

02-33000-28

[Original Effective Date](#): 03/15/03

[Reviewed](#): 07/26/18

[Revised](#): 08/15/18

Subject: Extracranial Carotid Angioplasty/Stenting

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

[Position Statement](#)

[Billing/Coding](#)

[Reimbursement](#)

[Program Exceptions](#)

[Definitions](#)

[Related Guidelines](#)

[Other](#)

[References](#)

[Updates](#)

DESCRIPTION:

Combined with optimal medical management, carotid angioplasty with or without stenting has been evaluated as an alternative to carotid endarterectomy (CEA). Carotid artery stenting (CAS) involves the introduction of coaxial systems of catheters, microcatheters, balloons, and other devices. The procedure is most often performed through the femoral artery, but a transcervical approach can also be used to avoid traversing the aortic arch. The procedure typically takes 20 to 40 minutes. Interventionalists almost uniformly use an embolic protection device (EPD) to reduce the risk of stroke caused by thromboembolic material dislodged during CAS. EPDs can be deployed proximally (with flow reversal) or distally (using a filter). Carotid angioplasty is rarely performed without stent placement.

The proposed advantages of CAS over CEA include:

- General anesthesia is not used (although CEA can be performed under local or regional anesthesia)
- Cranial nerve palsies are infrequent sequelae (although almost all following CEA resolve over time)
- Simultaneous procedures may be performed on the coronary and carotid arteries.

Multiple CAS and EPDs have been approved by the U.S. Food and Drug Administration (FDA) through the premarket approval or the 510(k) process.

POSITION STATEMENT:

Carotid angioplasty with associated stenting and embolic protection **meets the definition of medical necessity** when **ALL** of the following criteria are met:

- 50% to 99% stenosis; **AND**

- Symptoms of focal cerebral ischemia (transient ischemic attack or monocular blindness) in previous 120 days, symptom duration less than 24 hours, or nondisabling stroke; **AND**
- Anatomic contraindication for carotid endarterectomy (such as prior radiotherapy or neck surgery, lesions surgically inaccessible, spinal immobility, or tracheostomy).

Carotid angioplasty with associated stenting and embolic protection is considered **experimental or investigational** for all other indications, including but not limited to, members with carotid stenosis who are suitable candidates for carotid endarterectomy or members with carotid artery dissection. There is insufficient clinical evidence to permit conclusions on net health outcomes.

Carotid angioplasty without associated stenting and embolic protection is considered **experimental or investigational** for all indications, including but not limited to, members with carotid stenosis who are suitable candidates for carotid endarterectomy or members with carotid artery dissection. The evidence is insufficient to determine the effects of the technology on health outcomes.

BILLING/CODING INFORMATION:

CPT Coding:

37215	Transcatheter placement of intravascular stent(s), cervical carotid artery, open or percutaneous, including angioplasty, when performed, and radiological supervision and interpretation; with distal embolic protection
37216	Transcatheter placement of intravascular stent(s), cervical carotid artery, open or percutaneous, including angioplasty, when performed, and radiological supervision and interpretation; without distal embolic protection
37217	Transcatheter placement of an intravascular stent(s), intrathoracic common carotid artery or innominate artery by retrograde treatment, open ipsilateral cervical carotid artery exposure, including angioplasty, when performed, and radiological supervision and interpretation

ICD-10 Diagnosis Codes That Support Medical Necessity:

I65.21 – I65.29	Occlusion and stenosis of carotid artery
-----------------	--

REIMBURSEMENT INFORMATION:

CPT codes 37215 and 37216 include all ipsilateral selective carotid catheterization, all diagnostic imaging for ipsilateral, cervical and cerebral carotid arteriography, and all related radiological supervision and interpretation.

CPT code 37217 indicates the procedure is performed transcervically or by retrograde approach, but is considered carotid stenting.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products:

The following National Coverage Determination (NCD) was reviewed on the last guideline reviewed date: Percutaneous Transluminal Angioplasty (20.7) located at cms.gov.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

[Endovascular Procedures for Intracranial Arterial Disease \(Atherosclerosis and Aneurysms\) and Extracranial Vertebral Artery Disease, 02-61000-35](#)

OTHER:

None applicable.

REFERENCES:

1. American College of Cardiology Foundation; American Society of Interventional & Therapeutic Neuroradiology; Society for Cardiovascular Angiography and Interventions; Society for Vascular Medicine and Biology; Society of Interventional Radiology, Bates ER, Babb JD, Casey DE Jr, Cates CU, Duckwiler GR, Feldman TE, Gray WA, Ouriel K, Peterson ED, Rosenfield K, Rundback JH, Safian RD, Sloan MA, White CJ. ACCF/SCAI/SVMB/SIR/ASITN 2007 clinical expert consensus document on carotid stenting: a report of the American College of Cardiology Foundation Task Force on Clinical Expert Consensus Documents (ACCF/SCAI/SVMB/SIR/ASITN Clinical Expert Consensus Document Committee on Carotid Stenting). J Am Coll Cardiol. 2007 Jan 2; 49(1): 126-70.
2. Blue Cross Blue Shield Association Medical Policy Reference Manual 7.01.69 Extracranial Carotid Artery Stenting, 05/18.
3. Blue Cross Blue Shield Association. Technology Evaluation Center (TEC). Angioplasty and Stenting of the Cervical Carotid Artery with Embolic Protection of the Cerebral Circulation. TEC Assessments 2009; Volume 24, Tab 12.
4. Blue Cross Blue Shield Association "Angioplasty and Stenting of the Cervical Carotid Artery with Distal Embolic Protection of the Cerebral Circulation" TEC Assessment 2005; Volume 19, No. 15.
5. Brott TG, Halperin JL, et al; 2011 ASA/ACCF/AHA/AANN/AANS/ACR/ASNR/CNS/SAIP/SCAI/SIR/SNIS/SVM/SVS Guideline on the Management of Patients With Extracranial Carotid and Vertebral Artery Disease; Stroke. Aug 2011;42(8):e420-463.
6. CaRESS Steering Committee. Carotid Revascularization Using Endarterectomy or Stenting Systems (CaRESS) phase I clinical trial: 1-year results. J Vasc Surg. 08/05; 42(2): 213-9.
7. Centers for Medicare & Medicaid Services (CMS), NCD for Percutaneous Transluminal Angioplasty (20.7); accessed at cms.gov.
8. Chaturvedi S, Bruno A, Feasby T, Holloway R, Benavente O, Cohen SN, Cote R, Hess D, Saver J, Spence JD, Stern B, Wilterdink J; Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Carotid endarterectomy-an evidence-based review: report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. Neurology. 09/27/05; 65(6): 794-801.

9. Chaturvedi S; Fessler R. "Angioplasty and stenting for stroke prevention: good questions that need answers". *Neurology* 2002; 59(5): 664-8.
10. Connors JJ 3rd, Sacks D, Furlan AJ, Selman WR, Russell EJ, Stieg PE, Hadley MN, Wojak JC, Koroshetz WJ, Heros RC, Strother CM, Duckwiler GR, Durham JD, Tomsick TO, Rosenwasser RH, McDougall CG, Haughton VM, Derdeyn CP, Wechsler LR, Hudgins PA, Alberts MJ, Raabe RD, Gomez CR, Cawley CM 3rd, Krol KL, Futrell N, Hauser RA, Frank JI; American Academy of Neurology; American Association of Neurological Surgeons; American Society of Interventional and Therapeutic Neuroradiology; American Society of Neuroradiology; Congress of Neurological Surgeons; AANS/CNS Cerebrovascular Section; Society of Interventional Radiology; NeuroVascular Coalition Writing Group. Training, competency, and credentialing standards for diagnostic cervicocerebral angiography, carotid stenting, and cerebrovascular intervention: a joint statement from the American Academy of Neurology, the American Association of Neurological Surgeons, the American Society of Interventional and Therapeutic Neuroradiology, the American Society of Neuroradiology, the Congress of Neurological Surgeons, the AANS/CNS Cerebrovascular Section, and the Society of Interventional Radiology. *Neurology*. 01/25/05; 64(2): 190-8.
11. Coward LJ, Featherstone RL, Brown MM. Percutaneous transluminal angioplasty and stenting for vertebral artery stenosis. *The Cochrane Database of Systematic Reviews* 2005, Issue 2. Art. No.: CD000516. DOI: 10.1002/14651858.CD000516.pub2.
12. Coward LJ, Featherstone RL, Brown MM. Percutaneous transluminal angioplasty and stenting for carotid artery stenosis. *The Cochrane Database of Systematic Reviews* 2004, Issue 2. Art. No.: CD000515. DOI: 10.1002/14651858.CD000515.pub2.
13. Coward LJ, Featherstone RL, Brown MM. Safety and efficacy of endovascular treatment of carotid artery stenosis compared with carotid endarterectomy: a Cochrane systematic review of the randomized evidence. *Stroke* 04/05; 36(4): 905-11.
14. Creager MA, Goldstone J, Hirshfeld JW Jr, Kazmers A, Kent KC, Lorell BH, Olin JW, Pauly RR, Rosenfield K, Roubin GS, Sicard GA, White CJ, Merli FG, Rodger GP, Tracy CM, Weitz HH; American College of Cardiology; American Heart Association; American College of Physicians Task Force on Clinical Competence; Society for Cardiovascular Angiography and Interventions; Society for Vascular Medicine and Biology; Society for Vascular surgery. ACC/ACP/SCAI/SVMB/SVS Clinical Competence Statement on vascular medicine and catheter-based peripheral vascular interventions. Report of the American College of Cardiology/American Heart Association/American College of Physicians Task Force on Clinical Competence (ACC/ACP/SCAI/SVMB/SVS Writing Committee to develop a clinical competence statement on peripheral vascular disease). *Am Coll Cardiol*. 08/18/04; 44(4): 941-57.
15. Institute for Clinical Systems Improvement (ICSI). Technology Assessment Report: Carotid, vertebral and intracranial artery angioplasty and stenting. Bloomington, MN: Institute for Clinical Systems Improvement (ICSI), June 2006.
16. Jim J, Rubin BG, et al, Society for Vascular Surgery (SVS) Vascular Registry evaluation of comparative effectiveness of carotid revascularization procedures stratified by Medicare age. *J Vasc Surg* 2012; 55:1313-21; accessed at gfaesse.at 02/18/15.
17. Lewy EI, Mocco J, Samuelson RM, et al, Optimal Treatment of Carotid Artery Disease, *J Am Coll Cardiol* 2008; 51; 979-985, accessed at content.onlinejacc.org on 03/19/09.
18. Mantese VA, et al, The Carotid Revascularization Endarterectomy Versus Stenting Trial (CREST): Stenting Versus Carotid Endarterectomy for Carotid Disease, *Stroke* 2010; 41;531 - 534.
19. McCabe DJ, Pereira AC, Clifton A, Bland JM, Brown MM; CAVATAS Investigators. Restenosis after carotid angioplasty, stenting, or endarterectomy in the Carotid and Vertebral Artery Transluminal Angioplasty Study (CAVATAS). *Stroke*. 02/05; 36(2): 281-6.

20. Mukherjee D, Yadav JS. "Percutaneous treatment of carotid stenosis". *Cardiology Clinics* 2002; 20(4).
21. Mullenix PS, Andersen CA, et al. "Carotid endarterectomy remains the gold standard". *Am J Surg* 2002; 183(5): 580-3.
22. National Institute for Clinical Excellence (NICE). Carotid artery stent placement for carotid stenosis. 08/04.
23. Rhee-Moore SJ, DeRubertis BG, Lam RC, et al, Periprocedural Complication Rates are Equivalent Between Symptomatic and Asymptomatic Patients Undergoing Carotid Angioplasty and Stenting, *Ann Vasc Surg.* 2008 Mar; 22(2): 233-7.
24. Silver FL, Mackey A, Clark WM et al. Safety of Stenting and Endarterectomy by Symptomatic Status in the Carotid Revascularization Endarterectomy Versus Stenting Trial (CREST). *Stroke* 2011; accessed at ahajournals.org 02/18/15.
25. Sidawy AN, Zwolak RM, White RA, et al, Risk-Adjusted 30-Day Outcomes of Carotid Stenting and Endarterectomy: Results from the SVS Vascular Registry, *J Vasc Surg.* 2009 Jan; 49(1): 71-9.
26. Tice JA, Carotid Artery Stenting in Patients with Carotid Artery Stenosis, California Technology Assessment Forum, 10/13/10.
27. U.S. Food and Drug Administration (FDA), accessed at fda.gov.
28. Wholey MH, Barbato JE, Al-Khoury GE, Treatment of Asymptomatic Carotid Disease with Stenting: Pro, *Semin Vasc Surg.* 2008 Jun; 21(2): 95-9.
29. Yadav, JS, Wholey MH, et al. "Protected Carotid-Artery Stenting versus Endarterectomy in High-Risk Patients". *N Engl J Med* 2004; 351: 1493-501.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 07/26/18.

GUIDELINE UPDATE INFORMATION:

03/15/03	New Medical Coverage Guideline.
03/15/04	Review and revision; consisting of updated references.
01/01/05	Annual HCPCS update; consisting of deletion of 0005T, 0006T and 0007T and addition of 0075T, 0076T, 37215 and 37216.
05/15/05	Review and revision; consisting of updated references and MCG name change.
03/15/06	Review and revision; consisting of updated references and addition of coverage criteria.
08/15/07	Review and revision; consisting of updated references and reformatted guideline.
05/15/09	Biennial review: MCG title, description section, position statement, reimbursement information and updated references.
05/15/11	Biennial review; position statement maintained, formatting changes, references updated.
05/15/14	Revision; position statement, description and coding section, guideline title, and

	references updated; formatting changes.
01/01/15	Annual HCPCS update. Added code 37218; revised codes 37215-37217, 0075T-0076T.
04/15/15	Review; position statements maintained; coding (codes 0075T-0076T removed) and references updated.
07/15/17	Revision; position statements and references updated; formatting changes.
08/15/18	Revision; position maintained; description, coding, and references updated.