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

**Nonischemic Myocardial Disease with Clinical Manifestations (Ischemic Cardiomyopathy Already Excluded)**

**Variant 1:** Suspected hypertrophic cardiomyopathy. Ischemic cardiomyopathy already excluded. Initial imaging.

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<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
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<td>45 (30282640)</td>
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| US echocardiography transthoracic resting | Usually appropriate | Limited | O 0 mSv | O 0 mSv [ped] | 9 | 9 | 0 0 0 0 0 3 2 10 |

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SOE: Strength of Evidence

- O: Obsolete
- M: Moderate
- L: Limited
- S: Strong

Ped: Pediatric
<p>| MRI heart function and morphology without IV contrast | Usually appropriate | Strong | O 0 mSv | O 0 mSv [ped] | 7 | 7 | 0 | 0 | 0 | 0 | 2 | 4 | 5 | 4 | 0 |
|-----------------------------------------------------|---------------------|--------|---------|---------------|---|---|---|---|---|---|---|---|---|---|
| References                                           | Study Quality       |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 41 (20854967)                                        | 3                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 33 (28912181)                                        | 4                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 39 (26002385)                                        | 4                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 42 (23498674)                                        | 2                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 34 (26082555)                                        | 2                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 35 (19234246)                                        | 3                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 40 (22296938)                                        | 4                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 43 (17690158)                                        | 3                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 44 (25475749)                                        | 1                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 46 (21733342)                                        | 4                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 47 (26718199)                                        | 4                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 45 (30282640)                                        | 2                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| CT heart function and morphology with IV contrast    | May be appropriate  | Strong | ⚠️⚠️ 10-30 mSv | ⚠️⚠️ 3-10 mSv [ped] | 6 | 6 | 0 | 0 | 0 | 2 | 6 | 6 | 2 | 0 | 0 |
|References                                            | Study Quality       |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 38 (23064716)                                        | 2                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 36 (24449335)                                        | 2                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 37 (25022976)                                        | 1                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| US echocardiography transthoracic stress             | May be appropriate  | Limited | O 0 mSv | O 0 mSv [ped] | 6 | 6 | 0 | 0 | 1 | 0 | 6 | 7 | 1 | 0 | 1 |
| References                                            | Study Quality       |        |         |               |   |   |   |   |   |   |   |   |   |   |
| 51 (25173338)                                        | 4                   |        |         |               |   |   |   |   |   |   |   |   |   |   |
| US echocardiography transesophageal                  | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 3 | 3 | 5 | 2 | 4 | 0 | 2 | 1 | 0 | 1 | 0 |
| MRI heart with function and vasodilator stress perfusion without and with IV contrast | Usually not appropriate | Limited | O 0 mSv | O 0 mSv [ped] | 3 | 3 | 4 | 4 | 5 | 1 | 2 | 0 | 0 | 0 | 0 |
| References                                            | Study Quality       |        |         |               |   |   |   |   |   |   |   |   |   |   |</p>
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**Variant 2:** Suspected restrictive cardiomyopathy or infiltrative disease. Ischemic cardiomyopathy already excluded. Initial imaging.

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### Variant 3: Suspected nonischemic dilated and unclassified cardiomyopathy. Ischemic cardiomyopathy already excluded. Initial imaging.

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| MRI heart function and morphology without and with IV contrast | Usually appropriate | Strong | O 0 mSv | O 0 mSv [ped] | 8 | 8 | 0 0 0 0 0 0 3 5 7 |

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**MRI heart function and morphology without IV contrast**

Usually appropriate

**References**
| CT heart function and morphology with IV contrast | May be appropriate | Strong | ☢☢☢☢ 10-30 mSv | ☢☢☢☢ 3-10 mSv [ped] | 6 | 6 | 0 | 0 | 0 | 2 | 2 | 7 | 4 | 0 | 0 |
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| References                                    | Study Quality     |        |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |
| 91 (17512361)                                  | 2                 |        |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |
| 92 (23689383)                                  | 2                 |        |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |
| 93 (20634756)                                  | 4                 |        |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |
| 94 (20921912)                                  | 4                 |        |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |

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**Variant 4:** Suspected arrhythmogenic cardiomyopathy (arrhythmia of ventricular origin). Ischemic cardiomyopathy already excluded. Initial imaging.

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- 2 (27438188)
- 141 (29158437)
- 135 (26581396)
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#### References
- 143 (21907431)
- 2 (27438188)
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<tr>
<th>Study Type</th>
<th>Appropriateness</th>
<th>Expert Consensus</th>
<th>Radiation Dose</th>
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<tr>
<td>FDG-PET/CT heart</td>
<td>May be appropriate</td>
<td>☢☢☢☢ 10-30 mSv</td>
<td>☢☢☢☢ 3-10 mSv [ped]</td>
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<td>CT heart function and morphology with IV contrast</td>
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<td>CTA coronary arteries with IV contrast</td>
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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).