1.5T BREAST DIAGNOSTIC
(Updated August 26, 2016)

T1 3D Axial, STIR Axial

Average Scanning Parameters:
FOV should be appropriate to the size of the patient.

2 mm slice thickness for T1 3D
4 x .8 mm slice thickness for STIR

T1 3D FS Axial: pre / post contrast x 4 (4 consecutive measurements at approximately 1:15 each)

Average Scanning Parameters:
FOV should be appropriate to the size of the patient
1.8 mm slice thickness
*Time immediate post scan to start as soon as saline flush completes.

T1 3D Axial (FS or WS) High Resolution Post Contrast

Average Scanning Parameters:
FOV should be appropriate to the size of the patient
1 mm slice thickness

When a patient has silicone implants, you may need to perform a manual pre-scan to ensure the magnet centers to the water frequency. The graph at the left shows how the signal peaks should appear on a Siemens scanner 1.5T; the values double for 3T. On a GE scanner, the water and silicone peaks will be reversed. When using a Siemens 1.5T, you may need to target the adjust volume box to the breasts to get optimal fat saturation.
If the patient is pre-menopausal, the exam should be scheduled within 7-14 days of the onset of their menstrual cycle (only with Radiologist approval or a new diagnosis of breast cancer may this rule be overlooked).

1. Patient needs to fill out a Breast MRI questionnaire in addition to routine paperwork. A very thorough history is needed.

2. Have patient place a MR Spot marker on any abnormality (palpable mass, biopsy area, surgical scar, etc.).

3. Do not allow the patient to position themselves. A female tech, paramedic, or assistant should visually confirm proper patient positioning (very important in order to achieve good fat saturation).

4. Do not position the patient with the gown going down into the breast coil. The gown should be worn with the opening to the front of the patient and the gown should be pulled to the side when positioning the patient.

5. Uniform fat saturation is extremely important. Use the Adjust Volume Box (if necessary) and Manual Prescan in order to achieve the best possible fat saturation.

6. Using the Dynamic Evaluation/Slope function under the Evaluation Tab in either the Browser or Viewer, subtract the pre contrast T1 3D FS Axial series from each post contrast T1 3D FS Axial series.

7. Using the original T1 3D FS Axial post contrast 2-minute series, create a set of Sagittal reformatted 3x0mm images with the following name “Post 2 Sag MPR”.

8. Send all series to Synapse with breast orientated supine.

9. All prior exams will need to be located and placed in PACS.

10. When completing the patient in IDX, be sure to enter a thorough history in the notes.

11. Scan the following documents into MI Radiologist Paperwork: Breast Form, PI - Contrast Form, any additional paperwork.

Technologist’s notes for Breast exams are to include the following information with every exam:

1. History of prior biopsy- state if no biopsy was performed, and list details if the patient has had a biopsy.

2. When was the biopsy performed?

3. Which breast was the biopsy performed on?

4. What kind of biopsy? Needle (sono)? Excision (surgery)?

It is also necessary to explain the significance of all markers placed on the patient. A number of markers continue to be noted on some exams without correlating history for their placement.