American College of Radiology ACR Appropriateness Criteria®

Sinonasal Disease

Variant 1: Acute (less than 4 weeks) uncomplicated rhinosinusitis. Initial Imaging.

	Appropri	iateness									I	Final	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RR	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT cone beam paranasal sinuses without IV contrast	Usually approp	y not oriate	Limited	�� 0.1-1m	Sv		3	3	5	3	4	4	1	0	1	0	0
	•		References			Study	Quality										
			18 (8259141)				3										
			17 (26253983)				4										
			19 (26700263)				3										
			1 (25833927)				4										
CT head with IV contrast	Usually approp		Limited	��� 1-10 mSv)	��� 0.3- 3 mSv [ped]	2	2	9	4	1	1	1	2	0	0	0
			References			Study	Quality										
			1 (25833927)				4										
CT head without IV contrast	Usually approp		Limited	≎≎≎ 1-10 mSv)	��� 0.3- 3 mSv [ped]	2	2	9	3	2	2	0	1	1	0	0
			References			Study	Quality										
			1 (25833927)			_	4										
CT maxillofacial without IV contrast	Usually approp		Limited	�� 0.1-1m	Sv		2	2	7	5	1	2	2	0	0	0	0
			References			Study	Quality										
		18 (8259141)					3										
			18 (8259141) 17 (26253983)				4										

		1 (25833927)			4										
Radiography paranasal sinuses	Usually approp	Limited	� <0.1 mSv	v <0.03 mSv [ped]	2	2	8	2	2	4	1	0	0	0	0
		References		Study	y Quality										
		21 (12820855)			2										
		20 (27481857)			4										
		1 (25833927)			4										
		22 (-3194068)			4										
CTA head with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	ଡେଡେଡେ 3- 10 mSv [ped]	1	1	16	0	1	0	1	0	0	0	0
CT head without and with IV contrast	Usually approp	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	3	1	3	0	1	0	0	0
		References		Study	y Quality	•									
		1 (25833927)			4										
CT maxillofacial with IV contrast	Usually approp	Limited	�� 0.1-1mS	Sv	1	1	11	5	1	0	0	0	0	0	0
		References		Study	y Quality										
		18 (8259141)			3										
		17 (26253983)			4										
		1 (25833927)			4					1					
CT maxillofacial without and with IV contrast	Usually approp	Limited	��� 1-10 mSv		1	1	15	2	0	0	0	0	0	0	0
		References		Study	y Quality										
		18 (8259141)			3										
		17 (26253983)			4										
		1 (25833927)			4										
Arteriography craniofacial	Usually approp	Expert Consensus	��� 1-10 mSv		1	1	17	0	1	0	0	0	0	0	0

MRA head without IV contrast	Usually		Expert	O 0 mSv	O 0 mSv	1	1	14	3	1	0	0	0	0	0	0
	appropri	iate	Consensus	0 0 1110 0	[ped]	1	1	17	3	1	Ů	Ů	Ů			
MRA head without and with IV contrast	Usually appropri		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	15	2	1	0	0	0	0	0	0
MRI head without IV contrast	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	1	4	2	0	1	0	0	0
		•	References		Study	Quality		•	•		•		•	•	•	
			1 (25833927)			4										
MRI head without and with IV contrast	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	2	3	2	0	1	0	0	0
		•	References		Study	Ouality Outline							,			
			1 (25833927)			4										
SPECT or SPECT/CT paranasal sinuses	Usually appropri		Expert Consensus	��� 1-10 mSv	⊕⊕⊕⊕ 3- 10 mSv [ped]	1	1	16	0	2	0	0	0	0	0	0
FDG-PET/CT skull base to mid- thigh	Usually appropri		Expert Consensus	���� 10-3 mSv	99992	1	1	16	1	1	0	0	0	0	0	0
MRI orbits face neck without and with IV contrast	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	1	1	14	2	1	0	0	0	0	0	0
			References		Study	/ Quality										
			1 (25833927)			4										
MRI orbits face neck without IV contrast	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	1	1	14	1	2	0	0	0	0	0	0
		•	References		Study	Quality										
			1 (25833927)			4										
MRA head with IV contrast	Usually appropri		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	16	1	1	0	0	0	0	0	0
MRI head with IV contrast	Usually appropri		Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	2	3	1	0	1	0	1	0
			References		C ₁ 1	Quality					•					

			1 (25833927)				4										
MRI orbits face neck with IV contrast	Usuall approp	4	Limited	O 0 mSv	/	O 0 mSv [ped]	1	1	10	1	2	3	0	1	1	0	0
			References			Study	Quality										
			1 (25833927)			<u> </u>	4										

Variant 2: Acute rhinosinusitis with suspected orbital or intracranial complication. Initial Imaging.

D 1	Appropriateness	COE	A L L DDI	D I DDI	D 4	N. 11			F	inal	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT maxillofacial with IV contrast	Usually appropriate	Limited	�� 0.1-1mSv		9	9	0	0	0	0	0	0	3	6	9
		References		Study	Quality										
		23 (11889374)			3										
		17 (26253983)			4		_								
MRI orbits face neck without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	2	2	14
		References		Study	Quality										
		17 (26253983)			4		_								
MRI head without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	3	3	3	8
		References		Study	Quality										
		23 (11889374)			3										
		17 (26253983)			4										
CT head with IV contrast	May be appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	6	6	0	0	0	4	3	5	5	0	0
		References		Study	Quality										
		23 (11889374)			3										
		17 (26253983)			4										
		6 (28341385)			4										

CT maxillofacial without IV contrast	May be appropriate (Disagreement)	Expert Opinion	�� 0.1-1mS	v	5	5	0	3	1	2	8	3	0	0	0
		References		Study	y Quality		-								
		23 (11889374)			3										
		17 (26253983)			4										
MRI head without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	1	0	0	5	6	5	0	0	0
		References		Study	y Quality										
		23 (11889374)			3										
		17 (26253983)			4										
MRI orbits face neck without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	3	5	4	3	2	0
		References		Study	y Quality										
		17 (26253983)		4											
CT cone beam paranasal sinuses without IV contrast	Usually not appropriate	Limited	�� 0.1-1mS	v	3	3	7	2	6	1	1	1	0	0	0
		References		Study	y Quality		•								
		25 (24449524)			3										
		19 (26700263)			3										
CTA head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	9	1	2	4	0	2	0	0	0
CT head without IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	4	2	2	1	0	0	0	0
		References		Study	y Quality										
		23 (11889374)			3										
		17 (26253983)			4										
		6 (28341385)			4										
CT head without and with IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	11	1	2	2	1	0	0	0	0

		References			Study	Quality										
			23 (11889374)			3										
			17 (26253983)			4										
			6 (28341385)			4		_								
CT maxillofacial without and with IV contrast	Usually approp		Limited	��� 1-10 mSv		1	1	12	1	1	2	1	0	0	0	0
			References		Study	/ Quality										
			23 (11889374)			3										
			17 (26253983)			4										
Arteriography craniofacial	Usually approp		Expert Consensus	��� 1-10 mSv		1	1	15	0	0	2	0	1	0	0	0
MRA head without IV contrast	Usually approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	1	3	2	1	1	0	0	0
MRA head without and with IV contrast	Usually approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	2	4	1	0	1	0	0	0
SPECT or SPECT/CT paranasal sinuses	Usually approp		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	15	0	3	0	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually approp		Expert Consensus	≎≎≎≎ 10-3 mSv	0	1	1	14	1	2	0	0	1	0	0	0
Radiography paranasal sinuses	Usually approp		Expert Consensus	≎ <0.1 mS	v <0.03 v mSv [ped]	1	1	13	1	2	0	1	1	0	0	0
MRA head with IV contrast	Usually approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	1	5	0	0	2	0	0	0
MRI head with IV contrast	Usually appropr		Limited	O 0 mSv	O 0 mSv [ped]	1	1	11	1	2	2	1	0	0	0	0

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References	Study Quality
23 (11889374)	3
17 (26253983)	4

MRI orbits face neck with IV contrast	Usuall approp	· .	Limited	O 0 mSv	/	O 0 mSv [ped]	1	1	12	0	2	2	0	1	0	0	0
			References			Study	Quality										
			17 (26253983)				4										

Variant 3: Acute recurrent sinusitis or chronic rhinosinusitis or noninvasive fungal sinusitis or sinonasal polyposis. Possible surgical candidate for these indications or other non-neoplastic indications, including suspected silent sinus syndrome or suspected mucocele, or deviated nasal septum. Initial Imaging.

	Appropr	iateness	GOT		D 1 DE-	-				I	inal	Tabu	latio	ns		
Procedure	Cate	gory	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT maxillofacial without IV contrast	Usua approj	ally priate	Strong	�� 0.1-1mS\	,	9	9	1	0	0	1	0	0	2	0	13
			References		Study	y Quality					-					
			26 (25832968)			4										
			31 (26001236)			4										
			35 (27554662)			1										
			36 (28072563)			4										
			32 (27643765)			4										
			37 (27193478)			2										
			2 (26476379)			4										
			38 (25412986)			2			_		_					
CT maxillofacial with IV contrast	May approp	be priate	Strong	�� 0.1-1mSv		5	5	0	0	0	3	8	2	4	0	0
			References		Study	y Quality										
			26 (25832968)			4										
			31 (26001236)			4										
			35 (27554662)			1										
			36 (28072563)			4										
			32 (27643765)			4										
			37 (27193478)			2										
			2 (26476379)			4										

			38 (25412986)			2										
CT cone beam paranasal sinuses without IV contrast	May approp		Strong	�� 0.1-1mSv	,	5	5	0	0	2	1	12	2	0	0	0
			References		Study	y Quality			•	•	•				•	
			25 (24449524)			3										
			19 (26700263)			3										
			34 (28747616)			2										
			33 (25765366)			2		_								
MRI orbits face neck without and with IV contrast	May approp (Disagre	riate	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	3	0	1	2	8	3	0	0	0
			References		Study	y Quality					•					
			40 (19379610)			2										
			39 (2294574)			4										
			24 (29685531)			4										
MRI orbits face neck without IV contrast	May approp		Limited	O 0 mSv	O 0 mSv [ped]	4	4	3	0	0	6	8	0	0	0	0
			References		Study	y Quality										
			40 (19379610)			2										
			39 (2294574)			4										
	1		24 (29685531)			4			1							
CT head without IV contrast	Usually approp		Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	3	3	7	2	5	1	1	2	0	0	0
CT head without and with IV contrast	Usually approp		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	9	1	3	3	0	2	0	0	0
CTA head with IV contrast	Usually approp		Expert Consensus	��� 1-10 mSv		1	1	13	1	1	0	0	2	0	0	0
CT head with IV contrast	Usually approp		Expert Consensus	≎ ⊕⊕ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	11	2	4	0	0	0	0	0	0

CT maxillofacial without and with IV contrast	Usually approp	Strong	ॐॐ ≎ 1-10 mSv)	1	1	12	2	2	0	1	0	0	0	0
		References		Stud	y Quality										
		26 (25832968)			4										
		31 (26001236)			4										
		35 (27554662)			1										
		36 (28072563)			4										
		32 (27643765)			4										
		37 (27193478)			2										
		2 (26476379)			4										
		38 (25412986)			2										
Arteriography craniofacial	Usually approp	Expert Consensus	��� 1-10 mSv)	1	1	17	0	1	0	0	0	0	0	0
MRA head without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	14	2	0	1	0	0	0	0	0
MRA head without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	15	1	0	1	0	0	0	0	0
MRI head without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	14	3	0	0	0	0	0	0	0
MRI head without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	14	3	0	0	0	0	0	0	0
SPECT or SPECT/CT paranasal sinuses	Usually approp	Limited	≎≎≎ 1-10 mSv	9	1	1	14	1	0	0	1	1	0	0	0
		References		Stud	y Quality										
,		42 (19401044)			3										
FDG-PET/CT skull base to mid-thigh	Usually approp	Expert Consensus	��� ⊕ 10-3 mSv	30	1	1	14	2	1	0	0	0	0	0	0
Radiography paranasal sinuses	Usually approp	Limited	≎ <0.1 mS		1	1	9	3	2	1	1	0	1	0	0

			References			Study	Quality										
			41 (8327669)				4										
			2 (26476379)				4										
MRA head with IV contrast	Usually approp		Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	14	2	0	1	0	0	0	0	0
MRI head with IV contrast	Usually approp		Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
MRI orbits face neck with IV contrast	Usually approp	y not riate	Limited	O 0 mSv	,	O 0 mSv [ped]	1	1	13	0	1	3	0	0	0	0	0
			References			Study	Quality		•								
			40 (19379610)				2										
			39 (2294574)				4										
			24 (29685531)				4										

Variant 4: Acute sinusitis with rapid progression or suspected invasive fungal sinusitis. Initial Imaging.

D 1	Appropri	ateness	COE	4 1 14 DD		D I DDI	D 4	3.6 11			F	inal '	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RR	KL .	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI orbits face neck without and with IV contrast	Usua approp		Limited	O 0 mSv	/	O 0 mSv [ped]	9	9	0	0	0	0	0	0	2	3	12
			References			Study	Quality										
			45 (22006778)				2										
			46 (29774383)				4										
			5 (28438285)				4										
			4 (26476380)				4										
CT maxillofacial with IV contrast	Usua approp		Limited	�� 0.1-1m	ıSv		8	8	0	0	0	0	2	0	6	3	6
			References			Study	Quality										
			43 (18029900)				4										
			23 (11889374)				3										

		5 (28438285)			4										
		6 (28341385)			4										
		4 (26476380)			4										
		44 (25882281)			1										
CT maxillofacial without IV contrast	Usually appropriate	Limited	�� 0.1-1mSv		7	7	0	0	0	1	2	1	8	1	4
		References		Study	Quality										
		43 (18029900)			4										
		23 (11889374)			3										
		5 (28438285)			4										
		6 (28341385)			4										
		4 (26476380)			4										
		44 (25882281)			1										
MRI head without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	6	7	3	0	0
		References		Study	Quality										
		43 (18029900)			4										
		5 (28438285)			4										
		6 (28341385)			4										
CT head with IV contrast	May be appropriate	Limited	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	5	5	0	0	1	3	9	4	0	0	0
		References		Study	Quality										
		43 (18029900)			4										
		23 (11889374)			3										
		6 (28341385)			4										
MRI head without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	1	0	1	4	7	4	0	0	0
		References		Study	Quality										_
		43 (18029900)			4										
		5 (28438285)			4										

		6 (28341385)			4										
MRI orbits face neck without IV contrast	May b appropri	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	5	5	5	1	1	0
		References		St	udy Quality		•		•						
		45 (22006778)			2										
		46 (29774383)			4										
		5 (28438285)			4										
		4 (26476380)			4										
CT cone beam paranasal sinuses without IV contrast	Usually appropri	Limited	�� 0.1-1mS	v	2	2	8	1	3	2	3	0	0	0	0
		References		St	udy Quality										
		25 (24449524)			3										
		19 (26700263)			3										
CTA head with IV contrast	Usually appropri	Expert Consensus	��� 1-10 mSv	���� 3 10 mSv [ped]		1	12	3	1	0	1	0	0	0	0
CT head without IV contrast	Usually appropri	Limited	��� 1-10 mSv	��� 0.3 3 mSv [ped]	1	1	9	3	2	3	0	0	0	0	0
		References		St	udy Quality		•	•		•	•			•	
		43 (18029900)			4										
		23 (11889374)			3										
		6 (28341385)			4										
CT head without and with IV contrast	Usually appropri	Limited	��� 1-10 mSv	���� 3 10 mSv [ped]		1	12	0	4	1	0	0	0	0	0
		References		St	udy Quality										
		43 (18029900)			4										
		23 (11889374)			3										
		 6 (28341385)			4	_									
CT maxillofacial without and with IV contrast	Usually appropri	Limited	≎≎≎ 1-10 mSv		1	1	10	2	2	1	2	0	0	0	0
		References		St	udy Quality										

43 (18029900)	4
23 (11889374)	3
5 (28438285)	4
6 (28341385)	4
4 (26476380)	4
44 (25882281)	1

Arteriography craniofacial	Usuall approj	Expert Consensus	��� 1-10 mSv)	1	1	12	1	1	1	0	0	2	0	0
MRA head without IV contrast	Usuall approj	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	11	0	2	2	1	0	1	0	0
MRA head without and with IV contrast	Usuall approj	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	11	2	2	1	0	0	1	0	0
SPECT or SPECT/CT paranasal sinuses	Usuall approp	Expert Consensus	��� 1-10 mSv	9	1	1	16	0	0	1	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usuall approp	Expert Consensus	���� 10∹ mSv	30	1	1	15	1	1	0	0	0	0	0	0
Radiography paranasal sinuses	Usuall approp	Limited	≎ <0.1 mS		1	1	11	3	1	1	0	1	0	0	0
		References		Study	Quality										

47 (28599686) MRA head with IV contrast Usually not appropriate O 0 mSv [ped] Expert Consensus O 0 mSv 0 4 0 0 11 MRI head with IV contrast Usually not appropriate O 0 mSv [ped] O 0 mSv 3 2 Limited 11 0 0 1

References	Study Quality
43 (18029900)	4
5 (28438285)	4
6 (28341385)	4

MRI orbits face neck with IV contrast	Usuall approp	4	Limited	O 0 mSv	/	O 0 mSv [ped]	1	1	11	3	0	1	2	0	0	0	0
			References			Study	Quality										<u>.</u>
			45 (22006778)				2										
			46 (29774383)				4										
			5 (28438285)				4										
			4 (26476380)				4										

Variant 5: Suspected sinonasal mass. Initial Imaging.

	Appropriateness	GOT		D 1 DD1	5	3.5.31			F	inal	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI orbits face neck without and with IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	1	0	16
		References		Study	y Quality										
		24 (29685531))		4										
		52 (31939885)			1										
		8 (29696477)			4										
		9 (29217745)			1										
		7 (26830408)			4										
		53 (26359585)			2										
CT maxillofacial with IV contrast	Usually appropriate	Limited	�� 0.1-1mSv		7	7	0	0	0	1	1	0	8	1	6
		References		Study	y Quality										
		51 (28391267))		2										
		7 (26830408)			4										
CT maxillofacial without IV contrast	Usually appropriate	Limited	�� 0.1-1mSv		7	7	1	0	1	0	1	4	3	3	4
		References		Study	y Quality									·	
		51 (28391267)			2										

			7 (26830408)			4										
MRI head without and with IV contrast	May approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	6	6	1	0	0	1	1	8	4	2	0
CT head with IV contrast	May approp		Limited	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	5	5	1	0	0	4	10	2	0	0	0
			References		Stud	y Quality										
	1		51 (28391267)			2										
MRI head without IV contrast	May approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	5	5	2	0	0	5	9	1	0	0	0
MRI orbits face neck without IV contrast	May approp	be oriate	Strong	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	3	7	6	0	1	0
			References		Stud	y Quality										
			24 (29685531)			4										
			52 (31939885)			1										
			8 (29696477)			4										
			9 (29217745)			1										
			7 (26830408)			4										
			53 (26359585)			2										
CT head without and with IV contrast	Usuall approp		Limited	��� 1-10 mSv	••••• 3- 10 mSv [ped]	2	2	8	2	1	4	0	1	1	0	0
			References		Stud	y Quality										
			51 (28391267)			2										
CTA head with IV contrast	Usuall approp		Limited	��� 1-10 mSv	₩₩₩ 3- 10 mSv [ped]	1	1	10	0	1	3	1	2	0	0	0
			References		Stud	y Quality										
			43 (18029900)			4										
			48 (17213441)			4										
			49 (15794546)			4										
			50 (12487677)			4										

CT head without IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	11	1	5	0	0	0	0	0	0
		References			y Quality		'								
		51 (28391267)		-	2										
CT maxillofacial without and with IV contrast	Usually not appropriate	Limited	��� 1-10 mSv		1	1	11	3	0	1	1	1	0	0	0
		References		Study	y Quality						•				
		51 (28391267)			2										
		7 (26830408)			4										
Arteriography craniofacial	Usually not appropriate	Limited	��� 1-10 mSv		1	1	12	1	1	1	0	2	0	0	0
		References		Study	y Quality			•	•	•	•	•			
		43 (18029900)		_	4										
		48 (17213441)			4										
		49 (15794546)			4										
		50 (12487677)			4										
MRA head without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	1	3	1	1	1	0	0	0
		References		Study	y Quality		•								
		43 (18029900)			4										
		48 (17213441)			4										
		49 (15794546)			4										
		50 (12487677)			4										
MRA head without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	10	0	2	2	1	2	0	0	0
		References		Study	y Quality		•	•	•	•					
		43 (18029900)		-	4										
		48 (17213441)			4										
		49 (15794546)			4										
		50 (12487677)			4										

SPECT or SPECT/CT paranasal sinuses	Usually appropri		Expert Consensus	��� 1-10 mSv	0	⊕⊕⊕⊕ 3- 10 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually appropri		Limited	���� 10-3 mSv	30	���� 3- 10 mSv [ped]	1	1	12	1	3	1	0	0	0	0	0
			References			Study	Quality										
			7 (26830408)				4										
Radiography paranasal sinuses	Usually appropri		Limited	≎ <0.1 mS	Sv		1	1	14	2	0	0	1	0	0	0	0
			References 51 (28391267)			Study	Quality										
		51 (28391267)					2										
CT cone beam paranasal sinuses without IV contrast	Usually appropri		Expert Consensus	�� 0.1-1m	ıSv		1	1	9	1	2	2	2	0	1	0	0
MRA head with IV contrast	Usually appropri		Limited	O 0 mSv	,	O 0 mSv [ped]	1	1	11	0	2	2	1	1	0	0	0
			References			Study	Quality										
			43 (18029900)				4										
			48 (17213441)				4										
			49 (15794546)				4										
			50 (12487677)				4										
MRI head with IV contrast	Usually appropri		Expert Consensus	O 0 mSv	,	O 0 mSv [ped]	1	1	12	2	0	2	0	0	0	1	0
MRI orbits face neck with IV contrast	Usually appropri		Strong	O 0 mSv	,	O 0 mSv [ped]	1	1	13	0	1	0	1	1	0	1	0
			References			Study	Quality		•								
			24 (29685531)				4										
			52 (31939885)				1										
			8 (29696477)				4										
			9 (29217745)				1										
			7 (26830408)				4										

53 (26359585)	2
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Variant 6: Suspected CSF leak. Initial Imaging.

	Appropriateness	SOF Adulta DDI			D I DDI D (Final Tabulations											
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9			
CT maxillofacial without IV contrast	Usually appropriate	Strong	�� 0.1-1mSv		9	9	1	0	1	0	0	0	4	0	11			
		References		Study	y Quality					_			•					
		57 (10319986)			3													
		58 (12087336)			3													
		12 (27890184)			4													
		13 (26370330)			4													
		55 (16145599)			2													
		61 (9576647)																
		62 (18079188)			4													
MRI orbits face neck without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	6	7	3	1	0			
		References		Study	y Quality													
		11 (18710972)																
		58 (12087336)																
		12 (27890184)			4													
		14 (27738899)																
		13 (26370330)		4 2														
		55 (16145599)																
		61 (9576647)																
		60 (17970620)																
		63 (19723768)			3													
		65 (19762462)			4													

MRI head without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	5	5	0	0	1	4	5	6	0	1	0
		References		Study	Quality										
		11 (18710972)			4										
		58 (12087336)			3										
		12 (27890184)			4										
		14 (27738899)			2										
		13 (26370330)			4										
		55 (16145599)		2											
		61 (9576647)		2											
		63 (19723768)			3	_									
MRI head without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	4	0	1	4	5	3	0	0	0
		References		Study	Quality			•			•				
		11 (18710972)			4										
		58 (12087336)			3										
		64 (31685104)													
		12 (27890184)			4										
		14 (27738899)			2										
		13 (26370330)													
		55 (16145599)			2										
		61 (9576647)			2										
		63 (19723768)			3					1					
CT head cisternography	May be appropriate	Strong	��� 1-10 mSv		5	5	0	0	1	1	9	3	2	0	1
		References		Study Quality				•			•				
		57 (10319986)			3										
		58 (12087336)			3										
		12 (27890184)			4										
		13 (26370330)			4										
		55 (16145599)			2										

		56 (2287375)			4										
		59 (9369519)			2										
		60 (17970620)													
DTPA cisternography	May be appropriate	Limited	≎≎≎ 1-10 mSv		5	5	1	0	1	3	8	4	0	0	0
		References		Study	/ Quality										
		58 (12087336)			3										
		12 (27890184)			4										
		13 (26370330)													
MRI orbits face neck without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	2	0	1	2	5	3	2	2	0
		References	Study		•										
		11 (18710972)		4											
		58 (12087336)		3											
		12 (27890184)			4										
		14 (27738899)		2											
		13 (26370330)													
		55 (16145599)			2										
		61 (9576647)			2										
		60 (17970620)			2										
		63 (19723768)			3										
		65 (19762462)			4										
SPECT or SPECT/CT paranasal sinuses	May be appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	4	4	5	1	0	4	6	1	0	0	0
		References		Study	Quality										
		13 (26370330)		4											
		66 (23871275)			4										
CTA head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	12	3	0	0	2	0	0	0	0

CT head with IV contrast	Usually approp		Expert Consensus	≎≎≎ 1-10 mSv)	��� 0.3- 3 mSv [ped]	1	1	14	1	1	1	0	0	0	0	0
CT head without IV contrast	Usually approp		Expert Consensus	≎≎≎ 1-10 mSv		��� 0.3- 3 mSv [ped]	1	1	12	3	2	0	0	0	0	0	0
CT head without and with IV contrast	Usually approp		Expert Consensus	≎≎≎ 1-10 mSv)	���� 3- 10 mSv [ped]	1	1	15	0	2	0	0	0	0	0	0
CT maxillofacial with IV contrast	Usually approp		Strong	�� 0.1-1mS	Sv		1	1	11	2	4	0	0	0	0	0	0
		References				Study	Quality										
		57 (10319986)					3										
			58 (12087336)				3										
			12 (27890184)				4										
			13 (26370330)				4										
		55 (16145599)					2										
			61 (9576647)				2										
			62 (18079188)				4										
CT maxillofacial without and with IV contrast	Usually approp		Strong	��� 1-10 mSv)		1	1	12	1	4	0	0	0	0	0	0
			References			Study	Quality										
			57 (10319986)				3										
			58 (12087336)				3										
			12 (27890184)				4										
			13 (26370330)				4										
		55 (16145599)			2												
			61 (9576647)				2										
			62 (18079188)				4		1								
Arteriography craniofacial	Usually approp		Expert Consensus	��� 1-10 mSv)		1	1	15	1	0	1	0	0	0	0	0

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MRA head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	14	2	0	1	0	0	0	0	0
MRA head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	14	2	0	1	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
Radiography paranasal sinuses	Usually not appropriate	Expert Consensus	⊕ <0.1 mSv		1	1	15	1	0	0	0	1	0	0	0
CT cone beam paranasal sinuses without IV contrast	Usually not appropriate	Expert Consensus	�� 0.1-1mSv		1	1	11	1	0	1	2	1	1	0	0
MRA head with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	14	2	0	1	0	0	0	0	0
MRI head with IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	1	1	13	1	0	1	2	0	0	0	0
		References		Study	y Quality										
		58 (12087336)	1		3										
		12 (27890184)			4										
		14 (27738899)	1		2										
		13 (26370330)	1		4										
		55 (16145599)			2										
		61 (9576647)			2										
		63 (19723768)		İ	3										
MRI orbits face neck with IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	1	1	12	1	2	1	1	0	0	0	0
		References		Study	y Quality										
		11 (18710972)	1		4										
		58 (12087336)	1		3										
		12 (27890184)			4										
		14 (27738899)			2										
		13 (26370330)			4										

55 (16145599)	2
61 (9576647)	2
60 (17970620)	2
63 (19723768)	3
65 (19762462)	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.