

X-ray best practice:
X-ray available prior to US, CT or MRI MSK study within the last 3 months
X-ray available prior to US, CT or MRI osteomyelitis study within the last 1-2 weeks
MRI best practice:
Arthrograms of all joints, and any imaging of small joints (finger, thumb, hand, and wrist) should be performed on a 3T magnet. The exception is presence of hardware. If unclear, call rad
For imaging parameters, please follow ACR's criteria at a minimum (https://accreditationsupport.acr.org/support/solutions/articles/11000061021-mri-exam-specific-parameters-msk-module-revised-3-5-2025-). mrimaster.com is also acceptable (https://mrimaster.com)
Practical tips:
MSK "mass" protocols should be used for true masses. Ask patient where "mass" is. Check EPIC provider note for the word "mass". If unclear, call rad
Shoulder hardware protocol should be used for presence of fixation hardware. Not for history of rotator cuff repair, labral repair, biceps repair. Please check prior x-ray/CT/MRI. If unclear, call MSK rad
For arthrograms and small joints, GRE-type sequences (me2d/MEDIC/SPGR/T2*/DESS) should be 3D, 1 mm slice thickness. If 3D acquisition turns out poor/heavy artifact, add on a 2D.
Axial T1 fat saturation pre-contrast should always be performed for tumor/mass indication. Not required for infection indication.
For scan planes of the foot, the agreed upon terminology is relative to the whole patient (not the foot's long axis). Axial = long axis. Coronal = short axis.
For ankle tendon indication, oblique scan plane is perpendicular to the long axis of the peroneal tendons using sagittal scan as reference. (see figures 1-7 https://radsources.us/atypical-scan-angles-musculoskeletal-mri/)
For athletic pubalgia indication, oblique axial and coronal scan planes are relative to the pubic symphysis on a conventional midline sagittal sequence (see athletic pubalgia figures 14-17, https://radsources.us/atypical-scan-angles-musculoskeletal-mri/)
For pectoralis protocol, oblique coronal and sagittal scan planes are relative to long axis of the pectoralis major muscle (see pectoralis figures 32-34 https://radsources.us/atypical-scan-angles-musculoskeletal-mri/)
In general, hardware protocols should be used for extensive hardware involving the majority of the area of clinical interest. If it's unclear how the hardware will affect the area of clinical interest, call MSK rad. For example, fixation hardware at the distal radius for MRI hand for arthritis evaluation should be routine protocol. Fixation hardware of entire femur for evaluation of metastatic disease should be hardware protocol.

For MRI knee with poor fat saturation, use DIXON to troubleshoot

For finger, hand, wrist, forearm, and elbow MRI, position pt either in supine or prone position, whichever is the natural sleeping position for pt. If pt is supine, arm is down by side with hand supinated. If pt is prone, arm up in superman position with hand pronated. Use sandbags or tape to immobilize. Adjust FOV to exclude the chest, abdomen or head. (<https://mrimaster.com/plan-elbow/>, <https://www.pearl-technology.ch/en/blog/prone-positioning-in-radiology>)