

MR SIM: Prone Breast

8/21/2017 EP

Patient Preparation:

- Have patient change into gown.
- Confirm GFR > 60 within 45 days.
- **Check alpha cradle/vac-fix for bore and coil connector clearance (trim if necessary)**
- If patient consented for research (e.g., pre-op clinical trial) place IV. Fill injector.

Equipment (Coils, Immobilization Devices, etc):

- 2" blue Styrofoam risers
- 6" white Styrofoam risers
- G9 fiberglass breast bridge
- Patient-specific immobilization device (vac-fix or alpha cradle)
- (1) Extremity flex (surface) coil
- (1) Self-locking Nylon strap

Setup and Landmark:

1. Remove everything (all coils and pads) off the MRI table.
2. Arrange 2" blue Styrofoam risers on MRI table. Position extremity flex coil.
3. Arrange 6" white Styrofoam risers on top of blue Styrofoam risers.
4. Arrange G9 fiberglass breast bridge and vac-fix or alpha cradle.
5. Configure coil in "U" shape and secure with strap.
6. Setup patient head-first prone. Secure patient's upper extremities in the vac-fix or alpha cradle.
7. Call Radiation Therapists (x53809) to verify patient setup.
8. Landmark over center of diseased breast.

Protocol:

- USER → MR SIM → BREAST → PRONE

Scans:

- LOC
- AX T1 (~5:30):
 - Prescribe axial volume with FOV **rotated tangentially** to minimize cardiac and respiratory motion. Confirm **R/L phase encode** direction.
- AX STIR (4:30):
 - Copy AX T1 prescription.
- SAG T2(F) (~4:00):
 - Prescribe through diseased breast.

v--- Additional scans if patient consented for research/trial ---v

- COR DWI (~4:30):
 - Confirm frequency adjustment.
- AX T1 Mapping (0:07 x 5 flip angles):
 - All prescriptions must match
- AX DCE (7:00):
 - Copy AX T1 Mapping prescription.
 - Inject a single dose of MultiHance (0.05 mmol/kg) at 3 mL/sec followed by a 10 mL saline flush injected at the same rate after 1 minute of starting scan.

Post-Scanning:

- **Distortion-correct all images** (in the Browser window, select a series and then go to Evaluation → 3D Distortion Correction. Note: After correction the corrected images will have a "_DIS3D" suffix).
- Send the distortion-corrected images (i.e., those with a "_DIS3D" suffix) to **MIM Clinical** and **PACS**.

