American College of Radiology
ACR Appropriateness Criteria®

Abdominal Aortic Aneurysm or Dissection-Interventional Planning and Follow-up

Variant 1: Planning for pre-endovascular repair (EVAR) or open repair of AAA.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA abdomen and pelvis with IV contrast	Usually appropriate	Limited	☢☢☢☢ 10-30 mSv		9	9	0	0	0	0	0	0	1	1	11
	References		Study Quality												
	55 (24439321)		3												
	56 (23972762)		3												
MRA abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	0	1	4	3	5	0
	References		Study Quality												
	33 (25247964)		4												
	59 (23392427)		1												
	57 (14557503)		4												
	58 (10828235)		3												
MRA abdomen and pelvis without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	6	6	0	0	2	1	2	7	1	0	0
	References		Study Quality												
	33 (25247964)		4												
	59 (23392427)		1												
	57 (14557503)		4												
	58 (10828235)		3												

CT abdomen and pelvis with IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	6	6	0	0	1	1	4	4	4	0	0

References	Study Quality
55 (24439321)	3
56 (23972762)	3

CT abdomen and pelvis without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	1	3	1	2	5	1	0	0

References	Study Quality
55 (24439321)	3
56 (23972762)	3

Aortography abdomen	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv		4	4	0	1	3	3	3	2	1	0	0
CT abdomen and pelvis without and with IV contrast	May be appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	4	4	0	1	6	0	5	2	0	0	0

References	Study Quality
55 (24439321)	3
56 (23972762)	3

US duplex Doppler aorta abdomen	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	2	3	7	0	2	0	0	0	0

References	Study Quality
60 (22987204)	4

CT abdomen and pelvis without IV contrast and US aorta abdomen with duplex Doppler	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	3	3	0	0	7	4	1	1	0	0	0

References	Study Quality
55 (24439321)	3
56 (23972762)	3

Radiography abdomen and pelvis	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	1	7	2	3	0	1	0	0	0	0

References	Study Quality
54 (12171186)	4

Variant 2: Follow-up for post-endovascular repair (EVAR) or open repair of AAA.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA abdomen and pelvis with IV contrast	Usually appropriate	Strong	☢☢☢☢ 10-30 mSv		9	9	0	0	0	0	0	0	1	2	10

References	Study Quality
61 (25088738)	4
34 (25247965)	4
62 (24726829)	3
68 (24475801)	2
71 (23711975)	3
72 (21643642)	2
70 (19703867)	3
64 (18572368)	2
63 (20655690)	3
65 (12582188)	3
66 (15071447)	3
67 (16010509)	3
69 (12917836)	1
73 (21195639)	2
74 (15688106)	4
75 (11552730)	3
76 (11856690)	4

MRA abdomen and pelvis without and with IV contrast	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	7	7	0	0	0	2	0	2	3	6	0

References	Study Quality

35 (24873921)	4
83 (23561434)	1
79 (23403221)	4
84 (22588711)	3
78 (15503334)	3
82 (15100115)	2
76 (11856690)	4
77 (11042644)	4
80 (16247149)	3
81 (14718808)	2

MRA abdomen and pelvis without IV contrast	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	6	6	0	1	1	2	1	7	1	0	0

References	Study Quality
35 (24873921)	4
83 (23561434)	1
79 (23403221)	4
84 (22588711)	3
78 (15503334)	3
82 (15100115)	2
76 (11856690)	4
77 (11042644)	4
80 (16247149)	3
81 (14718808)	2

US duplex Doppler aorta abdomen	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	6	6	0	0	1	1	4	1	4	2	0

References	Study Quality
35 (24873921)	4
34 (25247965)	4
87 (25023904)	2
53 (24618331)	3
50 (24091092)	3

88 (23591188)	3
49 (23490295)	3
97 (22749436)	3
84 (22588711)	3
89 (23046331)	2
90 (22717670)	3
96 (23001681)	M
86 (16687740)	M
98 (19786241)	4
85 (15943504)	M
52 (19281282)	3
92 (17980791)	3
51 (16212456)	3
91 (16928163)	3
93 (18829237)	2
94 (11877694)	4
95 (12514572)	3

Aortography abdomen	May be appropriate	Limited	☢☢☢ 1-10 mSv		6	6	0	0	1	3	3	7	0	0	0

References	Study Quality
35 (24873921)	4
43 (15872321)	1

CT abdomen and pelvis without and with IV contrast	May be appropriate	Strong	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	6	6	0	0	0	2	1	6	4	1	0

References	Study Quality
61 (25088738)	4
34 (25247965)	4
62 (24726829)	3
68 (24475801)	2
71 (23711975)	3

72 (21643642)	2
70 (19703867)	3
64 (18572368)	2
63 (20655690)	3
65 (12582188)	3
66 (15071447)	3
67 (16010509)	3
69 (12917836)	1
73 (21195639)	2
74 (15688106)	4
75 (11552730)	3

CT abdomen and pelvis without IV contrast and US aorta abdomen with duplex Doppler	May be appropriate	Strong	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	6	6	0	0	1	0	4	5	3	0	0

References	Study Quality
61 (25088738)	4
34 (25247965)	4
62 (24726829)	3
68 (24475801)	2
71 (23711975)	3
72 (21643642)	2
70 (19703867)	3
64 (18572368)	2
63 (20655690)	3
65 (12582188)	3
66 (15071447)	3
67 (16010509)	3
69 (12917836)	1
73 (21195639)	2
74 (15688106)	4
75 (11552730)	3

CT abdomen and pelvis without IV contrast	May be appropriate	Strong	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	1	3	5	4	1	0	0

References	Study Quality
61 (25088738)	4
34 (25247965)	4
62 (24726829)	3
68 (24475801)	2
71 (23711975)	3
72 (21643642)	2
70 (19703867)	3
64 (18572368)	2
63 (20655690)	3
65 (12582188)	3
66 (15071447)	3
67 (16010509)	3
69 (12917836)	1
73 (21195639)	2
74 (15688106)	4
75 (11552730)	3

CT abdomen and pelvis with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	2	3	1	5	3	0	0

References	Study Quality
61 (25088738)	4
34 (25247965)	4
62 (24726829)	3
68 (24475801)	2
71 (23711975)	3
72 (21643642)	2
70 (19703867)	3
64 (18572368)	2

Radiography abdomen and pelvis	May be appropriate	Strong	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	4	4	0	1	4	2	3	2	0	1	0

References	Study Quality
63 (20655690)	3
65 (12582188)	3
66 (15071447)	3
67 (16010509)	3
69 (12917836)	1
73 (21195639)	2
74 (15688106)	4
75 (11552730)	3

References	Study Quality
87 (25023904)	2
53 (24618331)	3
49 (23490295)	3
84 (22588711)	3
89 (23046331)	2
90 (22717670)	3
32 (14514830)	4
99 (14656183)	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.**