### Soft-Tissue Masses

**Variant 1:** Soft-tissue mass. Superficial or palpable. Initial imaging study.

<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 area of interest</td>
<td>Usually appropriate</td>
<td>Varies</td>
<td>Varies</td>
<td>9</td>
<td>9</td>
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<tr>
<td>US area of interest</td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>7</td>
<td>7</td>
<td>0 0 0 1 0 1 6 3 1</td>
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<tr>
<td>MRI area of interest without IV contrast</td>
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<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>5</td>
<td>1</td>
<td>7 0 2 0 1 0 1 1 0</td>
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<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
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<td>1</td>
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<td>FDG-PET/CT area of interest</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>CT area of interest without IV contrast</td>
<td>Usually not appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 1 7 1 2 1 0 0 0</td>
</tr>
<tr>
<td>CT area of interest without and with IV contrast</td>
<td>Usually not appropriate</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CT area of interest with IV contrast</td>
<td>Usually not appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 1 8 2 0 1 0 1 0</td>
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</tbody>
</table>

**Variant 2:** Soft-tissue mass. Nonsuperficial (deep) or nonspecific clinical assessment or located in an area difficult to adequately evaluate with radiographs (flank, paraspinal region, groin, or deep soft tissues of the hands and feet.). Initial imaging study.
<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 area of interest</td>
<td>Usually appropriate</td>
<td>Varies</td>
<td>Varies</td>
<td></td>
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<td>9</td>
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<tr>
<td>US area of interest</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>0 0 2 4 3 2 0 0 0</td>
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<tr>
<td>CT area of interest without and with IV contrast</td>
<td>May be appropriate</td>
<td>Varies</td>
<td>Varies</td>
<td></td>
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<td>2 1 2 0 4 0 3 0 0</td>
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<tr>
<td>CT area of interest without IV contrast</td>
<td>May be appropriate</td>
<td>Varies</td>
<td>Varies</td>
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<td>4</td>
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<tr>
<td>MRI area of interest without and with IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>0 0 1 3 1 3 0 0 0</td>
</tr>
<tr>
<td>MRI area of interest without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>0 0 1 2 5 1 0 0 0</td>
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<tr>
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<td>10-30 mSv</td>
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<td>1</td>
<td>10 0 0 0 1 0 1 0 0</td>
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<tr>
<td>CT area of interest with IV contrast</td>
<td>Usually not appropriate</td>
<td>Varies</td>
<td>Varies</td>
<td></td>
<td>1</td>
<td>1</td>
<td>7 0 2 1 1 0 1 0 0</td>
</tr>
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</table>

**Variant 3:** Soft-tissue mass. Nondiagnostic initial evaluation (ultrasound and/or radiograph). Next imaging study.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
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<th>Adults RRL</th>
<th>Peds RRL</th>
<th>Rating</th>
<th>Median</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI area of interest without and with IV contrast</td>
<td>Usually appropriate</td>
<td>O 0 mSv</td>
<td>O 0 mSv [ped]</td>
<td>9</td>
<td>9</td>
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</tr>
<tr>
<td>MRI area of interest without IV contrast</td>
<td>Usually appropriate</td>
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<td>O 0 mSv [ped]</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>0 0 0 2 0 2 2 6 6</td>
</tr>
</tbody>
</table>
CT area of interest with IV contrast | May be appropriate (Disagreement) | Varies | Varies | 5 | 5 | 2 | 1 | 0 | 0 | 5 | 1 | 2 | 1 | 0
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
CT area of interest without IV contrast | May be appropriate | Varies | Varies | 4 | 4 | 3 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 0
CT area of interest without and with IV contrast | Usually not appropriate | Varies | Varies | 1 | 1 | 7 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0
FDG-PET/CT area of interest | Usually not appropriate | ☢☢☢☢ 10-30 mSv | 1 | 1 | 7 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 0

**Variant 4:** Soft-tissue mass. Nondiagnostic initial evaluation. Presenting with spontaneous hemorrhage or suspicion of vascular mass. Next imaging study.

<table>
<thead>
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<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>
</table>
| MRI area of interest without and with IV contrast | Usually appropriate | O 0 mSv | O 0 mSv [ped] | 9 | 9 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 7
| CT area of interest without and with IV contrast | Usually appropriate | Varies | Varies | 7 | 7 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 1 | 2
| CTA area of interest with IV contrast | May be appropriate | Varies | Varies | 6 | 6 | 0 | 0 | 0 | 1 | 5 | 0 | 4 | 2 | 0
| MRA area of interest with IV contrast | May be appropriate | O 0 mSv | O 0 mSv [ped] | 6 | 6 | 0 | 0 | 1 | 0 | 3 | 4 | 4 | 0 | 0
| MRI area of interest without IV contrast | May be appropriate (Disagreement) | O 0 mSv | O 0 mSv [ped] | 5 | 5 | 2 | 0 | 0 | 3 | 5 | 2 | 0 | 0 | 0
| CT area of interest without IV contrast | May be appropriate | Varies | Varies | 4 | 4 | 3 | 0 | 3 | 4 | 2 | 0 | 0 | 0 | 0
| CT area of interest with IV contrast | May be appropriate | Varies | Varies | 4 | 4 | 4 | 0 | 0 | 3 | 4 | 0 | 1 | 0 | 0
<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>
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<td></td>
<td>Varies</td>
<td>Varies</td>
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<td>9</td>
<td>0 1 0 0 1 1 2 1 6</td>
</tr>
<tr>
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<td></td>
<td>Varies</td>
<td>Varies</td>
<td>8</td>
<td>8</td>
<td>1 0 0 2 2 1 0 6</td>
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<td>Varies</td>
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<td>FDG-PET/CT area of interest</td>
<td>May be appropriate</td>
<td></td>
<td>⚠️ино️ 10-30 mSv</td>
<td></td>
<td>5</td>
<td>5</td>
<td>2 0 0 2 8 0 0 0 0</td>
</tr>
</tbody>
</table>

**Variant 5:** Soft-tissue mass. Nondiagnostic initial evaluation. Patient non-MRI compatible or with metal limiting MR evaluation. Next imaging study.
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).