Cervical Spine in Rheumatoid Arthritis

MRI Protocols of the ESSR Arthritis Subcommittee
Ax = axial
CE = contrast enhanced
Cor = coronal
FOV = field of view
FS = fat suppressed
Sag = sagittal
TE = echo time (ms)
TR = repetition time (ms)
MRI scan

- Patient positioning: Head first supine
- Coils: Head and neck
- Immobilize the head with cushions
**Localizer**

*Axial plane:* cover the entire cervical spine

*Sagittal plane:* from the right to the left transverse process

*Coronal plane:* cover the entire vertebral column
Recommended sequences

Sag T1

Sag STIR
Recommended sequences

Ax T2 FS

Cor T1
Recommended sequences

AX T1 FS CE
# MRI protocol

<table>
<thead>
<tr>
<th>Recommended Sequences#</th>
<th>FOV (mm)</th>
<th>Slice thickness (mm)</th>
<th>TR (ms)</th>
<th>TE (ms)</th>
<th>Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sag T1</td>
<td>280</td>
<td>3</td>
<td>4500</td>
<td>92</td>
<td>288x512</td>
</tr>
<tr>
<td>Sag STIR</td>
<td>300</td>
<td>3</td>
<td>3500</td>
<td>70</td>
<td>224x320</td>
</tr>
<tr>
<td>Ax T1</td>
<td>240</td>
<td>3</td>
<td>649</td>
<td>10</td>
<td>288x384</td>
</tr>
<tr>
<td>Ax T2 FS&lt;sup&gt;a&lt;/sup&gt;</td>
<td>160</td>
<td>3</td>
<td>568</td>
<td>19</td>
<td>224x320</td>
</tr>
<tr>
<td>Sag CE T1 FS&lt;sup&gt;*&lt;/sup&gt;</td>
<td>300</td>
<td>3</td>
<td>600</td>
<td>11</td>
<td>224x320</td>
</tr>
<tr>
<td>Ax CE T1 FS&lt;sup&gt;*&lt;/sup&gt;</td>
<td>240</td>
<td>3</td>
<td>700</td>
<td>10</td>
<td>288x384</td>
</tr>
</tbody>
</table>

#Coronal T1 in cases with atlantoaxial and/or atlanto-occipital changes suggesting lateral or rotatory subluxation

<sup>a</sup>Axial T2 FS of the atlantoaxial, atlanto-occipital and, when needed, subaxial region

<sup>*</sup>Postcontrast sagittal and axial T1 (FS) for clear delineation of active inflammation
Contributors

• Jans Lennart, Belgium
• Iwona Sudoł-Szopińska, Poland
• Mitja Rupreht, Slovenia

Project Coordinators

• Chiara Giraudo, Italy
• Hannes Platzgummer, Austria