Spine in Spondyloarthritis

MRI Protocols of the ESSR Arthritis Subcommittee

Ax= axial
CE= contrast enhanced
FOV= field of view
Sag= sagittal
STIR= Short Tau Inversion Recovery
TE= echo time (ms)
TR= repetition time (ms)
MRI scan

- Patient in supine position
- Spine coil
- Two plane localizer
  - Frontal
  - Sagittal
- Lumbar and thoracic spine are mandatory, preferably the whole spine should be examined
Recommended sequences

Midline  Lateral  Midline  Lateral
Sag T1   Sag STIR
Recommended sequences

- Midline Sag T1
- Midline Sag STIR
- Lateral Sag T1
- Lateral Sag STIR
Optional sequence

„Scout“ / Planning Ax T2

Ax T2
## MRI Protocol

| Field-of-view: | Adjusted for the spine, optimizing the examined area  
Mandatory sagittal images: For the whole spine  
2 or 3 spinal blocks with overlap to be fused, depending on the scanner  
Optional axial T2: FOV adjusted to the area of interest, 20-32 cm |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Slice thickness:</td>
<td>3 mm preferable (maximal 4 mm)</td>
</tr>
<tr>
<td>Interslice distance (gap)</td>
<td>10%</td>
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</table>
## MRI Protocol

<table>
<thead>
<tr>
<th>Recommended sequences</th>
<th>TR (ms)</th>
<th>TE (ms)</th>
<th>TI (ms)</th>
<th>Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sag T1</td>
<td>510-550</td>
<td>8-20</td>
<td>-</td>
<td>424 x 300</td>
</tr>
<tr>
<td>Sag STIR</td>
<td>2500-6000</td>
<td>70-100</td>
<td>150 (1.5T) 180-220 (3T)</td>
<td>424 x 300</td>
</tr>
<tr>
<td>Ax T2 (optional)</td>
<td>2200-5000</td>
<td>90-120</td>
<td>-</td>
<td>320 x 166</td>
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</table>
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