

RADIOLOGY ALERT

March 30, 2007

New Indications for Breast MRI

Recently, the American Cancer Society updated its guidelines for Breast Cancer Screening to include new indications for breast MRI. At the same time, the New England Journal of Medicine published a prospective study involving 969 women with a recent diagnosis of unilateral breast cancer who had no abnormalities in the contralateral breast by mammography and by clinical exam. All of these patients underwent MRI of the breast and the MRI detected clinically and mammographically occult breast cancer in the contralateral breast in 30 out of 969 women (3.1%). The sensitivity of MRI in the contralateral breast was 91% and its specificity was 88%. The negative predictive value of MRI was 99%.

The American Cancer Society is now recommending annual breast MRI on women who are carriers of either of two (2) breast cancer gene mutations known as BRCA1 and BRCA2. The recommendation is also to perform annual breast MRI on any first-degree relative of a carrier who has not undergone screening for the two (2) breast cancer genes. This would include: the mother, daughter, or sister.

In addition, annual breast MRI is recommended for women who have undergone radiotherapy to the chest for Hodgkin's disease.

The purpose of this alert is to summarize the current indications for performing breast MRI:

- 1) Assess for multicentric disease in a patient with known breast carcinoma.
- 2) Assess for suspected chest wall invasion.
- 3) Assess response to chemotherapy.
- 4) Assess for residual cancer following surgery.
- 5) Assess for recurrent cancer following treatment.
- 6) Axillary adenopathy in a patient with an unknown primary.
- 7) Perform annual MRI in women who have undergone radiotherapy to the chest for Hodgkin's disease.
- 8) Perform annual breast MRI on all women who are carriers of the breast cancer genes BRCA1 and BRCA2. Perform annual screening breast MRI on all first-degree relatives of these women who have not undergone testing for these two (2) breast cancer genes.
- 9) Perform breast MRI as additional evaluation of suspicious clinical findings or imaging results that remain indeterminate after complete mammographic and sonographic evaluation.

With respect to the article in the New England Journal of Medicine, there is no official position from the American College of Radiology or the American Cancer Society regarding detection of breast carcinoma in the contralateral breast of women with recently diagnosed breast carcinoma.

With regard to reimbursement by insurance companies, it is assumed that the insurance companies and Medicare will adopt the American Cancer Society recommendations for performing breast MRI.