WHO benefits most from Breast MRI?

- **Women at high risk for developing breast cancer.**
  - Gene mutation carriers (BRCA 1 & 2)
  - 1st degree relative of BRCA carrier, but untested
  - 20-25% lifetime risk due to family history
  - Radiation to chest between ages 10-30 years
- **Women with a metastatic axillary node adenocarcinoma with an unknown primary.**
  - Rare <1% breast cancers
  - Typically from ipsilateral breast and not identified on clinical breast exam or mammography
- **Follow up during chemotherapy: used to monitor neoadjuvant chemotherapy response on locally advanced breast cancer.**
- **For women as contralateral screening with newly diagnosed breast cancer.**
  - MRI may detect synchronous incidental occult breast cancer
  - Most studies report rates of 4-6%
- **To perform pre-operative staging for breast carcinoma.**
  - Determine extent of tumor (avoid positive surgical margins)
  - Determine lymph node, chest wall and pectoralis muscle involvement
  - Multifocal (within the same quadrant) vs multicentric (within different quadrants)
  - MRI is more sensitive than mammography and ultrasound in determining the extent of known carcinoma
  - Median prevalence of detection of additional foci of cancer in the ipsilateral breast is 16%
  - Especially important for young patients, in patients with dense or moderately dense breasts and patients with infiltrating lobular carcinoma (difficult to detect on mammography)
- **Women with a personal history of breast cancer.**
  - Patients are at an elevated risk and early detection of second cancers is known to decrease mortality
  - Ordered at the discretion of the clinician and patient in young patients, dense breasts mammographically occult cancer or suspected recurrence
- **Problem solving for mammography and ultrasound equivocal cases.**
- **Women with positive margins following an initial attempt at breast conservation to detect residual disease.**

WHY evaluate the breasts with MRI?

- To detect breast cancer that is occult on mammography and ultrasound.
- MRI is the most sensitive modality for breast cancer detection with a specificity of 94 to nearly 100 percent.
- Mammography is less sensitive, but more specific for breast cancer.
- MRI visualizes tumor angiogenesis with preferential uptake of Gadolinium by breast carcinoma.

Breast MRI is performed at the DIS Metairie and Covington facilities
REIMBURSEMENT INFORMATION FROM SPECIFIC INSURERS

MEDICARE

- Where diagnosis is inconclusive, even after standard work-up.
- Evaluation of the postoperative patient when scar tissue cannot be differentiated from tumors.
- Women with positive axillary nodes but no known primary.
- Women with rupture of a breast implant or determination of the extent of disease in women with known malignancy prior to treatment.

UNITED HEALTHCARE

- To confirm rupture of silicone breast implants in asymptomatic patients whose screening ultrasound shows rupture.
- Asymptomatic women 3 years after the placement of silicone implants and every 2 years thereafter.
- To detect silicone implant rupture in symptomatic women whose ultrasound shows no rupture.
- To detect suspected local tumor recurrence in breast cancer patients who have undergone mastectomy and breast reconstruction with an implant or tissue flaps (rectus, latissimus dorsi, or gluteal).
- Women with new diagnosis of breast cancer.
- To detect local tumor recurrence in women with a personal history of breast cancer and scarring from prior biopsies, radiation or surgery that results in uninterpretable mammography and ultrasound.
- To detect the extent of residual cancer in the recently postoperative breast with positive pathological margins after incomplete lumpectomy when the patient still desires breast conservation and local re-excision is planned.
- To detect and stage patients with Invasive Lobular Carcinoma for tailored therapy, especially when breast conservation is being considered.
- To localize the site of primary occult breast cancer in patients with adenocarcinoma suggestive of breast cancer discovered as axillary node metastasis or distant metastasis without focal findings on physical examination or on mammography/ultrasonography.
- To evaluate women with high genetic risk of breast cancer, woman is a confirmed carrier of BRCA1 or BRCA2 gene mutations, patient has a first-degree relative who is confirmed carrier of the BRCA1 or BRCA2 gene mutation.
- Male relative with breast cancer.
- One of more relatives with either 2 breast cancers or both breast and ovarian cancer.
- History of radiation therapy to the chest between the ages of 10 and 30.

Saving women money with outpatient fees far less than hospital imaging centers

All Breast MRI Scans completed by a female registered technologist

3D Mammography • Mammography w/ CAD • Breast Ultrasound • Ultrasound

Ultrasound Guided Breast Biopsy • Breast Cyst Aspiration • Galactography

DEXA Bone Densitometry • Hysterosalpingogram • Essure® Confirmation Test

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Fax: 504-883-5364
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Fax: 985-641-2854

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AETNA

- Screening of women considered to be at high genetic risk of breast cancer because of any of the following: confirmed presence of BRCA1 or BRCA2 mutation or first degree blood relative with BRCA1 or BRCA2 or have a lifetime risk of breast cancer of 20-25% or more.

- To detect implant rupture in symptomatic women.

- To detect local tumor recurrence in breast cancer members who have undergone mastectomy and breast reconstruction with an implant.

- To assess tumor location, size and extend before/or after chemotherapy in persons with locally advanced breast cancer, for determination of eligibility for breast conservation therapy.

- Initial breast MRI to evaluate persons with newly diagnosed lobular carcinoma in situ or ductal carcinoma in situ.

- Screening mammogram or ultrasound is required first.

BLUE CROSS AND BLUE SHIELD OF LOUISIANA

- To detect breast cancer in high-risk individuals with a breast cancer genetic mutation BRCA-1 and BRCA-2 or strong family history.

- To locate an occult breast cancer with positive lymph nodes for metastatic disease and not identifiable primary breast lesion by physical examination, mammography and breast ultrasound.

- Detection of breast cancer in patients who are at high genetic risk for breast cancer.

- Detection of breast cancer in patients who have breast characteristics limiting the sensitivity of mammography (i.e. dense breasts, implants scarring after treatment for breast cancer).

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Patient Navigator Program (part of Breast Biopsy service)

Inside Addition 3D/4D Fetal Ultrasound

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HUMANA

- Before, during and/or after a course of chemotherapy to evaluate chemotherapeutic response.
- Evaluation for suspected cancer recurrence after postoperative tissue reconstruction (tissue transfer, flaps or implants).
- BRCA mutation or first degree relative of a BRCA carrier.
- Lifetime breast cancer risk of 20-25% or greater, known personal history of breast cancer, ductal carcinoma in situ, lobular carcinoma in situ, heterogeneously or extremely dense breast on mammography.
- Presurgical evaluation of breast carcinoma to assess invasion of fascia and muscle in both mastectomy and breast conservation candidates.
- History of radiation therapy to the chest between the ages of 10 and 30 years.

CIGNA

- Evaluation of suspected breast cancer following mammography, inconclusive mammography due to breast characteristics limiting the sensitivity of mammography, extremely dense breasts, implants, scarring after treatment of breast cancer.
- Confirmation of silicone gel-filled breast implant rupture when this diagnosis cannot be confirmed by mammography or breast ultrasound.
- Annual breast MRI for screening as medically necessary when performed as an adjunct to mammography in women age 25 or over at high risk for breast cancer, as having any of the following: a strong family history or genetic predisposition for breast cancer; then individual has a known BRCA mutation, a first degree relative of BRCA carrier or have a lifetime risk of 20-25% or more.

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What’s Your Diagnosis?

Patient Presentation: 48-year-old transgendered female with implant complication.

Studies Performed: MRI, Breast, bilateral, with and without contrast, and with CAD. 20 cc of gadolinium contrast was injected. Implant sequence, axial T1, T2 and sagittal T2 images were obtained with a dedicated breast coil. Pre and post contrast images were obtained for 6 minutes. Post processing was performed including motion subtraction, color parametric mapping, computer aided calculations of any tumor volumes and dimensions, 2D and 3D multiplanar reconstruction. Current study was also evaluated with a Computer Aided Detection (CAD) system.

Finding: BILATERAL RETROPECTORAL SILICONE GEL IMPLANTS ARE PRESENT. TWO BREAST IMPLANTS ARE NOTED BILATERALLY. THE ANTERIOR IMPLANTS ARE SALINE, AND INTACT. THE POSTERIOR IMPLANTS ARE SILICONE. THE RIGHT SIDED POSTERIOR IMPLANT IS INTACT. THE LEFT SIDED POSTERIOR IMPLANT SHOWS THE “LINGUINE SIGN” OF INTRACAPSULAR RUPTURE. IN ADDITION, ON THE LEFT A THICK RIND OF MINIMALLY ENHANCING SOFT TISSUE ENCIRCLES THE POSTERIOR IMPLANT. THE RIND OF TISSUE EXTENDS INTO THE LEFT AXILLARY TAIL. NO DEFINITE FREE SILICONE IS NOTED. NO SILICONE LADEN LYMPH NODES ARE SEEN.

Impression: BENIGN. LEFT POSTERIOR SILICONE IMPLANT INTRACAPSULAR RUPTURE. ALTHOUGH THE RIND OF TISSUE IS NOT AVIDLY ENHANCING, INFLAMMATORY OR REACTIVE CHANGE IS THOUGHT LIKELY. BIOPSY OF THE SOFT TISSUE MAY BE HELPFUL.

Order CPT codes 77059 and 0159T on DIS referral order

Breast MRI performed at our Women’s & Advanced Imaging Center in Metairie and at our Northshore – West facility in Covington

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Appointment Scheduling (north)  
Phone: 985-641-2390  
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Patient Presentation: 51-year-old female with palpable lump at 11:00 in right breast. Bilateral breast pain. Family history of breast cancer. Female has silicone gel implants.

Studies Performed: MRI, Breast, bilateral, with and without contrast, and with CAD. 20 cc of gadolinium contrast was injected. A vitamin E capsule was placed by the lump. Axial T1 and T2 and sagittal T2 images were obtained with a dedicated breast coil. Pre and post contrast images were obtained for 6 minutes. Post processing was performed including motion subtraction, color parametric mapping, computer aided calculations of any tumor volumes and dimensions, 2D and 3D multiplanar reconstruction. Current study was also evaluated with a Computer Aided Detection (CAD) system.

Finding: THERE IS A 1.4 CM X 1 CM X 1.5 CM OVAL MASS WITH AN IRREGULAR MARGIN IN THE RIGHT BREAST AT 11 O’CLOCK ANTERIOR DEPTH. THIS SHOWS HETEROGENOUS ENHANCEMENT AND DELAYED PERSISTENT TYPE VASCULAR ENHANCEMENT. THIS CORRELATES AS PALPATED. BY HISTORY, THE PALPABLE Lesion ON THE RIGHT HAS BEEN BIOPSIED. ALTHOUGH THE MAJORITY OF THE MASS HAS PERSISTENT TYPE ENHANCEMENT, A SMALL PORTION HAS RAPID UPTAKE RAPID WASHOUT ENHANCEMENT, A MORE CONCERNING TYPE OF ENHANCEMENT. SCATTERED SIMPLE CYSTS ARE NOTED IN BOTH BREASTS. NO OTHER FINDINGS ARE SEEN IN EITHER BREAST. NO AXILLARY ADENOPATHY IS SEEN.

Impression: SUSPICIOUS OF MALIGNANCY. A SECOND LOOK ULTRASOUND AND CONSIDERATION OF AN ULTRASOUND GUIDED BIOPSY ARE RECOMMENDED.

Order CPT codes 77059 and 0159T on DIS referral order

Breast MRI w/CAD performed at our Metairie and Covington facilities

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What’s Your Diagnosis?

**Patient Presentation:** Female left breast palpable lump with abnormal mammographic and sonographic findings with breast MRI recommended.

**Studies Performed:** Imaged on Oasis 1.2T Open MRI bilateral breast coil. Noncontrast enhanced scanning is performed through both breasts using T2 fat-saturated scans, T1 Sequences and rapid pre and post TIGRE dynamic sequences. CAD computer aided detection was applied.

**Finding:**

**RIGHT BREAST:** THERE IS A SMALL CENTRAL BREAST 8 MM ENHANCING NODULE ORIENTED IN LONG AXIS OF BREAST LOCATED 6 CM DIRECTLY BEHIND THE NIPPLE.

**LEFT BREAST:** THERE IS A LARGE LOBULATED ENHANCING MASS OF THE CENTRAL BREAST LOCATED 7.5 CM BEHIND THE NIPPLE MEASURING 3.0 X 2.8 X 2.9 CM, WITH CENTRAL NONENHANCEMENT, PRESUMED NECROSIS, RELATIVELY LOW T2 SIGNAL, WITH SOME FLUID AT ITS MARGINS AND SPICULATION OF ITS MARGINS. 4 CM ANTERIOR 1 CM SUPERIOR TO THIS ENHANCING MASS IS A SMALLER 9 MM ENHANCING NODULE WITH SIMILAR IMAGING CHARACTERISTICS. LATERAL TO THE PRINCIPAL MASS AT THE LEVEL OF ITS SUPERIOR MARGIN OF THE PRINCIPAL MASS, 7 CM FROM THE NIPPLE. ALL 3 LESIONS HAVE SUSPICIOUS ENHANCEMENT.

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Case and images courtesy of Radiology Imaging Associates at Patuxent, Prince Frederick MD

Order CPT codes 77059 and 0159T on DIS referral order
DIAGNOSTIC IMAGING SERVICES LOCATIONS AND HOURS

**Metairie (East Bank)**
4241 Veterans Memorial Boulevard, Suite 100
Metairie LA 70006

Performing Breast MRI with CAD on the Hitachi Oasis 1.2T Open MRI. Providing women with a more comfortable experience on our non-claustrophobic high field system.

Hours:
Monday – Wednesday – Friday 7:00 a.m. to 5:00 p.m.
Tuesday & Thursday 7:00 a.m. to 7:00 p.m.
Saturday 8:30 a.m. to 12:00 p.m. (except holiday weekends)

**Marrero (West Bank)**
925 Avenue C
Marrero, Louisiana 70072

Situated behind West Jefferson Hospital, next to what used to be known as Lido's Restaurant. We are one block south of the Westbank Expressway and approximately four blocks east of Barataria Boulevard.

Hours:
Monday - Friday 8:00 a.m. to 5:00 p.m.

**Slidell (North Shore – East)**
1310 Gause Boulevard
Slidell, Louisiana 70458

We are located west of Interstate 10, between Rue Rochelle and Robert Boulevard. DIS is approximately 1/2 mile east of Slidell Memorial Hospital.

Hours:
Monday - Friday 8:00 a.m. to 5:00 p.m.

**Covington (North Shore – West)**
71154 Highway 21
Covington, Louisiana 70433

Performing Breast MRI with CAD on the Siemens Magnetom 1.5T MRI. For health care referring professionals who prefer a traditional high field closed MRI for their patients.

Hours:
Monday - Friday 8:00 a.m. to 5:00 p.m.

**X-RAYS DO NOT NEED AN APPOINTMENT**

Have patients bring your referral order to the DIS location that is most convenient for them.
X-Rays can also be completed on a Saturday morning, at our Metairie center.

3T MRI • 1.5T MRI • 1.2T Open MRI • CT • Nuclear Medicine • PET/CT • Women’s Health

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