

How to apply MAR (Metal Artifact Reduction)

Metal Artifact Reduction Software (MARS) is excellent for assessing the soft tissues near metal. However, the MAR technique may cause artefactual changes in the hardware or adjacent bone that can mimic hardware fractures and loosening. Therefore, our physicians do not interpret the bone kernel with MAR technique.

If your scanner has MARS, we recommend using it for soft tissue reconstructions only. If you create a MARS image, we recommend also reconstructing a non-MAR image to allow radiologist to better discern MAR induced artifacts. If your scanner doesn't have MAR, we do not recommend increasing mAs or using GSI-MAR.

Here is a table outlining our current guidance:

	Thin soft tissue recon	Thin bone recon	Thick bone recon	Additional Thin soft tissue with MAR recon	Bone reformats	Soft tissue reformats
T & L Spines	No MAR	No MAR	No MAR	MAR	No MAR	MAR
MSK	No MAR	No MAR	N/A	MAR	No MAR	MAR
Neuro Head/Neck	No MAR	No MAR	No MAR	MAR	No MAR	MAR

Common types of metal that require MAR include: dental fillings (amalgam) for head/neck cases, metal hardware for spines/MSK.

Coverage when metal is present:

Follow the scan ranges prescribed in the protocol or ordered by the radiologist. You ""do not need to cover the entire metal prosthesis"" unless ordered by the radiologist for MAR to work. Please just be generous (add a few cm) above and below the area of interest when using MAR.