American College of Radiology  
ACR Appropriateness Criteria®

Lower Extremity Arterial Revascularization-Post-Therapy Imaging

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US duplex Doppler lower extremity</strong></td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>8</td>
<td>8</td>
<td>1 0 0 0 0 3 1 4 7</td>
<td></td>
</tr>
<tr>
<td><strong>MRA lower extremity without IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>3</td>
<td>3</td>
<td>1 4 5 2 2 1 1 0 0</td>
<td></td>
</tr>
<tr>
<td><strong>MRA lower extremity without and with IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>3</td>
<td>3</td>
<td>0 6 8 1 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td><strong>CTA lower extremity with IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>3-10 mSv</td>
<td>3-10 mSv [ped]</td>
<td>3</td>
<td>3</td>
<td>0 5 9 1 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td><strong>Arteriography lower extremity</strong></td>
<td>Usually not appropriate</td>
<td>0.1-1 mSv</td>
<td>0.3-3 mSv [ped]</td>
<td>1</td>
<td>1</td>
<td>10 2 2 0 1 0 0 1 0</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US duplex Doppler lower extremity</strong></td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>9</td>
<td>9</td>
<td>1 0 0 0 0 0 0 4 11</td>
<td></td>
</tr>
</tbody>
</table>
## CTA lower extremity with IV contrast
- Usually appropriate
- **☢☢☢ 1-10 mSv**
- **☢☢☢☢ 3-10 mSv [ped]**
- **Rating**: 8
- **Median**: 8
- **Final Tabulations**: 0 0 1 0 0 0 4 8 3

## MRA lower extremity without and with IV contrast
- **☢☢ 0 mSv**
- **☢☢ 0 mSv [ped]**
- **Rating**: 8
- **Median**: 8
- **Final Tabulations**: 0 0 1 1 1 0 5 7 1

## Arteriography lower extremity
- **☢☢ 0.1-1mSv**
- **☢☢☢ 0.3-3 mSv [ped]**
- **Rating**: 5
- **Median**: 5
- **Final Tabulations**: 0 0 0 3 10 1 1 0 0

## MRA lower extremity without IV contrast
- **☢☢ 0 mSv**
- **☢☢ 0 mSv [ped]**
- **Rating**: 5
- **Median**: 5
- **Final Tabulations**: 0 0 1 0 9 4 1 0 0

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

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arteriography lower extremity</td>
<td>Usually appropriate</td>
<td><strong>☢ 0.1-1mSv</strong></td>
<td>8 8</td>
<td>0 1 0 0 0 0 2 8 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CTA lower extremity with IV contrast</td>
<td>Usually appropriate</td>
<td><strong>☢☢ 1-10 mSv</strong></td>
<td>8 8</td>
<td>0 1 0 0 2 1 2 5 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US duplex Doppler lower extremity</td>
<td>Usually appropriate</td>
<td><strong>☢☢ 0 mSv</strong></td>
<td>7 7</td>
<td>0 0 1 0 1 3 4 4 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRA lower extremity without and with IV contrast</td>
<td>May be appropriate (Disagreement)</td>
<td><strong>☢ 0 mSv</strong></td>
<td>5 4</td>
<td>0 2 1 6 4 0 2 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MRA lower extremity without IV contrast</td>
<td>May be appropriate</td>
<td><strong>☢ 0 mSv</strong></td>
<td>4 4</td>
<td>1 3 3 2 5 1 1 0 0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.