American College of Radiology
ACR Appropriateness Criteria®

Colorectal Cancer Screening

Variant 1: Colorectal cancer screening. Average-risk individual. Age 45 to 75 years. Initial screening, then follow-up every 5 years after initial negative screen.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT colonography without IV contrast screening	Usually appropriate	Strong	☢☢☢☢ 10-30 mSv		8	8	0	0	0	0	0	1	3	6	5

References	Study Quality
29 (34003220)	4
28 (26878227)	4
27 (22733929)	3
26 (22361006)	3
25 (21467252)	4
24 (20093521)	4
23 (22210409)	4
22 (16982816)	4
21 (23414650)	1
20 (15664225)	3
19 (15082698)	3
18 (15838071)	Good
17 (16304111)	Good
16 (18852257)	3
15 (14657426)	3
14 (18799557)	2

CT abdomen and pelvis with IV contrast	Usually not appropriate	Strong	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	6	2	4	2	0	0	1	0	0

References	Study Quality
13 (28230026)	Good
12 (16439217)	4
11 (36961532)	3
10 (33036678)	3
9 (29458958)	3
8 (20485005)	3

CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	2	2	7	6	2	0	0	0	0	0	0
Fluoroscopy barium enema double-contrast	Usually not appropriate	Strong	☢☢☢ 1-10 mSv		2	2	3	5	1	3	3	0	0	0	0

References	Study Quality
31 (37078599)	4
30 (18212223)	Good
21 (23414650)	1

Fluoroscopy barium enema single-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		2	2	5	7	3	0	0	0	0	0	0

References	Study Quality
32 (3485914)	3

CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	1	1	9	5	1	0	0	0	0	0	0

Variant 2: Colorectal cancer screening. Individuals 45 to 75 years of age with elevated risk (not average risk nor high risk). Initial screening, then follow-up every 5 years after initial negative screen.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT colonography without IV contrast screening	Usually appropriate	Strong	☢☢☢☢ 10-30 mSv		8	8	0	0	0	0	1	0	5	4	5

References	Study Quality
48 (28125785)	4
47 (27110333)	2
46 (15236170)	3
45 (24475809)	2
44 (19531785)	3
43 (38289210)	4
42 (27552558)	3
41 (17914041)	3
40 (21415247)	Good
39 (27196588)	2
38 (24059367)	2
37 (23473734)	3
36 (22586008)	2
35 (22088831)	3
34 (18580500)	3
33 (14739311)	2
29 (34003220)	4
28 (26878227)	4
26 (22361006)	3
25 (21467252)	4
24 (20093521)	4
23 (22210409)	4
21 (23414650)	1
16 (18852257)	3
15 (14657426)	3
14 (18799557)	2

Fluoroscopy barium enema double-contrast	Usually not appropriate	Strong	☢☢☢ 1-10 mSv		3	3	2	3	4	3	3	0	0	0	0

References	Study Quality
21 (23414650)	1
30 (18212223)	Good

CT abdomen and pelvis with IV contrast	Usually not appropriate	Strong	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	5	4	4	1	0	0	1	0	0

References	Study Quality
13 (28230026)	Good
12 (16439217)	4
11 (36961532)	3
10 (33036678)	3
9 (29458958)	3
8 (20485005)	3

CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	7	8	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	2	2	6	8	1	0	0	0	0	0	0
Fluoroscopy barium enema single-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		2	2	6	4	4	0	0	0	0	0	1

References	Study Quality
32 (3485914)	3

Variant 3: Adult. Colorectal cancer screening. High-risk individual.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT colonography without IV contrast screening	Usually not appropriate	Moderate	☢☢☢☢ 10-30 mSv		3	3	3	2	3	3	2	1	0	0	1

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
		References		Study Quality											
		51 (35181895)		Good											
CT abdomen and pelvis with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	6	5	3	1	0	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	7	6	2	0	0	0	0	0	0
Fluoroscopy barium enema double-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		2	2	5	3	5	2	0	0	0	0	0
		References		Study Quality											
		52 (7729632)		3											
Fluoroscopy barium enema single-contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		2	2	7	5	3	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	1	1	8	4	3	0	0	0	0	0	0

Variant 4: Adult. Colorectal cancer screening. Average, elevated, or high risk after incomplete colonoscopy or unable to tolerate colonoscopy.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT colonography without IV contrast screening	Usually appropriate	Strong	☢☢☢☢ 10-30 mSv		8	8	0	0	0	0	0	0	2	6	7
		References		Study Quality											
		69 (26830606)		3											
		68 (23575398)		4											

67 (24964317)	1
66 (17641367)	3
65 (18680229)	3
64 (12034925)	2
63 (10587120)	2
62 (10470879)	4
38 (24059367)	2
36 (22586008)	2

Fluoroscopy barium enema double-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		3	3	2	5	1	2	4	1	0	0	0

References	Study Quality
31 (37078599)	4
70 (20652709)	4
71 (11264083)	4

CT abdomen and pelvis with IV contrast	Usually not appropriate	Strong	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	3	5	3	2	1	0	1	0	0

References	Study Quality
13 (28230026)	Good
12 (16439217)	4
11 (36961532)	3
10 (33036678)	3
9 (29458958)	3
8 (20485005)	3

CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	5	8	2	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	2	2	4	7	3	0	1	0	0	0	0
Fluoroscopy barium enema single-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		2	2	5	4	1	4	0	1	0	0	0

References	Study Quality
72 (16086221)	3

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.**