LifeWise
Health Plan of Washington

MEDICAL POLICY – 7.01.594

Percutaneous Revascularization Procedures for Lower Extremity Peripheral Arterial Disease

BCBSA Ref. Policy: 7.01.178

Effective Date:	**Jan. 1, 2027***	RELATED MEDICAL POLICIES:
Last Revised:	Sep. 8, 2026	8.01.55 Stem Cell Therapy for Peripheral Arterial Disease
Replaces:	7.01.178	
*View the current policy here.		

Select a hyperlink below to be directed to that section.

POLICY CRITERIA | DOCUMENTATION REQUIREMENTS | CODING
RELATED INFORMATION | EVIDENCE REVIEW | REFERENCES | HISTORY | APPENDIX

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Introduction

Peripheral arterial disease (PAD) occurs when arteries in the lower body become narrowed or blocked due to plaque buildup, reducing blood supply and causing pain, cramping, or sores that don't heal. Percutaneous revascularization procedures for lower extremity PAD are minimally invasive treatments used to restore blood flow to the legs and feet. These procedures involve inserting a thin tube (catheter) through the skin into the blocked artery. Using imaging guidance, doctors use techniques such as:

- Angioplasty: Inflating a small balloon to open the artery.
- Stenting: Placing a metal mesh tube to keep the artery open.
- Atherectomy: Removing plaque from the artery walls.

These treatments are intended to improve circulation, relieve symptoms, and prevent serious complications, such as infections or amputations, without requiring open surgery. This policy describes when percutaneous revascularization procedures may be considered medically necessary.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Procedure	Medical Necessity
Percutaneous revascularization using: • **Atherectomy** • **Balloon angioplasty** • **Stent procedures**	**Percutaneous revascularization using balloon angioplasty, stent procedures, or atherectomy in individuals with chronic symptomatic lower extremity peripheral arterial disease may be considered medically necessary when the following criteria are met:** • Functionally limiting claudication (e.g., impairment of activities of daily living, difficulty ambulating) (see **Related Information**) **AND** • Inadequate response to 3 months of conservative therapy, including ALL of the following: ○ Participation in a 12-week structured exercise program (see **Related Information)** ○ Pharmacologic therapy (e.g., anti-platelet [aspirin, clopidogrel], cilostazol) ○ Documented discussion of the importance of smoking cessation and/or implemented plan to begin smoking cessation, if applicable **AND** • Documentation of occlusive arterial disease with one of the following: ○ Ankle-brachial index (ABI) ≤ 0.90 (i.e., resting or exercise) (see **Appendix**) ○ Monophasic waveform by ultrasound (see **Related Information**) **AND** • Confirmed anatomical location of significant occlusive disease (stenosis of >50%) by non-invasive or invasive evaluation (e.g.,

Procedure	Medical Necessity
	Duplex ultrasound, CT angiography, MR angiography) or contrast injection angiography **Percutaneous revascularization using balloon angioplasty, stent procedures, or atherectomy for treatment of chronic limb-threatening ischemia may be considered medically necessary when ALL the following criteria are met** • One or more of the following is present: ○ Ischemic rest pain ○ Non-healing wound(s)/ulcers (present for ≥2 weeks duration) ○ Gangrene in one or both legs **AND** • Documentation of occlusive arterial disease with one of the following: ○ Ankle-brachial index (ABI) ≤ 0.90 (i.e., resting or exercise) (see **Appendix**) ○ Monophasic waveform by ultrasound (see **Related Information**) **AND** • Confirmed anatomical location of significant occlusive disease (stenosis of >50%) by non-invasive or invasive evaluation (e.g., Duplex ultrasound, CT angiography, MR angiography) or contrast injection angiography **Percutaneous revascularization using balloon angioplasty, stent procedures, or atherectomy for treatment of acute limb ischemia may be considered medically necessary.**

Procedure	Not Medically Necessary
Percutaneous revascularization using: • **Atherectomy** • **Balloon angioplasty** • **Stent procedures**	**Percutaneous revascularization using balloon angioplasty, stent procedures, or atherectomy in individuals with asymptomatic lower extremity peripheral arterial disease is considered not medically necessary.**

Procedure	Investigational
Percutaneous revascularization using: • **Lithotripsy**	**Percutaneous revascularization using lithotripsy in individuals with lower extremity peripheral arterial disease is considered investigational in all situations.**
Endovenous femoropopliteal bypass using stent graft	**Endovenous femoropopliteal bypass using a stent graft in individuals with lower extremity peripheral artery disease is considered investigational in all situations (DETOUR procedure).**

Documentation Requirements

The patient's medical records submitted for review for all conditions should document that medical necessity criteria are met. The record should include the following:

- For chronic symptomatic lower extremity peripheral arterial disease with all of the following:
  - Functionally limiting claudication (e.g., impairment of activities of daily living, difficulty ambulating),

  AND
  - Inadequate response to 3 months of conservative therapy, including structured exercise, pharmacologic therapy (e.g., anti-platelet [aspirin, clopidogrel], cilostazol), and attempted smoking cessation, if applicable,

  AND
  - Documentation of occlusive arterial disease with one of the following:
    - Ankle-brachial index (ABI) ≤ 0.90 (i.e., resting or exercise)
    - Monophasic waveform by ultrasound,

  AND
  - Confirmed anatomical location of significant occlusive disease (stenosis of >50%) by non-invasive or invasive evaluation (e.g., Duplex ultrasound, CT angiography, MR angiography) or contrast injection angiography
- For chronic limb-threatening ischemia with all of the following:
  - One or more of the following is present:
    - Ischemic rest pain
    - Non-healing wound(s)/ulcers (present for ≥2 weeks duration)
    - Gangrene in one or both legs,

  AND
  - Documentation of occlusive arterial disease with one of the following:
    - Ankle-brachial index (ABI) ≤ 0.90 (i.e., resting or exercise)
    - Monophasic waveform by ultrasound,

Documentation Requirements

AND

- Confirmed anatomical location of significant occlusive disease (stenosis of >50%) by non-invasive or invasive evaluation (e.g., Duplex ultrasound, CT angiography, MR angiography) or contrast injection angiography

Coding

Code	Description
CPT	
37254	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37255	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure)
37256	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, initial vessel
37257	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure)
37258	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, initial vessel

Code	Description
37259	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure)
37260	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; complex lesion, initial vessel
37261	Revascularization, endovascular, open or percutaneous, iliac vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure)
37262	Intravascular lithotripsy(ies), iliac vascular territory, including all imaging guidance and radiological supervision and interpretation necessary to perform the intravascular lithotripsy(ies) within the same artery (List separately in addition to code for primary procedure)
37263	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37264	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure
37265	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, initial vessel

Code	Description
37266	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure
37267	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, initial vessel
37268	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to primary code)
37269	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; complex lesion, initial vessel
37270	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform stent placement and angioplasty, when performed, within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to primary code)
37271	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, initial vessel

Code	Description
37272	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to primary code)
37273	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty, when performed, within the same artery, unilateral; complex lesion, initial vessel
37274	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty, when performed, within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to primary code)
37275	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, initial vessel
37276	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy and angioplasty, when performed, within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to primary code)
37277	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to

Code	Description
	perform the stent placement, atherectomy and angioplasty, when performed, within the same artery, unilateral; complex lesion, initial vessel
37278	Revascularization, endovascular, open or percutaneous, femoral and popliteal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty when performed, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy and angioplasty, when performed, within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to primary code)
37279	Intravascular lithotripsy(ies), femoral and popliteal vascular territory, including all imaging guidance and radiological supervision and interpretation necessary to perform the Intravascular lithotripsy(ies), when performed, within the same artery (List separately in addition to primary code)
37280	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37281	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure
37282	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, initial vessel
37283	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure
37284	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision

Code	Description
	and interpretation necessary to perform the stent placement and angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37285	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement and angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure
37286	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement and angioplasty within the same artery, unilateral; complex lesion, initial vessel
37287	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement and angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure
37288	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37289	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure
37290	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy and angioplasty within the same artery, unilateral; complex lesion, initial vessel

Code	Description
37291	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the atherectomy, and angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure
37292	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy, and angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37293	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy, and angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure
37294	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy, and angioplasty within the same artery, unilateral; complex lesion, initial vessel)
37295	Revascularization, endovascular, open or percutaneous, tibial and peroneal vascular territory, with transluminal stent placement, with transluminal atherectomy, including transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the stent placement, atherectomy, and angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure
37296	Revascularization, endovascular, open or percutaneous, inframalleolar vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to

Code	Description
	perform the angioplasty within the same artery, unilateral; straightforward lesion, initial vessel
37297	Revascularization, endovascular, open or percutaneous, inframalleolar vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; straightforward lesion, each additional vessel (List separately in addition to code for primary procedure
37298	Revascularization, endovascular, open or percutaneous inframalleolar vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, initial vessel
37299	Revascularization, endovascular, open or percutaneous, inframalleolar vascular territory, with transluminal angioplasty, including all maneuvers necessary for accessing and selectively catheterizing the artery and crossing the lesion, including all imaging guidance and radiological supervision and interpretation necessary to perform the angioplasty within the same artery, unilateral; complex lesion, each additional vessel (List separately in addition to code for primary procedure
0505T	Endovenous femoral-popliteal arterial revascularization, with transcatheter placement of intravascular stent graft(s) and closure by any method, including percutaneous or open vascular access, ultrasound guidance for vascular access when performed, all catheterization(s) and intraprocedural roadmapping and imaging guidance necessary to complete the intervention, all associated radiological supervision and interpretation, when performed, with crossing of the occlusive lesion in an extraluminal fashion
0238T	Transluminal peripheral atherectomy, open or percutaneous, including radiological supervision and interpretation; iliac artery, each vessel
HCPCS	
C1604	Graft, transmural transvenous arterial bypass (implantable), with all delivery system components
C7531	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(ies), unilateral, with transluminal angioplasty with intravascular ultrasound (initial noncoronary vessel) during diagnostic evaluation and/or therapeutic intervention, including radiological supervision and interpretation
C7534	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(ies), unilateral, with atherectomy, includes angioplasty within the same vessel, when performed with intravascular ultrasound (initial noncoronary vessel) during diagnostic evaluation and/or therapeutic intervention, including radiological supervision and interpretation

Code	Description
C7535	Revascularization, endovascular, open or percutaneous, femoral, popliteal artery(ies), unilateral, with transluminal stent placement(s), includes angioplasty within the same vessel, when performed, with intravascular ultrasound (initial noncoronary vessel) during diagnostic evaluation and/or therapeutic intervention, including radiological supervision and interpretation
C9764	Revascularization, endovascular, open or percutaneous, lower extremity artery(ies), except tibial/peroneal; with intravascular lithotripsy, includes angioplasty within the same vessel(s), when performed
C9765	Revascularization, endovascular, open or percutaneous, lower extremity artery(ies), except tibial/peroneal; with intravascular lithotripsy, and transluminal stent placement(s), includes angioplasty within the same vessel(s), when performed
C9766	Revascularization, endovascular, open or percutaneous, lower extremity artery(ies), except tibial/peroneal; with intravascular lithotripsy and atherectomy, includes angioplasty within the same vessel(s), when performed
C9767	Revascularization, endovascular, open or percutaneous, lower extremity artery(ies), except tibial/peroneal; with intravascular lithotripsy and transluminal stent placement(s), and atherectomy, includes angioplasty within the same vessel(s), when performed
C9772	Revascularization, endovascular, open or percutaneous, tibial/peroneal artery(ies), with intravascular lithotripsy, includes angioplasty within the same vessel (s), when performed
C9773	Revascularization, endovascular, open or percutaneous, tibial/peroneal artery(ies); with intravascular lithotripsy, and transluminal stent placement(s), includes angioplasty within the same vessel(s), when performed
C9774	Revascularization, endovascular, open or percutaneous, tibial/peroneal artery(ies); with intravascular lithotripsy and atherectomy, includes angioplasty within the same vessel (s), when performed
C9775	Revascularization, endovascular, open or percutaneous, tibial/peroneal artery(ies); with intravascular lithotripsy and transluminal stent placement(s), and atherectomy, includes angioplasty within the same vessel (s), when performed

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Related Information

Definition of Terms

Claudication is pain or cramping in a muscle group (usually of the lower extremity or buttocks) that occurs with walking or exercise and is relieved with rest. It is a symptom of peripheral artery disease. The word is derived from the Latin term, “to limp.”

Monophasic waveform by ultrasound is an abnormal ultrasound finding that is seen downstream from stenoses or in collateral vessels formed around the occlusive disease.

Chronic Symptomatic Peripheral Arterial Disease

Diagnostic testing for suspected peripheral arterial disease (PAD) requires a multi-faceted approach that incorporates history and physical examination, ankle-brachial index (ABI), and additional physiological testing, as well as noninvasive and potentially invasive (angiography) imaging. Individuals with chronic symptomatic PAD report claudication or other non-joint-related exertional leg symptoms that limit walking performance.

Functional Status

Functional status is defined as an individual's ability to meet basic needs, fulfill usual roles, and maintain health and well-being (activities of daily living). Walking ability and performance, and mobility are components of functional status. Treadmill exercise ABI testing can be used to objectively assess functional status and walking performance. Among individuals with chronic symptomatic PAD, this exercise assessment can be used as a baseline measure of functional status and for evaluation of response to therapy.

Structured Exercise Programs for Peripheral Arterial Disease

A structured exercise program is an exercise program planned by a qualified health care professional that provides recommendations for exercise training with a goal of improving functional status over time. The program provides individualized recommendations for frequency, intensity, time, and type of exercise. Structured exercise programs are classified as supervised exercise therapy or structured community-based exercise programs. In supervised exercise therapy, training is performed for a minimum of thirty to fourty five minutes per sixty

minutes session. Supervised sessions are performed at least three times per week for a minimum of twelve weeks.

Shared Decision Making

Clinical practice guidelines state, "Patient-centered discussions are critical in making appropriate decisions regarding revascularization and for building a trusting longitudinal relationship. More than 70% of individuals prefer to have an active role in determining their treatment plan for claudication. Such discussions should be undertaken when considering whether to undergo a revascularization procedure, its timing, and approach for revascularization (i.e., endovascular or surgical), and should take into account the individual's goals, treatment preferences, and perception of risk. Individual engagement is also essential to facilitate smoking cessation, medication adherence, and participation in structured exercise."[1,]

Evidence Review

Description

Revascularization (either surgical or percutaneous) is a treatment option for certain individuals with lower extremity peripheral arterial disease. Percutaneous revascularization procedures include balloon angioplasty, stent procedures, and atherectomy. Lithotripsy is proposed as a vessel preparation option to facilitate definitive endovascular treatment in heavily calcified lesions.

Background

Peripheral Arterial Disease

Guidelines recognize four clinical subsets of peripheral arterial disease (PAD).[1,]

- Asymptomatic PAD is characterized by reporting of no leg symptoms. Individuals with asymptomatic PAD may adapt their activity to avoid leg pain. Those who report no exertional leg symptoms may develop symptoms during an objective walking test. These individuals have functional impairment that is comparable to those with claudication.

- Chronic symptomatic PAD (claudication) is characterized by exertional leg symptoms that can limit walking and resolve with rest. Typical claudication symptoms may be described as a pain, aching, cramping, or tired/fatigued feeling located in the buttocks, thigh, calf, or foot that occurs consistently during walking, does not start at rest, does not improve during walking, and is usually relieved within approximately ten minutes of rest. Leg symptom descriptors also include tingling, numbness, burning, throbbing, or shooting. Chronic symptomatic PAD is associated with significant functional (walking) impairment. It is estimated that only one-third of individuals with PAD present with symptoms of typical claudication, while most individuals with PAD present with other exertional leg symptoms not typical of claudication. All individuals with chronic symptomatic PAD, including those with atypical symptoms, have walking impairment.
- Chronic limb-threatening ischemia (CLTI) is a severe clinical subset of PAD, associated with ischemic rest pain, nonhealing wounds or ulcers, or gangrene with symptoms present longer than two weeks.
- Acute limb ischemia is the most severe clinical subset of PAD. It is characterized by a sudden decrease in arterial perfusion of the leg that threatens the viability of the limb. Causes of ALI include embolism, thrombosis within the native artery or at site of previous revascularization (graft or stent), trauma, peripheral aneurysm with distal embolization, or thrombosis. Severity is further classified using the Rutherford classification system (viable, salvageable/marginally threatened, salvageable/immediately threatened, irreversible.

Prevalence and Risk Factors

Individuals at risk for PAD are identified based on demographic features, cardiovascular risk factors, or the presence of atherosclerotic vascular disease in other vascular beds. Black race is associated with increased risk for PAD, even after adjustment for conventional risk factors, and is also associated with major adverse cardiovascular events (MACE) and major adverse limb events.

Screening and Diagnosis

Clinical assessment, including risk factor assessment, history, physical examination, and consideration of differential diagnoses, is performed before diagnostic testing.[2,3]

For individuals at increased risk of PAD, vascular examination with a focus on the lower extremities is recommended. After the history and physical examination identify individuals at risk for PAD and with history of physical examination symptoms or signs of PAD, diagnostic

testing to establish the diagnosis of PAD is performed. Diagnostic testing for suspected PAD incorporates history and physical examination, ankle-brachial index (ABI), and additional physiological testing, as well as noninvasive and potentially invasive (angiography) imaging.

Measurement of the ankle-brachial index (ABI) is the primary method for establishing the diagnosis of PAD. In individuals with history or physical examination findings suggestive of PAD, the resting ABI, with or without ankle pulse volume recordings (PVR) and/or Doppler waveforms, is recommended to establish the diagnosis.

The resting ABI is reported as abnormal ($\leq$0.90), borderline (0.91to 0.99), normal (1.00 to 1.40), or noncompressible (>1.40). In individuals with suspected chronic symptomatic PAD and normal or borderline resting ABI, exercise ABI can be performed.

Treatment

Standard treatment for claudication includes medical therapy, foot care, and structured exercise therapy.

Percutaneous revascularization includes catheter-based revascularization procedures using modalities such as percutaneous transluminal (balloon) angioplasty, drug-coated balloon angioplasty, stenting (bare-metal, drug-coated, or covered), and atherectomy.

Revascularization, either percutaneous or surgical, is the standard treatment for CLTI.

Summary of Evidence

For individuals who are adults with symptomatic lower extremity peripheral arterial disease (PAD) who receive percutaneous revascularization with balloon angioplasty, stent procedures, or atherectomy, the evidence includes randomized controlled trials (RCTs), observational studies, and systematic reviews. Relevant outcomes are overall survival, morbid events, functional outcomes, and treatment-related mortality and morbidity. Multiple studies have demonstrated that percutaneous and surgical revascularization for chronic symptomatic PAD can improve symptoms and quality of life in individuals who have not responded to guideline directed medical treatment, including structured exercise. Guidelines recommend that the choice to proceed to revascularization and selection of procedure should be a shared decision-making process, based on clinical presentation, including severity of symptoms and anticipated natural history; degree of functional limitation and quality of life impairment; response to medical therapy, including structured exercise; and the likelihood of a beneficial short- and longer-term

outcome, balanced against potential short-term (e.g., bleeding, infection, major adverse cardiovascular events [MACE]), and longer-term procedural risk. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are adults with chronic limb-threatening ischemia (CLTI) who receive percutaneous revascularization with balloon angioplasty, stent procedures, or atherectomy, the evidence includes RCTs, observational studies, and systematic reviews. Relevant outcomes are overall survival, morbid events, functional outcomes, and treatment-related mortality and morbidity. Revascularization is considered the standard treatment for individuals with CLTI to minimize tissue loss and preserve a functional limb and ambulatory status. Both endovascular and surgical revascularization have been demonstrated to be effective treatments for preventing amputation in CLTI. In a systematic review of 13 studies of individuals with CLTI enrolled in medical and angiogenic therapy trials who did not receive revascularization, a 22% all-cause mortality rate and a 22% rate of major amputation at a median follow-up of twelve months were observed. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are adults with acute limb ischemia who receive percutaneous revascularization with balloon angioplasty, stent procedures, or atherectomy, the evidence includes RCTs, observational studies, and systematic reviews. Relevant outcomes are overall survival, morbid events, functional outcomes, and treatment-related mortality and morbidity. A systematic review consisting of RCTs and observational studies demonstrated surgical revascularization is an effective treatment in individuals with acute limb ischemia. Thrombolysis was associated with a higher incidence of major vascular events compared to surgical treatment (6.5% vs 4.4%). Both thrombolysis and surgery have comparable limb salvage rates, but thrombolysis carries a higher risk of hemorrhagic complications. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are adults with symptomatic lower extremity PAD (PAD) who receive percutaneous revascularization using lithotripsy, the evidence includes one RCT and nonrandomized studies. Relevant outcomes are overall survival, morbid events, functional outcomes, and treatment-related mortality and morbidity. The RCT demonstrated primary patency at one year was superior in the lithotripsy group compared to the control group (80.5% vs 68.0%, P=.017). A major limitation of the study was a lack of comparison to other percutaneous revascularization procedures. The nonrandomized studies are limited by their lack of a control group, small sample sizes, and heterogeneity in clinical and procedural characteristics. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals with peripheral arterial disease who receive percutaneous revascularization using an endovenous femoropopliteal bypass procedure, the evidence includes a prospective, multicenter, single-arm study (DETOUR2) (Lyden et al.).[52] Relevant outcomes are safety, effectiveness, and treatment-related morbidity and mortality. The DETOUR system is a novel device for percutaneous transmural arterial bypass (PTAB) of the femoral-popliteal (FP) artery. It uses a stent routed through the femoral vein to restore blood flow to the leg. The study included 200 treated participants with Rutherford class 3 to 5 disease and long-segment (>200 mm) femoropopliteal lesions. At 3 years, primary patency was 58.2%, freedom from clinically driven target lesion revascularization was 66.8%, and freedom from major amputation was 97.9%. Symptomatic deep venous thrombosis occurred in 4.1% of participants, with no reported pulmonary emboli. Although the results suggest procedural durability in individuals with long and complex femoropopliteal lesions, the evidence is limited by the lack of a comparator group and absence of randomized controlled trials. Comparative studies are needed to determine whether the procedure improves net health outcomes compared with established treatment options. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who are adults with asymptomatic lower extremity PAD who receive percutaneous revascularization using any procedure, the evidence includes RCTs, observational studies, and systematic reviews. Relevant outcomes are overall survival, morbid events, functional outcomes, and treatment-related mortality and morbidity. Although some individuals with asymptomatic PAD will progress to symptomatic disease, there is no evidence that performing early invasive revascularization procedures leads to a reduction in the development of symptomatic disease. Further, there is evidence that individuals who have undergone a revascularization procedure are at increased risk of subsequent complications, including the need for additional subsequent revascularization procedures. Therefore, the risks of the procedure do not outweigh any proposed benefits. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this review are listed in **Table 1**.

Table 1. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT06315023	Prospective, Single Arm, Registry-based Study to Evaluate the Real-world Use of the DETOUR™ System in US Patients	450	Jun 2032
NCT06112171	Performance of the Shockwave Medical Peripheral Lithotripsy System vs Standard Balloon Angioplasty for Lesion Preparation Prior to Supera Stent Implantation in the Treatment of Symptomatic Severely Calcified Femoropopliteal Lesions in PAD (CRACK-IT)	120	Dec 2032
NCT06457685[a]	Pulse Intravascular Lithotripsy™ (Pulse IVL™) to Open Vessels With Calcific Walls and Enhance Vascular Compliance and Remodeling for Peripheral Artery Disease (POWER PAD 2)	115	Aug 2026
NCT05007925[a]	Prospective, Multi-center, Single-arm Study of the Shockwave Medical Peripheral Intravascular Lithotripsy (IVL) System for Treatment of Calcified Peripheral Arterial Disease (PAD) in Below-the-Knee (BTK) Arteries	250	Mar 2027

NCT: national clinical trial. [a] Denotes industry-sponsored or cosponsored trial.

Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a US professional society, an international society with US representation, or the National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American College of Cardiology/American Heart Association

In 2024, the American College of Cardiology (ACC)/American Heart Association (AHA) Joint Committee on Clinical Practice Guidelines published a guideline for the management of lower extremity peripheral artery disease PAD.[1,] The guideline was developed in collaboration with and endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation, American Podiatric Medical Association, Association of Black Cardiologists, Society for Cardiovascular Angiography and Interventions, Society for Vascular Medicine, Society for Vascular Nursing, Society for Vascular Surgery, Society of Interventional Radiology, and Vascular & Endovascular Surgery Society. The guideline included the following statements relevant to this policy (**Table 2** and **Table 3**):

Table 2. Revascularization for Asymptomatic Peripheral Artery Disease

Recommendation	Class of Recommendation[a]	Level of Evidence[b]
1. In patients with asymptomatic PAD, it is reasonable to perform revascularization procedures (endovascular or surgical) to reconstruct diseased arteries if needed for the safety, feasibility, or effectiveness of other procedures (e.g., transfemoral aortic valve replacement, mechanical circulatory support, endovascular aortic aneurysm repair).	2A	B-NR
2. In patients with asymptomatic PAD, revascularization procedures (endovascular or surgical) should not be performed solely to prevent progression of disease.	3	B-NR

PAD: peripheral artery disease.

[a]Class (strength) of recommendation: 1 (strong) = benefit >>> risk; 2a (moderate) = benefit >> risk; 2b (weak) = benefit ≥ risk; 3 (no benefit/moderate) = benefit = risk.

[b]Level (quality) of evidence: A = high-quality evidence from more than 1 RCT; B-R = moderate-quality evidence from 1 or more RCTs; B-NR = moderate-quality evidence from 1 or more well-designed, well-executed nonrandomized studies; C-LD = limited data; C-EO = expert opinion.

Table 3. Revascularization for Claudication (Chronic Symptomatic Peripheral Artery Disease)

Recommendation	Class of Recommendation[a]	Level of Evidence[b]
1. In patients with **functionally limiting claudication** who are being considered for revascularization, potential benefits with respect to QOL, walking performance, and overall functional status should be weighed against the risks and durability of intervention and possible need for repeated procedures	1	B-NR
2. In patients with **functionally limiting claudication** and an inadequate response to GDMT (including structured exercise), revascularization is a reasonable treatment option to improve walking function and QOL	2a	B-R
3. In patients with **claudication who have had an adequate clinical response to GDMT** (including structured exercise), revascularization is not recommended.	3: No Benefit	C-EO
4. In patients with **functionally limiting claudication and hemodynamically significant aortoiliac or femoropopliteal disease with inadequate response to GDMT** (including structured exercise), endovascular revascularization is effective to improve walking performance and QOL.	1	A
5. In patients with functionally limiting claudication and hemodynamically significant aortoiliac or femoropopliteal disease with inadequate response to GDMT (including structured exercise), surgical revascularization is reasonable if perioperative risk is acceptable, and technical factors suggest advantages over endovascular approaches	2a	B-NR
6. In patients with functionally limiting claudication and hemodynamically significant common femoral artery disease with inadequate response to GDMT (including structured exercise), surgical endarterectomy is reasonable, especially if endovascular approaches adversely affect profunda femoris artery pathways	2a	B-R
7. In patients with functionally limiting claudication and hemodynamically significant common femoral artery disease with inadequate response to GDMT (including structured exercise), endovascular approaches may be considered in those at high risk for surgical revascularization and/or if anatomical factors are	2b	B-R

favorable (i.e., no adverse effect on profunda femoris artery pathways).		
8. In patients with functionally limiting claudication and isolated hemodynamically significant infrapopliteal disease with inadequate response to GDMT (including structured exercise), the effectiveness of endovascular revascularization is unknown	2b	C-LD
9. In patients with functionally limiting claudication and isolated hemodynamically significant infrapopliteal disease with inadequate response to GDMT (including structured exercise), the effectiveness of surgical revascularization is unknown.	2b	C-LD

GDMT: guideline-directed medical therapy; PAD: peripheral artery disease; QOL: quality of life.

[a]Class (strength) of recommendation: 1 (strong) = benefit >>> risk; 2a (moderate) = benefit >> risk; 2b (weak) = benefit ≥ risk; 3 (no benefit/moderate) = benefit = risk.

[b]Level (quality) of evidence: A = high-quality evidence from more than 1 RCT; B-R = moderate-quality evidence from 1 or more RCTs; B-NR = moderate-quality evidence from 1 or more well-designed, well-executed nonrandomized studies; C-LD = limited data; C-EO = expert opinion.

The guideline states that "The appropriateness of particular endovascular therapies for the treatment of claudication is beyond the scope of this document but has been addressed in other multisocietal statements" and cites the statements detailed below.

In 2018, the American College of Cardiology, American Heart Association/Society for Cardiovascular Angiography and Intervention, Society of Interventional Radiology, and Society for Vascular Medicine published appropriate use criteria for peripheral artery intervention.[47,] Appropriate use scores for endovascular treatment of relevant indications are shown in **Table 4.**

Table 4. Appropriate Use Criteria for Peripheral Artery Intervention

Indication	Appropriate Use Score for Endovascular Treatment
Intermittent Claudication; No Prior Guideline-Directed Medical Therapy	Rarely Appropriate (2)

Intermittent Claudication Despite Guideline-Directed Medical Therapy—Stenotic Lesions	
Aortoiliac	Appropriate (8)
Superficial femoral artery and popliteal artery	Appropriate (7)
Below the knee	May Be Appropriate (5)
Intermittent Claudication Despite Guideline-Directed Medical Therapy—Chronic Total Occlusion	
Aortoiliac	Appropriate (7)
Superficial femoral artery and popliteal artery	May Be Appropriate (6)
Below the knee	May Be Appropriate (4)
Critical Limb Ischemia	
Aortoiliac	Appropriate (8.5)
Superficial femoral artery and popliteal artery	Appropriate (8)
Below the knee	Appropriate (8)
Access in Support of Other Life-Saving Interventions	
Access for coronary intervention	Appropriate (7)
Access for hemodynamic support	Appropriate (7)
Access for large vascular or valvular intervention	Appropriate (7)

The document also includes appropriate criteria for choice of endovascular procedure (atherectomy, balloon angioplasty, or stent) for different clinical situations, but does not mention lithotripsy.

Society for Interventional Radiology

In 2020, the Society for Interventional Radiology published guidelines on device selection in aorto-iliac arterial interventions.[48] The guidelines provide recommendations for the use of

balloon angioplasty, stent procedures, and atherectomy in different clinical situations. Although specific guidelines for lithotripsy are not mentioned, the document mentions lithotripsy under the "Adjunctive Therapies" section and note that long-term data is needed.

Society for Vascular Surgery

In 2015, the Society for Vascular Surgery published guidelines for the management of asymptomatic PAD and intermittent claudication.[2] Relevant recommendations are summarized below.

Asymptomatic Peripheral Artery Disease

3.1. We recommend multidisciplinary comprehensive smoking cessation interventions for individuals with asymptomatic PAD who use tobacco (repeatedly until tobacco use has stopped).1 A
3.2. We recommend providing education about the signs and symptoms of PAD progression to asymptomatic individuals with PAD. 1 Ungraded
3.3. We recommend against invasive treatments for PAD in the absence of symptoms, regardless of hemodynamic measures or imaging findings demonstrating PAD. 1 B

Intermittent Claudication- Invasive Treatments

5.1. We recommend endovascular therapy or surgical treatment of intermittent claudication (IC) for individuals with significant functional or lifestyle-limiting disability when there is a reasonable likelihood of symptomatic improvement with treatment, when pharmacologic or exercise therapy, or both, have failed, and when the benefits of treatment outweigh the potential risks. 1B

5.2. We recommend an individualized approach to select an invasive treatment for IC. The modality offered should provide a reasonable likelihood of sustained benefit to the individual (>50% likelihood of clinical efficacy for at least 2 years). For revascularization, anatomic patency (freedom from hemodynamically significant restenosis) is considered a prerequisite for sustained efficacy.

In 2022, the Society published Appropriate Use Criteria for Management of Intermittent Claudication.[49,] Revascularization was rated as B>R (benefit outweighs risk) for selected individuals with severe lifestyle-limiting intermittent claudication symptoms despite treatment with optimal medical therapy and an adequate trial of exercise. The panel noted, "specific types of endovascular interventions (e.g., angioplasty, stenting, atherectomy) were not included in these appropriate use criteria owing to the large number of additional scenarios that would be required. Furthermore, the amount and quality of data available regarding the outcomes of interventions for multilevel disease and specific types of endovascular interventions are limited. Thus, if included, the ratings would have relied primarily on expert opinion." Lithotripsy was not mentioned in the document.

In 2025, the Society published a focused update of recommendations related to the management of IC.[50] Relevant recommendations to this evidence review are below:

- In patients who are being considered for revascularization for IC, we recommend that shared decision-making conversations should include each of the following risks and benefits: mortality, major adverse cardiovascular events (MACE), major adverse limb events (MALE) (amputation, reintervention, acute limb ischemia [ALI]), functional gain, and health-related quality of life (HRQoL) anticipated after revascularization. Best practice statement.
- In patients who are being considered for revascularization for IC, we recommend that shared decision-making conversations involve an assessment of individual risk factors known to influence risks and benefits. These include key comorbidities (diabetes mellitus [DM], coronary artery disease [CAD], congestive heart failure [CHF], chronic obstructive pulmonary disease [COPD]), history of prior limb revascularization, anatomic complexity of disease (i.e., multi-level disease, long segment disease, chronic total occlusions), and procedural strategy (i.e., open surgery vs endovascular revascularization [ER]). Best practice statement.
- We recommend against performing revascularization in patients with asymptomatic PAD or IC based solely on hemodynamic measurements or imaging findings. There is no evidence to support the use of revascularization for modifying disease progression**.** Level of recommendation: grade 1; Level of evidence: C.
- In patients with IC and no signs of chronic limb-threatening ischemia (CLTI), we suggest against the use of infrapopliteal revascularization, either alone or in combination with a more proximal intervention, due to lack of evidence of benefit and potential harm. Level of recommendation: grade 2; Level of evidence: C.

National Institute for Health and Care Excellence (NICE)

In January of 2024, NICE published guidelines for Intravascular Lithotripsy for Calcified Arteries in Peripheral Arterial Disease. These guidelines state that "Intravascular lithotripsy for calcified arteries in peripheral arterial disease should only be used with special arrangements for clinical governance, consent, and audit or research."[53]

In August 2012 and updated December 2020, NICE published guidelines for Peripheral Arterial Disease: Diagnosis and Management. [54] The guideline includes the following recommendations: "Offer angioplasty for treating people with intermittent claudication only when:

- advice on the benefits of modifying risk factors has been reinforced
- a supervised exercise programme has not led to a satisfactory improvement in symptoms and
- imaging has confirmed that angioplasty is suitable for the person.

Do not offer primary stent placement for treating people with intermittent claudication caused by aorto-iliac disease (except complete occlusion) or femoro-popliteal disease.
Consider primary stent placement for treating people with intermittent claudication caused by complete aorto-iliac occlusion (rather than stenosis).
Use bare metal stents when stenting is used for treating people with intermittent claudication."

US Preventive Services Task Force Recommendations

In 2018, the US Preventive Services Task Force (USPSTF) concluded that the current evidence is insufficient to assess the balance of benefits and harms of screening for PAD and cardiovascular disease risk with the ankle-brachial index (ABI) in asymptomatic adults.[51]

Medicare National Coverage

There is no national coverage determination.

Regulatory Status

In 2016, the Shockwave Medical Peripheral Lithotripsy (IVL) System received 510(k) clearance (K161384) for lithotripsy-enhanced balloon dilatation of lesions, including calcified lesions, in the peripheral vasculature, including the iliac, femoral, ilio-femoral, popliteal, intrapopliteal, and renal arteries and is not for use in the coronary or cerebral vasculature.[55]

In July of 2018, the Shockwave M5 system **(K180958)** was approved for lithotripsy enhanced balloon dilatation of lesions, including calcified lesions, in the peripheral vasculature, including the iliac, femoral, ilio-femoral, popliteal, infra-popliteal, and renal arteries. Several other Shockwave Intravascular systems have been FDA approved since 2018 including the L6 system in August 2022 (**K221852**) and E8 system in March 2024 (**K240225**).

FDA Product Code: PPN

Initial clearance was based on a determination that the device was substantially equivalent to legally marketed predicate devices. The primary predicate for the Shockwave Medical Lithoplasty System is the Spectranetics, Inc. AngioSculpt PTA Scoring Balloon Catheter (**K142983**). FDA Product Code: PNO

Additional predicates were the Bard Peripheral Vascular VascuTrak PTA Dilatation Catheter (**K103459**) FDA Product Code: PNO; and the EKOS Corporation EKOS Lysus Micro-Infusion System (**K060422**).FDA Product Code: KRA . The FDA has approved several stent, stent systems, and catheter systems for the treatment of endovenous PAD. In June 2020, the DETOUR system (Endologix) received FDA designation as a Breakthrough Device. On June 7, 2023, the FDA granted full premarket approval of the DETOUR System (PMA P22021).

FDA Product Code: QWM

References

1. Gornik HL, Aronow HD, Goodney PP, et al. 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS Guideline for the Management of Lower Extremity Peripheral Artery Disease: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation. Jun 112024; 149(24): e1313-e1410. PMID 38743805.
2. Conte MS, Pomposelli FB, Clair DG, et al. Society for Vascular Surgery practice guidelines for atherosclerotic occlusive disease of the lower extremities: management of asymptomatic disease and claudication. J Vasc Surg. Mar 2015; 61(3 Suppl): 2S-41S. PMID 25638515.
3. Criqui MH, Matsushita K, Aboyans V, et al. Lower Extremity Peripheral Artery Disease: Contemporary Epidemiology, Management Gaps, and Future Directions: A Scientific Statement From the American Heart Association. Circulation. Aug 312021; 144(9): e171-e191. PMID 34315230.
4. Wardle BG, Ambler GK, Radwan RW, et al. Atherectomy for peripheral arterial disease. Cochrane Database Syst Rev. Sep 292020; 9(9): CD006680. PMID 32990327.
5. Ott I, Cassese S, Groha P, et al. Randomized Comparison of Paclitaxel-Eluting Balloon and Stenting Versus Plain Balloon Plus Stenting Versus Directional Atherectomy for Femoral Artery Disease (ISAR-STATH). Circulation. Jun 062017; 135(23): 2218-2226. PMID 28424222.

6. Zeller T, Langhoff R, Rocha-Singh KJ, et al. Directional Atherectomy Followed by a Paclitaxel-Coated Balloon to Inhibit Restenosis and Maintain Vessel Patency: Twelve-Month Results of the DEFINITIVE AR Study. Circ Cardiovasc Interv. Sep 2017; 10(9): e004848. PMID 28916599.

7. Dattilo R, Himmelstein SI, Cuff RF. The COMPLIANCE 360° Trial: a randomized, prospective, multicenter, pilot study comparing acute and long-term results of orbital atherectomy to balloon angioplasty for calcified femoropopliteal disease. J Invasive Cardiol. Aug 2014; 26(8): 355-60. PMID 25091093.

8. Shammas NW, Lam R, Mustapha J, et al. Comparison of orbital atherectomy plus balloon angioplasty vs. balloon angioplasty alone in patients with critical limb ischemia: results of the CALCIUM 360 randomized pilot trial. J Endovasc Ther. Aug 2012; 19(4): 480-8. PMID 22891826.

9. Shammas NW, Coiner D, Shammas GA, et al. Percutaneous lower-extremity arterial interventions with primary balloon angioplasty versus Silverhawk atherectomy and adjunctive balloon angioplasty: randomized trial. J Vasc Interv Radiol. Sep 2011; 22(9): 1223-8. PMID 21757372.

10. Nakamura S, Conroy RM, Gordon IL, et al. A randomized trial of transcutaneous extraction atherectomy in femoral arteries: intravascular ultrasound observations. J Clin Ultrasound. Oct 1995; 23(8): 461-71. PMID 7499516.

11. Vroegindeweij D, Tielbeek AV, Buth J, et al. Directional atherectomy versus balloon angioplasty in segmental femoropopliteal artery disease: two-year follow-up with color-flow duplex scanning. J Vasc Surg. Feb 1995; 21(2): 255-68; discussion 268-9. PMID 7853599.

12. Abouzid MR, Vyas A, Kamel I, et al. Comparing the efficacy and safety of endovascular therapy versus surgical revascularization for critical limb-threatening ischemia: A systematic review and Meta-analysis. Prog Cardiovasc Dis. 2025; 88: 126-135. PMID 38981532.

13. Farber A, Menard MT, Conte MS, et al. Surgery or Endovascular Therapy for Chronic Limb-Threatening Ischemia. N Engl J Med. Dec 222022; 387(25): 2305-2316. PMID 36342173.

14. Bradbury AW, Moakes CA, Popplewell M, et al. A vein bypass first versus a best endovascular treatment first revascularisation strategy for patients with chronic limb threatening ischaemia who required an infra-popliteal, with or without an additional more proximal infra-inguinal revascularisation procedure to restore limb perfusion (BASIL-2): an open-label, randomised, multicentre, phase 3 trial. Lancet. May 272023; 401(10390): 1798-1809. PMID 37116524.

15. Abu Dabrh AM, Steffen MW, Undavalli C, et al. The natural history of untreated severe or critical limb ischemia. J Vasc Surg. Dec 2015; 62(6): 1642-51.e3. PMID 26391460.

16. Kim TI, Zhang Y, Cardella JA, et al. Outcomes of bypass and endovascular interventions for advanced femoropopliteal disease in patients with premature peripheral artery disease. J Vasc Surg. Dec 2021; 74(6): 1968-1977.e3. PMID 34090986.

17. Latz CA, Boitano L, Wang LJ, et al. Contemporary Endovascular 30-Day Outcomes for Critical Limb Threatening Ischemia Relative to Surgical Bypass Grafting. Vasc Endovascular Surg. Jul 2021; 55(5): 441-447. PMID 33602047.

18. Lee KB, Macsata RA, Lala S, et al. Outcomes of open and endovascular interventions in patients with chronic limb threatening ischemia. Vascular. Oct 2021; 29(5): 693-703. PMID 33190618.

19. Lawaetz M, Fisker L, Lönn L, et al. In Situ Vein Bypass Is Superior to Endovascular Treatment of Femoropopliteal Lesions in Chronic Limb-Threatening Ischemia. Ann Vasc Surg. Aug 2020; 67: 437-447. PMID 32234573.

20. Stavroulakis K, Gkremoutis A, Borowski M, et al. Bypass Grafting vs Endovascular Therapy in Patients With Non-Dialysis-Dependent Chronic Kidney Disease and Chronic Limb-Threatening Ischemia (CRITISCH Registry). J Endovasc Ther. Aug 2020; 27(4): 599-607. PMID 3263365.1

21. Altreuther M, Mattsson E. Long-Term Limb Salvage and Amputation-Free Survival After Femoropopliteal Bypass and Femoropopliteal PTA for Critical Ischemia in a Clinical Cohort. Vasc Endovascular Surg. Feb 2019; 53(2): 112-117. PMID 30803415.

22. Dayama A, Tsilimparis N, Kolakowski S, et al. Clinical outcomes of bypass-first versus endovascular-first strategy in patients with chronic limb-threatening ischemia due to infrageniculate arterial disease. J Vasc Surg. Jan 2019; 69(1): 156-163.e1. PMID 30579443.

23. Bodewes TCF, Darling JD, Deery SE, et al. Patient selection and perioperative outcomes of bypass and endovascular intervention as first revascularization strategy for infrainguinal arterial disease. J Vasc Surg. Jan 2018; 67(1): 206-216.e2. PMID 28844467.

24. Fashandi AZ, Mehaffey JH, Hawkins RB, et al. Major adverse limb events and major adverse cardiac events after contemporary lower extremity bypass and infrainguinal endovascular intervention in patients with claudication. J Vasc Surg. Dec 2018; 68(6): 1817-1823. PMID 30470369.

25. Shannon AH, Mehaffey JH, Cullen JM, et al. A Comparison of Outcomes After Lower Extremity Bypass and Repeat Endovascular Intervention Following Failed Previous Endovascular Intervention for Critical Limb Ischemia. Angiology. Jul 2019; 70(6): 501-505. PMID 30376723.

26. Veraldi GF, Mezzetto L, Macrì M, et al. Comparison of Endovascular Versus Bypass Surgery in Femoropopliteal TASC II D Lesions: A Single-Center Study. Ann Vasc Surg. Feb 2018; 47: 179-187. PMID 28943491.

27. Darling JD, McCallum JC, Soden PA, et al. Results for primary bypass versus primary angioplasty/stent for lower extremity chronic limb-threatening ischemia. J Vasc Surg. Aug 2017; 66(2): 466-475. PMID 28274753.

28. Mehaffey JH, Hawkins RB, Fashandi A, et al. Lower extremity bypass for critical limb ischemia decreases major adverse limb events with equivalent cardiac risk compared with endovascular intervention. J Vasc Surg. Oct 2017; 66(4): 1109-1116.e1. PMID 28655549.

29. Siracuse JJ, Menard MT, Eslami MH, et al. Comparison of open and endovascular treatment of patients with critical limb ischemia in the Vascular Quality Initiative. J Vasc Surg. Apr 2016; 63(4): 958-65.e1. PMID 26830690.

30. McQuade K, Gable D, Pearl G, et al. Four-year randomized prospective comparison of percutaneous ePTFE/nitinol self-expanding stent graft versus prosthetic femoral-popliteal bypass in the treatment of superficial femoral artery occlusive disease. J Vasc Surg. Sep 2010; 52(3): 584-90; discussion 590-1, 591.e1-591.e7. PMID 20598480.

31. Nugteren MJ, Hazenberg CEVB, Akkersdijk GP, et al. Twelve-Month Outcomes of Intravascular Lithotripsy for Treatment of Calcified Popliteal and Infrapopliteal Lesions in Patients With Chronic Limb-Threatening Ischemia. J Endovasc Ther. Aug 2025; 32(4): 1127-1134. PMID 37853746.

32. Veenstra EB, van der Laan MJ, Zeebregts CJ, et al. A systematic review and meta-analysis of endovascular and surgical revascularization techniques in acute limb ischemia. J Vasc Surg. Feb 2020; 71(2): 654-668.e3. PMID 31353270.

33. Taha AG, Byrne RM, Avgerinos ED, et al. Comparative effectiveness of endovascular versus surgical revascularization for acute lower extremity ischemia. J Vasc Surg. Jan 2015; 61(1): 147-54. PMID 25080883.

34. de Donato G, Setacci F, Sirignano P, et al. The combination of surgical embolectomy and endovascular techniques may improve outcomes of patients with acute lower limb ischemia. J Vasc Surg. Mar 2014; 59(3): 729-36. PMID 24342067.

35. Ouriel K, Veith FJ, Sasahara AA. A comparison of recombinant urokinase with vascular surgery as initial treatment for acute arterial occlusion of the legs. Thrombolysis or Peripheral Arterial Surgery (TOPAS) Investigators. N Engl J Med. Apr 161998; 338(16): 1105-11. PMID 9545358.

36. Ouriel K, Veith FJ, Sasahara AA. Thrombolysis or peripheral arterial surgery: phase I results. TOPAS Investigators. J Vasc Surg. Jan 1996; 23(1): 64-73; discussion 74-5. PMID 8558744.

37. Hoch JR, Tullis MJ, Acher CW, et al. Thrombolysis versus surgery as the initial management for native artery occlusion: efficacy, safety, and cost. Surgery. Oct 1994; 116(4): 649-56; discussion 656-7. PMID 7940162.

38. Ouriel K, Shortell CK, DeWeese JA, et al. A comparison of thrombolytic therapy with operative revascularization in the initial treatment of acute peripheral arterial ischemia. J Vasc Surg. Jun 1994; 19(6): 1021-30. PMID 8201703.

39. Results of a prospective randomized trial evaluating surgery versus thrombolysis for ischemia of the lower extremity. The STILE trial. Ann Surg. Sep 1994; 220(3): 251-66; discussion 266-8. PMID 8092895.

40. Nilsson L, Albrechtsson U, Jonung T, et al. Surgical treatment versus thrombolysis in acute arterial occlusion: a randomised controlled study. Eur J Vasc Surg. Mar 1992; 6(2): 189-93. PMID 1572460.

41. Earnshaw JJ, Gregson RH, Makin GS, et al. Acute peripheral arterial ischemia: a prospective evaluation of differential management with surgery or thrombolysis. Ann Vasc Surg. Oct 1989; 3(4): 374-9. PMID 2512979

42. Seeger JM, Flynn TC, Quintessenza JA. Intra-arterial streptokinase in the treatment of acute arterial thrombosis. Surg Gynecol Obstet. Apr 1987; 164(4): 303-7. PMID 3563841

43. Tepe G, Brodmann M, Werner M, et al. Intravascular Lithotripsy for Peripheral Artery Calcification: 30-Day Outcomes From the Randomized Disrupt PAD III Trial. JACC Cardiovasc Interv. Jun 282021; 14(12): 1352-1361. PMID 34167675

44. Tepe G, Brodmann M, Bachinsky W, et al. Intravascular Lithotripsy for Peripheral Artery Calcification: Mid-term Outcomes From the Randomized Disrupt PAD III Trial. J Soc Cardiovasc Angiogr Interv. 2022; 1(4): 100341. PMID 39131928

45. Adams G, Soukas PA, Mehrle A, et al. Intravascular Lithotripsy for Treatment of Calcified Infrapopliteal Lesions: Results from the Disrupt PAD III Observational Study. J Endovasc Ther. Feb 2022; 29(1): 76-83. PMID 34380334

46. Shammas NW, Mangalmurti S, Bernardo NL, et al. Intravascular Lithotripsy for Treatment of Severely Calcified Common Femoral Artery Disease: Results From the Disrupt PAD III Observational Study. J Endovasc Ther. Jun 152024: 15266028241255622. PMID 38877777

47. Bailey SR, Beckman JA, Dao TD, et al. ACC/AHA/SCAI/SIR/SVM 2018 Appropriate Use Criteria for Peripheral Artery Intervention: A Report of the American College of Cardiology Appropriate Use Criteria Task Force, American Heart Association, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, and Society for Vascular Medicine. J Am Coll Cardiol. Jan 222019; 73(2): 214-237. PMID 30573393

48. Feldman DN, Armstrong EJ, Aronow HD, et al. SCAI guidelines on device selection in Aorto-Iliac arterial interventions. Catheter Cardiovasc Interv. Oct 012020; 96(4): 915-929. PMID 32406565

49. Woo K, Siracuse JJ, Klingbeil K, et al. Society for Vascular Surgery appropriate use criteria for management of intermittent claudication. J Vasc Surg. Jul 2022; 76(1): 3-22.e1. PMID 35470016

50. Conte MS, Aulivola B, Barshes NR, et al. Society for Vascular Surgery Clinical Practice Guideline on the management of intermittent claudication: Focused update. J Vasc Surg. Aug 2025; 82(2): 303-326.e11. PMID 40316185

51. U.S. Preventive Services Task Force. Peripheral artery disease and cardiovascular disease: screening and risk assessment with the ankle-brachial index. July 10, 218. **https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/peripheral-artery-disease-in-adults-screening-with-the-ankle-brachial-index**. Accessed September 4, 2026.

52. Lyden SP, Schneider PA, Sood A, Zendejas E, Soukas PA, Tarricone A, Krishnan P; DETOUR2 Trial Investigators. Durability of the DETOUR System for Long and Complex Femoral-Popliteal Lesions: 3-Year Results From the DETOUR2 Trial. J Soc Cardiovasc Angiogr Interv. 2026 Jun 23;5(8):105457. doi: 10.1016/j.jscai.2026.105457. PMID: 42626298.

53. National Institute for Health and Care Excellence. Intravascular lithotripsy for calcified arteries in peripheral arterial disease. Available at: **https://www.nice.org.uk/guidance/htg707**. Accessed August 27, 2026.

54. National Institute for Health and Care Excellence. Peripheral arterial disease: diagnosis and management. Available at: **https://www.nice.org.uk/guidance/cg147/chapter/Recommendations#management-of-critical-limb-ischaemia**. Accessed August 27, 2026.

55. Food and Drug Administration. Shockwave Medical Peripheral Intravascular Lithotripsy System. Available at: **https://www.accessdata.fda.gov/cdrh_docs/pdf16/K161384.pdf**. Accessed August 27, 2026.

56. Food and Drug Administration. DETOUR System. Available at: **https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpma/pma.cfm?id=P220021**. Accessed August 27, 2026.

57. National Heart Lung and Blood Institute. (2022, March 24). Peripheral Arterial Disease: Diagnosis. **https://www.nhlbi.nih.gov/health/peripheral-artery-disease/diagnosis**. Accessed August 27, 2026.

Appendix

Figure 1. Ankle Brachial Index (ABI) Test

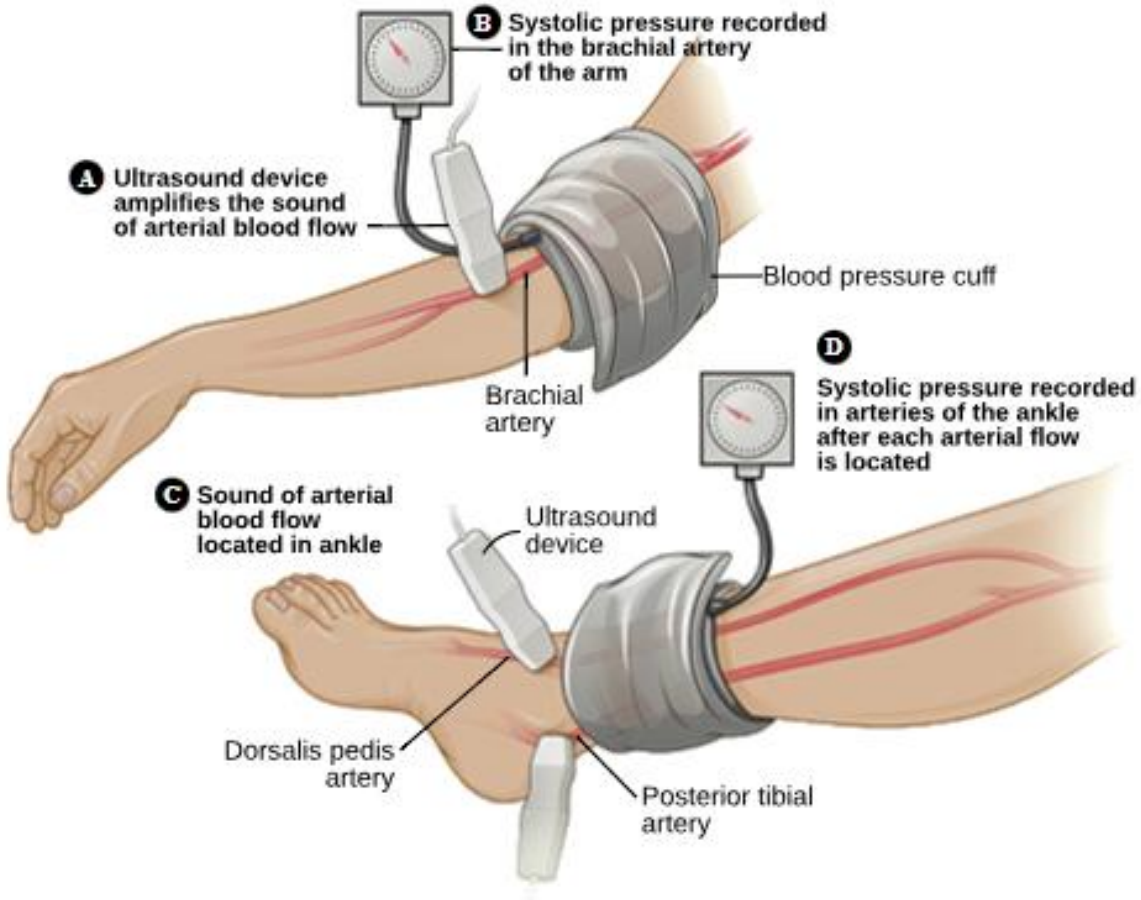


Figure 1. Ankle brachial index test[57]

The ankle-brachial index (ABI) test is used to detect and assess peripheral artery disease. The test compares the ratio of the higher of the blood pressures in the upper arms to the higher of the two blood pressures measured in the lower leg. The pressures are obtained by using a doppler device on the brachial artery, as well as the dorsalis pedis (DP) and posterior tibial (PT) arteries with the individual supine with limbs supported. The ABI is calculated by dividing the ankle systolic blood pressure by the upper arm systolic pressure. A low ankle-brachial index number can mean there is narrowing or blockage of the arteries in the legs.

Appendix Table 1. Interpretation of the ABI Results

ABPI Value	Interpretation	Action
1.4 and above	Abnormal vessel hardening from PAD	Refer or measure toe pressure
1.0-1.3	Normal range	None
0.7-0.9	Mild arterial disease	Manage risk factors
0.4-0.7	Moderate arterial disease	Routine specialist referral
Lower than 0.40	Severe arterial disease	Urgent specialist referral

PAD=Peripheral arterial disease

https://my.clevelandclinic.org/health/diagnostics/17840-ankle-brachial-index-abi

Ankle-brachial index testing might be done before and right after walking on a treadmill. This is called an exercise ankle-brachial index test. It can find out how badly the arteries are narrowed when walking.

History

Date	Comments
01/01/25	New policy, approved December 10, 2024, effective for dates of service on or after April 6, 2025, following 90-day provider notification. Policy created with literature review through August 15, 2024. Percutaneous revascularization procedures are considered medically necessary in adults with chronic symptomatic lower extremity peripheral arterial disease with guideline-based criteria, adults with chronic limb-threatening ischemia, and adults with acute limb ischemia. Percutaneous revascularization procedures in adults with asymptomatic lower extremity peripheral arterial disease are considered not medically necessary. Percutaneous revascularization procedures using lithotripsy are considered investigational in adults with lower extremity peripheral arterial disease. Added HCPCS codes C7531, C7534, C7535, C9764-C9767 and C9772-C9775 to match criteria updates.
06/01/25	Interim Review, approved May 26, 2025. Reformatted and clarified components of conservative therapy for greater ease of understanding. Policy intent unchanged.
01/01/26	Annual Review, approved December 22, 2025. Policy updated with literature review through September 3, 2025; references added. Policy statements unchanged. Added new CPT codes 37254, 37255, 37256, 37257, 37258, 37259, 37260, 37261, 37262, 37263, 37264, 37265, 37266, 37267, 37268, 37269, 37270, 37271, 37272, 37273, 37274, 37275, 37276, 37277, 37278, 37279, 37280, 37281, 37282, 37283, 37284, 37285, 37286, 37287, 37288, 37289, 37290, 37291, 37292, 37293, 37294, 37295, 37296, 37297, 37298,

Date	Comments
	and 37299 to replace termed CPT codes 37220, 37221, 37222, 37223, 37224, 37225, 37226, 37227, 37228, 37229, 37230, 37231, 37232, 37233, 37234, and 37235, effective January 1, 2026.
10/01/26	Annual Review, approved September 8, 2026. Literature review through September 4, 2026, References added. Added HCPCS code C1604. The following policy changes are effective January 1, 2027, following 90-day provider notification. Policy statements updated to include endovenous femoropopliteal bypass using a stent graft in individuals with lower extremity peripheral artery disease (PAD) is considered investigational in all situations (DETOUR procedure) and added "smoking cessation to the first occurrence in this statement: Documented discussion of the importance of smoking cessation and/or implemented plan to begin smoking cessation, if applicable. Added: evidence regarding DETOUR system for treatment of individuals with lower PAD, DETOUR clinical trial, National Institute for Health and Care Excellence (NICE) Clinical Evidence section, Shockwave and DETOUR system added to Regulatory Section. Updated Appendix ankle brachial index (ABI) test illustration, ABI test description, added Appendix Table 1 Interpretation of the ABI Results. Minor editorial refinements to policy statements; intent unchanged.

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