

36 (13679283)	3
37 (28438298)	4
28 (27542075)	4
34 (16448927)	3

MRI neck without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	6	6	0	1	0	4	4	4	5	0	0
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References	Study Quality
13 (23641590)	3
14 (28891424)	4
19 ()	4
35 (18995981)	3
36 (13679283)	3
37 (28438298)	4
28 (27542075)	4
34 (16448927)	3

US neck	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	6	6	0	0	2	0	3	5	5	2	1
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References	Study Quality
54 (23562011)	3
58 (24567918)	3
55 (24768485)	3
45 (24434158)	4
56 (23243639)	3
42 (24263756)	3
52 (23453381)	3
57 (23820176)	3
43 (20652889)	2
41 (18390388)	4
46 (15121245)	3
50 (20950927)	3
14 (28891424)	4

44 (27070179)	2
47 (26025577)	2
48 (26256915)	3
49 (24819862)	3
51 (25542937)	3
53 (26617244)	3

CT neck without IV contrast	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	5	5	1	1	2	2	4	8	0	0	0
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References	Study Quality
32 (23449649)	4
20 (25476177)	4
25 (25476176)	4
29 (21493241)	4
27 (24847947)	3
14 (28891424)	4
19 ()	4
26 (25978199)	4
30 (25630849)	3
31 (25944574)	3
28 (27542075)	4

CTA neck with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	3	3	8	0	5	1	2	1	0	0	1
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CT neck without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	2	1	9	1	4	1	0	0	0
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References	Study Quality
32 (23449649)	4
20 (25476177)	4
25 (25476176)	4
29 (21493241)	4
27 (24847947)	3

14 (28891424)	4
19 ()	4
26 (25978199)	4
30 (25630849)	3
31 (25944574)	3
28 (27542075)	4

MRA neck without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	9	1	5	2	0	0	0	0	1
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	2	2	7	3	4	0	3	0	1	0	0
FDG-PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv		2	2	8	3	3	1	2	0	1	0	0
Arteriography cervicocerebral	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	1	1	15	2	0	0	0	0	0	0	1
MRA neck without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	1	1	10	1	4	2	0	0	0	0	1

Variant 2: Pulsatile neck mass(es). Not parotid region or thyroid. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
CT neck with IV contrast	Usually appropriate	Limited	⊗⊗⊗ 1-10 mSv	⊗⊗⊗ 0.3-3 mSv [ped]	9	9	1	0	0	0	1	1	1	4	10	
		References	Study Quality													
		32 (23449649)														
		33 ()														
CTA neck with IV contrast	Usually appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗ 0.3-3 mSv [ped]	8	8	0	2	0	0	0	0	5	6	5	

MRI neck without and with IV contrast	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	0	0	3	8	7
		References	Study Quality												
		59 (25476181)	4												
		60 (18339724)	2												
		61 (25410709)	2												
MRA neck without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	7	7	0	1	1	0	2	2	6	4	2
		References	Study Quality												
		62 (23928233)	3												
MRI neck without IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	6	6	0	1	0	3	5	6	2	1	0
		References	Study Quality												
		59 (25476181)	4												
		60 (18339724)	2												
		61 (25410709)	2												
US neck	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	6	6	0	0	0	2	3	6	3	3	1
		References	Study Quality												
		59 (25476181)	4												
CT neck without IV contrast	May be appropriate (Disagreement)	Expert Opinion	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	5	5	2	2	2	2	7	3	0	0	0
		References	Study Quality												
		32 (23449649)	4												
		33 ()	4												
MRA neck without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	0	0	0	3	10	5	0	0	0
		References	Study Quality												
		62 (23928233)	3												

74 (18581165)	3
73 (25476182)	4
75 (17399933)	2
76 (17414771)	3

MRI neck without and with IV contrast	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	9	9	1	0	0	0	0	1	1	5	10
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References	Study Quality
77 (19629770)	2
78 (27093072)	4
74 (18581165)	3
79 (21724574)	2
80 (24948426)	3
81 (28074380)	3
82 (29101981)	4
83 (17502260)	2
84 (18504743)	3
85 (17213436)	3
86 (23703801)	3
87 (19131405)	2

US neck	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	7	7	0	0	1	0	4	2	6	3	2
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References	Study Quality
71 (23238699)	3
89 (24263755)	4
90 (28612315)	3
91 (19862655)	3
92 (25339101)	3
93 (25262550)	3
94 (23625388)	3
77 (19629770)	2

75 (17399933)	2
76 (17414771)	3

Fluoroscopy sialography parotid	May be appropriate (Disagreement)	Expert Opinion	Varies	Varies	5	5	2	1	1	6	5	2	1	0	0	
CT neck without and with IV contrast	Usually not appropriate	Limited	☻☻☻ 1-10 mSv	☻☻☻☻ 3-10 mSv [ped]	3	3	1	2	9	0	5	0	1	0	0	
		References	Study Quality													
		32 (23449649)	4													
		20 (25476177)	4													
		74 (18581165)	3													
		73 (25476182)	4													
		75 (17399933)	2													
		76 (17414771)	3													
CT neck with parotid sialography	Usually not appropriate	Expert Consensus	☻☻☻ 1-10 mSv		3	3	5	2	5	2	2	0	2	0	0	
CTA neck with IV contrast	Usually not appropriate	Expert Consensus	☻☻☻ 1-10 mSv	☻☻☻ 0.3-3 mSv [ped]	2	2	7	3	6	1	0	0	1	0	0	
MRA neck without IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	6	6	2	0	3	0	0	0	1	
MRA neck without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	6	7	2	0	2	0	0	0	1	
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	☻☻☻☻ 10-30 mSv	☻☻☻☻ 3-10 mSv [ped]	2	2	8	2	5	2	1	0	0	0	0	
FDG-PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	☻☻☻ 1-10 mSv		2	2	9	3	2	3	1	0	0	0	0	
Arteriography cervicocerebral	Usually not appropriate	Expert Consensus	☻☻☻ 1-10 mSv	☻☻☻☻ 3-10 mSv [ped]	1	1	15	1	1	0	0	0	0	0	1	

		59 (25476181)		4												
CTA neck with IV contrast	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹ 0.3-3 mSv [ped]	2	2	7	5	2	0	3	0	0	0	0	1
CT neck without and with IV contrast	Usually not appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	2	2	7	3	6	1	0	0	0	0	1	0
		References		Study Quality												
		32 (23449649)		4												
		20 (25476177)		4												
		96 (25171800)		3												
		29 (21493241)		4												
		21 (24249813)		3												
		33 ()		4												
Arteriography cervicocerebral	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	1	1	17	0	0	0	0	0	0	0	0	1
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	☹☹☹☹ 10-30 mSv	☹☹☹☹ 3-10 mSv [ped]	1	1	14	1	2	1	0	0	0	0	0	0
FDG-PET/MRI skull base to mid-thigh	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv		1	1	14	2	2	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.