Cohere Medicare Advantage Policy - Coronary Artery Atherectomy

Clinical Policy for Medical Necessity Review

Version: 3
Revision Date: June 26, 2025

Important Notices

Notices & Disclaimers:

GUIDELINES ARE SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION-MAKING OF END USERS.

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Other Notices:

Policy Information:

Specialty Area: Cardiovascular Disease
Policy Name: Coronary Artery Atherectomy
Type: [**X**] Adult (18+ yo) | [_] Pediatric (0-17 yo)

Table of Contents

Medical Necessity Criteria

Service: Coronary Artery Atherectomy

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.[19,20]

- Local Coverage Determination (LCD). Percutaneous coronary intervention (L33623)
  - Billing and Coding: Percutaneous coronary interventions (A56823)
- Local Coverage Determination (LCD). Percutaneous coronary interventions (L34761)
  - Billing and Coding: Percutaneous coronary interventions (A57479)

Description

Coronary artery atherectomy is a percutaneous interventional technique that removes or ablates coronary plaque. Atherectomy devices are typically used as adjuncts to balloon angioplasty and stenting procedures and are rarely used as a stand-alone treatment. They improve procedural success in patients with fibrotic or moderate to severely calcified lesions and in lesions that cannot be crossed or adequately expanded with a balloon.[1-7] Atherectomy may also be helpful to improve procedural success in eccentric lesions, lesions that are due to in-stent restenosis (rotational or laser)[8-11], aorto-ostial or branch ostial (bifurcation) lesions, and in under-expanded stents (rotational or laser).[11-13] Additional procedures sometimes used with atherectomy or to treat similar lesions include atherotomy devices (cutting and scoring balloons) and intracoronary lithotripsy.[14-17]

Medical Necessity Criteria

Indications

Coronary artery atherectomy is considered appropriate if **ALL** of the following are **TRUE**[19-20]:

- The patient has an indication for a percutaneous coronary intervention, including **ANY** of the following**:**
  - The patient has acute coronary syndrome (e.g., acute myocardial infarction, unstable angina)[19-20]; **OR**
  - The patient has a history of significant obstructive atherosclerotic disease[19-20]; **OR**
  - The patient has restenosis of a coronary artery previously treated with an intracoronary stent or other revascularization procedure[19-20]; **OR**
  - The patient has chronic angina[19-20]; **OR**
  - The patient has silent ischemia.[19-20]

Non-Indications

Coronary Artery Atherectomy is not considered appropriate if **ANY** of the following is **TRUE**[20]:

- A patient who can be managed medically[20]; **OR**
- A patient with stable coronary artery disease.[20]

Definitions

- **Chronic Coronary Disease (CCD):** CCD is a heterogeneous group of conditions that includes obstructive and nonobstructive coronary artery disease with or without previous myocardial infarction or revascularization, ischemic heart disease diagnosed only by noninvasive testing, and chronic angina syndromes with varying underlying causes.[25]

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
92924	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; single major coronary artery or branch
92925	Percutaneous transluminal coronary atherectomy, with coronary angioplasty when performed; each additional branch of a major coronary artery
92933	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch
92934	Percutaneous transluminal coronary atherectomy, with intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery
92941	Percutaneous transluminal revascularization of acute total/subtotal occlusion during acute myocardial infarction, coronary artery or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty, including aspiration thrombectomy when performed, single vessel
92943	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of intracoronary stent, atherectomy and angioplasty; single vessel
92944	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any

	combination of intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (list separately in addition to code for primary procedure)
C1724	Catheter, transluminal atherectomy, rotational
C9602	Percutaneous transluminal coronary atherectomy, with drug eluting intracoronary stent, with coronary angioplasty when performed; single major coronary artery or branch
C9603	Percutaneous transluminal coronary atherectomy, with drug-eluting intracoronary stent, with coronary angioplasty when performed; each additional branch of a major coronary artery
C9604	Percutaneous transluminal revascularization of or through coronary artery bypass graft (internal mammary, free arterial, venous), any combination of drug-eluting intracoronary stent, atherectomy and angioplasty, including distal protection when performed; single vessel
C9607	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; single vessel
C9608	Percutaneous transluminal revascularization of chronic total occlusion, coronary artery, coronary artery branch, or coronary artery bypass graft, any combination of drug-eluting intracoronary stent, atherectomy and angioplasty; each additional coronary artery, coronary artery branch, or bypass graft (list separately in addition to code for primary procedure)

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Evaluation of Clinical Harms and Benefits

Clinical determinations for Medicare Advantage beneficiaries are made in accordance with 42 CFR 422.101 guidance outlining CMS' required approach to decision hierarchy in the setting of NCDs/LCDs identified as being "not fully established". When clinical coverage criteria are "not fully established" Medicare Advantage organizations are instructed to create publicly accessible clinical coverage criteria based on widely-accepted clinical guidelines and/or scientific studies backed by a robust clinical evidence base. Clinical coverage criteria provided by Cohere Health in this manner include coverage rationale and risk/benefit analysis.

Clinical coverage criteria for coronary artery atherectomy were fully defined and established by NCDs and/or LCDs. Cohere Health did not supplement this policy with any additional criteria or interpretations.

Medical Evidence

Lawton et al. (2022) published a clinical practice guideline for the American College of Cardiology, the American Heart Association, and the Society for Cardiovascular Angiography and Interventions for coronary artery revascularization. It was recommended that in patients with significant left main disease, surgical revascularization is indicated. Percutaneous revascularization is a reasonable option to improve survival compared with medical therapy in selected patients with low to medium anatomic complexity of coronary artery disease and left main disease that is suitable for revascularization. In patients with stable ischemic heart disease, normal left ventricular ejection fraction, and triple vessel coronary artery disease, surgical revascularization may be reasonable, and the percutaneous revascularization survival benefit is uncertain.[1]

Mehanna et al. (2018) discuss the use of optical coherence tomography (OCT) in guiding percutaneous coronary intervention (PCI) for calcified lesions. The authors highlight the challenges associated with treating calcified coronary lesions, which can lead to suboptimal stent deployment and increased risk of adverse cardiovascular events. They emphasize the importance of understanding lesion morphology and composition to improve procedural outcomes. They review the utility of OCT, a high-resolution imaging modality, in assessing lesion characteristics such as calcium distribution, thickness, and morphology. By providing detailed visualization of the vessel wall, OCT enables better lesion assessment and facilitates optimal stent selection and deployment. The authors discuss the role of atherectomy devices in modifying calcified plaques before stent placement. They argue that OCT-guided atherectomy can improve procedural success by optimizing lesion preparation and ensuring adequate stent expansion. The group advocates for the integration of OCT into routine clinical practice for PCI in calcified lesions overall, citing its potential to enhance procedural outcomes and reduce the risk of complications.[21]

Whiteside and colleagues (2019) present evidence regarding using rotational atherectomy (RA) to treat underexpanded and undilatable coronary stents. The authors address the clinical challenge of managing stent underexpansion, a condition associated with increased risk of adverse

cardiovascular events. They propose RA as a potential solution to improve stent expansion and optimize procedural outcomes. The study reviews the outcomes of patients undergoing stent ablation with RA, focusing on procedural success rates, safety, and long-term efficacy. By analyzing data from a cohort of patients with under-expanded or undilatable stents, the authors evaluate the effectiveness of RA in achieving adequate stent expansion and restoring optimal coronary flow. Key findings from the study include improvements in angiographic parameters such as minimal lumen diameter and percent diameter stenosis following RA. Additionally, the authors report favorable clinical outcomes with low rates of major adverse cardiovascular events during follow-up. Appropriate patient selection and meticulous procedural technique are essential in achieving successful stent ablation with RA. Potential challenges and complications associated with the technique are discussed, emphasizing the need for careful risk assessment and management strategies. Overall, the evidence presented in the article suggests that RA represents a valuable therapeutic option for managing underexpanded and undilatable coronary stents, potentially improving clinical outcomes and reducing the need for repeat revascularization procedures.[13]

In a recent randomized controlled trial, Jurado-Román et al. (2025) compared rotational atherectomy (RA), excimer laser coronary angioplasty (ELCA), and intravascular lithotripsy (IVL) for the treatment of patients with calcified coronary stenosis. They found no significant differences among the three arms of the study concerning minimum stent area, procedural success rate, and complications.[23] Singh et al. (2025) studied the safety and efficacy of an integrated atherectomy and intravascular lithotripsy in severely calcified coronary lesions by conducting a systematic review and meta-analysis of the literature. They found a high procedural success rate during percutaneous coronary interventions. Still, the effectiveness of the combined strategy in terms of a low incidence of subsequent adverse cardiovascular events also had a significant risk for coronary artery perforation.[24]

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Clinical Guideline Revision History/Information

Original Date: June 03, 2024		
Review History		
Version 2	06/11/2024	422.101 Disclaimer Added
Version 3	06/26/2025	Annual review. Added LCD L33623 and LCD L34761. No changes in procedure codes. Added indications and non-indications from LCD L33623 and LCD L34761. Literature review - The medical evidence section (including references) has been updated.