Cohere Medical Policy - Arterial Stenting, Other

Clinical Guidelines for Medical Necessity Review

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Important Notices

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Guideline Information:

Specialty Area: Cardiovascular Disease
Guideline Name: Cohere Medical Policy - Arterial Stenting, Other
Literature review current through: 11/1/2024
Document last updated: 12/12/2024
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17yo)

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Medical Necessity Criteria

Service: Arterial Stenting, Other

Recommended Clinical Approach:

Arterial stent placement is indicated in a variety of clinical scenarios to treat both aneurysmal and occlusive arterial pathology. There are (2) types of arterial stents: (1) Bare metal stents; (2) Covered stents (a bare metal stent covered with fabric or graft material). Stents are further sub-classified as either balloon expandable or self-expanding. Lastly, bare metal stents may also be coated with a drug that is intended to reduce the risk of restenosis.

Generally speaking, stents are placed via a transcatheter route, but they can also be placed through an open approach (e.g., arterial cutdown). Exceptions to the scope of this policy include lower extremity arterial occlusive disease, extracranial carotid artery occlusive disease, extracranial vertebral artery occlusive disease, intrathoracic carotid artery occlusive disease, intracranial arterial occlusive disease, and coronary artery disease.

Medical Necessity Criteria

Indications

- ➔ **Arterial stenting** is considered appropriate if **ANY** of the following is **TRUE**:
  - ◆ The patient has **ANY** of the following aneurysmal conditions[6-7]:
    - Any symptomatic aneurysm; **OR**
    - Asymptomatic lower extremity aneurysmal disease as indicated by **ANY** of the following:
      - An iliac artery aneurysm greater than 3 cm in diameter; **OR**
      - A common femoral artery aneurysm greater than 2.5 cm in diameter; **OR**
      - A profunda femoral artery aneurysm greater than 2 cm in diameter; **OR**
      - A superficial femoral artery (SFA) aneurysm greater than 2 times the diameter of the normal native SFA (with or without mural thrombus); **OR**

        - A popliteal artery aneurysm greater than or equal to 2 cm in diameter (with or without mural thrombus) with documentation that the patient has a high surgical risk[12]; **OR**
    - Asymptomatic upper extremity aneurysm; **OR**
    - Asymptomatic visceral artery aneurysm as indicated by **ANY** of the following:
        - Renal artery aneurysms greater than 3 cm in diameter (and renal artery aneurysms of any size in women of childbearing age); **OR**
        - Splenic artery aneurysms greater than 3 cm in diameter (and splenic artery aneurysms of any size in women of childbearing age); **OR**
        - All splenic artery pseudoaneurysms; **OR**
        - Hepatic artery aneurysms greater than 2 cm in diameter or a hepatic artery aneurysm that enlarges by more than 0.5 cm in a year[13]; **OR**
        - Gastric, gastroepiploic, pancreaticoduodenal, and gastroduodenal aneurysms of any size[13]; **OR**
        - Superior mesenteric artery aneurysms of any size[13]; **OR**
        - Celiac artery aneurysms greater than 2 cm in diameter[13]; **OR**
- The patient has symptomatic upper extremity arterial occlusive disease indicated by **ALL** of the following:
    - Subclavian, axillary, or brachial artery stenosis (greater than 50% diameter reduction or 75% cross-sectional area stenosis); **AND**
    - **ANY** of the following:
        - Lifestyle-limiting, exercise-induced ipsilateral upper extremity fatigue; **OR**
        - Limb-threatening ischemia of the upper extremity (e.g., rest pain, ulceration, tissue loss, or gangrene); **OR**
        - Subclavian steal syndrome; **OR**
        - Subclavian artery occlusive disease causing cardiac ischemia in patients with a prior (and patent) ipsilateral internal mammary artery to coronary artery bypass; **OR**

- Visceral occlusive disease, as indicated by **ANY** of the following:
  - Symptomatic acute or chronic mesenteric ischemia; **OR**
  - Symptomatic renal artery stenosis (RAS) with **ANY** of the following[3-4]:
    - Bilateral RAS with **ALL** of the following:
      - Greater than 70% stenosis; **AND**
      - Intolerance to **OR** insufficient blood pressure response to guideline medical therapy (GDMT)(e.g., angiotensin-converting enzyme [ACE] inhibitors, angiotensin II receptor blockers [ARB], calcium channel blockers, diuretics); **OR**
    - Unilateral RAS with intolerance to GDMT (e.g., increased serum creatinine level upon initiation of a renin-angiotensin system inhibitor, or blood pressure does not respond to therapy); **OR**
    - Chronic end-stage renal disease (ESRD) with hemodialysis dependence less than or equal to 3 months; **OR**
    - Progressive renal functional impairment determined to be secondary to renal artery stenosis; **OR**
    - Unilateral renal artery stenosis (greater than 70%) in a uninephric patient; **OR**
    - Recurrent flash pulmonary edema or refractory heart failure secondary to renal artery occlusive disease; **OR**
- The patient has complex congenital heart disease, including but not limited to **ANY** of the following:
  - Pulmonary artery stenosis[14-17]; **OR**
  - Aortic coarctation[14,18-21]; **OR**
  - Patent ductus arteriosus (PDA); **OR**
- Bare metal or covered stent placement may be clinically indicated in **ANY** of the following peri-procedural clinical scenarios:
  - Acute arterial occlusion; **OR**
  - Flow-limiting dissection; **OR**
  - Elastic recoil or refractory spasm; **OR**
  - Residual stenosis greater than 30%; **OR**
  - Trans-stenotic resting pressure gradient greater than 5 mmHg; **OR**

- Covered stent placement or stent graft placement may be clinically indicated in **ANY** of the following peri-procedural clinical scenarios:
  - Arterial perforation; **OR**;
  - Arterial occlusion; **OR**
  - Arterial pseudoaneurysm; **OR**
  - Arteriovenous fistula; **OR**
- Repeat or secondary stenting is appropriate if **ANY** of the following is **TRUE**[11,18,22]:
  - Restenosis; **OR**
  - Suboptimal result; **OR**
  - Stent fracture (in association with restenosis or another complication such as pseudoaneurysm); **OR**
  - Stent recoil; **OR**
  - Re-coarctation of the aorta; **OR**
  - Impending or documented bypass graft failure; **OR**
- Asymptomatic peripheral artery occlusive disease with a documented need for intervention.

Non-Indications

➔ **Arterial stenting** is not considered appropriate if **ANY** of the following is **TRUE**:

- Known allergic reactions to stent or stent graft material (e.g., nitinol, dacron, expanded polytetrafluoroethylene [ePTFE]).

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
37236	Transcatheter placement of an intravascular stent(s) (except lower extremity artery(s) for occlusive disease, cervical carotid, extracranial vertebral or intrathoracic carotid, intracranial, or coronary), open or percutaneous, including radiological supervision and interpretation and including all angioplasty within the same vessel, when performed; initial artery
37237	Transcatheter placement of an intravascular stent(s)

	(except lower extremity artery(s) for occlusive disease, cervical carotid, extracranial vertebral or intrathoracic carotid, intracranial, or coronary), open or percutaneous, including radiological supervision and interpretation and including all angioplasty within the same vessel, when performed; each additional artery (List separately in addition to code for primary procedure)

Medical Evidence

The American College of Cardiology (ACC), American Heart Association (AHA), Society for Cardiovascular Angiography and Interventions (SCAI), Society of Interventional Radiology (SIR), and Society for Vascular Medicine (SVM) published the *Appropriate Use Criteria for Peripheral Artery Intervention* in 2018. Stenting is supported for the treatment of renal artery stenosis; recommendations align with evidence from the randomized CORAL trial (Stenting and Medical Therapy for Atherosclerotic Renal-Artery Stenosis). Patients with hypertension may benefit from renal stenting when outcomes are not achieved after taking the maximum dose of three prescribed antihypertensive medications. The report also notes the need for research on various modalities for in-stent stenosis and failure of arterial grafts.[11] Importantly, these guidelines also emphasize the relative benefits of endovascular intervention - such as stenting - over traditional open procedures. They cite, for example, that iliac artery stenting has excellent durability similar to surgical intervention but carries the additional benefit of an improved safety profile compared to surgical revascularization.

Although stenting is considered comparable to surgical intervention in many settings, some challenges associated with stenting may occur. Restenosis occurs with variable frequency depending on the anatomical site of treatment and, if unresolved, can be a life-limiting complication for patients who suffer critical limb ischemia and subsequent limb loss and the associated cardiovascular consequences. Frequent clinical reassessment is recommended to promote limb salvage and mitigate mortality.

The Society for Cardiovascular Angiography and Interventions (SCAI) published an *Expert Consensus Statement for Renal Artery Stenting Appropriate Use.* Clinical trials support stenting, including the CORAL trial. The procedure has a low complication rate and positive outcomes.[4] The SCAI also published *Appropriate Use Criteria for Peripheral Arterial Interventions: An Update.* The document also discusses aorto-iliac, femoral-popliteal, infra-popliteal, and renal arterial circulation.[6]

As a final note, lower extremity occlusive peripheral artery disease - particularly mild or asymptomatic diseases - is not considered within this

guideline because stenting is not an effective or adequate treatment as compared to lifestyle modification with pharmacological therapy or surgical therapy for more advanced disease.

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Clinical Guideline Revision History/Information

Original Date: September 25, 2023		
Review History		
Version 2	12/12/2024	Annual policy review and restructure: • Updated recommended clinical approach to the current format. • Consolidated upper extremity bullet points. • Consolidated aneurysmal indications into one bullet. • Replaced prior mesenteric ischemia indication with appropriate (e.g., non-emergent, non-acute) criteria. • Added indication for secondary or repeat stenting. • Removed one non-indication which was already covered by the choice of CPT codes. • Updated medical evidence section. • Updated references.