

Ankle

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

Cor= coronal

FOV= field of view

FS= fat suppressed

PD= proton density

Sag= sagittal

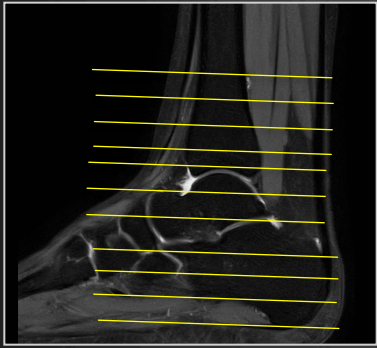
TE= echo time (ms)

TR= repetition time (ms)

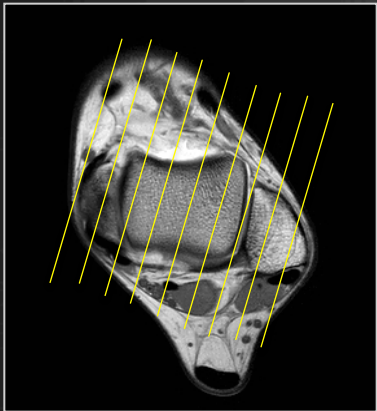
MRI scan

- Patient in supine position with feet first
- Dedicated coil
- Foot close to neutral position, avoiding any plantar or dorsiflexion

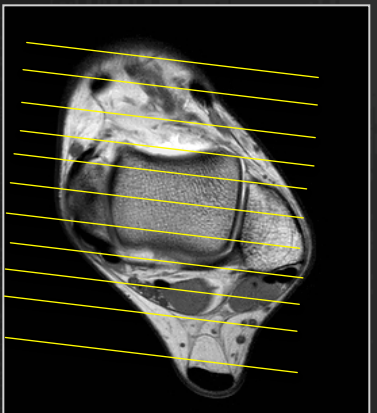
Localizer



Axial plane: 90° alignment to the tibia



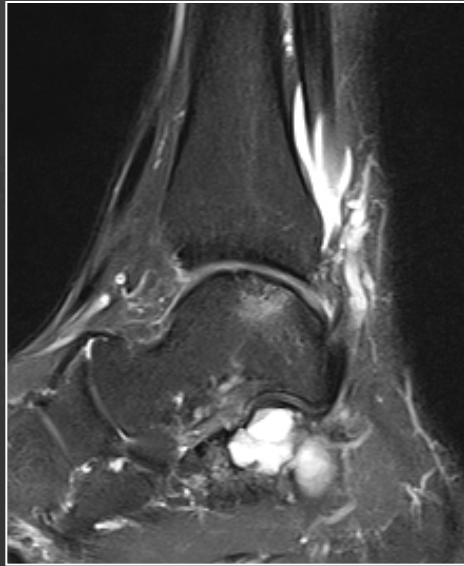
Sagittal plane: 90° alignment to the intermalleolar axis; the skin surrounding the hindfoot has to be included



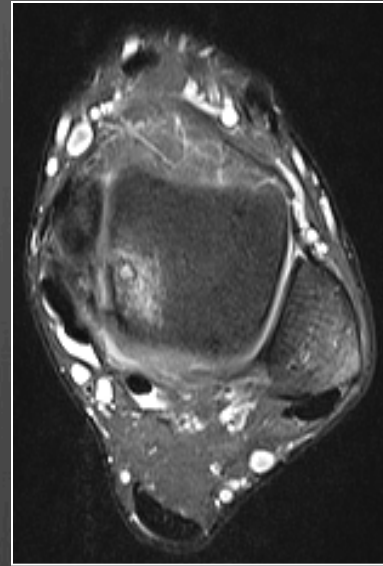
Coronal plane: aligned to the intermalleolar axis

Recommended sequences

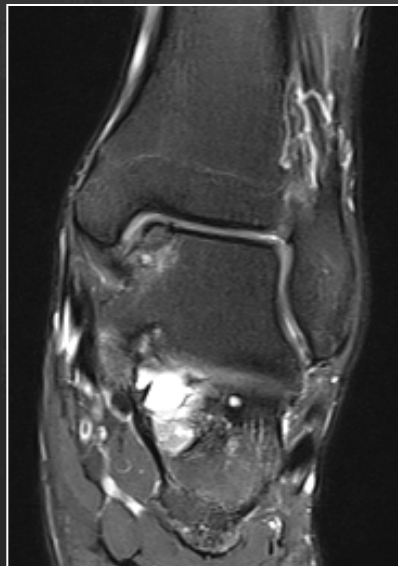
Sag PD FS



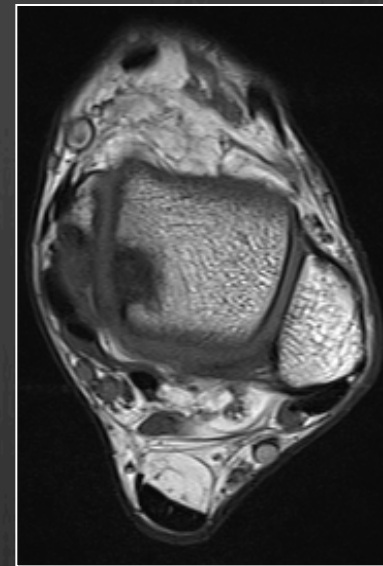
Ax PD FS



Cor PD FS



Ax T1



MRI protocol

Recommended Sequences	FOV (mm)	Slice thickness (mm)	TR (ms)	TE (ms)	Matrix
Sag PD FS	180	3	80-100	10-20	320 x 288
Cor PD FS	160	3	80-100	10-20	256x230
Ax PD FS	160	3	80-100	10-20	256x218
Ax T1	160	3	500	20	256x18
CE-Sag T1 FS*	180	3	650-750	18	320x288
CE Ax T1 FS*	160	3	650-750	18	256x218

*if optimal assessment of synovitis/osteitis is needed

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