American College of Radiology
ACR Appropriateness Criteria®

Developmental Dysplasia of the Hip-Child

Variant 1: Child, younger than 4 weeks of age. Equivocal physical examination or risk factors for DDH. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
US hips	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	4	3	1	0	0	0	0	0

References	Study Quality
18 (1979376)	3
5 (16510634)	4
3 (25940606)	4
59 (2119119)	4

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
Radiography pelvis	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	1	1	12	3	0	1	0	0	0	0	0

Variant 2: Child, between 4 weeks to 4 months of age. Equivocal physical examination or risk factors for DDH. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
US hips	Usually appropriate	Limited	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	0	3	2	4	7

References	Study Quality
62 (26270760)	3
63 (25539254)	2

		61 (16129755)			3											
Radiography pelvis	Usually not appropriate	Expert Consensus	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	2	2	8	4	3	0	0	1	0	0	0

Variant 3: Child, younger than 4 months of age. Physical findings of DDH. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US hips	Usually appropriate	Moderate	O 0 mSv	O 0 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0

References	Study Quality
37 (12504396)	1
7 (25628293)	3

Radiography pelvis	Usually not appropriate	Limited	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0

References	Study Quality
54 (25264556)	2

Variant 4: Child, between 4 to 6 months of age. Concern for DDH. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Radiography pelvis	Usually appropriate	Strong	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	7	7	0	0	0	0	1	0	9	5	1

References	Study Quality
1 (10742345)	4
21 (8682834)	4
54 (25264556)	2
65 (3524161)	3

References	Study Quality
70 (26090988)	3
56 (1527117)	3
58 (17847926)	3
57 (9259095)	4

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
US hips	May be appropriate	Limited	O 0 mSv	O 0 mSv [ped]	4	4	2	1	5	3	3	1	1	0	0

References	Study Quality
20 (25656273)	4
58 (17847926)	3

Variant 5: Child, older than 6 months of age. Concern for DDH. Initial imaging.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
Radiography pelvis	Usually appropriate	Limited	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0

References	Study Quality
1 (10742345)	4
71 (25333906)	3
72 (22410971)	3

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
US hips	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0

Variant 6: Child, younger than 6 months of age. Known diagnosis of DDH, nonoperative surveillance imaging in harness.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations 1	2	3	4	5	6	7	8	9
US hips	Usually appropriate	Strong	O 0 mSv	O 0 mSv [ped]	8	8	0	0	0	0	1	0	1	7	6

References	Study Quality
74 (12198463)	2
73 (26047647)	2
75 (8496228)	3
76 (12002504)	1
77 (12604946)	2
78 (9597592)	2
79 (15076582)	3
80 (8543600)	2
81 (11371819)	3

Radiography pelvis	Usually not appropriate	Moderate	☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	3	3	2	5	4	1	2	1	1	0	0

References	Study Quality
59 (2119119)	4
76 (12002504)	1
82 (19571898)	2

CT pelvis with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	1	1	12	3	0	0	1	0	0	0	0
CT pelvis without IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	1	1	10	5	0	0	0	1	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	3	0	0	0	0	0	0	0
MRI pelvis without IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	13	2	0	0	0	0	0	0	0
MRI pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	9	2	2	2	0	1	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.**