Penumbra

Neuro Reimbursement Guide

Mechanical Thrombectomy and Embolization

EFFECTIVE JANUARY 2025

Reimbursement Inquiries: reimbursement@penumbrainc.com

For USA only.

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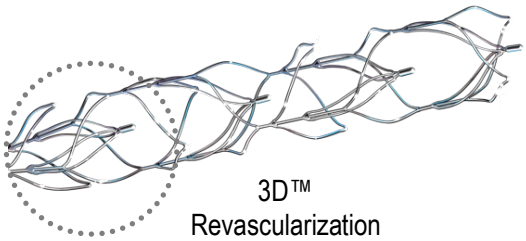
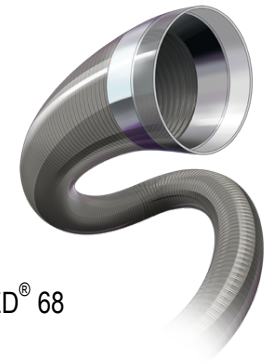


3D™ Revascularization Device



RED® 68

RED 62

MIDWAY™ 62

RED 43

RED 72 with SENDit™ Technology

Penumbra ENGINE®

Facility Coding and Payment

ICD-10-PCS Procedure Codes (hospital inpatient only)

03CG3ZZ	Extirpation of Matter from Intracranial Artery, Percutaneous Approach
03CH3ZZ	Extirpation of Matter from Right Common Carotid Artery, Percutaneous Approach
03CJ3ZZ	Extirpation of Matter from Left Common Carotid Artery, Percutaneous Approach
03CK3ZZ	Extirpation of Matter from Right Internal Carotid Artery, Percutaneous Approach
03CL3ZZ	Extirpation of Matter from Left Internal Carotid Artery, Percutaneous Approach
03CM3ZZ	Extirpation of Matter from Right External Carotid Artery, Percutaneous Approach
03CN3ZZ	Extirpation of Matter from Left External Carotid Artery, Percutaneous Approach
03CP3ZZ	Extirpation of Matter from Right Vertebral Artery, Percutaneous Approach
03CQ3ZZ	Extirpation of Matter from Left Vertebral Artery, Percutaneous Approach
03HY33Z	Insertion of Infusion Device into Upper Artery, Percutaneous Approach
04HY33Z	Insertion of Infusion Device into Lower Artery, Percutaneous Approach
3E03317	Introduction of Other Thrombolytic into Peripheral Vein, Percutaneous Approach
3E04317	Introduction of Other Thrombolytic into Central Vein, Percutaneous Approach
3E05317	Introduction of Other Thrombolytic into Peripheral Artery, Percutaneous Approach
3E06317	Introduction of Other Thrombolytic into Central Artery, Percutaneous Approach
3E08317	Introduction of Other Thrombolytic into Heart, Percutaneous Approach
B30R0ZZ	Plain Radiography of Intracranial Arteries using High Osmolar Contrast
B30R1ZZ	Plain Radiography of Intracranial Arteries using Low Osmolar Contrast
B30RYZZ	Plain Radiography of Intracranial Arteries using Other Contrast
B30RZZZ	Plain Radiography of Intracranial Arteries
B31R0ZZ	Fluoroscopy of Intracranial Arteries using High Osmolar Contrast
B31R1ZZ	Fluoroscopy of Intracranial Arteries using Low Osmolar Contrast
B31RYZZ	Fluoroscopy of Intracranial Arteries using Other Contrast
B31RZZZ	Fluoroscopy of Intracranial Arteries

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Facility Coding and Payment

Mechanical Thrombectomy

MS-DRG	Description	2025 National DRG Payment*
23	Craniotomy with Major Device Implant or Acute CNS PDX with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator	$40,600
24	Craniotomy with Major Device Implant or Acute Complex CNS PDX	$27,055
25	Craniotomy and Endovascular Intracranial Procedures with MCC	$31,827
26	Craniotomy and Endovascular Intracranial Procedures with CC	$21,767
27	Craniotomy and Endovascular Intracranial Procedures w/o MCC	$17,562

2025 Inpatient rates in effect from October 1, 2024 – September 30, 2025
(M)CC = (major) complications and/or comorbidities. Complete list available at: http://www.cms.hhs.gov/AcuteInpatientPPS
* Rates reflect FY 2025 National Medicare payment rates for hospitals submitting quality data and meaningful EHR users. Hospitals that do not submit quality data or are not meaningful EHR users may see decreased payment rates.

Charges for the Penumbra System® may be assigned to the following revenue codes:

- **0270** Medical/surgical supply
- **0272** Sterile supply
- **0279** Other supplies/devices

HCPCS

Product	Suggested HCPCS
Penumbra Reperfusion Catheters (includes all Penumbra System neuro catheters)[a]	**C1887** - Catheter, guiding (may include infusion/perfusion capability)
Penumbra Separators	NONE
3D Revascularization Device™	**C1887** - Catheter, guiding (may include infusion/perfusion capability)
Sterile Aspiration Tubing	NONE
Non-Sterile System Supplies	NONE
Delivery Catheters	**C1887** - Catheter, guiding (may include infusion/perfusion capability)

a. Not for use for infusion/perfusion—Only for use for aspiration

HCPCS Codes are not separately reimbursed for hospital inpatient procedures. However, they may be used for tracking or other administration processes.

References & Sources

- HIPPS (Inpatient) Federal Register/ Vol. 89, No. 192/ Thursday, October 3, 2024.
- ICD-10-CM 2025 ICD-10-CM Complete Official Codebook. American Medical Association. Copyright 2025 Optum360, LLC.
- ICD-10-PCS 2025 ICD-10-PCS Complete Official Codebook. American Medical Association. Copyright 2025 Optum360, LLC.
- HCPCS HCPCS 2025 Level II Professional Edition. American Medical Association. Copyright 2025 Optum360, LLC.

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Physician Coding and Payment

Intracranial Mechanical Thrombectomy Coding Tips

Per 2025 AMA CPT® coding guidelines, CPT codes 61645, 61650, and 61651 include selective catheterization, diagnostic angiography, and all subsequent angiography including: associated radiological supervision and interpretation within the treated vascular territory, fluoroscopic guidance, neurologic and hemodynamic monitoring of the patient, and closure of the arteriotomy by manual pressure, an arterial closure device, or suture.

For the purposes of reporting services described by 61645, 61650, and 61651, the intracranial arteries are divided into three vascular territories:

- Right carotid circulation
- Left carotid circulation
- Vertebro-basilar circulation

CPT code 61645 may be reported once for each intracranial vascular territory treated.

CPT code 61650 is reported once for the first intracranial vascular territory treated with intra-arterial prolonged administration of pharmacologic agent(s). If additional intracranial vascular territory(ies) is also treated with intra-arterial prolonged administration of pharmacologic agent(s) during the same session, the treatment of each additional vascular territory(ies) is reported using 61651 (may be reported maximally two times per day).

Do not report CPT codes 61645, 61651, or 61651 in conjunction with CPT codes 36221, 36226, 36228, 37184, or 37186 for the treated vascular territory.

Do not report CPT code 61645 in conjunction with CPT codes 61650 or 61651 for the same vascular distribution.

Physician Payment

- Based on RBRVS relative weights per CPT code × $ conversion factor
- Payments vary based on geographic location

CPT Code	Description	2025 National Medicare Payment[a]	Work RVU[a]
61645	Percutaneous arterial transluminal mechanical thrombectomy and/or infusion for thombolysis, intracranial, any method, including diagnostic angiography, fluoroscopic guidance, catheter placement, and intraprocedural pharmacological thrombolytic injection(s)	$821.69	15.00
61650	Endovascular intracranial prolonged administration of pharmacologic agent(s) other than thrombolysis, arterial, including catheter placement, diagnostic angiography, and imaging guidance; initial vascular territory	$569.68	10.00
61651	Endovascular intracranial prolonged administration of pharmacologic agent(s) other than thrombolysis, arterial, including catheter placement, diagnostic angiography, and imaging guidance; each additional vascular territory (List separately in addition to code for primary procedure)	$243.27	4.25

a. The 2025 physician payment rates are reflective of the Calendar Year 2025 Medicare Physician Fee Schedule (MPFS) Final Rule, which was published in Federal Register, Vol. 89 No. 236, Monday, December 9, 2024. Payments listed are national unadjusted fee schedule rates and are subject to change due to CMS' quarterly fee schedule updates and correction notices. Actual payments to physicians may also vary based on locality.

This list may not be comprehensive or complete. These procedures may be subject to the CMS multiple procedure reduction rule. When applicable, a payment reduction of 50% is applied to all payment amounts except the procedure with the greatest RVUs, which is paid at 100% unless exempt by CPT instructions or payer policy.

Modifier 59 - Distinct Procedural Service

- Modifier 59 is used to identify procedures/services, other than Evaluation and Management (E/M) services, normally reported together, but are appropriate under the specific circumstances. These circumstances may be:
  - different session or patient encounter (including different patient encounters on the same day)
  - different procedure or surgery
  - different anatomic sites (such as different organs or in certain instances, different lesions in the same organ)
  - separate incision/excision, separate lesion, or separate injury (or area of injury in extensive injuries) not ordinarily encountered or performed on the same day by the same physician
  - timed services (e.g., codes for which unit of service is a measure of time, such as per hour) provided during the same encounter only when they are performed sequentially
- Modifier 59 should only be used if no other modifier more appropriately describes the relationship of the two procedure codes. For instance, if procedures are performed on different sides of the body, modifiers RT or LT should be used instead of modifier 59.
- Modifier 59 is used inappropriately if the basis for its use is that the narrative description of the two codes is different. Although CPT® code descriptors describe different procedures, footnotes in the 2021 CPT manual instructions may still prohibit certain procedures from being billed together.

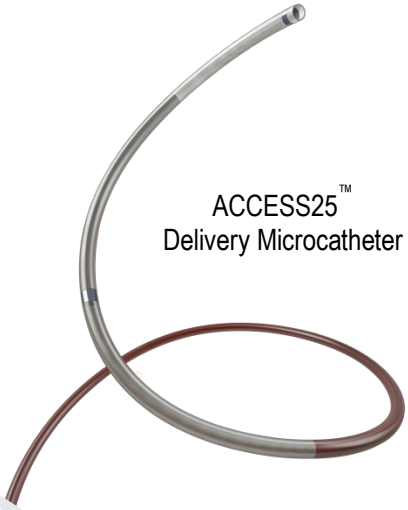
Examples of appropriate uses of modifier 59 and National Correct Coding Initiative (NCCI) guidelines:

Example	NCCI Guidelines
Failed percutaneous vascular procedure followed by an open procedure by the same physician at the same patient encounter	Only the HCPCS/CPT code for the completed procedure may be reported.
Percutaneous procedure performed on one lesion with a similar open procedure performed on a separate lesion	The HCPCS/CPT code for the percutaneous procedure may be reported with modifier 59 only if the lesions are in distinct and separate, anatomically defined vessels.
Similar open and percutaneous procedures are performed on different lesions in the same anatomically defined vessel	Only the open procedure may be reported.
A diagnostic procedure is performed preceding a therapeutic procedure and the diagnostic procedure is the basis for performing the therapeutic procedure	Modifier 59 may be reported for diagnostic angiography that has not been previously performed and the decision to perform an interventional vascular procedure on the same artery is based on the result of the diagnostic angiography. The 2021 CPT Manual (p455-456) specifies additional criteria under which diagnostic angiography performed at the time of an interventional procedure may be separately reportable with modifier 59.
A diagnostic procedure is performed subsequent to a completed therapeutic procedure	Modifier 59 may be reported for a diagnostic procedure only when the diagnostic procedure is not a common, expected, or necessary follow-up to the therapeutic procedure. For instance, modifier 59 may be reported if, later in the day following a completed therapeutic procedure, a patient develops complications and a diagnostic is performed to rule out infection.

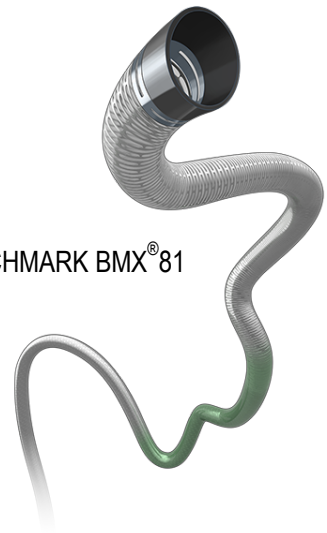
References & Sources

- CPT — All Current Procedural Terminology (CPT) five-digit number codes, descriptions, number modifiers, instructions, guidelines, and other material are copyright 2025 American Medical Association. All rights reserved.
  Current Procedural Terminology (CPT) is copyright 2025 American Medical Association. All rights reserved. No fee schedules, basic units, relative values, or related listings are included in CPT. The AMA assumes no liability for the data contained herein. Applicable FARS/DFARS restrictions apply to government use.
  CPT is a trademark of the American Medical Association.
- MPFS (Physician) — Federal Register, Vol. 89, No. 236 / Monday, December 9, 2024.
- Modifier 59 — MLN1783722 Fact Sheet March 2022 Proper Use of Modifiers 59 & –X{EPSU}. https://www.cms.gov/files/document/mln1783722-proper-use-modifiers-59-xepsu.pdf

BENCHMARK™ BMX96®
Access System



ACCESS25™
Delivery Microcatheter



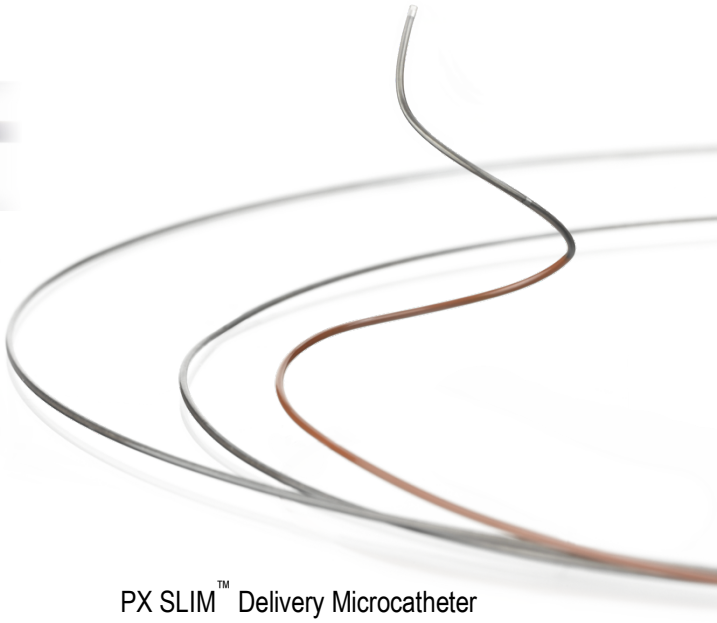
BENCHMARK BMX®81

SMART COIL®

SMART COIL
Detachment Handle

Swift™ Coil

Penumbra Coil 400™



PX SLIM™ Delivery Microcatheter

Reimbursement Inquiries: reimbursement@penumbrainc.com

The reimbursement information is provided for illustrative purposes only and does not constitute reimbursement or legal advice. Providers are responsible for consulting payers and reimbursement specialists regarding coding, coverage and reimbursement and for submitting appropriate coding and information for services provided.

Facility Coding and Payment

ICD-10-PCS Procedure Codes (hospital inpatient only)

03LG3DZ	Occlusion of Intracranial Artery with Intraluminal Device, Percutaneous Approach
03LH3DZ	Occlusion of Right Common Carotid Artery with Intraluminal Device, Percutaneous
03LJ3DZ	Occlusion of Left Common Carotid Artery with Intraluminal Device, Percutaneous
03LK3DZ	Occlusion of Right Internal Carotid Artery with Intraluminal Device, Percutaneous
03LL3DZ	Occlusion of Left Internal Carotid Artery with Intraluminal Device, Percutaneous
03LM3DZ	Occlusion of Right External Carotid Artery with Intraluminal Device, Percutaneous Approach
03LN3DZ	Occlusion of Left External Carotid Artery with Intraluminal Device, Percutaneous
03LP3DZ	Occlusion of Right Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LQ3DZ	Occlusion of Left Vertebral Artery with Intraluminal Device, Percutaneous Approach
03LR3DZ	Occlusion of Face Artery with Intraluminal Device, Percutaneous Approach
03LS3DZ	Occlusion of Right Temporal Artery with Intraluminal Device, Percutaneous
03LT3DZ	Occlusion of Left Temporal Artery with Intraluminal Device, Percutaneous

References & Sources

- HIPPS (Inpatient) Federal Register/ Vol. 89, No. 192/ Thursday, October 3, 2024
- ICD-10-CM 2025 ICD-10-CM Complete Official Codebook. American Medical Association. Copyright ©2025 Optum360, LLC.
- ICD-10-PCS 2025 ICD-10-PCS Complete Official Codebook. American Medical Association. Copyright ©2025 Optum360, LLC.

Neurovascular Coil Embolization

MS-DRG	Description	2025 National Medicare Payment*
20	Intracranial Vascular Procedures w/ PDX Hemorrhage w/ MCC	$57,367
21	Intracranial Vascular Procedures w/ PDX Hemorrhage w/ CC	$39,338
22	Intracranial Vascular Procedures w/ PDX Hemorrhage w/o MCC or CC	$25,126
25	Craniotomy and Endovascular Intracranial Procedures w/ MCC	$31,827
26	Craniotomy and Endovascular Intracranial Procedures w/ CC	$21,767
27	Craniotomy and Endovascular Intracranial Procedures w/o MCC or CC	$17,562

2025 Inpatient rates in effect from October 1, 2024 – September 30, 2025
(M)CC = (major) complications and/or comorbidities. Complete list available at: http://www.cms.hhs.gov/AcuteInpatientPPS
*Rates reflect FY 2025 National Medicare payment rates for hospitals submitting quality data and meaningful EHR users. Hospitals that do not submit quality data or are not meaningful EHR users may see decreased payment.

Costs for the Penumbra SMART COIL and Penumbra Coil 400 Embolization System can be categorized into the following revenue codes:

- **0270** Medical/surgical supply
- **0272** Sterile supply
- **0278** Other implants
- **0279** Other supplies/devices

Product	Suggested HCPCS
Coils	C1889 - Implantable/insertable device, not otherwise classified
Detachment Handle	NONE

HCPCS Codes are not separately reimbursed for hospital outpatient procedures. However, the Centers for Medicare & Medicaid Services (CMS) requires outpatient hospitals to bill the appropriate HCPCS codes for devices used as part of a procedure. CMS no longer requires procedures to have specific device edits as CMS has determined hospitals are experienced enough with this practice and are capable of applying the appropriate HCPCS codes on claims with the related procedures.
It is the responsibility of the provider to determine the appropriate coding when billing a claim.

Physician Coding and Payment

Physician Payment

- Based on RBRVS relative weights per CPT® code × $ conversion factor
- Payments vary based on geographic location

CPT Code	Mod	Description	2025 National Medicare Payment[a]	Work RVU[a]
61624		Transcatheter permanent occlusion or embolization (e.g., for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; central nervous system (intracranial, spinal cord)	$1,131.93	20.12
61626		Transcatheter permanent occlusion or embolization (e.g., for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method; non-central nervous system, head or neck (extracranial, brachiocephalic branch)	$877.98	16.60
75894	-26	Transcatheter therapy, embolization, any method, radiological supervision and interpretation	$69.23	1.31
75898	-26	Angiography through existing catheter for follow-up study for transcatheter therapy, embolization or infusion, other than for thrombolysis	$87.67	1.65

a. The 2025 physician payment rates are reflective of the Calendar Year 2025 Medicare Physician Fee Schedule (MPFS) Final Rule, which was published in Federal Register, Vol. 89, No. 236, Monday, December 9, 2024. Payments listed are national unadjusted fee schedule rates and are subject to change due to CMS' quarterly fee schedule updates and correction notices. Actual payments to physicians may also vary based on locality.

"26" modifier identifies the professional component

References & Sources

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- MPFS (Physician) — Federal Register/ Vol. 89, No. 236 / Monday, December 9, 2024.

Modifier 59 - Distinct Procedural Service

Modifier 59 is used to identify procedures/services, other than Evaluation and Management (E/M) services, that are not normally reported together, but are appropriate under specific circumstances.

Modifier 51 - Multiple Procedures

Modifier 51 is used to identify certain procedures subject, under Medicare, to multiple payment reduction when billed the same day as a different session or patient encounter. The primary and most significant procedure is paid in full while each subsequent procedure is appended with modifier 51 and is subject to a 50% payment reduction.

References & Sources

- Modifier 59 — MLN1783722 Fact Sheet March 2022 Proper Use of Modifiers 59 & –X{EPSU}. https://www.cms.gov/files/document/mln1783722-proper-use-modifiers-59-xepsu.pdf
- Modifier 51 — Medicare Quarterly Provider Compliance Newsletter. Guidance to Address Billing Errors. Volume 4, Issue 3, Page 14. April 2014. https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Fast-Facts/Proper-Use-of-Modifier-51.html

Indications for Use

For the complete Penumbra IFU Summary Statements, please scan QR code or visit: https://www.peninc.info/risk

Reimbursement Inquiries: reimbursement@penumbrainc.com

Reimbursement For USA only.

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Caution: Federal law restricts these devices to sale by or on the order of a physician. Prior to use, please refer to the Instructions for Use for complete product indications, contraindications, warnings, precautions, potential adverse events, and detailed instructions for use.

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