### Acute Trauma to the Foot

**Variant 1:**
Adult or child >5 years old. Acute injury to the foot; positive Ottawa Rules, suspicious for fracture. First study.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>SOE</th>
<th>RRL</th>
<th>Panel Rating</th>
<th>Group Median Rating</th>
<th>Final Tabulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT foot with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>CT foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>CT foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>MRI foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>MRI foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>US foot</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td>X-ray foot</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
</tbody>
</table>
### Variant 2:
Adult or child >5 years old. Acute injury to the foot; does not meet the Ottawa Rules; no focal tenderness in the foot or palpable abnormality of the foot on physical examination; able to walk; neurologically intact (including no peripheral neuropathy). First study.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness</th>
<th>Radiation Dose [mSv]</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT foot with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRI foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRI foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>US foot</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>X-ray foot</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>1 n/a 0 0 0 0 0 0 0 0 0</td>
</tr>
</tbody>
</table>

### Variant 3:
Adult or child >5 years old. Acute injury to the foot; does not meet the Ottawa Rules; patient is not neurologically intact and/or has a peripheral neuropathy that involves the feet. First study.
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness</th>
<th>Radiation Dose</th>
<th>Study Quality</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CT foot with IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>CT foot without IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>CT foot without and with IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>MRI foot without IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>MRI foot without and with IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>US foot</strong></td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>X-ray foot</strong></td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Variant 4:**
Adult or child >5 years old. Acute injury to the foot; does not meet the Ottawa Rules; patient has polytrauma. First study.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness</th>
<th>Radiation Dose</th>
<th>Study Quality</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CT foot with IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>CT foot without IV contrast</strong></td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>References</td>
<td>Study Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>MRI foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>MRI foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>US foot</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>X-ray foot</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Variant 5:**

Adult or child >5 years old. Acute injury to the foot; does not meet the Ottawa Rules; physical examination is concerning for a Lisfranc injury. First study.
<table>
<thead>
<tr>
<th>Study</th>
<th>Appropriateness</th>
<th>Radiation Dose (mSv) [ped]</th>
<th>1</th>
<th>n/a</th>
<th>0 0 0 0 0 0 0 0 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>0 0 mSv O 0 mSv</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>MRI foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>0 0 mSv O 0 mSv</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>US foot</td>
<td>Usually not appropriate</td>
<td>0 0 mSv O 0 mSv</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>X-ray foot</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv</td>
<td>9</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>X-ray foot with weight bearing</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv</td>
<td>7</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
</tbody>
</table>

**Variant 6:** Adult or child >5 years old. Acute injury to the foot; physical examination is concerning for a Lisfranc injury. Radiographs are normal and patient is not able to tolerate a weight-bearing radiographic view. Next imaging study.

<table>
<thead>
<tr>
<th>Study</th>
<th>Appropriateness</th>
<th>Radiation Dose (mSv) [ped]</th>
<th>1</th>
<th>n/a</th>
<th>0 0 0 0 0 0 0 0 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT foot with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT foot without IV contrast</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv</td>
<td>9</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>CT foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv</td>
<td>1</td>
<td>n/a</td>
<td>0 0 0 0 0 0 0 0 0</td>
</tr>
</tbody>
</table>
### MRI foot without IV contrast

**Usualy appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mSv 0 mSv [ped]</td>
<td>9</td>
</tr>
</tbody>
</table>

### MRI foot without and with IV contrast

**Usually not appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mSv 0 mSv [ped]</td>
<td>1</td>
</tr>
</tbody>
</table>

### US foot

**Usually not appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mSv 0 mSv [ped]</td>
<td>1</td>
</tr>
</tbody>
</table>

### CT foot with IV contrast

**Usually not appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
</tr>
</tbody>
</table>

### CT foot without IV contrast

**May be appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>5</td>
</tr>
</tbody>
</table>

### CT foot without and with IV contrast

**Usually not appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
</tr>
</tbody>
</table>

### MRI foot without IV contrast

**Usualy appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mSv 0 mSv [ped]</td>
<td>9</td>
</tr>
</tbody>
</table>

### MRI foot without and with IV contrast

**Usually not appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mSv 0 mSv [ped]</td>
<td>1</td>
</tr>
</tbody>
</table>

### US foot

**May be appropriate**

<table>
<thead>
<tr>
<th>Patient Dose</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 mSv 0 mSv [ped]</td>
<td>5</td>
</tr>
</tbody>
</table>

### Variant 7:

Adult or child >5 years old. Acute injury to the foot; physical examination is concerning for an acute tendinous rupture or dislocation in the foot; radiographs are negative. Next imaging study.
**Variant 8:**

**Adult or child >5 years old. Metatarsal-phalangeal joint injury. Suspect plantar plate injury. First study.**

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Safety Recommendation</th>
<th>References</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT foot with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03-0.3 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>CT foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03-0.3 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>CT foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03-0.3 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>MRI foot without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>5</td>
</tr>
<tr>
<td>MRI foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>US foot</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
</tr>
<tr>
<td>X-ray foot</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>9</td>
</tr>
<tr>
<td>Fluoroscopy foot</td>
<td>May be appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>5</td>
</tr>
<tr>
<td>X-ray foot forced dorsiflexion lateral</td>
<td>May be appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>5</td>
</tr>
</tbody>
</table>
### Variant 9:

**Adult or child >5 years old. Acute injury to the foot; physical examination is concerning for penetrating trauma with a foreign body in the soft tissues. First study.**

<table>
<thead>
<tr>
<th>Study Type</th>
<th>Appropriateness</th>
<th>Effective Dose (mSv)</th>
<th>References</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT foot with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt; 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>CT foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt; 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>CT foot without and with IV</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt; 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>MRI foot without IV contrast</td>
<td>Usually not appropriate</td>
<td>0 0 mSv 0 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>MRI foot without and with IV</td>
<td>Usually not appropriate</td>
<td>0 0 mSv 0 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>US foot</td>
<td>Usually appropriate</td>
<td>0 0 mSv 0 0 mSv [ped]</td>
<td>7</td>
<td>n/a</td>
</tr>
<tr>
<td>X-ray foot</td>
<td>Usually appropriate</td>
<td>☢ &lt;0.1 mSv ☢ &lt;0.03 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### Variant 10:

**Adult or child >5 years old. Acute injury to the foot; physical examination is concerning for penetrating trauma with a foreign body in the soft tissues. Radiographs of the foot are negative. Next best study.**
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness</th>
<th>Dose (mSv)</th>
<th>References</th>
<th>Study Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT foot with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>CT foot without IV contrast</td>
<td>May be appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>CT foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>☢ &lt;0.1 mSv ☢☢ 0.03-0.3 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>MRI foot without IV contrast</td>
<td>May be appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>5</td>
<td>n/a</td>
</tr>
<tr>
<td>MRI foot without and with IV contrast</td>
<td>Usually not appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>1</td>
<td>n/a</td>
</tr>
<tr>
<td>US foot</td>
<td>Usually appropriate</td>
<td>O 0 mSv O 0 mSv [ped]</td>
<td>9</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Please refer to the supporting documentation for a more complete discussion of the concepts and their definitions below.

**Final Tabulations:** A histogram of the number of panel members who rated the recommendation as noted in the column heading (i.e., 1, 2, 3, …etc.)

**Disagree:** The variation of the individual ratings from the median rating indicates panel disagreement on the final recommendation.

**References:** Lists the references associated with the recommendation.

**SQ:** Study Quality (1, 2, 3, 4, Good M or Inadequate M) of the references listed.

**RRL:** Information on the Relative Radiation Level (RRL) designations can be found.