

2 (31971937)	0
38 (21498313)	4
7 (14627251)	0
73 (8862370)	4
13 (38037721)	0
57 (38768832)	4
19 (25814198)	4
55 (29164308)	3
12 (38030849)	0
30 (8733861)	1
36 (15026595)	4
11 (32201007)	0
28 (17715112)	4
53 (27692855)	4

CTA abdomen and pelvis without and with IV contrast	Usually appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	9	9	0	0	1	1	2	0	1	1	12
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References	Study Quality
2 (31971937)	0
38 (21498313)	4
7 (14627251)	0
73 (8862370)	4
13 (38037721)	0
57 (38768832)	4
19 (25814198)	4
55 (29164308)	3
12 (38030849)	0
36 (15026595)	4
11 (32201007)	0
28 (17715112)	4
53 (27692855)	4

MRA abdomen without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	1	1	2	2	8	4	
		References	Study Quality													
		7 (14627251)	0													
		19 (25814198)	4													
MRA abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	1	1	1	3	8	4	
		References	Study Quality													
		7 (14627251)	0													
		53 (27692855)	4													
		19 (25814198)	4													
MRA abdomen with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	0	3	2	11	2	
		References	Study Quality													
		7 (14627251)	0													
		53 (27692855)	4													
		19 (25814198)	4													
MRA abdomen and pelvis with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	0	2	3	9	4	
		References	Study Quality													
		7 (14627251)	0													
		53 (27692855)	4													
		19 (25814198)	4													
CT abdomen with IV contrast	May be appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	6	6	1	0	1	0	5	4	4	2	1	
CT abdomen and pelvis with IV contrast	May be appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	6	6	1	0	0	2	4	5	5	0	1	
CT abdomen and pelvis without and with IV contrast	May be appropriate	Limited	☹☹☹☹ 10-30 mSv	☹☹☹☹☹ 10-30 mSv [ped]	6	6	1	0	0	2	6	5	3	0	1	

US duplex Doppler aorta abdomen	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	6	6	1	0	0	2	6	3	5	0	1
		References		Study Quality											
		40 (9922199)		4											
		73 (8862370)		4											
		39 (18392255)		4											
		53 (27692855)		4											
CT abdomen without and with IV contrast	May be appropriate	Limited	⊕⊕⊕⊕ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	5	5	0	1	0	1	10	4	1	0	0
US aorta abdomen with IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	1	1	1	0	12	2	0	0	0
		References		Study Quality											
		53 (27692855)		4											
		39 (18392255)		4											
MRA abdomen without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	4	4	0	1	4	5	7	0	0	0	0
MRA abdomen and pelvis without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	4	4	0	1	4	6	5	1	0	0	0
CT abdomen without IV contrast	Usually not appropriate	Expert Consensus	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	3	3	3	6	4	2	1	1	1	0	0
Arteriography abdomen	Usually not appropriate	Strong	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	3	3	1	6	7	3	1	0	0	0	0
		References		Study Quality											
		51 (11593635)		3											
		30 (8733861)		1											
MRI abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	3	3	4	3	8	0	3	0	0	0	0

MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	3	3	5	4	9	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	3	3	3	4	9	1	1	0	0	0	0
Arteriography abdomen and pelvis	Usually not appropriate	Strong	⊕⊕⊕⊕ 10-30 mSv	Varies	3	3	1	7	6	2	2	0	0	0	0

References	Study Quality
51 (11593635)	3

CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	2	2	5	6	6	1	0	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	0 0 mSv	0 0 mSv [ped]	2	2	5	6	7	0	0	0	0	0	0

Variant 2: Adult. Known splanchnic or renal artery aneurysm. Active surveillance.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA abdomen with IV contrast	Usually appropriate	Limited	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	9	9	0	0	0	0	1	0	1	4	12

References	Study Quality
2 (31971937)	0
38 (21498313)	4
55 (29164308)	3
57 (38768832)	4
11 (32201007)	0
53 (27692855)	4
29 (20609877)	4

CTA abdomen and pelvis with IV contrast	Usually appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	9	9	0	0	0	0	1	0	2	4	11	
		References	Study Quality													
		2 (31971937)	0													
		38 (21498313)	4													
		55 (29164308)	3													
		57 (38768832)	4													
		11 (32201007)	0													
		53 (27692855)	4													
		29 (20609877)	4													
MRA abdomen without and with IV contrast	Usually appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	8	8	0	0	1	1	0	1	3	8	4	
		References	Study Quality													
		53 (27692855)	4													
MRA abdomen and pelvis without and with IV contrast	Usually appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	8	8	0	0	2	0	0	1	3	7	5	
		References	Study Quality													
		53 (27692855)	4													
MRA abdomen with IV contrast	Usually appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	8	8	0	0	0	0	1	0	4	8	5	
		References	Study Quality													
		53 (27692855)	4													
MRA abdomen and pelvis with IV contrast	Usually appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	8	8	0	0	0	0	1	0	5	7	5	
		References	Study Quality													
		53 (27692855)	4													
CT abdomen with IV contrast	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	6	6	0	1	0	1	7	6	1	1	1	

CT abdomen and pelvis with IV contrast	May be appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	6	6	0	0	1	1	6	7	2	1	0
US duplex Doppler aorta abdomen	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	6	6	0	0	1	0	4	6	6	0	1
		References	Study Quality												
		57 (38768832)	4												
		53 (27692855)	4												
		39 (18392255)	4												
US aorta abdomen with IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	6	6	1	0	1	0	4	4	6	1	1
		References	Study Quality												
		53 (27692855)	4												
		39 (18392255)	4												
CT abdomen without and with IV contrast	May be appropriate	Limited	☹☹☹☹ 10-30 mSv	☹☹☹☹☹ 10-30 mSv [ped]	5	5	0	0	1	2	9	3	2	1	0
CT abdomen and pelvis without and with IV contrast	May be appropriate	Limited	☹☹☹☹ 10-30 mSv	☹☹☹☹☹ 10-30 mSv [ped]	5	5	0	1	0	0	9	5	2	1	0
MRA abdomen without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	4	4	0	1	1	7	5	3	0	0	0
MRA abdomen and pelvis without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	4	4	0	2	2	5	6	2	0	0	0
CT abdomen without IV contrast	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	3	3	3	4	5	2	3	0	0	1	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	3	3	2	1	8	3	3	1	0	0	0

Arteriography abdomen	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	6	1	6	2	1	0	1	0	1
MRI abdomen without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	3	5	7	0	3	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	4	5	6	0	2	1	0	0	0
Arteriography abdomen and pelvis	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	Varies	3	3	5	2	6	2	1	0	1	0	1
MRI abdomen without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	4	8	5	0	1	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	3	9	5	0	1	0	0	0	0

Variant 3: Pregnant. Suspected splanchnic or renal artery aneurysm. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US duplex Doppler aorta abdomen	Usually appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	8	8	0	0	2	0	1	1	4	3	7
US aorta abdomen with IV contrast	Usually appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	7	7	0	0	0	2	1	1	6	5	3
CTA abdomen with IV contrast	May be appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	1	2	3	2	9	0	0	0	0
CTA abdomen and pelvis with IV contrast	May be appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	5	5	1	1	1	4	6	5	0	0	0
MRA abdomen without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	1	1	0	2	10	3	0	0	0

MRA abdomen and pelvis without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	1	1	0	2	9	4	0	0	0
CT abdomen with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	3	4	5	2	2	0	2	0	0
CT abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	4	5	5	3	0	1	0	0	0
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	3	4	6	3	1	0	1	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	3	4	7	3	1	0	0	0	0
MRA abdomen without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	3	4	7	3	0	1	0	0	0
MRA abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	3	4	6	3	2	0	0	0	0
MRA abdomen with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	3	2	8	4	0	1	0	0	0
MRA abdomen and pelvis with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	3	3	3	3	5	5	1	0	1	0	0
CT abdomen without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	5	5	5	1	2	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	5	5	6	0	1	1	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	2	2	4	7	4	1	0	1	1	0	0
MRI abdomen without and with IV contrast	Usually not appropriate		0 0 mSv	0 0 mSv [ped]	2	2	4	8	4	2	0	0	0	0	0

MRI abdomen and pelvis without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	4	8	3	0	1	2	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	5	7	4	2	0	0	0	0	0
Arteriography abdomen	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗⊗ 10-30 mSv [ped]	1	1	10	2	3	2	1	0	0	0	0
Arteriography abdomen and pelvis	Usually not appropriate	Expert Consensus	⊗⊗⊗⊗ 10-30 mSv	Varies	1	1	10	2	3	2	1	0	0	0	0

Variant 4: Pregnant. Known splanchnic or renal artery aneurysm. Active surveillance.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US duplex Doppler aorta abdomen	Usually appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	8	8	0	0	1	0	2	3	3	3	6
US aorta abdomen with IV contrast	Usually appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	7	7	0	0	1	0	1	1	7	6	2
MRA abdomen without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	0	1	2	0	11	3	0	0	0
MRA abdomen and pelvis without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	1	1	1	1	10	3	0	0	0
CT abdomen with IV contrast	May be appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	4	4	4	3	2	5	3	0	1	0	0
CTA abdomen with IV contrast	May be appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	4	4	2	5	2	4	3	2	0	0	0
CTA abdomen and pelvis with IV contrast	May be appropriate	Expert Consensus	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗⊗ 10-30 mSv [ped]	4	4	1	2	4	4	6	0	0	0	0

CT abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	4	4	5	4	1	0	0	0	0
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	4	3	4	4	1	0	2	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	5	3	5	4	1	0	0	0	0
MRA abdomen without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	3	3	9	2	1	0	0	0	0
MRA abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	3	4	8	1	1	1	0	0	0
MRA abdomen with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	3	3	7	4	1	0	0	0	0
MRA abdomen and pelvis with IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	3	3	3	4	6	4	0	1	0	0	0
CT abdomen without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	6	4	3	2	2	1	0	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	6	5	3	2	1	1	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	4	7	4	1	1	1	0	0	0
MRI abdomen without and with IV contrast	Usually not appropriate		○ 0 mSv	○ 0 mSv [ped]	2	2	4	7	6	1	0	0	0	0	0
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	4	6	5	0	1	0	2	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate		○ 0 mSv	○ 0 mSv [ped]	2	2	4	9	4	1	0	0	0	0	0

Arteriography abdomen and pelvis	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	Varies	2	2	9	2	2	2	2	1	0	0	0
Arteriography abdomen	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼☼ 10-30 mSv [ped]	1	1	10	1	2	2	3	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.