

American College of Radiology
ACR Appropriateness Criteria®

Acute Pelvic Pain in the Reproductive Age Group

Variant 1: Acute pelvic pain in the reproductive age group. Gynecological etiology suspected, β -hCG positive (either serum or urine). Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US pelvis transabdominal	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	0	2	2	10
		References		Study Quality											
		14 (24901772)		4											
		13 (-3195244)		4											
US pelvis transvaginal	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	0	1	0	13
		References		Study Quality											
		12 (24658951)		3											
		19 (19035545)		3											
		16 (3292977)		4											
		11 (7509494)		3											
		18 (21252743)		3											
		14 (24901772)		4											
		15 (23613077)		4											
		17 (9356647)		4											
US duplex Doppler adnexa	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	1	1	4	8
		References		Study Quality											
		12 (24658951)		3											

		11 (7509494)		3											
		10 (30693977)		4											
MRI pelvis without IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	3	3	3	3	3	5	3	0	0	0	0
		References		Study Quality											
		7 (28668435)		4											
		8 (29713741)		4											
		9 (29023142)		3											
MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	7	1	0	3	1	2	0	0	0
CT abdomen and pelvis with IV contrast	Usually not appropriate	Limited	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	1	1	10	1	3	0	0	0	0	0	0
		References		Study Quality											
		5 (24660723)		4											
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	1	1	11	1	2	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	⊗⊗⊗⊗ 10-30 mSv	⊗⊗⊗⊗⊗ 10-30 mSv [ped]	1	1	12	0	2	0	0	0	0	0	0
CT pelvis with IV contrast	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	1	1	11	0	3	0	0	0	0	0	0
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	⊗⊗⊗ 1-10 mSv	⊗⊗⊗⊗ 3-10 mSv [ped]	1	1	11	1	2	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	13	0	1	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	2	1	1	0	0	0	0	0

MRI pelvis without and with IV contrast	Usually not appropriate	Limited	0.0 mSv	0.0 mSv [ped]	1	1	8	2	2	1	1	0	0	0	0
		References	Study Quality												
		5 (24660723)	4												
		6 (25035091)	3												

Variant 2: Acute pelvic pain in the reproductive age group. Gynecological etiology suspected, β -hCG negative (either serum or urine). Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US duplex Doppler pelvis	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	0	1	2	11
		References		Study Quality											
		32 (11309174)		3											
		29 (19670236)		3											
		30 (23980225)		4											
		31 (20586041)		3											
		22 (32570294)		Good											
US pelvis transabdominal	Usually appropriate	Limited	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	0	3	1	10
		References		Study Quality											
		13 (-3195244)		4											
US pelvis transvaginal	Usually appropriate	Strong	0 0 mSv	0 0 mSv [ped]	9	9	0	0	0	0	0	0	1	0	13
		References		Study Quality											
		34 (9697286)		3											
		32 (11309174)		3											
		33 (23503942)		2											
		29 (19670236)		3											
		21 (22268201)		4											

		36 (17947378)	3													
		22 (32570294)	Good													
		13 (-3195244)	4													
		26 (29719307)	3													
		35 (18242924)	4													
CT abdomen and pelvis with IV contrast	May be appropriate	Moderate	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	5	5	0	0	1	4	5	7	0	0	0	
		References	Study Quality													
		24 (26719159)	3													
		21 (22268201)	4													
		22 (32570294)	Good													
		23 (17996605)	4													
MRI pelvis without and with IV contrast	May be appropriate	Strong	○ ○ mSv	○ ○ mSv [ped]	5	5	0	1	1	4	3	8	0	0	0	
		References	Study Quality													
		21 (22268201)	4													
		25 (22527159)	2													
		28 (15205479)	3													
		27 (26894926)	3													
		22 (32570294)	Good													
		26 (29719307)	3													
MRI pelvis without IV contrast	May be appropriate	Expert Consensus	○ ○ mSv	○ ○ mSv [ped]	4	4	3	2	1	5	3	0	0	0	0	
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	4	3	4	3	0	0	0	0	0	
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼☼ 10-30 mSv	☼☼☼☼☼ 10-30 mSv [ped]	3	3	4	3	5	0	1	0	1	0	0	
CT pelvis with IV contrast	Usually not appropriate	Expert Consensus	☼☼☼ 1-10 mSv	☼☼☼☼ 3-10 mSv [ped]	3	3	2	6	6	3	0	0	0	0	0	

		46 (14665888)		4													
		47 (20627280)		3													
		45 (29869102)		3													
		44 (28097379)		3													
		43 (27511366)		3													
		42 (28471619)		3													
CT abdomen and pelvis with IV contrast	May be appropriate	Limited	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	4	4	0	1	0	15	0	1	0	0	0		
		References		Study Quality													
		37 (17709829)		3													
		38 (31760283)		4													
CT abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	2	2	6	2	2	2	1	1	0	0	0		
CT pelvis with IV contrast	Usually not appropriate	Expert Consensus	☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	2	2	6	2	1	4	1	0	0	0	0		
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	☹☹☹☹ 10-30 mSv	☹☹☹☹☹ 10-30 mSv [ped]	1	1	11	1	2	0	0	0	0	0	0		
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	☹☹☹☹ 1-10 mSv	☹☹☹☹ 3-10 mSv [ped]	1	1	9	1	3	0	1	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	11	0	2	0	1	0	0	0	0		
MRI abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	0 0 mSv	0 0 mSv [ped]	1	1	8	3	2	0	1	0	0	0	0		
		References		Study Quality													
		39 (21178041)		4													

Variant 4: Acute pelvic pain in the reproductive age group. Nongynecological etiology suspected, β -hCG negative (either urine or serum). 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	1	4	9
		References		Study Quality											
		54 (27318889)		2											
		56 (22533576)		1											
		55 (20959365)		2											
		50 (16928974)		M											
		57 (30048324)		4											
		53 (31483140)		3											
		52 (33474985)		3											
		51 (32406773)		3											
US abdomen and pelvis transabdominal	Usually appropriate	Strong	○ ○ mSv	○ ○ mSv [ped]	8	8	0	0	0	0	0	2	5	3	4
		References		Study Quality											
		66 (27203288)		3											
		50 (16928974)		M											
		69 (17373690)		2											
		71 (25781382)		4											
		73 (26177650)		3											
		72 (26279392)		4											
		70 (27154825)		3											
		67 (33038600)		4											
		68 (27503383)		3											
CT abdomen and pelvis without IV contrast	Usually appropriate	Strong	⊕⊕⊕ 1-10 mSv	⊕⊕⊕⊕ 3-10 mSv [ped]	7	7	0	0	1	1	1	4	4	3	0
		References		Study Quality											
		58 (17180324)		2											

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.