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. (24.1			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 approp	Strong	��� 1-1 mSv	0	���� 3- 10 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)			C	Good										
CT abdomen and pelvis without and with IV contrast	Usuall approp	Expert Consensus 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 mSv			2	2	3	5	1	3	3	0	0	0	0	
		References			Study	Quality										
		21 (23414650)				1										
		30 (18212223)			G	Good										
	1	31 (37078599)			.	4							1			
Fluoroscopy barium enema single- contrast	Usuall approp	Limited	888 1 10			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	��� 1-1 mSv	0	���� 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.

	Appropriateness	TOD	A L L DDY	n i nni	·	3.5.31]	Final	Tabı	ılatio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9

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		Strong	��� 1-10 mSv	0	3	3	2	3	4	3	3	0	0	0	0
			References		Study	y Quality		•					•			
			21 (23414650)			1										
			30 (18212223)			Good										
CT abdomen and pelvis with IV contrast	Usuall approp		Strong	��� 1-10 mSv	0	2	2	5	4	4	1	0	0	1	0	0
			References		Study	y Quality										
			10 (33036678)			3										
			8 (20485005)			3										
			11 (36961532)			3										
			9 (29458958)			3										
			12 (16439217)			4										
			13 (28230026)		(Good										
CT abdomen and pelvis without IV contrast	Usuall approp		Expert Consensus	��� 1-10 mSv	0	2	2	7	8	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approp	y not oriate	Expert Consensus	Expert		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	0	2	2	6	4	4	0	0	0	0	0	1
			References		Study	y Quality										
			32 (3485914)			3										

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

D 1	Appropriateness	COF	A L L DDI	n i nnr	D 41	3.7. 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 not appropriate	Moderate	≎≎≎≎ 10-30 mSv		3	3	3	2	3	3	2	1	0	0	1

D 1	Appropr	iateness	GOE	4 1 14 DD		D I DDI	D 4	3.7.11			F	inal T	[abu]	latio	ns		
Procedure	Cate		SOE	Adults RR	(L	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
			References			Study	Quality										
			51 (35181895)			C	ood										
CT abdomen and pelvis with IV contrast	Usuall approj		Expert Consensus	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	2	2	6	5	3	1	0	0	0	0	0
CT abdomen and pelvis without IV contrast		lly not Expert Consensus		��� 1-10 mSv	0	���� 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	0		2	2	5	3	5	2	0	0	0	0	0
			References			Study	Quality										
			52 (7729632)				3										
Fluoroscopy barium enema single- contrast	Usuall approj		Expert Consensus	��� 1-10 mSv	0		2	2	7	5	3	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usuall approj		Expert Consensus	Consensus mSv Expert ���� 10-30		����� 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.

	Appropriateness	COF	A L L DDY	D I DDI	D (1	3.6.11			F	inal '	Гabu	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

		63 (105	87120)	ı			2										
		64 (120	34925)	l			2										
		65 (186	80229)	ı			3										
		66 (176	41367)	ı			3										
		38 (240.	59367)	ı			2										
		68 (235)	75398)				4										
		67 (249	64317)				1										
		69 (268	30606)				3										
Fluoroscopy barium enema double-contrast	Usually no		d	��� 1-10 mSv	0		3	3	2	5	1	2	4	1	0	0	0
		Refere	ences			Study	Quality		•								<u> </u>
		71 (112	64083)				4										
		70 (206	52709)				4										
		31 (370	78599)				4										
CT abdomen and pelvis with IV contrast	Usually no		7	��� 1-10 mSv	0	���� 3- 10 mSv [ped]	2	2	3	5	3	2	1	0	1	0	0
		Refere	ences			Study	Quality										
		10 (330	36678)				3										
		8 (2048	5005)				3										
		11 (369	61532)				3										
		9 (2945	8958)				3										
		12 (164	39217)	ı			4										
		13 (282	30026)			C	lood										
CT abdomen and pelvis without IV contrast	Usually no			��� 1-10 mSv	0	���� 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 no			୫୫୫୫ 10-3 mSv	30		2	2	4	7	3	0	1	0	0	0	0
Fluoroscopy barium enema single- contrast	Usually no		d	��� 1-10 mSv	0		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.