



**Cohere Medical Policy -
Peripheral Atherectomy, Non-Lower Extremity**
Clinical Guidelines for Medical Necessity Review

Version: 3

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Important Notices

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Guideline Information:

Specialty Area: Cardiovascular Disease

Guideline Name: Cohere Medical Policy - Peripheral Atherectomy, Non-Lower Extremity

Type: Adult (18+ yo) | Pediatric (0-17yo)

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Medical Necessity Criteria

Service: Peripheral Atherectomy, Non-Lower Extremity

Description

Atherectomy is a minimally invasive procedure that removes blockages in blood vessels to re-establish normal blood flow. The procedure generally involves the removal of atheromatous plaque from within a blood vessel and uses a catheter fitted with a cutting blade, laser, or grinding burr.^{1,2}

Peripheral atherectomy is an adjunct tool purported to aid in the management of challenging calcified coronary disease.³⁻⁵

Medical Necessity Criteria

Indications

Peripheral atherectomy, non-lower extremity is considered appropriate if **ANY** of the following is **TRUE**:

- This procedure is clinically unproven and not medically necessary. There is inconclusive evidence of its effectiveness.

Non-Indications

Peripheral atherectomy, non-lower extremity is not considered appropriate if **ANY** of the following is **TRUE**:

- This is not applicable, as there are no indications.

Level of Care Criteria

None

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
0234T	Transluminal peripheral atherectomy, open or percutaneous, including radiological supervision and interpretation; renal artery
0235T	Transluminal peripheral atherectomy, open or percutaneous, including radiological supervision and interpretation; visceral artery (except renal), each vessel
0236T	Transluminal peripheral atherectomy, open or percutaneous, including radiological supervision and interpretation of the abdominal aorta
0237T	Transluminal peripheral atherectomy, open or percutaneous, including radiological supervision and interpretation; brachiocephalic trunk and branches, each vessel

Medical Evidence

Huber et al. (2021) provided practice guidelines for diagnosing and treating patients with chronic mesenteric ischemia (CMI) caused by atherosclerosis. The authors, including a committee of vascular surgeons, conducted a systematic review to identify the optimal technique for revascularization. The committee recommended that patients with symptoms consistent with CMI should undergo an expedited workup, including a computed tomography arteriogram to exclude other potential causes of CMI. Significant arterial occlusive disease in the mesenteric vessels, particularly the superior mesenteric artery, is consistent with a diagnosis of CMI. Revascularization should primarily target the superior mesenteric artery. Endovascular revascularization with a balloon-expandable covered intraluminal stent is recommended as the initial treatment, with open repair in select younger patients and patients who are not endovascular candidates. Long-term surveillance is recommended following revascularization and in asymptomatic patients with severe mesenteric occlusion. An endovascular-first approach is recommended if symptoms recur following revascularization due to stenoses.⁴

Usai et al. (2020) conducted a retrospective review on patients at two institutions to evaluate the performance of less invasive endovascular stent therapy versus open surgical revascularization in patients with subclavian artery atherosclerotic disease (SAAD). Reintervention-free survival (RFS) was the primary endpoint of the study, while the secondary endpoints included primary patency (PPR) and secondary patency (SPR) rates, overall survival (OS) times, and time to reintervention. The median time to follow-up was 87 months in the surgical group versus 27 months in the endovascular group. At 98 months, RFS was significantly higher in the surgical group, although OS did not differ significantly between the two groups. Open surgical repair was also associated with a reduced reintervention rate. At 98 months, PPR was 96% in the surgery group and 65% in the endovascular group, but SPR did not differ significantly. The authors concluded that surgical treatment was associated with higher patency and lower reintervention than endovascular treatment.⁵

Diaz et al. (2020) presented a case report on laser atherectomy to treat in-stent restenosis of the superior mesenteric artery in a 53-year-old male with chronic mesenteric ischemia caused by severe in-stent restenosis who experienced abdominal pain and weight loss. The authors used a 0.9 mm laser catheter with low energy and pulse rate, together with balloon therapy. Based on the patient's improved symptoms following revascularization, the authors conclude that treating severe in-stent restenosis of the superior mesenteric artery using laser atherectomy is safe and can result in a favorable outcome when conventional percutaneous therapies fail.²

Aboyans et al. (2018) documented diagnostic methods and therapeutic recommendations for atherosclerotic disease in several anatomic regions, including mesenteric, renal, and upper extremity arteries. For acute or chronic mesenteric artery disease (MAD), characterized by high mortality and underdiagnosis, the authors recommend endovascular surgery in most cases because a less invasive option is preferred in patients who are often frail. In chronic MAD, open surgery provides the advantage of durability. In acute embolic occlusion, open and endovascular surgery have comparable success rates. The authors recommend first-line endovascular therapy for revascularization in patients with acute thrombotic occlusion of the superior mesenteric artery. In patients with acute embolic occlusion of the superior mesenteric artery, they recommend both endovascular therapy and open surgery. The authors note that in patients with atherosclerotic renal artery disease (RAD), defined by greater than 60% renal arterial stenosis, renal revascularization generally does not improve blood pressure or renal or cardiovascular outcomes. Upper extremity artery disease (UEAD) due to atherosclerosis is most common at the level of the brachiocephalic trunk and the subclavian and axillary arteries. Aboyans et al. note that revascularization can be proposed for severe or disabling symptoms, bilateral stenosis or stenosis with ipsilateral arteriovenous fistula for dialysis, or in patients with upcoming coronary artery bypass grafting, or patients who have already undergone such surgery with evidence of myocardial ischemia. When revascularization surgery is considered, both endovascular and open options can be proposed based on the characteristics of the lesion and the patient's risk.¹

Parikh et al. (2014) report renal artery stenting has emerged as the predominant revascularization strategy in most patients with

hemodynamically significant atherosclerotic renal arterial stenosis, despite considerable debate regarding the role of medical therapy versus revascularization in patients with renovascular hypertension. In the consensus statement from the Society for Cardiovascular Angiography and Interventions (SCAI), experts note that systolic and diastolic blood pressure show improvement with high safety profiles in patients with renal artery stenosis, according to prospective multicenter registries. The authors also note that although randomized controlled clinical trials comparing the efficacy of optimal medical therapy and renal stenting show limited benefit in preserving renal function following stenting, such trials often exclude patients who may benefit from renal artery stenting.⁶

Valle et al. (2017) described the use of orbital atherectomy in a renal artery in a 55-year-old male with severe renal artery stenosis and drug-refractory hypertension. The patient presented with severe calcification of the right renal artery. The authors initially used orbital atherectomy to modify the renal plaque, followed by stenting of the renal artery. Based on favorable follow-up angiography and clinical results, the authors conclude that using orbital atherectomy in the renal vasculature is safe and effective and warrants further evaluation.⁸

References

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Clinical Guideline Revision History/Information

Original Date: September 25, 2023		
Review History		
Version 2	12/11/2024	<p>Annual review</p> <p>Medical evidence rewritten to reflect CPT codes.</p> <p>Aligned to the current template.</p> <p>References updated.</p> <p>Standardized language updated for indications and non-indications.</p>
Version 3	12/11/2025	<p>Annual review.</p> <p>Made minor copy-editing changes to the Medical Evidence and Description sections.</p> <p>Replaced reference #2.</p>