



Position Statement on the Use of Magnetic Resonance Imaging in Breast Surgical Oncology

(This document replaces the previous official statement of May 6, 2007 -- The Use of Magnetic Resonance Imaging in Breast Oncology.)

Magnetic Resonance Imaging (MRI) of the breast has been used increasingly for the detection and evaluation of breast cancer since its approval by the FDA over 15 years ago. Multiple studies comparing the results of breast MRI with pathology show that breast MRI is sensitive (identifying at least 95% of invasive cancers), but that specificity varies widely (30-90%), with frequent false-positive results due to evolving technology and variable interpretation. For this reason, breast MRI may help guide the breast evaluation in selected patient populations as indicated below. However, breast MRI findings should not be substituted for histological tissue diagnosis, especially when the patient and her surgeon are considering breast conservation. The decision to use breast MRI as an adjunct to the evaluation of patients with breast cancer should be made by the physician and the patient after joint consideration of the benefits as well as the risks, such as frequent false-positive results. Well-prepared (informed) patients suffer less distress when false-positive findings necessitate additional biopsies or prolong the pre-surgical workup.

Breast MRI requires a high field system (minimum 1.5 Tesla magnet), a dedicated breast surface coil (breast images taken in a body scanner are inadequate) and intravenous gadolinium contrast. Breast MRI should be performed by a dedicated team, including radiologists experienced in mammography, ultrasound (US) and MRI and in image-guided biopsy techniques. MRI-guided percutaneous biopsy availability is essential for centers performing breast MRI even though MRI lesions that are confirmed on second look US are amenable to US-core biopsy. For lesions not amenable to US or MRI guided biopsy, MRI-guided wire localization should be performed.

Breast MRI should not replace mammography for yearly screening examination in the general population. No prospective randomized trials to date have shown that the utilization of breast MRI results in a reduction in re-excision for margin control for breast conservation treatment or an improvement in overall survival. The long term data for breast MRI is continuing to evolve as clinical experience with this imaging modality continues.

Based on a review of current studies, the American Society of Breast Surgeons supports the addition of breast MRI to physical examination and mammography in the following settings:

1. Axillary node metastasis from a suspected occult primary breast cancer. Breast MRI can aid the treating physician in locating the primary tumor.
2. For determining the extent of disease or presence of multi-focal or multi-centric tumor or the presence of contralateral disease, in patients with a proven breast cancer and associated conventional imaging difficulties; such as those with invasive lobular carcinoma, or when dense breast tissue precludes an accurate mammographic and physical assessment.
3. To assess response to neoadjuvant endocrine therapy or chemotherapy in select patients post-treatment MRI can help identify those patients who are candidates for breast conservation, and assist in determining the extent of resection required.
4. As part of annual breast cancer screening, in addition to mammography, for patients at very high risk for developing breast cancer, especially those with suspected or proven deleterious mutations of BRCA 1 or 2, patients with a history of radiation therapy to the chest wall and others with a 20% or greater lifetime risk of breast cancer.
5. For the further evaluation of suspicious clinical findings or imaging results that remain indeterminate after complete mammographic and sonographic evaluations combined with a thorough physical examination. Since the negative predictive value of MRI is unknown, if lesions meet the criteria for biopsy by other modalities, it may be preferable to biopsy the lesion rather than obtain an MRI.

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