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, \(\beta \)-hCG positive (either serum or urine). Initial imaging.

P 1	Appropriateness	COF	A L L DDI	D I DDI	D .:	3.5.11			F	inal	Tabu	latio	ns		
Procedure	Category	SOE	Adults RRI	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US pelvis transabdominal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	2	2	10
		References		Study	Quality										
		21 (24901772)			4										
		20 (-3195244)			4										
US pelvis transvaginal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	1	0	13
		References		Study	Quality										
		18 (24658951)			3										
		28 (19035545)			3										
		25 (3292977)			4										
		16 (7509494)			3										
		27 (21252743)			3										
		21 (24901772)			4										
		22 (23613077)			4										
		26 (9356647)			4										
US duplex Doppler adnexa	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	1	1	4	8
		References		Study	Quality										
		18 (24658951)			3	9 9 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1									

						1									
		16 (7509494)			3										
		14 (30693977)			4				1	1		1	1		
MRI pelvis without IV contrast	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	3	3	3	3	3	5	3	0	0	0	0
		References		Study	Quality										
		11 (28668435)			4										
		12 (29713741)			4										
		13 (29023142)			3										
MRI abdomen and pelvis without IV contrast	Usuall approp	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	Usuall approp	Limited	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	1	1	10	1	3	0	0	0	0	0	0
		References		Study	Quality										
		8 (24660723)			4										
CT abdomen and pelvis without IV contrast	Usuall approp	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	Usuall approp	Expert Consensus	ଡ⊕ଡଡ 10-30 mSv		1	1	12	0	2	0	0	0	0	0	0
CT pelvis with IV contrast	Usuall approp	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	Usuall approp	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	Usuall approp	Expert Consensus	���� 10-30 mSv	9	1	1	13	0	1	0	0	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usuall approp	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	Usuall approp	• .	Limited	O 0 mSv	,	O 0 mSv [ped]	1	1	8	2	2	1	1	0	0	0	0	
			References			Study	Quality											
			8 (24660723)				4											
			9 (25035091)				3											

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

D 1	Appropriateness	COF	A L L DDI	D I DDI	D (1	37.11			F	inal	Tabı	ılatio	ns		
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US duplex Doppler pelvis	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	1	2	11
		References		Study	Quality										
		50 (11309174)			3										
		46 (19670236)			3										
		48 (23980225)			4										
		49 (20586041)			3										
		34 (32570294)		G	Good					_					
US pelvis transabdominal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	3	1	10
		References		Study	Quality							•			
		20 (-3195244)			4										
US pelvis transvaginal	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	0	1	0	13
		References		Study	Quality										
		54 (9697286)			3										
		50 (11309174)			3										
		51 (23503942)			2										
		46 (19670236)			3										
		31 (22268201)			4										

		57 (17947378)			3										
		34 (32570294)		C	Good										
		20 (-3195244)			4										
		41 (29719307)			3										
		56 (18242924)			4				1	1					
CT abdomen and pelvis with IV contrast	May approp	Moderate	��� 1-10 mSv	9999 3- 10 mSv [ped]	5	5	0	0	1	4	5	7	0	0	0
		References		Study	Quality										
		38 (26719159)			3										
		31 (22268201)			4										
		34 (32570294)		G	Good										
		35 (17996605)			4										
MRI pelvis without and with IV contrast	May approp	Strong	O 0 mSv	O 0 mSv [ped]	5	5	0	1	1	4	3	8	0	0	0
		References		Study	Quality										
		31 (22268201)			4										
		40 (22527159)			2										
		45 (15205479)			3										
		44 (26894926)			3										
		34 (32570294)		C	Good										
	1	41 (29719307)			3										
MRI pelvis without IV contrast	May approp	Expert Consensus	O 0 mSv	O 0 mSv [ped]	4	4	3	2	1	5	3	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually approp	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 approp	Expert Consensus	୫୫୫୫ 10-30 mSv	⊕⊕⊕⊕⊕ 10-30 mSv [ped]	3	3	4	3	5	0	1	0	1	0	0
CT pelvis with IV contrast	Usually approp	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	3	3	2	6	6	3	0	0	0	0	0

MRI abdomen and pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	3	3	5	2	2	5	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]	3	3	3	4	7	3	0	0	0	0	0
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv	���� 3- 10 mSv [ped]	1	1	8	3	3	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	8	2	3	1	0	0	0	0	0

Variant 3: Acute pelvic pain in the reproductive age group. Nongynecological etiology suspected, \(\beta \)-hCG positive (either urine or serum). Initial imaging.

	Appropriateness	gg-							F	inal '	Tabu	latio	ns		
Procedure	Category	SOE	Adults RR	L Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9
US abdomen and pelvis transabdominal	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	9	9	0	0	0	0	0	1	2	3	8
		References		Study	y Quality										
		81 (27554180)			3										
		65 (25291255)			3										
		62 (21178041)			4										
		80 (27925040)			4										
US pelvis transvaginal	Usually appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	8	8	1	0	0	0	1	0	2	4	6
US duplex Doppler adnexa	Usually appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	0	3	10	4
MRI abdomen and pelvis without IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	0	2	0	4	1	3	4	3	0
		References	Study	y Quality											
		65 (25291255)		3											
		66 (16505393)			3										

			1												
		76 (14665888)			4										
		77 (20627280)			3										
		73 (29869102)			3										
		72 (28097379)			3										
		69 (27511366)			3										
		68 (28471619)			3				ı	ı					
CT abdomen and pelvis with IV contrast	May approp	Limited	��� 1-10 mSv	���� 3- 10 mSv [ped]	4	4	0	1	0	15	0	1	0	0	0
		References		Study	Quality										
		59 (17709829)			3										
		61 (31760283)			4										
CT abdomen and pelvis without IV contrast	Usuall approp	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	Usuall: approp	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	Usuall approp	Expert Consensus	ଡଡ଼େଡ 10-30 mSv	⊕⊕⊕⊕⊕ 0 10-30 mSv [ped]	1	1	11	1	2	0	0	0	0	0	0
CT pelvis without IV contrast	Usuall approp	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	Usuall approp	Expert Consensus	���� 10-30 mSv	0	1	1	11	0	2	0	1	0	0	0	0
MRI abdomen and pelvis without and with IV contrast	Usuall approp	Limited	O 0 mSv	O 0 mSv [ped]	1	1	8	3	2	0	1	0	0	0	0
		References		Study	Quality										
		62 (21178041)			4										

Variant 4: Acute pelvic pain in the reproductive age group. Nongynecological etiology suspected, ß-hCG negative (either urine or serum). Initial imaging.

ъ 1	Appropriateness	COF	A L II DDI	D I DDI	D 4	3.7.11									
Procedure	Category	SOE	Adults RRL	Peds RRL	Rating	Median	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										
		87 (27318889)			2										
		91 (22533576)			1										
		89 (20959365)			2										
		82 (16928974)			M										
		94 (30048324)			4										
		86 (31483140)			3										
		84 (33474985)			3										
		83 (32406773)			3				1	1	1	1			
US abdomen and pelvis transabdominal	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	2	5	3	4
		References		Study	Quality										
		109 (27203288))		3										
		82 (16928974)			M										
		114 (17373690))		2										
		117 (25781382))		4										
		120 (26177650))		3										
		119 (26279392)			4										
		116 (27154825)			3										
		111 (33038600)			4										
		112 (27503383))		3			ı	ı	1	1	1			
CT abdomen and pelvis without IV contrast	Usually appropriate	Strong	999 1-10 mSv	���� 3- 10 mSv [ped]	7	7	0	0	1	1	1	4	4	3	0
		References		Study	Quality										
		95 (17180324)			2										

			1												
		102 (18647908)			M										
		103 (17377025)			2										
		100 (16372698))		2										
		98 (29675722)			3		_		1	1		1			
US duplex Doppler pelvis	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	7	7	0	0	1	0	1	2	8	0	2
		References		Study	Quality										
		122 (27063853))		3										
US pelvis transvaginal	Usually appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	7	7	0	0	1	0	0	4	5	5	2
MRI abdomen and pelvis without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	O 0 mSv	O 0 mSv [ped]	5	5	1	3	3	2	3	4	1	0	0
		References		Study	Quality										
		105 (24272981))		2										
		73 (29869102)			3										
		104 (31420704))		3										
MRI abdomen and pelvis without IV contrast	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	2	3	0	3	4	2	0	0	0
		References		Study	Quality										
		108 (23290346))		2										
CT pelvis with IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	3	3	3	5	6	1	0	2	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	����� 10-30 mSv [ped]	2	2	5	4	0	1	3	0	0	1	0
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	≎≎≎ 1-10 mSv	���� 3- 10 mSv [ped]	2	2	5	3	2	1	1	2	0	0	0
CT pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv	���� 3- 10 mSv [ped]	2	2	6	6	2	0	0	0	0	0	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.