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.

D 1	Appropriateness	COF	A L L DDI	D I DDI	D.	24.11			F	inal '	Гаbи	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT colonography without IV contrast screening	Usually appropriate	Strong	୫୫୫୫ 10-30 mSv		8	8	0	0	0	0	0	1	3	6	5

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

CT abdomen and pelvis with IV contrast	Usuall _e approp	Strong	��� 1-10 mSv	^U 1	��� 3- 0 mSv [ped]	2	2	6	2	4	2	0	0	1	0	0
		References			Study	Quality										
		10 (33036678)				3										
		8 (20485005)				3										
		11 (36961532)				3										
		9 (29458958)				3										
		12 (16439217)				4										
		13 (28230026)			G	Good										
CT abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus	���� 10- mSv	30	₩₩₩ 10-30 mSv [ped]	2	2	7	6	2	0	0	0	0	0	0
Fluoroscopy barium enema double-contrast	Usuall approp	Strong	��� 1-10 mSv	0		2	2	3	5	1	3	3	0	0	0	0
		References			Study	Quality										
		21 (23414650)				1										
		30 (18212223)			G	Good										
		31 (37078599)				4				,						
Fluoroscopy barium enema single- contrast	Usuall approp	Limited	��� 1-10 mSv	^U 1	��� 3- 0 mSv [ped]	2	2	5	7	3	0	0	0	0	0	0
		References			Study	Quality										
		32 (3485914)				3										
CT abdomen and pelvis without IV contrast	Usuall approp	Expert Consensus	��� 1-10 mSv		��� 3- 0 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.

D 1	Appropriateness	COF	A L L DDI	n i nnr	D 41	3.6 11			F	inal [Гаbu	lation	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	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
33 (14739311)	2
16 (18852257)	3
15 (14657426)	3
14 (18799557)	2
44 (19531785)	3
23 (22210409)	4
25 (21467252)	4
26 (22361006)	3
35 (22088831)	3
36 (22586008)	2
41 (17914041)	3
38 (24059367)	2
28 (26878227)	4
48 (28125785)	4
21 (23414650)	1
24 (20093521)	4
40 (21415247)	Good
34 (18580500)	3
39 (27196588)	2
42 (27552558)	3
45 (24475809)	2
37 (23473734)	3
29 (34003220)	4
43 (38289210)	4
46 (15236170)	3
47 (27110333)	2

Fluoroscopy barium enema double-contrast	Usuall approp	y not oriate	Strong	��� 1-10 mSv		3	3	2	3	4	3	3	0	0	0	0
			References		Study	Quality	•			1						
			21 (23414650)			1										
			30 (18212223)		G	lood										
CT abdomen and pelvis with IV contrast	Usuall approp		Strong	��� 1-10 mSv	���� 3- 10 mSv [ped]	2	2	5	4	4	1	0	0	1	0	0
			References		Study	Quality										
			10 (33036678)			3										
			8 (20485005)			3										
			11 (36961532)			3										
			9 (29458958)			3										
			12 (16439217)			4										
			13 (28230026)		G	ood					ı					
CT abdomen and pelvis without IV contrast	Usuall approp	y not oriate	Expert Consensus	��� 1-10 mSv	ଡେଡେଡେ 3- 10 mSv [ped]	2	2	7	8	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approp		Expert Consensus	���� 10-3 mSv	***	2	2	6	8	1	0	0	0	0	0	0
Fluoroscopy barium enema single- contrast	Usuall approp	y not oriate	Limited	≎≎≎ 1-10 mSv	9999 2	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.

D 1	Appropriateness	COF	A L L DDI	D 1 DD1	D (*	3.6.31			F	inal '	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
CT colonography without IV	Usually not	Moderate	��� 10-30		3	3	3	2	3	3	2	1	0	0	1

D 1	Appropr	iateness	COE	A L LA DDI	D I DDI	D 41	3.6 11			F	inal T	Гаbu	latio	ns		
Procedure	Cate		SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
contrast screening	approj	oriate		mSv												
			References		Study	Quality		•								
			51 (35181895)		(Good										
CT abdomen and pelvis with IV contrast	Usuall approp		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	Usuall approp		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	Usuall approj		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	Usuall approp		Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	7	5	3	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approj		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.

ъ .	Appropriateness	COE	A L L DDI	n i nni	D 41	3.6 11			F	inal '	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	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
36 (22586008)	2
62 (10470879)	4

		62 (10597120)			2										
		63 (10587120)			2										
		64 (12034925)			2										
		65 (18680229)			3										
		66 (17641367)			3										
		38 (24059367)			2										
		68 (23575398)			4										
		67 (24964317)			1										
		69 (26830606)			3										
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										
		71 (11264083)			4										
		70 (20652709)			4										
		31 (37078599)			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										
		10 (33036678)			3										
		8 (20485005)			3										
		11 (36961532)			3										
		9 (29458958)			3										
		12 (16439217)			4										
		13 (28230026)		G	lood										
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	ଡ⊕ଡଡ 10-30 mSv	****	2	2	4	7	3	0	1	0	0	0	0
Fluoroscopy barium enema single- contrast	Usually not appropriate	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	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.