American College of Radiology  
ACR Appropriateness Criteria®  

Imaging after Total Hip Arthroplasty

Variant 1: Follow-up of the asymptomatic patient with a total hip arthroplasty.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiography hip</td>
<td>Usually appropriate</td>
<td></td>
<td>☢☢☢ 1-10 mSv</td>
<td>9</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>CT hip without IV contrast</td>
<td>Usually not appropriate</td>
<td></td>
<td>☢☢☢ 1-10 mSv</td>
<td>1</td>
<td>n/a</td>
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<tr>
<td>CT hip without and with IV contrast</td>
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<td>☢☢☢ 1-10 mSv</td>
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<td>O 0 mSv [ped]</td>
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Variant 2: Total hip arthroplasty, evaluating suspected component malposition.
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<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
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**Variant 3:** Evaluating patients with a painful primary total hip arthroplasty: infection not excluded.

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<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
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**Variant 4:** Evaluating patients with a painful primary total hip arthroplasty: suspect aseptic loosening (infection excluded).
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<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
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<tr>
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<td>Variant 5: Evaluating suspected particle disease (aggressive granulomatous disease, infection excluded).</td>
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### Table: Radiological Procedures for Hip Evaluation

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<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
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**Variant 6:** Evaluating patients with a painful primary metal-on-metal total hip arthroplasty or surface replacement: evaluate for aseptic lymphocyte-dominated vasculitis-associated lesion.

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**Table continued:**

<table>
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<tr>
<td>X-ray arthrography hip</td>
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**Variant 7:** Total hip arthroplasty, trochanteric pain; suspect abductor injury or trochanteric bursitis.

**Variant 8:** Total hip arthroplasty; suspect iliopsoas bursitis or tendinitis.
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>Adults RRL</th>
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<th>Rating</th>
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<tr>
<td>Radiography hip</td>
<td>Usually appropriate</td>
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<tr>
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**Variant 9:** Total hip arthroplasty, suspect nerve damage.
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<th>SOE</th>
<th>Adults RRL</th>
<th>Peds RRL</th>
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Variant 10: Total hip arthroplasty, evaluate heterotopic bone.

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<tbody>
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<tr>
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<td></td>
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</table>
CT hip with IV contrast

- Usually not appropriate
- ☢☢☢ 1-10 mSv
- Rating: 1
- Median: n/a
- Final Tabulations: 0 0 0 0 0 0 0 0 0

MRI hip without and with IV contrast

- Usually not appropriate
- O 0 mSv
- Median: n/a
- Final Tabulations: 0 0 0 0 0 0 0 0 0

**Variant 11: Total hip arthroplasty, suspect periprosthetic fracture.**

<table>
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<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
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<th>Rating</th>
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<td>O 0 mSv</td>
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<tr>
<td>US hip</td>
<td>Usually not appropriate</td>
<td></td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
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</table>
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](http://www.acr.org/ac).