# American College of Radiology ACR Appropriateness Criteria®

## Orbital Imaging and Vision Loss-Child

Variant 1: Child. Traumatic visual loss. Suspected orbital injury. Initial imaging.

	Appropri	iateness	207							F	inal	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RR	L Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT orbits without IV contrast	Usua approp		Limited	��� 1-10 mSv	999 0.3- 3 mSv [ped]	9	9	0	0	0	0	0	0	0	3	13
			References		Study	y Quality										
			12 (18936032)			4										
			13 (21607931)			4			_		_					
CT head without IV contrast	May approp		Expert Consensus	<b>≎≎≎</b> 1-10 mSv	9	5	5	0	0	2	3	9	1	1	0	0
MRI orbits without IV contrast	May approp		Limited	O 0 mSv	O 0 mSv [ped]	5	5	1	0	1	2	5	6	0	0	1
			References		Study	y Quality		•								
			12 (18936032)			4		_	_							
MRI head without IV contrast	May approp		Expert Consensus	O 0 mSv	O 0 mSv [ped]	4	4	1	2	2	5	5	1	0	0	0
CT orbits with IV contrast	Usuall approp		Limited	<b>≎≎≎</b> 1-10 mSv	⊕⊕⊕ 0.3- 3 mSv [ped]	3	3	6	2	4	0	4	0	0	0	0
			References		Study	y Quality										
			13 (21607931)			4										
			12 (18936032)			4										

Radiography orbit	Usuall approp	Limited	<b>≎</b> <0.1 mSv	v <0.03 mSv [ped]	3	3	6	2	2	3	2	1	0	0	0
		References		Study	Quality										
		12 (18936032)			4										
		13 (21607931)			4										
CTA head with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	8	5	1	2	0	0	0	0	0
CT head with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	2	2	2	0	1	1	0	0
MRI orbits without and with IV contrast	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	2	4	1	0	0	1	1	0
		References		Study	Quality										
		12 (18936032)			4										
CT orbits without and with IV contrast	Usuall approp	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	7	0	0	0	0	0	0	0
		References		Study	Quality		-								
		12 (18936032)			4										
		13 (21607931)			4										
CT head without and with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	ଡେଡେଡେ 3- 10 mSv [ped]	1	1	12	4	0	0	0	0	0	0	0
MRA head without IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	4	1	1	0	0	1	0	0
MRA head without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	4	0	2	1	0	0	0	0
MRI head without and with IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	11	5	0	0	0	0	0	0	0

Variant 2: Child. Nontraumatic acute vision loss without papilledema. Initial imaging.

ъ 1	Appropriateness	COF	D I DDI	D 4	37.11			F	inal	Tabu	latio	ns			
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI head and orbits without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	2	0	1	1	1	11
		References		Study	Quality										
		19 (31896804)			4										
MRI head without and with IV contrast	May be appropriate	Moderate	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	5	8	2	0	0
		References		Study	Quality		-								
		18 (8505818)			2										
		17 (26822746)			4										
MRI complete spine without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	5	7	3	0	0
		References		Study	Quality		•			•	•		•	•	
		20 (25695963)			4										
		21 (12601106)			3										
		22 (23858328)			4										
MRI orbits without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	3	3	9	1	0	0
		References		Study	Quality										
		19 (31896804)			4										
MRI head and orbits without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	2	12	2	0	0	0
		References		Study	Quality										
		19 (31896804)			4										
MRI head without IV contrast	May be appropriate	Moderate	O 0 mSv	O 0 mSv [ped]	5	5	0	0	1	4	6	4	1	0	0
		References		Study	/ Quality										
		18 (8505818)			2										

		17 (26822746)			4										
CT head without IV contrast	May approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	4	4	2	3	1	2	6	0	2	0	0
MRI orbits without IV contrast	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	3	3	3	4	3	4	2	0	0	0	0
		References		Study	Quality										
		19 (31896804)			4										
CT orbits with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	5	0	1	1	0	0	0	1
MRA head without IV contrast	Usuall approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	4	2	0	0	1	0	0	1
MRI complete spine without IV contrast	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	2	2	3	9	3	0	1	0	0	0	0
		References		Study	Quality										
		20 (25695963)		-	4										
		21 (12601106)			3										
		22 (23858328)			4										
CT head and orbits with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	4	1	2	0	0	0	0	1
CT head and orbits without IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	4	2	2	0	0	1	0	0
CTA head with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	5	0	1	0	0	0	1	0
CT orbits without IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	3	1	0	1	0	0	1	0
CT orbits without and with IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	1	2	0	3	0	0	0	0

CT head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	3	1	1	1	0	1	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	11	1	0	2	0	0	1	1	0
CTA head and neck with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	6	0	0	0	0	0	1	0
MRA head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	2	1	3	0	0	0	1	0
CT head and orbits without and with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	11	1	0	2	1	0	1	0	0

#### Variant 3: Child with isolated nystagmus. Initial imaging.

December 1	Appropri	iateness	COE	A J14 DD	т	D. J. DDI	D - 43	M - 12			F	inal	Tabu	latio	ns		
Procedure	Categ		SOE	Adults RR	L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI head without and with IV contrast	Usua approp		Limited	O 0 mSv	,	O 0 mSv [ped]	8	8	0	0	0	0	1	0	5	7	3
		References 29 (27518079)				Study	Quality										
			29 (27518079)				3		_	_			_				
MRI head and orbits without and with IV contrast	May approp	be oriate	Limited	O 0 mSv	,	O 0 mSv [ped]	6	6	0	0	0	1	6	6	2	1	0
	•		References			Study	Quality		-		-						
			27 (-3195267)				4		_								
MRI head without IV contrast	May approp		Limited	O 0 mSv	,	O 0 mSv [ped]	6	6	0	0	0	2	3	10	1	0	0
			References			Study	Quality										
			29 (27518079)				3										

MRI head and orbits without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	3	12	1	0	0	0
		References		Study	Quality		•								
		27 (-3195267)		_	4										
MRI orbits without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	0	1	4	3	7	1	0	0	0
		References		Study	Quality					•					
		29 (27518079)			3										
MRI orbits without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	4	2	2	3	3	1	1	0	0
		References		Study	Quality										
		29 (27518079)			3										
MRA head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	3	1	1	3	1	0	0	0
CTA head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	<b>����</b> 3- 10 mSv [ped]	1	1	11	3	0	0	0	1	1	0	0
CT orbits with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	4	0	1	1	0	0	0	0
CT orbits without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	3	1	1	1	0	0	0	0
CT orbits without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	11	3	1	0	0	0	0	0	1
CT head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	5	0	2	0	0	0	0	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	4	2	0	1	0	0	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	4	1	0	0	0	0	0	1

MRA head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	7	0	0	0	0	0	0	0
CT head and orbits with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	4	0	1	1	0	0	0	0
CT head and orbits without IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	10	4	1	0	1	0	0	0	0
CT head and orbits without and with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	3	1	1	0	0	0	0	1

Variant 4: Child. Congenital or developmental abnormality leading to decreased visual acuity or vision loss. No leukocoria. Unilateral or bilateral. Initial imaging.

Donas Jane	Appropri	ateness	COE	4 J14- DD	I D. J. DDI	D - 43	M. 11.			F	inal '	Tabu	latio	ns		
Procedure	Categ	gory	SOE	Adults RR	L Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI head and orbits without IV contrast	Usua approp		Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	2	1	9	4
			References		Stud	y Quality										
			2 (26208421)			4										
			34 (25128595)			2										
			33 (23972277)			2										
			32 (28982953)			4										
MRI head without IV contrast	May approp	be oriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	2	4	8	1	1	0
MRI head and orbits without and with IV contrast	May approp (Disagre	riate	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	3	4	3	1	0	4	1	0	0
			References		Stud	y Quality										
			2 (26208421)			4										
			34 (25128595)			2										
			33 (23972277)			2										
			32 (28982953)			4										

MRI orbits without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	5	5	0	1	1	0	10	3	1	0	0
		References		Study	y Quality										
		2 (26208421)			4										
		34 (25128595)	ı		2										
		33 (23972277)	ı		2										
		32 (28982953)			4				1						
MRI head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	5	3	7	0	1	0	0	0	0
MRI orbits without and with IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	3	3	3	5	6	2	0	0	0	0	0
		References		Study	y Quality		•								
		2 (26208421)			4										
		34 (25128595)	ı		2										
		33 (23972277)	ı		2										
		32 (28982953)			4										
CT orbits with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	5	1	0	1	1	0	0	0
CT orbits without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	4	2	0	1	1	0	0	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	3	2	2	0	1	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	4	2	1	0	0	0	0	1
MRA head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	4	0	1	1	1	1	0	0
CT head and orbits without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	3	1	0	4	0	0	0	0

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CTA head with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	4	0	0	0	1	1	0	0
CT orbits without and with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	4	1	0	1	0	0	0	1
CT head with IV contrast	Usually not appropriate	Expert Consensus	୫୫୫ 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	4	1	0	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	3	1	1	0	0	1	0	1
CT head and orbits with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	3	2	0	1	1	0	0	0
CT head and orbits without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	4	1	1	0	0	0	0	1

Variant 5: Child. Vision loss and suspected optic pathway tumor, with or without a history of neurofibromatosis type 1. Initial imaging.

ъ	Appropriateness	COL	A L L DDI	D I DDI	D 41	3.6.31			F	inal '	<b>Tabu</b> l	latio	ns		
Procedure	Category	SOE	Adults RRI	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI head and orbits without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	1	0	0	0	0	1	1	3	10
		References		Study	Quality										
		39 (30904949)			2										
		38 (29789890)			3										
		37 (31739524)			4										
		36 (28257299)			4										
MRI head without and with IV contrast	May be appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	0	10	6	0	0	0
MRI orbits without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	2	0	1	0	8	4	1	0	0

MRI head and orbits without IV contrast	Usually approp	Limited	O 0 mSv	O 0 mSv [ped]	3	3	3	4	6	0	3	0	0	0	0
		References		Stud	ly Quality										
		39 (30904949)			2										
		38 (29789890)			3										
		37 (31739524)			4										
		36 (28257299)			4										
CT orbits with IV contrast	Usually approp	Expert Consensus	<b>���</b> 1-10 mSv	0	2	2	8	4	1	1	0	2	0	0	0
CT orbits without IV contrast	Usually approp	Expert Consensus	<b>發發發</b> 1-1( mSv	0	2	2	8	5	0	2	0	1	0	0	0
MRA head without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	3	3	2	0	0	1	0	0
MRA head without and with IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	2	3	2	0	0	0	1	0
MRI head without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	5	4	5	0	2	0	0	0	0
CT head and orbits with IV contrast	Usually approp	Expert Consensus	<b>發發發</b> 1-1( mSv	0	2	2	8	3	2	0	1	1	1	0	0
CT head and orbits without IV contrast	Usually approp	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	0	2	2	8	4	1	1	2	0	0	0	0
MRI orbits without IV contrast	Usually approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	3	4	0	1	0	0	0	0
CTA head with IV contrast	Usually approp	Expert Consensus	��� 1-1( mSv	0	1	1	9	4	2	0	0	0	1	0	0
CT orbits without and with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	0	1	1	9	4	0	1	1	0	0	0	1

CT head with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	3	1	1	2	0	0	0	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	3	0	4	0	0	0	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	3	2	0	1	0	0	0	1
Radiography orbit	Usually not appropriate	Expert Consensus	<b>⊕</b> <0.1 mSv		1	1	12	2	1	0	0	0	0	0	1
CT head and orbits without and with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	4	0	1	1	0	0	0	1

### Variant 6: Child. Six months of age or older. Papilledema detected on the ophthalmologic examination or signs of raised intracranial pressure. Initial imaging.

D 1	Appropri	ateness	COF	4 1 14 DD		D I DDI	D 4	N. 11			F	inal '	Гаbu	latio	ns		
Procedure	Categ	gory	SOE	Adults RR	KL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI head and orbits without and with IV contrast	Usua approp		Limited	O 0 mSv	/	O 0 mSv [ped]	8	8	0	0	0	0	0	0	2	7	7
		References 42 (23966248)				Study	Quality										
							4										
			43 (27585209)				4										
MRI head and orbits without IV contrast	Usua approp		Limited	O 0 mSv	,	O 0 mSv [ped]	7	7	0	0	0	0	0	0	11	2	3
	•		References			Study	Quality		_								
			42 (23966248)				4										
			43 (27585209)				4										
MRI head without and with IV contrast	Usua approp		Limited	O 0 mSv	/	O 0 mSv [ped]	7	7	0	1	0	0	0	0	9	4	2
			References			Study	Quality										

			43 (27585209)			4										
			42 (23966248)			4										
MRI head without IV contrast	May be appropria		Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	4	10	1	0	1
			References		Study	Quality										
			43 (27585209)			4										
			42 (23966248)			4										
MRV head without IV contrast	May be appropria		Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	0	5	7	3	0	1
		•	References		Study	Quality										
			43 (27585209)			4										
			42 (23966248)			4										
MRV head without and with IV contrast	May be appropria		Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	5	9	0	1	0
		•	References		Study	Quality				•						
			43 (27585209)		-	4										
			42 (23966248)			4										
MRV head with IV contrast	May be appropria		Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	2	5	8	0	1	0
			References		Study	Quality										
			43 (27585209)			4										
			42 (23966248)			4										
CT head without IV contrast	May be appropria		Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	5	5	1	0	0	0	9	3	2	1	0
CTV head with IV contrast	May be appropria		Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	5	5	0	0	0	2	6	8	0	0	0
			References		Study	Quality										
			42 (23966248)			4										

CT head with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	3	3	7	1	1	3	4	0	0	0	0
CT head and orbits without IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	3	3	7	1	3	2	1	1	1	0	0
MRI orbits without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	5	1	5	3	1	0	0	1	0
MRI orbits without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	5	1	6	3	0	0	1	0	0
CT orbits without IV contrast	Usually not appropriate	Expert Consensus	<del>≎</del> ⊕⊕ 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	8	3	2	0	1	1	1	0	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	8	5	3	0	0	0	0	0	0
MRA head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	4	0	2	1	1	1	0	0
MRA head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	3	0	2	1	1	1	0	0
CT head and orbits with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	9	0	0	0	0	0	0	0
CTA head with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	3	2	0	0	2	0	0	0
CT orbits with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	≎≎≎ 0.3- 3 mSv [ped]	1	1	9	7	0	0	0	0	0	0	0
CT orbits without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	1	3	1	1	0	0	0	1
CT head and orbits without and with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	7	0	0	0	0	0	0	0

Variant 7: Child. Suspected orbital or periorbital infection. Initial imaging.

ъ .	Appropriateness	COF	4.1.14 DD1	D I DD	D 41	37.11			I	Final	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT orbits with IV contrast	Usually appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	9	9	0	0	0	0	0	0	0	5	11
		References		Study	Quality					•	•				
		46 (24288398)			4										
MRI orbits without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	0	1	3	9	3	0	0
		References		Study	Quality										
		46 (24288398)		_	4										
CT head with IV contrast	May be appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	5	5	0	0	1	1	11	3	0	0	0
		References		Study	Quality										
		46 (24288398)			4										
MRI head without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	1	1	10	3	1	0	0
		References		Study	Quality										
		46 (24288398)			4										
CTV head with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	3	3	5	3	3	1	3	1	0	0	0
CTA head with IV contrast	Usually not appropriate	Expert Consensus	��⊕ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	8	3	2	1	0	1	0	0	1
CT orbits without IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	4	6	5	1	0	0	0	0	0
		References		Study	Quality		•			_	_				

		46 (24202200)			4										
CT orbits without and with IV contrast	Usually not appropriate	46 (24288398) Limited		��� 0.3- 3 mSv [ped]	2	2	5	3	4	1	2	0	0	1	0
		References			Quality		<b>I</b>			1				l	
		46 (24288398)			4										
CT head without IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	3	3	0	1	1	1	0	0
		References		Study	Quality		-								
		46 (24288398)			4										
MRA head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	5	1	1	0	0	1	0	0
MRI head without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	9	0	0	0	0	0	0	0
		References		Study	Quality		•						•		
		46 (24288398)		-	4										
MRV head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	4	4	0	0	0	0	0	0
MRI orbits without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	2	6	1	0	0	0	0	0
		References		Study	Quality										
		46 (24288398)			4										
CT head without and with IV contrast	Usually not appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	9	7	0	0	0	0	0	0	0
		References		Study	Quality										
		46 (24288398)			4										
MRA head without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	4	0	2	0	1	0	0	0
MRV head without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	7	0	0	0	0	0	0	0

MRV head with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	4	3	0	0	0	0	0	0	
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#### Variant 8: Child. Leukocoria or suspected intraocular mass. Initial imaging.

	Appropriate	eness	COL	4 1 14 DDI		DDI	D 41	3.6.11			F	inal '	Tabu	latio	ns		
Procedure	Category		SOE	Adults RRL	2 Peds	RRL	Rating	Median	1	2	3	4	5	6	7	8	9
MRI head and orbits without and with IV contrast	Usually appropriat		Limited	O 0 mSv		mSv ed]	9	9	0	1	0	0	0	1	1	0	13
			References		·	Study	Quality										
		2	2 (26208421)				4										
		5	0 (23117972)				3										
		4	9 (25195185)				4										
		4	8 (25924174)				2										
		4	7 (22218144)				3										
MRI orbits without and with IV contrast	Usually appropriat		Limited	O 0 mSv		mSv ed]	7	7	0	0	0	0	0	0	9	6	1
		·	References		·	Study	Quality										
		2	2 (26208421)				4										
		4	8 (25924174)				2		_								
CT orbits without IV contrast	May be appropriate		Limited	��� 1-10 mSv	3 r	€ 0.3- nSv ed]	5	5	0	1	1	1	12	1	0	0	0
			References			Study	Quality										
		2	2 (26208421)				4		_								
CT head with IV contrast	May be appropriate		Expert Consensus	��� 1-10 mSv	3 r	0.3- nSv ed]	5	5	5	1	0	2	8	0	0	0	0
MRI orbits without IV contrast	May be appropriate		Limited	O 0 mSv		mSv ed]	5	5	0	0	6	1	6	3	0	0	0
			References			Study	Quality		_								

		2 (26208421)			4										
		48 (25924174)			2										
CT orbits with IV contrast	May be appropriate	Limited	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	4	4	5	1	0	3	7	0	0	0	0
		References		Study	Quality										
		2 (26208421)			4										
MRI head without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	2	1	3	4	5	1	0	0	0
		References		Study	Quality										
		48 (25924174)			2										
CT head and orbits with IV contrast	May be appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	4	4	2	4	0	5	5	0	0	0	0
MRI head without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	6	0	4	2	2	1	1	0	0
		References		Study	Quality										
		48 (25924174)			2										
CT orbits without and with IV contrast	Usually not appropriate	Limited	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	2	2	7	2	2	0	3	1	0	1	0
		References		Study	/ Quality										
		2 (26208421)			4										
MRI head and orbits without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	5	4	4	1	1	0	0	0	1
		References		Study	Quality										
		2 (26208421)			4										
		50 (23117972)			3										
		49 (25195185)			4										
		48 (25924174)			2										
		47 (22218144)			3										

CTA head with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	3	0	2	0	0	0	1	0
CT head without IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	11	1	1	1	0	1	0	1	0
CT head without and with IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	���� 3- 10 mSv [ped]	1	1	15	1	0	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	10	3	2	0	1	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	9	3	2	0	0	1	0	1	0
CT head and orbits without IV contrast	Usually not appropriate	Expert Consensus	<b>≎≎≎</b> 1-10 mSv	��� 0.3- 3 mSv [ped]	1	1	9	2	1	2	0	0	1	1	0
CT head and orbits without and with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	15	1	0	0	0	0	0	0	0

#### **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.