

**American College of Radiology
ACR Appropriateness Criteria®**

Crohn Disease-Child

Variant 1: Child. Suspected Crohn disease, no prior Crohn diagnosis. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
MR enterography	Usually appropriate	Strong	0 mSv	0 mSv [ped]	9	9	0	0	0	0	0	0	0	4	14
		References		Study Quality											
		25 (21785852)		3											
		17 (21701034)		1											
		27 (22520509)		2											
		1 (22997386)		4											
		15 (29319414)		4											
		24 (22915428)		3											
		30 (23212595)		3											
		26 (25341168)		2											
		7 (27229500)		4											
		16 (28470387)		3											
		23 (30078049)		4											
		29 (29504171)		2											
		28 (30899973)		2											
CT enterography	Usually appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	8	8	0	0	0	1	0	1	4	7	5
		References		Study Quality											
		14 (24912799)		Good											

13 (19276325)	1
12 (19542402)	2
1 (22997386)	4
15 (29319414)	4
11 (23361877)	2
16 (28470387)	3
10 (27229508)	4

MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	7	7	1	0	0	1	1	6	4	5	0
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References	Study Quality
31 (25592192)	2
7 (27229500)	4
16 (28470387)	3

CT abdomen and pelvis with IV contrast	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	6	6	0	0	1	0	5	5	5	2	0
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References	Study Quality
17 (21701034)	1
1 (22997386)	4

Fluoroscopy upper GI series with small bowel follow-through	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	0	1	13	3	0	0	0
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References	Study Quality
2 (23583097)	4
22 (22588598)	3
21 (30150041)	4

MRI abdomen and pelvis without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	5	5	0	0	0	4	10	2	1	0	0
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References	Study Quality
31 (25592192)	2
7 (27229500)	4
16 (28470387)	3

			17 (21701034)																
			1 (22997386)																
Fluoroscopy contrast enema	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	5	7	5	0	0	0	0	0	0	0	0	0	0
			References				Study Quality												
			2 (23583097)				4												
			20 (23789685)				3												
			21 (30150041)				4												
WBC scan whole body	Usually not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	8	4	4	1	1	0	0	0	0	0	0	0	0
			References				Study Quality												
			45 (19522018)				4												
			46 (31482559)				3												
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Limited	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	8	7	2	0	0	0	0	0	0	0	0	0	0
			References				Study Quality												
			18 (22960135)				Good												
			19 (23519750)				3												
Radiography abdomen	Usually not appropriate	Expert Consensus	☼☼ 0.1-1mSv	☼☼ 0.03-0.3 mSv [ped]	2	2	6	4	1	2	4	0	1	0	0	0	0	0	0

Variant 2: Child. Known Crohn disease, suspected acute exacerbation. Initial Imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations													
							1	2	3	4	5	6	7	8	9					
MR enterography	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	1	0	1	1	15					
			References				Study Quality													
			25 (21785852)				3													

17 (21701034)	1
27 (22520509)	2
1 (22997386)	4
15 (29319414)	4
24 (22915428)	3
30 (23212595)	3
26 (25341168)	2
7 (27229500)	4
16 (28470387)	3
23 (30078049)	4
29 (29504171)	2
28 (30899973)	2

CT enterography	Usually appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	8	8	0	0	1	1	0	0	5	9	2
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References	Study Quality
14 (24912799)	Good
13 (19276325)	1
12 (19542402)	2
1 (22997386)	4
15 (29319414)	4
11 (23361877)	2
16 (28470387)	3
10 (27229508)	4

CT abdomen and pelvis with IV contrast	Usually appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	7	7	0	0	0	0	3	3	7	4	1
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References	Study Quality
17 (21701034)	1
1 (22997386)	4

MRI abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	7	7	0	0	0	1	3	4	4	6	0
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References	Study Quality
31 (25592192)	2
7 (27229500)	4
16 (28470387)	3

Fluoroscopy upper GI series with small bowel follow-through	May be appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	0	3	11	3	0	0	0
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References	Study Quality
2 (23583097)	4
22 (22588598)	3
21 (30150041)	4

MRI abdomen and pelvis without IV contrast	May be appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	5	5	0	0	0	3	10	2	2	0	0
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References	Study Quality
31 (25592192)	2
7 (27229500)	4
16 (28470387)	3

US abdomen	May be appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	5	5	0	0	0	2	13	2	0	0	0
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References	Study Quality
33 (23921767)	Good
32 (26164439)	4
35 (26700349)	2
36 (28434027)	2
34 (28302273)	3
21 (30150041)	4

Radiography abdomen	May be appropriate	Limited	☼☼ 0.1-1mSv	☼☼ 0.03-0.3 mSv [ped]	5	5	0	0	0	3	13	1	0	0	0
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References	Study Quality
47 (22749384)	3

CT abdomen and pelvis without IV contrast	Usually not appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	3	3	4	4	2	3	3	2	0	0	0
		References		Study Quality											
		17 (21701034)		1											
		1 (22997386)		4											
Fluoroscopy contrast enema	Usually not appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	3	3	5	4	3	2	3	1	0	0	0
		References		Study Quality											
		2 (23583097)		4											
		20 (23789685)		3											
		21 (30150041)		4											
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	☹☹☹☹ 10-30 mSv	☹☹☹☹☹ 10-30 mSv [ped]	2	2	7	4	5	1	0	0	0	0	0
		References		Study Quality											
		17 (21701034)		1											
		1 (22997386)		4											
WBC scan whole body	Usually not appropriate	Expert Consensus	☹☹☹☹ 10-30 mSv	☹☹☹☹ 3-10 mSv [ped]	2	2	9	4	4	0	0	1	0	0	0
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	☹☹☹☹ 10-30 mSv	☹☹☹☹ 3-10 mSv [ped]	2	2	8	7	1	0	0	1	1	0	0
US abdomen with IV contrast	Usually not appropriate	Expert Consensus	○ 0 mSv	○ 0 mSv [ped]	2	2	2	10	4	1	0	0	0	0	0

Variant 3: Child. Known Crohn disease, disease surveillance or monitoring therapy.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
MR enterography	Usually	Strong	○ 0 mSv	○ 0 mSv	9	9	0	0	0	0	0	0	1	1	16

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

References	Study Quality
25 (21785852)	3
17 (21701034)	1
27 (22520509)	2
50 (24177375)	3
15 (29319414)	4
24 (22915428)	3
30 (23212595)	3
26 (25341168)	2
7 (27229500)	4
53 (26638000)	2
16 (28470387)	3
23 (30078049)	4
29 (29504171)	2
28 (30899973)	2
51 (27351067)	2
52 (31145502)	2
54 (31365485)	2

CT enterography	Usually appropriate	Strong	⊕⊕⊕⊕ 10-30 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	7	7	0	0	0	0	0	1	10	4	2
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References	Study Quality
14 (24912799)	Good
13 (19276325)	1
12 (19542402)	2
1 (22997386)	4
15 (29319414)	4
11 (23361877)	2

55 (26080794)	Good
56 (26718197)	2
35 (26700349)	2
36 (28434027)	2
34 (28302273)	3
21 (30150041)	4

US abdomen with IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	5	5	0	1	1	6	7	2	0	0	0
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References	Study Quality
42 (26507861)	Good
41 (25619783)	Good
39 (22698508)	2
40 (22157203)	2
43 (26700336)	2
44 (29718309)	2

FDG-PET/CT skull base to mid-high	May be appropriate	Moderate	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	4	4	0	0	1	9	7	0	0	0	0
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References	Study Quality
18 (22960135)	Good
19 (23519750)	3
49 (16043988)	2
48 (32145886)	4

Fluoroscopy contrast enema	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	5	2	4	4	1	2	0	0	0
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References	Study Quality
2 (23583097)	4
21 (30150041)	4

CT abdomen and pelvis without IV contrast	Usually not appropriate	Limited	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	2	2	4	6	2	2	2	2	0	0	0
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References	Study Quality
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MRI pelvis with IV contrast	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	8	8	0	0	0	0	2	1	5	5	5	
		References	Study Quality													
		57 (22513437)	Good													
		5 (25246189)	4													
		59 (24121148)	3													
		6 (27229501)	4													
		58 (29135086)	3													
MRI pelvis without IV contrast	May be appropriate	Limited	0 0 mSv	0 0 mSv [ped]	6	6	0	1	0	0	5	7	4	1	0	
		References	Study Quality													
		57 (22513437)	Good													
		5 (25246189)	4													
		59 (24121148)	3													
		6 (27229501)	4													
		58 (29135086)	3													
CT pelvis with IV contrast	May be appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	0	3	11	2	1	0	0	
US pelvis transperineal	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	5	5	0	0	2	3	8	6	0	0	0	
		References	Study Quality													
		63 (24193154)	3													
		62 (27629757)	2													
		61 (28399604)	4													
		60 (28953535)	2													
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	10	7	0	0	0	0	0	0	0	
CT pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	10	6	1	0	0	0	0	0	0	

Fluoroscopy contrast enema	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	1	1	9	7	1	0	0	0	0	0	0
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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.