

Spine in Spondyloarthritis

MRI Protocols of the ESSR Arthritis Subcommittee



Recommendations of the ESSR Arthritis Subcommittee for the Use of Magnetic Resonance Imaging in Musculoskeletal Rheumatic Diseases. Semin Musculoskelet Radiol 2015;19:396–411

Acronyms

Ax= axial

CE= contrast enhanced

FOV= field of view

Sag= sagittal

STIR= Short Tau Inversion Recovery

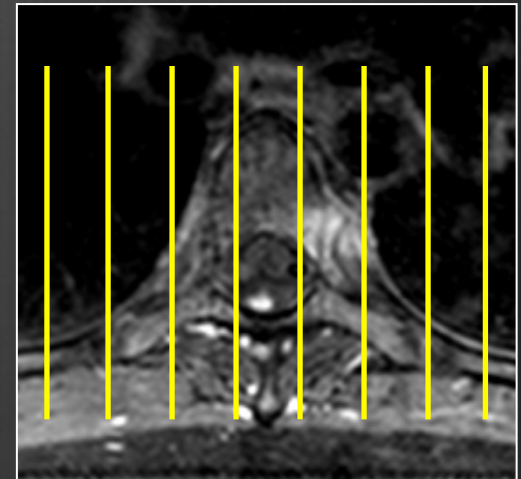
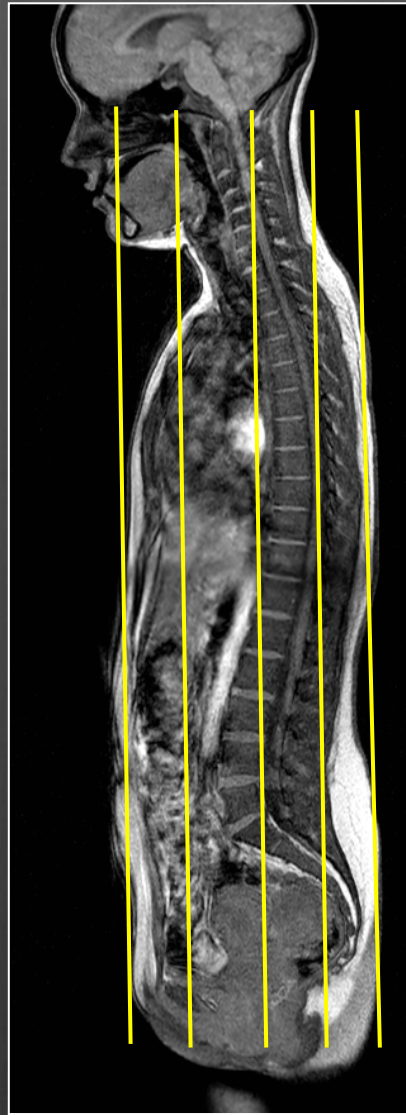
TE= echo time (ms)

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

Localizer



Recommended sequences

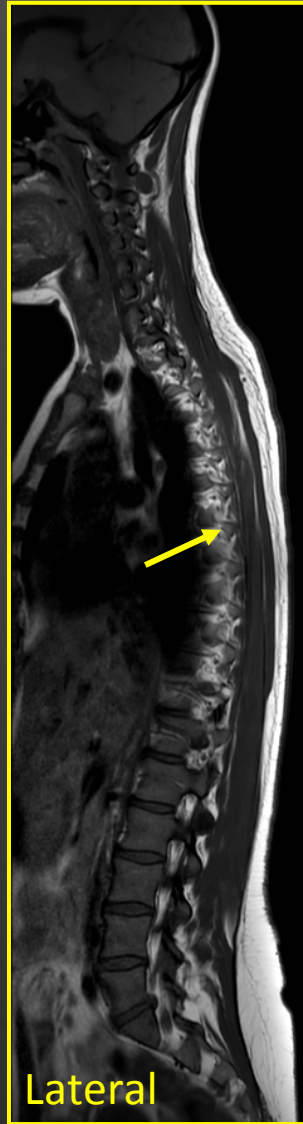


Sag T1

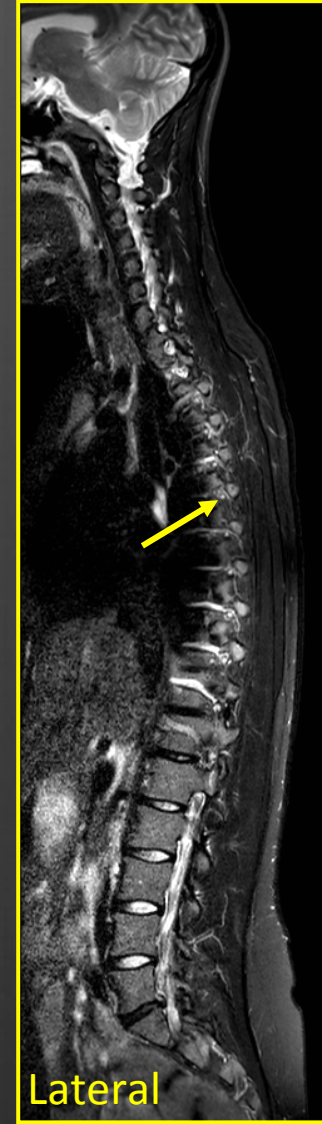


Sag STIR

Recommended sequences



Sag T1



Sag STIR

Optional sequence



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
Slice thickness:	3 mm preferable (maximal 4 mm)
Interslice distance (gap)	10%

MRI Protocol

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

Contributors

- Anne Grethe Jurik, Denmark
- Claudia Weidekamm, Austria
- Monique Reijnierse, The Netherlands
- Winston Rennie, United Kingdom

Project Coordinators

- Chiara Giraudo, Italy
- Hannes Platzgummer, Austria