



Liquid embolic system

2024 Coding and payment guide

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Physician coding and payment

Effective January 1, 2024 – December 31, 2024

Procedure	CPT procedure code and description ^a	Multiple procedure discounting	Medicare work RVUs (facility setting) ^b	Medicare national average for physician services provided in facility setting ^c
Liquid embolic system embolization procedure ¹	61624 Transcatheter permanent occlusion or embolization(eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method, central nervous system (intracranial, spinal cord)	Yes	20.12	\$1,138
	75894-26 Transcatheter therapy, embolization, any method, radiological supervision and interpretation	No	1.31	\$69
Pre-procedural balloon occlusion test ²	61623 Endovascular temporary balloon arterial occlusion, head or neck (extracranial/intracranial) including selective catheterization of vessel to be occluded, positioning and inflation of occlusion balloon, concomitant neurological monitoring, and radiologic supervision and interpretation of all angiography required for balloon occlusion and to exclude vascular injury post occlusion	Yes	9.95	\$564
Cerebral angiography ^{3,4}	36224 Selective catheter placement, internal carotid artery, unilateral, with angiography of the ipsilateral intracranial carotid circulation and all associated radiological supervision and interpretation, includes angiography of the extracranial carotid and cervicocerebral arch when performed	Yes	6.25	\$358
	36226 Selective catheter placement, vertebral artery, unilateral, with angiography of the ipsilateral vertebral circulation and all associated radiological supervision and interpretation, includes angiography of the cervicocerebral arch when performed	Yes	6.25	\$356
	+36228 Selective catheter placement, each intracranial branch of the internal carotid or vertebral arteries, unilateral, with angiography of the selected vessel circulation and all associated radiological supervision and interpretation (eg, middle cerebral artery, posterior inferior cerebellar artery)	No	4.25	\$242
Catherization ⁵	36216 Selective catheter placement, arterial system, initial second order thoracic or brachiocephalic branch, within a vascular family	Yes	5.27	\$261
	36217 Selective catheter placement, arterial system, initial third order or more selective thoracic or brachiocephalic branch, within a vascular family	Yes	6.29	\$320
Completion angiography ⁶	75898-26 Angiography through existing catheter for follow-up study for transcatheter therapy, embolization, or infusion other than for thrombolysis	No	1.65	\$88

Hospital inpatient coding and payment

Effective October 1, 2023 - September 30, 2024

ICD-10-PCS procedure codes^d

Procedure code	Procedure code description
Liquid embolic system procedure for arteriovenous malformation⁷	
03LG3DZ	Occlusion of intracranial artery with intraluminal device, percutaneous approach
Cerebral arteriography	
B31R1ZZ	Fluoroscopy of intracranial arteries using low osmolar contrast
B31RYZZ	Fluoroscopy of intracranial arteries using other contrast

MS-DRG assignments

MS-DRG ^e	MS-DRG title ^e	Relative weight ^e	Geometric mean length of stay ^e	Subject to PACT ^{e,8}	Medicare national average ^f
Ruptured brain arteriovenous malformation with hemorrhage					
020	Intracranial vascular procedures W principal diagnosis of hemorrhage W MCC	8.4524	10.2	No	\$59,180
021	Intracranial vascular procedures W principal diagnosis of hemorrhage W CC	6.1414	6.3	No	\$43,000
022	Intracranial vascular procedures W principal diagnosis of hemorrhage WO CC/MCC	3.9227	2.5	No	\$27,465
Non-ruptured brain arteriovenous malformation					
025	Craniotomy and endovascular intracranial procedures W MCC	4.4160	6.6	Yes	\$30,919
026	Craniotomy and endovascular intracranial procedures W CC	2.9531	3.1	Yes	\$20,676
027	Craniotomy and endovascular intracranial procedures WO CC/MCC	2.4329	1.6	Yes	\$17,034

Annual references

- a. CPT copyright 2024 [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.
- b. Centers for Medicare & Medicaid Services. [CY 2024 MPFS Final Rule Home Page](#). Although the total RVU consists of three components, only the physician work RVU is shown.
- c. Medicare national average payment is determined by multiplying the total RVU for a CPT code by the conversion factor, which is \$32.7375 for CY 2024. [CY 2024 MPFS final rule](#).
- d. Centers for Medicare & Medicaid Services. [2024 ICD-10 Procedure Coding System \(ICD-10-PCS\)](#).
- e. Center for Medicare & Medicaid Services. [FY 2024 IPPS Final Rule](#).
- f. Payment is based on the average standardized operating amount (\$6,497.77) plus the capital standard amount (\$503.83). The payment rate shown is the standardized amount for facilities with a wage index greater than one. The average standard amounts shown also assume facilities receive the full quality update. [FY 2024 IPPS Final Rule](#).

Coding footnotes

1. Component coding conventions apply to code 61624, so radiological supervision and interpretation is coded separately. Code 75894 represents the radiologic service linked to code 61624.
2. A balloon occlusion test may be performed immediately prior to embolization for AVM, to perform a separate and prolonged assessment of the neurological risks of permanently occluding the vessel. When performed, this may be coded and reported separately.
3. Codes 61624 and 75894 for embolization include intraprocedural road-mapping and fluoroscopic guidance necessary to perform the intervention. However, cerebral angiography may be coded separately with 61624 when it is truly diagnostic. *CPT manual instructions (Surgery section, Cardiovascular System chapter, Diagnostic Studies of Cervicocerebral Arteries heading); National Correct Coding Initiative (NCCI) Policy Manual, 1/1/2024, Chapter V, D13.*
4. A 4-view cervical and cerebral angiography, from catheter placement in the internal carotid arteries and vertebral arteries bilaterally, is typically coded 36224-50 and 36226-50. Add-on code +36228 would also be assigned if additional angiography was performed from catheter placement in, for example, the superior hypophyseal artery.
5. Catheter placement may be coded separately with 61624. Code 36216 would typically represent catheterization of the left internal carotid artery. Code 36217 would typically represent catheterization of the right internal carotid artery or higher level, eg, the middle cerebral artery on either side. However, if codes 61623 or 36224- 36226 are also assigned, catheterization may not be coded separately because it is included in these procedure codes.
6. The CMS Medically Unlikely Edit (MUE) for code 75898 is 2 units, although denials for units in excess of the MUE value may be appealed.
7. The liquid embolic system is considered a device for coding purposes because, while applied as a liquid, it solidifies after application per *Coding Clinic, 4th Q 2014, p.37*.
8. Post-Acute Care Transfer (PACT) status refers to selected DRGs in which payment to the hospital may be reduced when the patient is discharged by being transferred out. The DRGs impacted are those marked "Yes", and the patient must be transferred out before the geometric mean length of stay to certain post-acute care providers, including rehabilitation hospitals, long term care hospitals, skilled nursing facilities, hospice, or to home under the care of a home health agency. When these conditions are met, the DRG payment is converted to a per diem and payment is made at double the per diem rate for the first day plus the per diem rate for each remaining day up to the full DRG payment.