

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

Left Lower Quadrant Pain-Suspected Diverticulitis

Variant 1: Left lower quadrant pain. Suspected diverticulitis. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations									
							1	2	3	4	5	6	7	8	9	
CT abdomen and pelvis with IV contrast	Usually appropriate	Strong	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	9	9	0	0	0	0	0	0	0	2	17	
		References	Study Quality													
		42 (16126929)	2													
		41 (26070499)	3													
		40 (26385800)	2													
		39 (16168267)	3													
		38 (9609151)	3													
		36 (15505294)	4													
		35 (19517148)	3													
		34 (24187459)	3													
		33 (25972914)	4													
		32 (29204676)	3													
		31 (12740709)	3													
		27 (20054539)	3													
		17 (27082846)	4													
		13 (12034590)	3													
		4 (26526432)	4													
CT abdomen and pelvis without IV contrast	May be appropriate	Limited	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	6	6	0	1	0	0	1	11	3	3	0	

References	Study Quality
36 (15505294)	4
35 (19517148)	3
34 (24187459)	3
33 (25972914)	4
32 (29204676)	3
31 (12740709)	3
27 (20054539)	3
17 (27082846)	4
13 (12034590)	3
4 (26526432)	4

MRI abdomen and pelvis without and with IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	6	6	0	0	0	2	5	11	1	0	0
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References	Study Quality
44 (7767748)	4
43 (16632733)	4
26 (19419830)	2
15 (15088109)	4
14 (23319717)	4
13 (12034590)	3
12 (18443876)	1
11 (16625348)	4
10 (16132933)	2

MRI abdomen and pelvis without IV contrast	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	4	4	0	2	3	6	5	2	1	0	0
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References	Study Quality
43 (16632733)	4
26 (19419830)	2
15 (15088109)	4
14 (23319717)	4
13 (12034590)	3

12 (18443876)	1
11 (16625348)	4
10 (16132933)	2

US abdomen transabdominal	May be appropriate	Strong	0 0 mSv	0 0 mSv [ped]	4	4	1	4	2	6	4	2	0	0	0
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References	Study Quality
49 (25542939)	3
48 (21365197)	2
46 (12761647)	4
45 (24065248)	4
47 (18523784)	Good

CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	1	2	7	1	6	0	2	0	0
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References	Study Quality
42 (16126929)	2
41 (26070499)	3
40 (26385800)	2
39 (16168267)	3
38 (9609151)	3
36 (15505294)	4
35 (19517148)	3
34 (24187459)	3
33 (25972914)	4
32 (29204676)	3
31 (12740709)	3
27 (20054539)	3
17 (27082846)	4
13 (12034590)	3
4 (26526432)	4

Fluoroscopy contrast enema	Usually not appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	3	3	3	4	8	3	1	0	0	0	0
		References		Study Quality											
		17 (27082846)		4											
		13 (12034590)		3											
Radiography abdomen and pelvis	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 0.3-3 mSv [ped]	3	3	1	7	5	5	0	0	1	0	0
US pelvis transvaginal	Usually not appropriate	Limited	○ 0 mSv	○ 0 mSv [ped]	2	2	3	11	0	2	3	0	0	0	0
		References		Study Quality											
		50 (25884745)		4											
		4 (26526432)		4											

Variant 2: Left lower quadrant pain. Suspected complications of diverticulitis.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CT abdomen and pelvis with IV contrast	Usually appropriate	Strong	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	9	9	0	0	0	0	0	0	0	1	18
		References		Study Quality											
		59 (26827740)		4											
		58 (24258427)		4											
		57 (21326763)		4											
		56 (24280147)		3											
		55 (16498095)		3											
		54 (20574812)		3											
		53 (22752330)		2											
		52 (23592303)		2											
		51 (22404743)		4											

31 (12740709)	3
9 (18443803)	4
7 (23061533)	4

CT abdomen and pelvis without IV contrast	May be appropriate	Strong	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	6	6	1	0	0	0	4	13	1	0	0
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References	Study Quality
58 (24258427)	4
55 (16498095)	3
54 (20574812)	3
53 (22752330)	2
52 (23592303)	2
51 (22404743)	4
31 (12740709)	3
9 (18443803)	4
7 (23061533)	4

CT pelvis with bladder contrast (CT cystography)	May be appropriate	Limited	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	6	6	0	0	1	1	3	9	5	0	0
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References	Study Quality
61 (26211219)	4
60 (23550466)	3

MRI abdomen and pelvis without and with IV contrast	May be appropriate	Strong	○ 0 mSv	○ 0 mSv [ped]	6	6	0	1	0	1	5	6	6	0	0
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References	Study Quality
44 (7767748)	4
43 (16632733)	4
26 (19419830)	2
15 (15088109)	4
14 (23319717)	4
13 (12034590)	3
12 (18443876)	1

CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Strong	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	1	2	16	0	0	0	0	0	0
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References	Study Quality
59 (26827740)	4
58 (24258427)	4
57 (21326763)	4
56 (24280147)	3
55 (16498095)	3
54 (20574812)	3
53 (22752330)	2
52 (23592303)	2
51 (22404743)	4
31 (12740709)	3
9 (18443803)	4
7 (23061533)	4

US pelvis transvaginal	Usually not appropriate	Moderate	○ 0 mSv	○ 0 mSv [ped]	3	3	3	4	4	4	3	1	0	0	0
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References	Study Quality
66 (23838329)	3
65 (26871408)	4
64 (24366280)	3
58 (24258427)	4
57 (21326763)	4
55 (16498095)	3
53 (22752330)	2

Radiography abdomen and pelvis	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼ 0.3-3 mSv [ped]	3	3	2	7	3	4	2	0	0	1	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.