# American College of Radiology
# ACR Appropriateness Criteria®

## Radiologic Management of Iliac Artery Occlusive Disease

**Variant 1: Nonsmoker, sedentary lifestyle. No symptoms at rest but mild left lower-extremity claudication on walking, asymmetrically diminished left femoral pulse. Next steps on initial physician visit.**

| 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 | | O 0 mSv | O 0 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plethysmography and pulse volume recording | May be appropriate | | N/A | N/A | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CTA abdomen and pelvis with bilateral lower extremity runoff with IV contrast | Usually appropriate | | | | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRA abdomen and pelvis with bilateral lower extremity runoff with IV contrast | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Catheter directed angiography | May be appropriate | | N/A | N/A | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Risk factor analysis, lipid profile and ABIs | Usually appropriate | | N/A | N/A | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No further treatment or evaluation needed | Usually not appropriate | | N/A | N/A | 1 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Best medical management including supervised exercise program only | Usually appropriate | | N/A | N/A | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Anticoagulation adjunctive therapy | Usually not appropriate | | N/A | N/A | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| Antiplatelet adjunctive therapy | Usually appropriate | | N/A | N/A | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 2: Long history of mild claudication. Acute-onset left lower-extremity pain. Absent left femoral pulse on palpation, faint dorsalis pedis and posterior tibial pulses by Doppler. Next steps.**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Ankle brachial index | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US duplex Doppler lower extremity | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plethysmography and pulse volume recording | May be appropriate | | N/A | N/A | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CTA abdomen and pelvis with bilateral lower extremity runoff with IV contrast | Usually appropriate | | | | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRA abdomen and pelvis with bilateral lower extremity runoff with IV contrast | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 3: Known atrial fibrillation and spine surgery 3 weeks ago. Sudden-onset right lower-extremity pain. Diminished pulses in right lower extremity. CTA demonstrates isolated filling defect in right common iliac artery.**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Anticoagulation adjunctive therapy | Usually appropriate | | N/A | N/A | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Antiplatelet adjunctive therapy | May be appropriate | | N/A | N/A | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| Catheter directed thrombolytic therapy | Usually not appropriate | | N/A | N/A | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Catheter directed mechanical thrombectomy | Usually appropriate | | N/A | N/A | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surgical revascularization | Usually appropriate | | N/A | N/A | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 4: Past medical history of heavy smoking. Severe claudication and no symptoms at rest. Angiogram demonstrates bilateral 90% common iliac artery stenosis (TASC A).**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Anticoagulation adjunctive therapy | Usually not appropriate | | N/A | N/A | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Antiplatelet adjunctive therapy | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Best medical management including supervised exercise program only | May be appropriate | | N/A | N/A | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bilateral percutaneous transluminal angioplasty only | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bilateral stent placement | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surgical revascularization | May be appropriate | | N/A | N/A | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 5: Past medical history significant for diabetes mellitus, hypertension, and smoking. Increasing claudication of right lower extremity involving right buttock for last 3 months. CTA pelvis with runoff reveals short-segment occlusion of right common iliac artery (TASC B).**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Best medical management including supervised exercise program only | Usually not appropriate | | N/A | N/A | 2 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Primary percutaneous transluminal angioplasty alone | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Primary stenting | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surgical revascularization | May be appropriate | | N/A | N/A | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Anticoagulation adjunctive therapy | Usually not appropriate | | N/A | N/A | 2 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Antiplatelet adjunctive therapy | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 6: Past medical history significant for diabetes mellitus, hypertension, and heavy smoking. Gradually increasing claudication of bilateral lower extremities for at least 2 months. CTA pelvis with runoff reveals bilateral common iliac artery occlusion without any involvement of the external or internal iliac artery (TASC C).**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Best medical management including supervised exercise program only | Usually not appropriate | | N/A | N/A | 2 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Primary percutaneous transluminal angioplasty alone | May be appropriate | | N/A | N/A | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Primary stenting | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surgical revascularization | Usually appropriate | | N/A | N/A | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anticoagulation adjunctive therapy | Usually not appropriate | | N/A | N/A | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Antiplatelet adjunctive therapy | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 7: Worsening claudication and small ischemic ulcers on digits of both feet. Angiogram demonstrates diffuse disease involving distal aorta and both iliac vessels with multiple stenoses >50%, bilateral 75% mid-superficial femoral artery stenoses and 2-vessel tibial runoff bilaterally. (TASC D)**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Anticoagulation adjunctive therapy | Usually not appropriate | | N/A | N/A | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Antiplatelet adjunctive therapy | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Best medical management including supervised exercise program only | Usually not appropriate | | N/A | N/A | 2 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percutaneous transluminal angioplasty (aortoiliac only) | May be appropriate | | N/A | N/A | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Catheter directed stent placement (aortoiliac only) | Usually appropriate | | N/A | N/A | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Catheter directed stent placement (aortoiliac plus femoral angioplasty) | Usually appropriate | | N/A | N/A | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surgical revascularization | May be appropriate | | N/A | N/A | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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.**