

CT abdomen without and with IV contrast	Usually appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	7	7	0	1	1	0	2	3	4	1	5
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References	Study Quality
6 (23665399)	4
11 (15201737)	2
10 (9507823)	4
14 (10893575)	2
15 (7776446)	2
16 (9836544)	4
22 (21843882)	2
21 (9146581)	2
20 (23764074)	4

CT abdomen and pelvis with IV contrast	May be appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼☼ 3-10 mSv [ped]	6	6	0	1	0	1	4	4	2	4	1
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
10 (9507823)	4
11 (15201737)	2
14 (10893575)	2
15 (7776446)	2
16 (9836544)	4
20 (23764074)	4
21 (9146581)	2
22 (21843882)	2

CT abdomen and pelvis without and with IV contrast	May be appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	6	6	1	0	0	1	3	9	2	0	1
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
10 (9507823)	4
11 (15201737)	2
14 (10893575)	2
15 (7776446)	2
16 (9836544)	4
20 (23764074)	4
21 (9146581)	2
22 (21843882)	2

CT chest with IV contrast	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	6	6	0	0	1	0	6	8	2	0	0
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References	Study Quality
6 (23665399)	4
7 (25616710)	4
18 (26880407)	2
25 (20846691)	3

MRI abdomen without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	6	6	0	0	1	2	5	5	4	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
26 (20429759)	2

2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
10 (9507823)	4
11 (15201737)	2
14 (10893575)	2
15 (7776446)	2
16 (9836544)	4
20 (23764074)	4
21 (9146581)	2
22 (21843882)	2

FDG-PET/CT skull base to mid-thigh	May be appropriate	Limited	⊕⊕⊕⊕ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	4	4	1	0	0	9	6	0	1	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
36 (27824726)	Good
37 (26202597)	3
38 (26996777)	3

US kidney retroperitoneal	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	4	4	0	0	1	11	4	1	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
9 (26567050)	2

CT chest without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	5	1	10	1	0	0	0	0	0
		References	Study Quality												
		6 (23665399)	4												
		7 (25616710)	4												
		18 (26880407)	2												
		25 (20846691)	3												
Tc-99m bone scan whole body	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	7	7	1	0	0	1	0	0	1
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
		34 (4060382)	3												
		35 (11696720)	3												
CT head with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	11	4	1	0	0	0	0	1	0
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
CT head without IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	14	2	0	1	0	0	0	0	0
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
CT head without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	13	3	0	0	0	0	0	0	1

CT abdomen with IV contrast	Usually appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	7	7	0	0	1	1	1	3	7	2	1
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References	Study Quality
20 (23764074)	4
11 (15201737)	2
14 (10893575)	2
16 (9836544)	4
21 (9146581)	2
6 (23665399)	4
50 (20227295)	4
51 (26154677)	2
52 (24345460)	3

CT abdomen and pelvis without and with IV contrast	May be appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	6	6	0	1	0	0	4	10	1	0	1
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
11 (15201737)	2
14 (10893575)	2
16 (9836544)	4
20 (23764074)	4
21 (9146581)	2
50 (20227295)	4
51 (26154677)	2
52 (24345460)	3

6 (23665399)	4
7 (25616710)	4
8 (26617405)	4
18 (26880407)	2
19 (24096433)	2

US abdomen with IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	6	6	0	0	0	1	0	9	6	0	1
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References	Study Quality
33 (24665032)	2
32 (25404183)	3
31 (21107560)	2
30 (20204642)	2
29 (27569091)	2
28 (23092215)	2

CT abdomen and pelvis with IV contrast	May be appropriate	Strong	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	5	5	0	1	0	1	9	5	0	1	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
11 (15201737)	2
14 (10893575)	2
16 (9836544)	4
20 (23764074)	4
21 (9146581)	2
50 (20227295)	4
51 (26154677)	2
52 (24345460)	3

CT chest without IV contrast	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	1	0	2	6	5	2	0	0
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References	Study Quality
7 (25616710)	4
6 (23665399)	4
18 (26880407)	2
25 (20846691)	3

MRI abdomen and pelvis without IV contrast	May be appropriate	Moderate	○ 0 mSv	○ 0 mSv [ped]	5	5	0	1	1	1	13	1	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
20 (23764074)	4
23 (9888732)	4
24 (12090319)	4
53 (27401340)	4
54 (26797360)	2
55 (20173161)	2

CT abdomen without IV contrast	May be appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	4	4	0	0	5	6	1	3	1	0	0
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References	Study Quality
6 (23665399)	4
11 (15201737)	2
14 (10893575)	2
16 (9836544)	4
20 (23764074)	4
21 (9146581)	2
50 (20227295)	4
51 (26154677)	2

Tc-99m bone scan whole body	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	7	6	2	1	0	0	0	0	0
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
		34 (4060382)	3												
		35 (11696720)	3												
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	2	2	7	2	2	2	2	1	0	0	0
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
CT head with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	13	2	1	0	0	0	0	0	0
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
CT head without IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	14	2	0	0	0	0	0	0	0
		References	Study Quality												
		2 (28596261)	4												
		6 (23665399)	4												
		7 (25616710)	4												
CT head without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	13	3	0	0	0	0	0	0	0

59 (25698065)	1
63 (27331922)	Good
65 (25794069)	3

US abdomen with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	7	7	0	0	1	0	4	3	4	1	3
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References	Study Quality
68 (24475802)	3
69 (28429490)	3
54 (26797360)	2

CT abdomen and pelvis with IV contrast	May be appropriate	Strong	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	6	6	1	0	0	0	6	8	2	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
5 (21766302)	Good
23 (9888732)	4
24 (12090319)	4
59 (25698065)	1
58 (22564495)	3
57 (21353376)	2
56 (25781204)	4
62 (21167561)	3
63 (27331922)	Good
65 (25794069)	3

CT abdomen and pelvis without and with IV contrast	May be appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	6	6	1	0	0	1	2	10	2	1	0
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References	Study Quality
2 (28596261)	4
5 (21766302)	Good

6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
59 (25698065)	1
58 (22564495)	3
57 (21353376)	2
56 (25781204)	4
63 (27331922)	Good
62 (21167561)	3
65 (25794069)	3

MRI abdomen without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	6	6	0	0	0	0	4	5	5	2	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
66 (22826399)	3

MRI abdomen and pelvis without and with IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	6	6	1	0	1	0	3	10	2	0	0
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References	Study Quality
2 (28596261)	4
5 (21766302)	Good
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
63 (27331922)	Good
62 (21167561)	3
59 (25698065)	1
58 (22564495)	3

2 (28596261)	4
5 (21766302)	Good
6 (23665399)	4
7 (25616710)	4
23 (9888732)	4
24 (12090319)	4
59 (25698065)	1
58 (22564495)	3
57 (21353376)	2
56 (25781204)	4
62 (21167561)	3
63 (27331922)	Good
65 (25794069)	3

CT chest without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	4	4	5	0	1	1	1	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
18 (26880407)	2

FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Moderate	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	6	2	5	1	2	0	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
36 (27824726)	Good

Tc-99m bone scan whole body	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	7	6	3	0	0	0	0	0	0
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References	Study Quality
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2 (28596261)	4
6 (23665399)	4
7 (25616710)	4
34 (4060382)	3
35 (11696720)	3

CT head with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	13	2	1	0	0	0	0	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4

CT head without IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	14	2	0	0	0	0	0	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4

CT head without and with IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	13	3	0	0	0	0	0	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	4

Radiography intravenous urography	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	1	1	14	2	0	0	0	0	0	0	0	0
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References	Study Quality
2 (28596261)	4
6 (23665399)	4
7 (25616710)	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.