## American College of Radiology

**ACR Appropriateness Criteria®**

### Nontraumatic Aortic Disease

**Variant 1: Nontraumatic Aortic Disease**

<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>X-ray chest</td>
<td>Usually appropriate</td>
<td></td>
<td>☢ &lt;0.1 mSv</td>
<td>☢ &lt;0.03 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
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<tr>
<td>CT chest with IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
<td>8</td>
<td>n/a</td>
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<tr>
<td>CT chest and abdomen without IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢☢ 10-30 mSv</td>
<td></td>
<td>8</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT chest and abdomen without and with IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢☢ 10-30 mSv</td>
<td></td>
<td>8</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
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<tr>
<td>CTA chest with IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢ 1-10 mSv</td>
<td></td>
<td>8</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
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<tr>
<td>CTA chest and abdomen with IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢☢ 10-30 mSv</td>
<td></td>
<td>8</td>
<td>n/a</td>
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<tr>
<td>MRA chest without and with IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>8</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
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<tr>
<td>MRA chest and abdomen without and with IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>8</td>
<td>n/a</td>
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<tr>
<td>CT chest without IV contrast</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢ 1-10 mSv</td>
<td>☢☢☢ 3-10 mSv [ped]</td>
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<tr>
<td>Procedure</td>
<td>Appropriateness</td>
<td>Radiation Dose (mSv)</td>
<td>Energy Range</td>
<td>Adult Dose</td>
<td>Pediatric Dose</td>
<td>Human Dose</td>
<td>Time</td>
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<td>----------------------------------------------</td>
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<tr>
<td>CT chest without and with IV contrast</td>
<td>Usually appropriate</td>
<td>■■■■ 1-10 mSv</td>
<td>■■■■ 3-10 mSv [ped]</td>
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<tr>
<td>CT chest and abdomen with IV contrast</td>
<td>Usually appropriate</td>
<td>■■■■ 10-30 mSv</td>
<td>■■■■ 3-10 mSv [ped]</td>
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<td>n/a</td>
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<tr>
<td>MRA chest without IV contrast</td>
<td>Usually appropriate</td>
<td>0 0 mSv</td>
<td>0 0 mSv</td>
<td>7</td>
<td>n/a</td>
<td>0</td>
<td>0</td>
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<tr>
<td>MRA chest and abdomen without IV contrast</td>
<td>Usually appropriate</td>
<td>0 0 mSv</td>
<td>0 0 mSv [ped]</td>
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<td>n/a</td>
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<td>0 0 mSv [ped]</td>
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<td>n/a</td>
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<tr>
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<td>0</td>
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<tr>
<td>Aortography chest and abdomen</td>
<td>May be appropriate</td>
<td>■■■■ 10-30 mSv</td>
<td>■■■■ 3-10 mSv [ped]</td>
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<td>n/a</td>
<td>0</td>
<td>0</td>
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<tr>
<td>FDG-PET/CT chest and abdomen</td>
<td>May be appropriate</td>
<td>■■■■ 10-30 mSv</td>
<td>■■■■ 3-10 mSv [ped]</td>
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<td>In-111 WBC scan</td>
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<td>■■■■ 10-30 mSv</td>
<td>■■■■ 3-10 mSv [ped]</td>
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<tr>
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<td>0 0 mSv</td>
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<td>n/a</td>
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</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](http://www.acr.org/ac).