

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

Suspected Pulmonary Hypertension

Variant 1: Suspected pulmonary hypertension. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US echocardiography transthoracic resting	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	1	1	0	0	4	9
			References	Study Quality											
			1 (19324955)	4											
			11 (15249493)	4											
			24 (26320113)	4											
			10 (22267542)	4											
			28 (23496202)	2											
			25 (32628737)	2											
			22 (31109891)	4											
			51 (30963276)	2											
			31 (28668978)	2											
			29 (28655466)	2											
			26 (28488784)	2											
			27 (31904543)	2											
			23 (31871259)	Good											
			30 (19389575)	4											
Radiography chest	Usually appropriate	Limited	⊕ <0.1 mSv	⊕ <0.03 mSv [ped]	9	9	0	1	0	0	1	0	0	3	10
			References	Study Quality											

15 (1149525)	4
11 (15249493)	4
14 (7103259)	4
16 (7216709)	4
17 (8972316)	4
18 (5418015)	4
19 (3872021)	3
13 (6705299)	3
20 (24393659)	2
10 (22267542)	4
21 (22623544)	4

CTA chest with IV contrast	Usually appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼☼ 3-10 mSv [ped]	7	7	0	0	1	1	1	4	3	3	2
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References	Study Quality
36 (17475953)	4
39 (9596302)	4
45 (15703314)	4
24 (26320113)	4
54 (23982287)	2
47 (23168063)	4
41 (21447184)	3
37 (22262242)	2
56 (21926854)	2
21 (22623544)	4
55 (29846802)	2
44 (31351047)	2
58 (32649425)	2
57 (30562223)	2
51 (30963276)	2
35 (29880507)	2
46 (29432063)	4

			52 (29237020)		2													
			53 (28595696)		2													
CT chest with IV contrast	Usually appropriate	Strong	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	7	7	0	0	0	1	2	2	8	1	2			

References	Study Quality
39 (9596302)	4
40 (17573485)	4
45 (15703314)	4
24 (26320113)	4
48 (17495297)	4
47 (23168063)	4
41 (21447184)	3
21 (22623544)	4
50 (-3100301)	4
49 (30392598)	4
44 (31351047)	2
42 (29254655)	2
46 (29432063)	4
43 (32241822)	4

MRI heart function and morphology without IV contrast	May be appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	5	5	0	1	4	0	6	3	0	1	0			
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References	Study Quality
66 (21947513)	3
62 (24509623)	4
64 (22720870)	3
73 (24790032)	4
63 (23474963)	4
70 (23863980)	3
21 (22623544)	4
72 (24974951)	3
74 (24625242)	3

75 (29435739)	2
61 (28376242)	1
59 (31424519)	1
71 (31270715)	2
76 (29934885)	2
69 (30501639)	2
60 (29966635)	4
68 (27121929)	1
65 (27719980)	4
67 (25496540)	2

MRI heart function and morphology without and with IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	5	5	0	1	5	0	4	4	0	1	0
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References	Study Quality
66 (21947513)	3
62 (24509623)	4
64 (22720870)	3
73 (24790032)	4
63 (23474963)	4
70 (23863980)	3
21 (22623544)	4
72 (24974951)	3
74 (24625242)	3
75 (29435739)	2
61 (28376242)	1
59 (31424519)	1
71 (31270715)	2
76 (29934885)	2
69 (30501639)	2
60 (29966635)	4
68 (27121929)	1
65 (27719980)	4

41 (21447184)	3
21 (22623544)	4
50 (-3100301)	4
49 (30392598)	4
44 (31351047)	2
42 (29254655)	2
46 (29432063)	4
43 (32241822)	4

Arteriography pulmonary with right heart catheterization	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv		2	2	7	6	3	0	0	0	0	0	0
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References	Study Quality
82 (18462902)	3
24 (26320113)	4
83 (28060193)	4

Catheterization right heart	Usually not appropriate	Limited	☢☢ 0.1-1mSv		2	2	5	4	6	0	1	0	0	0	0
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References	Study Quality
79 (17534570)	4
81 (17174196)	4
24 (26320113)	4
78 (28722077)	4
80 (32088984)	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.