# American College of Radiology
# ACR Appropriateness Criteria®

## Chronic Chest Pain—High Probability of Coronary Artery Disease

**Variant 1: Chronic chest pain; high probability of coronary artery disease.**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Radiography chest | Usually appropriate | | ☢ <0.1 mSv | ☢ <0.03 mSv [ped] | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tc-99m SPECT MPI rest and stress | Usually appropriate | | ☢☢☢☢ 10-30 mSv | | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRI heart with function and vasodilator stress perfusion without and with IV contrast | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arteriography coronary | Usually appropriate | | ☢☢☢ 1-10 mSv | | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CTA coronary arteries with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US echocardiography transthoracic stress | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rb-82 PET heart stress | Usually appropriate | | ☢☢☢ 1-10 mSv | | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRI heart function and morphology without and with IV contrast | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRI heart with function and inotropic stress without IV contrast | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MRI heart with function and inotropic stress without and with IV contrast | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRA coronary arteries without and with IV contrast | May be appropriate | | O 0 mSv | O 0 mSv [ped] | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRI heart function and morphology without IV contrast | May be appropriate | | O 0 mSv | O 0 mSv [ped] | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US echocardiography transthoracic resting | May be appropriate | | O 0 mSv | O 0 mSv [ped] | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest with IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MRA coronary arteries without IV contrast | May be appropriate | | O 0 mSv | O 0 mSv [ped] | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without and with IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT coronary calcium | Usually not appropriate | | ☢☢☢ 1-10 mSv | | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tc-99m ventriculography | Usually not appropriate | | ☢☢☢ 1-10 mSv | | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US abdomen | Usually not appropriate | | O 0 mSv | O 0 mSv [ped] | 3 | 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.**