Routine Extremity - (2/14/2013) CTDI: ~20 mGy per acquisition

Used for evaluation of:
- Humerus
- Forearm
- Femur
- Knee
- Tib/Fib

PT Preparation: Place anatomy of interest in true anatomical position (Please note reason for protocol changes)

Billing:
1. CT Upper/Lower Extremity of concern without contrast, with contrast, or without and with contrast
2. IV Contrast if used

Setup:
1. AP and lateral scouts from above/below through above/below the anatomy of interest

DFOV:
1. Focused DFOV ~10 to 15cm; appropriate for anatomy of interest.

Scan Parameters:
1. IV Contrast:
   a. at the discretion of the Radiologist
   b. 80-150 ml of 300 mg/dl non-ionic contrast @ 2 ml/sec
2. 60 second delay
3. Scan from above above/below through above/below the anatomy of interest

Reconstructions:
1. Recon 1 is an axial bone data set
2. Recon 2 is for soft tissue evaluation
3. Recon 3 is for bone MPR’s
   - MPR’s should be reconstructed at 2 mm x 2 mm (2.5 x 2.5)
4. IF 3D’s are requested an additional reconstruction with a thin increment with a 50% overlap and a smooth kernel/algorith will be needed.
   (i.e. Recon 3 with a smooth kernel/algorith)

PACS Series: Topogram, Axial Bone, Axial ST, Coronal, Sagittal, 3D (VRT) is needed
## HI-Res Extremity

<table>
<thead>
<tr>
<th>Scanner</th>
<th>Phillips 6</th>
<th>Emotion 16</th>
<th>Sensation 20</th>
<th>Definition 64</th>
<th>Sensation 16</th>
<th>GE 4</th>
<th>GE 16</th>
<th>GE 64</th>
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<tbody>
<tr>
<td><strong>Scan Type</strong></td>
<td>Spiral</td>
<td>Spiral</td>
<td>Spiral</td>
<td>Spiral</td>
<td>Spiral</td>
<td>Spiral</td>
<td>Spiral</td>
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<tr>
<td><strong>Rotation Time (sec)</strong></td>
<td>0.75</td>
<td>1</td>
<td>1</td>
<td>1.0</td>
<td>1</td>
<td>0.8</td>
<td>0.8</td>
<td>0.6</td>
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<tr>
<td><strong>Detector Configuration</strong></td>
<td>6 x 1.5</td>
<td>16 x 0.6</td>
<td>16 x 0.75</td>
<td>20 x 0.6</td>
<td>64 x 0.6</td>
<td>4 x 1.25</td>
<td>16 x 0.625</td>
<td>32 x 0.625</td>
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<td><strong>Pitch</strong></td>
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<td>.75</td>
<td>1</td>
<td>0.5</td>
<td>1</td>
<td>1.5</td>
<td>.938</td>
<td>.969</td>
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<tr>
<td><strong>Speed(mm/rot)</strong></td>
<td>15</td>
<td>9.37</td>
<td>19.37</td>
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<tr>
<td><strong>Scan FOV</strong></td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
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<tr>
<td><strong>Auto mA range</strong></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>80-300</td>
<td>80-300</td>
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<tr>
<td><strong>Noise Index</strong></td>
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<td>n/a</td>
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<tr>
<td><strong>mAs</strong></td>
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<tr>
<td><strong>eff.mAs (care dose)</strong></td>
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<td>175</td>
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<td><strong>kVp</strong></td>
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<td>120</td>
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<tr>
<td><strong>Manual mA</strong></td>
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### Reconstruction Parameters

**Recon 1 for bone**

<table>
<thead>
<tr>
<th>DFOV</th>
<th>Algorithm/ Kernel</th>
<th>DFOV</th>
<th>Algorithm/ Kernel</th>
<th>WW/WL</th>
<th>Slice thickness (mm)</th>
<th>Slice Increment (mm)</th>
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<tr>
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<td>D</td>
<td>B70</td>
<td>B70</td>
<td>B70</td>
<td>2</td>
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**Recon 2 for soft tissue**

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<th>DFOV</th>
<th>Algorithm/ Kernel</th>
<th>WW/WC</th>
<th>Slice thickness (mm)</th>
<th>Slice Increment (mm)</th>
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</thead>
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<td>C</td>
<td>B41</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

**Recon 3 for 2x2 (2.5 x 2.5) MPR’s**

<table>
<thead>
<tr>
<th>DFOV</th>
<th>Algorithm/ Kernel</th>
<th>WW/WC</th>
<th>Slice thickness (mm)</th>
<th>Slice Increment (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>B70</td>
<td>0.75</td>
<td>0.5</td>
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*Protocol designed to minimize the amount of radiation while maximizing the yield and produce diagnostically acceptable image quality*
**Humerus**

**PT Preparation:** Place anatomy of interest in true anatomical position (Please note reason for protocol changes)

**Setup:**
1. AP scout to include distal entire humerus.

**DFOV:**
1. Focused DFOV appropriate for anatomy of interest

**Scan range:** To above Acromion through elbow joint. *(Limited studies must include at least one joint)*
Forearm

PT Preparation: Place anatomy of interest in true anatomical position
(Please note reason for protocol changes)

Setup:
1. AP scout from to include entire forearm

DFOV:
1. Focused DFOV appropriate for anatomy of interest

Scan range- To include above elbow joint through wrist.
(Limited studies must include at least one joint)
**Femur**

**PT Preparation:** Place anatomy of interest in true anatomical position
(Please note reason for protocol changes)

**Setup:**
1. AP scout to include entire femur

**DFOV:**
1. Focused DFOV appropriate for anatomy of interest

**Scan range**- To include above Acetabulum through knee joint.  
(Limited studies must include at least one joint)
**Knee**

**PT Preparation:** Place anatomy of interest in true anatomical position  
*(Please note reason for protocol changes)*

**Setup:**
1. AP scout to include entire knee

**DFOV:**
1. Focused DFOV appropriate for anatomy of interest

**Knee Arthrogram:**

*Scan range to include affected knee*

*If a patient presents with either a partial or total joint replacement it is necessary to provide a pre and a post arthrogram CT scan.*

Scan range - To include distal femur through  
Proximal tib/fib
Tibia/Fibula

PT Preparation: Place anatomy of interest in true anatomical position 
(Please note reason for protocol changes)

Setup:
AP scout to include entire lower leg

DFOV:
1. Focused DFOV appropriate for anatomy of interest

Scan range- To include above knee joint through ankle joint. 
(Limited studies must include at least one joint)