

		References	Study Quality													
		21 (25916321)	4													
MRI heart function and morphology without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
		References	Study Quality													
		22 (27550660)	4													
MRI heart function and morphology without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
		References	Study Quality													
		22 (27550660)	4													
MRI heart function with stress without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
MRI heart function with stress without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
		References	Study Quality													
		22 (27550660)	4													
US echocardiography transthoracic stress	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
		References	Study Quality													
		20 (17719283)	Good													
Radiography chest	Usually not appropriate	Expert Consensus	⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
SPECT or SPECT/CT MPI rest and stress	Usually not appropriate	Limited	⊕⊕⊕⊕ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	1	1	0	0	0	0	0	0	0	0	0	0
		References	Study Quality													
		23 (29200864)	4													

Variant 2: Asymptomatic patient. Intermediate risk for coronary artery disease. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
CT coronary calcium	Usually appropriate	Limited	⊕⊕⊕ 1-10 mSv		8	8	0	0	1	0	0	1	3	8	3	
		References	Study Quality													
		29 (20424251)	3													
		24 (12743005)	4													
		26 (17481445)	3													
		30 (20946997)	3													
		25 (12869688)	3													
		31 (26724526)	3													
		28 (25459592)	3													
		27 (22974805)	4													
		32 (22718782)	3													
		33 (29713929)	4													
		3 (30423393)	4													
CTA coronary arteries with IV contrast	May be appropriate	Limited	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	4	4	0	1	0	10	4	1	0	0	0	
		References	Study Quality													
		33 (29713929)	4													
MRA coronary arteries without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	7	9	0	0	0	0	0	0	0	
		References	Study Quality													
		35 (27221073)	3													
		36 (23878103)	3													
MRI heart function and morphology without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	8	7	1	0	0	0	0	0	0	
US echocardiography transthoracic resting	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	8	3	3	0	1	0	0	1	0	

US echocardiography transthoracic stress	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	2	6	8	2	0	0	0	0	0	0
		References		Study Quality											
		34 (18565214)		M											
SPECT or SPECT/CT MPI rest and stress	Usually not appropriate	Limited	⊕⊕⊕⊕ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	2	2	5	6	4	1	0	0	0	0	0
		References		Study Quality											
		38 (21181519)		4											
		39 (24556531)		4											
MRA coronary arteries without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	10	6	0	0	0	0	0	0	0
		References		Study Quality											
		35 (27221073)		3											
		36 (23878103)		3											
MRI heart function and morphology without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	1	1	9	6	1	0	0	0	0	0	0
MRI heart function with stress without IV contrast	Usually not appropriate	Moderate	0 0 mSv	0 0 mSv [ped]	1	1	9	6	1	0	0	0	0	0	0
		References		Study Quality											
		37 (22390914)		2											
MRI heart function with stress without and with IV contrast	Usually not appropriate	Moderate	0 0 mSv	0 0 mSv [ped]	1	1	9	4	2	0	0	1	0	0	0
		References		Study Quality											
		37 (22390914)		2											
Radiography chest	Usually not appropriate	Expert Consensus	⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	1	1	11	3	0	0	1	0	1	0	0

Variant 3: Asymptomatic patient. High risk for coronary artery disease. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
CTA coronary arteries with IV contrast	May be appropriate	Strong	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	6	6	0	0	0	1	6	7	2	0	0	
		References	Study Quality													
		43 (26754124)	2													
		42 (25205531)	2													
		46 (25402757)	3													
		45 (24468142)	2													
		48 (29778864)	3													
		44 (25332810)	2													
		47 (29604092)	2													
		49 (29685675)	Good													
CT coronary calcium	May be appropriate	Limited	⊕⊕⊕ 1-10 mSv		6	6	0	0	0	1	3	5	6	1	0	
		References	Study Quality													
		40 (19520336)	4													
		41 (21856482)	4													
US echocardiography transthoracic resting	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	3	3	5	3	4	0	2	1	0	0	1	
MRA coronary arteries without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	7	5	4	0	0	0	0	0	0	
		References	Study Quality													
		35 (27221073)	3													
		36 (23878103)	3													
MRI heart function and morphology without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	8	5	2	1	0	0	0	0	0	
MRI heart function and morphology without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	6	4	4	2	0	0	0	0	0	

MRI heart function with stress without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	7	5	1	1	2	0	0	0	0
MRI heart function with stress without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	5	4	1	2	4	0	0	0	0
US echocardiography transthoracic stress	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	6	8	2	0	0	0	0	0	0
		References		Study Quality											
		20 (17719283)		Good											
SPECT or SPECT/CT MPI rest and stress	Usually not appropriate	Strong	⊕⊕⊕⊕ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	2	2	5	4	3	0	4	0	0	0	0
		References		Study Quality											
		51 (19366774)		2											
		52 (25240454)		1											
		38 (21181519)		4											
		50 (25596143)		Good											
		53 (26846937)		4											
MRA coronary arteries without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	9	5	2	0	0	0	0	0	0
		References		Study Quality											
		35 (27221073)		3											
		36 (23878103)		3											
Radiography chest	Usually not appropriate	Expert Consensus	⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	1	1	10	1	2	1	0	1	0	1	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.