

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
CT paranasal sinuses without IV contrast	Usually appropriate	Limited	☼☼ 0.1-1mSv	☼☼☼ 0.3-3 mSv [ped]	9	9	0	0	0	0	4	0	2	2	10	
		References	Study Quality													
		52 (8327669)	4													
		49 (1787970)	4													
		1 (11533355)	4													
		9 (16416688)	4													
		57 (16015392)	4													
		19 (1626907)	4													
		20 (2000009)	4													
		23 (16025049)	4													
		47 (2816644)	4													
		45 (1529853)	4													
		46 (1528599)	4													
		41 (8361320)	4													
		42 (8247570)	4													
		43 (15907892)	4													
		48 (8361292)	4													
		44 (1590190)	4													
		50 (2251468)	4													
		51 (8373095)	4													
		55 (12111059)	4													
		56 (15855126)	3													
		17 (22297923)	4													
		54 (17767608)	4													
		53 (22762849)	4													
		58 (19418533)	3													
MRI paranasal sinuses without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	2	9	2	4	1	2	1	0	0	0	

References	Study Quality
59 (95100004)	4
61 (-3091644)	4
60 (3363145)	4

CT paranasal sinuses with IV contrast	Usually not appropriate	Limited	☼☼ 0.1-1mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	11	4	4	0	0	0	0	0	0
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References	Study Quality
52 (8327669)	4
49 (1787970)	4
1 (11533355)	4
9 (16416688)	4
57 (16015392)	4
19 (1626907)	4
20 (2000009)	4
23 (16025049)	4
47 (2816644)	4
45 (1529853)	4
46 (1528599)	4
41 (8361320)	4
42 (8247570)	4
43 (15907892)	4
48 (8361292)	4
44 (1590190)	4
50 (2251468)	4
51 (8373095)	4
55 (12111059)	4
56 (15855126)	3
17 (22297923)	4
54 (17767608)	4
53 (22762849)	4
58 (19418533)	3

CT paranasal sinuses without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	12	2	3	1	0	0	0	0	0
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References	Study Quality
52 (8327669)	4
49 (1787970)	4
1 (11533355)	4
9 (16416688)	4
57 (16015392)	4
19 (1626907)	4
20 (2000009)	4
23 (16025049)	4
47 (2816644)	4
45 (1529853)	4
46 (1528599)	4
41 (8361320)	4
42 (8247570)	4
43 (15907892)	4
48 (8361292)	4
44 (1590190)	4
50 (2251468)	4
51 (8373095)	4
55 (12111059)	4
56 (15855126)	3
54 (17767608)	4
53 (22762849)	4
58 (19418533)	3

MRI paranasal sinuses without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	1	1	12	4	3	0	0	0	0	0	0
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References	Study Quality
59 (95100004)	4
61 (-3091644)	4

MRV head with IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	6	6	0	0	0	1	8	5	2	2	0
		References	Study Quality												
		21 (16982973)	4												
		22 (21416657)	4												
		19 (1626907)	4												
		20 (2000009)	4												
		23 (16025049)	4												
CTA head with IV contrast	May be appropriate	Limited	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	5	5	1	0	0	3	13	2	0	0	0
		References	Study Quality												
		66 (19001644)	4												
MRA head without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	1	0	1	3	13	1	0	0	0
		References	Study Quality												
		66 (19001644)	4												
MRV head without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	2	0	1	3	9	3	1	0	0
		References	Study Quality												
		21 (16982973)	4												
		22 (21416657)	4												
		19 (1626907)	4												
		20 (2000009)	4												
		23 (16025049)	4												
CTV head with IV contrast	May be appropriate	Limited	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	5	5	0	0	0	2	8	3	5	0	0
		References	Study Quality												
		25 (11889374)	3												
		22 (21416657)	4												
		23 (16025049)	4												

MRV head without and with IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	2	0	1	2	9	4	1	0	0
		References	Study Quality												
		21 (16982973)	4												
		22 (21416657)	4												
		19 (1626907)	4												
		20 (2000009)	4												
		23 (16025049)	4												
MRA head with IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	4	4	2	2	0	7	7	1	0	0	0
		References	Study Quality												
		66 (19001644)	4												
MRI head and paranasal sinuses without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	3	2	7	4	3	0	0	0	0
		References	Study Quality												
		25 (11889374)	3												
		21 (16982973)	4												
		61 (-3091644)	4												
CT head and paranasal sinuses without IV contrast	Usually not appropriate	Limited		☼☼☼ 0.3-3 mSv [ped]	3	3	3	5	5	1	2	2	0	0	0
		References	Study Quality												
		65 (3174990)	3												
		23 (16025049)	4												
Radiography paranasal sinuses	Usually not appropriate	Expert Consensus	☼ <0.1 mSv	☼ <0.03 mSv [ped]	1	1	16	2	0	0	0	0	0	0	0
CT head and paranasal sinuses without and with IV contrast	Usually not appropriate	Limited		☼☼☼☼ 3-10 mSv [ped]	1	1	10	2	4	2	0	0	0	0	0
		References	Study Quality												
		65 (3174990)	3												
		23 (16025049)	4												

Variant 4: Child. Suspected invasive fungal sinusitis. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
CT paranasal sinuses with IV contrast	Usually appropriate	Limited	☹☹ 0.1-1mSv	☹☹☹ 0.3-3 mSv [ped]	9	9	0	1	0	0	0	0	2	6	9	
		References	Study Quality													
		65 (3174990)	3													
		23 (16025049)	4													
		68 (24923371)	3													
		69 (23271503)	4													
		67 (21400253)	2													
MRI paranasal sinuses without and with IV contrast	Usually appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	9	9	0	0	1	0	1	0	1	3	12	
		References	Study Quality													
		25 (11889374)	3													
		21 (16982973)	4													
		61 (-3091644)	4													
		70 (22006778)	2													
CTA head with IV contrast	May be appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	5	5	2	1	5	0	9	2	0	0	0	
MRA head without IV contrast	May be appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	5	5	1	1	3	3	9	2	0	0	0	
MRV head without IV contrast	May be appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	5	5	1	1	4	0	12	1	0	0	0	
CTV head with IV contrast	May be appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	5	5	1	0	1	0	9	2	5	0	0	

MRV head without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	○ 0 mSv	○ 0 mSv [ped]	5	5	3	2	4	0	7	3	0	0	0
MRV head with IV contrast	May be appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	5	5	1	0	1	0	8	5	1	2	0
MRA head with IV contrast	May be appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	4	4	1	1	4	5	7	1	0	0	0
CT paranasal sinuses without IV contrast	Usually not appropriate	Limited	⊕⊕ 0.1-1mSv	⊕⊕⊕ 0.3-3 mSv [ped]	3	3	3	0	8	0	7	0	0	0	1

References	Study Quality
65 (3174990)	3
23 (16025049)	4
68 (24923371)	3
69 (23271503)	4
67 (21400253)	2

MRI paranasal sinuses without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	4	1	5	3	5	1	0	0	0
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References	Study Quality
25 (11889374)	3
21 (16982973)	4
61 (-3091644)	4
70 (22006778)	2

CT paranasal sinuses without and with IV contrast	Usually not appropriate	Limited	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	1	1	10	2	5	0	1	0	0	0	0
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References	Study Quality
65 (3174990)	3
23 (16025049)	4
68 (24923371)	3
69 (23271503)	4
67 (21400253)	2

Radiography paranasal sinuses	Usually not appropriate	Expert Consensus	☼ <0.1 mSv	☼ <0.03 mSv [ped]	1	1	17	1	0	0	0	0	0	0	0
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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.