

**American College of Radiology**  
**ACR Appropriateness Criteria®**

## Lower Extremity Arterial Revascularization-Post-Therapy Imaging

**Variant 1: Previous infrainguinal endovascular therapy or bypass. Asymptomatic. Surveillance.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US duplex Doppler lower extremity	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	1	0	0	0	0	3	1	4	7
		References		Study Quality											
		68 (3901378)		4											
		70 (17980793)		3											
		71 (11665434)		3											
		72 (18973986)		4											
		73 (10361211)		4											
		74 (16186435)		1											
		75 (19497506)		3											
		76 (12618681)		4											
		69 (21820833)		3											
		22 (25256612)		3											
		21 (22623445)		4											
		26 (24788064)		2											
		MRA lower extremity without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]									
		References		Study Quality											
		77 (21618851)		3											

MRA lower extremity without and with IV contrast	Usually not appropriate	Limited	0.0 mSv	0.0 mSv [ped]	3	3	0	6	8	1	0	0	0	0	0
		References	Study Quality												
		77 (21618851)	3												
CTA lower extremity with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	0	5	9	1	0	0	0	0	0
Arteriography lower extremity	Usually not appropriate	Expert Consensus	☼☼ 0.1-1mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	10	2	2	0	1	0	0	1	0

**Variant 2: Previous infrainguinal endovascular therapy or bypass. Claudication or CLI. Initial imaging.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US duplex Doppler lower extremity	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	1	0	0	0	0	0	0	4	11
		References		Study Quality											
		79 (24636606)		4											
		22 (25256612)		3											
		17 (22835567)		3											
		16 (23716153)		4											
		26 (24788064)		2											
CTA lower extremity with IV contrast	Usually appropriate	Limited	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	8	8	0	0	1	0	0	0	4	8	3
		References		Study Quality											
		80 (25241315)		4											
MRA lower extremity without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	1	1	1	0	5	7	1
		References		Study Quality											
		9 (22172470)		4											

		80 (25241315)		4											
		4 (16549646)		4											
Arteriography lower extremity	May be appropriate	Expert Consensus	⊕⊕ 0.1-1mSv	⊕⊕⊕ 0.3-3 mSv [ped]	5	5	0	0	0	3	10	1	1	0	0
MRA lower extremity without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	0	0	1	0	9	4	1	0	0
		References		Study Quality											
		9 (22172470)		4											
		80 (25241315)		4											
		4 (16549646)		4											

**Variant 3: Previous infrainguinal endovascular therapy or bypass, presenting with cold, painful extremity and diminished pulses (acute limb ischemia). Initial imaging.**

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Arteriography lower extremity	Usually appropriate	Limited	⊕⊕ 0.1-1mSv	⊕⊕⊕ 0.3-3 mSv [ped]	8	8	0	1	0	0	0	0	2	8	5
		References		Study Quality											
		86 (19853229)		4											
		84 (19298929)		4											
		85 (22670905)		4											
CTA lower extremity with IV contrast	Usually appropriate	Moderate	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	8	8	0	1	0	0	2	1	2	5	5
		References		Study Quality											
		88 (26032010)		2											
		87 (19176443)		M											
		36 (21420330)		3											
US duplex Doppler lower extremity	Usually appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	7	7	0	0	1	0	1	3	4	4	3

References	Study Quality
82 (23988137)	4
83 (27531096)	3

MRA lower extremity without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	0 0 mSv	0 0 mSv [ped]	5	5	0	2	1	6	4	0	2	0	0
MRA lower extremity without IV contrast	May be appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	4	4	1	3	3	2	5	1	1	0	0

## Appendix Key

A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

**Appropriateness Category:** The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

**SOE:** Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality:** The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

**RRL:** Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

**Rating:** The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Median:** The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Final tabulations:** A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at [www.acr.org/ac](http://www.acr.org/ac).