

Association Between Early Chemoprophylaxis versus No Chemoprophylaxis and Risk of Venous Thromboembolism and Bleeding Complications after Same-Day Spine Surgery for Central Cord Syndrome: A Retrospective Cohort Analysis

This document includes 4 Supplemental Tables.

Variable	Codes Utilized
Arthrodesis Procedures on the Spine	1004085 (CPT)(+)
Cervical/Cervicothoracic Spine Fusion	0RG0, 0RG1, 0RG2, 0RG4 (ICD-10-PCS)(+)
Excisional Procedures of the Spine	1004042 (CPT)(+)
Spinal Instrumentation	1004123 (CPT)(+)
Release of the Cervical Spinal Cord	00NW0ZZ (ICD-10-PCS)(+)
Laminectomy, Facetectomy, or Foraminotomy of the Cervical Spine	63045, 63015 (CPT)(+)
Central Cord Syndrome of the Cervical Spinal Cord	S14.12 (ICD-10-CM)
Enoxaparin	67108 (RxNorm), J1650 (HCPCS) (+)
Heparin	5224 (RxNorm), J1644, J1642, J1643 (HCPCS) (+)
Aspirin	1191 (RxNorm)(-)
Direct Oral Anticoagulants (DOACs)	1037042, 1114195, 1364430, 1599538 (RxNorm)(-)
Vitamin K Antagonists	11289, 8150 (RxNorm)(-)
Direct Thrombin Inhibitors	114934, 15202, 237057, 60819 (RxNorm)(-)
Antithrombotic Agents	1311089 (RxNorm)(-)
Heparin, porcine	235473 (RxNorm)(-)
Low-Molecular-Weight-Heparin, excluding enoxaparin	321208, 67109 (RxNorm)(-)
Glycoprotein IIb/IIIa inhibitors	73137, 75635 (RxNorm)(-)
Chronic Kidney Disease, Acute Kidney Failure, Dialysis	N17, N18, Z49, Z99.2 (ICD-10-CM), 1012740 (CPT), 302497006 (SNOMED) (-)
Venous Thromboembolism	I82, I26 (ICD-10-CM)(-)
Vena Cava Filter	C1880 (HCPS), 37191, 37192 (CPT)(-)
Traumatic Subdural Hemorrhage	S06.5 (ICD-10-CM)(-)
Spinal Neoplasm	C41.2, D33.4, D43.44 (ICD-10-CM)(-)

Supplementary Table 1: Codes used to create the chemoprophylaxis cohort in this retrospective study. Positive (+) and negative (-) signs indicate code terms used as inclusion and exclusion criteria for the chemoprophylaxis cohort, respectively. Abbreviations: Current procedural terminology (CPT), International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM), ICD-10 Procedure Coding System (ICD-10-PCS), Systematized Nomenclature of Medicine (SNOMED), normalized names for clinical drugs (RxNorm), Veterans Affairs drug file (VA).

Variable	Codes Utilized
Arthrodesis Procedures on the Spine	1004085 (CPT)(+)
Cervical/Cervicothoracic Spine Fusion	0RG0, 0RG1, 0RG2, 0RG4 (ICD-10-PCS)(+)
Excisional Procedures of the Spine	1004042 (CPT)(+)
Spinal Instrumentation	1004123 (CPT)(+)
Release of the Cervical Spinal Cord	00NW0ZZ (ICD-10-PCS)(+)
Laminectomy, Facetectomy, or Foraminotomy of the Cervical Spine	63045, 63015 (CPT)(+)
Central Cord Syndrome of the Cervical Spinal Cord	S14.12 (ICD-10-CM)
Acetaminophen	161 (RxNorm)(+)
Heparin, Enoxaparin, Anticoagulants, Aspirin	5224, 67108, 1191 (RxNorm), BL110 (VA), J1650, J1644, J1642, J1643 (HCPCS) (-)
Chronic Kidney Disease, Acute Kidney Failure, Dialysis	N17, N18, Z49, Z99.2 (ICD-10-CM), 1012740 (CPT), 302497006 (SNOMED) (-)
Venous Thromboembolism	I82, I26 (ICD-10-CM)(-)
Vena Cava Filter	C1880 (HCPS), 37191, 37192 (CPT)(-)
Traumatic Subdural Hemorrhage	S06.5 (ICD-10-CM)(-)
Spinal Neoplasm	C41.2, D33.4, D43.44 (ICD-10-CM)(-)

Supplementary Table 2: Codes used to create the no chemoprophylaxis cohort in this retrospective study. Positive (+) and negative (-) signs indicate code terms used as inclusion and exclusion criteria for the no chemoprophylaxis cohort, respectively. Abbreviations: Current procedural terminology (CPT), International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM), ICD-10 Procedure Coding System (ICD-10-PCS), Systematized Nomenclature of Medicine (SNOMED), normalized names for clinical drugs (RxNorm), Veterans Affairs drug file (VA).

Propensity Matching Variable	Code(s) Utilized
Age	-
Male/female sex	-
Race/ethnicity	-
Nicotine dependence	F17 (ICD-10-CM)
Overweight/obesity status	E66 (ICD-10-CM)
Diabetes mellitus	E08-E13 (ICD-10-CM)
Hemoglobin (mass/volume) in blood	9014 (TriNetX curated code)
Hypotension	I95 (ICD-10-CM)
History of pelvic fracture	S32.8 (ICD-10-CM)
Inflammatory polyarthropathies	M05-M14 (ICD-10-CM)
Other disorders of fluid/electrolyte imbalance	E87 (ICD-10-CM)
Thrombophilia or coagulation disorders	D65-D69, D68.5, D68.6, D69.6 (ICD-10-CM)
Socioeconomic or psychosocial hazards	Z55-Z65 (ICD-10-CM)
Ischemic heart diseases	I20-I25 (ICD-10-CM)
Other forms of heart disease	I30-I5A (ICD-10-CM)
Chronic obstructive pulmonary disease	J44 (ICD-10-CM)
Chemotherapy	1002 (TriNetX curated code)
Quadriplegia	G82.5 (ICD-10-CM)
Paraplegia	G82.2 (ICD-10-CM)
Systemic lupus erythematosus	M32 (ICD-10-CM)
Use of systemic contraceptives	HS200 (VA)
Intracranial injury	S06 (ICD-10-CM)
Polytrauma	T07 (ICD-10-CM)
History of shock	R57, T79.4 (ICD-10-CM)
Prior use of DOACs	1114195, 1364430 (RxNorm)
Problems related to care dependency	Z74 (ICD-10-CM)
Pressure ulcer	L89 (ICD-10-CM)
Dependence on wheelchair	Z99.3 (ICD-10-CM)
Slipping, tripping, stumbling, and falls	W00-W19 (ICD-10-CM)
Venous thromboembolism	I26, I82 (ICD-10-CM)
Multilevel fusion	22552, 22614 (CPT)

Supplementary Table 3. Codes used in propensity matching. Abbreviations: International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM), Current procedural terminology (CPT), normalized names for clinical drugs (RxNorm), Veterans Affairs drug file (VA), direct oral anticoagulant (DOAC). A hyphen (-) is shown for variables without these standardized nomenclature systems, and for which TriNetX uses custom methods for handling within its online platform.

Variable	Codes Utilized
Venous Thromboembolism*	I82, I26 (ICD-10-CM)
Epidural Hematoma**	S06.4 (ICD-10-CM)
Pulmonary Embolism**	I26 (ICD-10-CM)
Deep Vein Thrombosis**	I82.4 (ICD-10-CM)
Severe Postoperative Bleeding**	S06.4, L76.2, D68.32 (ICD-10-CM)
Deceased**	TriNetX Coding

Supplemental Table 4: The primary (*) and secondary outcomes (**) for this retrospective propensity-matched cohort study assessed after spine surgery for central cord syndrome. Abbreviations: International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM).