American College of Radiology ACR Appropriateness Criteria®

Sinonasal Disease

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

	Appropri	ateness	207								F	inal	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RRI		Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT cone beam paranasal sinuses without IV contrast	Usually approp		Limited	�� 0.1-1m§	Sv		3	3	5	3	3	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	8	4	1	1	1	2	0	0	0
			References			Study	Quality										
			1 (25833927)				4										
CT head without IV contrast	Usually approp	y not riate	Limited	≎≎≎ 1-10 mSv)	��� 0.3- 3 mSv [ped]	2	2	8	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§		��� 0.3- 3 mSv [ped]	2	2	7	5	1	2	2	0	0	0	0
			References			Study	Quality										
			18 (8259141)				3										

		17 (26253983) 4 1 (25833927) 4														
Radiography paranasal sinuses	Usuall approp		Limited	⊕ <0.1 mSv		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	Usuall approp		Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	15	0	1	0	1	0	0	0	0
CT head without and with IV contrast	Usuall approp		Limited	��� 1-10 mSv	≎≎≎≎ 3- 10 mSv [ped]	1	1	9	3	1	3	0	1	0	0	0
			References	Study	y Quality					•	•	•				
			1 (25833927)			4										
CT maxillofacial with IV contrast	Usuall approp		Limited	�� 0.1-1mS	v	1	1	11	5	1	0	0	0	0	0	0
			References		Study	y Quality										
			18 (8259141)			3										
			17 (26253983)			4										
			1 (25833927)			4						,				
CT maxillofacial without and with IV contrast	Usuall approp		Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	15	2	0	0	0	0	0	0	0
			References		Study	y Quality										
			18 (8259141)			3										
			17 (26253983)			4										
			1 (25833927)			4				ı		1	1			
Arteriography craniofacial	Usuall approp		Expert Consensus	��� 1-10 mSv		1	1	16	0	1	0	0	0	0	0	0

MRA head without IV contrast																
WIKA nead without IV contrast	Usually approp	Expert Consensus	O 0 mSv	/	O 0 mSv [ped]	1	1	13	3	1	0	0	0	0	0	0
MRA head without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	<i>'</i>	O 0 mSv [ped]	1	1	14	2	1	0	0	0	0	0	0
MRI head without IV contrast	Usually approp	Limited	O 0 mSv	/	O 0 mSv [ped]	1	1	9	1	4	2	0	1	0	0	0
		References			Study	Quality										
		1 (25833927)				4										
MRI head without and with IV contrast	Usually approp	Limited	O 0 mSv	/	O 0 mSv [ped]	1	1	9	2	3	2	0	1	0	0	0
		References			Study	Quality			•				•	•		
		1 (25833927)				4										
SPECT or SPECT/CT paranasal sinuses	Usually approp	Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	1	1	15	0	2	0	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually approp	Expert Consensus	���� 10- mSv	-30	���� 3- 10 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
MRI orbits face neck without and with IV contrast	Usually approp	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 approp	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 approp	Expert Consensus	O 0 mSv	/	O 0 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
MRI head with IV contrast	Usually approp	Limited	O 0 mSv	,	O 0 mSv [ped]	1	1	9	2	3	1	0	1	0	1	0
		References			Study	Quality										

			1 (25833927)				4										
MRI orbits face neck with IV contrast	Usuall approp	4	Limited	O 0 mSv	/	O 0 mSv [ped]	1	1	9	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	3.6.19			F	inal '	Tabu	latio	ıs		
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	��� 0.3- 3 mSv [ped]	9	9	0	0	0	0	0	0	3	6	8
		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	13
		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	7
		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\		5	5	0	3	1	2	8	3	0	0	0
		References		Study	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	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	Quality					•					
		17 (26253983)			4										
CT cone beam paranasal sinuses without IV contrast	Usually not appropriate	Limited	�� 0.1-1mS\	,	3	3	7	2	5	1	1	1	0	0	0
		References		Study	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	8	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	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	y Quality		-								
		23 (11889374)			3										
		17 (26253983)			4										
		6 (28341385)			4										
CT maxillofacial without and with IV contrast	Usually not appropriate	Limited	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	12	1	1	2	1	0	0	0	0
		References		Study	y Quality										
		23 (11889374)			3										
		17 (26253983)			4										
Arteriography craniofacial	Usually not appropriate	Expert Consensus	��� 1-10 mSv		1	1	14	0	0	2	0	1	0	0	0
MRA head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	3	2	1	1	0	0	0
MRA head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	2	4	1	0	1	0	0	0
SPECT or SPECT/CT paranasal sinuses	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	14	0	3	0	0	0	0	0	0
FDG-PET/CT skull base to mid- thigh	Usually not appropriate	Expert Consensus	���� 10-30 mSv		1	1	13	1	2	0	0	1	0	0	0
Radiography paranasal sinuses	Usually not appropriate	Expert Consensus	 <0.1 mSv		1	1	12	1	2	0	1	1	0	0	0
MRA head with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	1	5	0	0	2	0	0	0
MRI head with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	11	1	2	2	1	0	0	0	0
		References		Study	y 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.

ъ .	Appropri	ateness	COL	4 1 14 DT		D I DDI	D (1	3.6.11			F	inal	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RF	KL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT maxillofacial without IV contrast	Usua approp		Strong	�� 0.1-1n	าริง	��� 0.3- 3 mSv [ped]	9	9	1	0	0	1	0	0	2	0	13
			References			Study	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	�� 0.1-1n	ıSv	��� 0.3- 3 mSv [ped]	5	5	0	0	0	3	8	2	4	0	0
			References			Study	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 be appropriate	Strong	�� 0.1-1mSv	/	5	5	0	0	2	1	12	2	0	0	0
		References		Study	Quality										
		25 (24449524)			3										
		19 (26700263)			3										
		34 (28747616)			2										
		33 (25765366)			2										
MRI orbits face neck without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	3	0	1	2	8	3	0	0	0
		References		Study	Quality										
		40 (19379610)			2										
		39 (2294574)			4										
		24 (29685531)			4										
MRI orbits face neck without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	3	0	0	6	8	0	0	0	0
		References		Study	Quality										
		40 (19379610)			2										
		39 (2294574)			4										
		24 (29685531)			4			•	•	•					
CT head without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	3	3	6	2	5	1	1	2	0	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	8	1	3	3	0	2	0	0	0
CTA head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	13	1	1	0	0	2	0	0	0

CT head with IV contrast	Usually not appropriate	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 not appropriate	Strong	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	12	2	2	0	1	0	0	0	0
		References		Study	Quality										
		26 (25832968)	1		4										
		31 (26001236)			4										
		35 (27554662)	1		1										
		36 (28072563)			4										
		32 (27643765)			4										
		37 (27193478)			2										
		2 (26476379)			4										
		38 (25412986)		1	2					1	1				
Arteriography craniofacial	Usually not appropriate	Expert Consensus	��� 1-10 mSv)	1	1	16	0	1	0	0	0	0	0	0
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	15	1	0	1	0	0	0	0	0
MRI head without IV contrast	Usually not appropriate	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 not appropriate	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 not appropriate	Limited	Consensus 0 0 mov		1	1	14	1	0	0	1	1	0	0	0
		References		Study	Quality										
		42 (19401044)			3										
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	���� 10-3 mSv	30	1	1	14	2	1	0	0	0	0	0	0

Radiography paranasal sinuses	Usually approp		Limited	 	Sv		1	1	9	3	2	1	1	0	1	0	0
			References			Study	Quality		<u> </u>				•				
			41 (8327669)				4										
			2 (26476379)				4										
MRA head with IV contrast	Usually approp	not riate	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		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		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	Appropriateness	COE	A L L DDI	D I DDI	D 4	3.6.11			F	inal '	Гаbu	latio	ns		
Procedure	Category	SOE	Adults RRI	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
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	3	12
		References		Study	Quality										
		45 (22006778)			2										
		46 (29774383)			4										
		5 (28438285)			4										
		4 (26476380)			4										
CT maxillofacial with IV contrast	Usually appropriate	Limited	�� 0.1-1m\$	&	8	8	0	0	0	0	2	0	6	3	6

		References		Study	y Quality										
		43 (18029900)			4										
		23 (11889374)			3										
		5 (28438285)			4										
		6 (28341385)			4										
		4 (26476380)			4										
		44 (25882281)			1		ı	1							
CT maxillofacial without IV contrast	Usually appropriate	Limited	�� 0.1-1m\$	999 0.3- Sv 3 mSv [ped]	7	7	0	0	0	1	2	1	8	1	4
		References		Study	y 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	y 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	y 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

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

CT maxillofacial without and with IV contrast	Usually not appropriate		��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	2	2	1	2	0	0	0	0
		References		Study	y Quality										
		43 (18029900)			4										
		23 (11889374)			3										
		5 (28438285)			4										
		6 (28341385)			4										
		4 (26476380)			4										
		44 (25882281)			1										
Arteriography craniofacial	Usually not appropriate		≎≎≎ 1-10 mSv		1	1	12	1	1	1	0	0	2	0	0
MRA head without IV contrast	Usually not appropriate		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	Usually not appropriate		O 0 mSv	O 0 mSv [ped]	1	1	11	2	2	1	0	0	1	0	0
SPECT or SPECT/CT paranasal sinuses	Usually not appropriate		��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	16	0	0	1	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually not appropriate		���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
Radiography paranasal sinuses	Usually not appropriate		≎ <0.1 mSv		1	1	11	3	1	1	0	1	0	0	0
		References		Study	y Quality										
		47 (28599686)			2										
MRA head with IV contrast	Usually not appropriate		O 0 mSv	O 0 mSv [ped]	1	1	11	0	4	1	0	0	1	0	0
MRI head with IV contrast	Usually not appropriate		O 0 mSv	O 0 mSv [ped]	1	1	11	3	0	1	2	0	0	0	0
		References		Study	y Quality										
		43 (18029900)			4										

			5 (28438285)				4										
			6 (28341385)				4										
MRI orbits face neck with IV contrast	Usuall approp	y not oriate	Limited	O 0 mSv	′	O 0 mSv [ped]	1	1	11	3	0	1	2	0	0	0	0
			References			Study	Quality										
			45 (22006778)				2										
			46 (29774383)				4										
			5 (28438285)	•			4										
			4 (26476380)	·		·	4										

Variant 5: Suspected sinonasal mass. Initial Imaging.

Duo anduma	Appropri	ateness	SOE	A J14a DD	т	Doda DDI	Datina	Madian			F	inal '	Tabu	latio	ıs		
Procedure	Categ		SOE	Adults RR	(L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI orbits face neck without and with IV contrast	Usua approp		Strong	O 0 mSv	/	O 0 mSv [ped]	9	9	0	0	0	0	0	0	1	0	16
			References			Study	Quality										
			24 (29685531)				4										
			52 (31939885)				1										
			8 (29696477)				4										
			9 (29217745)				1										
			7 (26830408)				4										
			53 (26359585)				2										
CT maxillofacial with IV contrast	Usua approp		Limited	�� 0.1-1m	nSv	��� 0.3- 3 mSv [ped]	7	7	0	0	0	1	1	0	8	1	6
			References			Study	Quality										
			51 (28391267)				2										
			7 (26830408)				4										
CT maxillofacial without IV contrast	Usua approp		Limited	�� 0.1-1m	nSv	��� 0.3- 3 mSv [ped]	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	9	5	5	1	0	0	4	10	2	0	0	0
		References		Study	y Quality										
		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	Strong	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	3	7	6	0	1	0
		References		Study	y Quality		<u> </u>								
		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	Usually approp	Limited	��� 1-10 mSv	0	2	2	8	2	1	4	0	1	1	0	0
		References		Study	y Quality										
		51 (28391267)			2										
CTA head with IV contrast	Usually approp	Limited	��� 1-10 mSv	0	1	1	10	0	1	3	1	2	0	0	0
		References		Study	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		Study	y Quality										
		51 (28391267)			2										
CT maxillofacial without and with IV contrast	Usually not appropriate	Limited	≎≎≎ 1-10 mSv	��� 0.3- 3 mSv [ped]	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 not appropriate	Expert Consensus	≎ ⊕⊕ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	15	1	1	0	0	0	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Limited	���� 10-30 mSv	���� 3- 10 mSv [ped]	1	1	12	1	3	1	0	0	0	0	0
		References		Study	y Quality										
		7 (26830408)			4										
Radiography paranasal sinuses	Usually not appropriate	Limited	♦ <0.1 mSv		1	1	14	2	0	0	1	0	0	0	0
		References		Study	y Quality										
		51 (28391267)			2										
CT cone beam paranasal sinuses without IV contrast	Usually not appropriate	Expert Consensus	�� 0.1-1mS\	v	1	1	9	1	2	2	2	0	1	0	0
MRA head with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	11	0	2	2	1	1	0	0	0
		References		Study	y Quality										
		43 (18029900)			4										
		48 (17213441)			4										
		49 (15794546)			4										
		50 (12487677)			4										
MRI head with IV contrast	Usually not appropriate	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 not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	1	1	13	0	1	0	1	1	0	1	0
		References		Study	y Quality		-								
		24 (29685531)			4										
		52 (31939885)			1										
		8 (29696477)			4										
		9 (29217745)			1										

7 (26830408)	4
53 (26359585)	2

Variant 6: Suspected CSF leak. Initial Imaging.

D 1	Appropriateness	COF	A L L DDI	D 1 DD1	D 41	3.6.19			I	inal	Tabu	latio	ns		
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	/ Quality										
		57 (10319986))		3										
		58 (12087336))		3										
		12 (27890184))		4										
		13 (26370330))		4										
		55 (16145599))		2										
		61 (9576647)			2										
		62 (18079188)			4			1	1	1	1	1	_		
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	/ Quality										
		11 (18710972))		4										
		58 (12087336))		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										

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)			4										
		12 (27890184)			4										
		14 (27738899)			2										
		13 (26370330)			4										
		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)													
		12 (27890184)		<u>3</u> 4											
		13 (26370330)		4											
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)													
		58 (12087336)													
		12 (27890184)													
		14 (27738899)													
		13 (26370330)													
		55 (16145599)													
		61 (9576647)													
		60 (17970620)													
		63 (19723768)													
		65 (19762462)		<u>3</u> 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 13 (26370330)		Study Quality											
		66 (23871275)													
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					\$\$\$ 0.3-											
C1 head with 17 contrast	Usually n appropria		Expert Consensus	२०० 1-10 mSv	3 mSv [ped]	1	1	14	1	1	1	0	0	0	0	0
CT head without IV contrast	Usually n appropria		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 nappropria		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 nappropria		Strong	�� 0.1-1mS	&	1	1	11	2	4	0	0	0	0	0	0
			References			ly Quality										
			57 (10319986)													
			58 (12087336)													
		12 (27890184)														
		13 (26370330)			4											
		55 (16145599)			2											
		61 (9576647)			2											
			62 (18079188)			4		_								
CT maxillofacial without and with IV contrast	Usually nappropria		Strong	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	12	1	4	0	0	0	0	0	0
		References			Stud											
		57 (10319986)				3										
			58 (12087336)		3											
			12 (27890184)		4											
		13 (26370330)														
		55 (16145599)														
			61 (9576647)		2											
			62 (18079188)			4										
Arteriography craniofacial	Usually nappropria		Expert Consensus	≎≎≎ 1-10 mSv		1	1	15	1	0	1	0	0	0	0	0

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)													
		14 (27738899)		2											
		13 (26370330)		4											
		55 (16145599)		2											
		61 (9576647)													
		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											
		11 (18710972)	1		4										
		58 (12087336)			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.