American College of Radiology
ACR Appropriateness Criteria®

Acute Left Upper Quadrant Pain

Variant 1: Adult. Acute left upper quadrant pain. Suspected splenomegaly. 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	Moderate	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	9	9	0	0	1	0	0	0	1	3	6

References	Study Quality
34 (9754100)	4
30 (19328367)	4
29 (26248155)	3
28 (24902657)	3
24 (26402399)	2

US abdomen	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	0	7	6	1

References	Study Quality
30 (19328367)	4

CT abdomen and pelvis without IV contrast	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	1	1	5	2	1	1	0
MRI abdomen without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	0	0	3	4	2	2	0	0

References	Study Quality
40 (1561331)	4
39 (26526902)	3
38 (37081221)	4

MRI abdomen without and with IV contrast	May be appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	5	5	0	1	1	0	4	4	0	1	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	3	3	3	0	8	2	1	0	0	0	0
Radiography abdomen	Usually not appropriate	Limited	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	3	3	2	1	4	1	2	0	0	1	0

References	Study Quality
42 (12355000)	3
43 (9915508)	4

FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	4	2	4	0	0	0	0	1	0

Variant 2: Adult. Acute left upper quadrant pain. Fever. 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	Moderate	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	9	9	1	0	0	0	0	0	3	0	10

References	Study Quality
51 (21257870)	4
24 (26402399)	2

CT abdomen and pelvis without IV contrast	May be appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	2	3	3	3	0	0	0
MRI abdomen without and with IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	5	5	0	1	0	2	5	6	0	0	0

References	Study Quality
39 (26526902)	3
52 (21826466)	3

		53 (31951512)		4												
US abdomen	May be appropriate	Strong	☢ 0 mSv	☢ 0 mSv [ped]	5	5	0	1	0	3	9	0	0	1	0
		References		Study Quality												
		54 (33765176)		1												
		55 (15899340)		2												
MRI abdomen without IV contrast	May be appropriate	Limited	☢ 0 mSv	☢ 0 mSv [ped]	4	4	0	1	1	4	2	2	1	0	0
		References		Study Quality												
		39 (26526902)		3												
		52 (21826466)		3												
		53 (31951512)		4												
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	3	3	3	1	7	2	1	0	0	0	0
Radiography abdomen	Usually not appropriate	Limited	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	3	3	2	1	6	0	1	0	0	1	0
		References		Study Quality												
		42 (12355000)		3												
FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Limited	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	2	4	3	1	1	0	0	0	0

Variant 3: Adult. Acute left upper quadrant pain. Not otherwise specified. 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	Moderate	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	9	9	1	0	0	0	0	1	1	2	6
		References		Study Quality											

16 (30392591)	4
29 (26248155)	3
28 (24902657)	3
24 (26402399)	2

CT abdomen and pelvis without IV contrast	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	5	5	0	0	0	4	4	1	2	0	0
MRI abdomen without and with IV contrast	May be appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	4	4	0	1	4	1	0	5	0	0	0
US abdomen	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	0	1	0	9	4	0	0	0	0

References	Study Quality
58 (2070175)	3

CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	3	3	3	2	5	2	2	0	0	0	0
MRI abdomen without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	0	1	6	2	0	1	1	0	0
Radiography abdomen	Usually not appropriate	Limited	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	3	3	2	2	4	2	1	0	0	0	0

References	Study Quality
56 (32370974)	4
57 (18710981)	2

FDG-PET/CT skull base to mid-thigh	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	4	4	2	0	0	0	0	1	0

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.**