# American College of Radiology ACR Appropriateness Criteria®

## Hemoptysis

Variant 1: Massive (life-threatening) hemoptysis. Initial imaging.

	Appropr	oriateness SOF Adults DDI Pods DDI Pating Median					3.5.31	Final Tabulations												
Procedure	Cates	gory	SOE	Adults RRI	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9			
CTA chest with IV contrast	Usua approp		Strong	��� 1-10 mSv	)	���� 3- 10 mSv [ped]	8	8	0	0	0	0	0	2	1	5	7			
			References			Study	Quality													
			35 (17285281)				3													
			26 (20656846)				4													
			37 (23674273)				4													
			38 (24283551)				2													
			36 (19864882)			2														
			25 (17989162)			4														
			24 (17609448)		2															
			34 (15486218)		2															
Radiography chest	Usua approp		Moderate			Sv			0	0	0	0	0	0	2	8	6			
			References			Study	Quality													
			28 (12388502)				3													
			40 (11566690)	66690) 4																
			41 (18677295)	41 (18677295)			2													
			39 (18239238)				4													
			12 (22025193)			2														
			17 (-3146904)			4														

Arteriography bronchial with embolization	Usually appropriate	Strong	���� 10-30 mSv	)	8	8	1	0	0	0	0	0	1	6	7
		References		Study	Quality		•				•		•	•	
		22 (19996573)			3										
		23 (15788606)			4										
		26 (20656846)			4										
		8 (25931790)			2										
		16 (25563314)			2										
		21 (25359349)			2										
		14 (25541693)			2										
		18 (23801773)			2										
		19 (21740674)			2										
		25 (17989162)			4										
		24 (17609448)													
		5 (28703105)		Not A	Assessed										
		15 (25960838)			4										
		17 (-3146904)			4										
		20 (26380767)			2										
CT chest with IV contrast	Usually appropriate	Strong	��� 1-10 mSv	ଡ଼େଡ଼ଡ଼ 3- 10 mSv [ped]	7	7	0	0	0	0	1	0	8	4	2
		References		Study	Quality										
		28 (12388502)			3										
		27 (2217769)			4										
		30 (15550375)			3										
		31 (27884176)			2										
		29 (26515934)			2										
		18 (23801773)			2										
		3 (17302979)			4										
		17 (-3146904)			4										

CT chest without IV contrast	May approp	Limited	��� 1-10 mSv	0	4	4	0	1	0	8	6	1	0	0	0
		References	Study	y Quality											
		33 (20729459)		3											
		25 (17989162)													
		32 (16446530)						_							
CT chest without and with IV contrast	Usually approp	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	0	2	2	5	5	3	1	0	0	0	1	0

## Variant 2: Nonmassive (non-life-threatening) hemoptysis. Initial imaging.

<b>D</b> 1	Appropri	ateness	SOE Adults RRL Peds RRL Rating Media				3.6.11			F	inal '	Tabulations					
Procedure	Categ	ory	SOE	Adults RR	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CTA chest with IV contrast	Usua approp		Limited	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	8	8	0	0	0	0	0	3	1	5	6
			References			Study	Quality										
			47 (28213604)				2		_								
CT chest with IV contrast	Usua approp		Limited	888 1 10		���� 3- 10 mSv [ped]	8	8	0	0	0	0	0	1	4	7	3
			References			Study	Quality										
			44 (19457872)		3												
			49 (23166543)		4				_								
Radiography chest	Usua approp		Expert Consensus	<b>≎</b> <0.1 mS	Sv		8	8	0	0	0	0	0	0	1	8	7
Arteriography bronchial with embolization	May approp	be riate	Strong Strong Strong Strong		30		5	5	0	0	1	0	13	2	0	0	0
			References		Study Quality												
			46 (21444351)				3										

47 (28213604)	2
48 (28526654)	4
45 (23921291)	4
18 (23801773)	2
19 (21740674)	2
15 (25960838)	4

CT chest without IV contrast	May be appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	4	4	2	0	4	4	3	1	1	0	0
CT chest without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	6	3	4	0	1	0	0	1	0

#### Variant 3: Recurrent hemoptysis. Initial imaging.

<b>D</b> 1	Appropriateness	SOE Adults RRL Peds RRL Rating Median				3.5.11			F	inal '	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
Radiography chest	Usually appropriate	Expert Consensus	<b>⊕</b> <0.1 mS\		8	8	0	0	1	0	2	1	4	5	3
CTA chest with IV contrast	Usually appropriate	Limited	Limited    SSS 1-10  mSv		7	7	0	0	0	0	1	5	3	1	5
		References	References		Study Quality										
		61 (28259504)		2											
Arteriography bronchial with embolization	Usually appropriate	Strong	8888 10 30		7	7	0	0	0	0	2	1	11	2	0
		References		Study	Quality		_								
		46 (21444351)			3										
		52 (21257863)	52 (21257863)		2										
		51 (28006828)	51 (28006828)		4										
		55 (26718145)			4										
		4 (26481824)	, i		4										

			16 (25563314)			2										
			14 (25541693)			2										
			56 (24252773)			2										
			58 (23932187)			2										
			53 (23579345)			2										
			50 (23246187)			2										
			19 (21740674)			2										
			57 (19406667)			2										
CT chest with IV contrast	May approp		Limited	��� 1-10 mSv	0	6	6	0	0	0	0	6	4	1	2	2
	,		References		Stu	dy Quality										
			60 (20675678)			4										
CT chest without IV contrast	Usuall approp		Expert Consensus	��� 1-10 mSv	0 <b>����</b> 3- 10 mSv [ped]	3	3	3	3	3	2	2	1	1	0	0
CT chest without and with IV contrast	Usuall approp	y not oriate	Expert Consensus	��� 1-10 mSv	88882	2	2	7	2	3	2	0	1	0	0	0

54 (25862253)

#### **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.