American College of Radiology ACR Appropriateness Criteria[®]

Acute Nonspecific Chest Pain-Low Probability of Coronary Artery Disease

Variant 1: Acute nonspecific chest pain; low probability of coronary artery disease. Initial imaging.

	Appropri	iateness			-		-				F	'inal '	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RR	RL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CTA coronary arteries with IV contrast	Usua approp		Expert Consensus	ଡଡଡ 1-1 mSv	0	���� 3- 10 mSv [ped]	8	8	1	0	0	1	0	1	4	10	0
Radiography chest	Usua approp	~	Expert Consensus	୫ <0.1 mସ	Sv		8	8	0	0	0	0	1	2	3	3	8
CTA chest with IV contrast	May approp		Expert Consensus	ତତତ 1-1 mSv	0	ତତତତ 3- 10 mSv [ped]	5	5	1	0	0	1	9	1	4	1	0
CT chest with IV contrast	May be appropriate		Expert Consensus	ଡେଡଡ 1-1 mSv	0	ତେତେତ 3- 10 mSv [ped]	5	5	1	0	1	1	10	4	0	0	0
CT chest without and with IV contrast	May approp		Limited	ତତତ 1-1 mSv	0	���� 3- 10 mSv [ped]	5	5	1	1	1	4	7	2	1	0	0
			References			Study	Quality										
			38 (19486717)				4										
	-		20 (27819965)				4							1			
V/Q scan lung	May approp		Expert Consensus	ଝିଝିଝି 1-1 mSv	0		5	5	2	1	2	2	10	0	0	0	0
US echocardiography transthoracic resting	May approp (Disagre	oriate	Expert Opinion	O 0 mSv	/	O 0 mSv [ped]	5	5	0	2	0	0	4	4	6	1	0
			References			Study	Quality										

	22 (25378470)		-	4						-				
	Expert Consensus	֎֎ 0.1-1mSv		5	5	0	1	2	5	7	1	0	0	0
	Expert Consensus	ତେତେ 1-10 mSv	≎≎≎≎≎ 3- 10 mSv [ped]	4	4	2	3	3	4	4	0	0	0	1
	Limited	ଡେଡେଡ 10-30 mSv	ତତତତ 3- 10 mSv [ped]	3	3	2	4	9	1	1	0	0	0	0
	References		Study Quality											
	39 (28027742)			4										
	Limited	O 0 mSv	O 0 mSv [ped]	3	3	0	8	6	0	2	0	0	0	1
	References		Study Quality											
	41 (28005512)		4					-		-				
	Limited	ତତତତ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
	References		Study	y Quality		-	•	-						•
	25 (28549119)			4										
	Limited	ତତତତ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	3	3	1	5	8	1	1	0	0	0	0
	References		Study	y Quality										
	25 (28549119)			4			-	-		-				
	Expert Consensus	ତତତ 1-10 mSv		2	2	6	4	1	1	3	1	1	0	0
	Limited	O 0 mSv	O 0 mSv [ped]	2	2	2	7	3	0	4	0	0	1	0
	References		Study Quality											
	40 (27533160)			4										
approp May approp Usually approp	May be appropriate May be appropriate Usually not appropriate Usually not appropriate Usually not appropriate Usually not appropriate Usually not appropriate Usually not appropriate	May be appropriateExpert ConsensusMay be appropriateExpert ConsensusMay be appropriateExpert ConsensusUsually not appropriateLimitedUsually not appropriateLimitedUsually not appropriateLimitedUsually not appropriateLimitedUsually not appropriateLimitedUsually not appropriateLimitedUsually not appropriateLimitedUsually not appropriateReferences 25 (28549119)Usually not appropriateLimitedUsually not appropriateReferences 25 (28549119)Usually not appropriateExpert ConsensusUsually not appropriateExpert ConsensusUsually not appropriateExpert ConsensusUsually not appropriateExpert ConsensusUsually not appropriateExpert ConsensusUsually not appropriateExpert ConsensusUsually not appropriateExpert Consensus	May be appropriateExpert ConsensusImage: model Set 0.1-1mSvMay be 	May be 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mSv ₩₩₩ 3 3 3 2 4 9 1 References Study Quality 4 4 2 3 3 4 Usually not appropriate Limited O 0 mSv O 0 mSv (ped) 3 3 0 8 6 0 References Study Quality 4 0</td><td>$\begin{array}{c c c c c c c c c c c c c c c c c c c$</td><td>May be appropriate Expert Consensus Image: Weight of the sense mSV 5 5 0 1 2 5 7 1 May be appropriate Expert Consensus Image: Weight of the sense mSV Image: Weight of the sense mSV 5 5 0 1 2 5 7 1 May be appropriate Expert Consensus Image: Weight of the sense mSV Image: Weight of the sense mSV 4 4 4 0 Usually not appropriate Limited Image: Weight of the sense mSV Study Quality 3 3 2 4 9 1 1 0 References Study Quality 3 3 3 0 8 6 0 2 0 Usually not appropriate Limited Image: Weight of the sense Study Quality 3 3 1 5 8 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>May be appropriate Expert Consensus Image with the consensus Image with consensus Image with consensus</td><td>May be appropriate Expert Consensus Image: Start Consensus <thimage: start<="" 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MRA chest without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	4	7	6	0	0	0	0	0	0
		References		Study	y Quality										
		40 (27533160)			4										
MRA coronary arteries without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	5	8	3	0	1	0	0	0	0
MRA coronary arteries without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	4	6	5	1	1	0	0	0	0
MRI heart function and morphology without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	2	7	7	0	0	0	0	0	1
		References			Study Quality										
		42 (19389557))												
		41 (28005512)													
		43 (27899132)													
Nuclear medicine scan gallbladder	Usually not appropriate	Expert Consensus	֎֎ 0.1-1mSv		2	2	6	3	1	4	2	0	0	1	0
US echocardiography transthoracic stress	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	2	8	3	1	2	0	0	1	0
		References		Study	y Quality			I							
		15 (26910053))												
		23 (28378340)													
		22 (25378470)													
		24 (29909113))	4 3											
US echocardiography transesophageal	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	6	5	1	3	1	0	1	0	0
		References		Study Quality						•			•		
		22 (25378470)			4										
MRI heart with function and vasodilator stress perfusion without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	6	6	2	0	2	0	0	0	1
		References		Study	y Quality										

			31 (25863305)		Inadequate											
MRI heart with function and inotropic stress without IV contrast	Usuall approp	y not priate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	6	5	2	0	3	0	1	0	0
			References	Study	Study Quality											
			31 (25863305)		Inac											
MRI heart with function and inotropic stress without and with IV contrast	Usuall approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	5	5	3	0	3	0	1	0	0
Arteriography coronary	Usuall approp	y not oriate	Limited	ଝେଝ 1-10 mSv		1	1	10	3	2	2	0	0	0	0	0
		References			Study Quality			-			-	-	-			
		44 (26112200)			4											

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.