

		39 (7538874)			4														
CTA neck with IV contrast	Usually appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹ 0.3-3 mSv [ped]	7	7	0	0	0	2	2	3	6	4	1				
		References			Study Quality														
		21 (20154559)			4														
		20 (20009659)			4														
		42 (23338658)			4														
MRI spine area of interest without IV contrast	Usually appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	7	7	0	0	1	0	2	5	5	4	1				
		References			Study Quality														
		43 (22398829)			4														
		46 (20938788)			2														
		45 (21228747)			2														
		44 (26601812)			4														
MRA neck without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	0	2	2	1	11	1	0	0	0				
		References			Study Quality														
		26 (25632417)			4														
		27 (10598164)			4														
MRI spine area of interest without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	○ 0 mSv	○ 0 mSv [ped]	5	5	1	1	1	2	5	4	3	0	0				
		References			Study Quality														
		40 (26612468)			4														
		43 (22398829)			4														
		46 (20938788)			2														
		45 (21228747)			2														
		47 (2520080)			3														
		44 (26601812)			4														
		48 (24346823)			2														

MRA neck with IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	1	2	3	0	10	1	0	0	0
		References		Study Quality											
		26 (25632417)		4											
		27 (10598164)		4											
Arteriography spine area of interest	Usually not appropriate	Limited	Varies	Varies	3	3	6	3	1	5	2	1	0	0	0
		References		Study Quality											
		49 (23361484)		4											
Radiography spine area of interest	Usually not appropriate	Expert Consensus	Varies	Varies	2	2	6	3	8	0	0	0	0	0	0
CT spine area of interest without and with IV contrast	Usually not appropriate	Strong	Varies	Varies	2	2	9	3	3	0	2	0	1	0	0
		References		Study Quality											
		40 (26612468)		4											
		35 (23422283)		2											
		32 (19509621)		2											
		38 (14566120)		2											
		41 (12702827)		1											
		33 (12913630)		3											
		34 (16612322)		4											
		36 (27250728)		3											
		37 (-3128680)		4											
		39 (7538874)		4											
CT spine area of interest with IV contrast	Usually not appropriate	Strong	Varies	Varies	2	2	5	5	7	0	0	0	0	0	0
		References		Study Quality											
		40 (26612468)		4											
		35 (23422283)		2											
		32 (19509621)		2											
		38 (14566120)		2											

41 (12702827)	1
33 (12913630)	3
34 (16612322)	4
36 (27250728)	3
37 (-3128680)	4
39 (7538874)	4

CT myelography spine area of interest	Usually not appropriate	Expert Consensus	Varies	Varies	2	2	5	5	3	3	1	1	0	0	0
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Variant 3: Ataxia. No history of trauma. Suspected intracranial process. Stroke intervention not a consideration. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
MRI head without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	1	2	1	14

References	Study Quality
92 (16292245)	4
89 (15607611)	4
90 (12942319)	4
91 (16340337)	4
88 (16636229)	4
87 (19729538)	4

MRI head without IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	1	1	6	9	1
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References	Study Quality
92 (16292245)	4
89 (15607611)	4
90 (12942319)	4
91 (16340337)	4
88 (16636229)	4

		87 (19729538)			4										
CT head with IV contrast	May be appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	6	6	0	1	4	2	1	9	0	0	0
CT head without IV contrast	May be appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	5	5	0	1	2	3	10	1	0	0	0
CT head without and with IV contrast	May be appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	4	4	5	1	3	3	4	1	1	0	0
CTA head and neck with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	3	3	10	1	0	0	0	0	0
MRA head and neck without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	3	3	4	3	9	0	1	0	0	0	0
MRA head and neck without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	3	3	5	3	9	0	0	0	0	0	0
Arteriography cervicocerebral	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	8	5	2	1	1	1	0	0	0
MRV head without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	6	4	5	0	2	1	0	0	0
CTV head with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	5	5	4	1	1	2	0	0	0
MRV head with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	6	4	5	0	1	2	0	0	0
Ioflupane SPECT or SPECT/CT brain	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	8	4	3	0	2	1	0	0	0
DTPA cisternography	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv		1	1	10	2	4	0	1	1	0	0	0

Variant 4: Ataxia of any acuity. No history of trauma. Suspected spinal or spinal vascular process. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
MRI spine area of interest without and with IV contrast	Usually appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	2	2	2	12	
MRI spine area of interest without IV contrast	Usually appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	1	0	7	8	2	
MRA spine area of interest with IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	6	6	0	0	0	2	6	8	1	0	0	
		References	Study Quality													
		125 (17698524)	4													
		126 (14872165)	4													
		124 (10588098)	4													
		123 (18202236)	4													
CTA spine area of interest with IV contrast	May be appropriate	Limited	Varies	Varies	5	5	0	1	2	1	12	1	0	0	0	
		References	Study Quality													
		122 (16611770)	4													
MRA spine area of interest without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	0	1	0	4	11	1	0	0	0	
		References	Study Quality													
		125 (17698524)	4													
		126 (14872165)	4													
		124 (10588098)	4													
		123 (18202236)	4													
CT spine area of interest without IV contrast	May be appropriate	Expert Consensus	Varies	Varies	4	4	0	1	4	8	3	1	0	0	0	
CT spine area of interest with IV contrast	May be appropriate	Expert Consensus	Varies	Varies	4	4	1	1	5	8	0	2	0	0	0	

CT myelography spine area of interest	May be appropriate	Limited	Varies	Varies	4	4	1	1	2	6	4	3	1	0	0
		References		Study Quality											
		127 (18710972)		4											
		9 (-3120926)		4											
Arteriography spine area of interest	May be appropriate	Expert Consensus	Varies	Varies	4	4	4	1	1	6	6	0	0	0	0
CT spine area of interest without and with IV contrast	Usually not appropriate	Expert Consensus	Varies	Varies	2	2	6	7	3	1	0	0	0	0	0
Radiography spine area of interest	Usually not appropriate	Expert Consensus	Varies	Varies	1	1	12	1	4	0	0	0	1	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.