American College of Radiology ACR Appropriateness Criteria®

Acute Hip Pain-Suspected Fracture

Variant 1: Acute hip pain. Fall or minor trauma. Suspect fracture. Initial imaging.

	Appropr	ateness	COF	4 1 1/ 55		1 DDI		3.5 11			F	inal '	Tabu	latio	ns		
Procedure	Categ	gory	SOE Adults RR		L Peds RRL		Rating	Median	1	2	3	4	5	6	7	8	9
Radiography hip	Usua approp	ılly oriate	Strong	��� 1-10 mSv)		9	9	0	0	0	0	0	0	1	3	10
			References			Study	Quality										
			26 (26015154)		2												
			15 (25187593)				4										
			16 (24434365)		4 4												
			17 (23787985)														
			19 (23365546)		2												
			18 (22495203)		3												
			20 (18963720)				4										
			22 (15269019)				4										
			21 (15805330)				2										
			24 (15910835)				3										
			23 (20308510)				3										
			25 (19651835)				4			1							
Radiography pelvis	Usua approp	ılly oriate	Limited	�� 0.1-1m		● 0.03- 0.3 mSv [ped]	9	9	0	0	0	0	0	0	2	3	9
			References		Study Quality												
			28 (26432694)				4										
			31 (24368044)		4												

		30	(21874573)			4										
		29	(15027916)			4										
		27	(7568834)			4										
		21	(15805330)			2										
Radiography pelvis and hips	Usually appropria	date L	imited	��� 1-10 mSv	���� 3- 10 mSv [ped]	9	9	1	0	0	0	0	0	0	0	13
		I	References		Stud	y Quality										
		28	(26432694)			4										
		31	(24368044)			4										
		30	(21874573)			4										
		29	(15027916)			4										
		27	(7568834)			4										
		21	(15805330)			2										
US hip	Usually n appropria		imited	O 0 mSv	O 0 mSv [ped]	1	1	13	0	1	0	0	0	0	0	0
		I	References		Stud	y Quality										
		36	(19854958)			2										
CT pelvis and hips without IV contrast	Usually n appropria		imited	��� 1-10 mSv		1	1	9	0	1	0	2	1	1	0	0
		I	References		Stud	y Quality										
		35	(27365082)			3										
		34	(26838948)			3										
CT pelvis and hips with IV contrast	Usually n appropria		imited	��� 1-10 mSv		1	1	11	1	1	0	0	1	0	0	0
		I	References		Stud	y Quality										
		35	(27365082)			3										
		34	(26838948)			3										
CT pelvis and hips without and with IV contrast	Usually n appropria		imited	���� 10-3 mSv	0	1	1	12	1	0	0	0	1	0	0	0
			References		G(1	y Quality		·								

	,																
			35 (27365082)				3										
			34 (26838948)			3											
MRI pelvis and affected hip without IV contrast	Usually approp		Limited	O 0 mSv		O 0 mSv [ped]	1	1	10	1	1	0	0	1	0	1	0
		References		Study Quality													
			21 (15805330)		2												
MRI pelvis and affected hip without and with IV contrast	Usually approp		Limited	O 0 mSv		O 0 mSv [ped]	1	1	11	1	2	0	0	0	0	0	0
			References		Study Quality												
			32 (24338938)		3												
			21 (15805330)		2												
			33 (8424346)				4										
Bone scan hips	Usually approp		Expert Consensus	��� 1-10 mSv)		1	1	13	0	0	0	0	1	0	0	0

Variant 2: Acute hip pain. Fall or minor trauma. Negative radiographs. Suspect fracture. Next imaging study.

22 (15269019)

21 (15805330)

23 (20308510)

n 1	Appropriatene	ateness	COF	4 1 14 DD		D I DDI	D 41	3.6.11		Final Tabulations									
Procedure	Categ		SOE	Adults RR	aL	Peds RRL	Rating	Median	1	2	3	4	5	6	7	8	9		
MRI pelvis and affected hip without IV contrast	Usua approp	.*	Strong	O 0 mSv	<i>'</i>	O 0 mSv [ped]	9	9	0	0	0	0	0	0	0	4	10		
			References			Study Quality													
			28 (26432694)	28 (26432694)			4												
			30 (21874573)		4														
			42 (12942204)			3													
			43 (22623574)		2														
			29 (15027916)				4												

4

2

		37 (8475292)			3										
		39 (18806133))		3										
		38 (9659484)			4										
		40 (10189478)			4										
		41 (16129752))		4										
		10 (19450802))		4										
CT pelvis and hips without IV contrast	Usually appropriate	Strong	��� 1-10 mSv		7	7	1	0	0	0	1	2	4	1	5
		References		Study	y Quality										
		34 (26838948)			3										
		26 (26015154))		2										
		49 (24985783))		2										
		46 (24780791))		3										
		48 (22459594))		3										
		24 (15910835))		3										
		39 (18806133)			3										
	47 (22173818)				3										
US hip	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	1	1	12	1	1	0	0	0	0	0	0
		References		Stud	y Quality		•			•				•	
		36 (19854958))		2										
CT pelvis and hips with IV contrast	Usually not appropriate	Expert Consensus	��� 1-10 mSv		1	1	14	0	0	0	1	0	0	0	0
CT pelvis and hips without and with IV contrast	Usually not appropriate	Expert Consensus	���� 10-30 mSv		1	1	15	0	0	0	0	0	0	0	0
MRI pelvis and affected hip without and with IV contrast	Usually not appropriate	Strong	O 0 mSv	O 0 mSv [ped]	1	1	9	0	1	2	1	0	1	0	0
	References			Study					•				•		
	28 (26432694)				4										
	30 (21874573)			4											
42 (12942204)				3											

43 (22623574)	2
29 (15027916)	4
22 (15269019)	4
21 (15805330)	2
23 (20308510)	3
37 (8475292)	3
39 (18806133)	3
38 (9659484)	4
40 (10189478)	4
41 (16129752)	4
10 (19450802)	4
44 (11764362)	3
45 (19266195)	3

Bone scan hips Usually appropri	Lamited	��� 1-10 mSv	1	1	15	0	0	0	0	0	0	0	0	
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References	Study Quality
51 (9592902)	4
50 (8444918)	3

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.