Disclaimer

The following report(s) provides findings from an FDA-initiated query using Sentinel. While Sentinel queries may be undertaken to assess potential medical product safety risks, they may also be initiated for various other reasons. Some examples include determining a rate or count of an identified health outcome of interest, examining medical product use, exploring the feasibility of future, more detailed analyses within Sentinel, and seeking to better understand Sentinel capabilities.

Data obtained through Sentinel are intended to complement other types of evidence such as preclinical studies, clinical trials, postmarket studies, and adverse event reports, all of which are used by FDA to inform regulatory decisions regarding medical product safety. The information contained in this report is provided as part of FDA's commitment to place knowledge acquired from Sentinel in the public domain as soon as possible. Any public health actions taken by FDA regarding products involved in Sentinel queries will continue to be communicated through existing channels.

FDA wants to emphasize that the fact that FDA has initiated a query involving a medical product and is reporting findings related to that query does not mean that FDA is suggesting health care practitioners should change their prescribing practices for the medical product or that patients taking the medical product should stop using it. Patients who have questions about the use of an identified medical product should contact their health care practitioners.

The following report contains a description of the request, request specifications, and results from the modular program run(s).

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Overview for Request: cder_mpl2p_wp009, Report 2 of 2

Request ID: cder_mpl2p_wp009_nsdp_v01

Request Description: In this request we estimated the association between apixaban compared to warfarin and risk of gastrointestinal bleeding, intracranial hemorrhage, and ischemic stroke in the Sentinel Distributed Database (SDD).

Sentinel Routine Querying Module: Cohort Identification and Descriptive Analysis (CIDA) module, version 5.4.4 with Propensity Score Analysis and additional programming

Data Source: We distributed this request to 8 Data Partners, on January 22, 2019. In this report, analyses were restricted to DP 8 only.The study period included data from December 28, 2012 to June 30, 2018. Please see Appendix A for a list of dates of available data for each Data Partner.

Study Design: We used a retrospective new-user cohort design to estimate the association between apixaban compared to warfarin and risk of gastrointestinal bleeding, intercranial hemorrhage, and ischemic stroke. We further stratified data by analysis type, age, and epidsode gap. Graphs predicting propensity score distrbutions are included in this report.

Exposure and Comparator: The exposure of interest was apixaban. The comparator treatment was warfarin. We defined the exposure and comparator drugs using National Drug Codes (NDCs) recorded in outpatient pharmacy dispensings. Please see Appendix B for a list of generic and brand names of medical products used to define the exposure and comparator drugs.

Outcomes of Interest: The outcomes of interest were gastrointestinal bleeding, intercranial hemmorrhage, and ischemic stroke. We defined gastrointestinal hemorrhage as one International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM/ICD-10-CM) diagnosis code from "Gastrointestinal Bleeding - List 1"(Appendix C) as primary diagnosis from inpatient encounter OR one ICD-9-CM/ICD-10-CM diagnosis code from "Gastrointestinal Bleeding - List 2" (Appendix C) as primary diagnosis from inpatient encounter AND one ICD-9-CM/ICD-10-CM diagnosis code from "Gastrointestinal Bleeding - List 1" as secondary or unspecified diagnosis from inpatient encounter on the same day. We defined intracranial hemorrhage and ischemic stroke using ICD-9-CM and ICD-10-CM diagnosis codes flagged as a primary diagnosis in an inpatient encounter. We excluded patients from the analysis if they had evidence of the outcome on the day of exposure initiation or in the 183 days preceding exposure initiation. Please see Appendix C for a list of diagnosis codes used to define the outcomes.

Cohort Eligibility Criteria: We required members included in the cohort to be continuously enrolled in health plans with both medical and drug coverage for at least 183 days prior to their first qualifying exposure (index) during which gaps in coverage of up to 45 days were allowed. Index was defined as no use of apixaban, dabigatran, edoxaban, rivaroxaban, or warfarin in the 183 days preceding the day of exposure (index date).We included the following age groups: 21-64, 65-74, 75+ years. We required patients to have evidence of atrial fibrillation in the 183 days preceding and including the index date. We excluded patients from the cohort if they had evidence of dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair in the 183 days prior to and including the index date. We assessed all exclusion conditions in any care setting, except for dialysis, which was only assessed in outpatient care settings. Additionally, we excluded patients from the analysis if they had evidence of any of the outcomes of interest in the 183 days preceding and including the index date. We defined inclusion and exclusion criteria using NDCs, ICD-9-CM, ICD-10-CM, International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) codes. Please see Appendices C-E for a list of specific codes used to define cohort eligibility.

Follow-up: We determined follow-up time by the length of the exposure episodes and censored upon prespecified criteria met. We defined exposure episode lengths using outpatient pharmacy dispensing days supplied to create a sequence of continuous exposure. We considered exposure episodes continuous if gaps in days supplied were 3 days or shorter. We added an episode extension of 3 days to the end of each exposure episode. We conducted a sensitivity analysis to extend the gap and episode extension to 14 days. Follow-up began on the day after exposure initiation and continued until the first occurrence of any of the following: 1) outcome occurrence; 2) initiation of dabigatran, edoxaban, rivaroxaban, or switch to exposure in comparison; 3) disenrollment; 4) recorded death; 5) end of exposure episode; 6) end of query period; or 7) end of available data. Only the first valid exposure episode that occurred during the study period was included per patient. Please see Appendix D for a list of generic and brand names of medical products used to define exposure incidence and censoring Criteria in this request.

Overview for Request: cder_mpl2p_wp009, Report 2 of 2

Baseline Covariates: Please refer to Appendices F-I for a list of covariates, codes, and evaluation windows used to define covariates.

Effect Estimates: For each comparison, a logistic regression model was fit, separately for each outcome analysis, to estimate the propensity score (PS) of initiating apixaban versus warfarin using the baseline characteristics and potential confounders outlined in Appendix I. The matching ratio for the PS was 1:1 and the matching caliper was 0.05. Patients in the exposed and comparator cohorts were nearest neighbor matched without replacement, meaning that each comparator patient was matched one time, at most, to an exposed patient. To account for transition of the ICD coding system in the United States amid the query period, the study used a mock-sequential design that limits PS estimation and matching within data eras specific to ICD-9-CM (monitoring period 1: from December 28, 2012 to September 30, 2015) and ICD-10-CM (monitoring period 2: from December 28, 2012 to June 30, 2018) respectively. A Cox regression model stratified on individual DP site and matched set was used to estimate the adjusted hazard ratio and 95% confidence intervals.

Please see Appendices H and I for complete specifications of parameters for this request.

Limitations: As with all observational studies, this evaluation was limited in its ability to control for all sources of potential bias. The exposures, outcomes, exclusions, and covariates may have been misclassified due to varying validity of algorithms used to identify them. Race data may not be completely populated at all Data Partners; therefore, data about race may be incomplete. Therefore, data should be interpreted with this limitation in mind.

Notes: Please contact the Sentinel Operations Center (info@sentinelsystem.org) for questions and to provide comments/suggestions for future enhancements to this documentation

Sentinel

Table of Contents

Table of Contents

Glossary of Terms for Analyses Using
Cohort Identification and Descriptive Analysis (CIDA) Tool*

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing.

Blackout Period - number of days at the beginning of a treatment episode that events are to be ignored. If an event occurs during the blackout period, the episode is excluded.

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency Department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or Missing (U). The Care Setting, along with the Principal Diagnosis Indicator (PDX), forms the Care Setting/PDX parameter.

- **Ambulatory Visit (AV) -** includes visits at outpatient clinics, same-day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.
- **Emergency Department (ED) -** includes ED encounters that become inpatient stays (in which case inpatient stays would be a separate encounter). Excludes urgent care visits.
- **Inpatient Hospital Stay (IP) -** includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.
- **Non-Acute Institutional Stay (IS) -** includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays.
- **Other Ambulatory Visit (OA) -** includes other non overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone and email consultations.

Charlson/Elixhauser Combined Comorbidity Score - calculated based on comorbidities observed during a requester-defined window around the exposure episode start date (e.g., in the 183 days prior to index).

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: 01: Cohort includes only the first valid treatment episode during the query period; 02: Cohort includes all valid treatment episodes during the query period; 03: Cohort includes all valid treatment episodes during the query period until an event occurs.

Days Supplied - number of days supplied for all dispensings in qualifying treatment episodes.

Eligible Members - number of members eligible for an incident treatment episode (defined by the drug/exposure and event washout periods) with drug and medical coverage during the query period.

Enrollment Gap - number of days allowed between two consecutive enrollment periods without breaking a “continuously enrolled” sequence.

Episodes - treatment episodes; length of episode is determined by days supplied in one dispensing or consecutive dispensings bridged by the episode gap.

Episode Gap - number of days allowed between two (or more) consecutive exposures (dispensings/procedures) to be considered the same treatment episode.

Event Deduplication - specifies how events are counted by the Modular Program (MP) algorithm: 0: Counts all occurrences of a health outcome of interest (HOI) during an exposure episode; 1: de-duplicates occurrences of the same HOI code and code type on the same day; 2: de-duplicates occurrences of the same HOI group on the same day (e.g., de-duplicates at the group level).

Exposure Episode Length - number of days after exposure initiation that is considered "exposed time."

Exposure Extension Period - number of days post treatment period in which the outcomes/events are counted for a treatment episode. Extensions are added after any episode gaps have been bridged.

Lookback Period - number of days wherein a member is required to have evidence of pre-existing condition (diagnosis/procedure/drug dispensing).

Maximum Episode Duration - truncates exposure episodes after a requester-specified number of exposed days. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Member-Years - sum of all days of enrollment with medical and drug coverage in the query period preceded by an exposure washout period all divided by 365.25.

Minimum Days Supplied - specifies a minimum number of days in length of the days supplied for the episode to be considered.

Minimum Episode Duration - specifies a minimum number of days in length of the episode for it to be considered. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Monitoring Period - used to define time periods of interest for both sequential analysis and simple cohort characterization requests.

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Period - period in which the modular program looks for exposures and outcomes of interest.

Treatment Episode Truncation Indicator - indicates whether the exposure episode will be truncated at the occurrence of a requester-specified code.

Washout Period (drug/exposure) - number of days a user is required to have no evidence of prior exposure (drug dispensing/procedure) and continuous drug and medical coverage prior to an incident treatment episode.

Washout Period (event/outcome) - number of days a user is required to have no evidence of a prior event (procedure/diagnosis) and continuous drug and medical coverage prior to an incident treatment episode.

Years at Risk - number of days supplied plus any episode gaps and exposure extension periods all divided by 365.25.

*all terms may not be used in this report

Glossary of Terms for Analyses Using Propensity Score Analysis (PSA) Tool*

Covariate - requester defined binary variable to include in the propensity score estimation model (e.g., diabetes, heart failure, etc.) during requester-defined lookback period. Requester may also choose to add any of the following categorical, continuous, or count metrics to the propensity score estimation model:

1. Age (continuous)
2. Sex
3. Time period (i.e., monitoring period for sequential analyses)
4. Year of exposure
5. Comorbidity score
6. Medical utilization – number of inpatient stays
7. Medical utilization – number of institutional stays
8. Medical utilization – number of emergency department visits
9. Medical utilization – number of outpatient visits
10. Health care utilization – number of other ambulatory encounters (e.g., telemedicine, email consults)
11. Drug utilization – number of dispensings
12. Drug utilization – number of unique generics dispensed
13. Drug Utilization – number of unique drug classes dispensed

Covariate Evaluation Window - specified number of days relative to index date to evaluate the occurrence of covariates of interest. Note: members are required to have continuous enrollment during the covariate evaluation window, regardless of the value included in the "Continuous enrollment before exposure" field.

Individual Level Data Return - program may return individual-level, de-identified datasets to the Sentinel Operations Center (SOC). While the datasets contain a single row per patient for each specified analysis, patient identifiers such as a patient ID are not included in the output. Individual-level datasets are returned to the SOC, aggregated, and used to calculate effect estimates via Cox (proportional hazards) regression.

Mahalanobis Distance - provides a measure of balance across all variables while accounting for their correlation.

Matching Caliper - maximum allowed difference in propensity scores between treatment and control patients. Requester may select any caliper (e.g., 0.01, 0.025, and 0.05).

Matching Ratio - patients in exposed and comparator groups are nearest neighbor matched by a 1:1 or 1:n (up to 10) matching ratio.

Matched Conditional and Unconditional Analysis - in a conditional matched analysis, a Cox model, stratified by Data Partner site and matched set, is run on the matched population. This can be done for both the both 1:1 and 1:n matched cohorts. In an unconditional analysis, a Cox model, stratified by Data Partner site only, is run on the matched population. This can be done for the 1:1 matched cohort only.

Propensity Score Stratification - option to stratify propensity scores based on requester-defined percentiles in the unmatched population. In a stratified analysis, a Cox model, stratified by Data Partner site, is run on the stratified population. Note that all patients identified in exposure and comparator cohorts are used in the analysis.

PSM Tool - performs effect estimation by comparing exposure propensity-score matched parallel new user cohorts. Propensity score estimation and matching are conducted within each Sentinel Data Partner site via distributed programming code; data are returned to the SOC, aggregated, and used to calculate effect estimates.

Risk-set Level Data Return - alternative to the patient-level data return approach. In this approach, the PSM tool will produce de-identified, risk-set level datasets instead of or in addition to individual-level output. Whereas each observation in the patient-level datasets represents one patient in the cohort, each observation in the risk set dataset represents one event. Risk sets are created at the Data Partner site, returned to the SOC, aggregated, and used to calculate effect estimates via case-centered logistic regression.

Subgroup Analysis - may be conducted using any requester-defined covariates. Subgroup analyses may be performed in the unmatched and the matched population.

Zero Cell Correction - indicator for whether to screen variables with a zero correction added to each cell in the confounder/outcome 2x2 table. Recommended when the number of exposed outcomes is fewer than 150.

*all terms may not be used in this report

Table 1a. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Unmatched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015

	Apixaban		Warfarin		Covariate Balance	
Characteristic[1, 2]	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Patients	78,978	100.0%	227,934	100.0%	-	-
Demographics	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean Age (years)†	74.9	7.6	77.2	9.0	-2.293	-0.276
Age (years)*	**Number**	**Percent**	**Number**	**Percent**		
21-64	4,110	5.2%	14,303	6.3%	-1.071	-0.046
65-74†	36,725	46.5%	76,152	33.4%	13.091	0.270
75+†	38,143	48.3%	137,479	60.3%	-12.020	-0.243
Sex						
Female	37,785	47.8%	112,818	49.5%	-1.653	-0.033
Male	41,193	52.2%	115,116	50.5%	1.653	0.033
Other	-	-	-	-	-	-
Race*						
American Indian or Alaska Native	185	0.2%	948	0.4%	-0.182	-0.032
Asian	794	1.0%	2,638	1.2%	-0.152	-0.015
Black or African American	3,499	4.4%	12,756	5.6%	-1.166	-0.053
Native Hawaiian or Other Pacific Islander	-	-	-	-	-	-
Unknown	2,128	2.7%	5,935	2.6%	0.091	0.006
White	72,372	91.6%	205,657	90.2%	1.409	0.049
Year*						
2012	-	0.0%	844	0.4%	-0.370	-
2013†	8,932	11.3%	96,598	42.4%	-31.070	-0.749
2014	31,217	39.5%	79,523	34.9%	4.638	0.096
2015†	38,829	49.2%	50,969	22.4%	26.803	0.582
Recorded history of:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Prior combined comorbidity score*†	2.6	2.4	3.4	2.8	-0.765	-0.290
$CHA_2DS_2VaSc^3$ (Continuous)	3.6*†	1.4*†	3.9*†	1.4*†	-0.281*†	-0.202*†
$CHA_2DS_2VaSc^3$ (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	3,273	4.1%	8,419	3.7%	0.451	0.023
2†	13,245	16.8%	28,045	12.3%	4.466	0.127
3	22,581	28.6%	55,719	24.4%	4.146	0.094
4	21,305	27.0%	64,410	28.3%	-1.282	-0.029
5	11,827	15.0%	42,466	18.6%	-3.656	-0.098
>= 6†	6,747	8.5%	28,875	12.7%	-4.125	-0.134
	Mean*	**Standard Deviation***	**Mean***	**Standard Deviation***		
HAS-BLED[4] (Continuous)	2.5	0.9	2.5	1.0	-0.074*	-0.076*
HAS-BLED[4] (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	9,206	11.7%	30,079	13.2%	-1.540	-0.047
2	35,163	44.5%	90,385	39.7%	4.869	0.099
3	24,193	30.6%	66,643	29.2%	1.395	0.030
>= 4*†	10,416	13.2%	40,827	17.9%	-4.723	-0.131
Acute myocardial infarction - prior 1-30 days	2,594	3.3%	11,248	4.9%	-1.650	-0.083

Table 1a. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Unmatched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015

	Apixaban		Warfarin		Covariate Balance	
Recorded history of:	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Acute myocardial infarction - prior 31-183 days	9,206	11.7%	30,079	13.2%	-0.784	-0.048
Cardiac ablation	1,917	2.4%	2,790	1.2%	1.203	0.090
Cardioversion†	8,438	10.7%	10,622	4.7%	6.024	0.228
Coronary revascularization	12,882	16.3%	40,707	17.9%	-1.548	-0.041
Diabetes	27,848	35.3%	89,727	39.4%	-4.105	-0.085
Falls	2,433	3.1%	10,524	4.6%	-1.537	-0.080
Fractures	1,071	1.4%	5,503	2.4%	-1.058	-0.078
Heart failure - hospitalized†	12,187	15.4%	51,142	22.4%	-7.006	-0.180
Heart failure - outpatient†	15,328	19.4%	59,902	26.3%	-6.872	-0.164
Hospitalized bleeding†	7,778	9.8%	37,802	16.6%	-6.736	-0.200
Hyperlipidemia†	59,450	75.3%	159,281	69.9%	5.394	0.121
Hypertension	69,197	87.6%	197,607	86.7%	0.921	0.028
Obesity	15,634	19.8%	38,665	17.0%	2.832	0.073
Other ischemic heart disease	37,389	47.3%	110,626	48.5%	-1.193	-0.024
Peptic ulcer disease	303	0.4%	1,155	0.5%	-0.123	-0.018
Renal disease - acute†	6,100	7.7%	30,651	13.4%	-5.724	-0.187
Renal disease - chronic†	11,221	14.2%	52,796	23.2%	-8.955	-0.231
Smoking	18,907	23.9%	50,926	22.3%	1.597	0.038
Stroke - prior 1-30 days	2,713	3.4%	9,547	4.2%	-0.753	-0.039
Stroke - prior 31-183 days	3,299	4.2%	11,723	5.1%	-0.966	-0.046
Syncope	7,470	9.5%	18,401	8.1%	1.385	0.049
Transient ischemic attack	4,222	5.3%	11,442	5.0%	0.326	0.015
Walker use	-	0.0%	-	0.0%	0.000	-
History of use:	**Number**	**Percent**	**Number**	**Percent**		
Angiotensin-converting enzyme inhibitors and angiotensin receptor blockers	48,612	61.6%	134,835	59.2%	2.396	0.049
Amiodarone	9,441	12.0%	27,806	12.2%	-0.245	-0.008
Anti-anginal vasodilators	8,667	11.0%	30,448	13.4%	-2.384	-0.073
Anticoagulants	7,987	10.1%	29,088	12.8%	-2.649	-0.083
Antiplatelet agents (non-aspirin)	12,446	15.8%	31,178	13.7%	2.080	0.059
Aspirin	549	0.7%	1,416	0.6%	0.074	0.009
Beta blockers	58,561	74.1%	164,985	72.4%	1.766	0.040
COX-2 inhibitors	1,928	2.4%	4,350	1.9%	0.533	0.037
Calcium channel blockers	34,167	43.3%	96,078	42.2%	1.110	0.022
Digoxin†	7,652	9.7%	35,469	15.6%	-5.872	-0.178
Disopyramide	70	0.1%	148	0.1%	0.024	0.009
Dronedarone†	3,248	4.1%	3,657	1.6%	2.508	0.151
Estrogen replacement	1,511	1.9%	2,984	1.3%	0.604	0.048
Flecainide	3,702	4.7%	4,163	1.8%	2.861	0.162
H2 antagonists	4,695	5.9%	15,245	6.7%	-0.744	-0.031

Table 1a. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Unmatched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015

	Apixaban		Warfarin		Covariate Balance	
History of use:	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Insulin	6,853	8.7%	25,349	11.1%	-2.444	-0.082
Loop diuretics†	21,857	27.7%	87,847	38.5%	-10.866	-0.232
Metformin	13,223	16.7%	34,574	15.2%	1.574	0.043
Non-statin lipid lowering agents	8,466	10.7%	22,006	9.7%	1.065	0.035
Other anti-diabetic drugs	5,349	6.8%	13,585	6.0%	0.813	0.033
Potassium-sparing diuretics	7,370	9.3%	25,289	11.1%	-1.763	-0.058
Prescription nonsteroidal anti-inflammatory drugs†	12,256	15.5%	26,410	11.6%	3.932	0.115
Propafenone	2,088	2.6%	3,212	1.4%	1.235	0.088
Proton pump inhibitors	24,435	30.9%	67,887	29.8%	1.155	0.025
Statins	48,269	61.1%	133,401	58.5%	2.591	0.053
Sulfonyureas	7,214	9.1%	25,177	11.0%	-1.912	-0.063
Thiazide diuretics	22,677	28.7%	59,222	26.0%	2.731	0.061
Health Service Utilization Intensity:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean number of ambulatory encounters	12.2	8.1	12.5	8.5	-0.292	-0.035
Mean number of emergency room encounters	0.4	0.9	0.4	0.9	0.002	0.002
Mean number of inpatient hospital encounters†	0.5	0.8	0.6	0.9	-0.121	-0.143
Mean number of generics	10.3	5.1	10.4	5.2	-0.059	-0.011

[1]Covariates followed by an asterisk * were not included in the propensity score logistic regression model

[2]Covariates folowed by a dagger † show a standardized difference greater than 0.1

[3]CHA_2DS_2-VaSc: Lip, G.Y., Nieuwlaat, R., Pisters, R., Lane, D.A. and Crijns, H.J., 2010. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. Chest, 137(2), pp.263-272.

[4]HAS-BLED: Pisters, R., Lane, D.A., Nieuwlaat, R., De Vos, C.B., Crijns, H.J. and Lip, G.Y., 2010. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. Chest, 138(5), pp.1093-1100.

Table 1b. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Matched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, Ratio: 1:1, Caliper: 0.05

	Apixaban		Warfarin		Covariate Balance	
Characteristic[1, 2]	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Patients	77,373	98.0%	77,373	33.9%	-	-
Demographics	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean Age (years)*	75.0	7.5	74.8	8.9	0.215	0.026
Age (years)*	**Number**	**Percent**	**Number**	**Percent**		
21-64†	3,939	5.1%	6,485	8.4%	-3.291	-0.132
65-74	35,595	46.0%	33,044	42.7%	3.297	0.066
75+	37,839	48.9%	37,844	48.9%	-0.006	0.000
Sex						
Female	37,106	48.0%	36,962	47.8%	0.186	0.004
Male	40,267	52.0%	40,411	52.2%	-0.186	-0.004
Other	-	-	-	-	-	-
Race*						
American Indian or Alaska Native	180	0.2%	320	0.4%	-0.181	-0.032
Asian	786	1.0%	877	1.1%	-0.118	-0.011
Black or African American	3,449	4.5%	4,145	5.4%	-0.900	-0.042
Native Hawaiian or Other Pacific Islander	-	-	-	-	-	-
Unknown	2,084	2.7%	2,095	2.7%	-0.014	-0.001
White	70,874	91.6%	69,936	90.4%	1.212	0.042
Year*						
2012	-	0.0%	278	0.4%	-0.359	-
2013†	8,689	11.2%	32,932	42.6%	-31.333	-0.755
2014†	30,597	39.5%	26,819	34.7%	4.883	0.101
2015†	38,087	49.2%	17,344	22.4%	26.809	0.582
Recorded history of:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Prior combined comorbidity score*†	2.6	2.4	2.8	2.5	-0.146	-0.059
$CHA_2DS_sVaSc^3$ (Continuous)	3.6*	1.4*	3.6*	1.4*	0.000*	0.000*
$CHA_2DS_sVaSc^3$ (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	3,203	4.1%	3,306	4.3%	-0.133	-0.007
2	12,729	16.5%	12,627	16.3%	0.132	0.004
3	22,036	28.5%	21,920	28.3%	0.150	0.003
4	21,016	27.2%	21,074	27.2%	-0.075	-0.002
5	11,704	15.1%	11,702	15.1%	0.003	0.000
>= 6	6,685	8.6%	6,744	8.7%	-0.076	-0.003
	Mean*	**Standard Deviation***	**Mean***	**Standard Deviation***		
HAS-BLED[4] (Continuous)	2.5	0.9	2.5	0.9	0.001*	0.001*
HAS-BLED[4] (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	9,098	11.8%	9,089	11.7%	0.012	0.000
2	34,396	44.5%	34,312	44.3%	0.109	0.002
3	23,603	30.5%	23,441	30.3%	0.209	0.005
>= 4	10,276	13.3%	10,531	13.6%	-0.330	-0.010
Acute myocardial infarction - prior 1-30 days	2,569	3.3%	2,698	3.5%	-0.167	-0.009

Table 1b. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Matched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, Ratio: 1:1, Caliper: 0.05

	Apixaban		Warfarin		Covariate Balance	
Recorded history of:	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Acute myocardial infarction - prior 31-183 days	1,825	2.4%	1,960	2.5%	-0.174	-0.011
Cardiac ablation	1,718	2.2%	1,619	2.1%	0.128	0.009
Cardioversion	7,381	9.5%	7,122	9.2%	0.335	0.011
Coronary revascularization	12,625	16.3%	12,892	16.7%	-0.345	-0.009
Diabetes	27,418	35.4%	27,918	36.1%	-0.646	-0.013
Falls	2,415	3.1%	2,441	3.2%	-0.034	-0.002
Fractures	1,065	1.4%	1,081	1.4%	-0.021	-0.002
Heart failure - hospitalized	12,047	15.6%	12,269	15.9%	-0.287	-0.008
Heart failure - outpatient	15,154	19.6%	15,205	19.7%	-0.066	-0.002
Hospitalized bleeding	7,741	10.0%	7,904	10.2%	-0.211	-0.007
Hyperlipidemia	58,065	75.0%	58,458	75.6%	-0.508	-0.012
Hypertension	67,736	87.5%	67,896	87.8%	-0.207	-0.006
Obesity	15,111	19.5%	15,436	20.0%	-0.420	-0.011
Other ischemic heart disease	36,587	47.3%	37,124	48.0%	-0.694	-0.014
Peptic ulcer disease	298	0.4%	299	0.4%	-0.001	0.000
Renal disease - acute	6,061	7.8%	6,284	8.1%	-0.288	-0.011
Renal disease - chronic	11,161	14.4%	11,164	14.4%	-0.004	0.000
Smoking	18,325	23.7%	18,651	24.1%	-0.421	-0.010
Stroke - prior 1-30 days	2,694	3.5%	2,770	3.6%	-0.098	-0.005
Stroke - prior 31-183 days	3,268	4.2%	3,320	4.3%	-0.067	-0.003
Syncope	7,215	9.3%	7,296	9.4%	-0.105	-0.004
Transient ischemic attack	4,138	5.3%	4,194	5.4%	-0.072	-0.003
Walker use	-	0.0%	-	0.0%	0.000	-
History of use:	**Number**	**Percent**	**Number**	**Percent**		
Angiotensin-converting enzyme inhibitors and angiotensin receptor blockers	47,580	61.5%	47,900	61.9%	-0.414	-0.009
Amiodarone	9,201	11.9%	9,350	12.1%	-0.193	-0.006
Anti-anginal vasodilators	8,556	11.1%	8,721	11.3%	-0.213	-0.007
Anticoagulants	7,840	10.1%	7,961	10.3%	-0.156	-0.005
Antiplatelet agents (non-aspirin)	12,131	15.7%	12,503	16.2%	-0.481	-0.013
Aspirin	541	0.7%	534	0.7%	0.009	0.001
Beta blockers	57,294	74.0%	57,466	74.3%	-0.222	-0.005
COX-2 inhibitors	1,862	2.4%	1,855	2.4%	0.009	0.001
Calcium channel blockers	33,417	43.2%	33,545	43.4%	-0.165	-0.003
Digoxin	7,606	9.8%	7,596	9.8%	0.013	0.000
Disopyramide	69	0.1%	71	0.1%	-0.003	-0.001
Dronedarone	2,794	3.6%	2,648	3.4%	0.189	0.010
Estrogen replacement	1,439	1.9%	1,438	1.9%	0.001	0.000
Flecainide	3,247	4.2%	3,071	4.0%	0.227	0.011
H2 antagonists	4,629	6.0%	4,701	6.1%	-0.093	-0.004

Table 1b. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Matched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, Ratio: 1:1, Caliper: 0.05

	Apixaban		Warfarin		Covariate Balance	
History of use:	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Insulin	6,776	8.8%	6,960	9.0%	-0.238	-0.008
Loop diuretics	21,676	28.0%	21,700	28.0%	-0.031	-0.001
Metformin	12,934	16.7%	13,288	17.2%	-0.458	-0.012
Non-statin lipid lowering agents	8,249	10.7%	8,342	10.8%	-0.120	-0.004
Other anti-diabetic drugs	5,198	6.7%	5,358	6.9%	-0.207	-0.008
Potassium-sparing diuretics	7,264	9.4%	7,337	9.5%	-0.094	-0.003
Prescription nonsteroidal anti-inflammatory drugs	11,828	15.3%	11,907	15.4%	-0.102	-0.003
Propafenone	1,901	2.5%	1,901	2.5%	0.000	0.000
Proton pump inhibitors	23,855	30.8%	23,892	30.9%	-0.048	-0.001
Statins	47,259	61.1%	47,529	61.4%	-0.349	-0.007
Sulfonyureas	7,136	9.2%	7,345	9.5%	-0.270	-0.009
Thiazide diuretics	22,138	28.6%	22,266	28.8%	-0.165	-0.004
Health Service Utilization Intensity:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean number of ambulatory encounters	12.2	8.2	12.2	8.1	-0.005	-0.001
Mean number of emergency room encounters	0.4	0.9	0.4	0.9	-0.008	-0.008
Mean number of inpatient hospital encounters	0.5	0.8	0.5	0.8	-0.010	-0.013
Mean number of generics	10.3	5.1	10.4	5.1	-0.081	-0.016

[1]Covariates followed by an asterisk * were not included in the propensity score logistic regression model

[2]Covariates folowed by a dagger † show a standardized difference greater than 0.1

[3]CHA_2DS_2-VaSc: Lip, G.Y., Nieuwlaat, R., Pisters, R., Lane, D.A. and Crijns, H.J., 2010. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. Chest, 137(2), pp.263-272.

[4]HAS-BLED: Pisters, R., Lane, D.A., Nieuwlaat, R., De Vos, C.B., Crijns, H.J. and Lip, G.Y., 2010. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. Chest, 138(5), pp.1093-1100.

Table 1c. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Unmatched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016

	Apixaban		Warfarin		Covariate Balance	
Characteristic[1, 2]	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Patients	167,941	100.0%	295,958	100.0%	-	-
Demographics	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean Age (years)†	74.8	7.6	77.1	9.0	-2.356	-0.283
Age (years)*	**Number**	**Percent**	**Number**	**Percent**		
21-64	9,302	5.5%	18,438	6.2%	-0.691	-0.029
65-74†	78,490	46.7%	99,966	33.8%	12.960	0.267
75+†	80,149	47.7%	177,554	60.0%	-12.268	-0.248
Sex						
Female	80,177	47.7%	145,210	49.1%	-1.323	-0.026
Male	87,764	52.3%	150,748	50.9%	1.323	0.026
Other	-	-	-	-	-	-
Race*						
American Indian or Alaska Native	443	0.3%	1,262	0.4%	-0.163	-0.028
Asian	1,682	1.0%	3,360	1.1%	-0.134	-0.013
Black or African American	7,862	4.7%	16,255	5.5%	-0.811	-0.037
Native Hawaiian or Other Pacific Islander	-	-	-	-	-	-
Unknown	4,883	2.9%	7,842	2.6%	0.258	0.016
White	153,071	91.1%	267,239	90.3%	0.849	0.029
Year*						
2012	-	0.0%	844	0.3%	-0.285	-
2013†	8,932	5.3%	96,598	32.6%	-27.321	-0.743
2014†	31,217	18.6%	79,523	26.9%	-8.282	-0.199
2015†	54,007	32.2%	66,085	22.3%	9.829	0.222
2016†	73,785	43.9%	52,908	17.9%	26.058	0.588
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
Recorded history of:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Prior combined comorbidity score*†	2.9	2.6	3.5	2.9	-0.581	-0.211
$CHA_2DS_sVaSc^3$ (Continuous)	3.6*†	1.4*†	3.9*†	1.4*†	-0.251*†	-0.178*†
$CHA_2DS_sVaSc^3$ (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	7,030	4.2%	10,997	3.7%	0.470	0.024
2†	28,176	16.8%	36,692	12.4%	4.380	0.124
3	46,478	27.7%	71,835	24.3%	3.403	0.078
4	44,497	26.5%	83,050	28.1%	-1.566	-0.035
5	25,845	15.4%	55,319	18.7%	-3.302	-0.088
>= 6†	15,915	9.5%	38,065	12.9%	-3.385	-0.108

Table 1c. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Unmatched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016

	Apixaban		Warfarin		Covariate Balance	
Recorded history of:	**Mean***	**Standard Deviation***	**Mean***	**Standard Deviation***	**Absolute Difference**	**Standardized Difference**
HAS-BLED[4] (Continuous)	2.5	0.9	2.6	1.0	-0.067*	-0.069*
HAS-BLED[4] (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	19,923	11.9%	38,797	13.1%	-1.246	-0.038
2	72,959	43.4%	116,418	39.3%	4.107	0.083
3	51,604	30.7%	86,660	29.3%	1.446	0.032
>= 4†	23,455	14.0%	54,083	18.3%	-4.308	-0.117
Acute myocardial infarction - prior 1-30 days	6,351	3.8%	15,325	5.2%	-1.396	-0.068
Acute myocardial infarction - prior 31-183 days	4,414	2.6%	9,631	3.3%	-0.626	-0.037
Cardiac ablation	3,756	2.2%	3,411	1.2%	1.084	0.084
Cardioversion†	16,950	10.1%	13,635	4.6%	5.486	0.211
Coronary revascularization	27,826	16.6%	53,724	18.2%	-1.584	-0.042
Diabetes	59,360	35.3%	116,350	39.3%	-3.967	-0.082
Falls	5,912	3.5%	14,130	4.8%	-1.254	-0.063
Fractures	2,304	1.4%	7,027	2.4%	-1.002	-0.074
Heart failure - hospitalized†	27,516	16.4%	65,558	22.2%	-5.767	-0.147
Heart failure - outpatient†	32,815	19.5%	77,877	26.3%	-6.774	-0.162
Hospitalized bleeding†	17,662	10.5%	48,804	16.5%	-5.973	-0.175
Hyperlipidemia	121,523	72.4%	203,791	68.9%	3.502	0.077
Hypertension	146,973	87.5%	256,676	86.7%	0.787	0.024
Obesity†	37,269	22.2%	53,050	17.9%	4.267	0.107
Other ischemic heart disease	77,518	46.2%	142,649	48.2%	-2.041	-0.041
Peptic ulcer disease	654	0.4%	1,525	0.5%	-0.126	-0.019
Renal disease - acute†	15,146	9.0%	41,068	13.9%	-4.858	-0.153
Renal disease - chronic†	25,937	15.4%	70,544	23.8%	-8.392	-0.212
Smoking	46,156	27.5%	70,379	23.8%	3.703	0.085
Stroke - prior 1-30 days	5,994	3.6%	12,455	4.2%	-0.639	-0.033
Stroke - prior 31-183 days	7,130	4.2%	15,419	5.2%	-0.964	-0.045
Syncope	16,175	9.6%	23,943	8.1%	1.541	0.054
Transient ischemic attack	8,557	5.1%	14,617	4.9%	0.156	0.007
Walker use	*****	0.0%	*****	0.0%	0.000	0.000
History of use:	**Number**	**Percent**	**Number**	**Percent**		
Angiotensin-converting enzyme inhibitors and angiotensin receptor blockers	102,320	60.9%	174,242	58.9%	2.052	0.042
Amiodarone	20,153	12.0%	35,964	12.2%	-0.152	-0.005
Anti-anginal vasodilators	18,204	10.8%	39,311	13.3%	-2.443	-0.075
Anticoagulants	17,951	10.7%	38,507	13.0%	-2.322	-0.072
Antiplatelet agents (non-aspirin)	25,585	15.2%	40,594	13.7%	1.518	0.043
Aspirin	999	0.6%	1,664	0.6%	0.033	0.004
Beta blockers	124,317	74.0%	214,724	72.6%	1.472	0.033

Table 1c. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Unmatched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016

	Apixaban		Warfarin		Covariate Balance	
History of use:	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
COX-2 inhibitors	3,806	2.3%	5,347	1.8%	0.460	0.033
Calcium channel blockers	72,889	43.4%	124,137	41.9%	1.457	0.029
Digoxin†	14,270	8.5%	43,206	14.6%	-6.102	-0.192
Disopyramide	113	0.1%	177	0.1%	0.007	0.003
Dronedarone†	5,543	3.3%	4,336	1.5%	1.835	0.121
Estrogen replacement	2,824	1.7%	3,574	1.2%	0.474	0.040
Flecainide†	7,569	4.5%	5,550	1.9%	2.632	0.150
H2 antagonists	10,675	6.4%	19,953	6.7%	-0.385	-0.016
Insulin	14,986	8.9%	32,935	11.1%	-2.205	-0.073
Loop diuretics†	46,876	27.9%	114,010	38.5%	-10.61	-0.227
Metformin	28,556	17.0%	45,232	15.3%	1.720	0.047
Non-statin lipid lowering agents	16,618	9.9%	27,444	9.3%	0.622	0.021
Other anti-diabetic drugs	11,576	6.9%	17,744	6.0%	0.897	0.037
Potassium-sparing diuretics	15,593	9.3%	32,769	11.1%	-1.787	-0.059
Prescription nonsteroidal anti-inflammatory drugs†	25,764	15.3%	33,634	11.4%	3.977	0.117
Propafenone	4,013	2.4%	3,982	1.3%	1.044	0.077
Proton pump inhibitors	51,593	30.7%	88,398	29.9%	0.852	0.019
Statins	102,396	61.0%	174,271	58.9%	2.088	0.043
Sulfonyureas	15,014	8.9%	32,119	10.9%	-1.913	-0.064
Thiazide diuretics	47,146	28.1%	75,780	25.6%	2.468	0.056
Health Service Utilization Intensity:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean number of ambulatory encounters	12.2	8.3	12.6	8.6	-0.355	-0.042
Mean number of emergency room encounters	0.4	0.9	0.4	0.9	0.024	0.027
Mean number of inpatient hospital encounters	0.5	0.8	0.6	0.9	-0.085	-0.100
Mean number of generics	10.3	5.1	10.3	5.1	-0.040	-0.008

[1]Covariates followed by an asterisk * were not included in the propensity score logistic regression model

[2]Covariates folowed by a dagger † show a standardized difference greater than 0.1

[3]CHA_2DS_2-VaSc: Lip, G.Y., Nieuwlaat, R., Pisters, R., Lane, D.A. and Crijns, H.J., 2010. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. Chest, 137(2), pp.263-272.

[4]HAS-BLED: Pisters, R., Lane, D.A., Nieuwlaat, R., De Vos, C.B., Crijns, H.J. and Lip, G.Y., 2010. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. Chest, 138(5), pp.1093-1100.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 1d. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Matched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016, Ratio: 1:1, Caliper: 0.05

	Apixaban		Warfarin		Covariate Balance	
Characteristic[1, 2]	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
Patients	135,458	80.7%	135,458	45.8%	-	-
Demographics	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean Age (years)	75.4	7.6	75.3	8.8	0.033	0.004
Age (years)*						
21-64†	6,809	5.0%	10,338	7.6%	-2.605	-0.107
65-74	59,433	43.9%	55,167	40.7%	3.149	0.064
75+	69,216	51.1%	69,953	51.6%	-0.544	-0.011
Sex						
Female	65,114	48.1%	64,296	47.5%	0.604	0.012
Male	70,344	51.9%	71,162	52.5%	-0.604	-0.012
Other	-	-	-	-	-	-
Race*						
American Indian or Alaska Native	359	0.3%	580	0.4%	-0.163	-0.028
Asian	1,371	1.0%	1,492	1.1%	-0.089	-0.009
Black or African American	6,452	4.8%	7,055	5.2%	-0.445	-0.020
Native Hawaiian or Other Pacific Islander	-	-	-	-	-	-
Unknown	3,809	2.8%	3,731	2.8%	0.058	0.004
White	123,467	91.1%	122,600	90.5%	0.640	0.022
Year*						
2012	-	0.0%	278	0.2%	-0.205	-
2013†	8,689	6.4%	32,932	24.3%	-17.897	-0.512
2014	30,597	22.6%	26,819	19.8%	2.789	0.068
2015†	48,030	35.5%	30,256	22.3%	13.121	0.293
2016	48,142	35.5%	45,173	33.3%	2.192	0.046
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
Recorded history of:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Prior combined comorbidity score*†	3.0	2.7	3.1	2.7	-0.105	-0.039
$CHA_2DS_sVaSc^3$ (Continuous)	3.7*	1.4*	3.7*	1.4*	0.006*	0.005*
$CHA_2DS_sVaSc^3$ (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	5,656	4.2%	5,732	4.2%	-0.056	-0.003
2	20,857	15.4%	20,838	15.4%	0.014	0.000
3	36,535	27.0%	36,502	26.9%	0.024	0.001
4	36,844	27.2%	36,970	27.3%	-0.093	-0.002
5	21,871	16.1%	21,844	16.1%	0.020	0.001
>= 6	13,695	10.1%	13,572	10.0%	0.091	0.003

Table 1d. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Matched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016, Ratio: 1:1, Caliper: 0.05

	Apixaban		Warfarin		Covariate Balance	
Recorded history of:	**Mean***	**Standard Deviation***	**Mean***	**Standard Deviation***	**Absolute Difference**	**Standardized Difference**
HAS-BLED[4] (Continuous)	2.5	1.0	2.5	1.0	-0.003*	-0.003*
HAS-BLED[4] (Categorical)	**Number**	**Percent**	**Number**	**Percent**		
0-1	16,920	12.5%	16,652	12.3%	0.198	0.006
2	57,906	42.7%	57,920	42.8%	-0.010	0.000
3	40,842	30.2%	40,524	29.9%	0.235	0.005
>= 4	19,790	14.6%	20,362	15.0%	-0.422	-0.012
Acute myocardial infarction - prior 1-30 days	5,538	4.1%	5,717	4.2%	-0.132	-0.007
Acute myocardial infarction - prior 31-183 days	3,673	2.7%	3,792	2.8%	-0.088	-0.005
Cardiac ablation	2,483	1.8%	2,212	1.6%	0.200	0.015
Cardioversion	10,519	7.8%	10,039	7.4%	0.354	0.013
Coronary revascularization	22,988	17.0%	23,370	17.3%	-0.282	-0.007
Diabetes	49,320	36.4%	49,714	36.7%	-0.291	-0.006
Falls	5,099	3.8%	5,079	3.7%	0.015	0.001
Fractures	2,092	1.5%	2,067	1.5%	0.018	0.002
Heart failure - hospitalized	23,749	17.5%	22,692	16.8%	0.780	0.021
Heart failure - outpatient	28,554	21.1%	28,597	21.1%	-0.032	-0.001
Hospitalized bleeding	15,913	11.7%	15,492	11.4%	0.311	0.010
Hyperlipidemia	97,235	71.8%	96,923	71.6%	0.230	0.005
Hypertension	118,088	87.2%	118,199	87.3%	-0.082	-0.002
Obesity	27,607	20.4%	28,347	20.9%	-0.546	-0.013
Other ischemic heart disease	63,373	46.8%	63,598	47.0%	-0.166	-0.003
Peptic ulcer disease	567	0.4%	566	0.4%	0.001	0.000
Renal disease - acute	13,365	9.9%	13,571	10.0%	-0.152	-0.005
Renal disease - chronic	23,266	17.2%	23,814	17.6%	-0.405	-0.011
Smoking	34,742	25.6%	35,620	26.3%	-0.648	-0.015
Stroke - prior 1-30 days	5,058	3.7%	5,090	3.8%	-0.024	-0.001
Stroke - prior 31-183 days	6,048	4.5%	6,214	4.6%	-0.123	-0.006
Syncope	12,360	9.1%	12,157	9.0%	0.150	0.005
Transient ischemic attack	6,929	5.1%	6,920	5.1%	0.007	0.000
Walker use	*****	0.0%	*****	0.0%	-0.001	-0.002
History of use:	**Number**	**Percent**	**Number**	**Percent**		
Angiotensin-converting enzyme inhibitors and angiotensin receptor blockers	81,953	60.5%	81,914	60.5%	0.029	0.001
Amiodarone	16,338	12.1%	16,150	11.9%	0.139	0.004
Anti-anginal vasodilators	15,481	11.4%	15,584	11.5%	-0.076	-0.002
Anticoagulants	15,223	11.2%	15,239	11.2%	-0.012	0.000
Antiplatelet agents (non-aspirin)	20,110	14.8%	20,638	15.2%	-0.390	-0.011
Aspirin	832	0.6%	755	0.6%	0.057	0.007
Beta blockers	99,589	73.5%	100,023	73.8%	-0.320	-0.007

Table 1d. Baseline Characteristics of New Initiators of Apixaban and Warfarin (Matched) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016, Ratio: 1:1, Caliper: 0.05

	Apixaban		Warfarin		Covariate Balance	
History of use:	**Number**	**Percent**	**Number**	**Percent**	**Absolute Difference**	**Standardized Difference**
COX-2 inhibitors	2,892	2.1%	2,763	2.0%	0.095	0.007
Calcium channel blockers	58,099	42.9%	57,721	42.6%	0.279	0.006
Digoxin	13,345	9.9%	12,684	9.4%	0.488	0.017
Disopyramide	96	0.1%	93	0.1%	0.002	0.001
Dronedarone	3,596	2.7%	3,313	2.4%	0.209	0.013
Estrogen replacement	2,114	1.6%	1,992	1.5%	0.090	0.007
Flecainide	4,572	3.4%	4,449	3.3%	0.091	0.005
H2 antagonists	8,609	6.4%	8,557	6.3%	0.038	0.002
Insulin	12,870	9.5%	12,850	9.5%	0.015	0.001
Loop diuretics	41,370	30.5%	41,199	30.4%	0.126	0.003
Metformin	22,446	16.6%	22,801	16.8%	-0.262	-0.007
Non-statin lipid lowering agents	13,355	9.9%	13,066	9.6%	0.213	0.007
Other anti-diabetic drugs	8,892	6.6%	9,024	6.7%	-0.097	-0.004
Potassium-sparing diuretics	13,253	9.8%	13,244	9.8%	0.007	0.000
Prescription nonsteroidal anti-inflammatory drugs	19,051	14.1%	18,597	13.7%	0.335	0.01
Propafenone	2,735	2.0%	2,644	2.0%	0.067	0.005
Proton pump inhibitors	41,044	30.3%	41,284	30.5%	-0.177	-0.004
Statins	81,845	60.4%	82,743	61.1%	-0.663	-0.014
Sulfonyureas	12,856	9.5%	12,889	9.5%	-0.024	-0.001
Thiazide diuretics	37,234	27.5%	36,919	27.3%	0.233	0.005
Health Service Utilization Intensity:	**Mean**	**Standard Deviation**	**Mean**	**Standard Deviation**		
Mean number of ambulatory encounters	12.3	8.4	12.4	8.3	-0.079	-0.010
Mean number of emergency room encounters	0.4	0.9	0.4	0.9	0.002	0.002
Mean number of inpatient hospital encounters	0.5	0.8	0.5	0.8	0.021	0.026
Mean number of generics	10.3	5.2	10.2	5.1	0.041	0.008

[1]Covariates followed by an asterisk * were not included in the propensity score logistic regression model

[2]Covariates folowed by a dagger † show a standardized difference greater than 0.1

[3]CHA_2DS_2-VaSc: Lip, G.Y., Nieuwlaat, R., Pisters, R., Lane, D.A. and Crijns, H.J., 2010. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. Chest, 137(2), pp.263-272.

[4]HAS-BLED: Pisters, R., Lane, D.A., Nieuwlaat, R., De Vos, C.B., Crijns, H.J. and Lip, G.Y., 2010. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. Chest, 138(5), pp.1093-1100.

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 2. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	78,978	23,312.08	107.81	0.30	483	20.72	-15.64	6.12	-8.94	0.50 (0.45, 0.55)	<0.001
Warfarin, 3-day episode gap		227,934	94,364.91	151.21	0.41	3,431	36.36		15.05			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	167,941	60,031.54	130.56	0.36	1,135	18.91	-14.08	6.76	-9.43	0.50 (0.47, 0.54)	<0.001
Warfarin, 3-day episode gap		295,958	145,276.60	179.29	0.49	4,792	32.99		16.19			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	77,373	12,282.41	57.98	0.16	322	26.22	-17.75	4.16	-2.82	0.60 (0.52, 0.68)	<0.001
Warfarin, 3-day episode gap		77,373	12,282.41	57.98	0.16	540	43.97		6.98			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	135,458	24,264.34	65.43	0.18	630	25.96	-13.97	4.65	-2.50	0.65 (0.59, 0.72)	<0.001
Warfarin, 3-day episode gap		135,458	24,264.34	65.43	0.18	969	39.94		7.15			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	77,373	22,843.26	107.83	0.30	475	20.79	-8.96	6.14	-6.48	0.61 (0.54, 0.68)	<0.001
Warfarin, 3-day episode gap		77,373	32,805.21	154.86	0.42	976	29.75		12.61			

Table 2. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	135,458	50,878.86	137.19	0.38	964	18.95	-9.21	7.12	-5.67	0.62 (0.58, 0.68)	<0.001
Warfarin, 3-day episode gap		135,458	61,516.43	165.87	0.45	1,732	28.16		12.79			

Table 3. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Age Group: 21-64 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	4,110	968.39	86.06	0.24	27	27.88	-4.99	6.57	-5.74	0.69 (0.46, 1.03)	0.071
Warfarin, 3-day episode gap		14,303	5,354.03	136.72	0.37	176	32.87		12.31			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	9,302	2,605.27	102.30	0.28	52	19.96	-10.15	5.59	-7.59	0.55 (0.41, 0.75)	<0.001
Warfarin, 3-day episode gap		18,438	8,070.42	159.87	0.44	243	30.11		13.18			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	3,935	517.21	48.01	0.13	15	29.00	-25.13	3.81	-3.30	0.54 (0.29, 1.00)	0.051
Warfarin, 3-day episode gap		3,935	517.21	48.01	0.13	28	54.14		7.12			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	6,805	1,002.01	53.78	0.15	27	26.95	-15.97	3.97	-2.35	0.63 (0.39, 1.02)	0.058
Warfarin, 3-day episode gap		6,805	1,002.01	53.78	0.15	43	42.91		6.32			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	3,935	926.98	86.04	0.24	24	25.89	-3.02	6.10	-5.08	0.71 (0.43, 1.18)	0.183
Warfarin, 3-day episode gap		3,935	1,521.77	141.25	0.39	44	28.91		11.18			

Table 3. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	6,805	2,016.84	108.25	0.30	41	20.33	-6.63	6.02	-4.85	0.67 (0.46, 0.99)	0.042
Warfarin, 3-day episode gap		6,805	2,744.48	147.31	0.40	74	26.96		10.87			
Age Group: 65-74 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	36,725	11,011.39	109.51	0.30	166	15.08	-15.89	4.52	-8.38	0.42 (0.36, 0.49)	<0.001
Warfarin, 3-day episode gap		76,152	31,714.32	152.11	0.42	982	30.96		12.90			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	78,490	28,689.36	133.50	0.37	403	14.05	-13.33	5.13	-8.52	0.45 (0.40, 0.50)	<0.001
Warfarin, 3-day episode gap		99,966	49,853.39	182.15	0.50	1,365	27.38		13.65			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	33,044	5,300.19	58.59	0.16	99	18.68	-19.62	3.00	-3.15	0.49 (0.38, 0.62)	<0.001
Warfarin, 3-day episode gap		33,044	5,300.19	58.59	0.16	203	38.30		6.14			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	55,145	10,160.56	67.30	0.18	190	18.70	-13.78	3.45	-2.54	0.58 (0.48, 0.69)	<0.001
Warfarin, 3-day episode gap		55,145	10,160.56	67.30	0.18	330	32.48		5.98			

Table 3. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	33,044	9,929.09	109.75	0.30	146	14.70	-9.13	4.42	-5.75	0.53 (0.43, 0.64)	<0.001
Warfarin, 3-day episode gap		33,044	14,098.58	155.84	0.43	336	23.83		10.17			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	55,145	21,595.92	143.04	0.39	287	13.29	-8.61	5.20	-5.10	0.56 (0.49, 0.65)	<0.001
Warfarin, 3-day episode gap		55,145	25,942.31	171.83	0.47	568	21.89		10.30			
Age Group: 75+ years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	38,143	11,332.29	108.52	0.30	290	25.59	-14.08	7.60	-8.93	0.57 (0.51, 0.65)	<0.001
Warfarin, 3-day episode gap		137,479	57,296.55	152.22	0.42	2,273	39.67		16.53			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	80,149	28,736.91	130.96	0.36	680	23.66	-12.79	8.48	-9.45	0.57 (0.53, 0.62)	<0.001
Warfarin, 3-day episode gap		177,554	87,352.79	179.70	0.49	3,184	36.45		17.93			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	37,113	5,937.08	58.43	0.16	197	33.18	-16.84	5.31	-2.69	0.66 (0.55, 0.79)	<0.001
Warfarin, 3-day episode gap		37,113	5,937.08	58.43	0.16	297	50.02		8.00			

Table 3. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	68,152	12,098.77	64.84	0.18	396	32.73	-14.30	5.81	-2.54	0.70 (0.61, 0.79)	<0.001
Warfarin, 3-day episode gap		68,152	12,098.77	64.84	0.18	569	47.03		8.35			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	37,113	11,023.83	108.49	0.30	283	25.67	-9.42	7.63	-7.41	0.65 (0.56, 0.75)	<0.001
Warfarin, 3-day episode gap		37,113	15,901.77	156.50	0.43	558	35.09		15.04			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	68,152	25,221.42	135.17	0.37	600	23.79	-9.85	8.80	-6.27	0.66 (0.60, 0.73)	<0.001
Warfarin, 3-day episode gap		68,152	30,532.49	163.63	0.45	1,027	33.64		15.07			

Table 4. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	78,978	23,363.57	108.05	0.30	97	4.15	-5.56	1.23	-2.82	0.41 (0.34, 0.51)	<0.001
Warfarin, 3-day episode gap		227,934	95,068.07	152.34	0.42	923	9.71		4.05			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	167,941	60,180.18	130.88	0.36	269	4.47	-5.45	1.60	-3.31	0.44 (0.38, 0.50)	<0.001
Warfarin, 3-day episode gap		295,958	146,506.33	180.81	0.50	1,453	9.92		4.91			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	77,373	12,339.79	58.25	0.16	50	4.05	-4.21	0.65	-0.67	0.49 (0.35, 0.69)	<0.001
Warfarin, 3-day episode gap		77,373	12,339.79	58.25	0.16	102	8.27		1.32			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	135,458	24,384.32	65.75	0.18	113	4.63	-4.14	0.83	-0.75	0.53 (0.42, 0.66)	<0.001
Warfarin, 3-day episode gap		135,458	24,384.32	65.75	0.18	214	8.78		1.58			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	77,373	22,893.74	108.07	0.30	96	4.19	-3.77	1.24	-2.16	0.52 (0.41, 0.66)	<0.001
Warfarin, 3-day episode gap		77,373	33,006.25	155.81	0.43	263	7.97		3.40			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	135,458	51,009.72	137.54	0.38	234	4.59	-4.20	1.73	-2.29	0.52 (0.44, 0.60)	<0.001
Warfarin, 3-day episode gap		135,458	61,898.20	166.90	0.46	544	8.79		4.02			

Table 5. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Age Group: 21-64 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	3.09	-3.03	0.73	-1.58	0.48 (0.15, 1.59)	0.231
Warfarin, 3-day episode gap		14,303	5,392.87	137.72	0.38	33	6.12		2.31			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	*****	*****	*****	*****	*****	2.68	-3.46	0.75	-1.96	0.44 (0.20, 0.98)	0.045
Warfarin, 3-day episode gap		18,438	8,140.93	161.27	0.44	50	6.14		2.71			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	3.85	-7.69	0.51	-1.02	0.33 (0.07, 1.65)	0.178
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	11.54		1.52			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	*****	*****	*****	*****	*****	4.96	-1.99	0.73	-0.29	0.71 (0.23, 2.25)	0.566
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	6.95		1.03			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	3.23	-3.31	0.76	-1.78	0.40 (0.11, 1.48)	0.172
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	6.54		2.54			

Table 5. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	*****	*****	*****	*****	*****	3.46	-2.33	1.03	-1.32	0.59 (0.24, 1.45)	0.252
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	5.80		2.35			
Age Group: 65-74 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	2.99	-4.18	0.90	-2.11	0.41 (0.28, 0.59)	<0.001
Warfarin, 3-day episode gap		76,152	31,920.88	153.10	0.42	229	7.17		3.01			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	*****	*****	*****	*****	*****	3.06	-4.17	1.12	-2.51	0.41 (0.32, 0.51)	<0.001
Warfarin, 3-day episode gap		99,966	50,223.85	183.51	0.50	363	7.23		3.63			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	33,044	5,323.91	58.85	0.16	12	2.25	-3.94	0.36	-0.64	0.36 (0.19, 0.70)	0.003
Warfarin, 3-day episode gap		33,044	5,323.91	58.85	0.16	33	6.20		1.00			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	55,145	10,204.71	67.59	0.19	31	3.04	-3.82	0.56	-0.71	0.44 (0.29, 0.68)	<0.001
Warfarin, 3-day episode gap		55,145	10,204.71	67.59	0.19	70	6.86		1.27			

Table 5. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	33,044	9,946.84	109.95	0.30	29	2.92	-2.38	0.88	-1.39	0.54 (0.35, 0.83)	0.005
Warfarin, 3-day episode gap		33,044	14,163.00	156.55	0.43	75	5.30		2.27			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	55,145	21,637.07	143.31	0.39	64	2.96	-3.03	1.16	-1.67	0.48 (0.36, 0.64)	<0.001
Warfarin, 3-day episode gap		55,145	26,068.47	172.66	0.47	156	5.98		2.83			
Age Group: 75+ years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	38,143	11,362.89	108.81	0.30	61	5.37	-6.08	1.60	-3.21	0.45 (0.35, 0.59)	<0.001
Warfarin, 3-day episode gap		137,479	57,754.31	153.44	0.42	661	11.45		4.81			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	80,149	28,827.15	131.37	0.36	174	6.04	-5.76	2.17	-3.69	0.50 (0.43, 0.59)	<0.001
Warfarin, 3-day episode gap		177,554	88,141.55	181.32	0.50	1,040	11.80		5.86			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	37,113	5,970.95	58.76	0.16	32	5.36	-5.02	0.86	-0.81	0.52 (0.34, 0.79)	0.002
Warfarin, 3-day episode gap		37,113	5,970.95	58.76	0.16	62	10.38		1.67			

Table 5. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	68,152	12,179.73	65.28	0.18	70	5.75		1.03			
Warfarin, 3-day episode gap		68,152	12,179.73	65.28	0.18	142	11.66	-5.91	2.08	-1.06	0.49 (0.37, 0.66)	<0.001
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	37,113	11,053.98	108.79	0.30	61	5.52		1.64			
Warfarin, 3-day episode gap		37,113	16,018.90	157.65	0.43	169	10.55	-5.03	4.55	-2.91	0.52 (0.39, 0.71)	<0.001
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	68,152	25,305.00	135.62	0.37	156	6.16		2.29			
Warfarin, 3-day episode gap		68,152	30,755.08	164.83	0.45	351	11.41	-5.25	5.15	-2.86	0.54 (0.44, 0.65)	<0.001

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 6. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	78,978	23,340.70	107.94	0.30	179	7.67	-5.56	2.27	-3.24	0.52 (0.45, 0.61)	<0.001
Warfarin, 3-day episode gap		227,934	94,859.10	152.01	0.42	1,255	13.23		5.51			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	167,941	60,105.71	130.72	0.36	443	7.37	-4.97	2.64	-3.45	0.54 (0.49, 0.60)	<0.001
Warfarin, 3-day episode gap		295,958	146,153.27	180.37	0.49	1,803	12.34		6.09			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	77,373	12,321.33	58.16	0.16	116	9.41	-6.33	1.50	-1.01	0.60 (0.48, 0.75)	<0.001
Warfarin, 3-day episode gap		77,373	12,321.33	58.16	0.16	194	15.75		2.51			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	135,458	24,338.38	65.63	0.18	244	10.03	-5.46	1.80	-0.98	0.65 (0.55, 0.76)	<0.001
Warfarin, 3-day episode gap		135,458	24,338.38	65.63	0.18	377	15.49		2.78			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	77,373	22,870.65	107.96	0.30	179	7.83	-3.35	2.31	-2.44	0.64 (0.53, 0.77)	<0.001
Warfarin, 3-day episode gap		77,373	32,938.93	155.49	0.43	368	11.17		4.76			

Table 6. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	135,458	50,941.35	137.36	0.38	387	7.60	-3.12	2.86	-2.03	0.67 (0.59, 0.75)	<0.001
Warfarin, 3-day episode gap		135,458	61,772.47	166.56	0.46	662	10.72		4.89			

Table 7. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Age Group: 21-64 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	8.27	0.10	1.95	-1.13	0.86 (0.40, 1.83)	0.686
Warfarin, 3-day episode gap		14,303	5,385.93	137.54	0.38	44	8.17		3.08			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	9,302	2,606.28	102.34	0.28	25	9.59	1.10	2.69	-1.05	0.98 (0.62, 1.56)	0.935
Warfarin, 3-day episode gap		18,438	8,127.73	161.01	0.44	69	8.49		3.74			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	13.46	11.54	1.78	1.52	7.00 (0.86, 56.89)	0.069
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	1.92		0.25			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	*****	*****	*****	*****	*****	14.91	7.95	2.20	1.18	2.14 (0.87, 5.26)	0.096
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	6.96		1.03			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	8.64	2.75	2.03	-0.25	1.28 (0.49, 3.35)	0.622
Warfarin, 3-day episode gap		*****	*****	*****	*****	*****	5.88		2.29			

Table 7. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	6,805	2,016.82	108.25	0.30	23	11.40	3.07	3.38	0.00	1.20 (0.67, 2.14)	0.546
Warfarin, 3-day episode gap		6,805	2,758.14	148.04	0.41	23	8.34		3.38			
Age Group: 65-74 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	5.81	-3.67	1.74	-2.22	0.55 (0.42, 0.72)	<0.001
Warfarin, 3-day episode gap		76,152	31,856.00	152.79	0.42	302	9.48		3.97			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	78,490	28,703.33	133.57	0.37	160	5.57	-2.78	2.04	-2.15	0.59 (0.49, 0.71)	<0.001
Warfarin, 3-day episode gap		99,966	50,127.65	183.15	0.50	419	8.36		4.19			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	33,044	5,314.05	58.74	0.16	40	7.53	-5.27	1.21	-0.85	0.59 (0.40, 0.87)	0.008
Warfarin, 3-day episode gap		33,044	5,314.05	58.74	0.16	68	12.80		2.06			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	55,145	10,187.98	67.48	0.18	79	7.75	-3.93	1.43	-0.73	0.66 (0.50, 0.88)	0.005
Warfarin, 3-day episode gap		55,145	10,187.98	67.48	0.18	119	11.68		2.16			

Table 7. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	33,044	9,933.03	109.79	0.30	62	6.24	-1.90	1.88	-1.60	0.69 (0.51, 0.95)	0.021
Warfarin, 3-day episode gap		33,044	14,132.09	156.21	0.43	115	8.14		3.48			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	55,145	21,601.98	143.08	0.39	121	5.60	-1.55	2.19	-1.18	0.73 (0.58, 0.92)	0.008
Warfarin, 3-day episode gap		55,145	26,024.09	172.37	0.47	186	7.15		3.37			
Age Group: 75+ years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	38,143	11,355.87	108.74	0.30	107	9.42	-6.35	2.81	-3.81	0.54 (0.44, 0.66)	<0.001
Warfarin, 3-day episode gap		137,479	57,617.17	153.08	0.42	909	15.78		6.61			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	80,149	28,796.10	131.23	0.36	258	8.96	-6.00	3.22	-4.19	0.55 (0.48, 0.63)	<0.001
Warfarin, 3-day episode gap		177,554	87,897.89	180.82	0.50	1,315	14.96		7.41			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	12/28/2012-9/30/2015	37,113	5,961.46	58.67	0.16	69	11.57	-8.55	1.86	-1.37	0.58 (0.43, 0.77)	<0.001
Warfarin, 3-day episode gap		37,113	5,961.46	58.67	0.16	120	20.13		3.23			

Table 7. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 3-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 3-day episode gap	12/28/2012-12/31/2016	68,152	12,156.45	65.15	0.18	141	11.60	-7.73	2.07	-1.38	0.60 (0.49, 0.74)	<0.001
Warfarin, 3-day episode gap		68,152	12,156.45	65.15	0.18	235	19.33		3.45			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 3-day episode gap	December 28, 2012 - September 30, 2015	37,113	11,047.03	108.72	0.30	106	9.60	-5.04	2.86	-3.45	0.61 (0.48, 0.76)	<0.001
Warfarin, 3-day episode gap		37,113	15,985.39	157.32	0.43	234	14.64		6.31			
Apixaban, 3-day episode gap	December 28, 2012 - December 31, 2016	68,152	25,275.95	135.46	0.37	230	9.10	-4.98	3.37	-2.96	0.61 (0.52, 0.72)	<0.001
Warfarin, 3-day episode gap		68,152	30,679.21	164.42	0.45	432	14.08		6.34			

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 8. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	78,978	34,361.98	158.91	0.44	665	19.35	-15.24	8.42	-10.25	0.52 (0.48, 0.56)	<0.001
Warfarin, 14-day episode gap		227,934	123,000.74	197.10	0.54	4,255	34.59		18.67			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	167,941	92,884.30	202.01	0.55	1,592	17.14	-14.32	9.48	-10.91	0.51 (0.48, 0.54)	<0.001
Warfarin, 14-day episode gap		295,958	191,798.76	236.70	0.65	6,033	31.45		20.38			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	77,373	18,447.28	87.08	0.24	436	23.63	-14.20	5.64	-3.39	0.62 (0.55, 0.70)	<0.001
Warfarin, 14-day episode gap		77,373	18,447.28	87.08	0.24	698	37.84		9.02			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	135,458	38,678.53	104.29	0.29	870	22.49	-11.51	6.42	-3.29	0.66 (0.61, 0.72)	<0.001
Warfarin, 14-day episode gap		135,458	38,678.53	104.29	0.29	1,315	34.00		9.71			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	77,373	33,671.74	158.95	0.44	650	19.30	-9.17	8.40	-7.37	0.62 (0.57, 0.68)	<0.001
Warfarin, 14-day episode gap		77,373	42,844.74	202.25	0.55	1,220	28.47		15.77			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	135,458	80,259.11	216.41	0.59	1,377	17.16	-9.89	10.17	-5.89	0.63 (0.59, 0.68)	<0.001
Warfarin, 14-day episode gap		135,458	80,401.49	216.80	0.59	2,175	27.05		16.06			

Table 9. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Age Group: 21-64 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	4,110	1,467.62	130.43	0.36	39	26.57	-5.26	9.49	-6.03	0.73 (0.52, 1.03)	0.071
Warfarin, 14-day episode gap		14,303	6,974.69	178.11	0.49	222	31.83		15.52			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	9,302	4,159.58	163.33	0.45	78	18.75	-10.09	8.39	-8.27	0.59 (0.46, 0.75)	<0.001
Warfarin, 14-day episode gap		18,438	10,645.51	210.88	0.58	307	28.84		16.65			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	3,935	786.23	72.98	0.20	24	30.53	-13.99	6.10	-2.80	0.69 (0.41, 1.15)	0.155
Warfarin, 14-day episode gap		3,935	786.23	72.98	0.20	35	44.52		8.89			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	6,805	1,620.51	86.98	0.24	39	24.07	-11.11	5.73	-2.65	0.68 (0.46, 1.03)	0.068
Warfarin, 14-day episode gap		6,805	1,620.51	86.98	0.24	57	35.17		8.38			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	3,935	1,398.29	129.79	0.36	35	25.03	-3.01	8.89	-5.34	0.76 (0.50, 1.16)	0.203
Warfarin, 14-day episode gap		3,935	1,997.26	185.39	0.51	56	28.04		14.23			

Table 9. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	6,805	3,288.80	176.52	0.48	60	18.24	-8.75	8.82	-5.58	0.65 (0.47, 0.89)	0.008
Warfarin, 14-day episode gap		6,805	3,629.93	194.83	0.53	98	27.00		14.40			
Age Group: 65-74 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	36,725	16,228.04	161.40	0.44	217	13.37	-15.23	5.91	-9.65	0.43 (0.37, 0.49)	<0.001
Warfarin, 14-day episode gap		76,152	41,427.39	198.70	0.54	1,185	28.60		15.56			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	78,490	44,474.09	206.96	0.57	552	12.41	-13.34	7.03	-9.93	0.45 (0.41, 0.50)	<0.001
Warfarin, 14-day episode gap		99,966	65,868.98	240.67	0.66	1,696	25.75		16.97			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	33,044	7,982.84	88.24	0.24	129	16.16	-15.66	3.90	-3.78	0.51 (0.41, 0.63)	<0.001
Warfarin, 14-day episode gap		33,044	7,982.84	88.24	0.24	254	31.82		7.69			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	55,145	16,431.52	108.83	0.30	264	16.07	-10.59	4.79	-3.16	0.60 (0.52, 0.70)	<0.001
Warfarin, 14-day episode gap		55,145	16,431.52	108.83	0.30	438	26.66		7.94			

Table 9. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	33,044	14,651.66	161.95	0.44	193	13.17	-9.20	5.84	-6.63	0.53 (0.45, 0.63)	<0.001
Warfarin, 14-day episode gap		33,044	18,419.17	203.60	0.56	412	22.37		12.47			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	55,145	34,386.09	227.75	0.62	398	11.57	-9.53	7.22	-5.77	0.55 (0.49, 0.62)	<0.001
Warfarin, 14-day episode gap		55,145	33,931.18	224.74	0.62	716	21.10		12.98			
Age Group: 75+ years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	38,143	16,666.32	159.59	0.44	409	24.54	-13.64	10.72	-9.99	0.60 (0.54, 0.66)	<0.001
Warfarin, 14-day episode gap		137,479	74,598.66	198.19	0.54	2,848	38.18		20.72			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	80,149	44,250.64	201.66	0.55	962	21.74	-13.22	12.00	-10.69	0.58 (0.54, 0.63)	<0.001
Warfarin, 14-day episode gap		177,554	115,284.27	237.15	0.65	4,030	34.96		22.70			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	37,113	8,917.36	87.76	0.24	260	29.16	-15.59	7.01	-3.75	0.65 (0.56, 0.76)	<0.001
Warfarin, 14-day episode gap		37,113	8,917.36	87.76	0.24	399	44.74		10.75			

Table 9. Effect Estimates for Gastrointestinal Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	68,152	19,187.62	102.83	0.28	531	27.67	-13.34	7.79	-3.76	0.67 (0.60, 0.75)	<0.001
Warfarin, 14-day episode gap		68,152	19,187.62	102.83	0.28	787	41.02		11.55			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	37,113	16,207.00	159.50	0.44	394	24.31	-9.30	10.62	-8.19	0.67 (0.59, 0.76)	<0.001
Warfarin, 14-day episode gap		37,113	20,767.59	204.39	0.56	698	33.61		18.81			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	68,152	39,359.91	210.94	0.58	862	21.90	-10.10	12.65	-6.07	0.68 (0.62, 0.74)	<0.001
Warfarin, 14-day episode gap		68,152	39,874.43	213.70	0.59	1,276	32.00		18.72			

Table 10. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	78,978	34,466.67	159.40	0.44	140	4.06	-5.45	1.77	-3.40	0.42 (0.35, 0.50)	<0.001
Warfarin, 14-day episode gap		227,934	123,997.26	198.70	0.54	1,179	9.51		5.17			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	167,941	93,206.08	202.71	0.55	390	4.18	-5.53	2.32	-4.03	0.42 (0.38, 0.47)	<0.001
Warfarin, 14-day episode gap		295,958	193,578.87	238.90	0.65	1,881	9.72		6.36			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	77,373	18,565.43	87.64	0.24	71	3.82	-4.42	0.92	-1.06	0.46 (0.35, 0.61)	<0.001
Warfarin, 14-day episode gap		77,373	18,565.43	87.64	0.24	153	8.24		1.98			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	135,458	38,969.15	105.08	0.29	167	4.29	-4.52	1.23	-1.30	0.49 (0.40, 0.59)	<0.001
Warfarin, 14-day episode gap		135,458	38,969.15	105.08	0.29	343	8.80		2.53			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	77,373	33,774.30	159.44	0.44	139	4.12	-3.93	1.80	-2.69	0.51 (0.42, 0.62)	<0.001
Warfarin, 14-day episode gap		77,373	43,135.30	203.63	0.56	347	8.04		4.48			

Table 10. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	135,458	80,549.34	217.19	0.59	345	4.28	-4.45	2.55	-2.67	0.49 (0.43, 0.56)	<0.001
Warfarin, 14-day episode gap		135,458	80,976.16	218.34	0.60	707	8.73		5.22			

Table 11. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Age Group: 21-64 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	4.08	-1.33	1.46	-1.20	0.70 (0.29, 1.66)	0.418
Warfarin, 14-day episode gap		14,303	7,027.54	179.46	0.49	38	5.41		2.66			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	9,302	4,169.97	163.74	0.45	11	2.64	-3.13	1.18	-2.18	0.46 (0.24, 0.87)	0.017
Warfarin, 14-day episode gap		18,438	10,741.88	212.79	0.58	62	5.77		3.36			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	5.05	-5.05	1.02	-1.02	0.50 (0.15, 1.66)	0.258
Warfarin, 14-day episode gap		*****	*****	*****	*****	*****	10.11		2.03			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	*****	*****	*****	*****	*****	4.90	-1.23	1.18	-0.29	0.80 (0.32, 2.03)	0.638
Warfarin, 14-day episode gap		*****	*****	*****	*****	*****	6.13		1.47			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	4.28	-1.69	1.52	-1.52	0.61 (0.23, 1.64)	0.327
Warfarin, 14-day episode gap		*****	*****	*****	*****	*****	5.97		3.05			

Table 11. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	6,805	3,296.89	176.96	0.48	11	3.34	-2.14	1.62	-1.32	0.60 (0.29, 1.27)	0.183
Warfarin, 14-day episode gap		6,805	3,654.58	196.15	0.54	20	5.47		2.94			
Age Group: 65-74 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	2.83	-3.91	1.25	-2.44	0.41 (0.30, 0.56)	<0.001
Warfarin, 14-day episode gap		76,152	41,725.36	200.13	0.55	281	6.73		3.69			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	78,490	44,584.14	207.47	0.57	129	2.89	-4.02	1.64	-2.95	0.41 (0.34, 0.50)	<0.001
Warfarin, 14-day episode gap		99,966	66,400.99	242.61	0.66	459	6.91		4.59			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	33,044	8,023.83	88.69	0.24	19	2.37	-3.61	0.57	-0.88	0.40 (0.23, 0.67)	<0.001
Warfarin, 14-day episode gap		33,044	8,023.83	88.69	0.24	48	5.98		1.45			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	55,145	16,522.42	109.44	0.30	47	2.84	-3.63	0.85	-1.09	0.44 (0.31, 0.62)	<0.001
Warfarin, 14-day episode gap		55,145	16,522.42	109.44	0.30	107	6.48		1.94			

Table 11. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	33,044	14,682.90	162.30	0.44	42	2.86	-2.43	1.27	-1.69	0.53 (0.37, 0.76)	<0.001
Warfarin, 14-day episode gap		33,044	18,515.58	204.66	0.56	98	5.29		2.97			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	55,145	34,472.05	228.32	0.63	96	2.78	-3.31	1.74	-2.03	0.46 (0.36, 0.59)	<0.001
Warfarin, 14-day episode gap		55,145	34,119.84	225.99	0.62	208	6.10		3.77			
Age Group: 75+ years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	38,143	16,731.39	160.22	0.44	88	5.26	-6.17	2.31	-3.95	0.45 (0.36, 0.57)	<0.001
Warfarin, 14-day episode gap		137,479	75,244.36	199.91	0.55	860	11.43		6.26			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	80,149	44,451.97	202.57	0.55	250	5.62	-6.06	3.12	-4.54	0.48 (0.42, 0.54)	<0.001
Warfarin, 14-day episode gap		177,554	116,436.01	239.52	0.66	1,360	11.68		7.66			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	37,113	8,988.45	88.46	0.24	49	5.45	-4.56	1.32	-1.10	0.54 (0.38, 0.77)	<0.001
Warfarin, 14-day episode gap		37,113	8,988.45	88.46	0.24	90	10.01		2.43			

Table 11. Effect Estimates for Intracranial Hemorrhage in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	68,152	19,373.32	103.83	0.28	110	5.68	-5.47	1.61	-1.56	0.51 (0.40, 0.64)	<0.001
Warfarin, 14-day episode gap		68,152	19,373.32	103.83	0.28	216	11.15		3.17			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	37,113	16,270.81	160.13	0.44	88	5.41	-5.24	2.37	-3.64	0.52 (0.40, 0.66)	<0.001
Warfarin, 14-day episode gap		37,113	20,936.01	206.04	0.56	223	10.65		6.01			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	68,152	39,549.24	211.96	0.58	228	5.76	-5.43	3.35	-3.26	0.51 (0.44, 0.60)	<0.001
Warfarin, 14-day episode gap		68,152	40,213.23	215.52	0.59	450	11.19		6.60			

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Table 12. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	78,978	34,420.89	159.19	0.44	244	7.09	-5.69	3.09	-3.84	0.52 (0.46, 0.60)	<0.001
Warfarin, 14-day episode gap		227,934	123,690.24	198.21	0.54	1,580	12.77		6.93			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	167,941	93,052.08	202.38	0.55	634	6.81	-5.12	3.78	-4.01	0.55 (0.50, 0.60)	<0.001
Warfarin, 14-day episode gap		295,958	193,040.56	238.24	0.65	2,304	11.94		7.78			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	77,373	18,525.87	87.45	0.24	155	8.37	-5.78	2.00	-1.38	0.59 (0.49, 0.72)	<0.001
Warfarin, 14-day episode gap		77,373	18,525.87	87.45	0.24	262	14.14		3.39			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	135,458	38,869.83	104.81	0.29	333	8.57	-4.35	2.46	-1.25	0.66 (0.58, 0.76)	<0.001
Warfarin, 14-day episode gap		135,458	38,869.83	104.81	0.29	502	12.91		3.71			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	77,373	33,728.57	159.22	0.44	242	7.17	-3.54	3.13	-2.83	0.63 (0.54, 0.74)	<0.001
Warfarin, 14-day episode gap		77,373	43,041.17	203.18	0.56	461	10.71		5.96			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	135,458	80,406.58	216.81	0.59	554	6.89	-3.44	4.09	-2.07	0.67 (0.60, 0.74)	<0.001
Warfarin, 14-day episode gap		135,458	80,793.72	217.85	0.60	835	10.33		6.16			

Table 13. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Age Group: 21-64 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	6.81	-1.02	2.43	-1.41	0.76 (0.39, 1.49)	0.427
Warfarin, 14-day episode gap		14,303	7,019.70	179.26	0.49	55	7.84		3.85			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	9,302	4,163.37	163.48	0.45	30	7.21	-0.91	3.23	-1.49	0.81 (0.53, 1.23)	0.315
Warfarin, 14-day episode gap		18,438	10,721.59	212.39	0.58	87	8.11		4.72			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	8.85	2.53	1.78	0.51	1.40 (0.44, 4.41)	0.566
Warfarin, 14-day episode gap		*****	*****	*****	*****	*****	6.32		1.27			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	6,805	1,627.91	87.38	0.24	16	9.83	1.84	2.35	0.44	1.23 (0.59, 2.56)	0.578
Warfarin, 14-day episode gap		6,805	1,627.91	87.38	0.24	13	7.99		1.91			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	6.44	1.46	2.29	-0.25	1.10 (0.45, 2.73)	0.831
Warfarin, 14-day episode gap		*****	*****	*****	*****	*****	4.97		2.54			

Table 13. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	6,805	3,290.57	176.62	0.48	26	7.90	0.23	3.82	-0.29	0.97 (0.57, 1.66)	0.92
Warfarin, 14-day episode gap		6,805	3,651.94	196.01	0.54	28	7.67		4.11			
Age Group: 65-74 years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	*****	*****	*****	*****	*****	5.23	-3.92	2.31	-2.69	0.54 (0.42, 0.68)	<0.001
Warfarin, 14-day episode gap		76,152	41,619.45	199.62	0.55	381	9.15		5.00			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	78,490	44,511.70	207.13	0.57	227	5.10	-2.98	2.89	-2.46	0.60 (0.51, 0.70)	<0.001
Warfarin, 14-day episode gap		99,966	66,240.37	242.03	0.66	535	8.08		5.35			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	33,044	8,002.26	88.45	0.24	60	7.50	-3.37	1.82	-0.82	0.69 (0.50, 0.96)	0.027
Warfarin, 14-day episode gap		33,044	8,002.26	88.45	0.24	87	10.87		2.63			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	55,145	16,478.00	109.14	0.30	113	6.86	-2.18	2.05	-0.65	0.76 (0.59, 0.97)	0.027
Warfarin, 14-day episode gap		55,145	16,478.00	109.14	0.30	149	9.04		2.70			

Table 13. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	33,044	14,659.16	162.03	0.44	82	5.59	-2.42	2.48	-2.00	0.66 (0.50, 0.86)	0.002
Warfarin, 14-day episode gap		33,044	18,465.48	204.11	0.56	148	8.01		4.48			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	55,145	34,404.74	227.88	0.62	170	4.94	-2.02	3.08	-1.21	0.71 (0.59, 0.87)	<0.001
Warfarin, 14-day episode gap		55,145	34,049.89	225.53	0.62	237	6.96		4.30			
Age Group: 75+ years												
Unmatched Analysis (Site-adjusted only)												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	38,143	16,712.51	160.04	0.44	149	8.92	-6.33	3.91	-4.41	0.55 (0.47, 0.66)	<0.001
Warfarin, 14-day episode gap		137,479	75,051.09	199.39	0.55	1,144	15.24		8.32			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	80,149	44,377.01	202.23	0.55	377	8.50	-5.99	4.70	-4.77	0.57 (0.51, 0.63)	<0.001
Warfarin, 14-day episode gap		177,554	116,078.61	238.79	0.65	1,682	14.49		9.47			
1:1 Matched Conditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	37,113	8,966.06	88.24	0.24	92	10.26	-8.59	2.48	-2.07	0.54 (0.42, 0.70)	<0.001
Warfarin, 14-day episode gap		37,113	8,966.06	88.24	0.24	169	18.85		4.55			

Table 13. Effect Estimates for Ischemic Stroke in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015, by Analysis Type and Age Group, 14-Day Episode Gap

Medical Product	Monitoring Period	Number of New Users	Person-Years at Risk	Average Person-Days at Risk	Average Person-Years at Risk	Number of Events	Incidence Rate per 1,000 Person-Years	Incidence Rate Difference per 1,000 Person-Years	Risk per 1,000 New Users	Difference in Risk per 1,000 New Users	Hazard Ratio (95% Confidence Interval)	Wald P-Value
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	68,152	19,311.70	103.50	0.28	201	10.41	-6.78	2.95	-1.92	0.61 (0.51, 0.72)	<0.001
Warfarin, 14-day episode gap		68,152	19,311.70	103.50	0.28	332	17.19		4.87			
1:1 Matched Unconditional Predefined Analysis; Caliper= 0.05												
Apixaban, 14-day episode gap	December 28, 2012 - September 30, 2015	37,113	16,253.12	159.96	0.44	146	8.98	-4.85	3.93	-3.85	0.62 (0.51, 0.76)	<0.001
Warfarin, 14-day episode gap		37,113	20,893.34	205.62	0.56	289	13.83		7.79			
Apixaban, 14-day episode gap	December 28, 2012 - December 31, 2016	68,152	39,481.39	211.59	0.58	337	8.54	-5.00	4.94	-3.02	0.63 (0.55, 0.72)	<0.001
Warfarin, 14-day episode gap		68,152	40,106.42	214.94	0.59	543	13.54		7.97			

*****Data are not presented in these cells due to a small sample size or to assure a small cell cannot be recalculated through the cells presented.

Figure 1a. Histogram Depicting Propensity Score Distributions of Apixaban and Warfarin Users (Unmatched Cohort) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015

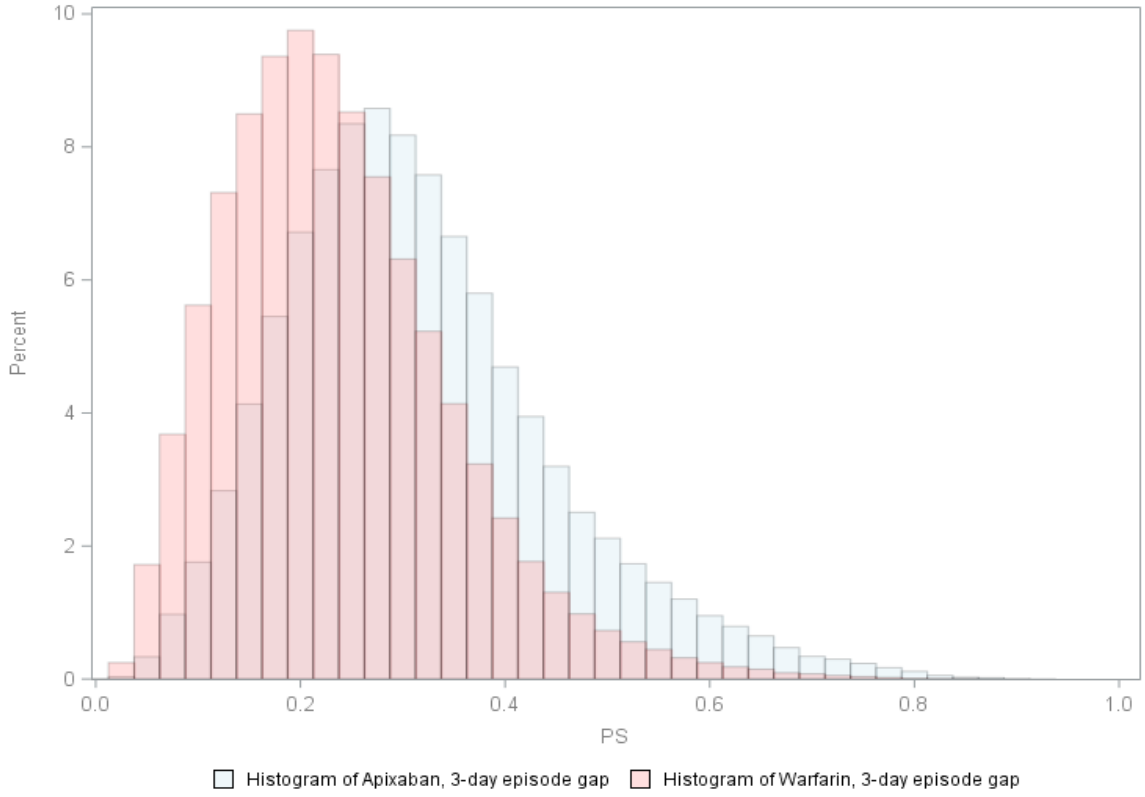


Figure 1b. Histogram Depicting Propensity Score Distributions of Apixaban and Warfarin Users (Matched Cohort, Matched Caliper = 0.05) in the Sentinel Distributed Database (SDD) between December 28, 2012 and September 30, 2015

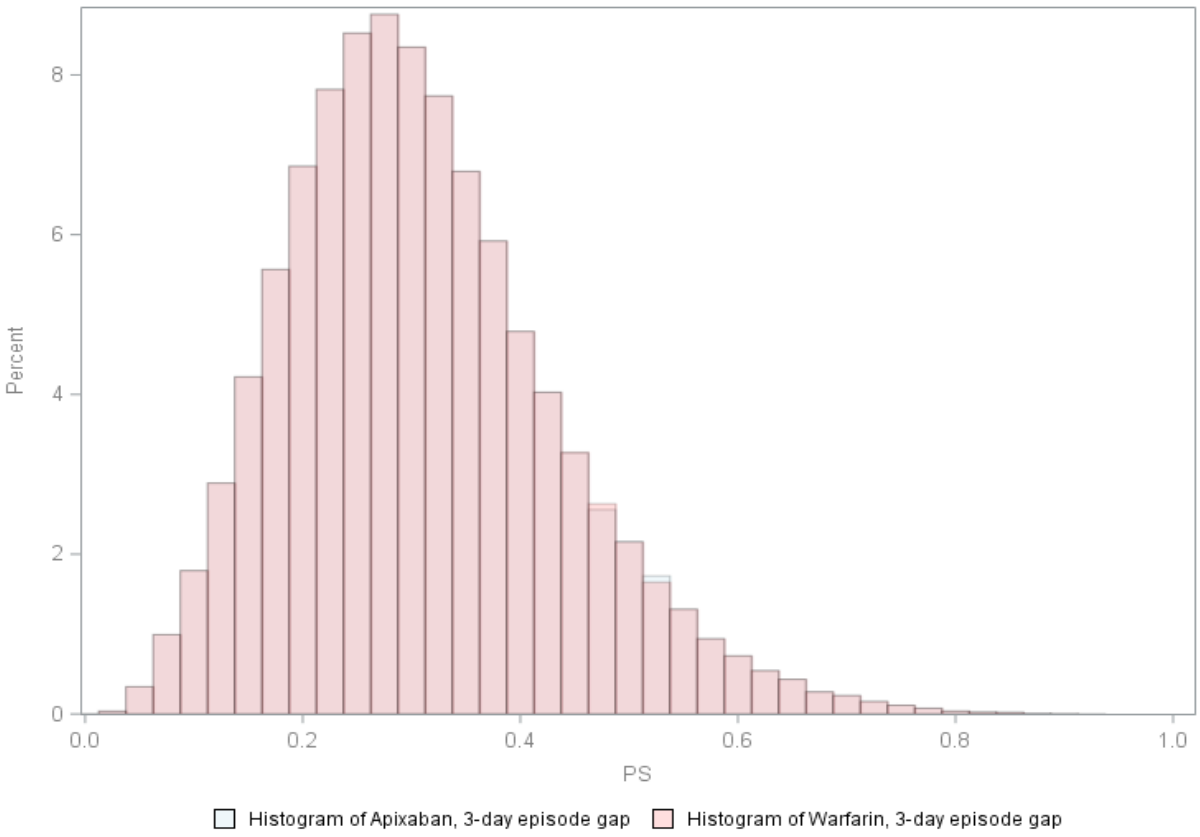


Figure 2a. Histogram Depicting Propensity Score Distributions of Apixaban and Warfarin Users (Unmatched Cohort) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016

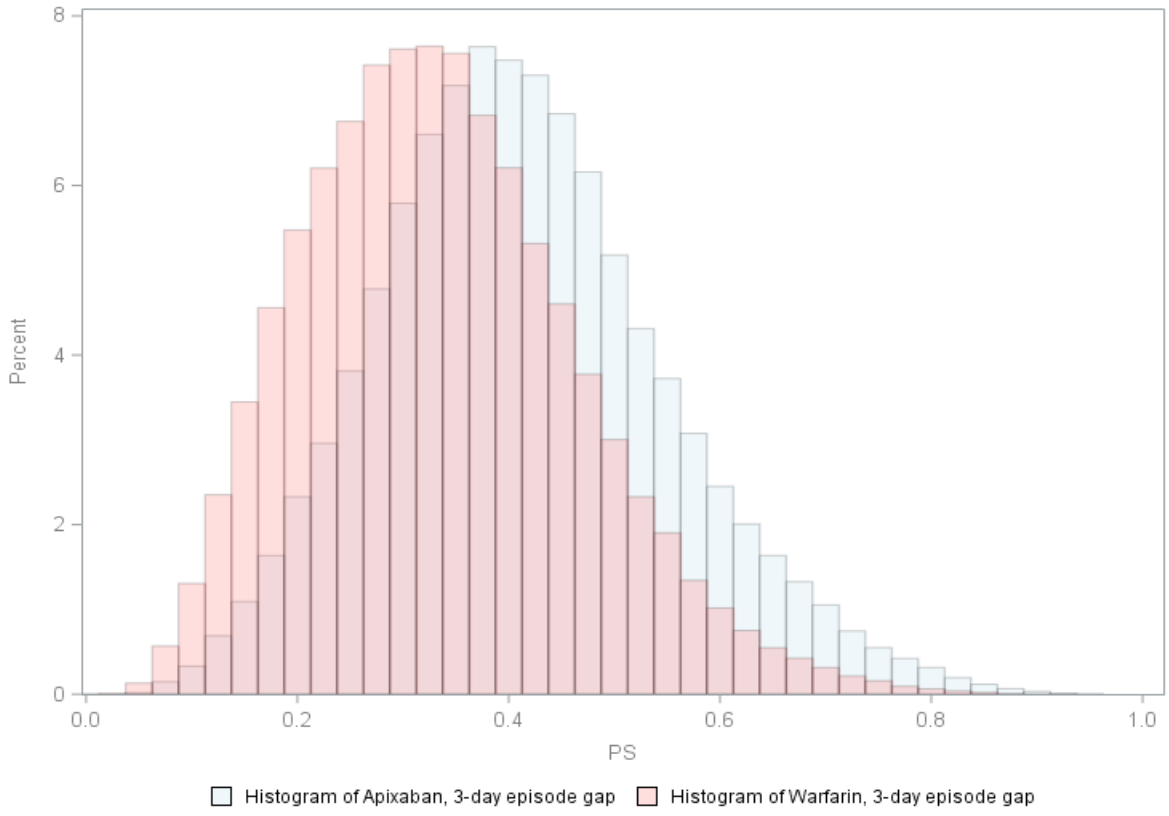
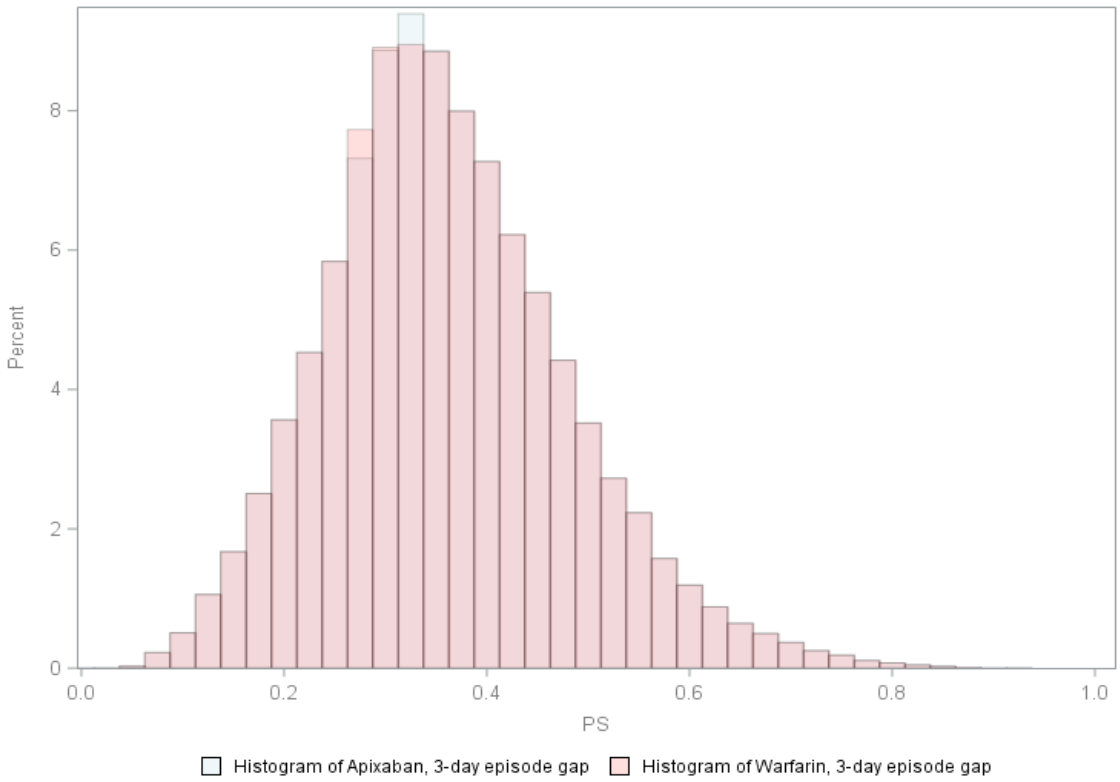


Figure 2b. Histogram Depicting Propensity Score Distributions of Apixaban and Warfarin Users (Matched Cohort, Matched Caliper = 0.05) in the Sentinel Distributed Database (SDD) between December 28, 2012 and December 31, 2016



Appendix A. Dates of Available Data for Each Data Partner (DP) as of Request Distribution Date (January 22, 2019)

DPID	DP Start Date[1]	DP End Date[1]
DP08	12/28/2012	12/31/2016

[1]The start and end dates are based on the minimum and maximum dates within each DP. The month with the maximum date must have at least 80% of the number of records in the previous month.

Appendix B. List of Generic and Brand Names of Medical Products Used to Define Exposures in this Request

Generic Name	Brand Name
Apixaban	Eliquis
Warfarin sodium	Warfarin
Warfarin sodium	Jantoven
Warfarin sodium	Coumadin

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
	Ischemic Stroke	
433.01	Occlusion and stenosis of basilar artery with cerebral infarction	ICD-9-CM
433.11	Occlusion and stenosis of carotid artery with cerebral infarction	ICD-9-CM
433.21	Occlusion and stenosis of vertebral artery with cerebral infarction	ICD-9-CM
433.31	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction	ICD-9-CM
433.81	Occlusion and stenosis of other specified precerebral artery with cerebral infarction	ICD-9-CM
433.91	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction	ICD-9-CM
434.01	Cerebral thrombosis with cerebral infarction	ICD-9-CM
434.11	Cerebral embolism with cerebral infarction	ICD-9-CM
434.91	Unspecified cerebral artery occlusion with cerebral infarction	ICD-9-CM
436	Acute, but ill-defined, cerebrovascular disease	ICD-9-CM
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar arteries	ICD-10-CM
I63.139	Cerebral infarction due to embolism of unspecified carotid artery	ICD-10-CM
I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid arteries	ICD-10-CM
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery	ICD-10-CM
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery	ICD-10-CM
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral arteries	ICD-10-CM
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery	ICD-10-CM
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries	ICD-10-CM
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery	ICD-10-CM
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery	ICD-10-CM
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery	ICD-10-CM
I67.89	Other cerebrovascular disease	ICD-10-CM
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery	ICD-10-CM
I63.011	Cerebral infarction due to thrombosis of right vertebral artery	ICD-10-CM
I63.012	Cerebral infarction due to thrombosis of left vertebral artery	ICD-10-CM
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries	ICD-10-CM
I63.02	Cerebral infarction due to thrombosis of basilar artery	ICD-10-CM
I63.031	Cerebral infarction due to thrombosis of right carotid artery	ICD-10-CM
I63.032	Cerebral infarction due to thrombosis of left carotid artery	ICD-10-CM
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries	ICD-10-CM
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery	ICD-10-CM
I63.09	Cerebral infarction due to thrombosis of other precerebral artery	ICD-10-CM
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery	ICD-10-CM
I63.111	Cerebral infarction due to embolism of right vertebral artery	ICD-10-CM
I63.112	Cerebral infarction due to embolism of left vertebral artery	ICD-10-CM
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries	ICD-10-CM
I63.12	Cerebral infarction due to embolism of basilar artery	ICD-10-CM
I63.131	Cerebral infarction due to embolism of right carotid artery	ICD-10-CM
I63.132	Cerebral infarction due to embolism of left carotid artery	ICD-10-CM
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries	ICD-10-CM
I63.19	Cerebral infarction due to embolism of other precerebral artery	ICD-10-CM
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral arteries	ICD-10-CM
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral arteries	ICD-10-CM
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries	ICD-10-CM
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries	ICD-10-CM
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries	ICD-10-CM
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries	ICD-10-CM
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery	ICD-10-CM
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery	ICD-10-CM
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries	ICD-10-CM
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery	ICD-10-CM
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery	ICD-10-CM
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery	ICD-10-CM
I63.323	Cerebral infarction due to thrombosis of bilateral anterior arteries	ICD-10-CM
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery	ICD-10-CM
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery	ICD-10-CM
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery	ICD-10-CM
I63.333	Cerebral infarction to thrombosis of bilateral posterior arteries	ICD-10-CM
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery	ICD-10-CM
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery	ICD-10-CM
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery	ICD-10-CM
I63.343	Cerebral infarction to thrombosis of bilateral cerebellar arteries	ICD-10-CM
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery	ICD-10-CM
I63.39	Cerebral infarction due to thrombosis of other cerebral artery	ICD-10-CM
I63.411	Cerebral infarction due to embolism of right middle cerebral artery	ICD-10-CM
I63.412	Cerebral infarction due to embolism of left middle cerebral artery	ICD-10-CM
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries	ICD-10-CM
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery	ICD-10-CM
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery	ICD-10-CM
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery	ICD-10-CM
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries	ICD-10-CM
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery	ICD-10-CM
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery	ICD-10-CM
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery	ICD-10-CM
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries	ICD-10-CM
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery	ICD-10-CM
I63.441	Cerebral infarction due to embolism of right cerebellar artery	ICD-10-CM
I63.442	Cerebral infarction due to embolism of left cerebellar artery	ICD-10-CM
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries	ICD-10-CM
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery	ICD-10-CM
I63.49	Cerebral infarction due to embolism of other cerebral artery	ICD-10-CM
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery	ICD-10-CM
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery	ICD-10-CM
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle arteries	ICD-10-CM
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery	ICD-10-CM
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery	ICD-10-CM
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery	ICD-10-CM
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior arteries	ICD-10-CM
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery	ICD-10-CM
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery	ICD-10-CM
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery	ICD-10-CM
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior arteries	ICD-10-CM
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery	ICD-10-CM
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery	ICD-10-CM
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries	ICD-10-CM
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery	ICD-10-CM
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic	ICD-10-CM
I63.8	Other cerebral infarction	ICD-10-CM
I63.9	Cerebral infarction, unspecified	ICD-10-CM
	Intracranial Hemorrhage	
430	Subarachnoid hemorrhage	ICD-9-CM
431	Intracerebral hemorrhage	ICD-9-CM
432	Other and unspecified intracranial hemorrhage	ICD-9-CM
432.0	Nontraumatic extradural hemorrhage	ICD-9-CM
432.1	Subdural hemorrhage	ICD-9-CM
432.9	Unspecified intracranial hemorrhage	ICD-9-CM
852.0	Subarachnoid hemorrhage following injury without mention of open intracranial wound	ICD-9-CM
852.00	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM
852.01	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM
852.02	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM
852.03	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM
852.04	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM
852.05	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM
852.06	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM
852.09	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM
852.2	Subdural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM
852.20	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM
852.21	Subdural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM
852.22	Subdural hemorrhage following injury, without mention of open intracranial wound, brief (less than one hour) loss of consciousness	ICD-9-CM
852.23	Subdural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM
852.24	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM
852.25	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM
852.26	Subdural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM
852.29	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM
852.4	Extradural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
852.40	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM
852.41	Extradural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM
852.42	Extradural hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM
852.43	Extradural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM
852.44	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM
852.45	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM
852.46	Extradural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM
852.49	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM
853.0	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound	ICD-9-CM
853.00	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM
853.01	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM
853.02	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM
853.03	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM
853.04	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to preexisting conscious level	ICD-9-CM
853.05	Other and unspecified intracranial hemorrhage following injury. Without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM
853.06	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM
853.09	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	ICD-10-CM
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM
I62.00	Nontraumatic subdural hemorrhage, unspecified	ICD-10-CM
I62.01	Nontraumatic acute subdural hemorrhage	ICD-10-CM
I62.02	Nontraumatic subacute subdural hemorrhage	ICD-10-CM
I62.03	Nontraumatic chronic subdural hemorrhage	ICD-10-CM
I62.1	Nontraumatic extradural hemorrhage	ICD-10-CM
I62.9	Nontraumatic intracranial hemorrhage, unspecified	ICD-10-CM
S06.340A	Traumatic hemorrhage of right cerebrum without loss of consciousness, initial encounter	ICD-10-CM
S06.341A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM
S06.342A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM
S06.343A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM
S06.344A	Traumatic hemorrhage of right cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM
S06.345A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM
S06.346A	Traumatic hemorrhage of right cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM
S06.347A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM
S06.348A	Traumatic hemorrhage of right cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM
S06.349A	Traumatic hemorrhage of right cerebrum with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM
S06.350A	Traumatic hemorrhage of left cerebrum without loss of consciousness, initial encounter	ICD-10-CM
S06.351A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM
S06.352A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM
S06.353A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM
S06.354A	Traumatic hemorrhage of left cerebrum with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
S06.355A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM
S06.356A	Traumatic hemorrhage of left cerebrum with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM
S06.357A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM
S06.358A	Traumatic hemorrhage of left cerebrum with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM
S06.359A	Traumatic hemorrhage of left cerebrum with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM
S06.360A	Traumatic hemorrhage of cerebrum, unspecified, without loss of consciousness, initial encounter	ICD-10-CM
S06.361A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM
S06.362A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM
S06.363A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 1 hours to 5 hours 59 minutes, initial encounter	ICD-10-CM
S06.364A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM
S06.365A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM
S06.366A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM
S06.367A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM
S06.368A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM
S06.369A	Traumatic hemorrhage of cerebrum, unspecified, with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM
S06.4X0A	Epidural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM
S06.4X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM
S06.4X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM
S06.4X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM
S06.4X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM
S06.4X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing	ICD-10-CM
S06.4X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM
S06.4X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM
S06.4X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to other causes prior to regaining consciousness, initial encounter	ICD-10-CM
S06.4X9A	Epidural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM
S06.5X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM
S06.5X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM
S06.5X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
S06.5X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM
S06.5X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM
S06.5X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM
S06.5X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM
S06.5X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter	ICD-10-CM
S06.5X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to other cause before regaining consciousness, initial encounter	ICD-10-CM
S06.5X9A	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM
S06.6X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter	ICD-10-CM
S06.6X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM
S06.6X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM
S06.6X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM
S06.6X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM
S06.6X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM
S06.6X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM
S06.6X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM
S06.6X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM
S06.6X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
	Gastrointestinal Bleeding - List 1	
455.2	Internal hemorrhoids with other complication	ICD-9-CM
455.5	External hemorrhoids with other complication	ICD-9-CM
455.8	Unspecified hemorrhoids with other complication	ICD-9-CM
456.0	Esophageal varices with bleeding	ICD-9-CM
456.20	Esophageal varices with bleeding in diseases classified elsewhere	ICD-9-CM
459.0	Unspecified hemorrhage	ICD-9-CM
530.7	Gastroesophageal laceration-hemorrhage syndrome	ICD-9-CM
530.82	Esophageal hemorrhage	ICD-9-CM
531.00	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM
531.20	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM
531.40	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM
532.00	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM
532.20	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM
532.40	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM
532.60	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM
533.00	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM
533.20	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM
533.40	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM
533.60	of obstruction	ICD-9-CM
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM
534.00	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM
534.20	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM
534.40	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM
534.60	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM
535.01	Acute gastritis with hemorrhage	ICD-9-CM
535.11	Atrophic gastritis with hemorrhage	ICD-9-CM
535.21	Gastric mucosal hypertrophy with hemorrhage	ICD-9-CM
535.31	Alcoholic gastritis with hemorrhage	ICD-9-CM
535.41	Other specified gastritis with hemorrhage	ICD-9-CM
535.51	Unspecified gastritis and gastroduodenitis with hemorrhage	ICD-9-CM
535.61	Duodenitis with hemorrhage	ICD-9-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
537.83	Angiodysplasia of stomach and duodenum with hemorrhage	ICD-9-CM
562.02	Diverticulosis of small intestine with hemorrhage	ICD-9-CM
562.03	Diverticulitis of small intestine with hemorrhage	ICD-9-CM
562.12	Diverticulosis of colon with hemorrhage	ICD-9-CM
562.13	Diverticulitis of colon with hemorrhage	ICD-9-CM
568.81	Hemoperitoneum (nontraumatic)	ICD-9-CM
569.3	Hemorrhage of rectum and anus	ICD-9-CM
569.85	Angiodysplasia of intestine with hemorrhage	ICD-9-CM
578.0	Hematemesis	ICD-9-CM
578.1	Blood in stool	ICD-9-CM
578.9	Hemorrhage of gastrointestinal tract, unspecified	ICD-9-CM
I85.01	Esophageal varices with bleeding	ICD-10-CM
I85.11	Secondary esophageal varices with bleeding	ICD-10-CM
K22.6	Gastro-esophageal laceration-hemorrhage syndrome	ICD-10-CM
K22.8	Other specified diseases of esophagus	ICD-10-CM
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM
K29.01	Acute gastritis with bleeding	ICD-10-CM
K29.21	Alcoholic gastritis with bleeding	ICD-10-CM
K29.31	Chronic superficial gastritis with bleeding	ICD-10-CM
K29.41	Chronic atrophic gastritis with bleeding	ICD-10-CM
K29.51	Unspecified chronic gastritis with bleeding	ICD-10-CM
K29.61	Other gastritis with bleeding	ICD-10-CM
K29.71	Gastritis, unspecified, with bleeding	ICD-10-CM
K29.81	Duodenitis with bleeding	ICD-10-CM
K29.91	Gastroduodenitis, unspecified, with bleeding	ICD-10-CM
K31.811	Angiodysplasia of stomach and duodenum with bleeding	ICD-10-CM
K55.21	Angiodysplasia of colon with hemorrhage	ICD-10-CM
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM
K57.01	Diverticulitis of small intestine with perforation and abscess with bleeding	ICD-10-CM
K57.11	Diverticulosis of small intestine without perforation or abscess with bleeding	ICD-10-CM
K57.13	Diverticulitis of small intestine without perforation or abscess with bleeding	ICD-10-CM
K57.21	Diverticulitis of large intestine with perforation and abscess with bleeding	ICD-10-CM
K57.31	Diverticulosis of large intestine without perforation or abscess with bleeding	ICD-10-CM
K57.33	Diverticulitis of large intestine without perforation or abscess with bleeding	ICD-10-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
K57.41	Diverticulitis of both small and large intestine with perforation and abscess with bleeding	ICD-10-CM
K57.51	Diverticulosis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM
K57.53	Diverticulitis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM
K57.81	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding	ICD-10-CM
K57.91	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM
K57.93	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM
K62.5	Hemorrhage of anus and rectum	ICD-10-CM
K64.0	First degree hemorrhoids	ICD-10-CM
K64.1	Second degree hemorrhoids	ICD-10-CM
K64.2	Third degree hemorrhoids	ICD-10-CM
K64.3	Fourth degree hemorrhoids	ICD-10-CM
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM
K64.8	Other hemorrhoids	ICD-10-CM
K66.1	Hemoperitoneum	ICD-10-CM
K92.0	Hematemesis	ICD-10-CM
K92.1	Melena	ICD-10-CM
K92.2	Gastrointestinal hemorrhage, unspecified	ICD-10-CM
R58	Hemorrhage, not elsewhere classified	ICD-10-CM
	Gastrointestinal Bleeding - List 2	
455.0	Internal hemorrhoids without mention of complication	ICD-9-CM
455.1	Internal thrombosed hemorrhoids	ICD-9-CM
455.3	External hemorrhoids without mention of complication	ICD-9-CM
455.4	External thrombosed hemorrhoids	ICD-9-CM
455.6	Unspecified hemorrhoids without mention of complication	ICD-9-CM
455.7	Unspecified thrombosed hemorrhoids	ICD-9-CM
531.1	Acute gastric ulcer with perforation	ICD-9-CM
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM
531.9	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM
532.1	Acute duodenal ulcer with perforation	ICD-9-CM
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM
532.9	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM
533.9	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM
534.9	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM
535.00	Acute gastritis without mention of hemorrhage	ICD-9-CM
535.10	Atrophic gastritis without mention of hemorrhage	ICD-9-CM
535.20	Gastric mucosal hypertrophy without mention of hemorrhage	ICD-9-CM

Appendix C. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Outcomes in this Request

Code	Description	Code Type
535.30	Alcoholic gastritis without mention of hemorrhage	ICD-9-CM
535.40	Other specified gastritis without mention of hemorrhage	ICD-9-CM
535.50	Unspecified gastritis and gastroduodenitis without mention of hemorrhage	ICD-9-CM
535.60	Duodenitis without mention of hemorrhage	ICD-9-CM
562.00	Diverticulosis of small intestine (without mention of hemorrhage)	ICD-9-CM
562.01	Diverticulitis of small intestine (without mention of hemorrhage)	ICD-9-CM
562.10	Diverticulosis of colon (without mention of hemorrhage)	ICD-9-CM
562.11	Diverticulitis of colon (without mention of hemorrhage)	ICD-9-CM
530.1	Esophagitis	ICD-9-CM
K29.00	Acute gastritis without bleeding	ICD-10-CM
K29.20	Alcoholic gastritis without bleeding	ICD-10-CM
K29.30	Chronic superficial gastritis without bleeding	ICD-10-CM
K29.40	Chronic atrophic gastritis without bleeding	ICD-10-CM
K29.50	Unspecified chronic gastritis without bleeding	ICD-10-CM
K29.60	Other gastritis without bleeding	ICD-10-CM
K29.70	Gastritis, unspecified, without bleeding	ICD-10-CM
K29.80	Duodenitis without bleeding	ICD-10-CM
K29.90	Gastroduodenitis, unspecified, without bleeding	ICD-10-CM
K57.00	Diverticulitis of small intestine with perforation and abscess without bleeding	ICD-10-CM
K57.10	Diverticulosis of small intestine without perforation or abscess without bleeding	ICD-10-CM
K57.12	Diverticulitis of small intestine without perforation or abscess without bleeding	ICD-10-CM
K57.20	Diverticulitis of large intestine with perforation and abscess without bleeding	ICD-10-CM
K57.30	Diverticulosis of large intestine without perforation or abscess without bleeding	ICD-10-CM
K57.32	Diverticulitis of large intestine without perforation or abscess without bleeding	ICD-10-CM
K57.40	Diverticulitis of both small and large intestine with perforation and abscess without bleeding	ICD-10-CM
K57.50	Diverticulosis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM
K57.52	Diverticulitis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM
K57.80	Diverticulitis of intestine, part unspecified, with perforation and abscess without bleeding	ICD-10-CM
K57.90	Diverticulosis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM
K57.92	Diverticulitis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM
K64.0	First degree hemorrhoids	ICD-10-CM
K64.1	Second degree hemorrhoids	ICD-10-CM
K64.2	Third degree hemorrhoids	ICD-10-CM
K64.3	Fourth degree hemorrhoids	ICD-10-CM
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM
K64.5	Perianal venous thrombosis	ICD-10-CM
K64.8	Other hemorrhoids	ICD-10-CM
K64.9	Unspecified hemorrhoids	ICD-10-CM

Appendix D. List of Generic and Brand Names of Medical Products Used to Define Exposure Incidence and Censoring Criteria in this Request

Generic Name	Brand Name
Apixaban	Eliquis
Dabigatran etexilate mesylate	Pradaxa
Edoxaban tosylate	Savaysa
Rivaroxaban	Xarelto
Warfarin sodium	Warfarin
Warfarin sodium	Coumadin
Warfarin sodium	Jantoven

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
	Atrial Fibrillation		
427.31	Atrial fibrillation	ICD-9-CM	Diagnosis
427.32	Atrial flutter	ICD-9-CM	Diagnosis
I48.0	Paroxysmal atrial fibrillation	ICD-10-CM	Diagnosis
I48.1	Persistent atrial fibrillation	ICD-10-CM	Diagnosis
I48.2	Chronic atrial fibrillation	ICD-10-CM	Diagnosis
I48.3	Typical atrial flutter	ICD-10-CM	Diagnosis
I48.4	Atypical atrial flutter	ICD-10-CM	Diagnosis
I48.91	Unspecified atrial fibrillation	ICD-10-CM	Diagnosis
I48.92	Unspecified atrial flutter	ICD-10-CM	Diagnosis
	Deep Vein Thrombosis		
453.40	Acute venous embolism and thrombosis of deep vessels of lower extremity	ICD-9-CM	Diagnosis
453.4	Acute venous embolism and thrombosis of unspecified deep vessels of lower	ICD-9-CM	Diagnosis
453.41	Acute venous embolism and thrombosis of deep vessels of proximal lower	ICD-9-CM	Diagnosis
453.42	Acute venous embolism and thrombosis of deep vessels of distal lower extremity	ICD-9-CM	Diagnosis
451.1	Phlebitis and thrombophlebitis of deep veins of lower extremities	ICD-9-CM	Diagnosis
451.11	Phlebitis and thrombophlebitis of femoral vein (deep) (superficial)	ICD-9-CM	Diagnosis
451.19	Phlebitis and thrombophlebitis of deep veins of lower extremities, other	ICD-9-CM	Diagnosis
451.2	Phlebitis and thrombophlebitis of lower extremities, unspecified	ICD-9-CM	Diagnosis
451.81	Phlebitis and thrombophlebitis of iliac vein	ICD-9-CM	Diagnosis
451.83	Phlebitis and thrombophlebitis of deep veins of upper extremities	ICD-9-CM	Diagnosis
453.84	Phlebitis and thrombophlebitis of upper extremities, unspecified	ICD-9-CM	Diagnosis
I80.10	Phlebitis and thrombophlebitis of unspecified femoral vein	ICD-10-CM	Diagnosis
I80.11	Phlebitis and thrombophlebitis of right femoral vein	ICD-10-CM	Diagnosis
I80.12	Phlebitis and thrombophlebitis of left femoral vein	ICD-10-CM	Diagnosis
I80.13	Phlebitis and thrombophlebitis of femoral vein, bilateral	ICD-10-CM	Diagnosis
I80.201	Phlebitis and thrombophlebitis of unspecified deep vessels of right lower extremity	ICD-10-CM	Diagnosis
I80.202	Phlebitis and thrombophlebitis of unspecified deep vessels of left lower extremity	ICD-10-CM	Diagnosis
I80.203	Phlebitis and thrombophlebitis of unspecified deep vessels of lower extremities,	ICD-10-CM	Diagnosis
I80.209	Phlebitis and thrombophlebitis of unspecified deep vessels of unspecified lower	ICD-10-CM	Diagnosis
I80.211	Phlebitis and thrombophlebitis of right iliac vein	ICD-10-CM	Diagnosis
I80.212	Phlebitis and thrombophlebitis of left iliac vein	ICD-10-CM	Diagnosis
I80.213	Phlebitis and thrombophlebitis of iliac vein, bilateral	ICD-10-CM	Diagnosis
I80.219	Phlebitis and thrombophlebitis of unspecified iliac vein	ICD-10-CM	Diagnosis
I80.221	Phlebitis and thrombophlebitis of right popliteal vein	ICD-10-CM	Diagnosis
I80.222	Phlebitis and thrombophlebitis of left popliteal vein	ICD-10-CM	Diagnosis
I80.223	Phlebitis and thrombophlebitis of popliteal vein, bilateral	ICD-10-CM	Diagnosis
I80.229	Phlebitis and thrombophlebitis of unspecified popliteal vein	ICD-10-CM	Diagnosis
I80.231	Phlebitis and thrombophlebitis of right tibial vein	ICD-10-CM	Diagnosis
I80.232	Phlebitis and thrombophlebitis of left tibial vein	ICD-10-CM	Diagnosis
I80.233	Phlebitis and thrombophlebitis of tibial vein, bilateral	ICD-10-CM	Diagnosis
I80.239	Phlebitis and thrombophlebitis of unspecified tibial vein	ICD-10-CM	Diagnosis
I80.291	Phlebitis and thrombophlebitis of other deep vessels of right lower extremity	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
I80.292	Phlebitis and thrombophlebitis of other deep vessels of left lower extremity	ICD-10-CM	Diagnosis
I80.293	Phlebitis and thrombophlebitis of other deep vessels of lower extremity, bilateral	ICD-10-CM	Diagnosis
I80.299	Phlebitis and thrombophlebitis of other deep vessels of unspecified lower extremity	ICD-10-CM	Diagnosis
I80.3	Phlebitis and thrombophlebitis of lower extremities, unspecified	ICD-10-CM	Diagnosis
I80.8	Phlebitis and thrombophlebitis of other sites	ICD-10-CM	Diagnosis
I82.401	Acute embolism and thrombosis of unspecified deep veins of right lower extremity	ICD-10-CM	Diagnosis
I82.402	Acute embolism and thrombosis of unspecified deep veins of left lower extremity	ICD-10-CM	Diagnosis
I82.403	Acute embolism and thrombosis of unspecified deep veins of lower extremity,	ICD-10-CM	Diagnosis
I82.409	Acute embolism and thrombosis of unspecified deep veins of unspecified lower	ICD-10-CM	Diagnosis
I82.411	Acute embolism and thrombosis of right femoral vein	ICD-10-CM	Diagnosis
I82.412	Acute embolism and thrombosis of left femoral vein	ICD-10-CM	Diagnosis
I82.413	Acute embolism and thrombosis of femoral vein, bilateral	ICD-10-CM	Diagnosis
I82.419	Acute embolism and thrombosis of unspecified femoral vein	ICD-10-CM	Diagnosis
I82.421	Acute embolism and thrombosis of right iliac vein	ICD-10-CM	Diagnosis
I82.422	Acute embolism and thrombosis of left iliac vein	ICD-10-CM	Diagnosis
I82.423	Acute embolism and thrombosis of iliac vein, bilateral	ICD-10-CM	Diagnosis
I82.429	Acute embolism and thrombosis of unspecified iliac vein	ICD-10-CM	Diagnosis
I82.431	Acute embolism and thrombosis of right popliteal vein	ICD-10-CM	Diagnosis
I82.432	Acute embolism and thrombosis of left popliteal vein	ICD-10-CM	Diagnosis
I82.433	Acute embolism and thrombosis of popliteal vein, bilateral	ICD-10-CM	Diagnosis
I82.439	Acute embolism and thrombosis of unspecified popliteal vein	ICD-10-CM	Diagnosis
I82.441	Acute embolism and thrombosis of right tibial vein	ICD-10-CM	Diagnosis
I82.442	Acute embolism and thrombosis of left tibial vein	ICD-10-CM	Diagnosis
I82.443	Acute embolism and thrombosis of tibial vein, bilateral	ICD-10-CM	Diagnosis
I82.449	Acute embolism and thrombosis of unspecified tibial vein	ICD-10-CM	Diagnosis
I82.491	Acute embolism and thrombosis of other specified deep vein of right lower	ICD-10-CM	Diagnosis
I82.492	Acute embolism and thrombosis of other specified deep vein of left lower extremity	ICD-10-CM	Diagnosis
I82.493	Acute embolism and thrombosis of other specified deep vein of lower extremity,	ICD-10-CM	Diagnosis
I82.499	Acute embolism and thrombosis of other specified deep vein of unspecified lower extremity	ICD-10-CM	Diagnosis
I82.4Y1	Acute embolism and thrombosis of unspecified deep veins of right proximal lower extremity	ICD-10-CM	Diagnosis
I82.4Y2	Acute embolism and thrombosis of unspecified deep veins of left proximal lower	ICD-10-CM	Diagnosis
I82.4Y3	Acute embolism and thrombosis of unspecified deep veins of proximal lower extremity, bilateral	ICD-10-CM	Diagnosis
I82.4Y9	Acute embolism and thrombosis of unspecified deep veins of unspecified proximal lower extremity	ICD-10-CM	Diagnosis
I82.4Z1	Acute embolism and thrombosis of unspecified deep veins of right distal lower	ICD-10-CM	Diagnosis
I82.4Z2	Acute embolism and thrombosis of unspecified deep veins of left distal lower	ICD-10-CM	Diagnosis
I82.4Z3	Acute embolism and thrombosis of unspecified deep veins of distal lower extremity, bilateral	ICD-10-CM	Diagnosis
I82.4Z9	Acute embolism and thrombosis of unspecified deep veins of unspecified distal lower extremity	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
I82.A11	Acute embolism and thrombosis of right axillary vein	ICD-10-CM	Diagnosis
I82.A12	Acute embolism and thrombosis of left axillary vein	ICD-10-CM	Diagnosis
I82.A13	Acute embolism and thrombosis of axillary vein, bilateral	ICD-10-CM	Diagnosis
I82.A19	Acute embolism and thrombosis of unspecified axillary vein	ICD-10-CM	Diagnosis
	Dialysis		
792.5	Cloudy (hemodialysis) (peritoneal) dialysis affluent	ICD-9-CM	Diagnosis
V45.1	Renal dialysis status	ICD-9-CM	Diagnosis
V45.11	Renal dialysis status	ICD-9-CM	Diagnosis
V45.12	Noncompliance with renal dialysis	ICD-9-CM	Diagnosis
V56.0	Encounter for extracorporeal dialysis	ICD-9-CM	Diagnosis
V56.1	Fitting and adjustment of extracorporeal dialysis catheter	ICD-9-CM	Diagnosis
V56.2	Fitting and adjustment of peritoneal dialysis catheter	ICD-9-CM	Diagnosis
V56.3	Encounter for adequacy testing for dialysis	ICD-9-CM	Diagnosis
V56.31	Encounter for adequacy testing for hemodialysis	ICD-9-CM	Diagnosis
V56.32	Encounter for adequacy testing for peritoneal dialysis	ICD-9-CM	Diagnosis
V56.8	Encounter other dialysis	ICD-9-CM	Diagnosis
R88.0	Cloudy (hemodialysis) (peritoneal) dialysis effluent	ICD-10-CM	Diagnosis
Z49.01	Encounter for fitting and adjustment of extracorporeal dialysis catheter	ICD-10-CM	Diagnosis
Z49.02	Encounter for fitting and adjustment of peritoneal dialysis catheter	ICD-10-CM	Diagnosis
Z49.31	Encounter for adequacy testing for hemodialysis	ICD-10-CM	Diagnosis
Z49.32	Encounter for adequacy testing for peritoneal dialysis	ICD-10-CM	Diagnosis
Z91.15	Patient's noncompliance with renal dialysis	ICD-10-CM	Diagnosis
Z99.2	Dependence on renal dialysis	ICD-10-CM	Diagnosis
90935	Hemodialysis procedure with single evaluation by a physician or other qualified health care professional	CPT-4	Procedure
90937	Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription	CPT-4	Procedure
90939	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator dilution method, hook-up; transcutaneous measurement and disconnection	CPT-4	Procedure
90940	Hemodialysis access flow study to determine blood flow in grafts and arteriovenous fistulae by an indicator method	CPT-4	Procedure
90941	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90942	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90943	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90944	Hemodialysis, For Acute Renal Failure And Or Intoxication,	CPT-4	Procedure
90945	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies), with single evaluation by a physician or other qualified health care professional	CPT-4	Procedure
90947	Dialysis procedure other than hemodialysis (eg, peritoneal dialysis, hemofiltration, or other continuous renal replacement therapies) requiring repeated evaluations by a physician or other qualified health care professional, with or without substantial revision of dialysis prescription	CPT-4	Procedure
90951	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
90952	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90953	End-stage renal disease (ESRD) related services monthly, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90954	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90955	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90956	End-stage renal disease (ESRD) related services monthly, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90957	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90958	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90959	End-stage renal disease (ESRD) related services monthly, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90960	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 4 or more face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure
90961	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 2-3 face-to-face visits by a physician or other qualified health care professional per month	CPT-4	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
90962	End-stage renal disease (ESRD) related services monthly, for patients 20 years of age and older; with 1 face-to-face visit by a physician or other qualified health care professional per month	CPT-4	Procedure
90963	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients younger than 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90964	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 2-11 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90965	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 12-19 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	CPT-4	Procedure
90966	End-stage renal disease (ESRD) related services for home dialysis per full month, for patients 20 years of age and older	CPT-4	Procedure
90967	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients younger than 2 years of age	CPT-4	Procedure
90968	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 2-11 years of age	CPT-4	Procedure
90969	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 12-19 years of age	CPT-4	Procedure
90970	End-stage renal disease (ESRD) related services for dialysis less than a full month of service, per day; for patients 20 years of age and older	CPT-4	Procedure
90976	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90977	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90978	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90979	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90982	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90983	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90984	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90985	Peritoneal Dialysis For End-stage Renal Disease (esrd),	CPT-4	Procedure
90988	Supervision Of Hemodialysis In Hospital Or Other Facility (excluding Home Dialysis), On Monthly Basis	CPT-4	Procedure
90989	Dialysis training, patient, including helper where applicable, any mode, completed	CPT-4	Procedure
90990	Hemodialysis Training And/or Counseling	CPT-4	Procedure
90991	Home Hemodialysis Care, Outpatient, For Those Services Either Provided By The Physician Primarily Responsible	CPT-4	Procedure
90992	Peritoneal Dialysis Training And/or Counseling	CPT-4	Procedure
90993	Dialysis training, patient, including helper where applicable, any mode, course not completed, per training session	CPT-4	Procedure
90994	Supervision Of Chronic Ambulatory Peritoneal Dialysis (capd), Home Or Out-patient (monthly)	CPT-4	Procedure
90995	End Stage Renal Disease (esrd) Related Services, Per Full Month	CPT-4	Procedure
90996	Continuous Arteriovenous Hemofiltration (cavh) (per Day)	CPT-4	Procedure
90997	Hemoperfusion (eg, with activated charcoal or resin)	CPT-4	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
90998	End Stage Renal Disease (esrd) Related Services (less Than Full Month), Per Day	CPT-4	Procedure
90999	Unlisted dialysis procedure, inpatient or outpatient	CPT-4	Procedure
	Joint Replacement		
V43.6	Joint replaced by other means	ICD-9-CM	Diagnosis
V43.60	Unspecified joint replacement	ICD-9-CM	Diagnosis
V43.61	Shoulder joint replacement	ICD-9-CM	Diagnosis
V43.62	Elbow joint replacement	ICD-9-CM	Diagnosis
V43.63	Wrist joint replacement	ICD-9-CM	Diagnosis
V43.64	Hip joint replacement	ICD-9-CM	Diagnosis
V43.65	Knee joint replacement	ICD-9-CM	Diagnosis
V43.66	Ankle joint replacement	ICD-9-CM	Diagnosis
V43.69	Other joint replacement	ICD-9-CM	Diagnosis
81.5	Joint Replacement Lower Extremity	ICD-9-CM	Procedure
81.51	Total Hip Replacement	ICD-9-CM	Procedure
81.52	Partial Hip Replacement	ICD-9-CM	Procedure
81.53	Revision Of Hip Replacement Nos	ICD-9-CM	Procedure
81.54	Total Knee Replacement	ICD-9-CM	Procedure
81.55	Revision Of Knee Replacement Nos	ICD-9-CM	Procedure
81.56	Total Ankle Replacement	ICD-9-CM	Procedure
81.57	Replacement Of Joint Of Foot&Toe	ICD-9-CM	Procedure
81.59	Rev Joint Replcmt Lower Extrem Nec	ICD-9-CM	Procedure
81.8	Arthroplasty&Repair Shoulder&Elbow	ICD-9-CM	Procedure
81.8	Other Total Shoulder Replacement	ICD-9-CM	Procedure
81.81	Partial Shoulder Replacement	ICD-9-CM	Procedure
81.82	Repair Recurrent Disloc Shoulder	ICD-9-CM	Procedure
81.83	Other Repair Of Shoulder	ICD-9-CM	Procedure
81.84	Total Elbow Replacement	ICD-9-CM	Procedure
81.85	Other Repair Of Elbow	ICD-9-CM	Procedure
24363	Replace Elbow Joint	CPT-4	Procedure
27130	Total Hip Arthroplasty	CPT-4	Procedure
27132	Total Hip Arthroplasty	CPT-4	Procedure
27134	Revise Hip Joint Replacement	CPT-4	Procedure
27137	Revise Hip Joint Replacement	CPT-4	Procedure
27138	Revise Hip Joint Replacement	CPT-4	Procedure
27447	Total Knee Arthroplasty	CPT-4	Procedure
Z96.60	Presence of unspecified orthopedic joint implant	ICD-10-CM	Diagnosis
Z96.611	Presence of right artificial shoulder joint	ICD-10-CM	Diagnosis
Z96.612	Presence of left artificial shoulder joint	ICD-10-CM	Diagnosis
Z96.619	Presence of unspecified artificial shoulder joint	ICD-10-CM	Diagnosis
Z96.621	Presence of right artificial elbow joint	ICD-10-CM	Diagnosis
Z96.622	Presence of left artificial elbow joint	ICD-10-CM	Diagnosis
Z96.629	Presence of unspecified artificial elbow joint	ICD-10-CM	Diagnosis
Z96.631	Presence of right artificial wrist joint	ICD-10-CM	Diagnosis
Z96.632	Presence of left artificial wrist joint	ICD-10-CM	Diagnosis
Z96.639	Presence of unspecified artificial wrist joint	ICD-10-CM	Diagnosis
Z96.641	Presence of right artificial hip joint	ICD-10-CM	Diagnosis
Z96.642	Presence of left artificial hip joint	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
Z96.643	Presence of artificial hip joint, bilateral	ICD-10-CM	Diagnosis
Z96.649	Presence of unspecified artificial hip joint	ICD-10-CM	Diagnosis
Z96.651	Presence of right artificial knee joint	ICD-10-CM	Diagnosis
Z96.652	Presence of left artificial knee joint	ICD-10-CM	Diagnosis
Z96.653	Presence of artificial knee joint, bilateral	ICD-10-CM	Diagnosis
Z96.659	Presence of unspecified artificial knee joint	ICD-10-CM	Diagnosis
Z96.661	Presence of right artificial ankle joint	ICD-10-CM	Diagnosis
Z96.662	Presence of left artificial ankle joint	ICD-10-CM	Diagnosis
Z96.669	Presence of unspecified artificial ankle joint	ICD-10-CM	Diagnosis
Z96.691	Finger-joint replacement of right hand	ICD-10-CM	Diagnosis
Z96.692	Finger-joint replacement of left hand	ICD-10-CM	Diagnosis
Z96.693	Finger-joint replacement, bilateral	ICD-10-CM	Diagnosis
Z96.698	Presence of other orthopedic joint implants	ICD-10-CM	Diagnosis
Z96.7	Presence of other bone and tendon implants	ICD-10-CM	Diagnosis
0RQE0ZZ	Repair Right Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RQE3ZZ	Repair Right Sternoclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQE4ZZ	Repair Right Sternoclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQEXZZ	Repair Right Sternoclavicular Joint, External Approach	ICD-10-PCS	Procedure
0RQF0ZZ	Repair Left Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RQF3ZZ	Repair Left Sternoclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQF4ZZ	Repair Left Sternoclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQFXZZ	Repair Left Sternoclavicular Joint, External Approach	ICD-10-PCS	Procedure
0RQG0ZZ	Repair Right Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RQG3ZZ	Repair Right Acromioclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQG4ZZ	Repair Right Acromioclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQGXZZ	Repair Right Acromioclavicular Joint, External Approach	ICD-10-PCS	Procedure
0RQH0ZZ	Repair Left Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RQH3ZZ	Repair Left Acromioclavicular Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQH4ZZ	Repair Left Acromioclavicular Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQHXZZ	Repair Left Acromioclavicular Joint, External Approach	ICD-10-PCS	Procedure
0RQJ0ZZ	Repair Right Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
0RQJ3ZZ	Repair Right Shoulder Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQJ4ZZ	Repair Right Shoulder Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQJXZZ	Repair Right Shoulder Joint, External Approach	ICD-10-PCS	Procedure
0RQK0ZZ	Repair Left Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
0RQK3ZZ	Repair Left Shoulder Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQK4ZZ	Repair Left Shoulder Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQKXZZ	Repair Left Shoulder Joint, External Approach	ICD-10-PCS	Procedure
0RQL0ZZ	Repair Right Elbow Joint, Open Approach	ICD-10-PCS	Procedure
0RQL3ZZ	Repair Right Elbow Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQL4ZZ	Repair Right Elbow Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQLXZZ	Repair Right Elbow Joint, External Approach	ICD-10-PCS	Procedure
0RQM0ZZ	Repair Left Elbow Joint, Open Approach	ICD-10-PCS	Procedure
0RQM3ZZ	Repair Left Elbow Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0RQM4ZZ	Repair Left Elbow Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RQMXZZ	Repair Left Elbow Joint, External Approach	ICD-10-PCS	Procedure
0RRE07Z	Replacement of Right Sternoclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0RRE0JZ	Replacement of Right Sternoclavicular Joint with Synthetic Substitute, Open	ICD-10-PCS	Procedure
0RRE0KZ	Replacement of Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRF07Z	Replacement of Left Sternoclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRF0JZ	Replacement of Left Sternoclavicular Joint with Synthetic Substitute, Open	ICD-10-PCS	Procedure
0RRF0KZ	Replacement of Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRG07Z	Replacement of Right Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRG0JZ	Replacement of Right Acromioclavicular Joint with Synthetic Substitute, Open	ICD-10-PCS	Procedure
0RRG0KZ	Replacement of Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRH07Z	Replacement of Left Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRH0JZ	Replacement of Left Acromioclavicular Joint with Synthetic Substitute, Open	ICD-10-PCS	Procedure
0RRH0KZ	Replacement of Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRJ07Z	Replacement of Right Shoulder Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RRJ0J6	Replacement of Right Shoulder Joint with Synthetic Substitute, Humeral Surface, Open Approach	ICD-10-PCS	Procedure
0RRJ0J7	Replacement of Right Shoulder Joint with Synthetic Substitute, Glenoid Surface, Open Approach	ICD-10-PCS	Procedure
0RRJ0JZ	Replacement of Right Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RRJ0KZ	Replacement of Right Shoulder Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRK07Z	Replacement of Left Shoulder Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RRK0J6	Replacement of Left Shoulder Joint with Synthetic Substitute, Humeral Surface, Open Approach	ICD-10-PCS	Procedure
0RRK0J7	Replacement of Left Shoulder Joint with Synthetic Substitute, Glenoid Surface, Open Approach	ICD-10-PCS	Procedure
0RRK0JZ	Replacement of Left Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RRK0KZ	Replacement of Left Shoulder Joint with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RRL07Z	Replacement of Right Elbow Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RRL0JZ	Replacement of Right Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RRL0KZ	Replacement of Right Elbow Joint with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RRM07Z	Replacement of Left Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RRM0JZ	Replacement of Left Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RRM0KZ	Replacement of Left Elbow Joint with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RSE04Z	Reposition Right Sternoclavicular Joint with Internal Fixation Device, Open	ICD-10-PCS	Procedure
0RSE0ZZ	Reposition Right Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RSF04Z	Reposition Left Sternoclavicular Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0RSF0ZZ	Reposition Left Sternoclavicular Joint, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0RSG04Z	Reposition Right Acromioclavicular Joint with Internal Fixation Device, Open	ICD-10-PCS	Procedure
0RSG0ZZ	Reposition Right Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RSH04Z	Reposition Left Acromioclavicular Joint with Internal Fixation Device, Open	ICD-10-PCS	Procedure
0RSH0ZZ	Reposition Left Acromioclavicular Joint, Open Approach	ICD-10-PCS	Procedure
0RSJ04Z	Reposition Right Shoulder Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0RSJ0ZZ	Reposition Right Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
0RSK04Z	Reposition Left Shoulder Joint with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0RSK0ZZ	Reposition Left Shoulder Joint, Open Approach	ICD-10-PCS	Procedure
0RUE07Z	Supplement Right Sternoclavicular Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUE0JZ	Supplement Right Sternoclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUE0KZ	Supplement Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUE37Z	Supplement Right Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUE3JZ	Supplement Right Sternoclavicular Joint with Synthetic Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUE3KZ	Supplement Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUE47Z	Supplement Right Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUE4JZ	Supplement Right Sternoclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUE4KZ	Supplement Right Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUF07Z	Supplement Left Sternoclavicular Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUF0JZ	Supplement Left Sternoclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUF0KZ	Supplement Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUF37Z	Supplement Left Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUF3JZ	Supplement Left Sternoclavicular Joint with Synthetic Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUF3KZ	Supplement Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUF47Z	Supplement Left Sternoclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUF4JZ	Supplement Left Sternoclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUF4KZ	Supplement Left Sternoclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUG07Z	Supplement Right Acromioclavicular Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUG0JZ	Supplement Right Acromioclavicular Joint with Synthetic Substitute, Open	ICD-10-PCS	Procedure
0RUG0KZ	Supplement Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUG37Z	Supplement Right Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0RUG3JZ	Supplement Right Acromioclavicular Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUG3KZ	Supplement Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUG47Z	Supplement Right Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUG4JZ	Supplement Right Acromioclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUG4KZ	Supplement Right Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUH07Z	Supplement Left Acromioclavicular Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUH0JZ	Supplement Left Acromioclavicular Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUH0KZ	Supplement Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUH37Z	Supplement Left Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUH3JZ	Supplement Left Acromioclavicular Joint with Synthetic Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUH3KZ	Supplement Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUH47Z	Supplement Left Acromioclavicular Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUH4JZ	Supplement Left Acromioclavicular Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUH4KZ	Supplement Left Acromioclavicular Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUJ07Z	Supplement Right Shoulder Joint with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUJ0JZ	Supplement Right Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUJ0KZ	Supplement Right Shoulder Joint with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUJ37Z	Supplement Right Shoulder Joint with Autologous Tissue Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUJ3JZ	Supplement Right Shoulder Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUJ3KZ	Supplement Right Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUJ47Z	Supplement Right Shoulder Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUJ4JZ	Supplement Right Shoulder Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUJ4KZ	Supplement Right Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUK07Z	Supplement Left Shoulder Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUK0JZ	Supplement Left Shoulder Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUK0KZ	Supplement Left Shoulder Joint with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUK37Z	Supplement Left Shoulder Joint with Autologous Tissue Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUK3JZ	Supplement Left Shoulder Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0RUK3KZ	Supplement Left Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUK47Z	Supplement Left Shoulder Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUK4JZ	Supplement Left Shoulder Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUK4KZ	Supplement Left Shoulder Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUL07Z	Supplement Right Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUL0JZ	Supplement Right Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUL0KZ	Supplement Right Elbow Joint with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
0RUL37Z	Supplement Right Elbow Joint with Autologous Tissue Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUL3JZ	Supplement Right Elbow Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUL3KZ	Supplement Right Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUL47Z	Supplement Right Elbow Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUL4JZ	Supplement Right Elbow Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUL4KZ	Supplement Right Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUM07Z	Supplement Left Elbow Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUM0JZ	Supplement Left Elbow Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0RUM0KZ	Supplement Left Elbow Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0RUM37Z	Supplement Left Elbow Joint with Autologous Tissue Substitute, Percutaneous	ICD-10-PCS	Procedure
0RUM3JZ	Supplement Left Elbow Joint with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUM3KZ	Supplement Left Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0RUM47Z	Supplement Left Elbow Joint with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUM4JZ	Supplement Left Elbow Joint with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0RUM4KZ	Supplement Left Elbow Joint with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SR9019	Replacement of Right Hip Joint with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR901A	Replacement of Right Hip Joint with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR901Z	Replacement of Right Hip Joint with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9029	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR902A	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SR902Z	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9039	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR903A	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR903Z	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9049	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR904A	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR904Z	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR907Z	Replacement of Right Hip Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SR90J9	Replacement of Right Hip Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR90JA	Replacement of Right Hip Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR90JZ	Replacement of Right Hip Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR90KZ	Replacement of Right Hip Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA009	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA00A	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA00Z	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA019	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA01A	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA01Z	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA039	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA03A	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA03Z	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA07Z	Replacement of Right Hip Joint, Acetabular Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA0J9	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA0JA	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SRA0JZ	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA0KZ	Replacement of Right Hip Joint, Acetabular Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB019	Replacement of Left Hip Joint with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRB01A	Replacement of Left Hip Joint with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRB01Z	Replacement of Left Hip Joint with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB029	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRB02A	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRB02Z	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB039	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRB03A	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRB03Z	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB049	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRB04A	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRB04Z	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB07Z	Replacement of Left Hip Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB0J9	Replacement of Left Hip Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRB0JA	Replacement of Left Hip Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRB0JZ	Replacement of Left Hip Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB0KZ	Replacement of Left Hip Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRC07Z	Replacement of Right Knee Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRC0J9	Replacement of Right Knee Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRC0JA	Replacement of Right Knee Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRC0JZ	Replacement of Right Knee Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRC0KZ	Replacement of Right Knee Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRC0L9	Replacement of Right Knee Joint with Unicondylar Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SRC0LA	Replacement of Right Knee Joint with Unicondylar Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRC0LZ	Replacement of Right Knee Joint with Unicondylar Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRD07Z	Replacement of Left Knee Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRD0J9	Replacement of Left Knee Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRD0JA	Replacement of Left Knee Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRD0JZ	Replacement of Left Knee Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRD0KZ	Replacement of Left Knee Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRD0L9	Replacement of Left Knee Joint with Unicondylar Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRD0LA	Replacement of Left Knee Joint with Unicondylar Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRD0LZ	Replacement of Left Knee Joint with Unicondylar Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRE009	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRE00A	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRE00Z	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRE019	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRE01A	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRE01Z	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRE039	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRE03A	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRE03Z	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRE07Z	Replacement of Left Hip Joint, Acetabular Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRE0J9	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRE0JA	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRE0JZ	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRE0KZ	Replacement of Left Hip Joint, Acetabular Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SRF07Z	Replacement of Right Ankle Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRF0J9	Replacement of Right Ankle Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRF0JA	Replacement of Right Ankle Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRF0JZ	Replacement of Right Ankle Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRF0KZ	Replacement of Right Ankle Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRG07Z	Replacement of Left Ankle Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRG0J9	Replacement of Left Ankle Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRG0JA	Replacement of Left Ankle Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRG0JZ	Replacement of Left Ankle Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRG0KZ	Replacement of Left Ankle Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRH07Z	Replacement of Right Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRH0JZ	Replacement of Right Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRH0KZ	Replacement of Right Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRJ07Z	Replacement of Left Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRJ0JZ	Replacement of Left Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRJ0KZ	Replacement of Left Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRK07Z	Replacement of Right Metatarsal-Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRK0JZ	Replacement of Right Metatarsal-Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRK0KZ	Replacement of Right Metatarsal-Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRL07Z	Replacement of Left Metatarsal-Tarsal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRL0JZ	Replacement of Left Metatarsal-Tarsal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRL0KZ	Replacement of Left Metatarsal-Tarsal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRM07Z	Replacement of Right Metatarsal-Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRM0JZ	Replacement of Right Metatarsal-Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRM0KZ	Replacement of Right Metatarsal-Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRN07Z	Replacement of Left Metatarsal-Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SRN0JZ	Replacement of Left Metatarsal-Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRN0KZ	Replacement of Left Metatarsal-Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRP07Z	Replacement of Right Toe Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRP0JZ	Replacement of Right Toe Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRP0KZ	Replacement of Right Toe Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRQ07Z	Replacement of Left Toe Phalangeal Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRQ0JZ	Replacement of Left Toe Phalangeal Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRQ0KZ	Replacement of Left Toe Phalangeal Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRR019	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRR01A	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRR01Z	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRR039	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRR03A	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRR03Z	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRR07Z	Replacement of Right Hip Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRR0J9	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRR0JA	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRR0JZ	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRR0KZ	Replacement of Right Hip Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS019	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRS01A	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRS01Z	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS039	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRS03A	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SRS03Z	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS07Z	Replacement of Left Hip Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS0J9	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRS0JA	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRS0JZ	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS0KZ	Replacement of Left Hip Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRT07Z	Replacement of Right Knee Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRT0J9	Replacement of Right Knee Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRT0JA	Replacement of Right Knee Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRT0JZ	Replacement of Right Knee Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRT0KZ	Replacement of Right Knee Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRU07Z	Replacement of Left Knee Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRU0J9	Replacement of Left Knee Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRU0JA	Replacement of Left Knee Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRU0JZ	Replacement of Left Knee Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRU0KZ	Replacement of Left Knee Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRV07Z	Replacement of Right Knee Joint, Tibial Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRV0J9	Replacement of Right Knee Joint, Tibial Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRV0JA	Replacement of Right Knee Joint, Tibial Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRV0JZ	Replacement of Right Knee Joint, Tibial Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRV0KZ	Replacement of Right Knee Joint, Tibial Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRW07Z	Replacement of Left Knee Joint, Tibial Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRW0J9	Replacement of Left Knee Joint, Tibial Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRW0JA	Replacement of Left Knee Joint, Tibial Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SRW0JZ	Replacement of Left Knee Joint, Tibial Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRW0KZ	Replacement of Left Knee Joint, Tibial Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SW90JZ	Revision of Synthetic Substitute in Right Hip Joint, Open Approach	ICD-10-PCS	Procedure
0SW93JZ	Revision of Synthetic Substitute in Right Hip Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SW94JZ	Revision of Synthetic Substitute in Right Hip Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWA0JZ	Revision of Synthetic Substitute in Right Hip Joint, Acetabular Surface, Open Approach	ICD-10-PCS	Procedure
0SWA3JZ	Revision of Synthetic Substitute in Right Hip Joint, Acetabular Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWA4JZ	Revision of Synthetic Substitute in Right Hip Joint, Acetabular Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWB0JZ	Revision of Synthetic Substitute in Left Hip Joint, Open Approach	ICD-10-PCS	Procedure
0SWB3JZ	Revision of Synthetic Substitute in Left Hip Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWB4JZ	Revision of Synthetic Substitute in Left Hip Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWC0JC	Revision of Synthetic Substitute in Right Knee Joint, Patellar Surface, Open Approach	ICD-10-PCS	Procedure
0SWC0JZ	Revision of Synthetic Substitute in Right Knee Joint, Open Approach	ICD-10-PCS	Procedure
0SWC3JC	Revision of Synthetic Substitute in Right Knee Joint, Patellar Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWC3JZ	Revision of Synthetic Substitute in Right Knee Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWC4JC	Revision of Synthetic Substitute in Right Knee Joint, Patellar Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWC4JZ	Revision of Synthetic Substitute in Right Knee Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWD0JC	Revision of Synthetic Substitute in Left Knee Joint, Patellar Surface, Open Approach	ICD-10-PCS	Procedure
0SWD0JZ	Revision of Synthetic Substitute in Left Knee Joint, Open Approach	ICD-10-PCS	Procedure
0SWD3JC	Revision of Synthetic Substitute in Left Knee Joint, Patellar Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWD3JZ	Revision of Synthetic Substitute in Left Knee Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWD4JC	Revision of Synthetic Substitute in Left Knee Joint, Patellar Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWD4JZ	Revision of Synthetic Substitute in Left Knee Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWE0JZ	Revision of Synthetic Substitute in Left Hip Joint, Acetabular Surface, Open Approach	ICD-10-PCS	Procedure
0SWE3JZ	Revision of Synthetic Substitute in Left Hip Joint, Acetabular Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWE4JZ	Revision of Synthetic Substitute in Left Hip Joint, Acetabular Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWF0JZ	Revision of Synthetic Substitute in Right Ankle Joint, Open Approach	ICD-10-PCS	Procedure
0SWF3JZ	Revision of Synthetic Substitute in Right Ankle Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWF4JZ	Revision of Synthetic Substitute in Right Ankle Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0SWG0JZ	Revision of Synthetic Substitute in Left Ankle Joint, Open Approach	ICD-10-PCS	Procedure
0SWG3JZ	Revision of Synthetic Substitute in Left Ankle Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWG4JZ	Revision of Synthetic Substitute in Left Ankle Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWH0JZ	Revision of Synthetic Substitute in Right Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
0SWH3JZ	Revision of Synthetic Substitute in Right Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWH4JZ	Revision of Synthetic Substitute in Right Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWJ0JZ	Revision of Synthetic Substitute in Left Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
0SWJ3JZ	Revision of Synthetic Substitute in Left Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWJ4JZ	Revision of Synthetic Substitute in Left Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWK0JZ	Revision of Synthetic Substitute in Right Metatarsal-Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
0SWK3JZ	Revision of Synthetic Substitute in Right Metatarsal-Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWK4JZ	Revision of Synthetic Substitute in Right Metatarsal-Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWL0JZ	Revision of Synthetic Substitute in Left Metatarsal-Tarsal Joint, Open Approach	ICD-10-PCS	Procedure
0SWL3JZ	Revision of Synthetic Substitute in Left Metatarsal-Tarsal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWL4JZ	Revision of Synthetic Substitute in Left Metatarsal-Tarsal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWM0JZ	Revision of Synthetic Substitute in Right Metatarsal-Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
0SWM3JZ	Revision of Synthetic Substitute in Right Metatarsal-Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWM4JZ	Revision of Synthetic Substitute in Right Metatarsal-Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWN0JZ	Revision of Synthetic Substitute in Left Metatarsal-Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
0SWN3JZ	Revision of Synthetic Substitute in Left Metatarsal-Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWN4JZ	Revision of Synthetic Substitute in Left Metatarsal-Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWP0JZ	Revision of Synthetic Substitute in Right Toe Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
0SWP3JZ	Revision of Synthetic Substitute in Right Toe Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWP4JZ	Revision of Synthetic Substitute in Right Toe Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWQ0JZ	Revision of Synthetic Substitute in Left Toe Phalangeal Joint, Open Approach	ICD-10-PCS	Procedure
0SWQ3JZ	Revision of Synthetic Substitute in Left Toe Phalangeal Joint, Percutaneous Approach	ICD-10-PCS	Procedure
0SWQ4JZ	Revision of Synthetic Substitute in Left Toe Phalangeal Joint, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
0SWR0JZ	Revision of Synthetic Substitute in Right Hip Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
0SWR3JZ	Revision of Synthetic Substitute in Right Hip Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWR4JZ	Revision of Synthetic Substitute in Right Hip Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWS0JZ	Revision of Synthetic Substitute in Left Hip Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
0SWS3JZ	Revision of Synthetic Substitute in Left Hip Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWS4JZ	Revision of Synthetic Substitute in Left Hip Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWT0JZ	Revision of Synthetic Substitute in Right Knee Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
0SWT3JZ	Revision of Synthetic Substitute in Right Knee Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWT4JZ	Revision of Synthetic Substitute in Right Knee Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWU0JZ	Revision of Synthetic Substitute in Left Knee Joint, Femoral Surface, Open Approach	ICD-10-PCS	Procedure
0SWU3JZ	Revision of Synthetic Substitute in Left Knee Joint, Femoral Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWU4JZ	Revision of Synthetic Substitute in Left Knee Joint, Femoral Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWV0JZ	Revision of Synthetic Substitute in Right Knee Joint, Tibial Surface, Open Approach	ICD-10-PCS	Procedure
0SWV3JZ	Revision of Synthetic Substitute in Right Knee Joint, Tibial Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWV4JZ	Revision of Synthetic Substitute in Right Knee Joint, Tibial Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0SWW0JZ	Revision of Synthetic Substitute in Left Knee Joint, Tibial Surface, Open Approach	ICD-10-PCS	Procedure
0SWW3JZ	Revision of Synthetic Substitute in Left Knee Joint, Tibial Surface, Percutaneous Approach	ICD-10-PCS	Procedure
0SWW4JZ	Revision of Synthetic Substitute in Left Knee Joint, Tibial Surface, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
	Kidney Replacement		
55.6	Transplant of kidney	ICD-9-CM	Diagnosis
55.61	Renal autotransplantation	ICD-9-CM	Diagnosis
55.69	Other kidney transplantation	ICD-9-CM	Diagnosis
996.81	Complications of transplanted kidney	ICD-9-CM	Diagnosis
V42.0	Kidney replaced by transplant	ICD-9-CM	Diagnosis
T86.10	Unspecified complication of kidney transplant	ICD-10-CM	Diagnosis
T86.11	Kidney transplant rejection	ICD-10-CM	Diagnosis
T86.12	Kidney transplant failure	ICD-10-CM	Diagnosis
T86.13	Kidney transplant infection	ICD-10-CM	Diagnosis
T86.19	Other complication of kidney transplant	ICD-10-CM	Diagnosis
Z48.22	Encounter for aftercare following kidney transplant	ICD-10-CM	Diagnosis

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
Z94.0	Kidney transplant status	ICD-10-CM	Diagnosis
0TS00ZZ	Reposition Right Kidney, Open Approach	ICD-10-PCS	Procedure
0TS10ZZ	Reposition Left Kidney, Open Approach	ICD-10-PCS	Procedure
0TY00Z0	Transplantation of Right Kidney, Allogeneic, Open Approach	ICD-10-PCS	Procedure
0TY00Z1	Transplantation of Right Kidney, Syngeneic, Open Approach	ICD-10-PCS	Procedure
0TY00Z2	Transplantation of Right Kidney, Zooplastic, Open Approach	ICD-10-PCS	Procedure
0TY10Z0	Transplantation of Left Kidney, Allogeneic, Open Approach	ICD-10-PCS	Procedure
0TY10Z1	Transplantation of Left Kidney, Syngeneic, Open Approach	ICD-10-PCS	Procedure
0TY10Z2	Transplantation of Left Kidney, Zooplastic, Open Approach	ICD-10-PCS	Procedure
	Mitral Stenosis		
394.0	Mitral stenosis	ICD-9-CM	Diagnosis
394.1	Rheumatic mitral insufficiency	ICD-9-CM	Diagnosis
394.2	Mitral stenosis with insufficiency	ICD-9-CM	Diagnosis
396.0	Mitral valve stenosis and aortic valve stenosis	ICD-9-CM	Diagnosis
396.1	Mitral valve stenosis and aortic valve insufficiency	ICD-9-CM	Diagnosis
396.2	Mitral valve insufficiency and aortic valve stenosis	ICD-9-CM	Diagnosis
396.3	Mitral valve insufficiency and aortic valve insufficiency	ICD-9-CM	Diagnosis
746.5	Congenital mitral stenosis	ICD-9-CM	Diagnosis
746.6	Congenital mitral insufficiency	ICD-9-CM	Diagnosis
I05.0	Rheumatic mitral stenosis	ICD-10-CM	Diagnosis
I05.1	Rheumatic mitral insufficiency	ICD-10-CM	Diagnosis
I05.2	Rheumatic mitral stenosis with insufficiency	ICD-10-CM	Diagnosis
I08.0	Rheumatic disorders of both mitral and aortic valves	ICD-10-CM	Diagnosis
I08.3	Combined rheumatic disorders of mitral, aortic and tricuspid valves	ICD-10-CM	Diagnosis
I34.2	Nonrheumatic mitral stenosis	ICD-10-CM	Diagnosis
Q23.2	Congenital mitral stenosis	ICD-10-CM	Diagnosis
Q23.3	Congenital mitral insufficiency	ICD-10-CM	Diagnosis
027G04Z	Dilation of Mitral Valve with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027G0DZ	Dilation of Mitral Valve with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027G0ZZ	Dilation of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02NG0ZZ	Release Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02QG0ZZ	Repair Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02VG0ZZ	Restriction of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
	Pulmonary Embolism		
4151	Pulmonary embolism and infarction	ICD-9-CM	Diagnosis
41511	Iatrogenic pulmonary embolism and infarction	ICD-9-CM	Diagnosis
41512	Septic pulmonary embolism	ICD-9-CM	Diagnosis
41519	Other pulmonary embolism and infarction	ICD-9-CM	Diagnosis
I26.01	Septic pulmonary embolism with acute cor pulmonale	ICD-10-CM	Diagnosis
I26.09	Other pulmonary embolism with acute cor pulmonale	ICD-10-CM	Diagnosis
I26.90	Septic pulmonary embolism without acute cor pulmonale	ICD-10-CM	Diagnosis
I26.99	Other pulmonary embolism without acute cor pulmonale	ICD-10-CM	Diagnosis
T80.0XXA	Air embolism following infusion, transfusion and therapeutic injection, initial encounter	ICD-10-CM	Diagnosis
T81.718A	Complication of other artery following a procedure, not elsewhere classified, initial encounter	ICD-10-CM	Diagnosis

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Code	Description	Code Type	Code Category
T81.72XA	Complication of vein following a procedure, not elsewhere classified, initial encounter	ICD-10-CM	Diagnosis
T82.817A	Embolism due to cardiac prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
T82.818A	Embolism due to vascular prosthetic devices, implants and grafts, initial encounter	ICD-10-CM	Diagnosis
	Valve Repair		
33400	REPAIR OF AORTIC VALVE	CPT-4	Procedure
33401	VALVULOPLASTY OPEN	CPT-4	Procedure
33403	VALVULOPLASTY W/CP BYPASS	CPT-4	Procedure
33420	REVISION OF MITRAL VALVE	CPT-4	Procedure
33422	REVISION OF MITRAL VALVE	CPT-4	Procedure
33425	REPAIR OF MITRAL VALVE	CPT-4	Procedure
33426	REPAIR OF MITRAL VALVE	CPT-4	Procedure
33427	REPAIR OF MITRAL VALVE	CPT-4	Procedure
33463	VALVULOPLASTY TRICUSPID	CPT-4	Procedure
33464	VALVULOPLASTY TRICUSPID	CPT-4	Procedure
33465	REPLACE TRICUSPID VALVE	CPT-4	Procedure
33470	REVISION OF PULMONARY VALVE	CPT-4	Procedure
33471	VALVOTOMY PULMONARY VALVE	CPT-4	Procedure
33472	REVISION OF PULMONARY VALVE	CPT-4	Procedure
33474	REVISION OF PULMONARY VALVE	CPT-4	Procedure
92986	REVISION OF AORTIC VALVE	CPT-4	Procedure
92987	REVISION OF MITRAL VALVE	CPT-4	Procedure
92990	REVISION OF PULMONARY VALVE	CPT-4	Procedure
	Valve Replacement		
V42.2	Heart valve replaced by transplant	ICD-9-CM	Diagnosis
V43.3	Heart valve replaced by other means	ICD-9-CM	Diagnosis
352	Open & Othr Replacement Heart Valve	ICD-9-CM	Procedure
3520	Open & Other Repl Uns Heart Valve	ICD-9-CM	Procedure
3521	Open Oth Repl Aortic Valve Tiss Gft	ICD-9-CM	Procedure
3522	Open & Othr Replacemnt Aortic Valve	ICD-9-CM	Procedure
3523	Opn Oth Repl Mitrl Valve Tiss Graft	ICD-9-CM	Procedure
3524	Open & Other Replcemnt Mitral Valve	ICD-9-CM	Procedure
3525	Open Oth Repl Pulm Valve Tiss Graft	ICD-9-CM	Procedure
3526	Open & Other Repl Pulmonary Valve	ICD-9-CM	Procedure
3527	Open & Oth Repl Tv W/Tissue Graft	ICD-9-CM	Procedure
3528	Open & Other Repl Tricuspd Valve	ICD-9-CM	Procedure
33405	Replacement Of Aortic Valve	CPT-4	Procedure
33406	Replacement Of Aortic Valve	CPT-4	Procedure
33410	Replacement Of Aortic Valve	CPT-4	Procedure
33411	Replacement Of Aortic Valve	CPT-4	Procedure
33412	Replacement Of Aortic Valve	CPT-4	Procedure
33413	Replacement Of Aortic Valve	CPT-4	Procedure
33430	Replacement Of Mitral Valve	CPT-4	Procedure
33465	Replace Tricuspid Valve	CPT-4	Procedure
33475	Replacement Pulmonary Valve	CPT-4	Procedure
33496	Repair Prosth Valve Clot	CPT-4	Procedure

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Code	Description	Code Type	Code Category
Z95.2	Presence of prosthetic heart valve	ICD-10-CM	Diagnosis
Z95.3	Presence of xenogenic heart valve	ICD-10-CM	Diagnosis
Z95.4	Presence of other heart-valve replacement	ICD-10-CM	Diagnosis
02RF07Z	Replacement of Aortic Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RF08Z	Replacement of Aortic Valve with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
02RF0JZ	Replacement of Aortic Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RF0KZ	Replacement of Aortic Valve with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RF47Z	Replacement of Aortic Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RF48Z	Replacement of Aortic Valve with Zooplastic Tissue, Percutaneous Endoscopic	ICD-10-PCS	Procedure
02RF4JZ	Replacement of Aortic Valve with Synthetic Substitute, Percutaneous Endoscopic	ICD-10-PCS	Procedure
02RF4KZ	Replacement of Aortic Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RG07Z	Replacement of Mitral Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RG08Z	Replacement of Mitral Valve with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
02RG0JZ	Replacement of Mitral Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RG0KZ	Replacement of Mitral Valve with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RG37Z	Replacement of Mitral Valve with Autologous Tissue Substitute, Percutaneous	ICD-10-PCS	Procedure
02RG38Z	Replacement of Mitral Valve with Zooplastic Tissue, Percutaneous Approach	ICD-10-PCS	Procedure
02RG3JZ	Replacement of Mitral Valve with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
02RG3KZ	Replacement of Mitral Valve with Nonautologous Tissue Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
02RG47Z	Replacement of Mitral Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RG48Z	Replacement of Mitral Valve with Zooplastic Tissue, Percutaneous Endoscopic	ICD-10-PCS	Procedure
02RG4JZ	Replacement of Mitral Valve with Synthetic Substitute, Percutaneous Endoscopic	ICD-10-PCS	Procedure
02RG4KZ	Replacement of Mitral Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH07Z	Replacement of Pulmonary Valve with Autologous Tissue Substitute, Open	ICD-10-PCS	Procedure
02RH08Z	Replacement of Pulmonary Valve with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
02RH0JZ	Replacement of Pulmonary Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RH0KZ	Replacement of Pulmonary Valve with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
02RH47Z	Replacement of Pulmonary Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH48Z	Replacement of Pulmonary Valve with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH4JZ	Replacement of Pulmonary Valve with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RH4KZ	Replacement of Pulmonary Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ07Z	Replacement of Tricuspid Valve with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02RJ08Z	Replacement of Tricuspid Valve with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix E. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Codes Used to Define Inclusion and Exclusion Criteria in this Request

Code	Description	Code Type	Code Category
02RJ0JZ	Replacement of Tricuspid Valve with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02RJ0KZ	Replacement of Tricuspid Valve with Nonautologous Tissue Substitute, Open	ICD-10-PCS	Procedure
02RJ47Z	Replacement of Tricuspid Valve with Autologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ48Z	Replacement of Tricuspid Valve with Zooplastic Tissue, Percutaneous Endoscopic	ICD-10-PCS	Procedure
02RJ4JZ	Replacement of Tricuspid Valve with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02RJ4KZ	Replacement of Tricuspid Valve with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
X2RF032	Replacement of Aortic Valve using Zooplastic Tissue, Rapid Deployment Technique, Open Approach, New Technology Group 2	ICD-10-PCS	Procedure
X2RF432	Replacement of Aortic Valve using Zooplastic Tissue, Rapid Deployment Technique, Percutaneous Endoscopic Approach, New Technology Group 2	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
	Acute Myocardial Infarction		
410	Acute myocardial infarction	ICD-9-CM	Diagnosis
410.0	Acute myocardial infarction of anterolateral wall	ICD-9-CM	Diagnosis
410.00	Acute myocardial infarction of anterolateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.01	Acute myocardial infarction of anterolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.02	Acute myocardial infarction of anterolateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.1	Acute myocardial infarction of other anterior wall	ICD-9-CM	Diagnosis
410.10	Acute myocardial infarction of other anterior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.11	Acute myocardial infarction of other anterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.12	Acute myocardial infarction of other anterior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.2	Acute myocardial infarction of inferolateral wall	ICD-9-CM	Diagnosis
410.20	Acute myocardial infarction of inferolateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.21	Acute myocardial infarction of inferolateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.22	Acute myocardial infarction of inferolateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.3	Acute myocardial infarction of inferoposterior wall	ICD-9-CM	Diagnosis
410.30	Acute myocardial infarction of inferoposterior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.31	Acute myocardial infarction of inferoposterior wall, initial episode of care	ICD-9-CM	Diagnosis
410.32	Acute myocardial infarction of inferoposterior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.4	Acute myocardial infarction of other inferior wall	ICD-9-CM	Diagnosis
410.40	Acute myocardial infarction of other inferior wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.41	Acute myocardial infarction of other inferior wall, initial episode of care	ICD-9-CM	Diagnosis
410.42	Acute myocardial infarction of other inferior wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.5	Acute myocardial infarction of other lateral wall	ICD-9-CM	Diagnosis
410.50	Acute myocardial infarction of other lateral wall, episode of care unspecified	ICD-9-CM	Diagnosis
410.51	Acute myocardial infarction of other lateral wall, initial episode of care	ICD-9-CM	Diagnosis
410.52	Acute myocardial infarction of other lateral wall, subsequent episode of care	ICD-9-CM	Diagnosis
410.6	Acute myocardial infarction, true posterior wall infarction	ICD-9-CM	Diagnosis
410.60	Acute myocardial infarction, true posterior wall infarction, episode of care unspecified	ICD-9-CM	Diagnosis
410.61	Acute myocardial infarction, true posterior wall infarction, initial episode of care	ICD-9-CM	Diagnosis
410.62	Acute myocardial infarction, true posterior wall infarction, subsequent episode of care	ICD-9-CM	Diagnosis
410.7	Acute myocardial infarction, subendocardial infarction	ICD-9-CM	Diagnosis
410.70	Acute myocardial infarction, subendocardial infarction, episode of care unspecified	ICD-9-CM	Diagnosis
410.71	Acute myocardial infarction, subendocardial infarction, initial episode of care	ICD-9-CM	Diagnosis
410.72	Acute myocardial infarction, subendocardial infarction, subsequent episode of care	ICD-9-CM	Diagnosis
410.8	Acute myocardial infarction of other specified sites	ICD-9-CM	Diagnosis
410.80	Acute myocardial infarction of other specified sites, episode of care unspecified	ICD-9-CM	Diagnosis
410.81	Acute myocardial infarction of other specified sites, initial episode of care	ICD-9-CM	Diagnosis
410.82	Acute myocardial infarction of other specified sites, subsequent episode of care	ICD-9-CM	Diagnosis
410.9	Acute myocardial infarction, unspecified site	ICD-9-CM	Diagnosis
410.90	Acute myocardial infarction, unspecified site, episode of care unspecified	ICD-9-CM	Diagnosis
410.91	Acute myocardial infarction, unspecified site, initial episode of care	ICD-9-CM	Diagnosis
410.92	Acute myocardial infarction, unspecified site, subsequent episode of care	ICD-9-CM	Diagnosis
I21.01	ST elevation (STEMI) myocardial infarction involving left main coronary artery	ICD-10-CM	Diagnosis
I21.02	ST elevation (STEMI) myocardial infarction involving left anterior descending coronary artery	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I21.09	ST elevation (STEMI) myocardial infarction involving other coronary artery of anterior wall	ICD-10-CM	Diagnosis
I21.11	ST elevation (STEMI) myocardial infarction involving right coronary artery	ICD-10-CM	Diagnosis
I21.19	ST elevation (STEMI) myocardial infarction involving other coronary artery of inferior wall	ICD-10-CM	Diagnosis
I21.21	ST elevation (STEMI) myocardial infarction involving left circumflex coronary artery	ICD-10-CM	Diagnosis
I21.29	ST elevation (STEMI) myocardial infarction involving other sites	ICD-10-CM	Diagnosis
I21.3	ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
I21.4	Non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I21.9	Acute myocardial infarction, unspecified	ICD-10-CM	Diagnosis
I21.A1	Myocardial infarction type 2	ICD-10-CM	Diagnosis
I21.A9	Other myocardial infarction type	ICD-10-CM	Diagnosis
I22.0	Subsequent ST elevation (STEMI) myocardial infarction of anterior wall	ICD-10-CM	Diagnosis
I22.1	Subsequent ST elevation (STEMI) myocardial infarction of inferior wall	ICD-10-CM	Diagnosis
I22.2	Subsequent non-ST elevation (NSTEMI) myocardial infarction	ICD-10-CM	Diagnosis
I22.8	Subsequent ST elevation (STEMI) myocardial infarction of other sites	ICD-10-CM	Diagnosis
I22.9	Subsequent ST elevation (STEMI) myocardial infarction of unspecified site	ICD-10-CM	Diagnosis
	Acute Renal Disease		
584	Acute kidney failure	ICD-9-CM	Diagnosis
584.5	Acute kidney failure with lesion of tubular necrosis	ICD-9-CM	Diagnosis
584.6	Acute kidney failure with lesion of renal cortical necrosis	ICD-9-CM	Diagnosis
584.7	Acute kidney failure with lesion of medullary [papillary] necrosis	ICD-9-CM	Diagnosis
584.8	Acute kidney failure with other specified pathological lesion in kidney	ICD-9-CM	Diagnosis
584.9	Acute kidney failure, unspecified	ICD-9-CM	Diagnosis
N17.0	Acute kidney failure with tubular necrosis	ICD-10-CM	Diagnosis
N17.1	Acute kidney failure with acute cortical necrosis	ICD-10-CM	Diagnosis
N17.2	Acute kidney failure with medullary necrosis	ICD-10-CM	Diagnosis
N17.8	Other acute kidney failure	ICD-10-CM	Diagnosis
N17.9	Acute kidney failure, unspecified	ICD-10-CM	Diagnosis
	Anticoagulants		
C9121	Injection, argatroban, per 5 mg	HCPCS	Procedure
J0583	Injection, bivalirudin, 1 mg	HCPCS	Procedure
J1642	Injection, heparin sodium, (heparin lock flush), per 10 units	HCPCS	Procedure
J1644	Injection, Heparin sodium, per 1000 units	HCPCS	Procedure
J1645	Injection, dalteparin sodium, per 2500 IU	HCPCS	Procedure
J1650	Injection, enoxaparin sodium, 10 mg	HCPCS	Procedure
J1652	Injection, fondaparinux sodium, 0.5 mg	HCPCS	Procedure
J1655	Injection, tinzaparin sodium, 1000 IU	HCPCS	Procedure
J1945	Injection, lepirudin, 50 mg	HCPCS	Procedure
	Cardiac Ablation		
33250	Operative ablation of supraventricular arrhythmogenic focus or pathway (eg, Wolff-Parkinson-White, atrioventricular node re-entry), tract(s) and/or focus (foci); without cardiopulmonary bypass	CPT-4	Procedure
33251	Operative ablation of supraventricular arrhythmogenic focus or pathway (eg, Wolff-Parkinson-White, atrioventricular node re-entry), tract(s) and/or focus (foci); with cardiopulmonary bypass	CPT-4	Procedure
33254	Operative tissue ablation and reconstruction of atria, limited (eg, modified maze procedure)	CPT-4	Procedure

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Code	Description	Code Type	Code Category
33255	Operative tissue ablation and reconstruction of atria, extensive (eg, maze procedure); without cardiopulmonary bypass	CPT-4	Procedure
33256	Operative tissue ablation and reconstruction of atria, extensive (eg, maze procedure); with cardiopulmonary bypass	CPT-4	Procedure
33257	Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), limited (eg, modified maze procedure) (List separately in addition to code for primary procedure)	CPT-4	Procedure
33258	Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (eg, maze procedure), without cardiopulmonary bypass (List separately in addition to code for primary procedure)	CPT-4	Procedure
33259	Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (eg, maze procedure), with cardiopulmonary bypass (List separately in addition to code for primary procedure)	CPT-4	Procedure
33261	Operative ablation of ventricular arrhythmogenic focus with cardiopulmonary bypass	CPT-4	Procedure
33265	Endoscopy, surgical; operative tissue ablation and reconstruction of atria, limited (eg, modified maze procedure), without cardiopulmonary bypass	CPT-4	Procedure
33266	Endoscopy, surgical; operative tissue ablation and reconstruction of atria, extensive (eg, maze procedure), without cardiopulmonary bypass	CPT-4	Procedure
93650	Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement	CPT-4	Procedure
93651	Intracardiac catheter ablation of arrhythmogenic focus; for treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathways, accessory atrioventricular connections or other atrial foci, singly or in combination	CPT-4	Procedure
93652	Intracardiac catheter ablation of arrhythmogenic focus; for treatment of ventricular tachycardia	CPT-4	Procedure
C1732	Catheter, electrophysiology, diagnostic/ablation, 3D or vector mapping	HCPCS	Procedure
C1733	Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, other than cool-tip	HCPCS	Procedure
C2618	Probe/needle, cryoablation	HCPCS	Procedure
C2630	Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, cool-tip	HCPCS	Procedure
37.33	Excision or destruction of other lesion or tissue of heart, open approach	ICD-9-CM	Procedure
37.34	Excision or destruction of other lesion or tissue of heart, endovascular approach	ICD-9-CM	Procedure
02550ZZ	Destruction of Atrial Septum, Open Approach	ICD-10-PCS	Procedure
02553ZZ	Destruction of Atrial Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02560ZZ	Destruction of Right Atrium, Open Approach	ICD-10-PCS	Procedure
02563ZZ	Destruction of Right Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02570ZZ	Destruction of Left Atrium, Open Approach	ICD-10-PCS	Procedure
02573ZZ	Destruction of Left Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02580ZZ	Destruction of Conduction Mechanism, Open Approach	ICD-10-PCS	Procedure
02583ZZ	Destruction of Conduction Mechanism, Percutaneous Approach	ICD-10-PCS	Procedure
02590ZZ	Destruction of Chordae Tendineae, Open Approach	ICD-10-PCS	Procedure
02593ZZ	Destruction of Chordae Tendineae, Percutaneous Approach	ICD-10-PCS	Procedure
025F0ZZ	Destruction of Aortic Valve, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
025F3ZZ	Destruction of Aortic Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025G0ZZ	Destruction of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
025G3ZZ	Destruction of Mitral Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025H0ZZ	Destruction of Pulmonary Valve, Open Approach	ICD-10-PCS	Procedure
025H3ZZ	Destruction of Pulmonary Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025J0ZZ	Destruction of Tricuspid Valve, Open Approach	ICD-10-PCS	Procedure
025J3ZZ	Destruction of Tricuspid Valve, Percutaneous Approach	ICD-10-PCS	Procedure
025K0ZZ	Destruction of Right Ventricle, Open Approach	ICD-10-PCS	Procedure
025K3ZZ	Destruction of Right Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
025L0ZZ	Destruction of Left Ventricle, Open Approach	ICD-10-PCS	Procedure
025L3ZZ	Destruction of Left Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
025M0ZZ	Destruction of Ventricular Septum, Open Approach	ICD-10-PCS	Procedure
025M3ZZ	Destruction of Ventricular Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02B50ZZ	Excision of Atrial Septum, Open Approach	ICD-10-PCS	Procedure
02B53ZZ	Excision of Atrial Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02B60ZZ	Excision of Right Atrium, Open Approach	ICD-10-PCS	Procedure
02B63ZZ	Excision of Right Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02B70ZZ	Excision of Left Atrium, Open Approach	ICD-10-PCS	Procedure
02B73ZZ	Excision of Left Atrium, Percutaneous Approach	ICD-10-PCS	Procedure
02B80ZZ	Excision of Conduction Mechanism, Open Approach	ICD-10-PCS	Procedure
02B83ZZ	Excision of Conduction Mechanism, Percutaneous Approach	ICD-10-PCS	Procedure
02B90ZZ	Excision of Chordae Tendineae, Open Approach	ICD-10-PCS	Procedure
02B93ZZ	Excision of Chordae Tendineae, Percutaneous Approach	ICD-10-PCS	Procedure
02BF0ZZ	Excision of Aortic Valve, Open Approach	ICD-10-PCS	Procedure
02BF3ZZ	Excision of Aortic Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BG0ZZ	Excision of Mitral Valve, Open Approach	ICD-10-PCS	Procedure
02BG3ZZ	Excision of Mitral Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BH0ZZ	Excision of Pulmonary Valve, Open Approach	ICD-10-PCS	Procedure
02BH3ZZ	Excision of Pulmonary Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BJ0ZZ	Excision of Tricuspid Valve, Open Approach	ICD-10-PCS	Procedure
02BJ3ZZ	Excision of Tricuspid Valve, Percutaneous Approach	ICD-10-PCS	Procedure
02BK0ZZ	Excision of Right Ventricle, Open Approach	ICD-10-PCS	Procedure
02BK3ZZ	Excision of Right Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
02BL0ZZ	Excision of Left Ventricle, Open Approach	ICD-10-PCS	Procedure
02BL3ZZ	Excision of Left Ventricle, Percutaneous Approach	ICD-10-PCS	Procedure
02BM0ZZ	Excision of Ventricular Septum, Open Approach	ICD-10-PCS	Procedure
02BM3ZZ	Excision of Ventricular Septum, Percutaneous Approach	ICD-10-PCS	Procedure
02T80ZZ	Resection of Conduction Mechanism, Open Approach	ICD-10-PCS	Procedure
02T83ZZ	Resection of Conduction Mechanism, Percutaneous Approach	ICD-10-PCS	Procedure
	Cardioversion		
99.61	Atrial cardioversion	ICD-9-CM	Procedure
99.62	Other electric countershock of heart	ICD-9-CM	Procedure
5A2204Z	Restoration of Cardiac Rhythm, Single	ICD-10-PCS	Procedure
92960	Cardioversion, elective, electrical conversion of arrhythmia; external	CPT-4	Procedure
92961	Cardioversion, elective, electrical conversion of arrhythmia; internal (separate procedure)	CPT-4	Procedure
	Chronic Renal Disease		

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Code	Description	Code Type	Code Category
585	Chronic kidney disease (CKD)	ICD-9-CM	Diagnosis
585.1	Chronic kidney disease, Stage I	ICD-9-CM	Diagnosis
585.2	Chronic kidney disease, Stage II (mild)	ICD-9-CM	Diagnosis
585.3	Chronic kidney disease, Stage III (moderate)	ICD-9-CM	Diagnosis
585.4	Chronic kidney disease, Stage IV (severe)	ICD-9-CM	Diagnosis
585.5	Chronic kidney disease, Stage V	ICD-9-CM	Diagnosis
585.6	End stage renal disease	ICD-9-CM	Diagnosis
585.9	Chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
586	Unspecified renal failure	ICD-9-CM	Diagnosis
587	Unspecified renal sclerosis	ICD-9-CM	Diagnosis
N18.1	Chronic kidney disease, stage 1	ICD-10-CM	Diagnosis
N18.2	Chronic kidney disease, stage 2 (mild)	ICD-10-CM	Diagnosis
N18.3	Chronic kidney disease, stage 3 (moderate)	ICD-10-CM	Diagnosis
N18.4	Chronic kidney disease, stage 4 (severe)	ICD-10-CM	Diagnosis
N18.5	Chronic kidney disease, stage 5	ICD-10-CM	Diagnosis
N18.6	End stage renal disease	ICD-10-CM	Diagnosis
N18.9	Chronic kidney disease, unspecified	ICD-10-CM	Diagnosis
N19	Unspecified kidney failure	ICD-10-CM	Diagnosis
N26.1	Atrophy of kidney (terminal)	ICD-10-CM	Diagnosis
N26.9	Renal sclerosis, unspecified	ICD-10-CM	Diagnosis
	Coronary Revascularization		
V45.81	Postprocedural aortocoronary bypass status	ICD-9-CM	Diagnosis
V45.82	Postprocedural percutaneous transluminal coronary angioplasty status	ICD-9-CM	Diagnosis
V45.88	Status post administration of tPA (rtPA) in a different facility within the last 24 hours prior to admission to current facility	ICD-9-CM	Diagnosis
Z92.82	Status post administration of tPA (rtPA) in a different facility within the last 24 hours prior to admission to current facility	ICD-10-CM	Diagnosis
Z95.1	Presence of aortocoronary bypass graft	ICD-10-CM	Diagnosis
Z95.5	Presence of coronary angioplasty implant and graft	ICD-10-CM	Diagnosis
Z98.61	Coronary angioplasty status	ICD-10-CM	Diagnosis
00.66	Percutaneous transluminal coronary angioplasty [PTCA]	ICD-9-CM	Procedure
36.0	Removal of coronary artery obstruction and insertion of stent(s)	ICD-9-CM	Procedure
36.03	Open chest coronary artery angioplasty	ICD-9-CM	Procedure
36.04	Intracoronary artery thrombolytic infusion	ICD-9-CM	Procedure
36.06	Insertion of non-drug-eluting coronary artery stent(s)	ICD-9-CM	Procedure
36.07	Insertion of drug-eluting coronary artery stent(s)	ICD-9-CM	Procedure
36.09	Other removal of coronary artery obstruction	ICD-9-CM	Procedure
36.1	Bypass anastomosis for heart revascularization	ICD-9-CM	Procedure
36.10	Aortocoronary bypass for heart revascularization, not otherwise specified	ICD-9-CM	Procedure
36.11	(Aorto)coronary bypass of one coronary artery	ICD-9-CM	Procedure
36.12	(Aorto)coronary bypass of two coronary arteries	ICD-9-CM	Procedure
36.13	(Aorto)coronary bypass of three coronary arteries	ICD-9-CM	Procedure
36.14	(Aorto)coronary bypass of four or more coronary arteries	ICD-9-CM	Procedure
36.15	Single internal mammary-coronary artery bypass	ICD-9-CM	Procedure
36.16	Double internal mammary-coronary artery bypass	ICD-9-CM	Procedure
36.17	Abdominal-coronary artery bypass	ICD-9-CM	Procedure
36.19	Other bypass anastomosis for heart revascularization	ICD-9-CM	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
36.2	Heart revascularization by arterial implant	ICD-9-CM	Procedure
36.3	Other heart revascularization	ICD-9-CM	Procedure
36.31	Open chest transmyocardial revascularization	ICD-9-CM	Procedure
36.32	Other transmyocardial revascularization	ICD-9-CM	Procedure
36.33	Endoscopic transmyocardial revascularization	ICD-9-CM	Procedure
36.34	Percutaneous transmyocardial revascularization	ICD-9-CM	Procedure
36.39	Other heart revascularization	ICD-9-CM	Procedure
0210083	Bypass Coronary Artery, One Artery from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0210088	Bypass Coronary Artery, One Artery from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0210089	Bypass Coronary Artery, One Artery from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021008C	Bypass Coronary Artery, One Artery from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021008F	Bypass Coronary Artery, One Artery from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021008W	Bypass Coronary Artery, One Artery from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0210093	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0210098	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0210099	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021009C	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021009F	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021009W	Bypass Coronary Artery, One Artery from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02100A3	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100A8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100A9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100AC	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100AF	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100AW	Bypass Coronary Artery, One Artery from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02100J3	Bypass Coronary Artery, One Artery from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100J8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02100J9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100JC	Bypass Coronary Artery, One Artery from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100JF	Bypass Coronary Artery, One Artery from Abdominal Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100JW	Bypass Coronary Artery, One Artery from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02100K3	Bypass Coronary Artery, One Artery from Coronary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100K8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100K9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100KC	Bypass Coronary Artery, One Artery from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100KF	Bypass Coronary Artery, One Artery from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100KW	Bypass Coronary Artery, One Artery from Aorta with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02100Z3	Bypass Coronary Artery, One Artery from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02100Z8	Bypass Coronary Artery, One Artery from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02100Z9	Bypass Coronary Artery, One Artery from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02100ZC	Bypass Coronary Artery, One Artery from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02100ZF	Bypass Coronary Artery, One Artery from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0210344	Bypass Coronary Artery, One Artery from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02103D4	Bypass Coronary Artery, One Artery from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0210444	Bypass Coronary Artery, One Artery from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210483	Bypass Coronary Artery, One Artery from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210488	Bypass Coronary Artery, One Artery from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210489	Bypass Coronary Artery, One Artery from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021048C	Bypass Coronary Artery, One Artery from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021048F	Bypass Coronary Artery, One Artery from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021048W	Bypass Coronary Artery, One Artery from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210493	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0210498	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0210499	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021049C	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021049F	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021049W	Bypass Coronary Artery, One Artery from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104A3	Bypass Coronary Artery, One Artery from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104A8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104A9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104AC	Bypass Coronary Artery, One Artery from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104AF	Bypass Coronary Artery, One Artery from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104AW	Bypass Coronary Artery, One Artery from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104D4	Bypass Coronary Artery, One Artery from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104J3	Bypass Coronary Artery, One Artery from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104J8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104J9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104JC	Bypass Coronary Artery, One Artery from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104JF	Bypass Coronary Artery, One Artery from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104JW	Bypass Coronary Artery, One Artery from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104K3	Bypass Coronary Artery, One Artery from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104K8	Bypass Coronary Artery, One Artery from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104K9	Bypass Coronary Artery, One Artery from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104KC	Bypass Coronary Artery, One Artery from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104KF	Bypass Coronary Artery, One Artery from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104KW	Bypass Coronary Artery, One Artery from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02104Z3	Bypass Coronary Artery, One Artery from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104Z8	Bypass Coronary Artery, One Artery from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104Z9	Bypass Coronary Artery, One Artery from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104ZC	Bypass Coronary Artery, One Artery from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02104ZF	Bypass Coronary Artery, One Artery from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211083	Bypass Coronary Artery, Two Arteries from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0211088	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0211089	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021108C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021108F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021108W	Bypass Coronary Artery, Two Arteries from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0211093	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0211098	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0211099	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021109C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021109F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021109W	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02110A3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110A8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110A9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110AC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110AF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02110AW	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02110J3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110J8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110J9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110JC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110JF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110JW	Bypass Coronary Artery, Two Arteries from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02110K3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02110K8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02110K9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02110KC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02110KF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02110KW	Bypass Coronary Artery, Two Arteries from Aorta with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02110Z3	Bypass Coronary Artery, Two Arteries from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02110Z8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02110Z9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02110ZC	Bypass Coronary Artery, Two Arteries from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02110ZF	Bypass Coronary Artery, Two Arteries from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0211344	Bypass Coronary Artery, Two Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02113D4	Bypass Coronary Artery, Two Arteries from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0211444	Bypass Coronary Artery, Two Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211483	Bypass Coronary Artery, Two Arteries from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211488	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211489	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021148C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021148F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
021148W	Bypass Coronary Artery, Two Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211493	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211498	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0211499	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021149C	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021149F	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021149W	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114A3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114A8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114A9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114AC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114AF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114AW	Bypass Coronary Artery, Two Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114D4	Bypass Coronary Artery, Two Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114J3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114J8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114J9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114JC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114JF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114JW	Bypass Coronary Artery, Two Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114K3	Bypass Coronary Artery, Two Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114K8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114K9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02114KC	Bypass Coronary Artery, Two Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114KF	Bypass Coronary Artery, Two Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114KW	Bypass Coronary Artery, Two Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114Z3	Bypass Coronary Artery, Two Arteries from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114Z8	Bypass Coronary Artery, Two Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114Z9	Bypass Coronary Artery, Two Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114ZC	Bypass Coronary Artery, Two Arteries from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02114ZF	Bypass Coronary Artery, Two Arteries from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212083	Bypass Coronary Artery, Three Arteries from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0212088	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0212089	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021208C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021208F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021208W	Bypass Coronary Artery, Three Arteries from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0212093	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0212098	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0212099	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021209C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021209F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021209W	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
02120A3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120A8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120A9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02120AC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120AF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120AW	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02120J3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120J8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120J9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120JC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120JF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120JW	Bypass Coronary Artery, Three Arteries from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02120K3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02120K8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02120K9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02120KC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02120KF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02120KW	Bypass Coronary Artery, Three Arteries from Aorta with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02120Z3	Bypass Coronary Artery, Three Arteries from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02120Z8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02120Z9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02120ZC	Bypass Coronary Artery, Three Arteries from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02120ZF	Bypass Coronary Artery, Three Arteries from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
0212344	Bypass Coronary Artery, Three Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02123D4	Bypass Coronary Artery, Three Arteries from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0212444	Bypass Coronary Artery, Three Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212483	Bypass Coronary Artery, Three Arteries from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212488	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0212489	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021248C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021248F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021248W	Bypass Coronary Artery, Three Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212493	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212498	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0212499	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021249C	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021249F	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021249W	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124A3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124A8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124A9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124AC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124AF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124AW	Bypass Coronary Artery, Three Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124D4	Bypass Coronary Artery, Three Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124J3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124J8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124J9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124JC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124JF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124JW	Bypass Coronary Artery, Three Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02124K3	Bypass Coronary Artery, Three Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124K8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124K9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124KC	Bypass Coronary Artery, Three Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124KF	Bypass Coronary Artery, Three Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124KW	Bypass Coronary Artery, Three Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124Z3	Bypass Coronary Artery, Three Arteries from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124Z8	Bypass Coronary Artery, Three Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124Z9	Bypass Coronary Artery, Three Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124ZC	Bypass Coronary Artery, Three Arteries from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02124ZF	Bypass Coronary Artery, Three Arteries from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213083	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0213088	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0213089	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021308C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021308F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021308W	Bypass Coronary Artery, Four or More Arteries from Aorta with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
0213093	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0213098	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
0213099	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021309C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021309F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021309W	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02130A3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130A8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130A9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130AC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130AF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130AW	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
02130J3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130J8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130J9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130JC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130JF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130JW	Bypass Coronary Artery, Four or More Arteries from Aorta with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
02130K3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02130K8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02130K9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02130KC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02130KF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02130KW	Bypass Coronary Artery, Four or More Arteries from Aorta with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
02130Z3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery, Open Approach	ICD-10-PCS	Procedure
02130Z8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02130Z9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
02130ZC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
02130ZF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0213344	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02133D4	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0213444	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213483	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213488	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213489	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021348C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021348F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021348W	Bypass Coronary Artery, Four or More Arteries from Aorta with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213493	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213498	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0213499	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021349C	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021349F	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021349W	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134A3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134A8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134A9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134AC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134AF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134AW	Bypass Coronary Artery, Four or More Arteries from Aorta with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134D4	Bypass Coronary Artery, Four or More Arteries from Coronary Vein with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134J3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02134J8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134J9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134JC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134JF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134JW	Bypass Coronary Artery, Four or More Arteries from Aorta with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134K3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134K8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134K9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134KC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134KF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134KW	Bypass Coronary Artery, Four or More Arteries from Aorta with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134Z3	Bypass Coronary Artery, Four or More Arteries from Coronary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134Z8	Bypass Coronary Artery, Four or More Arteries from Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134Z9	Bypass Coronary Artery, Four or More Arteries from Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134ZC	Bypass Coronary Artery, Four or More Arteries from Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02134ZF	Bypass Coronary Artery, Four or More Arteries from Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K0Z5	Bypass Right Ventricle to Coronary Circulation, Open Approach	ICD-10-PCS	Procedure
021K0Z8	Bypass Right Ventricle to Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021K0Z9	Bypass Right Ventricle to Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021K0ZC	Bypass Right Ventricle to Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
021K0ZF	Bypass Right Ventricle to Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
021K0ZW	Bypass Right Ventricle to Aorta, Open Approach	ICD-10-PCS	Procedure
021K4Z5	Bypass Right Ventricle to Coronary Circulation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4Z8	Bypass Right Ventricle to Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4Z9	Bypass Right Ventricle to Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4ZC	Bypass Right Ventricle to Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4ZF	Bypass Right Ventricle to Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021K4ZW	Bypass Right Ventricle to Aorta, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
021L08P	Bypass Left Ventricle to Pulmonary Trunk with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021L08Q	Bypass Left Ventricle to Right Pulmonary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021L08R	Bypass Left Ventricle to Left Pulmonary Artery with Zooplastic Tissue, Open Approach	ICD-10-PCS	Procedure
021L09P	Bypass Left Ventricle to Pulmonary Trunk with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021L09Q	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021L09R	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Venous Tissue, Open Approach	ICD-10-PCS	Procedure
021L0AP	Bypass Left Ventricle to Pulmonary Trunk with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
021L0AQ	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
021L0AR	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Arterial Tissue, Open Approach	ICD-10-PCS	Procedure
021L0JP	Bypass Left Ventricle to Pulmonary Trunk with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
021L0JQ	Bypass Left Ventricle to Right Pulmonary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
021L0JR	Bypass Left Ventricle to Left Pulmonary Artery with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
021L0KP	Bypass Left Ventricle to Pulmonary Trunk with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
021L0KQ	Bypass Left Ventricle to Right Pulmonary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
021L0KR	Bypass Left Ventricle to Left Pulmonary Artery with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
021L0Z5	Bypass Left Ventricle to Coronary Circulation, Open Approach	ICD-10-PCS	Procedure
021L0Z8	Bypass Left Ventricle to Right Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021L0Z9	Bypass Left Ventricle to Left Internal Mammary, Open Approach	ICD-10-PCS	Procedure
021L0ZC	Bypass Left Ventricle to Thoracic Artery, Open Approach	ICD-10-PCS	Procedure
021L0ZF	Bypass Left Ventricle to Abdominal Artery, Open Approach	ICD-10-PCS	Procedure
021L0ZP	Bypass Left Ventricle to Pulmonary Trunk, Open Approach	ICD-10-PCS	Procedure
021L0ZQ	Bypass Left Ventricle to Right Pulmonary Artery, Open Approach	ICD-10-PCS	Procedure
021L0ZR	Bypass Left Ventricle to Left Pulmonary Artery, Open Approach	ICD-10-PCS	Procedure
021L48P	Bypass Left Ventricle to Pulmonary Trunk with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L48Q	Bypass Left Ventricle to Right Pulmonary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L48R	Bypass Left Ventricle to Left Pulmonary Artery with Zooplastic Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L49P	Bypass Left Ventricle to Pulmonary Trunk with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L49Q	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
021L49R	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Venous Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4AP	Bypass Left Ventricle to Pulmonary Trunk with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4AQ	Bypass Left Ventricle to Right Pulmonary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4AR	Bypass Left Ventricle to Left Pulmonary Artery with Autologous Arterial Tissue, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4JP	Bypass Left Ventricle to Pulmonary Trunk with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4JQ	Bypass Left Ventricle to Right Pulmonary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4JR	Bypass Left Ventricle to Left Pulmonary Artery with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4KP	Bypass Left Ventricle to Pulmonary Trunk with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4KQ	Bypass Left Ventricle to Right Pulmonary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4KR	Bypass Left Ventricle to Left Pulmonary Artery with Nonautologous Tissue Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4Z5	Bypass Left Ventricle to Coronary Circulation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4Z8	Bypass Left Ventricle to Right Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4Z9	Bypass Left Ventricle to Left Internal Mammary, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZC	Bypass Left Ventricle to Thoracic Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZF	Bypass Left Ventricle to Abdominal Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZP	Bypass Left Ventricle to Pulmonary Trunk, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZQ	Bypass Left Ventricle to Right Pulmonary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
021L4ZR	Bypass Left Ventricle to Left Pulmonary Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270046	Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027004Z	Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0270056	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027005Z	Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0270066	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027006Z	Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0270076	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027007Z	Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02700D6	Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700DZ	Dilation of Coronary Artery, One Artery with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700E6	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700EZ	Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700F6	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700FZ	Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700G6	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700GZ	Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02700T6	Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700TZ	Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02700Z6	Dilation of Coronary Artery, One Artery, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02700ZZ	Dilation of Coronary Artery, One Artery, Open Approach	ICD-10-PCS	Procedure
0270346	Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
027034Z	Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0270356	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027035Z	Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0270366	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027036Z	Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0270376	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027037Z	Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703D6	Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703DZ	Dilation of Coronary Artery, One Artery with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703E6	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703EZ	Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703F6	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02703FZ	Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703G6	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703GZ	Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02703T6	Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703TZ	Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02703Z6	Dilation of Coronary Artery, One Artery, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02703ZZ	Dilation of Coronary Artery, One Artery, Percutaneous Approach	ICD-10-PCS	Procedure
0270446	Dilation of Coronary Artery, One Artery, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027044Z	Dilation of Coronary Artery, One Artery with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270456	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027045Z	Dilation of Coronary Artery, One Artery with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270466	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027046Z	Dilation of Coronary Artery, One Artery with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0270476	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027047Z	Dilation of Coronary Artery, One Artery with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704D6	Dilation of Coronary Artery, One Artery, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704DZ	Dilation of Coronary Artery, One Artery with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704E6	Dilation of Coronary Artery, One Artery, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704EZ	Dilation of Coronary Artery, One Artery with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704F6	Dilation of Coronary Artery, One Artery, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704FZ	Dilation of Coronary Artery, One Artery with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704G6	Dilation of Coronary Artery, One Artery, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704GZ	Dilation of Coronary Artery, One Artery with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704T6	Dilation of Coronary Artery, One Artery, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02704TZ	Dilation of Coronary Artery, One Artery with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704Z6	Dilation of Coronary Artery, One Artery, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02704ZZ	Dilation of Coronary Artery, One Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271046	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027104Z	Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0271056	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027105Z	Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0271066	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027106Z	Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0271076	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027107Z	Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710D6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710DZ	Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710E6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710EZ	Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710F6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710FZ	Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710G6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710GZ	Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02710T6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710TZ	Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02710Z6	Dilation of Coronary Artery, Two Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02710ZZ	Dilation of Coronary Artery, Two Arteries, Open Approach	ICD-10-PCS	Procedure
0271346	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
027134Z	Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0271356	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027135Z	Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0271366	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027136Z	Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0271376	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027137Z	Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713D6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713DZ	Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713E6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713EZ	Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713F6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713FZ	Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713G6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713GZ	Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02713T6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713TZ	Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02713Z6	Dilation of Coronary Artery, Two Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02713ZZ	Dilation of Coronary Artery, Two Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
0271446	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027144Z	Dilation of Coronary Artery, Two Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271456	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027145Z	Dilation of Coronary Artery, Two Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0271466	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027146Z	Dilation of Coronary Artery, Two Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0271476	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027147Z	Dilation of Coronary Artery, Two Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714D6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714DZ	Dilation of Coronary Artery, Two Arteries with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714E6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714EZ	Dilation of Coronary Artery, Two Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714F6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714FZ	Dilation of Coronary Artery, Two Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714G6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714GZ	Dilation of Coronary Artery, Two Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714T6	Dilation of Coronary Artery, Two Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714TZ	Dilation of Coronary Artery, Two Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714Z6	Dilation of Coronary Artery, Two Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02714ZZ	Dilation of Coronary Artery, Two Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272046	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027204Z	Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0272056	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027205Z	Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0272066	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027206Z	Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0272076	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027207Z	Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720D6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02720DZ	Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02720E6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720EZ	Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720F6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720FZ	Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720G6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720GZ	Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02720T6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02720TZ	Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02720Z6	Dilation of Coronary Artery, Three Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02720ZZ	Dilation of Coronary Artery, Three Arteries, Open Approach	ICD-10-PCS	Procedure
0272346	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
027234Z	Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0272356	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027235Z	Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0272366	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027236Z	Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0272376	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027237Z	Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723D6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723DZ	Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723E6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723EZ	Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723F6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723FZ	Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02723G6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723GZ	Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02723T6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723TZ	Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02723Z6	Dilation of Coronary Artery, Three Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02723ZZ	Dilation of Coronary Artery, Three Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
0272446	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027244Z	Dilation of Coronary Artery, Three Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272456	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027245Z	Dilation of Coronary Artery, Three Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272466	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027246Z	Dilation of Coronary Artery, Three Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0272476	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027247Z	Dilation of Coronary Artery, Three Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724D6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724DZ	Dilation of Coronary Artery, Three Arteries with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724E6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724EZ	Dilation of Coronary Artery, Three Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724F6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724FZ	Dilation of Coronary Artery, Three Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724G6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724GZ	Dilation of Coronary Artery, Three Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724T6	Dilation of Coronary Artery, Three Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724TZ	Dilation of Coronary Artery, Three Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02724Z6	Dilation of Coronary Artery, Three Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02724ZZ	Dilation of Coronary Artery, Three Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273046	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
027304Z	Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
0273056	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027305Z	Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0273066	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027306Z	Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
0273076	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
027307Z	Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730D6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730DZ	Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730E6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730EZ	Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730F6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730FZ	Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730G6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730GZ	Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Open Approach	ICD-10-PCS	Procedure
02730T6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730TZ	Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Open Approach	ICD-10-PCS	Procedure
02730Z6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02730ZZ	Dilation of Coronary Artery, Four or More Arteries, Open Approach	ICD-10-PCS	Procedure
0273346	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
027334Z	Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
0273356	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
027335Z	Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0273366	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027336Z	Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
0273376	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
027337Z	Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733D6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733DZ	Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733E6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733EZ	Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733F6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733FZ	Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733G6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733GZ	Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Percutaneous Approach	ICD-10-PCS	Procedure
02733T6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733TZ	Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Percutaneous Approach	ICD-10-PCS	Procedure
02733Z6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02733ZZ	Dilation of Coronary Artery, Four or More Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
0273446	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027344Z	Dilation of Coronary Artery, Four or More Arteries with Drug-eluting Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273456	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027345Z	Dilation of Coronary Artery, Four or More Arteries with Two Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273466	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
027346Z	Dilation of Coronary Artery, Four or More Arteries with Three Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0273476	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
027347Z	Dilation of Coronary Artery, Four or More Arteries with Four or More Drug-eluting Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734D6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734DZ	Dilation of Coronary Artery, Four or More Arteries with Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734E6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734EZ	Dilation of Coronary Artery, Four or More Arteries with Two Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734F6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734FZ	Dilation of Coronary Artery, Four or More Arteries with Three Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734G6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734GZ	Dilation of Coronary Artery, Four or More Arteries with Four or More Intraluminal Devices, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734T6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734TZ	Dilation of Coronary Artery, Four or More Arteries with Radioactive Intraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734Z6	Dilation of Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02734ZZ	Dilation of Coronary Artery, Four or More Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C00Z6	Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C00ZZ	Extirpation of Matter from Coronary Artery, One Artery, Open Approach	ICD-10-PCS	Procedure
02C03Z6	Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C03ZZ	Extirpation of Matter from Coronary Artery, One Artery, Percutaneous Approach	ICD-10-PCS	Procedure
02C04Z6	Extirpation of Matter from Coronary Artery, One Artery, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C04ZZ	Extirpation of Matter from Coronary Artery, One Artery, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C10Z6	Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C10ZZ	Extirpation of Matter from Coronary Artery, Two Arteries, Open Approach	ICD-10-PCS	Procedure
02C13Z6	Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C13ZZ	Extirpation of Matter from Coronary Artery, Two Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
02C14Z6	Extirpation of Matter from Coronary Artery, Two Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C14ZZ	Extirpation of Matter from Coronary Artery, Two Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
02C20Z6	Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C20ZZ	Extirpation of Matter from Coronary Artery, Three Arteries, Open Approach	ICD-10-PCS	Procedure
02C23Z6	Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C23ZZ	Extirpation of Matter from Coronary Artery, Three Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
02C24Z6	Extirpation of Matter from Coronary Artery, Three Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C24ZZ	Extirpation of Matter from Coronary Artery, Three Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C30Z6	Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Open Approach	ICD-10-PCS	Procedure
02C30ZZ	Extirpation of Matter from Coronary Artery, Four or More Arteries, Open Approach	ICD-10-PCS	Procedure
02C33Z6	Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Approach	ICD-10-PCS	Procedure
02C33ZZ	Extirpation of Matter from Coronary Artery, Four or More Arteries, Percutaneous Approach	ICD-10-PCS	Procedure
02C34Z6	Extirpation of Matter from Coronary Artery, Four or More Arteries, Bifurcation, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02C34ZZ	Extirpation of Matter from Coronary Artery, Four or More Arteries, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02QA0ZZ	Repair Heart, Open Approach	ICD-10-PCS	Procedure
02QA3ZZ	Repair Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02QA4ZZ	Repair Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02QB0ZZ	Repair Right Heart, Open Approach	ICD-10-PCS	Procedure
02QB3ZZ	Repair Right Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02QB4ZZ	Repair Right Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
02QC0ZZ	Repair Left Heart, Open Approach	ICD-10-PCS	Procedure
02QC3ZZ	Repair Left Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02QC4ZZ	Repair Left Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
3E07017	Introduction of Other Thrombolytic into Coronary Artery, Open Approach	ICD-10-PCS	Procedure
3E070PZ	Introduction of Platelet Inhibitor into Coronary Artery, Open Approach	ICD-10-PCS	Procedure
3E07317	Introduction of Other Thrombolytic into Coronary Artery, Percutaneous Approach	ICD-10-PCS	Procedure
3E073PZ	Introduction of Platelet Inhibitor into Coronary Artery, Percutaneous Approach	ICD-10-PCS	Procedure
00566	Anesthesia for direct coronary artery bypass grafting; without pump oxygenator	CPT-4	Procedure
00567	Anesthesia for direct coronary artery bypass grafting; with pump oxygenator	CPT-4	Procedure
33508	Endoscopy, surgical, including video-assisted harvest of vein(s) for coronary artery bypass procedure (List separately in addition to code for primary procedure)	CPT-4	Procedure
33510	Coronary artery bypass, vein only; single coronary venous graft	CPT-4	Procedure
33511	Coronary artery bypass, vein only; 2 coronary venous grafts	CPT-4	Procedure
33512	Coronary artery bypass, vein only; 3 coronary venous grafts	CPT-4	Procedure
33513	Coronary artery bypass, vein only; 4 coronary venous grafts	CPT-4	Procedure
33514	Coronary artery bypass, vein only; 5 coronary venous grafts	CPT-4	Procedure
33516	Coronary artery bypass, vein only; 6 or more coronary venous grafts	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
33517	Coronary artery bypass, using venous graft(s) and arterial graft(s); single vein graft (List separately in addition to code for primary procedure)	CPT-4	Procedure
33518	Coronary artery bypass, using venous graft(s) and arterial graft(s); 2 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33519	Coronary artery bypass, using venous graft(s) and arterial graft(s); 3 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33521	Coronary artery bypass, using venous graft(s) and arterial graft(s); 4 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33522	Coronary artery bypass, using venous graft(s) and arterial graft(s); 5 venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33523	Coronary artery bypass, using venous graft(s) and arterial graft(s); 6 or more venous grafts (List separately in addition to code for primary procedure)	CPT-4	Procedure
33530	Reoperation, coronary artery bypass procedure or valve procedure, more than 1 month after original operation (List separately in addition to code for primary procedure)	CPT-4	Procedure
33533	Coronary artery bypass, using arterial graft(s); single arterial graft	CPT-4	Procedure
33534	Coronary artery bypass, using arterial graft(s); 2 coronary arterial grafts	CPT-4	Procedure
33535	Coronary artery bypass, using arterial graft(s); 3 coronary arterial grafts	CPT-4	Procedure
33536	Coronary artery bypass, using arterial graft(s); 4 or more coronary arterial grafts	CPT-4	Procedure
33572	Coronary endarterectomy, open, any method, of left anterior descending, circumflex, or right coronary artery performed in conjunction with coronary artery bypass graft procedure, each vessel (List separately in addition to primary procedure)	CPT-4	Procedure
35500	Harvest of upper extremity vein, 1 segment, for lower extremity or coronary artery bypass procedure (List separately in addition to code for primary procedure)	CPT-4	Procedure
35600	Harvest of upper extremity artery, 1 segment, for coronary artery bypass procedure (List separately in addition to code for primary procedure)	CPT-4	Procedure
92920	Percutaneous transluminal coronary angioplasty; single major coronary artery or branch	CPT-4	Procedure
92921	Percutaneous transluminal coronary angioplasty; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch	CPT-4	Procedure
92925	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92928	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch	CPT-4	Procedure
92929	Percutaneous transcatheter placement of intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure
92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch	CPT-4	Procedure
92934	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (List separately in addition to code for primary procedure)	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
92937	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel	CPT-4	Procedure
92938	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (List separately in addition to code for primary procedure)	CPT-4	Procedure
92941	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel	CPT-4	Procedure
92943	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; single vessel	CPT-4	Procedure
92944	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (List separately in addition to code for primary procedure)	CPT-4	Procedure
92973	Percutaneous transluminal coronary thrombectomy mechanical (List separately in addition to code for primary procedure)	CPT-4	Procedure
92975	Thrombolysis, coronary; by intracoronary infusion, including selective coronary angiography	CPT-4	Procedure
92977	Thrombolysis, coronary; by intravenous infusion	CPT-4	Procedure
92980	Transcatheter placement of an intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; single vessel	CPT-4	Procedure
92981	Transcatheter placement of an intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; each additional vessel (List separately in addition to code for primary procedure)	CPT-4	Procedure
92982	Percutaneous transluminal coronary balloon angioplasty; single vessel	CPT-4	Procedure
92984	Percutaneous transluminal coronary balloon angioplasty; each additional vessel (List separately in addition to code for primary procedure)	CPT-4	Procedure
92995	Percutaneous transluminal coronary atherectomy, by mechanical or other method, with or without balloon angioplasty; single vessel	CPT-4	Procedure
92996	Percutaneous transluminal coronary atherectomy, by mechanical or other method, with or without balloon angioplasty; each additional vessel (List separately in addition to code for primary procedure)	CPT-4	Procedure
93455	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography	CPT-4	Procedure

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Code	Description	Code Type	Code Category
93457	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) including intraprocedural injection(s) for bypass graft angiography and right heart catheterization	CPT-4	Procedure
93459	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	CPT-4	Procedure
93461	Catheter placement in coronary artery(s) for coronary angiography, including intraprocedural injection(s) for coronary angiography, imaging supervision and interpretation; with right and left heart catheterization including intraprocedural injection(s) for left ventriculography, when performed, catheter placement(s) in bypass graft(s) (internal mammary, free arterial, venous grafts) with bypass graft angiography	CPT-4	Procedure
93508	Catheter placement in coronary artery(s), arterial coronary conduit(s), and/or venous coronary bypass graft(s) for coronary angiography without concomitant left heart catheterization	CPT-4	Procedure
93540	Injection procedure during cardiac catheterization; for selective opacification of aortocoronary venous bypass grafts, 1 or more coronary arteries	CPT-4	Procedure
93556	Imaging supervision, interpretation and report for injection procedure(s) during cardiac catheterization; pulmonary angiography, aortography, and/or selective coronary angiography including venous bypass grafts and arterial conduits (whether native or used in bypass)	CPT-4	Procedure
93564	Injection procedure during cardiac catheterization including imaging supervision, interpretation, and report; for selective opacification of aortocoronary venous or arterial bypass graft(s) (eg, aortocoronary saphenous vein, free radial artery, or free mammary artery graft) to one or more coronary arteries and in situ arterial conduits (eg, internal mammary), whether native or used for bypass to one or more coronary arteries during congenital heart catheterization, when performed (List separately in addition to code for primary procedure)	CPT-4	Procedure
C9600	Percutaneous transcatheter placement of drug eluting intracoronary stent(s), with coronary angioplasty when performed; single major coronary artery or branch	HCPCS	Procedure
C9601	Percutaneous transcatheter placement of drug-eluting intracoronary stent(s), with coronary angioplasty when performed; each additional branch of a major coronary artery (list separately in addition to code for primary procedure)	HCPCS	Procedure
C9602	Percutaneous transluminal coronary atherectomy, with drug eluting intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch	HCPCS	Procedure
C9603	Percutaneous transluminal coronary atherectomy, with drug-eluting intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery (list separately in addition to code for primary procedure)	HCPCS	Procedure

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Code	Description	Code Type	Code Category
C9604	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel	HCPCS	Procedure
C9605	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; each additional branch subtended by the bypass graft (list separately in addition to code for primary procedure)	HCPCS	Procedure
C9606	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel	HCPCS	Procedure
C9607	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; single vessel	HCPCS	Procedure
C9608	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (list separately in addition to code for primary procedure)	HCPCS	Procedure
G0290	Transcatheter placement of a drug eluting intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; single vessel	HCPCS	Procedure
G0291	Transcatheter placement of a drug eluting intracoronary stent(s), percutaneous, with or without other therapeutic intervention, any method; each additional vessel	HCPCS	Procedure
G8158	Patient documented to have received coronary artery bypass graft with use of internal mammary artery	HCPCS	Procedure
G8159	Patient documented to have received coronary artery bypass graft without use of internal mammary artery	HCPCS	Procedure
G8161	Patient with isolated coronary artery bypass graft documented to have received pre-operative beta-blockade	HCPCS	Procedure
G8162	Patient with isolated coronary artery bypass graft not documented to have received preoperative beta-blockade	HCPCS	Procedure
G8163	Clinician documented that patient with isolated coronary artery bypass graft was not an eligible candidate for pre-operative beta-blockade measure	HCPCS	Procedure
G8164	Patient with isolated coronary artery bypass graft documented to have prolonged intubation	HCPCS	Procedure
G8165	Patient with isolated coronary artery bypass graft not documented to have prolonged intubation	HCPCS	Procedure
G8166	Patient with isolated coronary artery bypass graft documented to have required surgical re-exploration	HCPCS	Procedure
G8167	Patient with isolated coronary artery bypass graft did not require surgical re-exploration	HCPCS	Procedure
G8170	Patient with isolated coronary artery bypass graft documented to have been discharged on aspirin or clopidogrel	HCPCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
G8171	Patient with isolated coronary artery bypass graft not documented to have been discharged on aspirin or clopidogrel	HCPCS	Procedure
G8172	Clinician documented that patient with isolated coronary artery bypass graft was not an eligible candidate for antiplatelet therapy at discharge measure	HCPCS	Procedure
	Diabetes		
250	Diabetes mellitus	ICD-9-CM	Diagnosis
250.0	Diabetes mellitus without mention of complication	ICD-9-CM	Diagnosis
250.00	Diabetes mellitus without mention of complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.01	Diabetes mellitus without mention of complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.02	Diabetes mellitus without mention of complication, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.03	Diabetes mellitus without mention of complication, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.1	Diabetes with ketoacidosis	ICD-9-CM	Diagnosis
250.10	Diabetes with ketoacidosis, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.11	Diabetes with ketoacidosis, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.12	Diabetes with ketoacidosis, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.13	Diabetes with ketoacidosis, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.2	Diabetes with hyperosmolarity	ICD-9-CM	Diagnosis
250.20	Diabetes with hyperosmolarity, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.21	Diabetes with hyperosmolarity, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.22	Diabetes with hyperosmolarity, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.23	Diabetes with hyperosmolarity, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.3	Diabetes with other coma	ICD-9-CM	Diagnosis
250.30	Diabetes with other coma, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.31	Diabetes with other coma, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.32	Diabetes with other coma, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.33	Diabetes with other coma, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.4	Diabetes with renal manifestations	ICD-9-CM	Diagnosis
250.40	Diabetes with renal manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.41	Diabetes with renal manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.42	Diabetes with renal manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.43	Diabetes with renal manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.5	Diabetes with ophthalmic manifestations	ICD-9-CM	Diagnosis
250.50	Diabetes with ophthalmic manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.51	Diabetes with ophthalmic manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.52	Diabetes with ophthalmic manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.53	Diabetes with ophthalmic manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.6	Diabetes with neurological manifestations	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
250.60	Diabetes with neurological manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.61	Diabetes with neurological manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.62	Diabetes with neurological manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.63	Diabetes with neurological manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.7	Diabetes with peripheral circulatory disorders	ICD-9-CM	Diagnosis
250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.71	Diabetes with peripheral circulatory disorders, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.72	Diabetes with peripheral circulatory disorders, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.73	Diabetes with peripheral circulatory disorders, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.8	Diabetes with other specified manifestations	ICD-9-CM	Diagnosis
250.80	Diabetes with other specified manifestations, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.81	Diabetes with other specified manifestations, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.82	Diabetes with other specified manifestations, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.83	Diabetes with other specified manifestations, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
250.9	Diabetes with unspecified complication	ICD-9-CM	Diagnosis
250.90	Diabetes with unspecified complication, type II or unspecified type, not stated as uncontrolled	ICD-9-CM	Diagnosis
250.91	Diabetes with unspecified complication, type I [juvenile type], not stated as uncontrolled	ICD-9-CM	Diagnosis
250.92	Diabetes with unspecified complication, type II or unspecified type, uncontrolled	ICD-9-CM	Diagnosis
250.93	Diabetes with unspecified complication, type I [juvenile type], uncontrolled	ICD-9-CM	Diagnosis
E11.9	Type 2 diabetes mellitus without complications	ICD-10-CM	Diagnosis
E10.9	Type 1 diabetes mellitus without complications	ICD-10-CM	Diagnosis
E11.65	Type 2 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E10.65	Type 1 diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E11.69	Type 2 diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E13.10	Other specified diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E10.10	Type 1 diabetes mellitus with ketoacidosis without coma	ICD-10-CM	Diagnosis
E11.00	Type 2 diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E11.01	Type 2 diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis
E10.69	Type 1 diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E11.641	Type 2 diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E10.11	Type 1 diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E10.641	Type 1 diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E11.29	Type 2 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E10.29	Type 1 diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E11.21	Type 2 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E10.21	Type 1 diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E11.311	Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E11.319	Type 2 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E11.36	Type 2 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E11.39	Type 2 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E10.311	Type 1 diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E10.319	Type 1 diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E10.36	Type 1 diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E10.37X1	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E10.37X2	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E10.37X3	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E10.37X9	Type 1 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E10.39	Type 1 diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E11.40	Type 2 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E10.40	Type 1 diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E11.51	Type 2 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E10.51	Type 1 diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E11.618	Type 2 diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E11.620	Type 2 diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E11.621	Type 2 diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E11.622	Type 2 diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E11.628	Type 2 diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E11.630	Type 2 diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E11.638	Type 2 diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E11.649	Type 2 diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E10.618	Type 1 diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E10.620	Type 1 diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E10.621	Type 1 diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E10.622	Type 1 diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E10.628	Type 1 diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E10.630	Type 1 diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E10.638	Type 1 diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E10.649	Type 1 diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E11.8	Type 2 diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E10.8	Type 1 diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
E13.9	Other specified diabetes mellitus without complications	ICD-10-CM	Diagnosis
E13.00	Other specified diabetes mellitus with hyperosmolarity without nonketotic hyperglycemic-hyperosmolar coma (NKHHC)	ICD-10-CM	Diagnosis
E13.01	Other specified diabetes mellitus with hyperosmolarity with coma	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E13.11	Other specified diabetes mellitus with ketoacidosis with coma	ICD-10-CM	Diagnosis
E13.641	Other specified diabetes mellitus with hypoglycemia with coma	ICD-10-CM	Diagnosis
E13.21	Other specified diabetes mellitus with diabetic nephropathy	ICD-10-CM	Diagnosis
E13.22	Other specified diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E13.29	Other specified diabetes mellitus with other diabetic kidney complication	ICD-10-CM	Diagnosis
E11.22	Type 2 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E10.22	Type 1 diabetes mellitus with diabetic chronic kidney disease	ICD-10-CM	Diagnosis
E11.3211	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3212	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3213	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3219	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3291	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3292	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3293	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3299	Type 2 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3311	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3312	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3313	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3319	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3391	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3392	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3393	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3399	Type 2 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3411	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3412	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3413	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3419	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E11.3491	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3492	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3493	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3499	Type 2 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3511	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E11.3512	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E11.3513	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3519	Type 2 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E11.3521	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E11.3522	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E11.3523	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E11.3529	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E11.3531	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E11.3532	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E11.3533	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E11.3539	Type 2 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E11.3541	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E11.3542	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E11.3543	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E11.3549	Type 2 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E11.3551	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E11.3552	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E11.3553	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E11.3559	Type 2 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E11.3591	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E11.3592	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E11.3593	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E11.3599	Type 2 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3211	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3212	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3213	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3219	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3291	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3292	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3293	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3299	Other specified diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3311	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3312	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3313	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3319	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3391	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3392	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3393	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3399	Other specified diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3411	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3412	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3413	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E13.3419	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3491	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3492	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3493	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3499	Other specified diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3511	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E13.3512	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E13.3513	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3519	Other specified diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.3521	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E13.3522	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E13.3523	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E13.3529	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E13.3531	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E13.3532	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E13.3533	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E13.3539	Other specified diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E13.3541	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E13.3542	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E13.3543	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E13.3549	Other specified diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E13.3551	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E13.3552	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E13.3553	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E13.3559	Other specified diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E13.3591	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E13.3592	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E13.3593	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E13.3599	Other specified diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.311	Other specified diabetes mellitus with unspecified diabetic retinopathy with macular edema	ICD-10-CM	Diagnosis
E13.319	Other specified diabetes mellitus with unspecified diabetic retinopathy without macular edema	ICD-10-CM	Diagnosis
E13.36	Other specified diabetes mellitus with diabetic cataract	ICD-10-CM	Diagnosis
E13.37X1	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E13.37X2	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E13.37X3	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E13.37X9	Other specified diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E13.39	Other specified diabetes mellitus with other diabetic ophthalmic complication	ICD-10-CM	Diagnosis
E11.37X1	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, right eye	ICD-10-CM	Diagnosis
E11.37X2	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, left eye	ICD-10-CM	Diagnosis
E11.37X3	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, bilateral	ICD-10-CM	Diagnosis
E11.37X9	Type 2 diabetes mellitus with diabetic macular edema, resolved following treatment, unspecified eye	ICD-10-CM	Diagnosis
E10.3211	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3212	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3213	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3219	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E10.3291	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3292	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3293	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3299	Type 1 diabetes mellitus with mild nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3311	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3312	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3313	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3319	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3391	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3392	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3393	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3399	Type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3411	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3412	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3413	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3419	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3491	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3492	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3493	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3499	Type 1 diabetes mellitus with severe nonproliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3511	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, right eye	ICD-10-CM	Diagnosis
E10.3512	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, left eye	ICD-10-CM	Diagnosis
E10.3513	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, bilateral	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E10.3519	Type 1 diabetes mellitus with proliferative diabetic retinopathy with macular edema, unspecified eye	ICD-10-CM	Diagnosis
E10.3521	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, right eye	ICD-10-CM	Diagnosis
E10.3522	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, left eye	ICD-10-CM	Diagnosis
E10.3523	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, bilateral	ICD-10-CM	Diagnosis
E10.3529	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E10.3531	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, right eye	ICD-10-CM	Diagnosis
E10.3532	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, left eye	ICD-10-CM	Diagnosis
E10.3533	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, bilateral	ICD-10-CM	Diagnosis
E10.3539	Type 1 diabetes mellitus with proliferative diabetic retinopathy with traction retinal detachment not involving the macula, unspecified eye	ICD-10-CM	Diagnosis
E10.3541	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, right eye	ICD-10-CM	Diagnosis
E10.3542	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, left eye	ICD-10-CM	Diagnosis
E10.3543	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, bilateral	ICD-10-CM	Diagnosis
E10.3549	Type 1 diabetes mellitus with proliferative diabetic retinopathy with combined traction retinal detachment and rhegmatogenous retinal detachment, unspecified eye	ICD-10-CM	Diagnosis
E10.3551	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, right eye	ICD-10-CM	Diagnosis
E10.3552	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, left eye	ICD-10-CM	Diagnosis
E10.3553	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, bilateral	ICD-10-CM	Diagnosis
E10.3559	Type 1 diabetes mellitus with stable proliferative diabetic retinopathy, unspecified eye	ICD-10-CM	Diagnosis
E10.3591	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, right eye	ICD-10-CM	Diagnosis
E10.3592	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, left eye	ICD-10-CM	Diagnosis
E10.3593	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, bilateral	ICD-10-CM	Diagnosis
E10.3599	Type 1 diabetes mellitus with proliferative diabetic retinopathy without macular edema, unspecified eye	ICD-10-CM	Diagnosis
E13.40	Other specified diabetes mellitus with diabetic neuropathy, unspecified	ICD-10-CM	Diagnosis
E13.41	Other specified diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E13.42	Other specified diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E13.43	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E13.44	Other specified diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E13.49	Other specified diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E13.610	Other specified diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E11.41	Type 2 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E11.42	Type 2 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E11.43	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E11.44	Type 2 diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E11.49	Type 2 diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E11.610	Type 2 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E10.41	Type 1 diabetes mellitus with diabetic mononeuropathy	ICD-10-CM	Diagnosis
E10.42	Type 1 diabetes mellitus with diabetic polyneuropathy	ICD-10-CM	Diagnosis
E10.43	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy	ICD-10-CM	Diagnosis
E10.44	Type 1 diabetes mellitus with diabetic amyotrophy	ICD-10-CM	Diagnosis
E10.49	Type 1 diabetes mellitus with other diabetic neurological complication	ICD-10-CM	Diagnosis
E10.610	Type 1 diabetes mellitus with diabetic neuropathic arthropathy	ICD-10-CM	Diagnosis
E13.51	Other specified diabetes mellitus with diabetic peripheral angiopathy without gangrene	ICD-10-CM	Diagnosis
E13.52	Other specified diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E13.59	Other specified diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E11.52	Type 2 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E11.59	Type 2 diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E10.52	Type 1 diabetes mellitus with diabetic peripheral angiopathy with gangrene	ICD-10-CM	Diagnosis
E10.59	Type 1 diabetes mellitus with other circulatory complications	ICD-10-CM	Diagnosis
E13.618	Other specified diabetes mellitus with other diabetic arthropathy	ICD-10-CM	Diagnosis
E13.620	Other specified diabetes mellitus with diabetic dermatitis	ICD-10-CM	Diagnosis
E13.621	Other specified diabetes mellitus with foot ulcer	ICD-10-CM	Diagnosis
E13.622	Other specified diabetes mellitus with other skin ulcer	ICD-10-CM	Diagnosis
E13.628	Other specified diabetes mellitus with other skin complications	ICD-10-CM	Diagnosis
E13.630	Other specified diabetes mellitus with periodontal disease	ICD-10-CM	Diagnosis
E13.638	Other specified diabetes mellitus with other oral complications	ICD-10-CM	Diagnosis
E13.649	Other specified diabetes mellitus with hypoglycemia without coma	ICD-10-CM	Diagnosis
E13.65	Other specified diabetes mellitus with hyperglycemia	ICD-10-CM	Diagnosis
E13.69	Other specified diabetes mellitus with other specified complication	ICD-10-CM	Diagnosis
E13.8	Other specified diabetes mellitus with unspecified complications	ICD-10-CM	Diagnosis
A5500	For diabetics only, fitting (including follow-up), custom preparation and supply of off-the-shelf depth-inlay shoe manufactured to accommodate multidensity insert(s), per shoe	HCPCS	Procedure
A5501	For diabetics only, fitting (including follow-up), custom preparation and supply of shoe molded from cast(s) of patient's foot (custom molded shoe), per shoe	HCPCS	Procedure
A5503	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with roller or rigid rocker bottom, per shoe	HCPCS	Procedure
A5504	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with wedge(s), per shoe	HCPCS	Procedure
A5505	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with metatarsal bar, per shoe	HCPCS	Procedure
A5506	For diabetics only, modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe with off-set heel(s), per shoe	HCPCS	Procedure
A5507	For diabetics only, not otherwise specified modification (including fitting) of off-the-shelf depth-inlay shoe or custom molded shoe, per shoe	HCPCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
A5508	For diabetics only, deluxe feature of off-the-shelf depth-inlay shoe or custom molded shoe, per shoe	HCPCS	Procedure
A5510	For diabetics only, direct formed, compression molded to patient's foot without external heat source, multiple-density insert(s) prefabricated, per shoe	HCPCS	Procedure
A5512	For diabetics only, multiple density insert, direct formed, molded to foot after external heat source of 230 degrees Fahrenheit or higher, total contact with patient's foot, including arch, base layer minimum of 1/4 inch material of shore a 35 durometer or 3/16 inch material of shore a 40 durometer (or higher), prefabricated, each	HCPCS	Procedure
A5513	For diabetics only, multiple density insert, custom molded from model of patient's foot, total contact with patient's foot, including arch, base layer minimum of 3/16 inch material of shore a 35 durometer or higher), includes arch filler and other shaping material, custom fabricated. each	HCPCS	Procedure
G0108	Diabetes outpatient self-management training services, individual, per 30 minutes	HCPCS	Procedure
G0109	Diabetes outpatient self-management training services, group session (2 or more), per 30 minutes	HCPCS	Procedure
G0245	Initial physician evaluation and management of a diabetic patient with diabetic sensory neuropathy resulting in a loss of protective sensation (LOPS) which must include: (1) the diagnosis of LOPS, (2) a patient history, (3) a physical examination that consists of at least the following elements: (a) visual inspection of the forefoot, hindfoot, and toe web spaces, (b) evaluation of a protective sensation, (c) evaluation of foot structure and biomechanics, (d) evaluation of vascular status and skin integrity, and (e) evaluation and recommendation of footwear, and (4) patient education	HCPCS	Procedure
G0246	Follow-up physician evaluation and management of a diabetic patient with diabetic sensory neuropathy resulting in a loss of protective sensation (LOPS) to include at least the following: (1) a patient history, (2) a physical examination that includes: (a) visual inspection of the forefoot, hindfoot, and toe web spaces, (b) evaluation of protective sensation, (c) evaluation of foot structure and biomechanics, (d) evaluation of vascular status and skin integrity, and (e) evaluation and recommendation of footwear, and (3) patient education	HCPCS	Procedure
G0247	Routine foot care by a physician of a diabetic patient with diabetic sensory neuropathy resulting in a loss of protective sensation (LOPS) to include the local care of superficial wounds (i.e., superficial to muscle and fascia) and at least the following, if present: (1) local care of superficial wounds, (2) debridement of corns and calluses, and (3) trimming and debridement of nails	HCPCS	Procedure
G8015	Diabetic patient with most recent hemoglobin A1c level (within the last 6 months) documented as greater than 9%	HCPCS	Procedure
G8016	Diabetic patient with most recent hemoglobin A1c level (within the last 6 months) documented as less than or equal to 9%	HCPCS	Procedure
G8017	Clinician documented that diabetic patient was not eligible candidate for hemoglobin A1c measure	HCPCS	Procedure
G8018	Clinician has not provided care for the diabetic patient for the required time for hemoglobin A1c measure (6 months)	HCPCS	Procedure
G8019	Diabetic patient with most recent low-density lipoprotein (within the last 12 months) documented as greater than or equal to 100 mg/dl	HCPCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
G8020	Diabetic patient with most recent low-density lipoprotein (within the last 12 months) documented as less than 100 mg/dl	HCPCS	Procedure
G8021	Clinician documented that diabetic patient was not eligible candidate for low-density lipoprotein measure	HCPCS	Procedure
G8022	Clinician has not provided care for the diabetic patient for the required time for low-density lipoprotein measure (12 months)	HCPCS	Procedure
G8023	Diabetic patient with most recent blood pressure (within the last 6 months) documented as equal to or greater than 140 systolic or equal to or greater than 80 mm Hg diastolic	HCPCS	Procedure
G8024	Diabetic patient with most recent blood pressure (within the last 6 months) documented as less than 140 systolic and less than 80 diastolic	HCPCS	Procedure
G8025	Clinician documented that the diabetic patient was not eligible candidate for blood pressure measure	HCPCS	Procedure
G8026	Clinician has not provided care for the diabetic patient for the required time for blood pressure measure (within the last 6 months)	HCPCS	Procedure
G8332	Clinician has not provided care for the diabetic retinopathy patient for the required time for macular edema and retinopathy measurement	HCPCS	Procedure
G8333	Patient documented to have had findings of macular or fundus exam communicated to the physician managing the diabetes care	HCPCS	Procedure
G8334	Documentation of findings of macular or fundus exam not communicated to the physician managing the patient's ongoing diabetes care	HCPCS	Procedure
G8335	Clinician documentation that patient was not an eligible candidate for the findings of their macular or fundus exam being communicated to the physician managing their diabetes care during the reporting year	HCPCS	Procedure
G8336	Clinician has not provided care for the diabetic retinopathy patient for the required time for physician communication measurement	HCPCS	Procedure
G8385	Diabetic patients with no documentation of hemoglobin A1c level (within the last 12 months)	HCPCS	Procedure
G8386	Diabetic patients with no documentation of low-density lipoprotein (within the last 12 months)	HCPCS	Procedure
G8390	Diabetic patients with no documentation of blood pressure measurement (within the last 12 months)	HCPCS	Procedure
	Estrogen Replacement		
J0900	Injection, testosterone enanthate and estradiol valerate, up to 1 cc	HCPCS	Procedure
J0970	Injection, estradiol valerate, up to 40 mg	HCPCS	Procedure
J1000	Injection, depo-estradiol cypionate, up to 5 mg	HCPCS	Procedure
J1056	Injection, medroxyprogesterone acetate/estradiol cypionate, 5 mg/25 mg	HCPCS	Procedure
J1060	Injection, testosterone cypionate and estradiol cypionate, up to 1 ml	HCPCS	Procedure
J1380	Injection, estradiol valerate, up to 10 mg	HCPCS	Procedure
J1390	Injection, estradiol valerate, up to 20 mg	HCPCS	Procedure
J1410	Injection, estrogen conjugated, per 25 mg	HCPCS	Procedure
J1435	Injection, estrone, per 1 mg	HCPCS	Procedure
	Falls		
E880	Accidental fall on or from stairs or steps	ICD-9-CM	Diagnosis
E880.0	Accidental fall on or from escalator	ICD-9-CM	Diagnosis
E880.1	Accidental fall on or from sidewalk curb	ICD-9-CM	Diagnosis
E880.9	Accidental fall on or from other stairs or steps	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
E881	Accidental fall on or from ladders or scaffolding	ICD-9-CM	Diagnosis
E881.0	Accidental fall from ladder	ICD-9-CM	Diagnosis
E881.1	Accidental fall from scaffolding	ICD-9-CM	Diagnosis
E882	Accidental fall from or out of building or other structure	ICD-9-CM	Diagnosis
E883	Accidental fall into hole or other opening in surface	ICD-9-CM	Diagnosis
E883.0	Accident from diving or jumping into water (swimming pool)	ICD-9-CM	Diagnosis
E883.1	Accidental fall into well	ICD-9-CM	Diagnosis
E883.2	Accidental fall into storm drain or manhole	ICD-9-CM	Diagnosis
E883.9	Accidental fall into other hole or other opening in surface	ICD-9-CM	Diagnosis
E884	Other accidental fall from one level to another	ICD-9-CM	Diagnosis
E884.0	Accidental fall from playground equipment	ICD-9-CM	Diagnosis
E884.1	Accidental fall from cliff	ICD-9-CM	Diagnosis
E884.2	Accidental fall from chair	ICD-9-CM	Diagnosis
E884.3	Accidental fall from wheelchair	ICD-9-CM	Diagnosis
E884.4	Accidental fall from bed	ICD-9-CM	Diagnosis
E884.5	Accidental fall from other furniture	ICD-9-CM	Diagnosis
E884.6	Accidental fall from commode	ICD-9-CM	Diagnosis
E884.9	Other accidental fall from one level to another	ICD-9-CM	Diagnosis
E885	Accidental fall on same level from slipping, tripping, or stumbling	ICD-9-CM	Diagnosis
E885.0	Fall on same level from (nonmotorized) scooter	ICD-9-CM	Diagnosis
E885.1	Fall from roller skates	ICD-9-CM	Diagnosis
E885.2	Fall from skateboard	ICD-9-CM	Diagnosis
E885.3	Fall from skis	ICD-9-CM	Diagnosis
E885.4	Fall from snowboard	ICD-9-CM	Diagnosis
E885.9	Fall from other slipping, tripping, or stumbling	ICD-9-CM	Diagnosis
E886	Accidental fall on same level from collision, pushing, or shoving, by or with other person	ICD-9-CM	Diagnosis
E886.0	Accidental fall on same level from collision, pushing, or shoving, by or with other person in sports	ICD-9-CM	Diagnosis
E886.9	Other and unspecified accidental falls on same level from collision, pushing, or shoving, by or with other person	ICD-9-CM	Diagnosis
E887	Fracture in accidental fall, cause unspecified	ICD-9-CM	Diagnosis
E888	Other and unspecified accidental fall	ICD-9-CM	Diagnosis
E888.0	Fall resulting in striking against sharp object	ICD-9-CM	Diagnosis
E888.1	Fall resulting in striking against other object	ICD-9-CM	Diagnosis
E888.8	Other fall	ICD-9-CM	Diagnosis
E888.9	Unspecified fall	ICD-9-CM	Diagnosis
E917.6	Strike against or struck accidentally by crowd, by collective fear or panic with subsequent fall	ICD-9-CM	Diagnosis
E917.7	Strike against or struck accidentally by furniture with subsequent fall	ICD-9-CM	Diagnosis
E917.8	Strike against or struck accidentally by other stationary object with subsequent fall	ICD-9-CM	Diagnosis
E917.9	Other accident caused by striking against or being struck accidentally by objects or persons	ICD-9-CM	Diagnosis
E929.3	Late effects of accidental fall	ICD-9-CM	Diagnosis
V00.01XA	Pedestrian on foot injured in collision with roller-skater, initial encounter	ICD-10-CM	Diagnosis
V00.01XD	Pedestrian on foot injured in collision with roller-skater, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
V00.02XA	Pedestrian on foot injured in collision with skateboarder, initial encounter	ICD-10-CM	Diagnosis
V00.02XD	Pedestrian on foot injured in collision with skateboarder, subsequent encounter	ICD-10-CM	Diagnosis
V00.09XA	Pedestrian on foot injured in collision with other pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.09XD	Pedestrian on foot injured in collision with other pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.111A	Fall from in-line roller-skates, initial encounter	ICD-10-CM	Diagnosis
V00.111D	Fall from in-line roller-skates, subsequent encounter	ICD-10-CM	Diagnosis
V00.111S	Fall from in-line roller-skates, sequela	ICD-10-CM	Diagnosis
V00.112A	In-line roller-skater colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.112D	In-line roller-skater colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.112S	In-line roller-skater colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.118A	Other in-line roller-skate accident, initial encounter	ICD-10-CM	Diagnosis
V00.118D	Other in-line roller-skate accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.118S	Other in-line roller-skate accident, sequela	ICD-10-CM	Diagnosis
V00.121A	Fall from non-in-line roller-skates, initial encounter	ICD-10-CM	Diagnosis
V00.121D	Fall from non-in-line roller-skates, subsequent encounter	ICD-10-CM	Diagnosis
V00.121S	Fall from non-in-line roller-skates, sequela	ICD-10-CM	Diagnosis
V00.122A	Non-in-line roller-skater colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.122D	Non-in-line roller-skater colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.122S	Non-in-line roller-skater colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.128A	Other non-in-line roller-skating accident, initial encounter	ICD-10-CM	Diagnosis
V00.128D	Other non-in-line roller-skating accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.128S	Other non-in-line roller-skating accident, sequela	ICD-10-CM	Diagnosis
V00.131A	Fall from skateboard, initial encounter	ICD-10-CM	Diagnosis
V00.131D	Fall from skateboard, subsequent encounter	ICD-10-CM	Diagnosis
V00.131S	Fall from skateboard, sequela	ICD-10-CM	Diagnosis
V00.132A	Skateboarder colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.132D	Skateboarder colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.132S	Skateboarder colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.138A	Other skateboard accident, initial encounter	ICD-10-CM	Diagnosis
V00.138D	Other skateboard accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.138S	Other skateboard accident, sequela	ICD-10-CM	Diagnosis
V00.141A	Fall from scooter (nonmotorized), initial encounter	ICD-10-CM	Diagnosis
V00.141D	Fall from scooter (nonmotorized), subsequent encounter	ICD-10-CM	Diagnosis
V00.141S	Fall from scooter (nonmotorized), sequela	ICD-10-CM	Diagnosis
V00.142A	Scooter (nonmotorized) colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.142D	Scooter (nonmotorized) colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.142S	Scooter (nonmotorized) colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.148A	Other scooter (nonmotorized) accident, initial encounter	ICD-10-CM	Diagnosis
V00.148D	Other scooter (nonmotorized) accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.148S	Other scooter (nonmotorized) accident, sequela	ICD-10-CM	Diagnosis
V00.151A	Fall from heelies, initial encounter	ICD-10-CM	Diagnosis
V00.151D	Fall from heelies, subsequent encounter	ICD-10-CM	Diagnosis
V00.151S	Fall from heelies, sequela	ICD-10-CM	Diagnosis
V00.152A	Heelies colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.152D	Heelies colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
V00.152S	Heelies colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.158A	Other heelies accident, initial encounter	ICD-10-CM	Diagnosis
V00.158D	Other heelies accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.158S	Other heelies accident, sequela	ICD-10-CM	Diagnosis
V00.181A	Fall from other rolling-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.181D	Fall from other rolling-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.181S	Fall from other rolling-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.182A	Pedestrian on other rolling-type pedestrian conveyance colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.182D	Pedestrian on other rolling-type pedestrian conveyance colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.182S	Pedestrian on other rolling-type pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.188A	Other accident on other rolling-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.188D	Other accident on other rolling-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.188S	Other accident on other rolling-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.211A	Fall from ice-skates, initial encounter	ICD-10-CM	Diagnosis
V00.211D	Fall from ice-skates, subsequent encounter	ICD-10-CM	Diagnosis
V00.211S	Fall from ice-skates, sequela	ICD-10-CM	Diagnosis
V00.212A	Ice-skater colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.212D	Ice-skater colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.212S	Ice-skater colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.218A	Other ice-skates accident, initial encounter	ICD-10-CM	Diagnosis
V00.218D	Other ice-skates accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.218S	Other ice-skates accident, sequela	ICD-10-CM	Diagnosis
V00.221A	Fall from sled, initial encounter	ICD-10-CM	Diagnosis
V00.221D	Fall from sled, subsequent encounter	ICD-10-CM	Diagnosis
V00.221S	Fall from sled, sequela	ICD-10-CM	Diagnosis
V00.222A	Sledder colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.222D	Sledder colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.222S	Sledder colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.228A	Other sled accident, initial encounter	ICD-10-CM	Diagnosis
V00.228D	Other sled accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.228S	Other sled accident, sequela	ICD-10-CM	Diagnosis
V00.281A	Fall from other gliding-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.281D	Fall from other gliding-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.281S	Fall from other gliding-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.282A	Pedestrian on other gliding-type pedestrian conveyance colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.282D	Pedestrian on other gliding-type pedestrian conveyance colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.282S	Pedestrian on other gliding-type pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.288A	Other accident on other gliding-type pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.288D	Other accident on other gliding-type pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
V00.288S	Other accident on other gliding-type pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.311A	Fall from snowboard, initial encounter	ICD-10-CM	Diagnosis
V00.311D	Fall from snowboard, subsequent encounter	ICD-10-CM	Diagnosis
V00.311S	Fall from snowboard, sequela	ICD-10-CM	Diagnosis
V00.312A	Snowboarder colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.312D	Snowboarder colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.312S	Snowboarder colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.318A	Other snowboard accident, initial encounter	ICD-10-CM	Diagnosis
V00.318D	Other snowboard accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.318S	Other snowboard accident, sequela	ICD-10-CM	Diagnosis
V00.321A	Fall from snow-skis, initial encounter	ICD-10-CM	Diagnosis
V00.321D	Fall from snow-skis, subsequent encounter	ICD-10-CM	Diagnosis
V00.321S	Fall from snow-skis, sequela	ICD-10-CM	Diagnosis
V00.322A	Snow-skier colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.322D	Snow-skier colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.322S	Snow-skier colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.328A	Other snow-ski accident, initial encounter	ICD-10-CM	Diagnosis
V00.328D	Other snow-ski accident, subsequent encounter	ICD-10-CM	Diagnosis
V00.328S	Other snow-ski accident, sequela	ICD-10-CM	Diagnosis
V00.381A	Fall from other flat-bottomed pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.381D	Fall from other flat-bottomed pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.381S	Fall from other flat-bottomed pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.382A	Pedestrian on other flat-bottomed pedestrian conveyance colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.382D	Pedestrian on other flat-bottomed pedestrian conveyance colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.382S	Pedestrian on other flat-bottomed pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.388A	Other accident on other flat-bottomed pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.388D	Other accident on other flat-bottomed pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.388S	Other accident on other flat-bottomed pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.811A	Fall from moving wheelchair (powered), initial encounter	ICD-10-CM	Diagnosis
V00.811D	Fall from moving wheelchair (powered), subsequent encounter	ICD-10-CM	Diagnosis
V00.811S	Fall from moving wheelchair (powered), sequela	ICD-10-CM	Diagnosis
V00.812A	Wheelchair (powered) colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.812D	Wheelchair (powered) colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.812S	Wheelchair (powered) colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.818A	Other accident with wheelchair (powered), initial encounter	ICD-10-CM	Diagnosis
V00.818D	Other accident with wheelchair (powered), subsequent encounter	ICD-10-CM	Diagnosis
V00.818S	Other accident with wheelchair (powered), sequela	ICD-10-CM	Diagnosis
V00.821A	Fall from baby stroller, initial encounter	ICD-10-CM	Diagnosis
V00.821D	Fall from baby stroller, subsequent encounter	ICD-10-CM	Diagnosis
V00.821S	Fall from baby stroller, sequela	ICD-10-CM	Diagnosis
V00.822A	Baby stroller colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.822D	Baby stroller colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.822S	Baby stroller colliding with stationary object, sequela	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
V00.828A	Other accident with baby stroller, initial encounter	ICD-10-CM	Diagnosis
V00.828D	Other accident with baby stroller, subsequent encounter	ICD-10-CM	Diagnosis
V00.828S	Other accident with baby stroller, sequela	ICD-10-CM	Diagnosis
V00.831A	Fall from motorized mobility scooter, initial encounter	ICD-10-CM	Diagnosis
V00.831D	Fall from motorized mobility scooter, subsequent encounter	ICD-10-CM	Diagnosis
V00.831S	Fall from motorized mobility scooter, sequela	ICD-10-CM	Diagnosis
V00.832A	Motorized mobility scooter colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.832D	Motorized mobility scooter colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.832S	Motorized mobility scooter colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.838A	Other accident with motorized mobility scooter, initial encounter	ICD-10-CM	Diagnosis
V00.838D	Other accident with motorized mobility scooter, subsequent encounter	ICD-10-CM	Diagnosis
V00.838S	Other accident with motorized mobility scooter, sequela	ICD-10-CM	Diagnosis
V00.891A	Fall from other pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.891D	Fall from other pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.891S	Fall from other pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
V00.892A	Pedestrian on other pedestrian conveyance colliding with stationary object, initial encounter	ICD-10-CM	Diagnosis
V00.892D	Pedestrian on other pedestrian conveyance colliding with stationary object, subsequent encounter	ICD-10-CM	Diagnosis
V00.892S	Pedestrian on other pedestrian conveyance colliding with stationary object, sequela	ICD-10-CM	Diagnosis
V00.898A	Other accident on other pedestrian conveyance, initial encounter	ICD-10-CM	Diagnosis
V00.898D	Other accident on other pedestrian conveyance, subsequent encounter	ICD-10-CM	Diagnosis
V00.898S	Other accident on other pedestrian conveyance, sequela	ICD-10-CM	Diagnosis
W00.0XXA	Fall on same level due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.0XXD	Fall on same level due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.0XXS	Fall on same level due to ice and snow, sequela	ICD-10-CM	Diagnosis
W00.1XXA	Fall from stairs and steps due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.1XXD	Fall from stairs and steps due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.1XXS	Fall from stairs and steps due to ice and snow, sequela	ICD-10-CM	Diagnosis
W00.2XXA	Other fall from one level to another due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.2XXD	Other fall from one level to another due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.2XXS	Other fall from one level to another due to ice and snow, sequela	ICD-10-CM	Diagnosis
W00.9XXA	Unspecified fall due to ice and snow, initial encounter	ICD-10-CM	Diagnosis
W00.9XXD	Unspecified fall due to ice and snow, subsequent encounter	ICD-10-CM	Diagnosis
W00.9XXS	Unspecified fall due to ice and snow, sequela	ICD-10-CM	Diagnosis
W01.0XXA	Fall on same level from slipping, tripping and stumbling without subsequent striking against object, initial encounter	ICD-10-CM	Diagnosis
W01.0XXD	Fall on same level from slipping, tripping and stumbling without subsequent striking against object, subsequent encounter	ICD-10-CM	Diagnosis
W01.0XXS	Fall on same level from slipping, tripping and stumbling without subsequent striking against object, sequela	ICD-10-CM	Diagnosis
W01.10XA	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified object, initial encounter	ICD-10-CM	Diagnosis
W01.10XD	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified object, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W01.10XS	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified object, sequela	ICD-10-CM	Diagnosis
W01.110A	Fall on same level from slipping, tripping and stumbling with subsequent striking against sharp glass, initial encounter	ICD-10-CM	Diagnosis
W01.110D	Fall on same level from slipping, tripping and stumbling with subsequent striking against sharp glass, subsequent encounter	ICD-10-CM	Diagnosis
W01.110S	Fall on same level from slipping, tripping and stumbling with subsequent striking against sharp glass, sequela	ICD-10-CM	Diagnosis
W01.111A	Fall on same level from slipping, tripping and stumbling with subsequent striking against power tool or machine, initial encounter	ICD-10-CM	Diagnosis
W01.111D	Fall on same level from slipping, tripping and stumbling with subsequent striking against power tool or machine, subsequent encounter	ICD-10-CM	Diagnosis
W01.111S	Fall on same level from slipping, tripping and stumbling with subsequent striking against power tool or machine, sequela	ICD-10-CM	Diagnosis
W01.118A	Fall on same level from slipping, tripping and stumbling with subsequent striking against other sharp object, initial encounter	ICD-10-CM	Diagnosis
W01.118D	Fall on same level from slipping, tripping and stumbling with subsequent striking against other sharp object, subsequent encounter	ICD-10-CM	Diagnosis
W01.118S	Fall on same level from slipping, tripping and stumbling with subsequent striking against other sharp object, sequela	ICD-10-CM	Diagnosis
W01.119A	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified sharp object, initial encounter	ICD-10-CM	Diagnosis
W01.119D	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified sharp object, subsequent encounter	ICD-10-CM	Diagnosis
W01.119S	Fall on same level from slipping, tripping and stumbling with subsequent striking against unspecified sharp object, sequela	ICD-10-CM	Diagnosis
W01.190A	Fall on same level from slipping, tripping and stumbling with subsequent striking against furniture, initial encounter	ICD-10-CM	Diagnosis
W01.190D	Fall on same level from slipping, tripping and stumbling with subsequent striking against furniture, subsequent encounter	ICD-10-CM	Diagnosis
W01.190S	Fall on same level from slipping, tripping and stumbling with subsequent striking against furniture, sequela	ICD-10-CM	Diagnosis
W01.198A	Fall on same level from slipping, tripping and stumbling with subsequent striking against other object, initial encounter	ICD-10-CM	Diagnosis
W01.198D	Fall on same level from slipping, tripping and stumbling with subsequent striking against other object, subsequent encounter	ICD-10-CM	Diagnosis
W01.198S	Fall on same level from slipping, tripping and stumbling with subsequent striking against other object, sequela	ICD-10-CM	Diagnosis
W03.XXXA	Other fall on same level due to collision with another person, initial encounter	ICD-10-CM	Diagnosis
W03.XXXD	Other fall on same level due to collision with another person, subsequent encounter	ICD-10-CM	Diagnosis
W03.XXXS	Other fall on same level due to collision with another person, sequela	ICD-10-CM	Diagnosis
W04.XXXA	Fall while being carried or supported by other persons, initial encounter	ICD-10-CM	Diagnosis
W04.XXXD	Fall while being carried or supported by other persons, subsequent encounter	ICD-10-CM	Diagnosis
W04.XXXS	Fall while being carried or supported by other persons, sequela	ICD-10-CM	Diagnosis
W05.0XXA	Fall from non-moving wheelchair, initial encounter	ICD-10-CM	Diagnosis
W05.0XXD	Fall from non-moving wheelchair, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W05.0XXS	Fall from non-moving wheelchair, sequela	ICD-10-CM	Diagnosis
W05.1XXA	Fall from non-moving nonmotorized scooter, initial encounter	ICD-10-CM	Diagnosis
W05.1XXD	Fall from non-moving nonmotorized scooter, subsequent encounter	ICD-10-CM	Diagnosis
W05.1XXS	Fall from non-moving nonmotorized scooter, sequela	ICD-10-CM	Diagnosis
W05.2XXA	Fall from non-moving motorized mobility scooter, initial encounter	ICD-10-CM	Diagnosis
W05.2XXD	Fall from non-moving motorized mobility scooter, subsequent encounter	ICD-10-CM	Diagnosis
W05.2XXS	Fall from non-moving motorized mobility scooter, sequela	ICD-10-CM	Diagnosis
W06.XXXA	Fall from bed, initial encounter	ICD-10-CM	Diagnosis
W06.XXXD	Fall from bed, subsequent encounter	ICD-10-CM	Diagnosis
W06.XXXS	Fall from bed, sequela	ICD-10-CM	Diagnosis
W07.XXXA	Fall from chair, initial encounter	ICD-10-CM	Diagnosis
W07.XXXD	Fall from chair, subsequent encounter	ICD-10-CM	Diagnosis
W07.XXXS	Fall from chair, sequela	ICD-10-CM	Diagnosis
W08.XXXA	Fall from other furniture, initial encounter	ICD-10-CM	Diagnosis
W08.XXXD	Fall from other furniture, subsequent encounter	ICD-10-CM	Diagnosis
W08.XXXS	Fall from other furniture, sequela	ICD-10-CM	Diagnosis
W09.0XXA	Fall on or from playground slide, initial encounter	ICD-10-CM	Diagnosis
W09.0XXD	Fall on or from playground slide, subsequent encounter	ICD-10-CM	Diagnosis
W09.0XXS	Fall on or from playground slide, sequela	ICD-10-CM	Diagnosis
W09.1XXA	Fall from playground swing, initial encounter	ICD-10-CM	Diagnosis
W09.1XXD	Fall from playground swing, subsequent encounter	ICD-10-CM	Diagnosis
W09.1XXS	Fall from playground swing, sequela	ICD-10-CM	Diagnosis
W09.2XXA	Fall on or from jungle gym, initial encounter	ICD-10-CM	Diagnosis
W09.2XXD	Fall on or from jungle gym, subsequent encounter	ICD-10-CM	Diagnosis
W09.2XXS	Fall on or from jungle gym, sequela	ICD-10-CM	Diagnosis
W09.8XXA	Fall on or from other playground equipment, initial encounter	ICD-10-CM	Diagnosis
W09.8XXD	Fall on or from other playground equipment, subsequent encounter	ICD-10-CM	Diagnosis
W09.8XXS	Fall on or from other playground equipment, sequela	ICD-10-CM	Diagnosis
W10.0XXA	Fall (on)(from) escalator, initial encounter	ICD-10-CM	Diagnosis
W10.0XXD	Fall (on)(from) escalator, subsequent encounter	ICD-10-CM	Diagnosis
W10.0XXS	Fall (on)(from) escalator, sequela	ICD-10-CM	Diagnosis
W10.1XXA	Fall (on)(from) sidewalk curb, initial encounter	ICD-10-CM	Diagnosis
W10.1XXD	Fall (on)(from) sidewalk curb, subsequent encounter	ICD-10-CM	Diagnosis
W10.1XXS	Fall (on)(from) sidewalk curb, sequela	ICD-10-CM	Diagnosis
W10.2XXA	Fall (on)(from) incline, initial encounter	ICD-10-CM	Diagnosis
W10.2XXD	Fall (on)(from) incline, subsequent encounter	ICD-10-CM	Diagnosis
W10.2XXS	Fall (on)(from) incline, sequela	ICD-10-CM	Diagnosis
W10.8XXA	Fall (on) (from) other stairs and steps, initial encounter	ICD-10-CM	Diagnosis
W10.8XXD	Fall (on) (from) other stairs and steps, subsequent encounter	ICD-10-CM	Diagnosis
W10.8XXS	Fall (on) (from) other stairs and steps, sequela	ICD-10-CM	Diagnosis
W10.9XXA	Fall (on) (from) unspecified stairs and steps, initial encounter	ICD-10-CM	Diagnosis
W10.9XXD	Fall (on) (from) unspecified stairs and steps, subsequent encounter	ICD-10-CM	Diagnosis
W10.9XXS	Fall (on) (from) unspecified stairs and steps, sequela	ICD-10-CM	Diagnosis
W11.XXXA	Fall on and from ladder, initial encounter	ICD-10-CM	Diagnosis
W11.XXXD	Fall on and from ladder, subsequent encounter	ICD-10-CM	Diagnosis
W11.XXXS	Fall on and from ladder, sequela	ICD-10-CM	Diagnosis
W12.XXXA	Fall on and from scaffolding, initial encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W12.XXXD	Fall on and from scaffolding, subsequent encounter	ICD-10-CM	Diagnosis
W12.XXXS	Fall on and from scaffolding, sequela	ICD-10-CM	Diagnosis
W13.0XXA	Fall from, out of or through balcony, initial encounter	ICD-10-CM	Diagnosis
W13.0XXD	Fall from, out of or through balcony, subsequent encounter	ICD-10-CM	Diagnosis
W13.0XXS	Fall from, out of or through balcony, sequela	ICD-10-CM	Diagnosis
W13.1XXA	Fall from, out of or through bridge, initial encounter	ICD-10-CM	Diagnosis
W13.1XXD	Fall from, out of or through bridge, subsequent encounter	ICD-10-CM	Diagnosis
W13.1XXS	Fall from, out of or through bridge, sequela	ICD-10-CM	Diagnosis
W13.2XXA	Fall from, out of or through roof, initial encounter	ICD-10-CM	Diagnosis
W13.2XXD	Fall from, out of or through roof, subsequent encounter	ICD-10-CM	Diagnosis
W13.2XXS	Fall from, out of or through roof, sequela	ICD-10-CM	Diagnosis
W13.3XXA	Fall through floor, initial encounter	ICD-10-CM	Diagnosis
W13.3XXD	Fall through floor, subsequent encounter	ICD-10-CM	Diagnosis
W13.3XXS	Fall through floor, sequela	ICD-10-CM	Diagnosis
W13.4XXA	Fall from, out of or through window, initial encounter	ICD-10-CM	Diagnosis
W13.4XXD	Fall from, out of or through window, subsequent encounter	ICD-10-CM	Diagnosis
W13.4XXS	Fall from, out of or through window, sequela	ICD-10-CM	Diagnosis
W13.8XXA	Fall from, out of or through other building or structure, initial encounter	ICD-10-CM	Diagnosis
W13.8XXD	Fall from, out of or through other building or structure, subsequent encounter	ICD-10-CM	Diagnosis
W13.8XXS	Fall from, out of or through other building or structure, sequela	ICD-10-CM	Diagnosis
W13.9XXA	Fall from, out of or through building, not otherwise specified, initial encounter	ICD-10-CM	Diagnosis
W13.9XXD	Fall from, out of or through building, not otherwise specified, subsequent encounter	ICD-10-CM	Diagnosis
W13.9XXS	Fall from, out of or through building, not otherwise specified, sequela	ICD-10-CM	Diagnosis
W14.XXXA	Fall from tree, initial encounter	ICD-10-CM	Diagnosis
W14.XXXD	Fall from tree, subsequent encounter	ICD-10-CM	Diagnosis
W14.XXXS	Fall from tree, sequela	ICD-10-CM	Diagnosis
W15.XXXA	Fall from cliff, initial encounter	ICD-10-CM	Diagnosis
W15.XXXD	Fall from cliff, subsequent encounter	ICD-10-CM	Diagnosis
W15.XXXS	Fall from cliff, sequela	ICD-10-CM	Diagnosis
W16.011A	Fall into swimming pool striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.011D	Fall into swimming pool striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.011S	Fall into swimming pool striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.012A	Fall into swimming pool striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.012D	Fall into swimming pool striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.012S	Fall into swimming pool striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.021A	Fall into swimming pool striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.021D	Fall into swimming pool striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.021S	Fall into swimming pool striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.022A	Fall into swimming pool striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W16.022D	Fall into swimming pool striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.022S	Fall into swimming pool striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.031A	Fall into swimming pool striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.031D	Fall into swimming pool striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.031S	Fall into swimming pool striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.032A	Fall into swimming pool striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.032D	Fall into swimming pool striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.032S	Fall into swimming pool striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.111A	Fall into natural body of water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.111D	Fall into natural body of water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.111S	Fall into natural body of water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.112A	Fall into natural body of water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.112D	Fall into natural body of water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.112S	Fall into natural body of water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.121A	Fall into natural body of water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.121D	Fall into natural body of water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.121S	Fall into natural body of water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.122A	Fall into natural body of water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.122D	Fall into natural body of water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.122S	Fall into natural body of water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.131A	Fall into natural body of water striking side causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.131D	Fall into natural body of water striking side causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.131S	Fall into natural body of water striking side causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.132A	Fall into natural body of water striking side causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.132D	Fall into natural body of water striking side causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.132S	Fall into natural body of water striking side causing other injury, sequela	ICD-10-CM	Diagnosis
W16.211A	Fall in (into) filled bathtub causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.211D	Fall in (into) filled bathtub causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W16.211S	Fall in (into) filled bathtub causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.212A	Fall in (into) filled bathtub causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.212D	Fall in (into) filled bathtub causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.212S	Fall in (into) filled bathtub causing other injury, sequela	ICD-10-CM	Diagnosis
W16.221A	Fall in (into) bucket of water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.221D	Fall in (into) bucket of water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.221S	Fall in (into) bucket of water causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.222A	Fall in (into) bucket of water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.222D	Fall in (into) bucket of water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.222S	Fall in (into) bucket of water causing other injury, sequela	ICD-10-CM	Diagnosis
W16.311A	Fall into other water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.311D	Fall into other water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.311S	Fall into other water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.312A	Fall into other water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.312D	Fall into other water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.312S	Fall into other water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.321A	Fall into other water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.321D	Fall into other water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.321S	Fall into other water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.322A	Fall into other water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.322D	Fall into other water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.322S	Fall into other water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.331A	Fall into other water striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.331D	Fall into other water striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.331S	Fall into other water striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.332A	Fall into other water striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.332D	Fall into other water striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.332S	Fall into other water striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.41XA	Fall into unspecified water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.41XD	Fall into unspecified water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.41XS	Fall into unspecified water causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.42XA	Fall into unspecified water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.42XD	Fall into unspecified water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.42XS	Fall into unspecified water causing other injury, sequela	ICD-10-CM	Diagnosis
W16.511A	Jumping or diving into swimming pool striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.511D	Jumping or diving into swimming pool striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W16.511S	Jumping or diving into swimming pool striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.512A	Jumping or diving into swimming pool striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.512D	Jumping or diving into swimming pool striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.512S	Jumping or diving into swimming pool striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.521A	Jumping or diving into swimming pool striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.521D	Jumping or diving into swimming pool striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.521S	Jumping or diving into swimming pool striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.522A	Jumping or diving into swimming pool striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.522D	Jumping or diving into swimming pool striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.522S	Jumping or diving into swimming pool striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.531A	Jumping or diving into swimming pool striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.531D	Jumping or diving into swimming pool striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.531S	Jumping or diving into swimming pool striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.532A	Jumping or diving into swimming pool striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.532D	Jumping or diving into swimming pool striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.532S	Jumping or diving into swimming pool striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.611A	Jumping or diving into natural body of water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.611D	Jumping or diving into natural body of water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.611S	Jumping or diving into natural body of water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.612A	Jumping or diving into natural body of water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.612D	Jumping or diving into natural body of water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.612S	Jumping or diving into natural body of water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.621A	Jumping or diving into natural body of water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.621D	Jumping or diving into natural body of water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W16.621S	Jumping or diving into natural body of water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.622A	Jumping or diving into natural body of water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.622D	Jumping or diving into natural body of water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.622S	Jumping or diving into natural body of water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.711A	Jumping or diving from boat striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.711D	Jumping or diving from boat striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.711S	Jumping or diving from boat striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.712A	Jumping or diving from boat striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.712D	Jumping or diving from boat striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.712S	Jumping or diving from boat striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.721A	Jumping or diving from boat striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.721D	Jumping or diving from boat striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.721S	Jumping or diving from boat striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.722A	Jumping or diving from boat striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.722D	Jumping or diving from boat striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.722S	Jumping or diving from boat striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.811A	Jumping or diving into other water striking water surface causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.811D	Jumping or diving into other water striking water surface causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.811S	Jumping or diving into other water striking water surface causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.812A	Jumping or diving into other water striking water surface causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.812D	Jumping or diving into other water striking water surface causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.812S	Jumping or diving into other water striking water surface causing other injury, sequela	ICD-10-CM	Diagnosis
W16.821A	Jumping or diving into other water striking bottom causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.821D	Jumping or diving into other water striking bottom causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.821S	Jumping or diving into other water striking bottom causing drowning and submersion, sequela	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W16.822A	Jumping or diving into other water striking bottom causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.822D	Jumping or diving into other water striking bottom causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.822S	Jumping or diving into other water striking bottom causing other injury, sequela	ICD-10-CM	Diagnosis
W16.831A	Jumping or diving into other water striking wall causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.831D	Jumping or diving into other water striking wall causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.831S	Jumping or diving into other water striking wall causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.832A	Jumping or diving into other water striking wall causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.832D	Jumping or diving into other water striking wall causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.832S	Jumping or diving into other water striking wall causing other injury, sequela	ICD-10-CM	Diagnosis
W16.91XA	Jumping or diving into unspecified water causing drowning and submersion, initial encounter	ICD-10-CM	Diagnosis
W16.91XD	Jumping or diving into unspecified water causing drowning and submersion, subsequent encounter	ICD-10-CM	Diagnosis
W16.91XS	Jumping or diving into unspecified water causing drowning and submersion, sequela	ICD-10-CM	Diagnosis
W16.92XA	Jumping or diving into unspecified water causing other injury, initial encounter	ICD-10-CM	Diagnosis
W16.92XD	Jumping or diving into unspecified water causing other injury, subsequent encounter	ICD-10-CM	Diagnosis
W16.92XS	Jumping or diving into unspecified water causing other injury, sequela	ICD-10-CM	Diagnosis
W17.0XXA	Fall into well, initial encounter	ICD-10-CM	Diagnosis
W17.0XXD	Fall into well, subsequent encounter	ICD-10-CM	Diagnosis
W17.0XXS	Fall into well, sequela	ICD-10-CM	Diagnosis
W17.1XXA	Fall into storm drain or manhole, initial encounter	ICD-10-CM	Diagnosis
W17.1XXD	Fall into storm drain or manhole, subsequent encounter	ICD-10-CM	Diagnosis
W17.1XXS	Fall into storm drain or manhole, sequela	ICD-10-CM	Diagnosis
W17.2XXA	Fall into hole, initial encounter	ICD-10-CM	Diagnosis
W17.2XXD	Fall into hole, subsequent encounter	ICD-10-CM	Diagnosis
W17.2XXS	Fall into hole, sequela	ICD-10-CM	Diagnosis
W17.3XXA	Fall into empty swimming pool, initial encounter	ICD-10-CM	Diagnosis
W17.3XXD	Fall into empty swimming pool, subsequent encounter	ICD-10-CM	Diagnosis
W17.3XXS	Fall into empty swimming pool, sequela	ICD-10-CM	Diagnosis
W17.4XXA	Fall from dock, initial encounter	ICD-10-CM	Diagnosis
W17.4XXD	Fall from dock, subsequent encounter	ICD-10-CM	Diagnosis
W17.4XXS	Fall from dock, sequela	ICD-10-CM	Diagnosis
W17.81XA	Fall down embankment (hill), initial encounter	ICD-10-CM	Diagnosis
W17.81XD	Fall down embankment (hill), subsequent encounter	ICD-10-CM	Diagnosis
W17.81XS	Fall down embankment (hill), sequela	ICD-10-CM	Diagnosis
W17.82XA	Fall from (out of) grocery cart, initial encounter	ICD-10-CM	Diagnosis
W17.82XD	Fall from (out of) grocery cart, subsequent encounter	ICD-10-CM	Diagnosis
W17.82XS	Fall from (out of) grocery cart, sequela	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W17.89XA	Other fall from one level to another, initial encounter	ICD-10-CM	Diagnosis
W17.89XD	Other fall from one level to another, subsequent encounter	ICD-10-CM	Diagnosis
W17.89XS	Other fall from one level to another, sequela	ICD-10-CM	Diagnosis
W18.00XA	Striking against unspecified object with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.00XD	Striking against unspecified object with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.00XS	Striking against unspecified object with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.01XA	Striking against sports equipment with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.01XD	Striking against sports equipment with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.01XS	Striking against sports equipment with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.02XA	Striking against glass with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.02XD	Striking against glass with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.02XS	Striking against glass with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.09XA	Striking against other object with subsequent fall, initial encounter	ICD-10-CM	Diagnosis
W18.09XD	Striking against other object with subsequent fall, subsequent encounter	ICD-10-CM	Diagnosis
W18.09XS	Striking against other object with subsequent fall, sequela	ICD-10-CM	Diagnosis
W18.11XA	Fall from or off toilet without subsequent striking against object, initial encounter	ICD-10-CM	Diagnosis
W18.11XD	Fall from or off toilet without subsequent striking against object, subsequent encounter	ICD-10-CM	Diagnosis
W18.11XS	Fall from or off toilet without subsequent striking against object, sequela	ICD-10-CM	Diagnosis
W18.12XA	Fall from or off toilet with subsequent striking against object, initial encounter	ICD-10-CM	Diagnosis
W18.12XD	Fall from or off toilet with subsequent striking against object, subsequent encounter	ICD-10-CM	Diagnosis
W18.12XS	Fall from or off toilet with subsequent striking against object, sequela	ICD-10-CM	Diagnosis
W18.2XXA	Fall in (into) shower or empty bathtub, initial encounter	ICD-10-CM	Diagnosis
W18.2XXD	Fall in (into) shower or empty bathtub, subsequent encounter	ICD-10-CM	Diagnosis
W18.2XXS	Fall in (into) shower or empty bathtub, sequela	ICD-10-CM	Diagnosis
W18.30XA	Fall on same level, unspecified, initial encounter	ICD-10-CM	Diagnosis
W18.30XD	Fall on same level, unspecified, subsequent encounter	ICD-10-CM	Diagnosis
W18.30XS	Fall on same level, unspecified, sequela	ICD-10-CM	Diagnosis
W18.31XA	Fall on same level due to stepping on an object, initial encounter	ICD-10-CM	Diagnosis
W18.31XD	Fall on same level due to stepping on an object, subsequent encounter	ICD-10-CM	Diagnosis
W18.31XS	Fall on same level due to stepping on an object, sequela	ICD-10-CM	Diagnosis
W18.39XA	Other fall on same level, initial encounter	ICD-10-CM	Diagnosis
W18.39XD	Other fall on same level, subsequent encounter	ICD-10-CM	Diagnosis
W18.39XS	Other fall on same level, sequela	ICD-10-CM	Diagnosis
W18.40XA	Slipping, tripping and stumbling without falling, unspecified, initial encounter	ICD-10-CM	Diagnosis
W18.40XD	Slipping, tripping and stumbling without falling, unspecified, subsequent encounter	ICD-10-CM	Diagnosis
W18.40XS	Slipping, tripping and stumbling without falling, unspecified, sequela	ICD-10-CM	Diagnosis
W18.41XA	Slipping, tripping and stumbling without falling due to stepping on object, initial encounter	ICD-10-CM	Diagnosis
W18.41XD	Slipping, tripping and stumbling without falling due to stepping on object, subsequent encounter	ICD-10-CM	Diagnosis
W18.41XS	Slipping, tripping and stumbling without falling due to stepping on object, sequela	ICD-10-CM	Diagnosis
W18.42XA	Slipping, tripping and stumbling without falling due to stepping into hole or opening, initial encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
W18.42XD	Slipping, tripping and stumbling without falling due to stepping into hole or opening, subsequent encounter	ICD-10-CM	Diagnosis
W18.42XS	Slipping, tripping and stumbling without falling due to stepping into hole or opening, sequela	ICD-10-CM	Diagnosis
W18.43XA	Slipping, tripping and stumbling without falling due to stepping from one level to another, initial encounter	ICD-10-CM	Diagnosis
W18.43XD	Slipping, tripping and stumbling without falling due to stepping from one level to another, subsequent encounter	ICD-10-CM	Diagnosis
W18.43XS	Slipping, tripping and stumbling without falling due to stepping from one level to another, sequela	ICD-10-CM	Diagnosis
W18.49XA	Other slipping, tripping and stumbling without falling, initial encounter	ICD-10-CM	Diagnosis
W18.49XD	Other slipping, tripping and stumbling without falling, subsequent encounter	ICD-10-CM	Diagnosis
W18.49XS	Other slipping, tripping and stumbling without falling, sequela	ICD-10-CM	Diagnosis
W19.XXXA	Unspecified fall, initial encounter	ICD-10-CM	Diagnosis
W19.XXXD	Unspecified fall, subsequent encounter	ICD-10-CM	Diagnosis
W19.XXXS	Unspecified fall, sequela	ICD-10-CM	Diagnosis
W50.0XXA	Accidental hit or strike by another person, initial encounter	ICD-10-CM	Diagnosis
W50.0XXD	Accidental hit or strike by another person, subsequent encounter	ICD-10-CM	Diagnosis
W50.1XXA	Accidental kick by another person, initial encounter	ICD-10-CM	Diagnosis
W50.1XXD	Accidental kick by another person, subsequent encounter	ICD-10-CM	Diagnosis
W50.2XXA	Accidental twist by another person, initial encounter	ICD-10-CM	Diagnosis
W50.2XXD	Accidental twist by another person, subsequent encounter	ICD-10-CM	Diagnosis
W50.4XXA	Accidental scratch by another person, initial encounter	ICD-10-CM	Diagnosis
W50.4XXD	Accidental scratch by another person, subsequent encounter	ICD-10-CM	Diagnosis
W51.XXXA	Accidental striking against or bumped into by another person, initial encounter	ICD-10-CM	Diagnosis
W51.XXXD	Accidental striking against or bumped into by another person, subsequent encounter	ICD-10-CM	Diagnosis
W52.XXXA	Crushed, pushed or stepped on by crowd or human stampede, initial encounter	ICD-10-CM	Diagnosis
	Fractures		
807.0	Closed fracture of rib(s)	ICD-9-CM	Diagnosis
807.00	Closed fracture of rib(s), unspecified	ICD-9-CM	Diagnosis
807.01	Closed fracture of one rib	ICD-9-CM	Diagnosis
807.02	Closed fracture of two ribs	ICD-9-CM	Diagnosis
807.03	Closed fracture of three ribs	ICD-9-CM	Diagnosis
807.04	Closed fracture of four ribs	ICD-9-CM	Diagnosis
807.05	Closed fracture of five ribs	ICD-9-CM	Diagnosis
807.06	Closed fracture of six ribs	ICD-9-CM	Diagnosis
807.07	Closed fracture of seven ribs	ICD-9-CM	Diagnosis
807.08	Closed fracture of eight or more ribs	ICD-9-CM	Diagnosis
807.09	Closed fracture of multiple ribs, unspecified	ICD-9-CM	Diagnosis
807.1	Open fracture of rib(s)	ICD-9-CM	Diagnosis
807.10	Open fracture of rib(s), unspecified	ICD-9-CM	Diagnosis
807.11	Open fracture of one rib	ICD-9-CM	Diagnosis
807.12	Open fracture of two ribs	ICD-9-CM	Diagnosis
807.13	Open fracture of three ribs	ICD-9-CM	Diagnosis
807.14	Open fracture of four ribs	ICD-9-CM	Diagnosis
807.15	Open fracture of five ribs	ICD-9-CM	Diagnosis
807.16	Open fracture of six ribs	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
807.17	Open fracture of seven ribs	ICD-9-CM	Diagnosis
807.18	Open fracture of eight or more ribs	ICD-9-CM	Diagnosis
807.19	Open fracture of multiple ribs, unspecified	ICD-9-CM	Diagnosis
810	Fracture of clavicle	ICD-9-CM	Diagnosis
810.0	Closed fracture of clavicle	ICD-9-CM	Diagnosis
810.00	Unspecified part of closed fracture of clavicle	ICD-9-CM	Diagnosis
810.01	Closed fracture of sternal end of clavicle	ICD-9-CM	Diagnosis
810.02	Closed fracture of shaft of clavicle	ICD-9-CM	Diagnosis
810.03	Closed fracture of acromial end of clavicle	ICD-9-CM	Diagnosis
810.1	Open fracture of clavicle	ICD-9-CM	Diagnosis
810.10	Unspecified part of open fracture of clavicle	ICD-9-CM	Diagnosis
810.11	Open fracture of sternal end of clavicle	ICD-9-CM	Diagnosis
810.12	Open fracture of shaft of clavicle	ICD-9-CM	Diagnosis
810.13	Open fracture of acromial end of clavicle	ICD-9-CM	Diagnosis
813	Fracture of radius and ulna	ICD-9-CM	Diagnosis
813.0	Closed fracture of upper end of radius and ulna	ICD-9-CM	Diagnosis
813.00	Unspecified fracture of radius and ulna, upper end of forearm, closed	ICD-9-CM	Diagnosis
813.01	Closed fracture of olecranon process of ulna	ICD-9-CM	Diagnosis
813.02	Closed fracture of coronoid process of ulna	ICD-9-CM	Diagnosis
813.03	Closed Monteggia's fracture	ICD-9-CM	Diagnosis
813.04	Other and unspecified closed fractures of proximal end of ulna (alone)	ICD-9-CM	Diagnosis
813.05	Closed fracture of head of radius	ICD-9-CM	Diagnosis
813.06	Closed fracture of neck of radius	ICD-9-CM	Diagnosis
813.07	Other and unspecified closed fractures of proximal end of radius (alone)	ICD-9-CM	Diagnosis
813.08	Closed fracture of radius with ulna, upper end (any part)	ICD-9-CM	Diagnosis
813.1	Open fracture of upper end of radius and ulna	ICD-9-CM	Diagnosis
813.10	Unspecified open fracture of upper end of forearm	ICD-9-CM	Diagnosis
813.11	Open fracture of olecranon process of ulna	ICD-9-CM	Diagnosis
813.12	Open fracture of coronoid process of ulna	ICD-9-CM	Diagnosis
813.13	Open Monteggia's fracture	ICD-9-CM	Diagnosis
813.14	Other and unspecified open fractures of proximal end of ulna (alone)	ICD-9-CM	Diagnosis
813.15	Open fracture of head of radius	ICD-9-CM	Diagnosis
813.16	Open fracture of neck of radius	ICD-9-CM	Diagnosis
813.17	Other and unspecified open fractures of proximal end of radius (alone)	ICD-9-CM	Diagnosis
813.18	Open fracture of radius with ulna, upper end (any part)	ICD-9-CM	Diagnosis
813.2	Closed fracture of shaft of radius and ulna	ICD-9-CM	Diagnosis
813.20	Unspecified closed fracture of shaft of radius or ulna	ICD-9-CM	Diagnosis
813.21	Closed fracture of shaft of radius (alone)	ICD-9-CM	Diagnosis
813.22	Closed fracture of shaft of ulna (alone)	ICD-9-CM	Diagnosis
813.23	Closed fracture of shaft of radius with ulna	ICD-9-CM	Diagnosis
813.3	Open fracture of shaft of radius and ulna	ICD-9-CM	Diagnosis
813.30	Unspecified open fracture of shaft of radius or ulna	ICD-9-CM	Diagnosis
813.31	Open fracture of shaft of radius (alone)	ICD-9-CM	Diagnosis
813.32	Open fracture of shaft of ulna (alone)	ICD-9-CM	Diagnosis
813.33	Open fracture of shaft of radius with ulna	ICD-9-CM	Diagnosis
813.4	Closed fracture of lower end of radius and ulna	ICD-9-CM	Diagnosis
813.40	Unspecified closed fracture of lower end of forearm	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
813.41	Closed Colles' fracture	ICD-9-CM	Diagnosis
813.42	Other closed fractures of distal end of radius (alone)	ICD-9-CM	Diagnosis
813.43	Closed fracture of distal end of ulna (alone)	ICD-9-CM	Diagnosis
813.44	Closed fracture of lower end of radius with ulna	ICD-9-CM	Diagnosis
813.45	Torus fracture of radius (alone)	ICD-9-CM	Diagnosis
813.46	Torus fracture of ulna (alone)	ICD-9-CM	Diagnosis
813.47	Torus fracture of radius and ulna	ICD-9-CM	Diagnosis
813.5	Open fracture of lower end of radius and ulna	ICD-9-CM	Diagnosis
813.50	Unspecified open fracture of lower end of forearm	ICD-9-CM	Diagnosis
813.51	Open Colles' fracture	ICD-9-CM	Diagnosis
813.52	Other open fractures of distal end of radius (alone)	ICD-9-CM	Diagnosis
813.53	Open fracture of distal end of ulna (alone)	ICD-9-CM	Diagnosis
813.54	Open fracture of lower end of radius with ulna	ICD-9-CM	Diagnosis
813.8	Closed fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.80	Closed fracture of unspecified part of forearm	ICD-9-CM	Diagnosis
813.81	Closed fracture of unspecified part of radius (alone)	ICD-9-CM	Diagnosis
813.82	Closed fracture of unspecified part of ulna (alone)	ICD-9-CM	Diagnosis
813.83	Closed fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.9	Open fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
813.90	Open fracture of unspecified part of forearm	ICD-9-CM	Diagnosis
813.91	Open fracture of unspecified part of radius (alone)	ICD-9-CM	Diagnosis
813.92	Open fracture of unspecified part of ulna (alone)	ICD-9-CM	Diagnosis
813.93	Open fracture of unspecified part of radius with ulna	ICD-9-CM	Diagnosis
820	Fracture of neck of femur	ICD-9-CM	Diagnosis
820.0	Closed transcervical fracture	ICD-9-CM	Diagnosis
820.00	Closed fracture of unspecified intracapsular section of neck of femur	ICD-9-CM	Diagnosis
820.01	Closed fracture of epiphysis (separation) (upper) of neck of femur	ICD-9-CM	Diagnosis
820.02	Closed fracture of midcervical section of femur	ICD-9-CM	Diagnosis
820.03	Closed fracture of base of neck of femur	ICD-9-CM	Diagnosis
820.09	Other closed transcervical fracture of femur	ICD-9-CM	Diagnosis
820.1	Open transcervical fracture	ICD-9-CM	Diagnosis
820.10	Open fracture of unspecified intracapsular section of neck of femur	ICD-9-CM	Diagnosis
820.11	Open fracture of epiphysis (separation) (upper) of neck of femur	ICD-9-CM	Diagnosis
820.12	Open fracture of midcervical section of femur	ICD-9-CM	Diagnosis
820.13	Open fracture of base of neck of femur	ICD-9-CM	Diagnosis
820.19	Other open transcervical fracture of femur	ICD-9-CM	Diagnosis
820.2	Closed pertrochanteric fracture of femur	ICD-9-CM	Diagnosis
820.20	Closed fracture of unspecified trochanteric section of femur	ICD-9-CM	Diagnosis
820.21	Closed fracture of intertrochanteric section of femur	ICD-9-CM	Diagnosis
820.22	Closed fracture of subtrochanteric section of femur	ICD-9-CM	Diagnosis
820.3	Open pertrochanteric fracture of femur	ICD-9-CM	Diagnosis
820.30	Open fracture of unspecified trochanteric section of femur	ICD-9-CM	Diagnosis
820.31	Open fracture of intertrochanteric section of femur	ICD-9-CM	Diagnosis
820.32	Open fracture of subtrochanteric section of femur	ICD-9-CM	Diagnosis
820.8	Closed fracture of unspecified part of neck of femur	ICD-9-CM	Diagnosis
820.9	Open fracture of unspecified part of neck of femur	ICD-9-CM	Diagnosis
S22.31XA	Fracture of one rib, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S22.31XB	Fracture of one rib, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.32XA	Fracture of one rib, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.32XB	Fracture of one rib, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.39XA	Fracture of one rib, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.39XB	Fracture of one rib, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.41XA	Multiple fractures of ribs, right side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.41XB	Multiple fractures of ribs, right side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.42XA	Multiple fractures of ribs, left side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.42XB	Multiple fractures of ribs, left side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.43XA	Multiple fractures of ribs, bilateral, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.43XB	Multiple fractures of ribs, bilateral, initial encounter for open fracture	ICD-10-CM	Diagnosis
S22.49XA	Multiple fractures of ribs, unspecified side, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S22.49XB	Multiple fractures of ribs, unspecified side, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.001A	Fracture of unspecified part of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.001B	Fracture of unspecified part of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.002A	Fracture of unspecified part of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.002B	Fracture of unspecified part of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.009A	Fracture of unspecified part of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.009B	Fracture of unspecified part of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.011A	Anterior displaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.011B	Anterior displaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.012A	Anterior displaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.012B	Anterior displaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.013A	Anterior displaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.013B	Anterior displaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.014A	Posterior displaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.014B	Posterior displaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.015A	Posterior displaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.015B	Posterior displaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.016A	Posterior displaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.016B	Posterior displaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.017A	Nondisplaced fracture of sternal end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S42.017B	Nondisplaced fracture of sternal end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.018A	Nondisplaced fracture of sternal end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.018B	Nondisplaced fracture of sternal end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.019A	Nondisplaced fracture of sternal end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.019B	Nondisplaced fracture of sternal end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.021A	Displaced fracture of shaft of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.021B	Displaced fracture of shaft of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.022A	Displaced fracture of shaft of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.022B	Displaced fracture of shaft of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.023A	Displaced fracture of shaft of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.023B	Displaced fracture of shaft of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.024A	Nondisplaced fracture of shaft of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.024B	Nondisplaced fracture of shaft of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.025A	Nondisplaced fracture of shaft of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.025B	Nondisplaced fracture of shaft of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.026A	Nondisplaced fracture of shaft of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.026B	Nondisplaced fracture of shaft of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.031A	Displaced fracture of lateral end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.031B	Displaced fracture of lateral end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.032A	Displaced fracture of lateral end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.032B	Displaced fracture of lateral end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.033A	Displaced fracture of lateral end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.033B	Displaced fracture of lateral end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.034A	Nondisplaced fracture of lateral end of right clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.034B	Nondisplaced fracture of lateral end of right clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.035A	Nondisplaced fracture of lateral end of left clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S42.035B	Nondisplaced fracture of lateral end of left clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S42.036A	Nondisplaced fracture of lateral end of unspecified clavicle, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S42.036B	Nondisplaced fracture of lateral end of unspecified clavicle, initial encounter for open fracture	ICD-10-CM	Diagnosis
S52.001A	Unspecified fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.001B	Unspecified fracture of upper end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.001C	Unspecified fracture of upper end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.002A	Unspecified fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.002B	Unspecified fracture of upper end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.002C	Unspecified fracture of upper end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.009A	Unspecified fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.009B	Unspecified fracture of upper end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.009C	Unspecified fracture of upper end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.011A	Torus fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.012A	Torus fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.019A	Torus fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.021A	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.021B	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.021C	Displaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.022A	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.022B	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.022C	Displaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.023A	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.023B	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.023C	Displaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.024A	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.024B	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.024C	Nondisplaced fracture of olecranon process without intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.025A	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.025B	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.025C	Nondisplaced fracture of olecranon process without intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.026A	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.026B	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.026C	Nondisplaced fracture of olecranon process without intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.031A	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.031B	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.031C	Displaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.032A	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.032B	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.032C	Displaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.033A	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.033B	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.033C	Displaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.034A	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.034B	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.034C	Nondisplaced fracture of olecranon process with intraarticular extension of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.035A	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.035B	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.035C	Nondisplaced fracture of olecranon process with intraarticular extension of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.036A	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.036B	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.036C	Nondisplaced fracture of olecranon process with intraarticular extension of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.041A	Displaced fracture of coronoid process of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.041B	Displaced fracture of coronoid process of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.041C	Displaced fracture of coronoid process of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.042A	Displaced fracture of coronoid process of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.042B	Displaced fracture of coronoid process of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.042C	Displaced fracture of coronoid process of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.043A	Displaced fracture of coronoid process of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.043B	Displaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.043C	Displaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.044A	Nondisplaced fracture of coronoid process of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.044B	Nondisplaced fracture of coronoid process of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.044C	Nondisplaced fracture of coronoid process of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.045A	Nondisplaced fracture of coronoid process of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.045B	Nondisplaced fracture of coronoid process of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.045C	Nondisplaced fracture of coronoid process of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.046A	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.046B	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.046C	Nondisplaced fracture of coronoid process of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.091A	Other fracture of upper end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.091B	Other fracture of upper end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.091C	Other fracture of upper end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.092A	Other fracture of upper end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.092B	Other fracture of upper end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.092C	Other fracture of upper end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.099A	Other fracture of upper end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.099B	Other fracture of upper end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.099C	Other fracture of upper end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.101A	Unspecified fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.101B	Unspecified fracture of upper end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.101C	Unspecified fracture of upper end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.102A	Unspecified fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.102B	Unspecified fracture of upper end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.102C	Unspecified fracture of upper end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.109A	Unspecified fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.109B	Unspecified fracture of upper end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.109C	Unspecified fracture of upper end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.111A	Torus fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.112A	Torus fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.119A	Torus fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.121A	Displaced fracture of head of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.121B	Displaced fracture of head of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.121C	Displaced fracture of head of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.122A	Displaced fracture of head of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.122B	Displaced fracture of head of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.122C	Displaced fracture of head of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.123A	Displaced fracture of head of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.123B	Displaced fracture of head of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.123C	Displaced fracture of head of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.124A	Nondisplaced fracture of head of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.124B	Nondisplaced fracture of head of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.124C	Nondisplaced fracture of head of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.125A	Nondisplaced fracture of head of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.125B	Nondisplaced fracture of head of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.125C	Nondisplaced fracture of head of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.126A	Nondisplaced fracture of head of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.126B	Nondisplaced fracture of head of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.126C	Nondisplaced fracture of head of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.131A	Displaced fracture of neck of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.131B	Displaced fracture of neck of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.131C	Displaced fracture of neck of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.132A	Displaced fracture of neck of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.132B	Displaced fracture of neck of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.132C	Displaced fracture of neck of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.133A	Displaced fracture of neck of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.133B	Displaced fracture of neck of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.133C	Displaced fracture of neck of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.134A	Nondisplaced fracture of neck of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.134B	Nondisplaced fracture of neck of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.134C	Nondisplaced fracture of neck of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.135A	Nondisplaced fracture of neck of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.135B	Nondisplaced fracture of neck of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.135C	Nondisplaced fracture of neck of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.136A	Nondisplaced fracture of neck of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.136B	Nondisplaced fracture of neck of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.136C	Nondisplaced fracture of neck of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.181A	Other fracture of upper end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.181B	Other fracture of upper end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.181C	Other fracture of upper end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.182A	Other fracture of upper end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.182B	Other fracture of upper end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.182C	Other fracture of upper end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.189A	Other fracture of upper end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.189B	Other fracture of upper end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.189C	Other fracture of upper end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.201A	Unspecified fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.201B	Unspecified fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.201C	Unspecified fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.202A	Unspecified fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.202B	Unspecified fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.202C	Unspecified fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.209A	Unspecified fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.209B	Unspecified fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.209C	Unspecified fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.211A	Greenstick fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.212A	Greenstick fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.219A	Greenstick fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.221A	Displaced transverse fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.221B	Displaced transverse fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.221C	Displaced transverse fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.222A	Displaced transverse fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.222B	Displaced transverse fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.222C	Displaced transverse fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.223A	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.223B	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.223C	Displaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.224A	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.224B	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.224C	Nondisplaced transverse fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.225A	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.225B	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.225C	Nondisplaced transverse fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.226A	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.226B	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.226C	Nondisplaced transverse fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.231A	Displaced oblique fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.231B	Displaced oblique fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.231C	Displaced oblique fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.232A	Displaced oblique fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.232B	Displaced oblique fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.232C	Displaced oblique fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.233A	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.233B	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.233C	Displaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.234A	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.234B	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.234C	Nondisplaced oblique fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.235A	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.235B	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.235C	Nondisplaced oblique fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.236A	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.236B	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.236C	Nondisplaced oblique fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.241A	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.241B	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.241C	Displaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.242A	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.242B	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.242C	Displaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.243A	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.243B	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.243C	Displaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.244A	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.244B	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.244C	Nondisplaced spiral fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.245A	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.245B	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.245C	Nondisplaced spiral fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.246A	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.246B	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.246C	Nondisplaced spiral fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.251A	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.251B	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.251C	Displaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.252A	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.252B	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.252C	Displaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.253A	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.253B	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.253C	Displaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.254A	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.254B	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.254C	Nondisplaced comminuted fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.255A	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.255B	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.255C	Nondisplaced comminuted fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.256A	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.256B	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.256C	Nondisplaced comminuted fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.261A	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.261B	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.261C	Displaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.262A	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.262B	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.262C	Displaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.263A	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.263B	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.263C	Displaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.264A	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.264B	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.264C	Nondisplaced segmental fracture of shaft of ulna, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.265A	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.265B	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.265C	Nondisplaced segmental fracture of shaft of ulna, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.266A	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.266B	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.266C	Nondisplaced segmental fracture of shaft of ulna, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.271A	Monteggia's fracture of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.271B	Monteggia's fracture of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.271C	Monteggia's fracture of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.272A	Monteggia's fracture of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.272B	Monteggia's fracture of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.272C	Monteggia's fracture of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.279A	Monteggia's fracture of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.279B	Monteggia's fracture of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.279C	Monteggia's fracture of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.281A	Bent bone of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.281B	Bent bone of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.281C	Bent bone of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.282A	Bent bone of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.282B	Bent bone of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.282C	Bent bone of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.283A	Bent bone of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.283B	Bent bone of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.283C	Bent bone of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.291A	Other fracture of shaft of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.291B	Other fracture of shaft of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.291C	Other fracture of shaft of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.292A	Other fracture of shaft of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.292B	Other fracture of shaft of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.292C	Other fracture of shaft of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.299A	Other fracture of shaft of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.299B	Other fracture of shaft of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.299C	Other fracture of shaft of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.301A	Unspecified fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.301B	Unspecified fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.301C	Unspecified fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.302A	Unspecified fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.302B	Unspecified fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.302C	Unspecified fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.309A	Unspecified fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.309B	Unspecified fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.309C	Unspecified fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.311A	Greenstick fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.312A	Greenstick fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.319A	Greenstick fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.321A	Displaced transverse fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.321B	Displaced transverse fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.321C	Displaced transverse fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.322A	Displaced transverse fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.322B	Displaced transverse fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.322C	Displaced transverse fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.323A	Displaced transverse fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.323B	Displaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.323C	Displaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.324A	Nondisplaced transverse fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.324B	Nondisplaced transverse fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.324C	Nondisplaced transverse fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.325A	Nondisplaced transverse fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.325B	Nondisplaced transverse fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.325C	Nondisplaced transverse fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.326A	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.326B	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.326C	Nondisplaced transverse fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.331A	Displaced oblique fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.331B	Displaced oblique fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.331C	Displaced oblique fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.332A	Displaced oblique fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.332B	Displaced oblique fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.332C	Displaced oblique fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.333A	Displaced oblique fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.333B	Displaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.333C	Displaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.334A	Nondisplaced oblique fracture of shaft of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.334B	Nondisplaced oblique fracture of shaft of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.334C	Nondisplaced oblique fracture of shaft of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.335A	Nondisplaced oblique fracture of shaft of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.335B	Nondisplaced oblique fracture of shaft of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.335C	Nondisplaced oblique fracture of shaft of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.336A	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.336B	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.336C	Nondisplaced oblique fracture of shaft of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.341A	Displaced spiral fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.341B	Displaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.341C	Displaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.342A	Displaced spiral fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.342B	Displaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.342C	Displaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.343A	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.343B	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.343C	Displaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.344A	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.344B	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.344C	Nondisplaced spiral fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.345A	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.345B	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.345C	Nondisplaced spiral fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.346A	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.346B	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.346C	Nondisplaced spiral fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.351A	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.351B	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.351C	Displaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.352A	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.352B	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.352C	Displaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.353A	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.353B	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.353C	Displaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.354A	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.354B	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.354C	Nondisplaced comminuted fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.355A	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.355B	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.355C	Nondisplaced comminuted fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.356A	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.356B	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.356C	Nondisplaced comminuted fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.361A	Displaced segmental fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.361B	Displaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.361C	Displaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.362A	Displaced segmental fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.362B	Displaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.362C	Displaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.363A	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.363B	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.363C	Displaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.364A	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.364B	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.364C	Nondisplaced segmental fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.365A	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.365B	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.365C	Nondisplaced segmental fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.366A	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.366B	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.366C	Nondisplaced segmental fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.371A	Galeazzi's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.371B	Galeazzi's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.371C	Galeazzi's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.372A	Galeazzi's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.372B	Galeazzi's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.372C	Galeazzi's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.379A	Galeazzi's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.379B	Galeazzi's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.379C	Galeazzi's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.381A	Bent bone of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.381B	Bent bone of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.381C	Bent bone of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.382A	Bent bone of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.382B	Bent bone of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.382C	Bent bone of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.389A	Bent bone of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.389B	Bent bone of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.389C	Bent bone of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.391A	Other fracture of shaft of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.391B	Other fracture of shaft of radius, right arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.391C	Other fracture of shaft of radius, right arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.392A	Other fracture of shaft of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.392B	Other fracture of shaft of radius, left arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.392C	Other fracture of shaft of radius, left arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.399A	Other fracture of shaft of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.399B	Other fracture of shaft of radius, unspecified arm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.399C	Other fracture of shaft of radius, unspecified arm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.501A	Unspecified fracture of the lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.501B	Unspecified fracture of the lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.501C	Unspecified fracture of the lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.502A	Unspecified fracture of the lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.502B	Unspecified fracture of the lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.502C	Unspecified fracture of the lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.509A	Unspecified fracture of the lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.509B	Unspecified fracture of the lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.509C	Unspecified fracture of the lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.511A	Displaced fracture of right radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.511B	Displaced fracture of right radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.511C	Displaced fracture of right radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.512A	Displaced fracture of left radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.512B	Displaced fracture of left radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.512C	Displaced fracture of left radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.513A	Displaced fracture of unspecified radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.513B	Displaced fracture of unspecified radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.513C	Displaced fracture of unspecified radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.514A	Nondisplaced fracture of right radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.514B	Nondisplaced fracture of right radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.514C	Nondisplaced fracture of right radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.515A	Nondisplaced fracture of left radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.515B	Nondisplaced fracture of left radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.515C	Nondisplaced fracture of left radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.516A	Nondisplaced fracture of unspecified radial styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.516B	Nondisplaced fracture of unspecified radial styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.516C	Nondisplaced fracture of unspecified radial styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.521A	Torus fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.522A	Torus fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.529A	Torus fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.531A	Colles' fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.531B	Colles' fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.531C	Colles' fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.532A	Colles' fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.532B	Colles' fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.532C	Colles' fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.539A	Colles' fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.539B	Colles' fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.539C	Colles' fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.541A	Smith's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.541B	Smith's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.541C	Smith's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.542A	Smith's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.542B	Smith's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.542C	Smith's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.549A	Smith's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.549B	Smith's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.549C	Smith's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.551A	Other extraarticular fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.551B	Other extraarticular fracture of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.551C	Other extraarticular fracture of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.552A	Other extraarticular fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.552B	Other extraarticular fracture of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.552C	Other extraarticular fracture of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.559A	Other extraarticular fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.559B	Other extraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.559C	Other extraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.561A	Barton's fracture of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.561B	Barton's fracture of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.561C	Barton's fracture of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.562A	Barton's fracture of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.562B	Barton's fracture of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.562C	Barton's fracture of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.569A	Barton's fracture of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.569B	Barton's fracture of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.569C	Barton's fracture of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.571A	Other intraarticular fracture of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.571B	Other intraarticular fracture of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.571C	Other intraarticular fracture of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.572A	Other intraarticular fracture of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.572B	Other intraarticular fracture of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.572C	Other intraarticular fracture of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.579A	Other intraarticular fracture of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.579B	Other intraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.579C	Other intraarticular fracture of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.591A	Other fractures of lower end of right radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.591B	Other fractures of lower end of right radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.591C	Other fractures of lower end of right radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.592A	Other fractures of lower end of left radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.592B	Other fractures of lower end of left radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.592C	Other fractures of lower end of left radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.599A	Other fractures of lower end of unspecified radius, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.599B	Other fractures of lower end of unspecified radius, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.599C	Other fractures of lower end of unspecified radius, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.601A	Unspecified fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.601B	Unspecified fracture of lower end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.601C	Unspecified fracture of lower end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.602A	Unspecified fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.602B	Unspecified fracture of lower end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.602C	Unspecified fracture of lower end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.609A	Unspecified fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.609B	Unspecified fracture of lower end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.609C	Unspecified fracture of lower end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.611A	Displaced fracture of right ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.611B	Displaced fracture of right ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.611C	Displaced fracture of right ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.612A	Displaced fracture of left ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.612B	Displaced fracture of left ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.612C	Displaced fracture of left ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.613A	Displaced fracture of unspecified ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.613B	Displaced fracture of unspecified ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.613C	Displaced fracture of unspecified ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.614A	Nondisplaced fracture of right ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.614B	Nondisplaced fracture of right ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.614C	Nondisplaced fracture of right ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.615A	Nondisplaced fracture of left ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.615B	Nondisplaced fracture of left ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.615C	Nondisplaced fracture of left ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.616A	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.616B	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S52.616C	Nondisplaced fracture of unspecified ulna styloid process, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.621A	Torus fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.622A	Torus fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.629A	Torus fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.691A	Other fracture of lower end of right ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.691B	Other fracture of lower end of right ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.691C	Other fracture of lower end of right ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.692A	Other fracture of lower end of left ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.692B	Other fracture of lower end of left ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.692C	Other fracture of lower end of left ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.699A	Other fracture of lower end of unspecified ulna, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.699B	Other fracture of lower end of unspecified ulna, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.699C	Other fracture of lower end of unspecified ulna, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.90XA	Unspecified fracture of unspecified forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.90XB	Unspecified fracture of unspecified forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.90XC	Unspecified fracture of unspecified forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.91XA	Unspecified fracture of right forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.91XB	Unspecified fracture of right forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.91XC	Unspecified fracture of right forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S52.92XA	Unspecified fracture of left forearm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S52.92XB	Unspecified fracture of left forearm, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S52.92XC	Unspecified fracture of left forearm, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S59.001A	Unspecified physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.002A	Unspecified physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.009A	Unspecified physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.011A	Salter-Harris Type I physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.012A	Salter-Harris Type I physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S59.019A	Salter-Harris Type I physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.021A	Salter-Harris Type II physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.022A	Salter-Harris Type II physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.029A	Salter-Harris Type II physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.031A	Salter-Harris Type III physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.032A	Salter-Harris Type III physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.039A	Salter-Harris Type III physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.041A	Salter-Harris Type IV physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.042A	Salter-Harris Type IV physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.049A	Salter-Harris Type IV physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.091A	Other physeal fracture of lower end of ulna, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.092A	Other physeal fracture of lower end of ulna, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.099A	Other physeal fracture of lower end of ulna, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.101A	Unspecified physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.102A	Unspecified physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.109A	Unspecified physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.111A	Salter-Harris Type I physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.112A	Salter-Harris Type I physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.119A	Salter-Harris Type I physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.121A	Salter-Harris Type II physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.122A	Salter-Harris Type II physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.129A	Salter-Harris Type II physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.131A	Salter-Harris Type III physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S59.132A	Salter-Harris Type III physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.139A	Salter-Harris Type III physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.141A	Salter-Harris Type IV physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.142A	Salter-Harris Type IV physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.149A	Salter-Harris Type IV physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.191A	Other physeal fracture of upper end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.192A	Other physeal fracture of upper end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.199A	Other physeal fracture of upper end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.201A	Unspecified physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.202A	Unspecified physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.209A	Unspecified physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.211A	Salter-Harris Type I physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.212A	Salter-Harris Type I physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.219A	Salter-Harris Type I physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.221A	Salter-Harris Type II physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.222A	Salter-Harris Type II physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.229A	Salter-Harris Type II physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.231A	Salter-Harris Type III physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.232A	Salter-Harris Type III physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.239A	Salter-Harris Type III physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.241A	Salter-Harris Type IV physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.242A	Salter-Harris Type IV physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.249A	Salter-Harris Type IV physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S59.291A	Other physeal fracture of lower end of radius, right arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.292A	Other physeal fracture of lower end of radius, left arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S59.299A	Other physeal fracture of lower end of radius, unspecified arm, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.001A	Fracture of unspecified part of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.001B	Fracture of unspecified part of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.001C	Fracture of unspecified part of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.002A	Fracture of unspecified part of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.002B	Fracture of unspecified part of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.002C	Fracture of unspecified part of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.009A	Fracture of unspecified part of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.009B	Fracture of unspecified part of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.009C	Fracture of unspecified part of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.011A	Unspecified intracapsular fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.011B	Unspecified intracapsular fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.011C	Unspecified intracapsular fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.012A	Unspecified intracapsular fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.012B	Unspecified intracapsular fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.012C	Unspecified intracapsular fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.019A	Unspecified intracapsular fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.019B	Unspecified intracapsular fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.019C	Unspecified intracapsular fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.021A	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.021B	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.021C	Displaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.022A	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.022B	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.022C	Displaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.023A	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.023B	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.023C	Displaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.024A	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.024B	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.024C	Nondisplaced fracture of epiphysis (separation) (upper) of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.025A	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.025B	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.025C	Nondisplaced fracture of epiphysis (separation) (upper) of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.026A	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.026B	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.026C	Nondisplaced fracture of epiphysis (separation) (upper) of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.031A	Displaced midcervical fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.031B	Displaced midcervical fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.031C	Displaced midcervical fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.032A	Displaced midcervical fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.032B	Displaced midcervical fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.032C	Displaced midcervical fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.033A	Displaced midcervical fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.033B	Displaced midcervical fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.033C	Displaced midcervical fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.034A	Nondisplaced midcervical fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.034B	Nondisplaced midcervical fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.034C	Nondisplaced midcervical fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.035A	Nondisplaced midcervical fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.035B	Nondisplaced midcervical fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.035C	Nondisplaced midcervical fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.036A	Nondisplaced midcervical fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.036B	Nondisplaced midcervical fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.036C	Nondisplaced midcervical fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.041A	Displaced fracture of base of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.041B	Displaced fracture of base of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.041C	Displaced fracture of base of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.042A	Displaced fracture of base of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.042B	Displaced fracture of base of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.042C	Displaced fracture of base of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.043A	Displaced fracture of base of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.043B	Displaced fracture of base of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.043C	Displaced fracture of base of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.044A	Nondisplaced fracture of base of neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.044B	Nondisplaced fracture of base of neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.044C	Nondisplaced fracture of base of neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.045A	Nondisplaced fracture of base of neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.045B	Nondisplaced fracture of base of neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.045C	Nondisplaced fracture of base of neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.046A	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.046B	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.046C	Nondisplaced fracture of base of neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.051A	Unspecified fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.051B	Unspecified fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.051C	Unspecified fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.052A	Unspecified fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.052B	Unspecified fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.052C	Unspecified fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.059A	Unspecified fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.059B	Unspecified fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.059C	Unspecified fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.061A	Displaced articular fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.061B	Displaced articular fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.061C	Displaced articular fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.062A	Displaced articular fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.062B	Displaced articular fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.062C	Displaced articular fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.063A	Displaced articular fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.063B	Displaced articular fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.063C	Displaced articular fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.064A	Nondisplaced articular fracture of head of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.064B	Nondisplaced articular fracture of head of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.064C	Nondisplaced articular fracture of head of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.065A	Nondisplaced articular fracture of head of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.065B	Nondisplaced articular fracture of head of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.065C	Nondisplaced articular fracture of head of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.066A	Nondisplaced articular fracture of head of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.066B	Nondisplaced articular fracture of head of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.066C	Nondisplaced articular fracture of head of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.091A	Other fracture of head and neck of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.091B	Other fracture of head and neck of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.091C	Other fracture of head and neck of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.092A	Other fracture of head and neck of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.092B	Other fracture of head and neck of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.092C	Other fracture of head and neck of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.099A	Other fracture of head and neck of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.099B	Other fracture of head and neck of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.099C	Other fracture of head and neck of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.101A	Unspecified trochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.101B	Unspecified trochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.101C	Unspecified trochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.102A	Unspecified trochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.102B	Unspecified trochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.102C	Unspecified trochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.109A	Unspecified trochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.109B	Unspecified trochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.109C	Unspecified trochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.111A	Displaced fracture of greater trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.111B	Displaced fracture of greater trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.111C	Displaced fracture of greater trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.112A	Displaced fracture of greater trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.112B	Displaced fracture of greater trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.112C	Displaced fracture of greater trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.113A	Displaced fracture of greater trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.113B	Displaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.113C	Displaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.114A	Nondisplaced fracture of greater trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.114B	Nondisplaced fracture of greater trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.114C	Nondisplaced fracture of greater trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.115A	Nondisplaced fracture of greater trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.115B	Nondisplaced fracture of greater trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.115C	Nondisplaced fracture of greater trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.116A	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.116B	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.116C	Nondisplaced fracture of greater trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.121A	Displaced fracture of lesser trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.121B	Displaced fracture of lesser trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.121C	Displaced fracture of lesser trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.122A	Displaced fracture of lesser trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.122B	Displaced fracture of lesser trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.122C	Displaced fracture of lesser trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.123A	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.123B	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.123C	Displaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.124A	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.124B	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.124C	Nondisplaced fracture of lesser trochanter of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.125A	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.125B	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.125C	Nondisplaced fracture of lesser trochanter of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.126A	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.126B	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.126C	Nondisplaced fracture of lesser trochanter of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.131A	Displaced apophyseal fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.131B	Displaced apophyseal fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.131C	Displaced apophyseal fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.132A	Displaced apophyseal fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.132B	Displaced apophyseal fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.132C	Displaced apophyseal fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.133A	Displaced apophyseal fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.133B	Displaced apophyseal fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.133C	Displaced apophyseal fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.134A	Nondisplaced apophyseal fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.134B	Nondisplaced apophyseal fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.134C	Nondisplaced apophyseal fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.135A	Nondisplaced apophyseal fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.135B	Nondisplaced apophyseal fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.135C	Nondisplaced apophyseal fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.136A	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.136B	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.136C	Nondisplaced apophyseal fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.141A	Displaced intertrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.141B	Displaced intertrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.141C	Displaced intertrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.142A	Displaced intertrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.142B	Displaced intertrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.142C	Displaced intertrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.143A	Displaced intertrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.143B	Displaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.143C	Displaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.144A	Nondisplaced intertrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.144B	Nondisplaced intertrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.144C	Nondisplaced intertrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.145A	Nondisplaced intertrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.145B	Nondisplaced intertrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S72.145C	Nondisplaced intertrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.146A	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.146B	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.146C	Nondisplaced intertrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.21XA	Displaced subtrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.21XB	Displaced subtrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.21XC	Displaced subtrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.22XA	Displaced subtrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.22XB	Displaced subtrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.22XC	Displaced subtrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.23XA	Displaced subtrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.23XB	Displaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.23XC	Displaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.24XA	Nondisplaced subtrochanteric fracture of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.24XB	Nondisplaced subtrochanteric fracture of right femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.24XC	Nondisplaced subtrochanteric fracture of right femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.25XA	Nondisplaced subtrochanteric fracture of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.25XB	Nondisplaced subtrochanteric fracture of left femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.25XC	Nondisplaced subtrochanteric fracture of left femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S72.26XA	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S72.26XB	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type I or II	ICD-10-CM	Diagnosis
S72.26XC	Nondisplaced subtrochanteric fracture of unspecified femur, initial encounter for open fracture type IIIA, IIIB, or IIIC	ICD-10-CM	Diagnosis
S79.001A	Unspecified physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S79.002A	Unspecified physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.009A	Unspecified physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.011A	Salter-Harris Type I physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.012A	Salter-Harris Type I physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.019A	Salter-Harris Type I physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.091A	Other physeal fracture of upper end of right femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.092A	Other physeal fracture of upper end of left femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
S79.099A	Other physeal fracture of upper end of unspecified femur, initial encounter for closed fracture	ICD-10-CM	Diagnosis
78.11	Application of external fixator device, scapula, clavicle, and thorax [ribs and sternum]	ICD-9-CM	Procedure
78.13	Application of external fixator device, radius and ulna	ICD-9-CM	Procedure
78.15	Application of external fixator device, femur	ICD-9-CM	Procedure
78.41	Other repair or plastic operations on scapula, clavicle, and thorax (ribs and sternum)	ICD-9-CM	Procedure
78.43	Other repair or plastic operations on radius and ulna	ICD-9-CM	Procedure
78.45	Other repair or plastic operations on femur	ICD-9-CM	Procedure
78.51	Internal fixation of scapula, clavicle, and thorax (ribs and sternum) without fracture reduction	ICD-9-CM	Procedure
78.53	Internal fixation of radius and ulna without fracture reduction	ICD-9-CM	Procedure
78.55	Internal fixation of femur without fracture reduction	ICD-9-CM	Procedure
78.61	Removal of implanted device from scapula, clavicle, and thorax (ribs and sternum)	ICD-9-CM	Procedure
78.63	Removal of implanted device from radius and ulna	ICD-9-CM	Procedure
78.65	Removal of implanted device from femur	ICD-9-CM	Procedure
79.02	Closed reduction of fracture of radius and ulna without internal fixation	ICD-9-CM	Procedure
79.05	Closed reduction of fracture of femur without internal fixation	ICD-9-CM	Procedure
79.12	Closed reduction of fracture of radius and ulna with internal fixation	ICD-9-CM	Procedure
79.15	Closed reduction of fracture of femur with internal fixation	ICD-9-CM	Procedure
79.22	Open reduction of fracture of radius and ulna without internal fixation	ICD-9-CM	Procedure
79.25	Open reduction of fracture of femur without internal fixation	ICD-9-CM	Procedure
79.32	Open reduction of fracture of radius and ulna with internal fixation	ICD-9-CM	Procedure
79.35	Open reduction of fracture of femur with internal fixation	ICD-9-CM	Procedure
79.62	Debridement of open fracture of radius and ulna	ICD-9-CM	Procedure
79.65	Debridement of open fracture of femur	ICD-9-CM	Procedure
0PBH0ZZ	Excision of Right Radius, Open Approach	ICD-10-PCS	Procedure
0PBJ0ZZ	Excision of Left Radius, Open Approach	ICD-10-PCS	Procedure
0PBK0ZZ	Excision of Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PBL0ZZ	Excision of Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PH004Z	Insertion of Internal Fixation Device into Sternum, Open Approach	ICD-10-PCS	Procedure
0PH034Z	Insertion of Internal Fixation Device into Sternum, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PH044Z	Insertion of Internal Fixation Device into Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH104Z	Insertion of Internal Fixation Device into 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PH134Z	Insertion of Internal Fixation Device into 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PH144Z	Insertion of Internal Fixation Device into 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH204Z	Insertion of Internal Fixation Device into 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PH234Z	Insertion of Internal Fixation Device into 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PH244Z	Insertion of Internal Fixation Device into 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH504Z	Insertion of Internal Fixation Device into Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PH534Z	Insertion of Internal Fixation Device into Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PH544Z	Insertion of Internal Fixation Device into Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH604Z	Insertion of Internal Fixation Device into Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PH634Z	Insertion of Internal Fixation Device into Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PH644Z	Insertion of Internal Fixation Device into Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH704Z	Insertion of Internal Fixation Device into Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PH734Z	Insertion of Internal Fixation Device into Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PH744Z	Insertion of Internal Fixation Device into Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH804Z	Insertion of Internal Fixation Device into Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PH834Z	Insertion of Internal Fixation Device into Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PH844Z	Insertion of Internal Fixation Device into Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PH904Z	Insertion of Internal Fixation Device into Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PH934Z	Insertion of Internal Fixation Device into Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PH944Z	Insertion of Internal Fixation Device into Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHB04Z	Insertion of Internal Fixation Device into Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PHB34Z	Insertion of Internal Fixation Device into Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PHB44Z	Insertion of Internal Fixation Device into Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHH04Z	Insertion of Internal Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
0PHH05Z	Insertion of External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
0PHH06Z	Insertion of Intramedullary Internal Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
0PHH0BZ	Insertion of Monoplanar External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
0PHH0CZ	Insertion of Ring External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
0PHH0DZ	Insertion of Hybrid External Fixation Device into Right Radius, Open Approach	ICD-10-PCS	Procedure
0PHH34Z	Insertion of Internal Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHH35Z	Insertion of External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PHH36Z	Insertion of Intramedullary Internal Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHH3BZ	Insertion of Monoplanar External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHH3CZ	Insertion of Ring External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHH3DZ	Insertion of Hybrid External Fixation Device into Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHH44Z	Insertion of Internal Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHH45Z	Insertion of External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHH46Z	Insertion of Intramedullary Internal Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHH4BZ	Insertion of Monoplanar External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHH4CZ	Insertion of Ring External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHH4DZ	Insertion of Hybrid External Fixation Device into Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHJ04Z	Insertion of Internal Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
0PHJ05Z	Insertion of External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
0PHJ06Z	Insertion of Intramedullary Internal Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
0PHJ0BZ	Insertion of Monoplanar External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
0PHJ0CZ	Insertion of Ring External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
0PHJ0DZ	Insertion of Hybrid External Fixation Device into Left Radius, Open Approach	ICD-10-PCS	Procedure
0PHJ34Z	Insertion of Internal Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHJ35Z	Insertion of External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHJ36Z	Insertion of Intramedullary Internal Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHJ3BZ	Insertion of Monoplanar External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHJ3CZ	Insertion of Ring External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHJ3DZ	Insertion of Hybrid External Fixation Device into Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PHJ44Z	Insertion of Internal Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHJ45Z	Insertion of External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHJ46Z	Insertion of Intramedullary Internal Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHJ4BZ	Insertion of Monoplanar External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHJ4CZ	Insertion of Ring External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PHJ4DZ	Insertion of Hybrid External Fixation Device into Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHK04Z	Insertion of Internal Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PHK05Z	Insertion of External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PHK06Z	Insertion of Intramedullary Internal Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PHK0BZ	Insertion of Monoplanar External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PHK0CZ	Insertion of Ring External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PHK0DZ	Insertion of Hybrid External Fixation Device into Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PHK34Z	Insertion of Internal Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHK35Z	Insertion of External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHK36Z	Insertion of Intramedullary Internal Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHK3BZ	Insertion of Monoplanar External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHK3CZ	Insertion of Ring External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHK3DZ	Insertion of Hybrid External Fixation Device into Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHK44Z	Insertion of Internal Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHK45Z	Insertion of External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHK46Z	Insertion of Intramedullary Internal Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHK4BZ	Insertion of Monoplanar External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHK4CZ	Insertion of Ring External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHK4DZ	Insertion of Hybrid External Fixation Device into Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHL04Z	Insertion of Internal Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PHL05Z	Insertion of External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PHL06Z	Insertion of Intramedullary Internal Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PHL0BZ	Insertion of Monoplanar External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PHL0CZ	Insertion of Ring External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PHL0DZ	Insertion of Hybrid External Fixation Device into Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PHL34Z	Insertion of Internal Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHL35Z	Insertion of External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHL36Z	Insertion of Intramedullary Internal Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHL3BZ	Insertion of Monoplanar External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHL3CZ	Insertion of Ring External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHL3DZ	Insertion of Hybrid External Fixation Device into Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PHL44Z	Insertion of Internal Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PHL45Z	Insertion of External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHL46Z	Insertion of Intramedullary Internal Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHL4BZ	Insertion of Monoplanar External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHL4CZ	Insertion of Ring External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PHL4DZ	Insertion of Hybrid External Fixation Device into Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN00ZZ	Release Sternum, Open Approach	ICD-10-PCS	Procedure
0PN03ZZ	Release Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
0PN04ZZ	Release Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN10ZZ	Release 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PN13ZZ	Release 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PN14ZZ	Release 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN20ZZ	Release 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PN23ZZ	Release 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PN24ZZ	Release 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN50ZZ	Release Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PN53ZZ	Release Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PN54ZZ	Release Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN60ZZ	Release Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PN63ZZ	Release Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PN64ZZ	Release Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN70ZZ	Release Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PN73ZZ	Release Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PN74ZZ	Release Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN80ZZ	Release Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PN83ZZ	Release Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PN84ZZ	Release Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PN90ZZ	Release Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PN93ZZ	Release Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PN94ZZ	Release Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PNB0ZZ	Release Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PNB3ZZ	Release Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PNB4ZZ	Release Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PNH0ZZ	Release Right Radius, Open Approach	ICD-10-PCS	Procedure
0PNH3ZZ	Release Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PNH4ZZ	Release Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PNJ0ZZ	Release Left Radius, Open Approach	ICD-10-PCS	Procedure
0PNJ3ZZ	Release Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PNJ4ZZ	Release Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PNK0ZZ	Release Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PNK3ZZ	Release Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PNK4ZZ	Release Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PNL0ZZ	Release Left Ulna, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PNL3ZZ	Release Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PNL4ZZ	Release Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP004Z	Removal of Internal Fixation Device from Sternum, Open Approach	ICD-10-PCS	Procedure
0PP007Z	Removal of Autologous Tissue Substitute from Sternum, Open Approach	ICD-10-PCS	Procedure
0PP00JZ	Removal of Synthetic Substitute from Sternum, Open Approach	ICD-10-PCS	Procedure
0PP00KZ	Removal of Nonautologous Tissue Substitute from Sternum, Open Approach	ICD-10-PCS	Procedure
0PP034Z	Removal of Internal Fixation Device from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
0PP037Z	Removal of Autologous Tissue Substitute from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
0PP03JZ	Removal of Synthetic Substitute from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
0PP03KZ	Removal of Nonautologous Tissue Substitute from Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
0PP044Z	Removal of Internal Fixation Device from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP047Z	Removal of Autologous Tissue Substitute from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP04JZ	Removal of Synthetic Substitute from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP04KZ	Removal of Nonautologous Tissue Substitute from Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP104Z	Removal of Internal Fixation Device from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PP107Z	Removal of Autologous Tissue Substitute from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PP10JZ	Removal of Synthetic Substitute from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PP10KZ	Removal of Nonautologous Tissue Substitute from 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PP134Z	Removal of Internal Fixation Device from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP137Z	Removal of Autologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP13JZ	Removal of Synthetic Substitute from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP13KZ	Removal of Nonautologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP144Z	Removal of Internal Fixation Device from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP147Z	Removal of Autologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP14JZ	Removal of Synthetic Substitute from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP14KZ	Removal of Nonautologous Tissue Substitute from 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP204Z	Removal of Internal Fixation Device from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PP207Z	Removal of Autologous Tissue Substitute from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PP20JZ	Removal of Synthetic Substitute from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PP20KZ	Removal of Nonautologous Tissue Substitute from 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PP234Z	Removal of Internal Fixation Device from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP237Z	Removal of Autologous Tissue Substitute from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP23JZ	Removal of Synthetic Substitute from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PP23KZ	Removal of Nonautologous Tissue Substitute from 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PP244Z	Removal of Internal Fixation Device from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP247Z	Removal of Autologous Tissue Substitute from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP24JZ	Removal of Synthetic Substitute from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP24KZ	Removal of Nonautologous Tissue Substitute from 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP504Z	Removal of Internal Fixation Device from Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PP507Z	Removal of Autologous Tissue Substitute from Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PP50JZ	Removal of Synthetic Substitute from Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PP50KZ	Removal of Nonautologous Tissue Substitute from Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PP534Z	Removal of Internal Fixation Device from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP537Z	Removal of Autologous Tissue Substitute from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP53JZ	Removal of Synthetic Substitute from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP53KZ	Removal of Nonautologous Tissue Substitute from Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP544Z	Removal of Internal Fixation Device from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP547Z	Removal of Autologous Tissue Substitute from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP54JZ	Removal of Synthetic Substitute from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP54KZ	Removal of Nonautologous Tissue Substitute from Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP604Z	Removal of Internal Fixation Device from Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PP607Z	Removal of Autologous Tissue Substitute from Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PP60JZ	Removal of Synthetic Substitute from Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PP60KZ	Removal of Nonautologous Tissue Substitute from Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PP634Z	Removal of Internal Fixation Device from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP637Z	Removal of Autologous Tissue Substitute from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP63JZ	Removal of Synthetic Substitute from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP63KZ	Removal of Nonautologous Tissue Substitute from Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PP644Z	Removal of Internal Fixation Device from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP647Z	Removal of Autologous Tissue Substitute from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP64JZ	Removal of Synthetic Substitute from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP64KZ	Removal of Nonautologous Tissue Substitute from Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP704Z	Removal of Internal Fixation Device from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP707Z	Removal of Autologous Tissue Substitute from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0PP70JZ	Removal of Synthetic Substitute from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP70KZ	Removal of Nonautologous Tissue Substitute from Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP734Z	Removal of Internal Fixation Device from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP737Z	Removal of Autologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP73JZ	Removal of Synthetic Substitute from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP73KZ	Removal of Nonautologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP744Z	Removal of Internal Fixation Device from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP747Z	Removal of Autologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP74JZ	Removal of Synthetic Substitute from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP74KZ	Removal of Nonautologous Tissue Substitute from Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP804Z	Removal of Internal Fixation Device from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP807Z	Removal of Autologous Tissue Substitute from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP80JZ	Removal of Synthetic Substitute from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP80KZ	Removal of Nonautologous Tissue Substitute from Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PP834Z	Removal of Internal Fixation Device from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP837Z	Removal of Autologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP83JZ	Removal of Synthetic Substitute from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP83KZ	Removal of Nonautologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PP844Z	Removal of Internal Fixation Device from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP847Z	Removal of Autologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP84JZ	Removal of Synthetic Substitute from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP84KZ	Removal of Nonautologous Tissue Substitute from Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP904Z	Removal of Internal Fixation Device from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PP907Z	Removal of Autologous Tissue Substitute from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PP90JZ	Removal of Synthetic Substitute from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PP90KZ	Removal of Nonautologous Tissue Substitute from Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PP934Z	Removal of Internal Fixation Device from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PP937Z	Removal of Autologous Tissue Substitute from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PP93JZ	Removal of Synthetic Substitute from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0PP93KZ	Removal of Nonautologous Tissue Substitute from Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PP944Z	Removal of Internal Fixation Device from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP947Z	Removal of Autologous Tissue Substitute from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP94JZ	Removal of Synthetic Substitute from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PP94KZ	Removal of Nonautologous Tissue Substitute from Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPB04Z	Removal of Internal Fixation Device from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PPB07Z	Removal of Autologous Tissue Substitute from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PPB0JZ	Removal of Synthetic Substitute from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PPB0KZ	Removal of Nonautologous Tissue Substitute from Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PPB34Z	Removal of Internal Fixation Device from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PPB37Z	Removal of Autologous Tissue Substitute from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PPB3JZ	Removal of Synthetic Substitute from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PPB3KZ	Removal of Nonautologous Tissue Substitute from Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PPB44Z	Removal of Internal Fixation Device from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPB47Z	Removal of Autologous Tissue Substitute from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPB4JZ	Removal of Synthetic Substitute from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPB4KZ	Removal of Nonautologous Tissue Substitute from Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPH04Z	Removal of Internal Fixation Device from Right Radius, Open Approach	ICD-10-PCS	Procedure
0PPH05Z	Removal of External Fixation Device from Right Radius, Open Approach	ICD-10-PCS	Procedure
0PPH07Z	Removal of Autologous Tissue Substitute from Right Radius, Open Approach	ICD-10-PCS	Procedure
0PPH0JZ	Removal of Synthetic Substitute from Right Radius, Open Approach	ICD-10-PCS	Procedure
0PPH0KZ	Removal of Nonautologous Tissue Substitute from Right Radius, Open Approach	ICD-10-PCS	Procedure
0PPH34Z	Removal of Internal Fixation Device from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPH35Z	Removal of External Fixation Device from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPH37Z	Removal of Autologous Tissue Substitute from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPH3JZ	Removal of Synthetic Substitute from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPH3KZ	Removal of Nonautologous Tissue Substitute from Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPH44Z	Removal of Internal Fixation Device from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPH45Z	Removal of External Fixation Device from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPH47Z	Removal of Autologous Tissue Substitute from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PPH4JZ	Removal of Synthetic Substitute from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPH4KZ	Removal of Nonautologous Tissue Substitute from Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPJ04Z	Removal of Internal Fixation Device from Left Radius, Open Approach	ICD-10-PCS	Procedure
0PPJ05Z	Removal of External Fixation Device from Left Radius, Open Approach	ICD-10-PCS	Procedure
0PPJ07Z	Removal of Autologous Tissue Substitute from Left Radius, Open Approach	ICD-10-PCS	Procedure
0PPJ0JZ	Removal of Synthetic Substitute from Left Radius, Open Approach	ICD-10-PCS	Procedure
0PPJ0KZ	Removal of Nonautologous Tissue Substitute from Left Radius, Open Approach	ICD-10-PCS	Procedure
0PPJ34Z	Removal of Internal Fixation Device from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPJ35Z	Removal of External Fixation Device from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPJ37Z	Removal of Autologous Tissue Substitute from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPJ3JZ	Removal of Synthetic Substitute from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPJ3KZ	Removal of Nonautologous Tissue Substitute from Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PPJ44Z	Removal of Internal Fixation Device from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPJ45Z	Removal of External Fixation Device from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPJ47Z	Removal of Autologous Tissue Substitute from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPJ4JZ	Removal of Synthetic Substitute from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPJ4KZ	Removal of Nonautologous Tissue Substitute from Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPK04Z	Removal of Internal Fixation Device from Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PPK05Z	Removal of External Fixation Device from Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PPK07Z	Removal of Autologous Tissue Substitute from Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PPK0JZ	Removal of Synthetic Substitute from Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PPK0KZ	Removal of Nonautologous Tissue Substitute from Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PPK34Z	Removal of Internal Fixation Device from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPK35Z	Removal of External Fixation Device from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPK37Z	Removal of Autologous Tissue Substitute from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPK3JZ	Removal of Synthetic Substitute from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPK3KZ	Removal of Nonautologous Tissue Substitute from Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPK44Z	Removal of Internal Fixation Device from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPK45Z	Removal of External Fixation Device from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPK47Z	Removal of Autologous Tissue Substitute from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPK4JZ	Removal of Synthetic Substitute from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPK4KZ	Removal of Nonautologous Tissue Substitute from Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPL04Z	Removal of Internal Fixation Device from Left Ulna, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PPL05Z	Removal of External Fixation Device from Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PPL07Z	Removal of Autologous Tissue Substitute from Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PPL0JZ	Removal of Synthetic Substitute from Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PPL0KZ	Removal of Nonautologous Tissue Substitute from Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PPL34Z	Removal of Internal Fixation Device from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPL35Z	Removal of External Fixation Device from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPL37Z	Removal of Autologous Tissue Substitute from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPL3JZ	Removal of Synthetic Substitute from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPL3KZ	Removal of Nonautologous Tissue Substitute from Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PPL44Z	Removal of Internal Fixation Device from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPL45Z	Removal of External Fixation Device from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPL47Z	Removal of Autologous Tissue Substitute from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPL4JZ	Removal of Synthetic Substitute from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PPL4KZ	Removal of Nonautologous Tissue Substitute from Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ00ZZ	Repair Sternum, Open Approach	ICD-10-PCS	Procedure
0PQ03ZZ	Repair Sternum, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ04ZZ	Repair Sternum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ0XZZ	Repair Sternum, External Approach	ICD-10-PCS	Procedure
0PQ10ZZ	Repair 1 to 2 Ribs, Open Approach	ICD-10-PCS	Procedure
0PQ13ZZ	Repair 1 to 2 Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ14ZZ	Repair 1 to 2 Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ1XZZ	Repair 1 to 2 Ribs, External Approach	ICD-10-PCS	Procedure
0PQ20ZZ	Repair 3 or More Ribs, Open Approach	ICD-10-PCS	Procedure
0PQ23ZZ	Repair 3 or More Ribs, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ24ZZ	Repair 3 or More Ribs, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ2XZZ	Repair 3 or More Ribs, External Approach	ICD-10-PCS	Procedure
0PQ50ZZ	Repair Right Scapula, Open Approach	ICD-10-PCS	Procedure
0PQ53ZZ	Repair Right Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ54ZZ	Repair Right Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ5XZZ	Repair Right Scapula, External Approach	ICD-10-PCS	Procedure
0PQ60ZZ	Repair Left Scapula, Open Approach	ICD-10-PCS	Procedure
0PQ63ZZ	Repair Left Scapula, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ64ZZ	Repair Left Scapula, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ6XZZ	Repair Left Scapula, External Approach	ICD-10-PCS	Procedure
0PQ70ZZ	Repair Right Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PQ73ZZ	Repair Right Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ74ZZ	Repair Right Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ7XZZ	Repair Right Glenoid Cavity, External Approach	ICD-10-PCS	Procedure
0PQ80ZZ	Repair Left Glenoid Cavity, Open Approach	ICD-10-PCS	Procedure
0PQ83ZZ	Repair Left Glenoid Cavity, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ84ZZ	Repair Left Glenoid Cavity, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PQ8XZZ	Repair Left Glenoid Cavity, External Approach	ICD-10-PCS	Procedure
0PQ90ZZ	Repair Right Clavicle, Open Approach	ICD-10-PCS	Procedure
0PQ93ZZ	Repair Right Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PQ94ZZ	Repair Right Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQ9XZZ	Repair Right Clavicle, External Approach	ICD-10-PCS	Procedure
0PQB0ZZ	Repair Left Clavicle, Open Approach	ICD-10-PCS	Procedure
0PQB3ZZ	Repair Left Clavicle, Percutaneous Approach	ICD-10-PCS	Procedure
0PQB4ZZ	Repair Left Clavicle, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQBXZZ	Repair Left Clavicle, External Approach	ICD-10-PCS	Procedure
0PQH0ZZ	Repair Right Radius, Open Approach	ICD-10-PCS	Procedure
0PQH3ZZ	Repair Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PQH4ZZ	Repair Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQHXZZ	Repair Right Radius, External Approach	ICD-10-PCS	Procedure
0PQJ0ZZ	Repair Left Radius, Open Approach	ICD-10-PCS	Procedure
0PQJ3ZZ	Repair Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PQJ4ZZ	Repair Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQJXZZ	Repair Left Radius, External Approach	ICD-10-PCS	Procedure
0PQK0ZZ	Repair Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PQK3ZZ	Repair Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PQK4ZZ	Repair Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQKXZZ	Repair Right Ulna, External Approach	ICD-10-PCS	Procedure
0PQL0ZZ	Repair Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PQL3ZZ	Repair Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PQL4ZZ	Repair Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PQLXZZ	Repair Left Ulna, External Approach	ICD-10-PCS	Procedure
0PR00JZ	Replacement of Sternum with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR03JZ	Replacement of Sternum with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR04JZ	Replacement of Sternum with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR10JZ	Replacement of 1 to 2 Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR13JZ	Replacement of 1 to 2 Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR14JZ	Replacement of 1 to 2 Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR20JZ	Replacement of 3 or More Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR23JZ	Replacement of 3 or More Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR24JZ	Replacement of 3 or More Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR50JZ	Replacement of Right Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR53JZ	Replacement of Right Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR54JZ	Replacement of Right Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR60JZ	Replacement of Left Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR63JZ	Replacement of Left Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR64JZ	Replacement of Left Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR70JZ	Replacement of Right Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PR73JZ	Replacement of Right Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR74JZ	Replacement of Right Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR80JZ	Replacement of Left Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR83JZ	Replacement of Left Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR84JZ	Replacement of Left Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PR90JZ	Replacement of Right Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PR93JZ	Replacement of Right Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PR94JZ	Replacement of Right Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PRB0JZ	Replacement of Left Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PRB3JZ	Replacement of Left Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PRB4JZ	Replacement of Left Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PRH0JZ	Replacement of Right Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PRH3JZ	Replacement of Right Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PRH4JZ	Replacement of Right Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PRJ0JZ	Replacement of Left Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PRJ3JZ	Replacement of Left Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PRJ4JZ	Replacement of Left Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PRK0JZ	Replacement of Right Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PRK3JZ	Replacement of Right Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PRK4JZ	Replacement of Right Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PRL0JZ	Replacement of Left Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PRL3JZ	Replacement of Left Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PRL4JZ	Replacement of Left Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH04Z	Reposition Right Radius with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSH05Z	Reposition Right Radius with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSH06Z	Reposition Right Radius with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSH0BZ	Reposition Right Radius with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSH0CZ	Reposition Right Radius with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSH0DZ	Reposition Right Radius with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSH0ZZ	Reposition Right Radius, Open Approach	ICD-10-PCS	Procedure
0PSH34Z	Reposition Right Radius with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSH35Z	Reposition Right Radius with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSH36Z	Reposition Right Radius with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PSH3BZ	Reposition Right Radius with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSH3CZ	Reposition Right Radius with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSH3DZ	Reposition Right Radius with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSH3ZZ	Reposition Right Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PSH44Z	Reposition Right Radius with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH45Z	Reposition Right Radius with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH46Z	Reposition Right Radius with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH4BZ	Reposition Right Radius with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH4CZ	Reposition Right Radius with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH4DZ	Reposition Right Radius with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSH4ZZ	Reposition Right Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSHXZZ	Reposition Right Radius, External Approach	ICD-10-PCS	Procedure
0PSJ04Z	Reposition Left Radius with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSJ05Z	Reposition Left Radius with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSJ06Z	Reposition Left Radius with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSJ0BZ	Reposition Left Radius with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSJ0CZ	Reposition Left Radius with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSJ0DZ	Reposition Left Radius with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSJ0ZZ	Reposition Left Radius, Open Approach	ICD-10-PCS	Procedure
0PSJ34Z	Reposition Left Radius with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ35Z	Reposition Left Radius with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ36Z	Reposition Left Radius with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ3BZ	Reposition Left Radius with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ3CZ	Reposition Left Radius with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ3DZ	Reposition Left Radius with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ3ZZ	Reposition Left Radius, Percutaneous Approach	ICD-10-PCS	Procedure
0PSJ44Z	Reposition Left Radius with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSJ45Z	Reposition Left Radius with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSJ46Z	Reposition Left Radius with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSJ4BZ	Reposition Left Radius with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0PSJ4CZ	Reposition Left Radius with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSJ4DZ	Reposition Left Radius with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSJ4ZZ	Reposition Left Radius, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSJXZZ	Reposition Left Radius, External Approach	ICD-10-PCS	Procedure
0PSK04Z	Reposition Right Ulna with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSK05Z	Reposition Right Ulna with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSK06Z	Reposition Right Ulna with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSK0BZ	Reposition Right Ulna with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSK0CZ	Reposition Right Ulna with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSK0DZ	Reposition Right Ulna with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSK0ZZ	Reposition Right Ulna, Open Approach	ICD-10-PCS	Procedure
0PSK34Z	Reposition Right Ulna with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK35Z	Reposition Right Ulna with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK36Z	Reposition Right Ulna with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK3BZ	Reposition Right Ulna with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK3CZ	Reposition Right Ulna with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK3DZ	Reposition Right Ulna with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK3ZZ	Reposition Right Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PSK44Z	Reposition Right Ulna with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSK45Z	Reposition Right Ulna with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSK46Z	Reposition Right Ulna with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSK4BZ	Reposition Right Ulna with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSK4CZ	Reposition Right Ulna with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSK4DZ	Reposition Right Ulna with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSK4ZZ	Reposition Right Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSKXZZ	Reposition Right Ulna, External Approach	ICD-10-PCS	Procedure
0PSL04Z	Reposition Left Ulna with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSL05Z	Reposition Left Ulna with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSL06Z	Reposition Left Ulna with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSL0BZ	Reposition Left Ulna with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSL0CZ	Reposition Left Ulna with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSL0DZ	Reposition Left Ulna with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0PSL0ZZ	Reposition Left Ulna, Open Approach	ICD-10-PCS	Procedure
0PSL34Z	Reposition Left Ulna with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSL35Z	Reposition Left Ulna with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure

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Code	Description	Code Type	Code Category
0PSL36Z	Reposition Left Ulna with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSL3BZ	Reposition Left Ulna with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSL3CZ	Reposition Left Ulna with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSL3DZ	Reposition Left Ulna with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0PSL3ZZ	Reposition Left Ulna, Percutaneous Approach	ICD-10-PCS	Procedure
0PSL44Z	Reposition Left Ulna with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSL45Z	Reposition Left Ulna with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSL46Z	Reposition Left Ulna with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSL4BZ	Reposition Left Ulna with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSL4CZ	Reposition Left Ulna with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSL4DZ	Reposition Left Ulna with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSL4ZZ	Reposition Left Ulna, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PSLXZZ	Reposition Left Ulna, External Approach	ICD-10-PCS	Procedure
0PU00JZ	Supplement Sternum with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU03JZ	Supplement Sternum with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU04JZ	Supplement Sternum with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU10JZ	Supplement 1 to 2 Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU13JZ	Supplement 1 to 2 Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU14JZ	Supplement 1 to 2 Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU20JZ	Supplement 3 or More Ribs with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU23JZ	Supplement 3 or More Ribs with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU24JZ	Supplement 3 or More Ribs with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU50JZ	Supplement Right Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU53JZ	Supplement Right Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU54JZ	Supplement Right Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU60JZ	Supplement Left Scapula with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU63JZ	Supplement Left Scapula with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU64JZ	Supplement Left Scapula with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU70JZ	Supplement Right Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU73JZ	Supplement Right Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU74JZ	Supplement Right Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU80JZ	Supplement Left Glenoid Cavity with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0PU83JZ	Supplement Left Glenoid Cavity with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU84JZ	Supplement Left Glenoid Cavity with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PU90JZ	Supplement Right Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PU93JZ	Supplement Right Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PU94JZ	Supplement Right Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PUB0JZ	Supplement Left Clavicle with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PUB3JZ	Supplement Left Clavicle with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PUB4JZ	Supplement Left Clavicle with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PUH0JZ	Supplement Right Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PUH3JZ	Supplement Right Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PUH4JZ	Supplement Right Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PUJ0JZ	Supplement Left Radius with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PUJ3JZ	Supplement Left Radius with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PUJ4JZ	Supplement Left Radius with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PUK0JZ	Supplement Right Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PUK3JZ	Supplement Right Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PUK4JZ	Supplement Right Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0PUL0JZ	Supplement Left Ulna with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0PUL3JZ	Supplement Left Ulna with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0PUL4JZ	Supplement Left Ulna with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QB60ZZ	Excision of Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QB70ZZ	Excision of Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QB80ZZ	Excision of Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QB90ZZ	Excision of Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QBB0ZZ	Excision of Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QBC0ZZ	Excision of Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QH604Z	Insertion of Internal Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH605Z	Insertion of External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH606Z	Insertion of Intramedullary Internal Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH60BZ	Insertion of Monoplanar External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH60CZ	Insertion of Ring External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH60DZ	Insertion of Hybrid External Fixation Device into Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH634Z	Insertion of Internal Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH635Z	Insertion of External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QH636Z	Insertion of Intramedullary Internal Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH63BZ	Insertion of Monoplanar External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH63CZ	Insertion of Ring External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH63DZ	Insertion of Hybrid External Fixation Device into Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH644Z	Insertion of Internal Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH645Z	Insertion of External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH646Z	Insertion of Intramedullary Internal Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH64BZ	Insertion of Monoplanar External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH64CZ	Insertion of Ring External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH64DZ	Insertion of Hybrid External Fixation Device into Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH704Z	Insertion of Internal Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH705Z	Insertion of External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH706Z	Insertion of Intramedullary Internal Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH70BZ	Insertion of Monoplanar External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH70CZ	Insertion of Ring External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH70DZ	Insertion of Hybrid External Fixation Device into Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QH734Z	Insertion of Internal Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH735Z	Insertion of External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH736Z	Insertion of Intramedullary Internal Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH73BZ	Insertion of Monoplanar External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH73CZ	Insertion of Ring External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH73DZ	Insertion of Hybrid External Fixation Device into Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QH744Z	Insertion of Internal Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH745Z	Insertion of External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH746Z	Insertion of Intramedullary Internal Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QH74BZ	Insertion of Monoplanar External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH74CZ	Insertion of Ring External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH74DZ	Insertion of Hybrid External Fixation Device into Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH804Z	Insertion of Internal Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH805Z	Insertion of External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH806Z	Insertion of Intramedullary Internal Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH80BZ	Insertion of Monoplanar External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH80CZ	Insertion of Ring External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH80DZ	Insertion of Hybrid External Fixation Device into Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH834Z	Insertion of Internal Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH835Z	Insertion of External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH836Z	Insertion of Intramedullary Internal Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH83BZ	Insertion of Monoplanar External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH83CZ	Insertion of Ring External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH83DZ	Insertion of Hybrid External Fixation Device into Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH844Z	Insertion of Internal Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH845Z	Insertion of External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH846Z	Insertion of Intramedullary Internal Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH84BZ	Insertion of Monoplanar External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH84CZ	Insertion of Ring External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH84DZ	Insertion of Hybrid External Fixation Device into Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH904Z	Insertion of Internal Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH905Z	Insertion of External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH906Z	Insertion of Intramedullary Internal Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH90BZ	Insertion of Monoplanar External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH90CZ	Insertion of Ring External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QH90DZ	Insertion of Hybrid External Fixation Device into Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QH934Z	Insertion of Internal Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH935Z	Insertion of External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH936Z	Insertion of Intramedullary Internal Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH93BZ	Insertion of Monoplanar External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH93CZ	Insertion of Ring External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH93DZ	Insertion of Hybrid External Fixation Device into Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QH944Z	Insertion of Internal Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH945Z	Insertion of External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH946Z	Insertion of Intramedullary Internal Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH94BZ	Insertion of Monoplanar External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH94CZ	Insertion of Ring External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QH94DZ	Insertion of Hybrid External Fixation Device into Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB04Z	Insertion of Internal Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB05Z	Insertion of External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB06Z	Insertion of Intramedullary Internal Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB0BZ	Insertion of Monoplanar External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB0CZ	Insertion of Ring External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB0DZ	Insertion of Hybrid External Fixation Device into Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHB34Z	Insertion of Internal Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB35Z	Insertion of External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB36Z	Insertion of Intramedullary Internal Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB3BZ	Insertion of Monoplanar External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB3CZ	Insertion of Ring External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHB3DZ	Insertion of Hybrid External Fixation Device into Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QHB44Z	Insertion of Internal Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB45Z	Insertion of External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB46Z	Insertion of Intramedullary Internal Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB4BZ	Insertion of Monoplanar External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB4CZ	Insertion of Ring External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHB4DZ	Insertion of Hybrid External Fixation Device into Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC04Z	Insertion of Internal Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC05Z	Insertion of External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC06Z	Insertion of Intramedullary Internal Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC0BZ	Insertion of Monoplanar External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC0CZ	Insertion of Ring External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC0DZ	Insertion of Hybrid External Fixation Device into Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QHC34Z	Insertion of Internal Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC35Z	Insertion of External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC36Z	Insertion of Intramedullary Internal Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC3BZ	Insertion of Monoplanar External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC3CZ	Insertion of Ring External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC3DZ	Insertion of Hybrid External Fixation Device into Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QHC44Z	Insertion of Internal Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC45Z	Insertion of External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC46Z	Insertion of Intramedullary Internal Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC4BZ	Insertion of Monoplanar External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC4CZ	Insertion of Ring External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QHC4DZ	Insertion of Hybrid External Fixation Device into Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN60ZZ	Release Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QN63ZZ	Release Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QN64ZZ	Release Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QN70ZZ	Release Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QN73ZZ	Release Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QN74ZZ	Release Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN80ZZ	Release Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QN83ZZ	Release Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QN84ZZ	Release Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QN90ZZ	Release Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QN93ZZ	Release Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QN94ZZ	Release Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QNB0ZZ	Release Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QNB3ZZ	Release Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QNB4ZZ	Release Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QNC0ZZ	Release Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QNC3ZZ	Release Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QNC4ZZ	Release Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP604Z	Removal of Internal Fixation Device from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP605Z	Removal of External Fixation Device from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP607Z	Removal of Autologous Tissue Substitute from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP60JZ	Removal of Synthetic Substitute from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP60KZ	Removal of Nonautologous Tissue Substitute from Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP634Z	Removal of Internal Fixation Device from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP635Z	Removal of External Fixation Device from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP637Z	Removal of Autologous Tissue Substitute from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP63JZ	Removal of Synthetic Substitute from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP63KZ	Removal of Nonautologous Tissue Substitute from Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP644Z	Removal of Internal Fixation Device from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP645Z	Removal of External Fixation Device from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP647Z	Removal of Autologous Tissue Substitute from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP64JZ	Removal of Synthetic Substitute from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP64KZ	Removal of Nonautologous Tissue Substitute from Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP704Z	Removal of Internal Fixation Device from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP705Z	Removal of External Fixation Device from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP707Z	Removal of Autologous Tissue Substitute from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP70JZ	Removal of Synthetic Substitute from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QP70KZ	Removal of Nonautologous Tissue Substitute from Left Upper Femur, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QP734Z	Removal of Internal Fixation Device from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP735Z	Removal of External Fixation Device from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP737Z	Removal of Autologous Tissue Substitute from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP73JZ	Removal of Synthetic Substitute from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP73KZ	Removal of Nonautologous Tissue Substitute from Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QP744Z	Removal of Internal Fixation Device from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP745Z	Removal of External Fixation Device from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP747Z	Removal of Autologous Tissue Substitute from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP74JZ	Removal of Synthetic Substitute from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP74KZ	Removal of Nonautologous Tissue Substitute from Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP804Z	Removal of Internal Fixation Device from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP805Z	Removal of External Fixation Device from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP807Z	Removal of Autologous Tissue Substitute from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP80JZ	Removal of Synthetic Substitute from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP80KZ	Removal of Nonautologous Tissue Substitute from Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP834Z	Removal of Internal Fixation Device from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP835Z	Removal of External Fixation Device from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP837Z	Removal of Autologous Tissue Substitute from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP83JZ	Removal of Synthetic Substitute from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP83KZ	Removal of Nonautologous Tissue Substitute from Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP844Z	Removal of Internal Fixation Device from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP845Z	Removal of External Fixation Device from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP847Z	Removal of Autologous Tissue Substitute from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP84JZ	Removal of Synthetic Substitute from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP84KZ	Removal of Nonautologous Tissue Substitute from Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP904Z	Removal of Internal Fixation Device from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP905Z	Removal of External Fixation Device from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QP907Z	Removal of Autologous Tissue Substitute from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP90JZ	Removal of Synthetic Substitute from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP90KZ	Removal of Nonautologous Tissue Substitute from Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QP934Z	Removal of Internal Fixation Device from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP935Z	Removal of External Fixation Device from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP937Z	Removal of Autologous Tissue Substitute from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP93JZ	Removal of Synthetic Substitute from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP93KZ	Removal of Nonautologous Tissue Substitute from Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QP944Z	Removal of Internal Fixation Device from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP945Z	Removal of External Fixation Device from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP947Z	Removal of Autologous Tissue Substitute from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP94JZ	Removal of Synthetic Substitute from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QP94KZ	Removal of Nonautologous Tissue Substitute from Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB04Z	Removal of Internal Fixation Device from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB05Z	Removal of External Fixation Device from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB07Z	Removal of Autologous Tissue Substitute from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB0JZ	Removal of Synthetic Substitute from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB0KZ	Removal of Nonautologous Tissue Substitute from Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPB34Z	Removal of Internal Fixation Device from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB35Z	Removal of External Fixation Device from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB37Z	Removal of Autologous Tissue Substitute from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB3JZ	Removal of Synthetic Substitute from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB3KZ	Removal of Nonautologous Tissue Substitute from Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPB44Z	Removal of Internal Fixation Device from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB45Z	Removal of External Fixation Device from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB47Z	Removal of Autologous Tissue Substitute from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPB4JZ	Removal of Synthetic Substitute from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QPB4KZ	Removal of Nonautologous Tissue Substitute from Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC04Z	Removal of Internal Fixation Device from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC05Z	Removal of External Fixation Device from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC07Z	Removal of Autologous Tissue Substitute from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC0JZ	Removal of Synthetic Substitute from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC0KZ	Removal of Nonautologous Tissue Substitute from Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QPC34Z	Removal of Internal Fixation Device from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC35Z	Removal of External Fixation Device from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC37Z	Removal of Autologous Tissue Substitute from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC3JZ	Removal of Synthetic Substitute from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC3KZ	Removal of Nonautologous Tissue Substitute from Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QPC44Z	Removal of Internal Fixation Device from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC45Z	Removal of External Fixation Device from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC47Z	Removal of Autologous Tissue Substitute from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC4JZ	Removal of Synthetic Substitute from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QPC4KZ	Removal of Nonautologous Tissue Substitute from Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ60ZZ	Repair Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QQ63ZZ	Repair Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ64ZZ	Repair Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ6XZZ	Repair Right Upper Femur, External Approach	ICD-10-PCS	Procedure
0QQ70ZZ	Repair Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QQ73ZZ	Repair Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ74ZZ	Repair Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ7XZZ	Repair Left Upper Femur, External Approach	ICD-10-PCS	Procedure
0QQ80ZZ	Repair Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QQ83ZZ	Repair Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ84ZZ	Repair Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ8XZZ	Repair Right Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QQ90ZZ	Repair Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QQ93ZZ	Repair Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QQ94ZZ	Repair Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQ9XZZ	Repair Left Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QQB0ZZ	Repair Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QQB3ZZ	Repair Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQB4ZZ	Repair Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQBXZZ	Repair Right Lower Femur, External Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QQC0ZZ	Repair Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QQC3ZZ	Repair Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QQC4ZZ	Repair Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QQCXZZ	Repair Left Lower Femur, External Approach	ICD-10-PCS	Procedure
0QR60JZ	Replacement of Right Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR63JZ	Replacement of Right Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR64JZ	Replacement of Right Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QR70JZ	Replacement of Left Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR73JZ	Replacement of Left Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR74JZ	Replacement of Left Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QR80JZ	Replacement of Right Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR83JZ	Replacement of Right Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR84JZ	Replacement of Right Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QR90JZ	Replacement of Left Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QR93JZ	Replacement of Left Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QR94JZ	Replacement of Left Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QRB0JZ	Replacement of Right Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QRB3JZ	Replacement of Right Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QRB4JZ	Replacement of Right Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QRC0JZ	Replacement of Left Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QRC3JZ	Replacement of Left Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QRC4JZ	Replacement of Left Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS604Z	Reposition Right Upper Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS605Z	Reposition Right Upper Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS606Z	Reposition Right Upper Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60BZ	Reposition Right Upper Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60CZ	Reposition Right Upper Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60DZ	Reposition Right Upper Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS60ZZ	Reposition Right Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QS634Z	Reposition Right Upper Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QS635Z	Reposition Right Upper Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS636Z	Reposition Right Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63BZ	Reposition Right Upper Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63CZ	Reposition Right Upper Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63DZ	Reposition Right Upper Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS63ZZ	Reposition Right Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QS644Z	Reposition Right Upper Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS645Z	Reposition Right Upper Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS646Z	Reposition Right Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64BZ	Reposition Right Upper Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64CZ	Reposition Right Upper Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64DZ	Reposition Right Upper Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS64ZZ	Reposition Right Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS6XZZ	Reposition Right Upper Femur, External Approach	ICD-10-PCS	Procedure
0QS704Z	Reposition Left Upper Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS705Z	Reposition Left Upper Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS706Z	Reposition Left Upper Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70BZ	Reposition Left Upper Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70CZ	Reposition Left Upper Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70DZ	Reposition Left Upper Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS70ZZ	Reposition Left Upper Femur, Open Approach	ICD-10-PCS	Procedure
0QS734Z	Reposition Left Upper Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS735Z	Reposition Left Upper Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS736Z	Reposition Left Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73BZ	Reposition Left Upper Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73CZ	Reposition Left Upper Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73DZ	Reposition Left Upper Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS73ZZ	Reposition Left Upper Femur, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QS744Z	Reposition Left Upper Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS745Z	Reposition Left Upper Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS746Z	Reposition Left Upper Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74BZ	Reposition Left Upper Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74CZ	Reposition Left Upper Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74DZ	Reposition Left Upper Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS74ZZ	Reposition Left Upper Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS7XZZ	Reposition Left Upper Femur, External Approach	ICD-10-PCS	Procedure
0QS804Z	Reposition Right Femoral Shaft with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS805Z	Reposition Right Femoral Shaft with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS806Z	Reposition Right Femoral Shaft with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80BZ	Reposition Right Femoral Shaft with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80CZ	Reposition Right Femoral Shaft with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80DZ	Reposition Right Femoral Shaft with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS80ZZ	Reposition Right Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QS834Z	Reposition Right Femoral Shaft with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS835Z	Reposition Right Femoral Shaft with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS836Z	Reposition Right Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83BZ	Reposition Right Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83CZ	Reposition Right Femoral Shaft with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83DZ	Reposition Right Femoral Shaft with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS83ZZ	Reposition Right Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QS844Z	Reposition Right Femoral Shaft with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS845Z	Reposition Right Femoral Shaft with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS846Z	Reposition Right Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84BZ	Reposition Right Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84CZ	Reposition Right Femoral Shaft with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QS84DZ	Reposition Right Femoral Shaft with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS84ZZ	Reposition Right Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS8XZZ	Reposition Right Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QS904Z	Reposition Left Femoral Shaft with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS905Z	Reposition Left Femoral Shaft with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS906Z	Reposition Left Femoral Shaft with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90BZ	Reposition Left Femoral Shaft with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90CZ	Reposition Left Femoral Shaft with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90DZ	Reposition Left Femoral Shaft with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QS90ZZ	Reposition Left Femoral Shaft, Open Approach	ICD-10-PCS	Procedure
0QS934Z	Reposition Left Femoral Shaft with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS935Z	Reposition Left Femoral Shaft with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS936Z	Reposition Left Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93BZ	Reposition Left Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93CZ	Reposition Left Femoral Shaft with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93DZ	Reposition Left Femoral Shaft with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QS93ZZ	Reposition Left Femoral Shaft, Percutaneous Approach	ICD-10-PCS	Procedure
0QS944Z	Reposition Left Femoral Shaft with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS945Z	Reposition Left Femoral Shaft with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS946Z	Reposition Left Femoral Shaft with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94BZ	Reposition Left Femoral Shaft with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94CZ	Reposition Left Femoral Shaft with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94DZ	Reposition Left Femoral Shaft with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS94ZZ	Reposition Left Femoral Shaft, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QS9XZZ	Reposition Left Femoral Shaft, External Approach	ICD-10-PCS	Procedure
0QSB04Z	Reposition Right Lower Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB05Z	Reposition Right Lower Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB06Z	Reposition Right Lower Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0BZ	Reposition Right Lower Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QSB0CZ	Reposition Right Lower Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0DZ	Reposition Right Lower Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSB0ZZ	Reposition Right Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QSB34Z	Reposition Right Lower Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB35Z	Reposition Right Lower Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB36Z	Reposition Right Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3BZ	Reposition Right Lower Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3CZ	Reposition Right Lower Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3DZ	Reposition Right Lower Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB3ZZ	Reposition Right Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QSB44Z	Reposition Right Lower Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB45Z	Reposition Right Lower Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB46Z	Reposition Right Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4BZ	Reposition Right Lower Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4CZ	Reposition Right Lower Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4DZ	Reposition Right Lower Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSB4ZZ	Reposition Right Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSBXZZ	Reposition Right Lower Femur, External Approach	ICD-10-PCS	Procedure
0QSC04Z	Reposition Left Lower Femur with Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC05Z	Reposition Left Lower Femur with External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC06Z	Reposition Left Lower Femur with Intramedullary Internal Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0BZ	Reposition Left Lower Femur with Monoplanar External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0CZ	Reposition Left Lower Femur with Ring External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0DZ	Reposition Left Lower Femur with Hybrid External Fixation Device, Open Approach	ICD-10-PCS	Procedure
0QSC0ZZ	Reposition Left Lower Femur, Open Approach	ICD-10-PCS	Procedure
0QSC34Z	Reposition Left Lower Femur with Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC35Z	Reposition Left Lower Femur with External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC36Z	Reposition Left Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3BZ	Reposition Left Lower Femur with Monoplanar External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
0QSC3CZ	Reposition Left Lower Femur with Ring External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3DZ	Reposition Left Lower Femur with Hybrid External Fixation Device, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC3ZZ	Reposition Left Lower Femur, Percutaneous Approach	ICD-10-PCS	Procedure
0QSC44Z	Reposition Left Lower Femur with Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC45Z	Reposition Left Lower Femur with External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC46Z	Reposition Left Lower Femur with Intramedullary Internal Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4BZ	Reposition Left Lower Femur with Monoplanar External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4CZ	Reposition Left Lower Femur with Ring External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4DZ	Reposition Left Lower Femur with Hybrid External Fixation Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSC4ZZ	Reposition Left Lower Femur, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QSCXZZ	Reposition Left Lower Femur, External Approach	ICD-10-PCS	Procedure
0QU60JZ	Supplement Right Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU63JZ	Supplement Right Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU64JZ	Supplement Right Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QU70JZ	Supplement Left Upper Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU73JZ	Supplement Left Upper Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU74JZ	Supplement Left Upper Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QU80JZ	Supplement Right Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU83JZ	Supplement Right Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU84JZ	Supplement Right Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QU90JZ	Supplement Left Femoral Shaft with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QU93JZ	Supplement Left Femoral Shaft with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QU94JZ	Supplement Left Femoral Shaft with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QUB0JZ	Supplement Right Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QUB3JZ	Supplement Right Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QUB4JZ	Supplement Right Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0QUC0JZ	Supplement Left Lower Femur with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0QUC3JZ	Supplement Left Lower Femur with Synthetic Substitute, Percutaneous Approach	ICD-10-PCS	Procedure
0QUC4JZ	Supplement Left Lower Femur with Synthetic Substitute, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0XH23YZ	Insertion of Other Device into Right Shoulder Region, Percutaneous Approach	ICD-10-PCS	Procedure
0XH33YZ	Insertion of Other Device into Left Shoulder Region, Percutaneous Approach	ICD-10-PCS	Procedure
21800	Closed treatment of rib fracture, uncomplicated, each	CPT-4	Procedure
21805	Open treatment of rib fracture without fixation, each	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
21810	Treatment of rib fracture requiring external fixation (flail chest)	CPT-4	Procedure
21812	Open treatment of rib fracture(s) with internal fixation, includes thoracoscopic visualization when performed, unilateral; 4-6 ribs	CPT-4	Procedure
21813	Open treatment of rib fracture(s) with internal fixation, includes thoracoscopic visualization when performed, unilateral; 7 or more ribs	CPT-4	Procedure
23485	Osteotomy, clavicle, with or without internal fixation; with bone graft for nonunion or malunion (includes obtaining graft and/or necessary fixation)	CPT-4	Procedure
23500	Closed treatment of clavicular fracture; without manipulation	CPT-4	Procedure
23505	Closed treatment of clavicular fracture; with manipulation	CPT-4	Procedure
23515	Open treatment of clavicular fracture, includes internal fixation, when performed	CPT-4	Procedure
24586	Open treatment of periarticular fracture and/or dislocation of the elbow (fracture distal humerus and proximal ulna and/or proximal radius);	CPT-4	Procedure
24587	Open treatment of periarticular fracture and/or dislocation of the elbow (fracture distal humerus and proximal ulna and/or proximal radius); with implant arthroplasty	CPT-4	Procedure
24620	Closed treatment of Monteggia type of fracture dislocation at elbow (fracture proximal end of ulna with dislocation of radial head), with manipulation	CPT-4	Procedure
24635	Open treatment of Monteggia type of fracture dislocation at elbow (fracture proximal end of ulna with dislocation of radial head), includes internal fixation, when performed	CPT-4	Procedure
24650	Closed treatment of radial head or neck fracture; without manipulation	CPT-4	Procedure
24655	Closed treatment of radial head or neck fracture; with manipulation	CPT-4	Procedure
24665	Open treatment of radial head or neck fracture, includes internal fixation or radial head excision, when performed;	CPT-4	Procedure
24666	Open treatment of radial head or neck fracture, includes internal fixation or radial head excision, when performed; with radial head prosthetic replacement	CPT-4	Procedure
24670	Closed treatment of ulnar fracture, proximal end (eg, olecranon or coronoid process[es]); without manipulation	CPT-4	Procedure
24675	Closed treatment of ulnar fracture, proximal end (eg, olecranon or coronoid process[es]); with manipulation	CPT-4	Procedure
24685	Open treatment of ulnar fracture, proximal end (eg, olecranon or coronoid process[es]), includes internal fixation, when performed	CPT-4	Procedure
25500	Closed treatment of radial shaft fracture; without manipulation	CPT-4	Procedure
25505	Closed treatment of radial shaft fracture; with manipulation	CPT-4	Procedure
25515	Open treatment of radial shaft fracture, includes internal fixation, when performed	CPT-4	Procedure
25520	Closed treatment of radial shaft fracture and closed treatment of dislocation of distal radioulnar joint (Galeazzi fracture/dislocation)	CPT-4	Procedure
25525	Open treatment of radial shaft fracture, includes internal fixation, when performed, and closed treatment of distal radioulnar joint dislocation (Galeazzi fracture/ dislocation), includes percutaneous skeletal fixation, when performed	CPT-4	Procedure
25526	Open treatment of radial shaft fracture, includes internal fixation, when performed, and open treatment of distal radioulnar joint dislocation (Galeazzi fracture/ dislocation), includes internal fixation, when performed, includes repair of triangular fibrocartilage complex	CPT-4	Procedure
25530	Closed treatment of ulnar shaft fracture; without manipulation	CPT-4	Procedure
25535	Closed treatment of ulnar shaft fracture; with manipulation	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
25545	Open treatment of ulnar shaft fracture, includes internal fixation, when performed	CPT-4	Procedure
25560	Closed treatment of radial and ulnar shaft fractures; without manipulation	CPT-4	Procedure
25565	Closed treatment of radial and ulnar shaft fractures; with manipulation	CPT-4	Procedure
25574	Open treatment of radial AND ulnar shaft fractures, with internal fixation, when performed; of radius OR ulna	CPT-4	Procedure
25575	Open treatment of radial AND ulnar shaft fractures, with internal fixation, when performed; of radius AND ulna	CPT-4	Procedure
25600	Closed treatment of distal radial fracture (eg, Colles or Smith type) or epiphyseal separation, includes closed treatment of fracture of ulnar styloid, when performed; without manipulation	CPT-4	Procedure
25605	Closed treatment of distal radial fracture (eg, Colles or Smith type) or epiphyseal separation, includes closed treatment of fracture of ulnar styloid, when performed; with manipulation	CPT-4	Procedure
25606	Percutaneous skeletal fixation of distal radial fracture or epiphyseal separation	CPT-4	Procedure
25607	Open treatment of distal radial extra-articular fracture or epiphyseal separation, with internal fixation	CPT-4	Procedure
25608	Open treatment of distal radial intra-articular fracture or epiphyseal separation; with internal fixation of 2 fragments	CPT-4	Procedure
25609	Open treatment of distal radial intra-articular fracture or epiphyseal separation; with internal fixation of 3 or more fragments	CPT-4	Procedure
25611	Percutaneous skeletal fixation of distal radial fracture (eg, Colles or Smith type) or epiphyseal separation, with or without fracture of ulnar styloid, requiring manipulation, with or without external fixation	CPT-4	Procedure
25620	Open treatment of distal radial fracture (eg, Colles or Smith type) or epiphyseal separation, with or without fracture of ulnar styloid, with or without internal or external fixation	CPT-4	Procedure
25650	Closed treatment of ulnar styloid fracture	CPT-4	Procedure
25651	Percutaneous skeletal fixation of ulnar styloid fracture	CPT-4	Procedure
25652	Open treatment of ulnar styloid fracture	CPT-4	Procedure
27230	Closed treatment of femoral fracture, proximal end, neck; without manipulation	CPT-4	Procedure
27232	Closed treatment of femoral fracture, proximal end, neck; with manipulation, with or without skeletal traction	CPT-4	Procedure
27235	Percutaneous skeletal fixation of femoral fracture, proximal end, neck	CPT-4	Procedure
27236	Open treatment of femoral fracture, proximal end, neck, internal fixation or prosthetic replacement	CPT-4	Procedure
27238	Closed treatment of intertrochanteric, peritrochanteric, or subtrochanteric femoral fracture; without manipulation	CPT-4	Procedure
27240	Closed treatment of intertrochanteric, peritrochanteric, or subtrochanteric femoral fracture; with manipulation, with or without skin or skeletal traction	CPT-4	Procedure
27244	Treatment of intertrochanteric, peritrochanteric, or subtrochanteric femoral fracture; with plate/screw type implant, with or without cerclage	CPT-4	Procedure
27245	Treatment of intertrochanteric, peritrochanteric, or subtrochanteric femoral fracture; with intramedullary implant, with or without interlocking screws and/or cerclage	CPT-4	Procedure
27246	Closed treatment of greater trochanteric fracture, without manipulation	CPT-4	Procedure
27248	Open treatment of greater trochanteric fracture, includes internal fixation, when performed	CPT-4	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
27254	Open treatment of hip dislocation, traumatic, with acetabular wall and femoral head fracture, with or without internal or external fixation	CPT-4	Procedure
27267	Closed treatment of femoral fracture, proximal end, head; without manipulation	CPT-4	Procedure
27268	Closed treatment of femoral fracture, proximal end, head; with manipulation	CPT-4	Procedure
27269	Open treatment of femoral fracture, proximal end, head, includes internal fixation, when performed	CPT-4	Procedure
27500	Closed treatment of femoral shaft fracture, without manipulation	CPT-4	Procedure
27501	Closed treatment of supracondylar or transcondylar femoral fracture with or without intercondylar extension, without manipulation	CPT-4	Procedure
27502	Closed treatment of femoral shaft fracture, with manipulation, with or without skin or skeletal traction	CPT-4	Procedure
27503	Closed treatment of supracondylar or transcondylar femoral fracture with or without intercondylar extension, with manipulation, with or without skin or skeletal traction	CPT-4	Procedure
27506	Open treatment of femoral shaft fracture, with or without external fixation, with insertion of intramedullary implant, with or without cerclage and/or locking screws	CPT-4	Procedure
27507	Open treatment of femoral shaft fracture with plate/screws, with or without cerclage	CPT-4	Procedure
27508	Closed treatment of femoral fracture, distal end, medial or lateral condyle, without manipulation	CPT-4	Procedure
27509	Percutaneous skeletal fixation of femoral fracture, distal end, medial or lateral condyle, or supracondylar or transcondylar, with or without intercondylar extension, or distal femoral epiphyseal separation	CPT-4	Procedure
27510	Closed treatment of femoral fracture, distal end, medial or lateral condyle, with manipulation	CPT-4	Procedure
27511	Open treatment of femoral supracondylar or transcondylar fracture without intercondylar extension, includes internal fixation, when performed	CPT-4	Procedure
27513	Open treatment of femoral supracondylar or transcondylar fracture with intercondylar extension, includes internal fixation, when performed	CPT-4	Procedure
27514	Open treatment of femoral fracture, distal end, medial or lateral condyle, includes internal fixation, when performed	CPT-4	Procedure
	Heart Failure		
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM	Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
428	Heart failure	ICD-9-CM	Diagnosis
428.0	Congestive heart failure, unspecified	ICD-9-CM	Diagnosis
428.1	Left heart failure	ICD-9-CM	Diagnosis
428.2	Systolic heart failure	ICD-9-CM	Diagnosis
428.20	Unspecified systolic heart failure	ICD-9-CM	Diagnosis
428.21	Acute systolic heart failure	ICD-9-CM	Diagnosis
428.22	Chronic systolic heart failure	ICD-9-CM	Diagnosis
428.23	Acute on chronic systolic heart failure	ICD-9-CM	Diagnosis
428.3	Diastolic heart failure	ICD-9-CM	Diagnosis
428.30	Unspecified diastolic heart failure	ICD-9-CM	Diagnosis
428.31	Acute diastolic heart failure	ICD-9-CM	Diagnosis
428.32	Chronic diastolic heart failure	ICD-9-CM	Diagnosis
428.33	Acute on chronic diastolic heart failure	ICD-9-CM	Diagnosis
428.4	Combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.40	Unspecified combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.41	Acute combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.42	Chronic combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.43	Acute on chronic combined systolic and diastolic heart failure	ICD-9-CM	Diagnosis
428.9	Unspecified heart failure	ICD-9-CM	Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I50.1	Left ventricular failure, unspecified	ICD-10-CM	Diagnosis
I50.20	Unspecified systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.21	Acute systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.22	Chronic systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.23	Acute on chronic systolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.30	Unspecified diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.31	Acute diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.32	Chronic diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.33	Acute on chronic diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.41	Acute combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.43	Acute on chronic combined systolic (congestive) and diastolic (congestive) heart failure	ICD-10-CM	Diagnosis
I50.810	Right heart failure, unspecified	ICD-10-CM	Diagnosis
I50.811	Acute right heart failure	ICD-10-CM	Diagnosis
I50.812	Chronic right heart failure	ICD-10-CM	Diagnosis
I50.813	Acute on chronic right heart failure	ICD-10-CM	Diagnosis
I50.814	Right heart failure due to left heart failure	ICD-10-CM	Diagnosis
I50.82	Biventricular heart failure	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I50.83	High output heart failure	ICD-10-CM	Diagnosis
I50.84	End stage heart failure	ICD-10-CM	Diagnosis
I50.89	Other heart failure	ICD-10-CM	Diagnosis
I50.9	Heart failure, unspecified	ICD-10-CM	Diagnosis
37.66	Insertion of implantable heart assist system	ICD-9-CM	Procedure
02HA0QZ	Insertion of Implantable Heart Assist System into Heart, Open Approach	ICD-10-PCS	Procedure
02HA3QZ	Insertion of Implantable Heart Assist System into Heart, Percutaneous Approach	ICD-10-PCS	Procedure
02HA4QZ	Insertion of Implantable Heart Assist System into Heart, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
33980	Removal of ventricular assist device, implantable intracorporeal, single ventricle	CPT-4	Procedure
92970	Cardioassist-method of circulatory assist; internal	CPT-4	Procedure
92971	Cardioassist-method of circulatory assist; external	CPT-4	Procedure
G8027	Heart failure patient with left ventricular systolic dysfunction (LVSD) documented to be on either angiotensin-converting enzyme-inhibitor or angiotensin-receptor blocker (ACE-1 or ARB) therapy	HCPCS	Procedure
G8028	Heart failure patient with left ventricular systolic dysfunction (LVSD) not documented to be on either angiotensin-converting enzyme-inhibitor or angiotensin-receptor blocker (ACE-1 or ARB) therapy	HCPCS	Procedure
G8029	Clinician documented that heart failure patient was not an eligible candidate for either angiotensin-converting enzyme-inhibitor or angiotensin-receptor blocker (ACE-1 or ARB) therapy measure	HCPCS	Procedure
G8030	Heart failure patient with left ventricular systolic dysfunction (LVSD) documented to be on beta-blocker therapy	HCPCS	Procedure
G8031	Heart failure patient with left ventricular systolic dysfunction (LVSD) not documented to be on beta-blocker therapy	HCPCS	Procedure
G8032	Clinician documented that heart failure patient was not eligible candidate for beta-blocker therapy measure	HCPCS	Procedure
G8183	Patient with heart failure and atrial fibrillation documented to be on warfarin therapy	HCPCS	Procedure
G8184	Clinician documented that patient with heart failure and atrial fibrillation was not an eligible candidate for warfarin therapy measure	HCPCS	Procedure
G8681	Patient hospitalized with principal diagnosis of heart failure during the measurement period	HCPCS	Procedure
	Hospitalized Bleeding		
280.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-9-CM	Diagnosis
285.1	Acute posthemorrhagic anemia	ICD-9-CM	Diagnosis
285.9	Unspecified anemia	ICD-9-CM	Diagnosis
423.0	Hemopericardium	ICD-9-CM	Diagnosis
430	Subarachnoid hemorrhage	ICD-9-CM	Diagnosis
431	Intracerebral hemorrhage	ICD-9-CM	Diagnosis
432.0	Nontraumatic extradural hemorrhage	ICD-9-CM	Diagnosis
432.1	Subdural hemorrhage	ICD-9-CM	Diagnosis
432.9	Unspecified intracranial hemorrhage	ICD-9-CM	Diagnosis
455	Hemorrhoids	ICD-9-CM	Diagnosis
455.0	Internal hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.1	Internal thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.2	Internal hemorrhoids with other complication	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
455.3	External hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.4	External thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.5	External hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.6	Unspecified hemorrhoids without mention of complication	ICD-9-CM	Diagnosis
455.7	Unspecified thrombosed hemorrhoids	ICD-9-CM	Diagnosis
455.8	Unspecified hemorrhoids with other complication	ICD-9-CM	Diagnosis
455.9	Residual hemorrhoidal skin tags	ICD-9-CM	Diagnosis
456.0	Esophageal varices with bleeding	ICD-9-CM	Diagnosis
456.20	Esophageal varices with bleeding in diseases classified elsewhere	ICD-9-CM	Diagnosis
459.0	Unspecified hemorrhage	ICD-9-CM	Diagnosis
530.1	Esophagitis	ICD-9-CM	Diagnosis
530.10	Unspecified esophagitis	ICD-9-CM	Diagnosis
530.11	Reflux esophagitis	ICD-9-CM	Diagnosis
530.12	Acute esophagitis	ICD-9-CM	Diagnosis
530.13	Eosinophilic esophagitis	ICD-9-CM	Diagnosis
530.19	Other esophagitis	ICD-9-CM	Diagnosis
530.7	Gastroesophageal laceration-hemorrhage syndrome	ICD-9-CM	Diagnosis
530.82	Esophageal hemorrhage	ICD-9-CM	Diagnosis
531.0	Acute gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.00	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.1	Acute gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.10	Acute gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.11	Acute gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.2	Acute gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.20	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.30	Acute gastric ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
531.31	Acute gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
531.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.40	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.50	Chronic or unspecified gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.51	Chronic or unspecified gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.6	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.70	Chronic gastric ulcer without mention of hemorrhage, perforation, without mention of obstruction	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
531.71	Chronic gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
531.9	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.90	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
531.91	Gastric ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.0	Acute duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.00	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.1	Acute duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.10	Acute duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.11	Acute duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.2	Acute duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.20	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.30	Acute duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.31	Acute duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.40	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.50	Chronic or unspecified duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.51	Chronic or unspecified duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.6	Chronic or unspecified duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.60	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.70	Chronic duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.71	Chronic duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.9	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.90	Duodenal ulcer, unspecified as acute or chronic, without hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.91	Duodenal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
533.0	Acute peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
533.00	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.10	Acute peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.11	Acute peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.2	Acute peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.20	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM	Diagnosis
533.30	Acute peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.31	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation, with obstruction	ICD-9-CM	Diagnosis
533.4	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.40	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.50	Chronic or unspecified peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.51	Chronic or unspecified peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.6	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.60	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.70	Chronic peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.71	Chronic peptic ulcer of unspecified site without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
533.9	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.90	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.91	Peptic ulcer, unspecified site, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.0	Acute gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.00	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.10	Acute gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.11	Acute gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.2	Acute gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.20	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.30	Acute gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.31	Acute gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.40	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.50	Chronic or unspecified gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.51	Chronic or unspecified gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.6	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.60	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.70	Chronic gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.71	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.9	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.90	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.91	Gastrojejunal ulcer, unspecified as acute or chronic, without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
535.00	Acute gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.01	Acute gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.10	Atrophic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.11	Atrophic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.20	Gastric mucosal hypertrophy without mention of hemorrhage	ICD-9-CM	Diagnosis
535.21	Gastric mucosal hypertrophy with hemorrhage	ICD-9-CM	Diagnosis
535.30	Alcoholic gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.31	Alcoholic gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.40	Other specified gastritis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.41	Other specified gastritis with hemorrhage	ICD-9-CM	Diagnosis
535.50	Unspecified gastritis and gastroduodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
535.51	Unspecified gastritis and gastroduodenitis with hemorrhage	ICD-9-CM	Diagnosis
535.60	Duodenitis without mention of hemorrhage	ICD-9-CM	Diagnosis
535.61	Duodenitis with hemorrhage	ICD-9-CM	Diagnosis
537.83	Angiodysplasia of stomach and duodenum with hemorrhage	ICD-9-CM	Diagnosis
562.00	Diverticulosis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.01	Diverticulitis of small intestine (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.02	Diverticulosis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.03	Diverticulitis of small intestine with hemorrhage	ICD-9-CM	Diagnosis
562.10	Diverticulosis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.11	Diverticulitis of colon (without mention of hemorrhage)	ICD-9-CM	Diagnosis
562.12	Diverticulosis of colon with hemorrhage	ICD-9-CM	Diagnosis
562.13	Diverticulitis of colon with hemorrhage	ICD-9-CM	Diagnosis
568.81	Hemoperitoneum (nontraumatic)	ICD-9-CM	Diagnosis
569.3	Hemorrhage of rectum and anus	ICD-9-CM	Diagnosis
569.85	Angiodysplasia of intestine with hemorrhage	ICD-9-CM	Diagnosis
578.0	Hematemesis	ICD-9-CM	Diagnosis
578.1	Blood in stool	ICD-9-CM	Diagnosis
578.9	Hemorrhage of gastrointestinal tract, unspecified	ICD-9-CM	Diagnosis
593.81	Vascular disorders of kidney	ICD-9-CM	Diagnosis
599.7	Hematuria	ICD-9-CM	Diagnosis
599.70	Hematuria, unspecified	ICD-9-CM	Diagnosis
599.71	Gross hematuria	ICD-9-CM	Diagnosis
599.72	Microscopic hematuria	ICD-9-CM	Diagnosis
623.8	Other specified noninflammatory disorder of vagina	ICD-9-CM	Diagnosis
626.2	Excessive or frequent menstruation	ICD-9-CM	Diagnosis
626.6	Metrorrhagia	ICD-9-CM	Diagnosis
719.1	Hemarthrosis	ICD-9-CM	Diagnosis
719.10	Hemarthrosis, site unspecified	ICD-9-CM	Diagnosis
719.11	Hemarthrosis, shoulder region	ICD-9-CM	Diagnosis
719.12	Hemarthrosis, upper arm	ICD-9-CM	Diagnosis
719.13	Hemarthrosis, forearm	ICD-9-CM	Diagnosis
719.14	Hemarthrosis, hand	ICD-9-CM	Diagnosis
719.15	Hemarthrosis, pelvic region and thigh	ICD-9-CM	Diagnosis
719.16	Hemarthrosis, lower leg	ICD-9-CM	Diagnosis
719.17	Hemarthrosis, ankle and foot	ICD-9-CM	Diagnosis
719.18	Hemarthrosis, other specified site	ICD-9-CM	Diagnosis
719.19	Hemarthrosis, multiple sites	ICD-9-CM	Diagnosis
784.7	Epistaxis	ICD-9-CM	Diagnosis
784.8	Hemorrhage from throat	ICD-9-CM	Diagnosis
786.3	Hemoptysis	ICD-9-CM	Diagnosis
790.92	Abnormal coagulation profile	ICD-9-CM	Diagnosis
852.0	Subarachnoid hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.00	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.01	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
852.02	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
852.03	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.04	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.05	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.06	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.09	Subarachnoid hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
852.2	Subdural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.20	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.21	Subdural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.22	Subdural hemorrhage following injury, without mention of open intracranial wound, brief (less than one hour) loss of consciousness	ICD-9-CM	Diagnosis
852.23	Subdural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.24	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.25	Subdural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.26	Subdural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.29	Subdural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
852.4	Extradural hemorrhage following injury without mention of open intracranial wound	ICD-9-CM	Diagnosis
852.40	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified state of consciousness	ICD-9-CM	Diagnosis
852.41	Extradural hemorrhage following injury, without mention of open intracranial wound, no loss of consciousness	ICD-9-CM	Diagnosis
852.42	Extradural hemorrhage following injury, without mention of open intracranial wound, brief (less than 1 hour) loss of consciousness	ICD-9-CM	Diagnosis
852.43	Extradural hemorrhage following injury, without mention of open intracranial wound, moderate (1-24 hours) loss of consciousness	ICD-9-CM	Diagnosis
852.44	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness and return to pre-existing conscious level	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
852.45	Extradural hemorrhage following injury, without mention of open intracranial wound, prolonged (more than 24 hours) loss of consciousness, without return to pre-existing conscious level	ICD-9-CM	Diagnosis
852.46	Extradural hemorrhage following injury, without mention of open intracranial wound, loss of consciousness of unspecified duration	ICD-9-CM	Diagnosis
852.49	Extradural hemorrhage following injury, without mention of open intracranial wound, unspecified concussion	ICD-9-CM	Diagnosis
853.0	Other and unspecified intracranial hemorrhage following injury, without mention of open intracranial wound	ICD-9-CM	Diagnosis
D50.0	Iron deficiency anemia secondary to blood loss (chronic)	ICD-10-CM	Diagnosis
D62	Acute posthemorrhagic anemia	ICD-10-CM	Diagnosis
D64.9	Anemia, unspecified	ICD-10-CM	Diagnosis
I31.2	Hemopericardium, not elsewhere classified	ICD-10-CM	Diagnosis
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM	Diagnosis
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM	Diagnosis
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	ICD-10-CM	Diagnosis
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM	Diagnosis
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM	Diagnosis
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM	Diagnosis
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM	Diagnosis
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM	Diagnosis
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM	Diagnosis
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM	Diagnosis
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM	Diagnosis
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM	Diagnosis
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM	Diagnosis
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM	Diagnosis
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM	Diagnosis
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM	Diagnosis
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM	Diagnosis
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM	Diagnosis
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM	Diagnosis
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM	Diagnosis
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM	Diagnosis
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM	Diagnosis
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM	Diagnosis
I62.00	Nontraumatic subdural hemorrhage, unspecified	ICD-10-CM	Diagnosis
I62.01	Nontraumatic acute subdural hemorrhage	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I62.02	Nontraumatic subacute subdural hemorrhage	ICD-10-CM	Diagnosis
I62.03	Nontraumatic chronic subdural hemorrhage	ICD-10-CM	Diagnosis
I62.1	Nontraumatic extradural hemorrhage	ICD-10-CM	Diagnosis
I62.9	Nontraumatic intracranial hemorrhage, unspecified	ICD-10-CM	Diagnosis
I85.01	Esophageal varices with bleeding	ICD-10-CM	Diagnosis
I85.11	Secondary esophageal varices with bleeding	ICD-10-CM	Diagnosis
K20.0	Eosinophilic esophagitis	ICD-10-CM	Diagnosis
K20.8	Other esophagitis	ICD-10-CM	Diagnosis
K20.9	Esophagitis, unspecified	ICD-10-CM	Diagnosis
K21.0	Gastro-esophageal reflux disease with esophagitis	ICD-10-CM	Diagnosis
K22.6	Gastro-esophageal laceration-hemorrhage syndrome	ICD-10-CM	Diagnosis
K22.8	Other specified diseases of esophagus	ICD-10-CM	Diagnosis
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.1	Acute gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.3	Acute gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.5	Chronic or unspecified gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.7	Chronic gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K25.9	Gastric ulcer, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.1	Acute duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.3	Acute duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.5	Chronic or unspecified duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.7	Chronic duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.9	Duodenal ulcer, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.1	Acute peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.3	Acute peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.5	Chronic or unspecified peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.7	Chronic peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.9	Peptic ulcer, site unspecified, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.1	Acute gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.3	Acute gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
K28.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.7	Chronic gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.9	Gastrojejunal ulcer, unspecified as acute or chronic, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K29.00	Acute gastritis without bleeding	ICD-10-CM	Diagnosis
K29.01	Acute gastritis with bleeding	ICD-10-CM	Diagnosis
K29.20	Alcoholic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.21	Alcoholic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.30	Chronic superficial gastritis without bleeding	ICD-10-CM	Diagnosis
K29.31	Chronic superficial gastritis with bleeding	ICD-10-CM	Diagnosis
K29.40	Chronic atrophic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.41	Chronic atrophic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.50	Unspecified chronic gastritis without bleeding	ICD-10-CM	Diagnosis
K29.51	Unspecified chronic gastritis with bleeding	ICD-10-CM	Diagnosis
K29.60	Other gastritis without bleeding	ICD-10-CM	Diagnosis
K29.61	Other gastritis with bleeding	ICD-10-CM	Diagnosis
K29.70	Gastritis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K29.71	Gastritis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K29.80	Duodenitis without bleeding	ICD-10-CM	Diagnosis
K29.81	Duodenitis with bleeding	ICD-10-CM	Diagnosis
K29.90	Gastroduodenitis, unspecified, without bleeding	ICD-10-CM	Diagnosis
K29.91	Gastroduodenitis, unspecified, with bleeding	ICD-10-CM	Diagnosis
K31.811	Angiodysplasia of stomach and duodenum with bleeding	ICD-10-CM	Diagnosis
K55.21	Angiodysplasia of colon with hemorrhage	ICD-10-CM	Diagnosis
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM	Diagnosis
K57.00	Diverticulitis of small intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.01	Diverticulitis of small intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.10	Diverticulosis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.11	Diverticulosis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.12	Diverticulitis of small intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.13	Diverticulitis of small intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.20	Diverticulitis of large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.21	Diverticulitis of large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.30	Diverticulosis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.31	Diverticulosis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.32	Diverticulitis of large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.33	Diverticulitis of large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.40	Diverticulitis of both small and large intestine with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.41	Diverticulitis of both small and large intestine with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.50	Diverticulosis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.51	Diverticulosis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
K57.52	Diverticulitis of both small and large intestine without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.53	Diverticulitis of both small and large intestine without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.80	Diverticulitis of intestine, part unspecified, with perforation and abscess without bleeding	ICD-10-CM	Diagnosis
K57.81	Diverticulitis of intestine, part unspecified, with perforation and abscess with bleeding	ICD-10-CM	Diagnosis
K57.90	Diverticulosis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.91	Diverticulosis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K57.92	Diverticulitis of intestine, part unspecified, without perforation or abscess without bleeding	ICD-10-CM	Diagnosis
K57.93	Diverticulitis of intestine, part unspecified, without perforation or abscess with bleeding	ICD-10-CM	Diagnosis
K62.5	Hemorrhage of anus and rectum	ICD-10-CM	Diagnosis
K64.0	First degree hemorrhoids	ICD-10-CM	Diagnosis
K64.1	Second degree hemorrhoids	ICD-10-CM	Diagnosis
K64.2	Third degree hemorrhoids	ICD-10-CM	Diagnosis
K64.3	Fourth degree hemorrhoids	ICD-10-CM	Diagnosis
K64.4	Residual hemorrhoidal skin tags	ICD-10-CM	Diagnosis
K64.5	Perianal venous thrombosis	ICD-10-CM	Diagnosis
K64.8	Other hemorrhoids	ICD-10-CM	Diagnosis
K64.9	Unspecified hemorrhoids	ICD-10-CM	Diagnosis
K66.1	Hemoperitoneum	ICD-10-CM	Diagnosis
K92.0	Hematemesis	ICD-10-CM	Diagnosis
K92.1	Melena	ICD-10-CM	Diagnosis
K92.2	Gastrointestinal hemorrhage, unspecified	ICD-10-CM	Diagnosis
M25.00	Hemarthrosis, unspecified joint	ICD-10-CM	Diagnosis
M25.011	Hemarthrosis, right shoulder	ICD-10-CM	Diagnosis
M25.012	Hemarthrosis, left shoulder	ICD-10-CM	Diagnosis
M25.019	Hemarthrosis, unspecified shoulder	ICD-10-CM	Diagnosis
M25.021	Hemarthrosis, right elbow	ICD-10-CM	Diagnosis
M25.022	Hemarthrosis, left elbow	ICD-10-CM	Diagnosis
M25.029	Hemarthrosis, unspecified elbow	ICD-10-CM	Diagnosis
M25.031	Hemarthrosis, right wrist	ICD-10-CM	Diagnosis
M25.032	Hemarthrosis, left wrist	ICD-10-CM	Diagnosis
M25.039	Hemarthrosis, unspecified wrist	ICD-10-CM	Diagnosis
M25.041	Hemarthrosis, right hand	ICD-10-CM	Diagnosis
M25.042	Hemarthrosis, left hand	ICD-10-CM	Diagnosis
M25.049	Hemarthrosis, unspecified hand	ICD-10-CM	Diagnosis
M25.051	Hemarthrosis, right hip	ICD-10-CM	Diagnosis
M25.052	Hemarthrosis, left hip	ICD-10-CM	Diagnosis
M25.059	Hemarthrosis, unspecified hip	ICD-10-CM	Diagnosis
M25.061	Hemarthrosis, right knee	ICD-10-CM	Diagnosis
M25.062	Hemarthrosis, left knee	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
M25.069	Hemarthrosis, unspecified knee	ICD-10-CM	Diagnosis
M25.071	Hemarthrosis, right ankle	ICD-10-CM	Diagnosis
M25.072	Hemarthrosis, left ankle	ICD-10-CM	Diagnosis
M25.073	Hemarthrosis, unspecified ankle	ICD-10-CM	Diagnosis
M25.074	Hemarthrosis, right foot	ICD-10-CM	Diagnosis
M25.075	Hemarthrosis, left foot	ICD-10-CM	Diagnosis
M25.076	Hemarthrosis, unspecified foot	ICD-10-CM	Diagnosis
M25.08	Hemarthrosis, other specified site	ICD-10-CM	Diagnosis
N28.0	Ischemia and infarction of kidney	ICD-10-CM	Diagnosis
N89.8	Other specified noninflammatory disorders of vagina	ICD-10-CM	Diagnosis
N92.0	Excessive and frequent menstruation with regular cycle	ICD-10-CM	Diagnosis
N92.1	Excessive and frequent menstruation with irregular cycle	ICD-10-CM	Diagnosis
R04.0	Epistaxis	ICD-10-CM	Diagnosis
R04.1	Hemorrhage from throat	ICD-10-CM	Diagnosis
R31.0	Gross hematuria	ICD-10-CM	Diagnosis
R31.1	Benign essential microscopic hematuria	ICD-10-CM	Diagnosis
R31.21	Asymptomatic microscopic hematuria	ICD-10-CM	Diagnosis
R31.29	Other microscopic hematuria	ICD-10-CM	Diagnosis
R31.9	Hematuria, unspecified	ICD-10-CM	Diagnosis
R58	Hemorrhage, not elsewhere classified	ICD-10-CM	Diagnosis
R79.1	Abnormal coagulation profile	ICD-10-CM	Diagnosis
S06.4X0A	Epidural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X1A	Epidural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.4X2A	Epidural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X3A	Epidural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.4X4A	Epidural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.4X5A	Epidural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.4X6A	Epidural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.4X7A	Epidural hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X8A	Epidural hemorrhage with loss of consciousness of any duration with death due to other causes prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.4X9A	Epidural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.5X0A	Traumatic subdural hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X1A	Traumatic subdural hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.5X2A	Traumatic subdural hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.5X3A	Traumatic subdural hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
S06.5X4A	Traumatic subdural hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.5X5A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.5X6A	Traumatic subdural hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.5X7A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to brain injury before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X8A	Traumatic subdural hemorrhage with loss of consciousness of any duration with death due to other cause before regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.5X9A	Traumatic subdural hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
S06.6X0A	Traumatic subarachnoid hemorrhage without loss of consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X1A	Traumatic subarachnoid hemorrhage with loss of consciousness of 30 minutes or less, initial encounter	ICD-10-CM	Diagnosis
S06.6X2A	Traumatic subarachnoid hemorrhage with loss of consciousness of 31 minutes to 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X3A	Traumatic subarachnoid hemorrhage with loss of consciousness of 1 hour to 5 hours 59 minutes, initial encounter	ICD-10-CM	Diagnosis
S06.6X4A	Traumatic subarachnoid hemorrhage with loss of consciousness of 6 hours to 24 hours, initial encounter	ICD-10-CM	Diagnosis
S06.6X5A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours with return to pre-existing conscious level, initial encounter	ICD-10-CM	Diagnosis
S06.6X6A	Traumatic subarachnoid hemorrhage with loss of consciousness greater than 24 hours without return to pre-existing conscious level with patient surviving, initial encounter	ICD-10-CM	Diagnosis
S06.6X7A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to brain injury prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X8A	Traumatic subarachnoid hemorrhage with loss of consciousness of any duration with death due to other cause prior to regaining consciousness, initial encounter	ICD-10-CM	Diagnosis
S06.6X9A	Traumatic subarachnoid hemorrhage with loss of consciousness of unspecified duration, initial encounter	ICD-10-CM	Diagnosis
	Hyperlipidemia		
272.0	Pure hypercholesterolemia	ICD-9-CM	Diagnosis
272.1	Pure hyperglyceridemia	ICD-9-CM	Diagnosis
272.2	Mixed hyperlipidemia	ICD-9-CM	Diagnosis
272.3	Hyperchylomicronemia	ICD-9-CM	Diagnosis
272.4	Other and unspecified hyperlipidemia	ICD-9-CM	Diagnosis
E78.00	Pure hypercholesterolemia, unspecified	ICD-10-CM	Diagnosis
E78.01	Familial hypercholesterolemia	ICD-10-CM	Diagnosis
E78.1	Pure hyperglyceridemia	ICD-10-CM	Diagnosis
E78.2	Mixed hyperlipidemia	ICD-10-CM	Diagnosis
E78.3	Hyperchylomicronemia	ICD-10-CM	Diagnosis
E78.4	Other hyperlipidemia	ICD-10-CM	Diagnosis
E78.5	Hyperlipidemia, unspecified	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
	Hypertension		
401	Essential hypertension	ICD-9-CM	Diagnosis
401.0	Essential hypertension, malignant	ICD-9-CM	Diagnosis
401.1	Essential hypertension, benign	ICD-9-CM	Diagnosis
401.9	Unspecified essential hypertension	ICD-9-CM	Diagnosis
402	Hypertensive heart disease	ICD-9-CM	Diagnosis
402.0	Malignant hypertensive heart disease	ICD-9-CM	Diagnosis
402.00	Malignant hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.01	Malignant hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.1	Benign hypertensive heart disease	ICD-9-CM	Diagnosis
402.10	Benign hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.11	Benign hypertensive heart disease with heart failure	ICD-9-CM	Diagnosis
402.9	Unspecified hypertensive heart disease	ICD-9-CM	Diagnosis
402.90	Unspecified hypertensive heart disease without heart failure	ICD-9-CM	Diagnosis
402.91	Hypertensive heart disease, unspecified, with heart failure	ICD-9-CM	Diagnosis
403	Hypertensive chronic kidney disease	ICD-9-CM	Diagnosis
403.0	Hypertensive chronic kidney disease, malignant	ICD-9-CM	Diagnosis
403.00	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.01	Hypertensive chronic kidney disease, malignant, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.1	Hypertensive chronic kidney disease, benign	ICD-9-CM	Diagnosis
403.10	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.11	Hypertensive chronic kidney disease, benign, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
403.9	Hypertensive chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
403.90	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
403.91	Hypertensive chronic kidney disease, unspecified, with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404	Hypertensive heart and chronic kidney disease	ICD-9-CM	Diagnosis
404.0	Hypertensive heart and chronic kidney disease, malignant	ICD-9-CM	Diagnosis
404.00	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.02	Hypertensive heart and chronic kidney disease, malignant, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.1	Hypertensive heart and chronic kidney disease, benign	ICD-9-CM	Diagnosis
404.10	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
404.12	Hypertensive heart and chronic kidney disease, benign, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.9	Hypertensive heart and chronic kidney disease, unspecified	ICD-9-CM	Diagnosis
404.90	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease stage I through stage IV, or unspecified	ICD-9-CM	Diagnosis
404.92	Hypertensive heart and chronic kidney disease, unspecified, without heart failure and with chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease stage V or end stage renal disease	ICD-9-CM	Diagnosis
405	Secondary hypertension	ICD-9-CM	Diagnosis
405.0	Secondary hypertension, malignant	ICD-9-CM	Diagnosis
405.01	Secondary renovascular hypertension, malignant	ICD-9-CM	Diagnosis
405.09	Other secondary hypertension, malignant	ICD-9-CM	Diagnosis
405.1	Secondary hypertension, benign	ICD-9-CM	Diagnosis
405.11	Secondary renovascular hypertension, benign	ICD-9-CM	Diagnosis
405.19	Other secondary hypertension, benign	ICD-9-CM	Diagnosis
405.9	Unspecified secondary hypertension, unspecified	ICD-9-CM	Diagnosis
405.91	Secondary renovascular hypertension, unspecified	ICD-9-CM	Diagnosis
405.99	Other secondary hypertension, unspecified	ICD-9-CM	Diagnosis
997.91	Hypertension	ICD-9-CM	Diagnosis
I10	Essential (primary) hypertension	ICD-10-CM	Diagnosis
I11.0	Hypertensive heart disease with heart failure	ICD-10-CM	Diagnosis
I11.9	Hypertensive heart disease without heart failure	ICD-10-CM	Diagnosis
I12.0	Hypertensive chronic kidney disease with stage 5 chronic kidney disease or end stage renal disease	ICD-10-CM	Diagnosis
I12.9	Hypertensive chronic kidney disease with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.0	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.10	Hypertensive heart and chronic kidney disease without heart failure, with stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease	ICD-10-CM	Diagnosis
I13.11	Hypertensive heart and chronic kidney disease without heart failure, with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I13.2	Hypertensive heart and chronic kidney disease with heart failure and with stage 5 chronic kidney disease, or end stage renal disease	ICD-10-CM	Diagnosis
I15.0	Renovascular hypertension	ICD-10-CM	Diagnosis
I15.1	Hypertension secondary to other renal disorders	ICD-10-CM	Diagnosis
I15.2	Hypertension secondary to endocrine disorders	ICD-10-CM	Diagnosis
I15.8	Other secondary hypertension	ICD-10-CM	Diagnosis
I15.9	Secondary hypertension, unspecified	ICD-10-CM	Diagnosis
I16.0	Hypertensive urgency	ICD-10-CM	Diagnosis
I16.1	Hypertensive emergency	ICD-10-CM	Diagnosis
I16.9	Hypertensive crisis, unspecified	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I97.3	Postprocedural hypertension	ICD-10-CM	Diagnosis
N26.2	Page kidney	ICD-10-CM	Diagnosis
	Insulin		
A4230	Infusion set for external insulin pump, nonneedle cannula type	HCPCS	Procedure
A4231	Infusion set for external insulin pump, needle type	HCPCS	Procedure
A4232	Syringe with needle for external insulin pump, sterile, 3 cc	HCPCS	Procedure
A9274	External ambulatory insulin delivery system, disposable, each, includes all supplies and accessories	HCPCS	Procedure
E0784	External ambulatory infusion pump, insulin	HCPCS	Procedure
G9147	Outpatient Intravenous Insulin Treatment (OIVIT) either pulsatile or continuous, by any means, guided by the results of measurements for: respiratory quotient; and/or, urine urea nitrogen (UUN); and/or, arterial, venous or capillary glucose; and/or potassium concentration	HCPCS	Procedure
J1815	Injection, insulin, per 5 units	HCPCS	Procedure
J1817	Insulin for administration through DME (i.e., insulin pump) per 50 units	HCPCS	Procedure
J1820	Injection, insulin, up to 100 units	HCPCS	Procedure
S5550	Insulin, rapid onset, 5 units	HCPCS	Procedure
S5551	Insulin, most rapid onset (Lispro or Aspart); 5 units	HCPCS	Procedure
S5552	Insulin, intermediate acting (NPH or LENTE); 5 units	HCPCS	Procedure
S5553	Insulin, long acting; 5 units	HCPCS	Procedure
	Obesity		
278.0	Overweight and obesity	ICD-9-CM	Diagnosis
278.00	Obesity, unspecified	ICD-9-CM	Diagnosis
278.01	Morbid obesity	ICD-9-CM	Diagnosis
278.02	Overweight	ICD-9-CM	Diagnosis
278.1	Localized adiposity	ICD-9-CM	Diagnosis
V45.86	Bariatric surgery status	ICD-9-CM	Diagnosis
V85.3	Body Mass Index between 30-39, adult	ICD-9-CM	Diagnosis
V85.30	Body Mass Index 30.0-30.9, adult	ICD-9-CM	Diagnosis
V85.31	Body Mass Index 31.0-31.9, adult	ICD-9-CM	Diagnosis
V85.32	Body Mass Index 32.0-32.9, adult	ICD-9-CM	Diagnosis
V85.33	Body Mass Index 33.0-33.9, adult	ICD-9-CM	Diagnosis
V85.34	Body Mass Index 34.0-34.9, adult	ICD-9-CM	Diagnosis
V85.35	Body Mass Index 35.0-35.9, adult	ICD-9-CM	Diagnosis
V85.36	Body Mass Index 36.0-36.9, adult	ICD-9-CM	Diagnosis
V85.37	Body Mass Index 37.0-37.9, adult	ICD-9-CM	Diagnosis
V85.38	Body Mass Index 38.0-38.9, adult	ICD-9-CM	Diagnosis
V85.39	Body Mass Index 39.0-39.9, adult	ICD-9-CM	Diagnosis
V85.4	Body Mass Index 40 and over, adult	ICD-9-CM	Diagnosis
E65	Localized adiposity	ICD-10-CM	Diagnosis
E66.01	Morbid (severe) obesity due to excess calories	ICD-10-CM	Diagnosis
E66.09	Other obesity due to excess calories	ICD-10-CM	Diagnosis
E66.1	Drug-induced obesity	ICD-10-CM	Diagnosis
E66.3	Overweight	ICD-10-CM	Diagnosis
E66.8	Other obesity	ICD-10-CM	Diagnosis
E66.9	Obesity, unspecified	ICD-10-CM	Diagnosis
Z68.30	Body mass index (BMI) 30.0-30.9, adult	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
Z68.31	Body mass index (BMI) 31.0-31.9, adult	ICD-10-CM	Diagnosis
Z68.32	Body mass index (BMI) 32.0-32.9, adult	ICD-10-CM	Diagnosis
Z68.33	Body mass index (BMI) 33.0-33.9, adult	ICD-10-CM	Diagnosis
Z68.34	Body mass index (BMI) 34.0-34.9, adult	ICD-10-CM	Diagnosis
Z68.35	Body mass index (BMI) 35.0-35.9, adult	ICD-10-CM	Diagnosis
Z68.36	Body mass index (BMI) 36.0-36.9, adult	ICD-10-CM	Diagnosis
Z68.37	Body mass index (BMI) 37.0-37.9, adult	ICD-10-CM	Diagnosis
Z68.38	Body mass index (BMI) 38.0-38.9, adult	ICD-10-CM	Diagnosis
Z68.39	Body mass index (BMI) 39.0-39.9, adult	ICD-10-CM	Diagnosis
Z98.84	Bariatric surgery status	ICD-10-CM	Diagnosis
44.31	High gastric bypass	ICD-9-CM	Procedure
44.68	Laparoscopic gastroplasty	ICD-9-CM	Procedure
44.95	Laparoscopic gastric restrictive procedure	ICD-9-CM	Procedure
0D1607A	Bypass Stomach to Jejunum with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0D160JA	Bypass Stomach to Jejunum with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0D160KA	Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0D160ZA	Bypass Stomach to Jejunum, Open Approach	ICD-10-PCS	Procedure
0D1687A	Bypass Stomach to Jejunum with Autologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0D168JA	Bypass Stomach to Jejunum with Synthetic Substitute, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0D168KA	Bypass Stomach to Jejunum with Nonautologous Tissue Substitute, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0D168ZA	Bypass Stomach to Jejunum, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0DQ64ZZ	Repair Stomach, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0DV64CZ	Restriction of Stomach with Extraluminal Device, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
	Other Ischemic Heart Disease		
411	Other acute and subacute forms of ischemic heart disease	ICD-9-CM	Diagnosis
411.0	Postmyocardial infarction syndrome	ICD-9-CM	Diagnosis
411.1	Intermediate coronary syndrome	ICD-9-CM	Diagnosis
411.8	Other acute and subacute forms of ischemic heart disease	ICD-9-CM	Diagnosis
411.81	Acute coronary occlusion without myocardial infarction	ICD-9-CM	Diagnosis
411.89	Other acute and subacute form of ischemic heart disease	ICD-9-CM	Diagnosis
413	Angina pectoris	ICD-9-CM	Diagnosis
413.0	Angina decubitus	ICD-9-CM	Diagnosis
413.1	Prinzmetal angina	ICD-9-CM	Diagnosis
413.9	Other and unspecified angina pectoris	ICD-9-CM	Diagnosis
414	Other forms of chronic ischemic heart disease	ICD-9-CM	Diagnosis
414.0	Coronary atherosclerosis	ICD-9-CM	Diagnosis
414.00	Coronary atherosclerosis of unspecified type of vessel, native or graft	ICD-9-CM	Diagnosis
414.01	Coronary atherosclerosis of native coronary artery	ICD-9-CM	Diagnosis
414.02	Coronary atherosclerosis of autologous vein bypass graft	ICD-9-CM	Diagnosis
414.03	Coronary atherosclerosis of nonautologous biological bypass graft	ICD-9-CM	Diagnosis
414.04	Coronary atherosclerosis of artery bypass graft	ICD-9-CM	Diagnosis
414.05	Coronary atherosclerosis of unspecified type of bypass graft	ICD-9-CM	Diagnosis
414.06	Coronary atherosclerosis, of native coronary artery of transplanted heart	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
414.07	Coronary atherosclerosis, of bypass graft (artery) (vein) of transplanted heart	ICD-9-CM	Diagnosis
414.1	Aneurysm and dissection of heart	ICD-9-CM	Diagnosis
414.10	Aneurysm of heart	ICD-9-CM	Diagnosis
414.11	Aneurysm of coronary vessels	ICD-9-CM	Diagnosis
414.12	Dissection of coronary artery	ICD-9-CM	Diagnosis
414.19	Other aneurysm of heart	ICD-9-CM	Diagnosis
414.2	Chronic total occlusion of coronary artery	ICD-9-CM	Diagnosis
414.3	Coronary atherosclerosis due to lipid rich plaque	ICD-9-CM	Diagnosis
414.4	Coronary atherosclerosis due to calcified coronary lesion	ICD-9-CM	Diagnosis
414.8	Other specified forms of chronic ischemic heart disease	ICD-9-CM	Diagnosis
414.9	Unspecified chronic ischemic heart disease	ICD-9-CM	Diagnosis
429.2	Unspecified cardiovascular disease	ICD-9-CM	Diagnosis
429.5	Rupture of chordae tendineae	ICD-9-CM	Diagnosis
429.6	Rupture of papillary muscle	ICD-9-CM	Diagnosis
429.7	Certain sequelae of myocardial infarction, not elsewhere classified	ICD-9-CM	Diagnosis
429.71	Acquired cardiac septal defect	ICD-9-CM	Diagnosis
429.79	Other certain sequelae of myocardial infarction, not elsewhere classified	ICD-9-CM	Diagnosis
429.9	Unspecified heart disease	ICD-9-CM	Diagnosis
I20.0	Unstable angina	ICD-10-CM	Diagnosis
I20.1	Angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I20.8	Other forms of angina pectoris	ICD-10-CM	Diagnosis
I20.9	Angina pectoris, unspecified	ICD-10-CM	Diagnosis
I23.0	Hemopericardium as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.1	Atrial septal defect as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.2	Ventricular septal defect as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.3	Rupture of cardiac wall without hemopericardium as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.4	Rupture of chordae tendineae as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.5	Rupture of papillary muscle as current complication following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.6	Thrombosis of atrium, auricular appendage, and ventricle as current complications following acute myocardial infarction	ICD-10-CM	Diagnosis
I23.7	Postinfarction angina	ICD-10-CM	Diagnosis
I23.8	Other current complications following acute myocardial infarction	ICD-10-CM	Diagnosis
I24.0	Acute coronary thrombosis not resulting in myocardial infarction	ICD-10-CM	Diagnosis
I24.1	Dressler's syndrome	ICD-10-CM	Diagnosis
I24.8	Other forms of acute ischemic heart disease	ICD-10-CM	Diagnosis
I24.9	Acute ischemic heart disease, unspecified	ICD-10-CM	Diagnosis
I25.10	Atherosclerotic heart disease of native coronary artery without angina pectoris	ICD-10-CM	Diagnosis
I25.110	Atherosclerotic heart disease of native coronary artery with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.111	Atherosclerotic heart disease of native coronary artery with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.118	Atherosclerotic heart disease of native coronary artery with other forms of angina pectoris	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I25.119	Atherosclerotic heart disease of native coronary artery with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.3	Aneurysm of heart	ICD-10-CM	Diagnosis
I25.41	Coronary artery aneurysm	ICD-10-CM	Diagnosis
I25.42	Coronary artery dissection	ICD-10-CM	Diagnosis
I25.5	Ischemic cardiomyopathy	ICD-10-CM	Diagnosis
I25.6	Silent myocardial ischemia	ICD-10-CM	Diagnosis
I25.700	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.701	Atherosclerosis of coronary artery bypass graft(s), unspecified, with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.708	Atherosclerosis of coronary artery bypass graft(s), unspecified, with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.709	Atherosclerosis of coronary artery bypass graft(s), unspecified, with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.710	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.711	Atherosclerosis of autologous vein coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.718	Atherosclerosis of autologous vein coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.719	Atherosclerosis of autologous vein coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.720	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.721	Atherosclerosis of autologous artery coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.728	Atherosclerosis of autologous artery coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.729	Atherosclerosis of autologous artery coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.730	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.731	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.738	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.739	Atherosclerosis of nonautologous biological coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.750	Atherosclerosis of native coronary artery of transplanted heart with unstable angina	ICD-10-CM	Diagnosis
I25.751	Atherosclerosis of native coronary artery of transplanted heart with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.758	Atherosclerosis of native coronary artery of transplanted heart with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.759	Atherosclerosis of native coronary artery of transplanted heart with unspecified angina pectoris	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I25.760	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unstable angina	ICD-10-CM	Diagnosis
I25.761	Atherosclerosis of bypass graft of coronary artery of transplanted heart with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.768	Atherosclerosis of bypass graft of coronary artery of transplanted heart with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.769	Atherosclerosis of bypass graft of coronary artery of transplanted heart with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.790	Atherosclerosis of other coronary artery bypass graft(s) with unstable angina pectoris	ICD-10-CM	Diagnosis
I25.791	Atherosclerosis of other coronary artery bypass graft(s) with angina pectoris with documented spasm	ICD-10-CM	Diagnosis
I25.798	Atherosclerosis of other coronary artery bypass graft(s) with other forms of angina pectoris	ICD-10-CM	Diagnosis
I25.799	Atherosclerosis of other coronary artery bypass graft(s) with unspecified angina pectoris	ICD-10-CM	Diagnosis
I25.810	Atherosclerosis of coronary artery bypass graft(s) without angina pectoris	ICD-10-CM	Diagnosis
I25.811	Atherosclerosis of native coronary artery of transplanted heart without angina pectoris	ICD-10-CM	Diagnosis
I25.812	Atherosclerosis of bypass graft of coronary artery of transplanted heart without angina pectoris	ICD-10-CM	Diagnosis
I25.82	Chronic total occlusion of coronary artery	ICD-10-CM	Diagnosis
I25.83	Coronary atherosclerosis due to lipid rich plaque	ICD-10-CM	Diagnosis
I25.84	Coronary atherosclerosis due to calcified coronary lesion	ICD-10-CM	Diagnosis
I25.89	Other forms of chronic ischemic heart disease	ICD-10-CM	Diagnosis
I25.9	Chronic ischemic heart disease, unspecified	ICD-10-CM	Diagnosis
I51.0	Cardiac septal defect, acquired	ICD-10-CM	Diagnosis
I51.1	Rupture of chordae tendineae, not elsewhere classified	ICD-10-CM	Diagnosis
I51.2	Rupture of papillary muscle, not elsewhere classified	ICD-10-CM	Diagnosis
I51.9	Heart disease, unspecified	ICD-10-CM	Diagnosis
I52	Other heart disorders in diseases classified elsewhere	ICD-10-CM	Diagnosis
G8033	Prior myocardial infarction, coronary artery disease patient documented to be on beta-blocker therapy	HCPCS	Procedure
G8034	Prior myocardial infarction, coronary artery disease patient not documented to be on beta-blocker therapy	HCPCS	Procedure
G8035	Clinician documented that prior myocardial infarction, coronary artery disease patient was not eligible candidate for beta-blocker therapy measure	HCPCS	Procedure
G8036	Coronary artery disease patient documented to be on antiplatelet therapy	HCPCS	Procedure
G8037	Coronary artery disease patient not documented to be on antiplatelet therapy	HCPCS	Procedure
G8038	Clinician documented that coronary artery disease patient was not eligible candidate for antiplatelet therapy measure	HCPCS	Procedure
G8039	Coronary artery disease patient with low-density lipoprotein documented to be greater than 100 mg/dl	HCPCS	Procedure
G8040	Coronary artery disease patient with low-density lipoprotein documented to be less than or equal to 100 mg/dl	HCPCS	Procedure
G8041	Clinician documented that coronary artery disease patient was not eligible candidate for low-density lipoprotein measure	HCPCS	Procedure
	Peptic Ulcer Disease		

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
531.0	Acute gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.00	Acute gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.01	Acute gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.1	Acute gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.10	Acute gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.11	Acute gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.2	Acute gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.20	Acute gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.21	Acute gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.3	Acute gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.30	Acute gastric ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
531.31	Acute gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
531.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-9-CM	Diagnosis
531.40	Chronic or unspecified gastric ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
531.41	Chronic or unspecified gastric ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
531.5	Chronic or unspecified gastric ulcer with perforation	ICD-9-CM	Diagnosis
531.50	Chronic or unspecified gastric ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.51	Chronic or unspecified gastric ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
531.6	Chronic or unspecified gastric ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
531.60	Chronic or unspecified gastric ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.61	Chronic or unspecified gastric ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
531.7	Chronic gastric ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
531.70	Chronic gastric ulcer without mention of hemorrhage, perforation, without mention of obstruction	ICD-9-CM	Diagnosis
531.71	Chronic gastric ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.0	Acute duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis
532.00	Acute duodenal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.01	Acute duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.1	Acute duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.10	Acute duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.11	Acute duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.2	Acute duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.20	Acute duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.21	Acute duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.3	Acute duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.30	Acute duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.31	Acute duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
532.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
532.40	Duodenal ulcer, chronic or unspecified, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
532.41	Chronic or unspecified duodenal ulcer with hemorrhage and obstruction	ICD-9-CM	Diagnosis
532.5	Chronic or unspecified duodenal ulcer with perforation	ICD-9-CM	Diagnosis
532.50	Chronic or unspecified duodenal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.51	Chronic or unspecified duodenal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
532.6	Chronic or unspecified duodenal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
532.60	Chronic or unspecified duodenal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
532.61	Chronic or unspecified duodenal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
532.7	Chronic duodenal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
532.70	Chronic duodenal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
532.71	Chronic duodenal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
533.0	Acute peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.00	Acute peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.01	Acute peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.1	Acute peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.10	Acute peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.11	Acute peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.2	Acute peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis
533.20	Acute peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.21	Acute peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.3	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation	ICD-9-CM	Diagnosis
533.30	Acute peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.31	Acute peptic ulcer, unspecified site, without mention of hemorrhage and perforation, with obstruction	ICD-9-CM	Diagnosis
533.4	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage	ICD-9-CM	Diagnosis
533.40	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
533.41	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
533.5	Chronic or unspecified peptic ulcer, unspecified site, with perforation	ICD-9-CM	Diagnosis
533.50	Chronic or unspecified peptic ulcer, unspecified site, with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.51	Chronic or unspecified peptic ulcer, unspecified site, with perforation and obstruction	ICD-9-CM	Diagnosis
533.6	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
533.60	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
533.61	Chronic or unspecified peptic ulcer, unspecified site, with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
533.7	Chronic peptic ulcer, unspecified site, without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
533.70	Chronic peptic ulcer, unspecified site, without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
533.71	Chronic peptic ulcer of unspecified site without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.0	Acute gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.00	Acute gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.01	Acute gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.1	Acute gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.10	Acute gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.11	Acute gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.2	Acute gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.20	Acute gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.21	Acute gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.3	Acute gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.30	Acute gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.31	Acute gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
534.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-9-CM	Diagnosis
534.40	Chronic or unspecified gastrojejunal ulcer with hemorrhage, without mention of obstruction	ICD-9-CM	Diagnosis
534.41	Chronic or unspecified gastrojejunal ulcer, with hemorrhage and obstruction	ICD-9-CM	Diagnosis
534.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-9-CM	Diagnosis
534.50	Chronic or unspecified gastrojejunal ulcer with perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.51	Chronic or unspecified gastrojejunal ulcer with perforation and obstruction	ICD-9-CM	Diagnosis
534.6	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation	ICD-9-CM	Diagnosis
534.60	Chronic or unspecified gastrojejunal ulcer with hemorrhage and perforation, without mention of obstruction	ICD-9-CM	Diagnosis
534.61	Chronic or unspecified gastrojejunal ulcer with hemorrhage, perforation, and obstruction	ICD-9-CM	Diagnosis
534.7	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation	ICD-9-CM	Diagnosis
534.70	Chronic gastrojejunal ulcer without mention of hemorrhage, perforation, or obstruction	ICD-9-CM	Diagnosis
534.71	Chronic gastrojejunal ulcer without mention of hemorrhage or perforation, with obstruction	ICD-9-CM	Diagnosis
K25.0	Acute gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis
K25.1	Acute gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.2	Acute gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.3	Acute gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K25.4	Chronic or unspecified gastric ulcer with hemorrhage	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
K25.5	Chronic or unspecified gastric ulcer with perforation	ICD-10-CM	Diagnosis
K25.6	Chronic or unspecified gastric ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K25.7	Chronic gastric ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.0	Acute duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.1	Acute duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.2	Acute duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.3	Acute duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K26.4	Chronic or unspecified duodenal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K26.5	Chronic or unspecified duodenal ulcer with perforation	ICD-10-CM	Diagnosis
K26.6	Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K26.7	Chronic duodenal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.0	Acute peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.1	Acute peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.2	Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.3	Acute peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K27.4	Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	ICD-10-CM	Diagnosis
K27.5	Chronic or unspecified peptic ulcer, site unspecified, with perforation	ICD-10-CM	Diagnosis
K27.6	Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K27.7	Chronic peptic ulcer, site unspecified, without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.0	Acute gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.1	Acute gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.3	Acute gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage	ICD-10-CM	Diagnosis
K28.5	Chronic or unspecified gastrojejunal ulcer with perforation	ICD-10-CM	Diagnosis
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation	ICD-10-CM	Diagnosis
K28.7	Chronic gastrojejunal ulcer without hemorrhage or perforation	ICD-10-CM	Diagnosis
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction	ICD-10-CM	Diagnosis
44.4	Control of hemorrhage and suture of ulcer of stomach or duodenum	ICD-9-CM	Procedure
44.40	Suture of peptic ulcer, not otherwise specified	ICD-9-CM	Procedure
44.41	Suture of gastric ulcer site	ICD-9-CM	Procedure
44.42	Suture of duodenal ulcer site	ICD-9-CM	Procedure
0DQ60ZZ	Repair Stomach, Open Approach	ICD-10-PCS	Procedure
0DQ63ZZ	Repair Stomach, Percutaneous Approach	ICD-10-PCS	Procedure
0DQ64ZZ	Repair Stomach, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0DQ67ZZ	Repair Stomach, Via Natural or Artificial Opening	ICD-10-PCS	Procedure
0DQ68ZZ	Repair Stomach, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
0DQ90ZZ	Repair Duodenum, Open Approach	ICD-10-PCS	Procedure
0DQ93ZZ	Repair Duodenum, Percutaneous Approach	ICD-10-PCS	Procedure
0DQ94ZZ	Repair Duodenum, Percutaneous Endoscopic Approach	ICD-10-PCS	Procedure
0DQ97ZZ	Repair Duodenum, Via Natural or Artificial Opening	ICD-10-PCS	Procedure
0DQ98ZZ	Repair Duodenum, Via Natural or Artificial Opening Endoscopic	ICD-10-PCS	Procedure
	Smoking		
305.1	Nondependent tobacco use disorder	ICD-9-CM	Diagnosis
989.84	Toxic effect of tobacco	ICD-9-CM	Diagnosis
V15.82	Personal history of tobacco use, presenting hazards to health	ICD-9-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
F17.200	Nicotine dependence, unspecified, uncomplicated	ICD-10-CM	Diagnosis
F17.201	Nicotine dependence, unspecified, in remission	ICD-10-CM	Diagnosis
F17.210	Nicotine dependence, cigarettes, uncomplicated	ICD-10-CM	Diagnosis
F17.211	Nicotine dependence, cigarettes, in remission	ICD-10-CM	Diagnosis
F17.220	Nicotine dependence, chewing tobacco, uncomplicated	ICD-10-CM	Diagnosis
F17.221	Nicotine dependence, chewing tobacco, in remission	ICD-10-CM	Diagnosis
F17.290	Nicotine dependence, other tobacco product, uncomplicated	ICD-10-CM	Diagnosis
F17.291	Nicotine dependence, other tobacco product, in remission	ICD-10-CM	Diagnosis
T65.211A	Toxic effect of chewing tobacco, accidental (unintentional), initial encounter	ICD-10-CM	Diagnosis
T65.212A	Toxic effect of chewing tobacco, intentional self-harm, initial encounter	ICD-10-CM	Diagnosis
T65.213A	Toxic effect of chewing tobacco, assault, initial encounter	ICD-10-CM	Diagnosis
T65.214A	Toxic effect of chewing tobacco, undetermined, initial encounter	ICD-10-CM	Diagnosis
T65.221A	Toxic effect of tobacco cigarettes, accidental (unintentional), initial encounter	ICD-10-CM	Diagnosis
T65.222A	Toxic effect of tobacco cigarettes, intentional self-harm, initial encounter	ICD-10-CM	Diagnosis
T65.223A	Toxic effect of tobacco cigarettes, assault, initial encounter	ICD-10-CM	Diagnosis
T65.224A	Toxic effect of tobacco cigarettes, undetermined, initial encounter	ICD-10-CM	Diagnosis
T65.291A	Toxic effect of other tobacco and nicotine, accidental (unintentional), initial encounter	ICD-10-CM	Diagnosis
T65.292A	Toxic effect of other tobacco and nicotine, intentional self-harm, initial encounter	ICD-10-CM	Diagnosis
T65.293A	Toxic effect of other tobacco and nicotine, assault, initial encounter	ICD-10-CM	Diagnosis
T65.294A	Toxic effect of other tobacco and nicotine, undetermined, initial encounter	ICD-10-CM	Diagnosis
Z87.891	Personal history of nicotine dependence	ICD-10-CM	Diagnosis
99406	Smoking and tobacco use cessation counseling visit; intermediate, greater than 3 minutes up to 10 minutes	CPT-4	Procedure
99407	Smoking and tobacco use cessation counseling visit; intensive, greater than 10 minutes	CPT-4	Procedure
C9801	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes	HCPCS	Procedure
C9802	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes	HCPCS	Procedure
D1320	tobacco counseling for the control and prevention of oral disease	HCPCS	Procedure
G0375	Smoking and tobacco use cessation counseling visit; intermediate, greater than 3 minutes up to 10 minutes	HCPCS	Procedure
G0376	Smoking and tobacco use cessation counseling visit; intensive, greater than 10 minutes	HCPCS	Procedure
G0436	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intermediate, greater than 3 minutes, up to 10 minutes	HCPCS	Procedure
G0437	Smoking and tobacco cessation counseling visit for the asymptomatic patient; intensive, greater than 10 minutes	HCPCS	Procedure
G8093	Newly diagnosed chronic obstructive pulmonary disease (COPD) patient documented to have received smoking cessation intervention, within 3 months of diagnosis	HCPCS	Procedure
G8094	Newly diagnosed chronic obstructive pulmonary disease (COPD) patient not documented to have received smoking cessation intervention, within 3 months of diagnosis	HCPCS	Procedure
G8402	Tobacco (smoke) use cessation intervention, counseling	HCPCS	Procedure
G8403	Tobacco (smoke) use cessation intervention not counseled	HCPCS	Procedure

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
G8453	Tobacco use cessation intervention, counseling	HCPCS	Procedure
G8454	Tobacco use cessation intervention not counseled, reason not specified	HCPCS	Procedure
G8455	Current tobacco smoker	HCPCS	Procedure
G8456	Current smokeless tobacco user	HCPCS	Procedure
G8688	Currently a smokeless tobacco user (e.g., chew, snuff) and no exposure to secondhand smoke	HCPCS	Procedure
G8690	Current tobacco smoker or current exposure to secondhand smoke	HCPCS	Procedure
G8692	Current smokeless tobacco user (e.g., chew, snuff) and no exposure to secondhand smoke	HCPCS	Procedure
G9016	Smoking cessation counseling, individual, in the absence of or in addition to any other evaluation and management service, per session (6-10 minutes) [demo project code only]	HCPCS	Procedure
G9276	Documentation that patient is a current tobacco user	HCPCS	Procedure
G9458	Patient documented as tobacco user and received tobacco cessation intervention (must include at least one of the following: advice given to quit smoking or tobacco use, counseling on the benefits of quitting smoking or tobacco use, assistance with or referral to external smoking or tobacco cessation support programs, or current enrollment in smoking or tobacco use cessation program) if identified as a tobacco user	HCPCS	Procedure
	Stroke		
430	Subarachnoid hemorrhage	ICD-9-CM	Diagnosis
431	Intracerebral hemorrhage	ICD-9-CM	Diagnosis
433.01	Occlusion and stenosis of basilar artery with cerebral infarction	ICD-9-CM	Diagnosis
433.11	Occlusion and stenosis of carotid artery with cerebral infarction	ICD-9-CM	Diagnosis
433.21	Occlusion and stenosis of vertebral artery with cerebral infarction	ICD-9-CM	Diagnosis
433.31	Occlusion and stenosis of multiple and bilateral precerebral arteries with cerebral infarction	ICD-9-CM	Diagnosis
433.81	Occlusion and stenosis of other specified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
433.91	Occlusion and stenosis of unspecified precerebral artery with cerebral infarction	ICD-9-CM	Diagnosis
434.01	Cerebral thrombosis with cerebral infarction	ICD-9-CM	Diagnosis
434.11	Cerebral embolism with cerebral infarction	ICD-9-CM	Diagnosis
434.91	Unspecified cerebral artery occlusion with cerebral infarction	ICD-9-CM	Diagnosis
436	Acute, but ill-defined, cerebrovascular disease	ICD-9-CM	Diagnosis
I60.00	Nontraumatic subarachnoid hemorrhage from unspecified carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.01	Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.02	Nontraumatic subarachnoid hemorrhage from left carotid siphon and bifurcation	ICD-10-CM	Diagnosis
I60.10	Nontraumatic subarachnoid hemorrhage from unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I60.11	Nontraumatic subarachnoid hemorrhage from right middle cerebral artery	ICD-10-CM	Diagnosis
I60.12	Nontraumatic subarachnoid hemorrhage from left middle cerebral artery	ICD-10-CM	Diagnosis
I60.2	Nontraumatic subarachnoid hemorrhage from anterior communicating artery	ICD-10-CM	Diagnosis
I60.30	Nontraumatic subarachnoid hemorrhage from unspecified posterior communicating artery	ICD-10-CM	Diagnosis
I60.31	Nontraumatic subarachnoid hemorrhage from right posterior communicating artery	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I60.32	Nontraumatic subarachnoid hemorrhage from left posterior communicating artery	ICD-10-CM	Diagnosis
I60.4	Nontraumatic subarachnoid hemorrhage from basilar artery	ICD-10-CM	Diagnosis
I60.50	Nontraumatic subarachnoid hemorrhage from unspecified vertebral artery	ICD-10-CM	Diagnosis
I60.51	Nontraumatic subarachnoid hemorrhage from right vertebral artery	ICD-10-CM	Diagnosis
I60.52	Nontraumatic subarachnoid hemorrhage from left vertebral artery	ICD-10-CM	Diagnosis
I60.6	Nontraumatic subarachnoid hemorrhage from other intracranial arteries	ICD-10-CM	Diagnosis
I60.7	Nontraumatic subarachnoid hemorrhage from unspecified intracranial artery	ICD-10-CM	Diagnosis
I60.8	Other nontraumatic subarachnoid hemorrhage	ICD-10-CM	Diagnosis
I60.9	Nontraumatic subarachnoid hemorrhage, unspecified	ICD-10-CM	Diagnosis
I61.0	Nontraumatic intracerebral hemorrhage in hemisphere, subcortical	ICD-10-CM	Diagnosis
I61.1	Nontraumatic intracerebral hemorrhage in hemisphere, cortical	ICD-10-CM	Diagnosis
I61.2	Nontraumatic intracerebral hemorrhage in hemisphere, unspecified	ICD-10-CM	Diagnosis
I61.3	Nontraumatic intracerebral hemorrhage in brain stem	ICD-10-CM	Diagnosis
I61.4	Nontraumatic intracerebral hemorrhage in cerebellum	ICD-10-CM	Diagnosis
I61.5	Nontraumatic intracerebral hemorrhage, intraventricular	ICD-10-CM	Diagnosis
I61.6	Nontraumatic intracerebral hemorrhage, multiple localized	ICD-10-CM	Diagnosis
I61.8	Other nontraumatic intracerebral hemorrhage	ICD-10-CM	Diagnosis
I61.9	Nontraumatic intracerebral hemorrhage, unspecified	ICD-10-CM	Diagnosis
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.011	Cerebral infarction due to thrombosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.012	Cerebral infarction due to thrombosis of left vertebral artery	ICD-10-CM	Diagnosis
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.02	Cerebral infarction due to thrombosis of basilar artery	ICD-10-CM	Diagnosis
I63.031	Cerebral infarction due to thrombosis of right carotid artery	ICD-10-CM	Diagnosis
I63.032	Cerebral infarction due to thrombosis of left carotid artery	ICD-10-CM	Diagnosis
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.09	Cerebral infarction due to thrombosis of other precerebral artery	ICD-10-CM	Diagnosis
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery	ICD-10-CM	Diagnosis
I63.111	Cerebral infarction due to embolism of right vertebral artery	ICD-10-CM	Diagnosis
I63.112	Cerebral infarction due to embolism of left vertebral artery	ICD-10-CM	Diagnosis
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.12	Cerebral infarction due to embolism of basilar artery	ICD-10-CM	Diagnosis
I63.131	Cerebral infarction due to embolism of right carotid artery	ICD-10-CM	Diagnosis
I63.132	Cerebral infarction due to embolism of left carotid artery	ICD-10-CM	Diagnosis
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.139	Cerebral infarction due to embolism of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.19	Cerebral infarction due to embolism of other precerebral artery	ICD-10-CM	Diagnosis
I63.20	Cerebral infarction due to unspecified occlusion or stenosis of unspecified precerebral arteries	ICD-10-CM	Diagnosis
I63.211	Cerebral infarction due to unspecified occlusion or stenosis of right vertebral artery	ICD-10-CM	Diagnosis
I63.212	Cerebral infarction due to unspecified occlusion or stenosis of left vertebral artery	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I63.213	Cerebral infarction due to unspecified occlusion or stenosis of bilateral vertebral arteries	ICD-10-CM	Diagnosis
I63.219	Cerebral infarction due to unspecified occlusion or stenosis of unspecified vertebral artery	ICD-10-CM	Diagnosis
I63.22	Cerebral infarction due to unspecified occlusion or stenosis of basilar artery	ICD-10-CM	Diagnosis
I63.231	Cerebral infarction due to unspecified occlusion or stenosis of right carotid arteries	ICD-10-CM	Diagnosis
I63.232	Cerebral infarction due to unspecified occlusion or stenosis of left carotid arteries	ICD-10-CM	Diagnosis
I63.233	Cerebral infarction due to unspecified occlusion or stenosis of bilateral carotid arteries	ICD-10-CM	Diagnosis
I63.239	Cerebral infarction due to unspecified occlusion or stenosis of unspecified carotid artery	ICD-10-CM	Diagnosis
I63.29	Cerebral infarction due to unspecified occlusion or stenosis of other precerebral arteries	ICD-10-CM	Diagnosis
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.323	Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.333	Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.343	Cerebral infarction due to thrombosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.39	Cerebral infarction due to thrombosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.411	Cerebral infarction due to embolism of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.412	Cerebral infarction due to embolism of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.441	Cerebral infarction due to embolism of right cerebellar artery	ICD-10-CM	Diagnosis
I63.442	Cerebral infarction due to embolism of left cerebellar artery	ICD-10-CM	Diagnosis

Appendix F. List of International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) Codes Used to Define Covariates in this Request

Code	Description	Code Type	Code Category
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.49	Cerebral infarction due to embolism of other cerebral artery	ICD-10-CM	Diagnosis
I63.50	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebral artery	ICD-10-CM	Diagnosis
I63.511	Cerebral infarction due to unspecified occlusion or stenosis of right middle cerebral artery	ICD-10-CM	Diagnosis
I63.512	Cerebral infarction due to unspecified occlusion or stenosis of left middle cerebral artery	ICD-10-CM	Diagnosis
I63.513	Cerebral infarction due to unspecified occlusion or stenosis of bilateral middle cerebral arteries	ICD-10-CM	Diagnosis
I63.519	Cerebral infarction due to unspecified occlusion or stenosis of unspecified middle cerebral artery	ICD-10-CM	Diagnosis
I63.521	Cerebral infarction due to unspecified occlusion or stenosis of right anterior cerebral artery	ICD-10-CM	Diagnosis
I63.522	Cerebral infarction due to unspecified occlusion or stenosis of left anterior cerebral artery	ICD-10-CM	Diagnosis
I63.523	Cerebral infarction due to unspecified occlusion or stenosis of bilateral anterior cerebral arteries	ICD-10-CM	Diagnosis
I63.529	Cerebral infarction due to unspecified occlusion or stenosis of unspecified anterior cerebral artery	ICD-10-CM	Diagnosis
I63.531	Cerebral infarction due to unspecified occlusion or stenosis of right posterior cerebral artery	ICD-10-CM	Diagnosis
I63.532	Cerebral infarction due to unspecified occlusion or stenosis of left posterior cerebral artery	ICD-10-CM	Diagnosis
I63.533	Cerebral infarction due to unspecified occlusion or stenosis of bilateral posterior cerebral arteries	ICD-10-CM	Diagnosis
I63.539	Cerebral infarction due to unspecified occlusion or stenosis of unspecified posterior cerebral artery	ICD-10-CM	Diagnosis
I63.541	Cerebral infarction due to unspecified occlusion or stenosis of right cerebellar artery	ICD-10-CM	Diagnosis
I63.542	Cerebral infarction due to unspecified occlusion or stenosis of left cerebellar artery	ICD-10-CM	Diagnosis
I63.543	Cerebral infarction due to unspecified occlusion or stenosis of bilateral cerebellar arteries	ICD-10-CM	Diagnosis
I63.549	Cerebral infarction due to unspecified occlusion or stenosis of unspecified cerebellar artery	ICD-10-CM	Diagnosis
I63.59	Cerebral infarction due to unspecified occlusion or stenosis of other cerebral artery	ICD-10-CM	Diagnosis
I63.6	Cerebral infarction due to cerebral venous thrombosis, nonpyogenic	ICD-10-CM	Diagnosis
I63.8	Other cerebral infarction	ICD-10-CM	Diagnosis
I63.9	Cerebral infarction, unspecified	ICD-10-CM	Diagnosis
I67.89	Other cerebrovascular disease	ICD-10-CM	Diagnosis
	Syncope		
780.2	Syncope and collapse	ICD-9-CM	Diagnosis
R55	Syncope and collapse	ICD-10-CM	Diagnosis
	Transient Ischemic Attack		

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Code	Description	Code Type	Code Category
435	Transient cerebral ischemia	ICD-9-CM	Diagnosis
435.0	Basilar artery syndrome	ICD-9-CM	Diagnosis
435.1	Vertebral artery syndrome	ICD-9-CM	Diagnosis
435.2	Subclavian steal syndrome	ICD-9-CM	Diagnosis
435.3	Vertebrobasilar artery syndrome	ICD-9-CM	Diagnosis
435.8	Other specified transient cerebral ischemias	ICD-9-CM	Diagnosis
435.9	Unspecified transient cerebral ischemia	ICD-9-CM	Diagnosis
G45.0	Vertebro-basilar artery syndrome	ICD-10-CM	Diagnosis
G45.1	Carotid artery syndrome (hemispheric)	ICD-10-CM	Diagnosis
G45.2	Multiple and bilateral precerebral artery syndromes	ICD-10-CM	Diagnosis
G45.8	Other transient cerebral ischemic attacks and related syndromes	ICD-10-CM	Diagnosis
G45.9	Transient cerebral ischemic attack, unspecified	ICD-10-CM	Diagnosis
G46.0	Middle cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.1	Anterior cerebral artery syndrome	ICD-10-CM	Diagnosis
G46.2	Posterior cerebral artery syndrome	ICD-10-CM	Diagnosis
I67.841	Reversible cerebrovascular vasoconstriction syndrome	ICD-10-CM	Diagnosis
I67.848	Other cerebrovascular vasospasm and vasoconstriction	ICD-10-CM	Diagnosis
	Walker Use		
E0130	Walker, rigid (pickup), adjustable or fixed height	HCPCS	Procedure
E0135	Walker, folding (pickup), adjustable or fixed height	HCPCS	Procedure
E0140	Walker, with trunk support, adjustable or fixed height, any type	HCPCS	Procedure
E0141	Walker, rigid, wheeled, adjustable or fixed height	HCPCS	Procedure
E0142	Rigid walker, wheeled, with seat	HCPCS	Procedure
E0143	Walker, folding, wheeled, adjustable or fixed height	HCPCS	Procedure
E0144	Walker, enclosed, 4 sided framed, rigid or folding, wheeled with posterior seat	HCPCS	Procedure
E0145	Walker, wheeled, with seat and crutch attachments	HCPCS	Procedure
E0146	Folding walker, wheeled, with seat	HCPCS	Procedure
E0147	Walker, heavy-duty, multiple braking system, variable wheel resistance	HCPCS	Procedure
E0148	Walker, heavy-duty, without wheels, rigid or folding, any type, each	HCPCS	Procedure
E0149	Walker, heavy-duty, wheeled, rigid or folding, any type	HCPCS	Procedure
E0154	Platform attachment, walker, each	HCPCS	Procedure
E0155	Wheel attachment, rigid pick-up walker, per pair	HCPCS	Procedure
E0156	Seat attachment, walker	HCPCS	Procedure
E0157	Crutch attachment, walker, each	HCPCS	Procedure
E0158	Leg extensions for walker, per set of 4	HCPCS	Procedure
E0159	Brake attachment for wheeled walker, replacement, each	HCPCS	Procedure
K0458	Heavy duty walker, without wheels, each	HCPCS	Procedure
K0459	Heavy duty wheeled walker, each	HCPCS	Procedure
L1520	Thoracic-hip-knee-ankle orthotic (THKAO), swivel walker	HCPCS	Procedure

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Angiotensin-Converting Enzyme Inhibitors and Angiotensin Receptor Blockers
Captopril hydrochlorothiazide
Captopril
Captopril tab 12.5 mg
Captopril tab 25 mg
Captopril tab 50 mg
Enalapril maleate tab 2.5 mg
Lisinopril
Lisinopril tab 5 mg
Lisinopril hydrochlorothiazide
Lisinopril/hydrochlorothiazide
Enalapril maleate hydrochlorothiazide tab 5 12.5 mg
Enalapril maleate tab 5 mg
Enalapril maleate tab 10 mg
Enalapril maleate tab 20 mg
Losartan potassium hydrochlorothiazide
Losartan potassium/hydrochlorothiazide
Enalapril maleate hydrochlorothiazide tab 10 25 mg
Losartan potassium
Nebivolol hcl/valsartan
Irbesartan
Irbesartan/hydrochlorothiazide
Perindopril erbumine
Trandolapril tab 1 mg
Trandolapril tab 2 mg
Trandolapril tab 4 mg
Trandolapril verapamil hcl tab cr 2 180 mg
Trandolapril verapamil hcl tab cr 2 240 mg
Eprosartan mesylate tab 400 mg
Eprosartan mesylate tab 600 mg
Ramipril
Telmisartan
Telmisartan/hydrochlorothiazide
Quinapril hydrochlorothiazide tab 20 12.5 mg
Quinapril hcl/hydrochlorothiazide
Quinapril hydrochlorothiazide tab 10 12.5 mg
Quinapril hydrochlorothiazide tab 20 25 mg
Quinapril hcl
Trandolapril
Eprosartan mesylate/hydrochlorothiazide
Eprosartan mesylate
Trandolapril/verapamil hcl
Valsartan hydrochlorothiazide
Valsartan/hydrochlorothiazide
Valsartan
Amlodipine besylate/benazepril hcl
Benazepril hcl
Benazepril hcl hydrochlorothiazide
Benazepril hcl/hydrochlorothiazide
Amlodipine besylate/valsartan
Amlodipine besylate/valsartan/hydrochlorothiazide

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Aliskiren valsartan
Sacubitril/valsartan
Amlodipine besylate benazepril hcl
Fosinopril sodium
Fosinopril sodium hydrochlorothiazide
Irbesartan hydrochlorothiazide
Moexipril hcl
Moexipril hcl/hydrochlorothiazide
Enalapril maleate
Captopril/hydrochlorothiazide
Enalapril maleate/hydrochlorothiazide
Enalapril maleate hydrochlorothiazide
Olmesartan medoxomil/amlodipine besylate/hydrochlorothiazid
Amlodipine besylate/olmesartan medoxomil
Olmesartan medoxomil
Olmesartan medoxomil/hydrochlorothiazide
Captopril hydrochlorothiazide tab 25 15 mg
Lisinopril tab 10 mg
Lisinopril tab 20 mg
Captopril hydrochlorothiazide tab 50 25 mg
Lisinopril hydrochlorothiazide tab 20 25 mg
Lisinopril hydrochlorothiazide tab 10 12.5 mg
Lisinopril hydrochlorothiazide tab 20 12.5 mg
Fosinopril sodium/hydrochlorothiazide
Enalapril maleate felodipine
Candesartan cilexetil
Candesartan cilexetil/hydrochlorothiazide
Telmisartan/amlodipine besylate
Amlodipine besylate benazepril hcl cap 2.5 10 mg
Amlodipine besylate benazepril hcl cap 5 10 mg
Amlodipine besylate benazepril hcl cap 5 20 mg
Amlodipine besylate benazepril hcl cap 10 20 mg
Losartan potassium tab 50 mg
Lisinopril tab 40 mg
Quinapril hcl tab 40 mg
Telmisartan hydrochlorothiazide
Benazepril hcl tab 10 mg
Benazepril hcl tab 40 mg
Lisinopril tab 30 mg
Telmisartan hydrochlorothiazide tab 80 12.5 mg
Irbesartan tab 150 mg
Irbesartan tab 300 mg
Valsartan tab 80 mg
Valsartan tab 160 mg
Valsartan hydrochlorothiazide tab 80 12.5 mg
Valsartan hydrochlorothiazide tab 160 12.5 mg
Valsartan hydrochlorothiazide tab 160 25 mg
Telmisartan hydrochlorothiazide tab 40 12.5 mg
Telmisartan hydrochlorothiazide tab 80 25 mg
Benazepril hcl tab 20 mg
Lisinopril tab 2.5 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Irbesartan tab 75 mg
Olmesartan medoxomil tab 20 mg
Olmesartan medoxomil tab 40 mg
Valsartan tab 40 mg
Losartan potassium tab 25 mg
Losartan potassium tab 100 mg
Losartan potassium hydrochlorothiazide tab 100 12.5 mg
Losartan potassium hydrochlorothiazide tab 100 25 mg
Ramipril cap 2.5 mg
Ramipril cap 5 mg
Ramipril cap 10 mg
Benazepril hydrochlorothiazide tab 10 12.5 mg
Captopril tab 100 mg
Losartan potassium hydrochlorothiazide tab 50 12.5 mg
Irbesartan hydrochlorothiazide tab 150 12.5 mg
Amlodipine besylate valsartan tab 10 320 mg
Amlodipine besylate valsartan tab 5 160 mg
Valsartan tab 320 mg
Valsartan hydrochlorothiazide tab 320 25 mg
Telmisartan tab 20 mg
Telmisartan tab 40 mg
Telmisartan tab 80 mg
Quinapril hcl tab 5 mg
Quinapril hcl tab 10 mg
Quinapril hcl tab 20 mg
Trandolapril verapamil hcl
Quinapril hcl hydrochlorothiazide
Benazepril hcl tab 5 mg
Candesartan cilexetil tab 8 mg
Moexipril hcl tab 7.5 mg
Benazepril hydrochlorothiazide tab 5 6.25 mg
Benazepril hydrochlorothiazide tab 20 12.5 mg
Benazepril hydrochlorothiazide tab 20 25 mg
Candesartan cilexetil hydrochlorothiazide
Amlodipine besylate benazepril hcl cap 5 40 mg
Amlodipine besylate benazepril hcl cap 10 40 mg
Eprosartan mesylate hydrochlorothiazide
Moexipril hcl hydrochlorothiazide
Olmesartan medoxomil hydrochlorothiazide
Fosinopril sodium hydrochlorothiazide tab 20 12.5 mg
Ramipril cap 1.25 mg
Fosinopril sodium tab 40 mg
Fosinopril sodium tab 20 mg
Azilsartan medoxomil
Azilsartan medoxomil/chlorthalidone
Perindopril arginine/amlodipine besylate
Amlodipine besylate olmesartan medoxomil
Fosinopril sodium tab 10 mg
Candesartan cilexetil hydrochlorothiazide tab 32 12.5 mg
Valsartan hydrochlorothiazide tab 320 12.5 mg
Amlodipine besylate olmesartan medoxomil tab 10 20 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Olmesartan medoxomil hydrochlorothiazide tab 40 12.5 mg
Olmesartan medoxomil hydrochlorothiazide tab 20 12.5 mg
Lisinopril tab 20 mg dietary management cap pack
Lisinopril dietary supplement comb.10
Amiodarone
Amiodarone hcl
Amiodarone hcl tab 200 mg
Amiodarone hcl tab 400 mg
Antianginal Vasodilators
Nitroglycerin
Isosorbide mononitrate
Isosorbide dinitrate
Nitroglycerin in 5 % dextrose in water
Amyl nitrite
Ranolazine
Isosorbide dinitrate tab 10 mg
Isosorbide dinitrate tab 20 mg
Isosorbide dinitrate tab 30 mg
Isosorbide dinitrate sl tab 10 mg
Nitroglycerin td patch 24hr 0.8 mg hr
Nitroglycerin td patch 24hr 0.1 mg hr
Nitroglycerin td patch 24hr 0.2 mg hr
Nitroglycerin td patch 24hr 0.3 mg hr
Nitroglycerin td patch 24hr 0.4 mg hr
Nitroglycerin td patch 24hr 0.6 mg hr
Nitroglycerin cap cr 2.5 mg
Isosorbide mononitrate tab sr 24hr 60 mg
Nitroglycerin oint 2%
Isosorbide dinitrate sl tab 2.5 mg
Isosorbide dinitrate hydralazine hcl
Isosorbide mononitrate tab sr 24hr 120 mg
Isosorbide mononitrate tab 20 mg
Nitroglycerin tl soln 0.4 mg spray (400 mcg spray)
Nitroglycerin sl tab 0.4 mg
Isosorbide mononitrate tab sr 24hr 30 mg
Isosorbide dinitrate tab 5 mg
Isosorbide dinitrate tab cr 40 mg
Nitroglycerin cap cr 6.5 mg
Nitroglycerin sl tab 0.3 mg
Nitroglycerin sl tab 0.6 mg
Anticoagulants
Heparin sodium porcine
Fondaparinux sodium
Argatroban
Heparin sodium (bovine) inj 1000 unit ml
Heparin sodium beef
Heparin sodium (bovine) inj 5000 unit ml
Heparin sodium (bovine) inj 10000 unit ml
Dalteparin sodium porcine
Heparin sodium,porcine/PF
Heparin sodium,porcine

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Dalteparin sodium,porcine
Heparin sodium (porcine) inj 10000 unit ml
Heparin sodium (porcine) inj 2500 unit ml
Heparin sodium (porcine) inj 7500 unit ml
Heparin sodium porcine pf
Heparin sodium (porcine) inj 5000 unit ml
Heparin sodium porcine normal saline pf
Heparin sodium porcine 0.5 normal saline
Heparin sodium porcine dextrose 5% water
Enoxaparin sodium
Enoxaparin sodium inj 10 mg 0.1ml (100 mg ml)
Argatroban in 0.9 % sodium chloride
Desirudin
Heparin sodium porcine normal saline
Heparin sodium,porcine/dextrose 5 % in water
Heparin sodium,porcine IN 0.9 % sodium chloride/PF
Bivalirudin in 0.9 % sodium chloride
Heparin sodium,porcine in 0.45 % sodium chloride
Heparin sodium (porcine) 100 unit ml in d5w
Bivalirudin
Dabigatran etexilate mesylate
Heparin sodium (porcine) inj 1000 unit ml
Enoxaparin sodium inj 30 mg 0.3ml
Enoxaparin sodium inj 40 mg 0.4ml
Enoxaparin sodium inj 60 mg 0.6ml
Enoxaparin sodium inj 80 mg 0.8ml
Enoxaparin sodium inj 100 mg ml
Enoxaparin sodium inj 120 mg 0.8ml
Enoxaparin sodium inj 150 mg ml
Argatroban in sodium chloride, iso-osmotic
Heparin sodium,porcine in 0.9 % sodium chloride
Heparin sodium,porcine/dextrose 5 % in water/PF
Rivaroxaban
Heparin sodium,porcine in 0.45 % sodium chloride/PF
Tinzaparin sodium porcine
Lepirudin,recombinant
Tinzaparin sodium inj 20000 anti xa unit ml
Edoxaban tosylate
Betrixaban maleate
Antiplatelet Agents (non-aspirin)
Prasugrel hcl
Abciximab
Ticlopidine hcl
Vorapaxar sulfate
Cilostazol
Dipyridamole
Eptifibatide
Clopidogrel bisulfate
Anagrelide hcl
Ticagrelor
Clopidogrel bisulfate tab 75 mg (base equiv)

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Dipyridamole iv soln 5 mg ml
Dipyridamole tab 50 mg
Dipyridamole tab 75 mg
Cangrelor tetrasodium
Cilostazol tab 100 mg
Clopidogrel bisulfate tab 300 mg (base equiv)
Tirofiban hcl monohydrate
Tirofiban hcl monohydrate in 0.9 % sodium chl
Dipyridamole (bulk) powder
Ticlopidine hcl tab 250 mg
Cilostazol tab 50 mg
Dipyridamole tab 25 mg
Aspirin
Butalbital/aspirin/caffeine
Aspirin/sodium bicarbonate/citric acid
Aspirin
Aspirin/acetaminophen/caffeine
Codeine phosphate/butalbital/aspirin/caffeine
Aspirin/caffeine
Aspirin/calcium carbonate/magnesium
Acetaminophen
Oxycodone hcl/aspirin
Aspirin/acetaminophen/calcium carbonate
Aspirin/acetaminophen/caffeine/potassium
Aspirin/salicylamide/acetaminophen/caffeine
Aspirin/caffeine/dihydrocodeine bitartrate
Aspirin/salicylamide/caffeine
Aspirin/acetaminophen/magnesium/aluminum hydroxide/caffeine
Aspirin/calcium carbonate/magnesium/aluminum hydroxide
Aspirin/acetaminophen
Aspirin/calcium carbonate
Aspirin/dipyridamole
Aspirin/omeprazole
Carisoprodol/aspirin
Orphenadrine citrate/aspirin/caffeine
Carisoprodol/aspirin/codeine phosphate
Chlorpheniramine maleate/phenylephrine bitartrate/aspirin
Chlorpheniramine mal/phenylephrine/d-methorphan hb/aspirin
Aspirin/diphenhydramine citrate
Dextromethorphan hbr/pseudoephedrine hcl/acetaminophen
Diflunisal
Magnesium salicylate/caffeine
Salsalate
Choline salicylate/magnesium salicylate
Magnesium salicylate
Magnesium salicylate/acetaminophen/caffeine
Salicylamide/acetaminophen/phenyltoloxamine
Aspirin dipyridamole
Aspirin dipyridamole cap sr 12hr 25 200 mg
Beta Blockers
Nadolol tab 40 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Nadolol
Nadolol tab 120 mg
Nadolol tab 20 mg
Nadolol tab 80 mg
Bisoprolol hydrochlorothiazide tab 5 6.25 mg
Bisoprolol hydrochlorothiazide tab 10 6.25 mg
Bisoprolol hydrochlorothiazide tab 2.5 6.25 mg
Bisoprolol fumarate tab 5 mg
Bisoprolol fumarate tab 10 mg
Timolol maleate
Timolol maleate hydrochlorothiazide
Carvedilol phosphate
Carvedilol
Acebutolol hcl cap 200 mg
Acebutolol hcl
Betaxolol hcl
Betaxolol hcl tab 10 mg
Metoprolol tartrate hydrochlorothiazide
Metoprolol tartrate
Propranolol hcl
Propranolol hcl hydrochlorothiazide
Carteolol hcl
Metoprolol tartrate/hydrochlorothiazide
Penbutolol sulfate
Atenolol
Sotalol hcl
Bisoprolol fumarate
Nadolol/bendroflumethiazide
Pindolol
Labetalol hcl
Labetalol hcl tab 100 mg
Labetalol hcl tab 200 mg
Labetalol hcl tab 300 mg
Metoprolol succinate
Bisoprolol fumarate/hydrochlorothiazide
Bisoprolol fumarate hydrochlorothiazide
Propranolol hydrochlorothiazide tab 40 25 mg
Atenolol tab 50 mg
Atenolol/chlorthalidone
Metoprolol succinate/hydrochlorothiazide
Nadolol bendroflumethiazide
Propranolol hcl/hydrochlorothiazide
Nebivolol hcl
Atenolol chlorthalidone tab 50 25 mg
Atenolol chlorthalidone tab 100 25 mg
Pindolol tab 10 mg
Atenolol chlorthalidone
Propranolol hcl tab 10 mg
Propranolol hcl tab 20 mg
Propranolol hcl tab 40 mg
Propranolol hcl tab 80 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Metoprolol tartrate tab 50 mg
Atenolol tab 100 mg
Atenolol tab 25 mg
Propranolol hcl cap sr 24hr 120 mg
Metoprolol succinate tab sr 24hr 50 mg
Propranolol hcl cap sr 24hr 60 mg
Metoprolol tartrate tab 25 mg
Metoprolol succinate tab sr 24hr 100 mg
Metoprolol succinate tab sr 24hr 25 mg
Metoprolol tartrate tab 100 mg
Propranolol hcl cap sr 24hr 160 mg
Carvedilol tab 25 mg
Carvedilol tab 6.25 mg
Carvedilol tab 12.5 mg
Carvedilol tab 3.125 mg
Sotalol hcl tab 80 mg
Sotalol hcl (afib afl) tab 120 mg
Sotalol hcl (afib afl) tab 80 mg
Acebutolol hcl powder
Sotalol hcl tab 160 mg
Sotalol hcl tab 240 mg
Sotalol hcl tab 120 mg
Pindolol tab 5 mg
Propranolol hcl tab 60 mg
Metoprolol succinate tab sr 24hr 200 mg
Carvedilol phosphate cap sr 24hr 20 mg
Levetiracetam
Timolol maleate tab 10 mg
Propranolol hcl cap sr 24hr 80 mg
Sotalol hcl (afib afl) tab 160 mg
Metoprolol hydrochlorothiazide tab 50 25 mg
Nebivolol hcl tab 2.5 mg (base equivalent)
Nebivolol hcl tab 20 mg (base equivalent)
Nebivolol hcl tab 10 mg (base equivalent)
Nebivolol hcl tab 5 mg (base equivalent)
Metoprolol tab 50 mg dietary management cap pack
Carvedilol tab 12.5 mg dietary management cap pack
Metoprolol tartrate dietary supplement comb.10
Calcium Channel Blockers
Nicardipine hcl
Verapamil hcl
Nimodipine
Nifedipine
Nifedipine tab sr 24hr 30 mg
Nifedipine tab sr 24hr 60 mg
Verapamil hcl tab cr 180 mg
Verapamil hcl tab cr 240 mg
Verapamil hcl tab cr 120 mg
Bepridil hcl
Trandolapril verapamil hcl tab cr 2 180 mg
Trandolapril verapamil hcl tab cr 2 240 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Amlodipine besylate
Amlodipine besylate/atorvastatin calcium
Nifedipine cap 10 mg
Diltiazem hcl
Trandolapril/verapamil hcl
Amlodipine besylate/benazepril hcl
Amlodipine besylate/valsartan
Amlodipine besylate/valsartan/hydrochlorothiazide
Aliskiren hemifumarate/amlodipine besylate
Aliskiren hemifumarate/amlodipine/hydrochlorothiazide
Amlodipine besylate benazepril hcl
Diltiazem hcl cap sr 12hr 90 mg
Diltiazem hcl cap sr 12hr 120 mg
Nicardipine hcl cap 20 mg
Olmesartan medoxomil/amlodipine besylate/hydrochlorothiazid
Verapamil hcl cap sr 24hr 180 mg
Amlodipine besylate/olmesartan medoxomil
Diltiazem hcl tab 30 mg
Diltiazem hcl tab 60 mg
Diltiazem hcl tab 90 mg
Isradipine
Diltiazem hcl coated beads cap sr 24hr 120 mg
Diltiazem hcl coated beads cap sr 24hr 180 mg
Diltiazem hcl coated beads cap sr 24hr 240 mg
Enalapril maleate felodipine
Felodipine
Felodipine tab sr 24hr 2.5 mg
Felodipine tab sr 24hr 5 mg
Felodipine tab sr 24hr 10 mg
Nisoldipine
Verapamil hcl cap sr 24hr 120 mg
Verapamil hcl cap sr 24hr 240 mg
Verapamil hcl cap sr 24hr 360 mg
Telmisartan/amlodipine besylate
Amlodipine besylate tab 2.5 mg
Amlodipine besylate tab 5 mg
Amlodipine besylate tab 10 mg
Amlodipine besylate benazepril hcl cap 2.5 10 mg
Amlodipine besylate benazepril hcl cap 5 10 mg
Amlodipine besylate benazepril hcl cap 5 20 mg
Amlodipine besylate benazepril hcl cap 10 20 mg
Nifedipine tab sr 24hr 90 mg
Nifedipine tab sr 24hr osmotic 90 mg
Verapamil hcl tab 80 mg
Verapamil hcl tab 120 mg
Amlodipine besylate atorvastatin calcium
Nifedipine tab sr 24hr osmotic 60 mg
Nifedipine tab sr 24hr osmotic 30 mg
Diltiazem hcl extended release beads cap sr 24hr 180 mg
Diltiazem hcl tab 120 mg
Amlodipine besylate valsartan tab 10 320 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Amlodipine besylate valsartan tab 5 160 mg
Diltiazem hcl coated beads cap sr 24hr 300 mg
Nimodipine cap 30 mg
Trandolapril verapamil hcl
Nifedipine cap 20 mg
Diltiazem hcl cap sr 12hr 60 mg
Verapamil hcl tab sr 24hr (controlled onset) 180 mg
Verapamil hcl tab sr 24hr (controlled onset) 240 mg
Nisoldipine tab sr 24hr 30 mg
Diltiazem hcl extended release beads cap sr 24hr 120 mg
Diltiazem hcl extended release beads cap sr 24hr 240 mg
Amlodipine besylate benazepril hcl cap 5 40 mg
Amlodipine besylate benazepril hcl cap 10 40 mg
Verapamil hcl cap sr 24hr 100 mg
Diltiazem hcl cap sr 24hr 180 mg
Isradipine cap 2.5 mg
Diltiazem hcl cap sr 24hr 240 mg
Verapamil hcl cap sr 24hr 300 mg
Nifedipine tab sr 24hr osmotic release 60 mg
Nifedipine tab sr 24hr osmotic release 30 mg
Fosinopril sodium
Diltiazem hcl cap sr 24hr 120 mg
Perindopril arginine/amlodipine besylate
Amlodipine besylate olmesartan medoxomil
Amlodipine besylate olmesartan medoxomil tab 10 20 mg
Amlodipine tab 2.5 mg dietary management cap pack
Cyclooxygenase-2 Inhibitors
Celecoxib
Digoxin
Digoxin tab 0.125 mg
Digoxin
Digoxin oral soln 0.05 mg ml
Digoxin tab 0.25 mg
Digoxin tab 125 mcg (0.125 mg)
Digoxin tab 250 mcg (0.25 mg)
Disopyramide
Disopyramide phosphate
Dronedarone
Dronedarone HCl
Estrogen Replacement
Estradiol gel 0.06% (0.52 mg 0.87 gm metered dose pump)
Desogestrel ethinyl estradiol tab 0.15 mg 30 mcg
Desogest ethin est tab 0.1 0.025 0.125 0.025 0.15 0.025mg mg
Estradiol td patch twice weekly 0.025 mg 24hr
Norgestimate eth estrad tab 0.18 25 0.215 25 0.25 25 mg mcg
Norethindrone acetate ethinyl estradiol
Norethindrone ace ethinyl estradiol fe tab 1 mg 20 mcg (24)
Norelgestromin ethinyl estradiol
Estradiol
Norethindrone ace ethinyl estradiol tab 1 mg 20 mcg
Levonorgestrel ethinyl estradiol (91 day) tab 0.15 0.03 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Norethindrone ace ethinyl estradiol fe tab 1 mg 20 mcg
Levonorg eth est tab 0.15 0.03mg(84) eth est tab 0.01mg(7)
Levonorgestrel ethinyl estradiol tab 0.1 mg 20 mcg
Desogest eth estrad eth estrad tab 0.15 0.02 0.01 mg(21 5)
Drospirenone ethinyl estradiol tab 3 0.03 mg
Norethindrone acetate ethinyl estradiol ferrous fumarate
Norethindrone ethinyl estradiol fe chew tab 0.8 mg 25 mcg
Norethindrone ethinyl estradiol ferrous fumarate
Norethindrone ac ethinyl estrad fe tab 1 20 1 30 1 35 mg mcg
Norethindrone ethinyl estradiol fe chew tab 0.4 mg 35 mcg
Norethindrone ace eth estradiol fe chew tab 1 mg 20 mcg (24)
Desogestrel ethinyl estradiol ethinyl estradiol
Norgestimate ethinyl estradiol
Levonorgestrel ethinyl estradiol
Norethindrone ace ethinyl estradiol tab 1.5 mg 30 mcg
Estradiol tab 1 mg
Estradiol tab 2 mg
Estradiol td patch weekly 0.025 mg 24hr
Estradiol tab 0.5 mg
Drospirenone ethinyl estradiol levomefolate calcium
Norethindrone ethinyl estradiol
Estradiol estriol progesterone micronized cream (cmpd kit)
Norethindrone ace ethinyl estradiol fe tab 1.5 mg 30 mcg
Norethindrone eth estradiol tab 0.5 35 0.75 35 1 35 mg mcg
Norgestimate ethinyl estradiol tab 0.25 mg 35 mcg
Norelgestromin ethinyl estradiol td ptwk 150 35 mcg 24hr
Norethindrone ethinyl estradiol tab 1 mg 35 mcg
Drospirenone ethinyl estradiol tab 3 0.02 mg
Norgestrel ethinyl estradiol tab 0.3 mg 30 mcg
Ethynodiol diacetate ethinyl estradiol tab 1 mg 35 mcg
Estradiol norethindrone acetate tab 0.5 0.1 mg
Estradiol norethindrone acetate tab 1 0.5 mg
Estradiol implant pellet 6 mg
Estradiol implant pellet 10 mg
Estradiol implant pellet 12.5 mg
Estradiol implant pellet 18 mg
Estradiol implant pellet 20 mg
Estradiol implant pellet 25 mg
Estradiol implant pellet 31 mg
Estradiol implant pellet 37.5 mg
Estradiol implant pellet 50 mg
Levonorgestrel eth estra tab 0.05 30 0.075 40 0.125 30mg mcg
Ethinyl estradiol drospirenone
Levonorgestrel eth estra ethinyl estradiol
Estradiol norethindrone acetate
Desogestrel ethinyl estradiol
Estradiol valerate im in oil 40 mg ml
Estradiol valerate im in oil 10 mg ml
Estradiol valerate im in oil 20 mg ml
Norgestrel ethinyl estradiol tab 0.5 mg 50 mcg
Levonorgestrel ethinyl estradiol tab 0.15 mg 30 mcg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Levonorgestrel ethinyl estradiol tab 0.10 mg 20 mcg
Levonorgestrel ethinyl estradiol (continuous) tab 90 20 mcg
Conjugated estrogens bazedoxifene tab 0.45 20 mg
Estradiol testosterone cypionates im in oil 2 50 mg ml
Estradiol cypionate im in oil 5 mg ml
Medroxyprogesterone ace estradiol cyp im susp 25 5 mg 0.5ml
Estropipate tab 0.75 mg
Estropipate tab 1.5 mg
Estropipate tab 3 mg
Estradiol vaginal ring 2 mg (7.5 mcg 24hrs)
Ethynodiol diacetate ethinyl estradiol tab 1 mg 50 mcg
Esterified estrogens methyltestosterone tab 0.625 1.25 mg
Esterified estrogens methyltestosterone tab 1.25 2.5 mg
Estrogens conjugated for inj 25 mg
Estrogens conjugated tab 0.9 mg
Estrogens conjugated tab 2.5 mg
Estrogens conjugated tab 1.25 mg
Estrogens conjugated tab 0.625 mg
Estrogens conjugated tab 0.3 mg
Conjugated estrogen medroxyprogest acetate tab 0.625 2.5 mg
Estrogens conjugated tab 0.45 mg
Conjugated estrogen medroxyprogest acetate tab 0.45 1.5 mg
Conjugated estrogen medroxyprogest acetate tab 0.3 1.5 mg
Conjugated estrogen medroxyprogest acetate tab 0.625 5 mg
Conj est 0.625(14) conj est medroxypro ac tab 0.625 5mg(14)
Estradiol gel 0.06% (0.75 mg 1.25gm metered dose pump)
Etonogestrel ethinyl estradiol va ring 0.120 0.015 mg 24hr
Norethindrone ethinyl estradiol tab 0.5 mg 35 mcg
Norethindrone eth estradiol tab 0.5 35 1 35 mg mcg (10 11)
Estradiol tab 1 mg(15) estrad norgestimate tab 1 0.09mg(15)
Norgestimate eth estrad tab 0.18 35 0.215 35 0.25 35 mg mcg
Norelgestromin ethinyl estradiol td ptwk 150 20 mcg 24hr
Norethindrone acetate ethinyl estradiol tab 1 mg 5 mcg
Estradiol td patch biweekly 0.0375 mg 24hr
Estradiol td patch biweekly 0.05 mg 24hr
Estradiol td patch biweekly 0.075 mg 24hr
Estradiol td patch biweekly 0.1 mg 24hr
Estradiol td patch biweekly 0.025 mg 24hr
Estradiol norethindrone ace td pttw 0.05 0.14 mg day
Estradiol norethindrone ace td pttw 0.05 0.25 mg day
Levonorg eth est tab 0.1 0.02mg(84) eth est tab 0.01mg(7)
Estradiol td gel 0.1%
Estrone im susp 5 mg ml
Estradiol valerate
Testosterone enanthate estradiol valerate
Estropipate
Estradiol tab 1.5 mg
Norethindrone acetate ethinyl estradiol tab 0.5 mg 2.5 mcg
Estradiol acetate tab 0.45 mg
Estradiol acetate tab 0.9 mg
Estradiol acetate tab 1.8 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Norethin eth estradiol fe tab 1 mg 10 mcg (24) 10 mcg (2)
Norethindrone ethinyl estradiol fe tab 1 mg 20 mcg (24)
Norethin eth estrad fe chew tab 1 mg 10 mcg 10 mcg ther pack
Norethindrone ethinyl estradiol tab 0.4 mg 35 mcg
Norethindrone ethinyl estradiol tab 1 mg 50 mcg
Estradiol acetate vaginal ring 0.05 mg 24hr
Estradiol acetate vaginal ring 0.1 mg 24hr
Norethindrone eth estradiol tab 0.5 35 1 35 0.5 35 mg mcg
Norethindrone a e estradiol
Norethindrone a e estradiol ferrous fumarate
Levonorgestrel eth estra
Estradiol transdermal emulsion 4.35 mg 1.74gm
Estradiol td patch weekly 0.05 mg 24hr
Estradiol td patch weekly 0.1 mg 24hr
Estradiol td patch weekly 0.0375 mg 24hr (37.5 mcg 24hr)
Estradiol td patch weekly 0.06 mg 24hr
Estradiol td patch weekly 0.075 mg 24hr
Drospirenone ethinyl estrad levomefolate tab 3 0.03 0.451 mg
Drospirenone ethinyl estrad levomefolate tab 3 0.02 0.451 mg
Estradiol valerate dienogest tab 3 mg 2 2 mg 2 3 mg 1 mg
Estradiol td patch weekly 14 mcg 24hr
Drospirenone estradiol tab 0.25 0.5 mg
Drospirenone estradiol tab 0.5 1 mg
Estradiol levonorgestrel td patch weekly 0.045 0.015 mg day
Estrogens conjugated synthetic b tab 0.3 mg
Estrogens conjugated synthetic b tab 0.45 mg
Estrogens conjugated synthetic b tab 0.625 mg
Estrogens conjugated synthetic b tab 0.9 mg
Estrogens conjugated synthetic b tab 1.25 mg
Levonor eth est tab 0.15 0.02 0.025 0.03 mg eth est 0.01 mg
Estrogens conjugated synthetic a tab 0.3 mg
Estrogens conjugated synthetic a tab 0.625 mg
Estrogens conjugated synthetic a tab 0.9 mg
Estrogens conjugated synthetic a tab 1.25 mg
Estrogens conjugated synthetic a tab 0.45 mg
Ethinyl estradiol tab 0.02 mg
Esterified estrogens tab 0.625 mg
Esterified estrogens tab 0.3 mg
Norethindrone ethinyl estrad
Estradiol transdermal spray 1.53 mg spray
Esterified estrogens tab 1.25 mg
Esterified estrogens tab 2.5 mg
Estrogens conjugated
Flecainide
Flecainide acetate
H_2 Antagonists
Nizatidine
Famotidine
Famotidine tab 40 mg
Cimetidine hcl
Cimetidine

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Ranitidine hcl
Cimetidine tab 300 mg
Famotidine/calcium carbonate/magnesium hydroxide
Famotidine ca carbonate mag hydroxide chew tab 10 800 165 mg
Ranitidine hcl tab 150 mg
Cimetidine tab 800 mg
Cimetidine tab 200 mg
Cimetidine tab 400 mg
Cimetidine hcl soln 300 mg 5ml
Famotidine tab 20 mg
Ranitidine hcl tab 75 mg
Ranitidine hcl tab 300 mg
Famotidine calcium carbonate magnesium
Famotidine tab 10 mg
Nizatidine cap 150 mg
Famotidine calcium carbonate magnesium hydroxide
Famotidine chew tab 20 mg
Famotidine ca carbonate mag hydroxide chew tab 10 800 185 mg
Ranitidine hcl syrup 15 mg ml (75 mg 5ml)
Ranitidine hcl for oral susp 22.4 mg ml (compound kit)
Nizatidine cap 300 mg
Diclofen dr tab 75mg ranitidine tab 150mg capsaicin cr thpk
Ranitidine hcl tab 150 mg dietary management cap pack
Ranitidine hcl dietary supplement misc comb17
Ranitidine hcl dietary supplement misc.combo8
Diclofen dr tab 75mg ranitidine tab 150mg lido cr 3.75% thpk
Ibuprofen/famotidine
Insulin
Insulin lispro
Insulin lispro protamine and insulin lispro
Insulin lispro human rec.anlog
Insulin glargine,human recombinant analog
Insulin (regular) inj 100 unit ml
Insulin pork purified
Insulin regular, human
Insulin isophane inj 100 unit ml
Insulin isophane pork pure
Insulin nph human isophane
Insulin zinc inj 100 unit ml
Insulin zinc pork purified
Insulin zinc human rec
Insulin zinc extend human rec
Insulin nph human isophane/insulin regular, human
Insulin lispro protamine insulin lispro
Insulin lispro (npl) insulin lispro human rec.anlog
Insulin nph human recom insulin regular human rec
Insulin regular human rec insulin release unit
Insulin regular human rec insulin release unit chbr ihlr
Insulin glargine hum.rec.anlog
Insulin glulisine
Insulin regular human rec

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Insulin nph human recom
Insulin reg hum rec buff
Insulin degludec
Insulin aspart (niacinamide)
Insulin aspart
Insulin aspart protamine human insulin aspart
Insulin aspart protamine human/insulin aspart
Insulin detemir
Diluent insulin aspart combination #1
Insulin lispro (human) inj 100 unit ml
Insulin isophane (human) inj 100 unit ml
Insulin regular (human) inj 100 unit ml
Insulin detemir inj 100 unit ml
Insulin aspart prot aspart (human) inj 100 unit ml (70 30)
Insulin glargine inj 100 unit ml
Insulin aspart inj 100 unit ml
Insulin isophane regular (human) inj 100 unit ml (70 30)
Insulin zinc (human) inj 100 unit ml
Insulin detemir soln pen injector 100 unit ml
Insulin glargine soln pen injector 100 unit ml
Insulin lispro (human) soln pen injector 100 unit ml
Insulin aspart soln cartridge 100 unit ml
Insulin aspart soln pen injector 100 unit ml
Insulin aspart prot aspart sus pen inj 100 unit ml (70 30)
Nph human insulin isophane
Nph human insulin isophane insulin regular human
Insulin lispro prot lispro (human) inj 100 unit ml (75 25)
Loop Diuretics
Bumetanide
Torsemide
Ethacrynic acid
Furosemide
Furosemide oral soln 10 mg ml
Furosemide tab 20 mg
Furosemide tab 80 mg
Bumetanide tab 0.5 mg
Bumetanide tab 1 mg
Bumetanide tab 2 mg
Furosemide tab 40 mg
Furosemide in 0.9 % sodium ch
Ethacrynate sodium
Torsemide tab 10 mg
Torsemide tab 5 mg
Torsemide tab 20 mg
Furosemide/dextrose 5 % in wa
Metformin
Saxagliptin hcl/metformin hcl
Sitagliptin phosphate/metformin hcl
Sitagliptin phosphate metformin hcl
Ertugliflozin pidolate/metformin hcl
Rosiglitazone maleate metformin hcl

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Metformin hcl
Glyburide metformin hcl
Glyburide/metformin hcl
Glipizide metformin hcl
Pioglitazone hcl/metformin hcl
Glyburide micronized metformin hcl
Glipizide/metformin hcl
Repaglinide/metformin hcl
Metformin hcl tab 1000 mg
Rosiglitazone maleate/metformin hcl
Dapagliflozin propanediol/metformin hcl
Glyburide metformin tab 5 500 mg
Linagliptin/metformin hcl
Empagliflozin/metformin hcl
Metformin hcl tab 500 mg
Metformin hcl tab 850 mg
Glyburide metformin tab 2.5 500 mg
Metformin hcl tab sr 24hr 500 mg
Alogliptin benzoate/metformin hcl
Glipizide metformin hcl tab 2.5 500 mg
Glipizide metformin hcl tab 5 500 mg
Sitagliptin metformin hcl tab 50 1000 mg
Sitagliptin metformin hcl tab 50 500 mg
Butalbital aspirin caffeine
Canagliflozin/metformin hcl
Metformin hcl tab sr 24hr 750 mg
Rosiglitazone maleate metformin hcl tab 4 500 mg
Pioglitazone hcl metformin hcl tab 15 850 mg
Sitagliptin metformin hcl tab sr 24hr 50 1000 mg
Metformin hcl tab 500 mg dietary management cap pack
Metformin caffeine amino acids#7 herbal comb#125 choli
Metformin amino acids comb. #7 herbal comb.#125 cholin
Non-Statin Lipid Lowering Agents
Fish oil/borage oil/flaxseed oil/omega 3,6,9 combination no1
Vitamin e
Fenofibrate nanocrystallized
Fenofibrate,micronized
Ezetimibe
Gemfibrozil
Choline bitartrate
Omega-3 fatty acids/fish oil
Omega-3/dha/epa/other omega-3s/fish oil/vitamin d3
Vitamin e acetate
Colesevelam hcl
Omega-3 fatty acids/docosahexanoic acid/epa/fish oil
Omega-3 acid ethyl esters
Omega-3 fatty acids
Cholestyramine/aspartame
Fenofibrate
Niacin
Docosahexanoic acid/eicosapentaenoic acid

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Docosahexanoic acid
Cholestyramine (with sugar)
Krill oil/omega-3 fatty acids/dha/epa/phospholipids
Racemethionine/inositol/choline/lysine/cyanocobalamin
Colestipol hcl
Omega-3 fatty acids/dha/epa/other omega-3s/fish oil
Fenofibric acid (choline)
Lecithin
Krill oil/omega-3 fatty acids/dha/epa/phospholipids/astaxan
Omega 3,6,9 combination no.7
Lecithin, soy
Icosapent ethyl
Fenofibric acid
Mipomersen sodium
Evolocumab
Omega-3 fatty acids/dha/epa/fish oil/vitamin d3
Omega-3 fatty acids/docosahexanoic acid/epa
Inositol
Krill oil/omega-3 fatty acids/docosahexanoic acid/epa
Omega-3 fatty acids/dha/epa/dpa/fish oil
Salmon oil/omega-3 fatty acids
Alirocumab
Inositol/choline/vitamin b complex
Omega-3 fatty acids/dha/epa/cod liver oil/vit a palm/vit d3
Fish,flaxseed,eve primrose,blk currant,bor oils/om3,6,9 no.5
Phytosterol/omega-3 fatty acids/dha/epa/fish oil
Lomitapide mesylate
Krill oil/omega-3/dha/epa/omega-6/phospholipids/astaxanthin
Fish oil/omega-3 fatty acids/ascorbic acid/vitamin e
Fish oil/omega-3 fatty acids/vit e/folic acid/b6-b12
Omega-3 fatty acids/vitamin e
Omega-3 fatty acids/dha/epa/other omega-3s/vitamin d3
Fish oil/docosahexanoic acid/eicosapentaenoic acid
Chia seed oil/alpha-linoleic acid/linoleic acid/oleic acid
Fish oil/safflower, flaxseed, borage oils/omega 3,6,9 no.2
Fish oil/flax oil/e.primrose/b.currant/bor oil/om 3,6,9 no.6
Krill oil
Methionine/inositol/choline/folic acid
Phytosterol combination no.1
Omega 3,5,6,7,9 combination no.1/salmon oil
Omega-3 fatty acids/dha/epa/ala/vitamin d3
Policosanol/inositol niacinate/garlic
Policosanol combination no.3
Omega-3s/e/linoleic acid/alph-linoleic/oleic acid/gla/lipase
Omega-3 fatty acids/dha/epa/fish oil/lactobacillus casei
Omega-3/dha/epa/marine phospholipids/astaxanthin/krill oil
Phytosterol/cholecalciferol (vit d3)/fish oil
Other Antidiabetic Drugs
Dulaglutide
Dapagliflozin propanediol
Saxagliptin hcl

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Saxagliptin hcl/metformin hcl
Sitagliptin phosphate/metformin hcl
Sitagliptin phosphate
Sitagliptin phosphate/simvastatin
Sitagliptin phosphate metformin hcl
Ertugliflozin pidolate
Ertugliflozin pidolate/sitagliptin phosphate
Ertugliflozin pidolate/metformin hcl
Rosiglitazone maleate glimepiride
Rosiglitazone maleate metformin hcl
Miglitol
Lixisenatide
Acarbose
Rosiglitazone maleate glimepiride tab 4 1 mg
Rosiglitazone maleate glimepiride tab 4 2 mg
Rosiglitazone maleate glimepiride tab 4 4 mg
Rosiglitazone maleate
Nateglinide
Pioglitazone hcl
Pioglitazone hcl/metformin hcl
Repaglinide
Repaglinide/metformin hcl
Liraglutide
Insulin degludec/liraglutide
Semaglutide
Rosiglitazone maleate/metformin hcl
Rosiglitazone maleate/glimepiride
Albiglutide
Dapagliflozin propanediol/metformin hcl
Exenatide
Exenatide microspheres
Pramlintide acetate
Dapagliflozin propanediol/saxagliptin hcl
Linagliptin
Linagliptin/metformin hcl
Empagliflozin
Empagliflozin/metformin hcl
Empagliflozin/linagliptin
Pioglitazone hcl/glimepiride
Miglitol tab 25 mg
Pioglitazone hcl tab 15 mg (base equiv)
Pioglitazone hcl tab 30 mg (base equiv)
Pioglitazone hcl tab 45 mg (base equiv)
Sitagliptin phosphate tab 100 mg (base equiv)
Alogliptin benzoate
Alogliptin benzoate/metformin hcl
Alogliptin benzoate/pioglitazone hcl
Sitagliptin metformin hcl tab 50 1000 mg
Sitagliptin metformin hcl tab 50 500 mg
Rosiglitazone maleate tab 2 mg (base equiv)
Rosiglitazone maleate tab 4 mg (base equiv)

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Rosiglitazone maleate tab 8 mg (base equiv)
Canagliflozin
Canagliflozin/metformin hcl
Acarbose tab 50 mg
Acarbose tab 25 mg
Nateglinide tab 120 mg
Repaglinide tab 2 mg
Liraglutide soln pen injector 18 mg 3ml (6 mg ml)
Rosiglitazone maleate metformin hcl tab 4 500 mg
Pioglitazone hcl metformin hcl tab 15 850 mg
Sitagliptin metformin hcl tab sr 24hr 50 1000 mg
Nateglinide tab 60 mg
Exenatide inj 5 mcg 0.02ml
Exenatide inj 10 mcg 0.04ml
Mifepristone
Potassium Sparing Diuretics
Spironolactone
Eplerenone
Spironolactone/hydrochlorothiazide
Amiloride hcl
Amiloride hcl hydrochlorothiazide
Triamterene hydrochlorothiazide
Triamterene/hydrochlorothiazide
Spironolactone hydrochlorothiazide
Amiloride hcl/hydrochlorothiazide
Triamterene hydrochlorothiazide tab 75 50 mg
Triamterene hydrochlorothiazide cap 50 25 mg
Spironolactone hydrochlorothiazide tab 25 25 mg
Amiloride hydrochlorothiazide tab 5 50 mg
Triamterene hydrochlorothiazide tab 37.5 25 mg
Spironolactone tab 100 mg
Spironolactone tab 50 mg
Spironolactone tab 25 mg
Triamterene hydrochlorothiazide cap 37.5 25 mg
Triamterene
Amiloride hcl tab 5 mg
Prescription Nonsteroidal Anti-Inflammatory Drugs
Naproxen
Ketorolac tromethamine
Naproxen sodium tab 550 mg
Naproxen sodium
Naproxen tab 375 mg
Naproxen tab 250 mg
Indomethacin
Rofecoxib
Sulindac
Ketoprofen
Flurbiprofen
Ibuprofen
Ibuprofen tab 800 mg
Oxaprozin

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Diclofenac sodium/misoprostol
Celecoxib
Valdecoxib
Diclofenac potassium
Diclofenac sodium
Nabumetone
Tolmetin sodium
Ibuprofen susp 100 mg 5ml
Ibuprofen tab 200 mg
Etodolac
Etodolac tab sr 24hr 600 mg
Meloxicam
Diclofenac sodium tab delayed release 75 mg
Piroxicam
Piroxicam cap 20 mg
Hydrocodone/ibuprofen
Ibuprofen/diphenhydramine citrate
Naproxen tab 500 mg
Naproxen sodium tab 275 mg
Fenoprofen calcium
Etodolac tab 500 mg
Etodolac tab 400 mg
Flurbiprofen tab 100 mg
Sumatriptan succinate/naproxen sodium
Naproxen/esomeprazole magnesium
Fenoprofen calcium tab 600 mg
Tolmetin sodium tab 600 mg
Tolmetin sodium cap 400 mg
Ibuprofen/oxycodone hcl
Mefenamic acid
Indomethacin cap cr 75 mg
Naproxen sodium tab 220 mg
Naproxen sodium/pseudoephedrine hcl
Naproxen sodium cap 220 mg
Lansoprazole naproxen
Ibuprofen cap 200 mg
Ibuprofen/pseudoephedrine hcl
Ibuprofen/diphenhydramine hcl
Meclofenamate sodium cap 50 mg
Meclofenamate sodium
Celecoxib cap 200 mg
Diclofenac sodium tab delayed release 50 mg
Diclofenac sodium tab sr 24hr 100 mg
Indomethacin cap 25 mg
Naproxen tab ec 500 mg
Ibuprofen/phenylephrine hcl
Chlorpheniramine maleate/pseudoephedrine hcl/ibuprofen
Chlorpheniramine maleate/phenylephrine hcl/ibuprofen
Meclofenamate sodium cap 100 mg
Sulindac tab 150 mg
Sulindac tab 200 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Ibuprofen tab 600 mg
Ibuprofen tab 400 mg
Nabumetone tab 500 mg
Meloxicam tab 15 mg
Meloxicam tab 7.5 mg
Indomethacin cap 50 mg
Ketorolac tromethamine tab 10 mg
Oxaprozin tab 600 mg
Diclofenac sodium gel 1%
Diclofenac w misoprostol tab 75 0.2 mg
Diclofenac sodium misoprostol
Nabumetone tab 750 mg
Diclofenac sodium tab delayed release 25 mg
Naproxen cream 10% (compound kit)
Diclofenac gabapentin lidocaine hcl cream 5 5 2% (cmpd kit
Celecoxib cap 100 mg
Diclofenac potassium tab 50 mg
Etodolac tab sr 24hr 500 mg
Ketoprofen cap 75 mg
Piroxicam cap 10 mg
Etodolac cap 300 mg
Diclofenac w misoprostol tab 50 0.2 mg
Naproxen esomeprazole magnesium tab dr 375 20 mg
Naproxen sodium tab sr 24hr 375 mg (base equiv)
Naproxen susp 125 mg 5ml
Naproxen sodium/diphenhydramine hcl
Naproxen tab 500 mg liniment topical gel kit
Isometheptene mucate caffeine acetaminophen
Indomethacin, submicronized
Diclofenac submicronized
Meloxicam, submicronized
Ibuprofen irritants counter irritants combination #2
Meloxicam irritants counter irritants combination no.2
Ketoprofen cream 5% (compound kit)
Flurbiprofen cyclobenzaprine cream (cmpd kit)
Ketoprofen baclofen gabapentin cream (cmpd kit)
Ketoprofen lidocaine gabapentin cream (cmpd kit)
Diclofenac potassium cap 25 mg
Flurbiprofen baclofen lidocaine cream 15 4 5% (cmpd kit)
Ketoprofen baclofen gabapent lido crm 15 4 10 2% (cmp kit)
Metaxalone tab 800 mg diclofenac sodium soln 1.5% kit
Ketoprofen lidocaine hcl cream 10 2% (compound kit)
Ketoprofen lidocaine gabapentin cream 5 2 5% (cmpd kit)
Ketoprofen ketamine lidocaine cream 5 5 2% (compounding kit)
Ketoprofen ketamine lidocaine cream 5 5 2% (compound kit)
Rofecoxib tab 50 mg
Valdecoxib tab 10 mg
Valdecoxib tab 20 mg
Etodolac tab sr 24hr 400 mg
Ibuprofen cream 10% (compounding kit)
Fenoprofen calcium cap 400 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Ketorolac tromethamine gel 2% (cmpd kit) (base equiv)
Ketoprofen (bulk) cream 10%
Ketoprofen cap sr 24hr 200 mg
Ketoprofen tab 12.5 mg
Phenylbutazone tab 100 mg
Rofecoxib tab 25 mg
Fenoprofen calcium cap 200 mg
Indomethacin suppos 50 mg
Naproxen irritants counter irritants combination #2
Prasterone cap 200 mg ibuprofen tab 400 mg kit
Naproxen sodium tab sr 24hr 500 mg (base equiv)
Rofecoxib tab 12.5 mg
Etodolac cap 200 mg
Ibuprofen caffeine vitamins b1 b2 b6 b12
Diclofenac sodium capsicum oleoresin
Diclofenac sod tab dr 75 mg lido men methyl sal ptch kit
Flurbiprofen tab 50 mg
Mefenamic acid cap 250 mg
Ketoprofen cap 50 mg
Phenylephrine hcl ketorolac tromethamine
Naproxen sodium tab 550 mg menthol gel 2% therapy pack
Naproxen sodium menthol
Flurbiprofen gabapent cycloben lido dexameth cr (cmp kit)
Flurbiprofen baclofen cycloben lido cream (cmp kit)
Naproxen tab 250 mg dietary management cap pack
Meloxicam tab 7.5 mg dietary management cap pack
Piroxicam cap 20 mg dietary management cap pack
Ibuprofen tab 600 mg dietary management cap pack
Naproxen tab 500 mg dietary management cap pack
Ibuprofen tab 800 mg dietary management cap pack
Naproxen dietary supplement misc. Cb.11
Diclofenac tab dr 25 mg dietary management cap pack
Piroxicam dietary supplement misc. Cb.11
Ibuprofen dietary supplement misc. Cb.11
Naproxen capsaicin menthol methyl salicylate
Fluorouracil diclofenac sodium cream 5 1%
Tamoxifen adapalene diclofenac cream 0.2 0.3 2% (cmpd kit)
Amantadine gabapent diclofenac baclofen lido cr (cmpd kit)
Diclofenac amitriptyline prilo lido cream (cmpd kit)
Diclofenac tab 75mg ranitid tab 150mg lido prilo cr thpk
Ketorolac tromethamine nasal spray 15.75 mg spray
Naproxen capsaicin menthol
Celecoxib capsaicin menthol
Celecoxib lidocaine menthol
Ibuprofen tab 800 mg multiple minerals cap therapy pack
Ropivacaine hcl/epinephrine/clonidine hcl/ketorolac trometh
Diclofenac td soln 1.5% camph men methyl sal patch kit
Ibuprofen/famotidine
Ibuprofen diphenhydramine citrate
Propafenone
Propafenone HCl

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Proton Pump Inhibitors
Pantoprazole sodium
Lansoprazole
Rabeprazole sodium
Omeprazole
Esomeprazole magnesium
Lansoprazole tab delayed release orally disintegrating 15 mg
Lansoprazole tab delayed release orally disintegrating 30 mg
Lansoprazole/amoxicillin trihydrate/clarithromycin
Omeprazole magnesium
Naproxen/esomeprazole magnesium
Lansoprazole naproxen
Lansoprazole amoxicillin trihydrate clarithromycin
Omeprazole sodium bicarbonate cap 20 1100 mg
Esomeprazole magnesium cap delayed release 40 mg
Esomeprazole magnesium cap delayed release 20 mg
Omeprazole cap delayed release 20 mg
Pantoprazole sodium ec tab 40 mg (base equiv)
Esomeprazole magnesium cap delayed release 20 mg (base eq)
Omeprazole cap delayed release 40 mg
Omeprazole/sodium bicarbonate
Omeprazole delayed release tab 20 mg
Esomeprazole mag trihydrate
Lansoprazole cap delayed release 15 mg
Lansoprazole cap delayed release 30 mg
Pantoprazole sodium ec tab 20 mg (base equiv)
Omeprazole sodium bicarbonate cap 40 1100 mg
Omeprazole cap delayed release 10 mg
Naproxen esomeprazole magnesium tab dr 375 20 mg
Rabeprazole sodium ec tab 20 mg
Dexlansoprazole cap delayed release 60 mg
Dexlansoprazole cap delayed release 30 mg
Esomeprazole magnesium cap delayed release 40 mg (base eq)
Omeprazole susp 2 mg ml (compound kit)
Esomeprazole strontium
Dexlansoprazole
Colchicine
Omeprazole/clarithromycin/amoxicillin trihydrate
Omeprazole magnesium delayed release tab 20 mg (base equiv)
Aspirin/omeprazole
Statins
Pitavastatin calcium
Pravastatin sodium
Aspirin calcium carbonate magnesium pravastatin
Sitagliptin phosphate/simvastatin
Simvastatin
Simvastatin tab 80 mg
Lovastatin
Lovastatin tab 20 mg
Amlodipine besylate/atorvastatin calcium
Atorvastatin calcium

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Niacin/lovastatin
Niacin/simvastatin
Niacin simvastatin
Fluvastatin sodium
Rosuvastatin calcium
Ezetimibe/simvastatin
Atorvastatin calcium tab 10 mg (base equivalent)
Atorvastatin calcium tab 20 mg (base equivalent)
Atorvastatin calcium tab 40 mg (base equivalent)
Atorvastatin calcium tab 80 mg (base equivalent)
Pravastatin sodium tab 10 mg
Pravastatin sodium tab 20 mg
Pravastatin sodium tab 40 mg
Simvastatin tab 40 mg
Ezetimibe simvastatin
Amlodipine besylate atorvastatin calcium
Fluvastatin sodium cap 20 mg
Simvastatin tab 20 mg
Simvastatin tab 5 mg
Simvastatin tab 10 mg
Rosuvastatin calcium tab 10 mg
Lovastatin tab 40 mg
Ezetimibe simvastatin tab 10 20 mg
Pravastatin sodium tab 80 mg
Rosuvastatin calcium tab 20 mg
Lovastatin tab 10 mg
Rosuvastatin calcium tab 5 mg
Ezetimibe simvastatin tab 10 40 mg
Ezetimibe simvastatin tab 10 80 mg
Fluvastatin sodium cap 40 mg
Niacin lovastatin
Ezetimibe/atorvastatin calcium
Rosuvastatin calcium tab 40 mg
Lutetium lu 177 dotatate
Atorvastatin tab 20 mg coenzyme q10 cap 100 mg ther pack
Sulfonyureas
Rosiglitazone maleate glimepiride
Tolazamide
Glyburide
Glyburide,micronized
Glyburide micronized
Rosiglitazone maleate glimepiride tab 4 1 mg
Rosiglitazone maleate glimepiride tab 4 2 mg
Rosiglitazone maleate glimepiride tab 4 4 mg
Glimepiride
Glipizide
Chlorpropamide
Glyburide metformin hcl
Glyburide/metformin hcl
Glipizide metformin hcl
Glyburide micronized metformin hcl

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Glipizide/metformin hcl
Rosiglitazone maleate/glimepiride
Chlorpropamide tab 100 mg
Tolbutamide
Glyburide metformin tab 5 500 mg
Acetohexamide
Chlorpropamide tab 250 mg
Pioglitazone hcl/glimepiride
Glipizide tab 10 mg
Triamterene hydrochlorothiazide
Glyburide micronized tab 1.5 mg
Glipizide tab 5 mg
Glyburide tab 5 mg
Glipizide tab sr 24hr 2.5 mg
Glyburide tab 2.5 mg
Glimepiride tab 4 mg
Glimepiride tab 2 mg
Glyburide metformin tab 2.5 500 mg
Glipizide tab sr 24hr 5 mg
Glipizide tab sr 24hr 10 mg
Glimepiride tab 1 mg
Glipizide metformin hcl tab 2.5 500 mg
Glipizide metformin hcl tab 5 500 mg
Tolazamide tab 250 mg
Tolazamide tab 500 mg
Glyburide micronized tab 3 mg
Glyburide tab 1.25 mg
Glyburide micronized tab 6 mg
Tolazamide tab 100 mg
Buspirone hcl
Thiazide Diuretics
Captopril hydrochlorothiazide
Bendroflumethiazide
Bisoprolol hydrochlorothiazide tab 5 6.25 mg
Bisoprolol hydrochlorothiazide tab 10 6.25 mg
Bisoprolol hydrochlorothiazide tab 2.5 6.25 mg
Hydrochlorothiazide tab 25 mg
Timolol maleate hydrochlorothiazide
Lisinopril hydrochlorothiazide
Enalapril maleate hydrochlorothiazide tab 5 12.5 mg
Chlorothiazide
Methyldopa hydrochlorothiazide
Methyldopa chlorothiazide
Losartan potassium hydrochlorothiazide
Enalapril maleate hydrochlorothiazide tab 10 25 mg
Amiloride hcl hydrochlorothiazide
Triamterene hydrochlorothiazide
Irbesartan hydrochlorothiazide
Spironolactone hydrochlorothiazide
Metoprolol tartrate hydrochlorothiazide
Methyclothiazide

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Propranolol hcl hydrochlorothiazide
Telmisartan hydrochlorothiazide
Hydrochlorothiazide
Polythiazide tab 1 mg
Polythiazide tab 2 mg
Prazosin hcl polythiazide
Quinapril hydrochlorothiazide tab 20 12.5 mg
Quinapril hcl hydrochlorothiazide
Quinapril hydrochlorothiazide tab 10 12.5 mg
Quinapril hydrochlorothiazide tab 20 25 mg
Eprosartan mesylate hydrochlorothiazide
Methyclothiazide tab 5 mg
Deserpidine methyclothiazide
Indapamide tab 2.5 mg
Indapamide
Valsartan hydrochlorothiazide
Benazepril hcl hydrochlorothiazide
Aliskiren hemifumarate hydrochlorothiazide
Amlodipine besylate valsartan hydrochlorothiazide
Aliskiren hemifumarate amlodipine hydrochlorothiazide
Fosinopril sodium hydrochlorothiazide
Moexipril hcl hydrochlorothiazide
Indapamide tab 1.25 mg
Enalapril maleate hydrochlorothiazide
Hydrochlorothiazide cap 12.5 mg
Metolazone
Nadolol bendroflumethiazide
Hydrochlorothiazide tab 100 mg
Captopril hydrochlorothiazide tab 25 15 mg
Captopril hydrochlorothiazide tab 50 25 mg
Lisinopril hydrochlorothiazide tab 20 25 mg
Lisinopril hydrochlorothiazide tab 10 12.5 mg
Lisinopril hydrochlorothiazide tab 20 12.5 mg
Bisoprolol fumarate hydrochlorothiazide
Candesartan cilexetil hydrochlorothiazide
Propranolol hydrochlorothiazide tab 40 25 mg
Atenolol chlorthalidone
Metoprolol succinate hydrochlorothiazide
Clonidine hcl chlorthalidone
Chlorthalidone
Chlorothiazide sodium
Triamterene hydrochlorothiazide tab 75 50 mg
Atenolol chlorthalidone tab 50 25 mg
Atenolol chlorthalidone tab 100 25 mg
Chlorothiazide tab 500 mg
Hydralazine reserpine hydrochlorothiazide tab 25 0.1 15 mg
Triamterene hydrochlorothiazide cap 50 25 mg
Spironolactone hydrochlorothiazide tab 25 25 mg
Amiloride hydrochlorothiazide tab 5 50 mg
Triamterene hydrochlorothiazide tab 37.5 25 mg
Telmisartan hydrochlorothiazide tab 80 12.5 mg

Appendix G. List of Generic Names of Medical Products Used to Define Covariates in this Request

Generic Name
Valsartan hydrochlorothiazide tab 80 12.5 mg
Valsartan hydrochlorothiazide tab 160 12.5 mg
Valsartan hydrochlorothiazide tab 160 25 mg
Telmisartan hydrochlorothiazide tab 40 12.5 mg
Telmisartan hydrochlorothiazide tab 80 25 mg
Hydrochlorothiazide tab 50 mg
Losartan potassium hydrochlorothiazide tab 100 12.5 mg
Losartan potassium hydrochlorothiazide tab 100 25 mg
Benazepril hydrochlorothiazide tab 10 12.5 mg
Losartan potassium hydrochlorothiazide tab 50 12.5 mg
Irbesartan hydrochlorothiazide tab 150 12.5 mg
Triamterene hydrochlorothiazide cap 37.5 25 mg
Valsartan hydrochlorothiazide tab 320 25 mg
Hydrochlorothiazide tab 12.5 mg
Metolazone tab 2.5 mg
Metolazone tab 5 mg
Hydralazine hcl hydrochlorothiazide
Reserpine hydrochlorothiazide tab 0.125 25 mg
Chlorthalidone tab 25 mg
Hydroflumethiazide
Methyldopa hydrochlorothiazide tab 250 25 mg
Benazepril hydrochlorothiazide tab 5 6.25 mg
Benazepril hydrochlorothiazide tab 20 12.5 mg
Benazepril hydrochlorothiazide tab 20 25 mg
Reserpine hydrochlorothiazide tab 0.125 50 mg
Fosinopril sodium hydrochlorothiazide tab 20 12.5 mg
Hydralazine hcl reserpine hydrochlorothiazide
Bendroflumethiazide rauwolfia tab 4 50 mg
Spironolactone
Methyldopa hydrochlorothiazide tab 250 15 mg
Trichlormethiazide tab 4 mg
Azilsartan medoxomil chlorthalidone
Candesartan cilexetil hydrochlorothiazide tab 32 12.5 mg
Valsartan hydrochlorothiazide tab 320 12.5 mg
Metoprolol hydrochlorothiazide tab 50 25 mg

Appendix H. Specifications Defining Parameters for this Request

This request utilized the Cohort Identification and Descriptive Analysis and Propensity Score Analysis (CIDA) tools to estimate the risk of stroke and hemorrhage in non-valvular atrial fibrillation patients treated with apixaban compared to warfarin.

Query Period: Mock-Sequential: December 28, 2012 - September 30, 2015 and December 28, 2012 - January 22, 2019
Coverage Requirement: Medical and Drug Coverage
Enrollment Gap: 45 days
Enrollment Requirement: 183 days
Age Groups: 21-64, 65-74, 75+ years

	Comparison 1		Comparison 2		Comparison 3	
Drug/Exposure						
Incident Exposure/Comparator	Apixaban	Warfarin	Apixaban	Warfarin	Apixaban	Warfarin
Incidence Criteria	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin
Washout (days)	183	183	183	183	183	183
Cohort Definition	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only
Episode Gap (days)	3	3	3	3	3	3
Episode Extension Period (days)	3	3	3	3	3	3
Episode Truncation at Death	Yes	Yes	Yes	Yes	Yes	Yes
Episode Truncation Criteria	Dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban	Dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban	Dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban
Inclusion/Exclusion						
Pre-Existing Condition	Non-valvular atrial fibrillation		Non-valvular atrial fibrillation		Non-valvular atrial fibrillation	
Include/Exclude	Include		Include		Include	
Care Setting/Primary Diagnosis	Any		Any		Any	
Lookback Period	-183, 0		-183, 0		-183, 0	
Pre-Existing Condition	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair	
Include/Exclude	Exclude		Exclude		Exclude	
Care Setting/Primary Diagnosis	Any, except Ambulatory Visit (AV)/Other Ambulatory Visit (OA) for dialysis		Any, except AV/OA for dialysis		Any, except AV/OA for dialysis	
Lookback Period	-183, 0		-183, 0		-183, 0	

Appendix H. Specifications Defining Parameters for this Request			
Pre-Existing Condition	Gastrointestinal hemorrhage,* intracranial hemorrhage, ischemic stroke	Gastrointestinal hemorrhage,* intracranial hemorrhage, ischemic stroke	Gastrointestinal hemorrhage,* intracranial hemorrhage, ischemic stroke
Include/Exclude	Exclude	Exclude	Exclude
Care Setting/Primary Diagnosis	Inpatient Hospital Stay, Primary Diagnosis (IPP)	IPP	IPP
Lookback Period	-183, 0	-183, 0	-183, 0
	Comparison 1	**Comparison 2**	**Comparison 3**
Event/Outcome			
Event/Outcome	Gastrointestinal hemorrhage*	Intracranial hemorrhage	Ischemic stroke
Care Setting/Primary Diagnosis	See footnote	IPP	IPP
Washout (days)	183	183	183
Blackout Period	1	1	1
Propensity Score Matching			
Covariates	See Appendix I	See Appendix I	See Appendix I
Covariate Evaluation Window	See Appendix I	See Appendix I	See Appendix I
Matching Ratio	1:1	1:1	1:1
Matching Caliper Settings	0.050	0.050	0.050
Analysis Type	Unconditional and Conditional	Unconditional and Conditional	Unconditional and Conditional
Effect Estimation	Risk set level	Risk set level	Risk set level
Subgroup Analysis			
Stratifying variable	Age Group	Age Group	Age Group
Re-matching	Re-matching should be restricted to the matched population	Re-matching should be restricted to the matched population	Re-matching should be restricted to the matched population
Reporting	1) DPs 1-7 2) DP 8 only	1) DPs 1-7 2) DP 8 only	1) DPs 1-7 2) DP 8 only

* The gastrointestinal hemorrhage outcome is defined as one code from "Gastrointestinal Bleeding - List 1" as primary diagnosis from inpatient encounter OR (one code from "Gastrointestinal Bleeding - List 2" as primary diagnosis from inpatient encounter AND one code from "Gastrointestinal Bleeding - List 1" as secondary or unspecified diagnosis from inpatient encounter on the same day)

International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) codes are provided by Optum360. ICD-10-CM codes were mapped from ICD-9-CM codes using the Centers for Medicare and Medicaid Services General Equivalence Mappings. NDC codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix H. Specifications Defining Parameters for this Request

This request utilized the Cohort Identification and Descriptive Analysis (CIDA) and Propensity Score Analysis tools to estimate the risk of stroke and hemorrhage in non-valvular atrial fibrillation patients treated with apixaban compared to warfarin.

Query Period: Mock-Sequential: December 28, 2012 - September 30, 2015 and December 28, 2012 - January 22, 2019
Coverage Requirement: Medical and Drug Coverage
Enrollment Gap: 45 days
Enrollment Requirement: 183 days
Age Groups: 21-64, 65-74, 75+ years

	Comparison 4		Comparison 5		Comparison 6	
Drug/Exposure						
Incident Exposure/Comparator	Apixaban	Warfarin	Apixaban	Warfarin	Apixaban	Warfarin
Incidence Criteria	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban, warfarin
Washout (days)	183	183	183	183	183	183
Cohort Definition	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only	Retain first valid incident exposure episode only
Episode Gap (days)	14	14	14	14	14	14
Episode Extension Period (days)	14	14	14	14	14	14
Episode Truncation at Death	Yes	Yes	Yes	Yes	Yes	Yes
Episode Truncation Criteria	Dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban	Dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban	Dabigatran, rivaroxaban, edoxaban, warfarin	Apixaban, dabigatran, rivaroxaban, edoxaban
Inclusion/Exclusion						
Pre-Existing Condition	Non-valvular atrial fibrillation		Non-valvular atrial fibrillation		Non-valvular atrial fibrillation	
Include/Exclude	Include		Include		Include	
Care Setting/Primary Diagnosis	Any		Any		Any	
Lookback Period	-183, 0		-183, 0		-183, 0	
Pre-Existing Condition	Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair		Dialysis, kidney replacement, deep vein thrombosis, pulmonary embolism, joint replacement, mitral stenosis, valve replacement or valve repair	
Include/Exclude	Exclude		Exclude		Exclude	
Care Setting/Primary Diagnosis	Any, except Ambulatory Visit (AV)/Other Ambulatory Visit (OA) for dialysis		Any, except AV/OA for dialysis		Any, except AV/OA for dialysis	
Lookback Period	-183, 0		-183, 0		-183, 0	
Pre-Existing Condition	Gastrointestinal hemorrhage,* intracranial hemorrhage, ischemic stroke		Gastrointestinal hemorrhage,* intracranial hemorrhage, ischemic stroke		Gastrointestinal hemorrhage,* intracranial hemorrhage, ischemic stroke	

Appendix H. Specifications Defining Parameters for this Request			
Include/Exclude	Exclude	Exclude	Exclude
Care Setting/Primary Diagnosis	Inpatient Hospital Stay, Primary Diagnosis (IPP)	IPP	IPP
Lookback Period	-183, 0	-183, 0	-183, 0
	Comparison 4	**Comparison 5**	**Comparison 6**
Event/Outcome			
Event/Outcome	Gastrointestinal hemorrhage*	Intracranial hemorrhage	Ischemic stroke
Care Setting/Primary Diagnosis	See footnote	IPP	IPP
Washout (days)	183	183	183
Blackout Period	1	1	1
Propensity Score Matching			
Covariates	See Appendix I	See Appendix I	See Appendix I
Covariate Evaluation Window	See Appendix I	See Appendix I	See Appendix I
Matching Ratio	1:1	1:1	1:1
Matching Caliper Settings	0.050	0.050	0.050
Analysis Type	Unconditional and Conditional	Unconditional and Conditional	Unconditional and Conditional
Effect Estimation	Risk set level	Risk set level	Risk set level
Subgroup Analysis			
Stratifying variable	Age Group	Age Group	Age Group
Re-matching	Re-matching should be restricted to the matched population	Re-matching should be restricted to the matched population	Re-matching should be restricted to the matched population
Reporting	1) DPs 1-7 2) DP 8 only	1) DPs 1-7 2) DP 8 only	1) DPs 1-7 2) DP 8 only

* The gastrointestinal hemorrhage outcome is defined as one code from "Gastrointestinal Bleeding - List 1" as primary diagnosis from inpatient encounter OR (one code from "Gastrointestinal Bleeding - List 2" as primary diagnosis from inpatient encounter AND one code from "Gastrointestinal Bleeding - List 1" as secondary or unspecified diagnosis from inpatient encounter on the same day)

International Classification of Diseases, Ninth and Tenth Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM), International Classification of Diseases, Tenth Revision, Procedural Coding System (ICD-10-PCS), Current Procedural Terminology, Fourth Edition (CPT-4), and Healthcare Common Procedure Coding System (HCPCS) codes are provided by Optum360. ICD-10-CM codes were mapped from ICD-9-CM codes using the Centers for Medicare and Medicaid Services General Equivalence Mappings. NDC codes are checked against First Data Bank's "National Drug Data File (NDDF®) Plus."

Appendix I. Baseline Covariate Groups Evaluated in this Request

Group	Evaluation Window
Characteristic	
Age (continuous)	Index date
Sex	Index date
Age (years) *	
21-64	Index date
65-74	Index date
75+	Index date
Year*	
2012	Index date
2013	Index date
2014	Index date
2015	Index date
2016	Index date
2017	Index date
2018	Index date
Race*	
American Indian or Alaska Native	Index date
Asian	Index date
Black or African American	Index date
Native Hawaiian or Other Pacific Islander	Index date
White	Index date
Unknown	Index date
Recorded History of:	
Statins	-183 to 0
Non-statin lipid lowering agents	-183 to 0
Angiotensin-converting enzyme inhibitors and angiotensin receptor blockers	-183 to 0
Beta blockers	-183 to 0
Calcium channel blockers	-183 to 0
Loop diuretics	-183 to 0
Potassium sparing diuretics	-183 to 0
Thiazide diuretics	-183 to 0
Anti-anginal vasodilators	-183 to 0
Dronedarone	-183 to 0
Amiodarone	-183 to 0
Disopyramide	-183 to 0
Flecainide	-183 to 0
Propafenone	-183 to 0
Digoxin	-183 to 0
Metformin	-183 to 0
Sulfonyureas	-183 to 0
Insulin	-183 to 0
Other anti-diabetic drugs	-183 to 0
Aspirin	-183 to 0
Antiplatelet agents (non-aspirin)	-183 to 0
Prescription nonsteroidal anti-inflammatory drugs	-183 to 0
COX-2 inhibitors	-183 to 0
Anticoagulants	-183 to 0
H2 antagonists	-183 to 0
Proton pump inhibitors	-183 to 0
Estrogen replacement	-183 to 0
Hypertension	-183 to 0

Appendix I. Baseline Covariate Groups Evaluated in this Request

Group	Evaluation Window
Diabetes	-183 to 0
Hyperlipidemia	-183 to 0
Obesity	-183 to 0
Renal disease - acute	-183 to 0
Renal disease - chronic	-183 to 0
Transient ischemic attack	-183 to 0
Stroke - prior 1-30 days	-30 to -1
Stroke - prior 31-183 days	-183 to -31
Acute myocardial infarction - prior 1-30 days	-30 to -1
Acute myocardial infarction - prior 31-183 days	-183 to -31
Heart failure - hospitalized	-183 to 0
Heart failure - outpatient	-183 to 0
Other ischemic heart disease	-183 to 0
Cardiac ablation	-183 to 0
Coronary revascularization	-183 to 0
Cardioversion	-183 to 0
Hospitalized bleeding	-183 to 0
Peptic ulcer disease	-183 to 0
Smoking	-183 to 0
Falls	-183 to 0
Fractures	-183 to 0
Syncope	-183 to 0
Walker use	-183 to 0
CHA_2DS_2-VASc score (Continuous)[1]*	-183 to 0
CHA_2DS_2-VASc score (Categorical)[1]	-183 to 0
0-1	-183 to 0
2	-183 to 0
3	-183 to 0
4	-183 to 0
5	-183 to 0
≥6	-183 to 0
HAS-BLED score (Continuous)[2]*	-183 to 0
HAS-BLED score (Categorical)[2]	-183 to 0
0-1	-183 to 0
2	-183 to 0
3	-183 to 0
≥4	-183 to 0

Appendix I. Baseline Covariate Groups Evaluated in this Request

Group	Evaluation Window
Health care utilization:	-183 to 0
Number of inpatient hospital stays	-183 to 0
Number of emergency department visits	-183 to 0
Number of ambulatory visits	-183 to 0
Drug utilization:	-183 to 0
Number of unique generics dispensed	-183 to 0

* Covariates followed by an asterisk * were not included in the propensity score model.

[1]CHA2DS2-VaSc: Lip, G.Y., Nieuwlaat, R., Pisters, R., Lane, D.A. and Crijns, H.J., 2010. Refining clinical risk stratification for predicting stroke and thromboembolism in atrial fibrillation using a novel risk factor-based approach: the euro heart survey on atrial fibrillation. Chest, 137(2), pp.263-272.

[2]HAS-BLED: Pisters, R., Lane, D.A., Nieuwlaat, R., De Vos, C.B., Crijns, H.J. and Lip, G.Y., 2010. A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation: the Euro Heart Survey. Chest, 138(5), pp.1093-1100.