CERENOVUS

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CERENOVUS

STROKE SOLUTIONS

2020 ISCHEMIC STROKE REIMBURSEMENT GUIDE

Physician and Facility

CONTENTS

EMBOTRAP® II & EMBOTRAP® III REVASCULARIZATION DEVICES

The EMBOTRAP® II and EMBOTRAP™ III Revascularization Devices are intended to restore blood flow in the neurovasculature by removing thrombus in patients experiencing ischemic stroke within 8 hours of symptom onset. Patients who are ineligible for intravenous tissue plasminogen activator (IV t-PA) or who fail IV t-PA therapy are candidates for treatment.

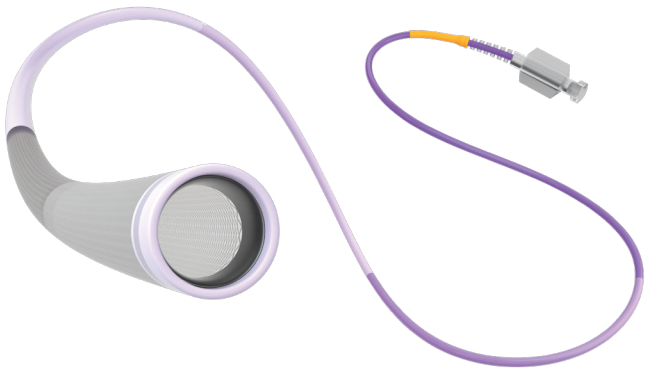
The EMBOTRAP® II & EMBOTRAP® III Revascularization Devices have a dual-layer design to engage and grip clots differently, resulting in successful revascularization in acute ischemic stroke patients. Open, articulated outer cages serve to engage and grip the clot and maintain wall apposition during retrieval. The closed cell inner channels secure and stabilize the thrombus during retrieval. Distal closed-end mesh maintain control of clot during retrieval.

EMBOTRAP® II

EMBOTRAP® III

CERENOVUS LARGE BORE CATHETER ASPIRATION CATHETER FOR USE IN DIRECT ASPIRATION FOR REVASCULARIZATION

The Cerenovus Large Bore Catheter, with the Cerenovus Aspiration Tubing Set and the NOUVAG Vacuson 60 aspiration pump (or equivalent aspiration pump), is indicated for use in the revascularization of patients with acute ischemic stroke secondary to intracranial large vessel occlusive disease (within the internal carotid, middle cerebral – M1 and M2 segments, basilar, and vertebral arteries) within 8 hours of symptom onset. Patients who are ineligible for intravenous tissue plasminogen activator (IV t-PA) or who fail IV t-PA therapy are candidates for treatment.



PHYSICIAN SERVICES

AMA CPT Professional 2020 Guide notes, CPT code 61645 is inclusive of selective catheterization, diagnostic angiography and all subsequent angiography. This includes the associated radiological supervision and interpretation, fluoroscopic guidance, neurologic and hemodynamic monitoring of the patient, closure of the arteriotomy by manual pressure via arterial closure device or suture.

AMA CPT also instructs, not to report CPT code 61645 in conjunction with CPT codes 36221, 36222, 36223, 36224, 36225, 36226, 37184, 61630, 61635, 61650, or 61651 for the same vascular territory.

Finally, for reporting purposes AMA CPT has divided the intracranial arteries into three territories. CPT code 61645 may be reported once for all territories treated.

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

The CPT® Code and the Medicare national average payment rates for reference when reporting the treatment of ischemic stroke with CERENOVUS products are outlined below.

CPT® Code	Description	2020 Facility RVUs	2020 Medicare National Average Payment[1]
61645	Percutaneous arterial transluminal mechanical thrombectomy and/or infusion for thrombolysis, intracranial, any method, including diagnostic angiography, fluoroscopic guidance, catheter placement, and intraprocedural pharmacological thrombolytic injection(s)	24.19	$873

HOSPITAL INPATIENT SERVICES

Medicare reimburses inpatient hospital services under the Inpatient Prospective Payment System (IPPS), which bases payment on MS-DRGs (Medicare Severity Diagnosis Related Groups).

The table below lists common MS-DRGs which may be assigned when conducting neurovascular procedures in the inpatient setting:

MS-DRG	Description	2020 Relative Weight	2020 Medicare National Average Payment[2]
	Mechanical Thrombectomy		
023	Craniotomy with major device implant or acute complex CNS principal diagnosis with MCC or chemotherapy implant or epilepsy with neurostimulator	5.6171	$35,184
024	Craniotomy with major device implant/acute complex CNS principal diagnosis without MCC	4.0165	$25,158
	Thrombolytic Agent		
061	Ischemic stroke, precerebral occlusion or transient ischemia with thrombolytic agent with MCC	2.7935	$17,498
062	Ischemic stroke, precerebral occlusion or transient ischemia with thrombolytic agent with CC	2.0112	$12,598
063	Ischemic stroke, precerebral occlusion or transient ischemia with thrombolytic agent without CC/MCC	1.6808	$10,528
	Medical Management		
064	Intracranial hemorrhage or cerebral infarction with MCC	1.8748	$11,743
065	Intracranial hemorrhage or cerebral infarction with CC or t-PA in 24 hours	1.0277	$6,437
066	Intracranial hemorrhage or cerebral infarction without CC/MCC	0.7170	$4,491

CC=Complications or Comorbidities MCC=Major Complications or Comorbidities

PROCEDURE CODES

Medicare uses The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) and Procedure Coding System (PCS) codes to identify diagnoses and procedures in the hospital inpatient setting. Hospitals must report the principal diagnosis using the appropriate ICD-10-CM code, as well as any secondary diagnoses — some of which may be considered CCs or MCCs for MS-DRG assignment.

The principal diagnosis is defined in the Uniform Hospital Discharge Data Set (UHDDS) as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care." The circumstances of inpatient admission always govern the selection of the principal diagnosis.

For patient admissions involving procedures, hospitals must also report ICD-10-PCS procedure code(s) for the surgical and other procedures as well as ICD-10-CM diagnosis codes.

The following table lists some commonly used ICD-10-PCS codes for mechanical thrombectomy procedures:

ICD-10-PCS Code	Description
Mechanical Thrombectomy with Stent Retriever	
03CG3Z7	Extirpation of Matter from Intracranial Artery using Stent Retriever, Percutaneous Approach
03CH3Z7	Extirpation of Matter from Right Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CJ3Z7	Extirpation of Matter from Left Common Carotid Artery using Stent Retriever, Percutaneous Approach
03CK3Z7	Extirpation of Matter from Right Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CL3Z7	Extirpation of Matter from Left Internal Carotid Artery using Stent Retriever, Percutaneous Approach
03CM3Z7	Extirpation of Matter from Right External Carotid Artery using Stent Retriever, Percutaneous Approach
03CN3Z7	Extirpation of Matter from Left External Carotid Artery using Stent Retriever, Percutaneous Approach
03CP3Z7	Extirpation of Matter from Right Vertebral Artery using Stent Retriever, Percutaneous Approach
03CQ3Z7	Extirpation of Matter from Left Vertebral Artery using Stent Retriever, Percutaneous Approach
Mechanical Thrombectomy with Aspiration	
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
Thrombolytic Agent	
3E03317	Introduction of Other Thrombolytic into Peripheral Vein, Percutaneous Approach

DIAGNOSIS CODES

The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes entered on hospital and physician claims are important in conveying information about the patient's condition to payers. All healthcare providers must report the principal diagnosis using the appropriate ICD-10-CM code, as well as any secondary diagnoses. Payers use this information to evaluate the medical necessity for the episode of care and the appropriateness of the treatment the patient received.

Diagnosis codes should be reported to the highest level of specificity available — a code is invalid if it has not been coded to the full number of digits required for that code.

The table below includes examples only of ICD-10-CM diagnosis codes associated with ischemic stroke.

ICD-10-CM Code	Description
I63.00	Cerebral infarction due to thrombosis of unspecified precerebral artery
I63.011	Cerebral infarction due to thrombosis of right vertebral artery
I63.012	Cerebral infarction due to thrombosis of left vertebral artery
I63.013	Cerebral infarction due to thrombosis of bilateral vertebral arteries
I63.019	Cerebral infarction due to thrombosis of unspecified vertebral artery
I63.02	Cerebral infarction due to thrombosis of basilar artery
I63.031	Cerebral infarction due to thrombosis of right carotid artery
I63.032	Cerebral infarction due to thrombosis of left carotid artery
I63.033	Cerebral infarction due to thrombosis of bilateral carotid arteries
I63.039	Cerebral infarction due to thrombosis of unspecified carotid artery
I63.10	Cerebral infarction due to embolism of unspecified precerebral artery
I63.111	Cerebral infarction due to embolism of right vertebral artery
I63.112	Cerebral infarction due to embolism of left vertebral artery
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery
I63.12	Cerebral infarction due to embolism of basilar artery
I63.131	Cerebral infarction due to embolism of right carotid artery
I63.132	Cerebral infarction due to embolism of left carotid artery
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries
I63.139	Cerebral infarction due to embolism of unspecified carotid artery
I63.30	Cerebral infarction due to thrombosis of unspecified cerebral artery
I63.311	Cerebral infarction due to thrombosis of right middle cerebral artery
I63.312	Cerebral infarction due to thrombosis of left middle cerebral artery
I63.313	Cerebral infarction due to thrombosis of bilateral middle cerebral arteries
I63.319	Cerebral infarction due to thrombosis of unspecified middle cerebral artery

ICD-10-CM Code	Description
I63.321	Cerebral infarction due to thrombosis of right anterior cerebral artery
I63.322	Cerebral infarction due to thrombosis of left anterior cerebral artery
I63.323	Cerebral infarction due to thrombosis of bilateral anterior cerebral arteries
I63.329	Cerebral infarction due to thrombosis of unspecified anterior cerebral artery
I63.331	Cerebral infarction due to thrombosis of right posterior cerebral artery
I63.332	Cerebral infarction due to thrombosis of left posterior cerebral artery
I63.333	Cerebral infarction due to thrombosis of bilateral posterior cerebral arteries
I63.339	Cerebral infarction due to thrombosis of unspecified posterior cerebral artery
I63.341	Cerebral infarction due to thrombosis of right cerebellar artery
I63.342	Cerebral infarction due to thrombosis of left cerebellar artery
I63.343	Cerebral infarction due to thrombosis of bilateral cerebellar arteries
I63.349	Cerebral infarction due to thrombosis of unspecified cerebellar artery
I63.39	Cerebral infarction due to thrombosis of other cerebral artery
I63.131	Cerebral infarction due to embolism of right carotid artery
I63.132	Cerebral infarction due to embolism of left carotid artery
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries
I63.139	Cerebral infarction due to embolism of unspecified carotid artery
I63.40	Cerebral infarction due to embolism of unspecified cerebral artery
I63.411	Cerebral infarction due to embolism of right middle cerebral artery
I63.412	Cerebral infarction due to embolism of left middle cerebral artery
I63.413	Cerebral infarction due to embolism of bilateral middle cerebral arteries
I63.419	Cerebral infarction due to embolism of unspecified middle cerebral artery
I63.42	Cerebral infarction due to embolism of anterior cerebral artery
I63.421	Cerebral infarction due to embolism of right anterior cerebral artery
I63.422	Cerebral infarction due to embolism of left anterior cerebral artery
I63.423	Cerebral infarction due to embolism of bilateral anterior cerebral arteries
I63.429	Cerebral infarction due to embolism of unspecified anterior cerebral artery
I63.43	Cerebral infarction due to embolism of posterior cerebral artery
I63.431	Cerebral infarction due to embolism of right posterior cerebral artery
I63.432	Cerebral infarction due to embolism of left posterior cerebral artery
I63.433	Cerebral infarction due to embolism of bilateral posterior cerebral arteries

ICD-10-CM Code	Description
I63.439	Cerebral infarction due to embolism of unspecified posterior cerebral artery
I63.44	Cerebral infarction due to embolism of cerebellar artery
I63.441	Cerebral infarction due to embolism of right cerebellar artery
I63.442	Cerebral infarction due to embolism of left cerebellar artery
I63.443	Cerebral infarction due to embolism of bilateral cerebellar arteries
I63.449	Cerebral infarction due to embolism of unspecified cerebellar artery
I63.49	Cerebral infarction due to embolism of other cerebral artery
I63.111	Cerebral infarction due to embolism of right vertebral artery
I63.112	Cerebral infarction due to embolism of left vertebral artery
I63.113	Cerebral infarction due to embolism of bilateral vertebral arteries
I63.119	Cerebral infarction due to embolism of unspecified vertebral artery
I63.131	Cerebral infarction due to embolism of right carotid artery
I63.132	Cerebral infarction due to embolism of left carotid artery
I63.133	Cerebral infarction due to embolism of bilateral carotid arteries
I63.139	Cerebral infarction due to embolism of unspecified carotid artery

SCENARIO

ACUTE ISCHEMIC STROKE AT CEREBRAL ARTERY

Products used: EMBOTRAP® II

PROCEDURE

Patient presents six hours after the onset of an acute ischemic stroke due to thrombosis of a cerebral artery. Physician performs a mechanical thrombectomy, the mechanical stent retriever is deployed across the occluding thrombus via a micro catheter. The mechanical stent retriever is unfolded to engage the thrombus. Once the thrombus is fully encapsulated in the stent mesh, the micro catheter and mechanical stent retriever are retracted slowly to remove the thrombus. After one pass, the clot was fully removed with no breakage or distal emboli.

PHYSICIAN PAYMENT EXAMPLE

CPT® Code	Description	2020 Medicare National Average Payment[1]
61645	Percutaneous arterial transluminal mechanical thrombectomy and/or infusion for thrombolysis, intracranial, any method, including diagnostic angiography, fluoroscopic guidance, catheter placement, and intraprocedural pharmacological thrombolytic injection(s)	$873
Total Physician Payment		**$873**

AMA CPT® instructs (Do not report 61645 in conjunction with 36221, 36222, 36223, 36224, 36225, 36226, 37184, 61630, 61635, 61650, or 61651, for the same vascular territory)

CPT® Codes 75894 and 75898 are mutually exclusive to CPT® code 61645 and are not separately reported.

FACILITY PAYMENT EXAMPLE

ICD-10-CM Diagnosis Code and Description	ICD-10-PCS Procedure Code and Description	MS-DRG and Description	2020 Medicare National Average Payment
I63.30 Cerebral infarction due to thrombosis of unspecified cerebral artery	**03CG3Z7** Extirpation of Matter from Intracranial Artery using Stent Retriever, Percutaneous Approach	**023** Craniotomy with major device implant or acute CNS principal diagnosis with MCC* or chemo implant or epilepsy with neurostimulator	**$35,184**
Total Hospital Payment			**$35,184**

* MCC: Major Comorbid Condition

MODIFIERS

A modifier provides a way to indicate that a service or procedure that has been performed has been altered by some specific circumstance but not changed in its definition of code. Modifiers also enable healthcare professional to effectively respond to payment policy requirements established by other entities. Some modifiers apply to either physician or hospital outpatient claims; some may only be relevant for one or the other. The table below is a list of some of the CPT and HCPCS modifiers which may be common to procedures associated with CERENOVUS products.

Modifier	Description
22	Increased Procedural Service: When the work required to provide a service is substantially greater than typically required, it may be identified by adding modifier 22 to the usual procedure code. Documentation must support the substantial additional work and the reason for the additional work (ie, increased intensity, time, technical difficulty of procedure, severity of patient's condition, physical and mental effort required). **Note: This modifier should not be appended to an E/M service.**
50	Bilateral Procedures: Unless otherwise identified in the listings, bilateral procedures that are performed at the same operative session should be identified by adding modifier 50 to the appropriate five digit ode.
51	Multiple Procedures: When multiple procedures, other than E/M services, Physical Medicine and Rehabilitation services or provision of supplies (e.g. vaccines), are performed at the same session by the same individual, the primary procedure or service may be reported as listed. The additional procedure(s) or service(s) may be identified by appending modifier 51 to the additional procedure or service code(s). Note: This modifier should not be appended to designated "add-on" codes (see Appendix D of the current CPT Manual).
59	Distinct Procedural Service: Under certain circumstances, it may be necessary to indicate that a procedure or service was distinct or independent from other non-E/M services performed on the same day. Modifier 59 is used to identify procedures/services, other than E/M services, that are not normally reported together, but are appropriate under the circumstances. Documentation must support a different session, different procedure or surgery, different site or organ system, 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 individual. However, when another already established modifier is appropriate it should be used rather than modifier 59. Only if no more descriptive modifier is available and the use of the modifier 59 best explains the circumstances should modifier 59 be used. Note: Modifier 59 should not be appended to an E/M service. To report a separate and distinct E/M service with a non-E/M service performed on the same date, see modifier 25.

HCPCS CODES[5]

Many hospitals look to manufacturers for coding advice specific to that manufacturer's products. This is especially true when it comes to "product codes" also known as C Codes. In general, most CERENOVUS products are used in the inpatient hospital setting. C Codes are categorized for use in the outpatient setting only and are not for use in the hospital inpatient setting.

Where there is a need to report a HCPCS device/C code **for internal purposes only** please reference the table of HCPCS device codes below.

HCPCS Code	Description
C1757	Catheter, thrombectomy/embolectomy

REVENUE CODES

Revenue codes allow hospitals to categorize services provided by revenue center for cost reporting. For Medicare, revenue codes must be included for each service on a CMS 1450 (UB-04) claim form.[6] Sample revenue codes that hospital facilities may use to track costs for services associated with neurovascular, nonsurgical procedures are listed in the following table.

Revenue Code	Description
0270	Medical/Surgical Supplies and Devices — General
0271	Medical/Surgical Supplies and Devices — Nonsterile Supply
0272	Medical/Surgical Supplies and Devices — Sterile Supply
0278	Medical/Surgical Supplies and Devices — Other Implants
0323	Radiology - Diagnostic — Arteriography
0360	Operating Room Services — General Classification

NOTES

Not all codes provided are applicable for the recommended uses of CERENOVUS products. The most appropriate code for the patient's clinical presentation must be selected. CPT® copyright 2019 American Medical Association. All rights reserved. CPT® is a registered trademark of the American Medical Association. Applicable FARS / DFARS Restrictions Apply to Government Use. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT®, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

SOURCES

1. Calendar Year 2020 Medicare Physician Fee Schedule, Final Rule [CMS-1715-F]. Federal Register, November 15, 2019. No geographic adjustments have been made to the reported payment rates..
2. Calendar Year 2020 Medicare Inpatient Final Rule, Final Rule [CMS-1716-F]. Federal Register, August 16, 2019. No geographic adjustments have been made to the reported payment rates.
3. On December 13, 2016, Section 3052 of the 21st Century Cures Act (Pub. L. No. 114-255) changed the List of Device Category Codes for Present or Previous Pass-Through Payment and Related Definitions. Effective January 1, 2018 https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complet-list-DeviceCats-OPPS.pdf
4. Medicare Claims Processing Manual, Chapter 25 — Completing and Processing the Form CMS-1450 Data Set, §75.4 — Form Locator 42.

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