American College of Radiology
ACR Appropriateness Criteria®

Clinically Suspected Vascular Malformation of the Extremities

Variant 1: Upper or lower extremity. Suspected vascular malformation presenting with pain or findings of physical deformity including soft-tissue mass, diffuse or focal enlargement, discoloration, or ulceration. Initial imaging.

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| 22 (19931109)                       |                          |      |            |            | 4      |        |                  |
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### CT extremity area of interest with IV contrast

- May be appropriate
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- Study Quality: 4

### MRI extremity area of interest without IV contrast

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  - 21 (24955647)
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- Study Quality: 3

### US extremity area of interest with IV contrast

- May be appropriate
- References:
  - 17 (29630543)
  - 16 (21092206)
- Study Quality: 3

### Dose Considerations

- **CT:** Limited (O 0 mSv)
- **MRI:** O 0 mSv (ped)
- **US:** Limited (O 0 mSv)

### Notes

- Variability in study quality and dose considerations.
- Pediatric doses denoted with [ped].
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**Variant 2: Upper or lower extremity. Vascular murmur (bruit or thrill). Initial imaging.**

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MRA extremity area of interest without and with IV contrast

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- 9 (22674646)
- 7 (22890795)
- 6 (25525685)

MRI extremity area of interest without and with IV contrast

- 23 (17533093)
- 20 (22024295)
- 19 (25367671)
- 6 (25525685)
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- 3 (25895482)
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US duplex Doppler extremity area of interest

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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).