American College of Radiology
ACR Appropriateness Criteria®

Colorectal Cancer Screening

Variant 1: Colorectal cancer screening. Average-risk individual. Age greater than or equal to 50 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	Usually appropriate	Strong	☢☢☢ 1-10 mSv		9	9	0	0	0	0	0	0	1	2	12

References	Study Quality
46 (15664225)	3
38 (16641348)	4
39 (9024315)	4
42 (18852257)	3
41 (14657426)	3
45 (15082698)	3
40 (18799557)	2
53 (22733929)	3
49 (22210409)	4
51 (21467252)	4
52 (22361006)	3
47 (17914041)	3
55 (24059367)	2
54 (26878227)	4
48 (23414650)	1
44 (15838071)	Good
43 (16304111)	Good

		50 (20093521)		4											
Fluoroscopy barium enema double-contrast	May be appropriate	Strong	☢☢☢ 1-10 mSv		5	5	0	1	1	4	2	6	1	0	0
		References		Study Quality											
		59 (16837671)		3											
		62 (10900274)		4											
		64 (8029400)		4											
		46 (15664225)		3											
		58 (2806824)		3											
		38 (16641348)		4											
		39 (9024315)		4											
		60 (14687811)		4											
		61 (14572585)		4											
		63 (12050337)		4											
		65 (6602483)		3											
		66 (8978337)		3											
		67 (18853981)		4											
		68 (18212223)		Good											
MR colonography	May be appropriate	Strong	O 0 mSv		O 0 mSv [ped]	4	4	0	1	4	6	1	3	0	0	0
		References		Study Quality											
		72 (14633953)		2											
		73 (16304088)		2											
		70 (10924558)		2											
		71 (10930364)		2											
		75 (21131152)		2											
		74 (22167505)		2											
		77 (23415805)		1											
		76 (19936754)		Good											
Fluoroscopy barium enema single-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv			3	3	5	1	4	4	1	0	0	0	0

References	Study Quality
69 (3485914)	3
65 (6602483)	3
66 (8978337)	3

Variant 2: Colorectal cancer screening. Moderate-risk individual. First-degree family history of cancer or adenoma. 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	Usually appropriate	Limited	☢☢☢ 1-10 mSv		9	9	0	0	0	0	1	1	0	3	10
References			Study Quality												
78 (28125785)			4												
Fluoroscopy barium enema double-contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv		5	5	0	2	2	3	1	6	1	0	0
References			Study Quality												
79 (7729632)			3												
MR colonography	May be appropriate	Moderate	O 0 mSv	O 0 mSv [ped]	4	4	0	1	4	7	1	2	0	0	0
References			Study Quality												
80 (17329686)			1												
Fluoroscopy barium enema single-contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		3	3	5	2	3	5	0	0	0	0	0

Variant 3: Colorectal cancer detection. Moderate-risk individual. Average-risk individual after positive fecal occult blood test (FOBT) or positive fecal immunochemical test indicating a relative elevation in risk.

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	Usually appropriate	Moderate	☢☢☢ 1-10 mSv		9	9	0	0	1	0	0	0	1	4	9
References	Study Quality														
82 (23955527)	3														
81 (24519111)	Good														
Fluoroscopy barium enema double-contrast	May be appropriate	Strong	☢☢☢ 1-10 mSv		5	5	0	2	1	5	6	2	0	0	0
References	Study Quality														
84 (3251216)	3														
66 (8978337)	3														
87 (3273756)	3														
83 (23414648)	1														
MR colonography	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	4	4	0	3	4	6	0	2	0	0	0
References	Study Quality														
89 (24560199)	2														
90 (11930074)	2														
Fluoroscopy barium enema single-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		2	2	5	3	4	3	0	0	0	0	0
References	Study Quality														
88 (8474513)	3														
66 (8978337)	3														

Variant 4: Colorectal cancer screening. High-risk individual. Hereditary nonpolyposis colorectal cancer; ulcerative colitis or Crohn colitis.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT colonography	Usually not	Expert	☢☢☢ 1-10		3	3	0	6	6	3	0	1	0	0	0

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
	appropriate	Consensus	mSv												
Fluoroscopy barium enema double-contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		2	2	3	7	0	3	1	1	0	0	0
MR colonography	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	3	5	2	4	0	1	0	0	0
Fluoroscopy barium enema single-contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		1	1	10	4	0	1	0	0	0	0	0

Variant 5: Colorectal cancer screening. Average-, moderate-, or high-risk individual after incomplete colonoscopy.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT colonography	Usually appropriate	Strong	☢☢☢ 1-10 mSv		9	9	0	0	0	0	0	0	0	0	0

References	Study Quality
93 (10470879)	4
94 (10587120)	2
95 (12034925)	2
96 (18680229)	3
97 (17641367)	3
99 (23575398)	4
98 (24964317)	1
100 (26830606)	3

Fluoroscopy barium enema double-contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv		6	6	0	0	0	0	0	0	0	0	0

References	Study Quality
102 (11264083)	4

		101 (20652709)		4												
Fluoroscopy barium enema single-contrast	Usually not appropriate	Limited	☢☢☢ 1-10 mSv		3	3	3	4	1	7	0	0	0	0	0	
		References		Study Quality												
		103 (16086221)		3												
MR colonography	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	0	0	0	0	0	0	0	0	0	
		References		Study Quality												
		104 (16116531)		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.**