Guidelines for MR Imaging of Sports Injuries

European Society of Skeletal Radiology
Sports Sub-committee

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Abbreviations and clarifications

- Ax = axial
- Cor = coronal
- Sag = sagittal
- FOV = field of view
- PD = proton density
- TE = time to echo in milliseconds
- FS = fat suppressed
- Int = intermediate

Int FS: this is a fat suppressed sequence with a long TR and a TE between that of a traditional PD (e.g. TE= 10-20) and a traditional T2 (e.g. TE=80-100). The advantage of this sequence is that the TE is short enough to maintain sufficient signal for visualisation of the anatomy (like a PD) yet long enough to be more fluid sensitive (like a T2)

- For STIR sequence, TI (inversion time) should be 140-150 at 1.5T
Wrist

- Patient in prone position with elevated arm (‘Superman position’)
- Wrist at center of scanner, use dedicated wrist coil or small surface coil
- Coronals oriented between radial and ulnar styloid process
- Sagittals are oriented 90° to coronals
- Axials include volume 2-3 cm proximal of radiocarpal joint to 1 cm distal of the carpometacarpal joints
## Wrist

<table>
<thead>
<tr>
<th></th>
<th>FOV</th>
<th>Slice</th>
<th>TE</th>
<th>Matrix (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cor T1</td>
<td>8-10 cm</td>
<td>2-3 mm</td>
<td>min.</td>
<td>240x320</td>
</tr>
<tr>
<td>Cor PD FS</td>
<td>8-10 cm</td>
<td>2-3 mm</td>
<td>10-20</td>
<td>240x320</td>
</tr>
<tr>
<td>Cor TrueFisp 3D</td>
<td>10 cm</td>
<td>1.5-2 mm</td>
<td>5</td>
<td>320x450</td>
</tr>
<tr>
<td>Sag T1</td>
<td>10 cm</td>
<td>2-3 mm</td>
<td>min.</td>
<td>240x320</td>
</tr>
<tr>
<td>Ax PD FS</td>
<td>10 cm</td>
<td>2-3 mm</td>
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</table>
Wrist

Cor T1  Cor PD FS  Cor True Fisp 3D

Sag T1  Ax PD FS  Sag PD FS