

Breast MRI in the early detection of breast cancer

Florida Cancer Institute

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Fifty percent of women with an inherited predisposition to breast cancer (mutations in the BRCA1 or BRCA2 genes) will develop breast cancer before the age of 50. Mammography has helped reduce mortality rates from breast cancer, but women between the ages 40 and 49 have denser breasts than postmenopausal women, and the sensitivity of mammography decreases with increased density of breast tissue.

For these patients, MRI of the breast may be an effective tool in early detection.

The July 29, 2004, *New England Journal of Medicine* reported on a trial in which breast MRI was performed on 1,909 women with increased risk for breast cancer based on familial or genetic predisposition. The women's mean age was 40 years; 75% of the women were premenopausal. Documented mutations in the BRCA1 or BRCA2 genes were present in 358 participants.

From November 1, 1999, to October 1, 2003, 51 malignant tumors were detected during follow-up. MRI found 32 breast cancers, 22 of which were not visible on mammography.

For invasive breast cancers, the sensitivity of

MRI was 79.5% versus 33.3% for mammography. Mammography was better for detecting carcinoma *in situ* with a sensitivity of 83% compared with 17% for MRI.

This report demonstrates the increased sensitivity of breast MRI in the early detection of breast cancer in women with increased risk based on familial or genetic predisposition to breast cancer. Breast MRI does not replace clinical breast examination or mammography, but it is an important diagnostic tool in evaluating breast abnormalities, virtually uninfluenced by breast density.

Managing breast cancer after breast conserving surgery in older women

Breast-conserving surgery, or lumpectomy, is traditionally followed by whole breast radiation therapy, and this approach has offered many women with breast cancer the option of keeping their breast.

Now, another option may make it possible for women to select breast conserving therapy *without* breast irradiation.

The September 2, 2004, *New England Journal of Medicine* reported on two trials that compared breast-conserving surgery plus the drug *tamoxifen* with or without radiotherapy.

One trial involved 636 women age 70 and older. Some received tamoxifen alone, whereas others received it in conjunction with a standard course of radiation therapy.

There was no statistical difference between the two groups in rates of mastectomy for local recurrence, distant metastases, or five-year survival, with 87% in the tamoxifen-plus-radiation group versus 86% in the tamoxifen-only group. There was a significant difference in the rate of local or regional recurrence at five years, with 1% in the tamoxifen-plus-radiation group versus 4% in the tamoxifen-only group).

Another trial involved 769 women age 50 and older. These women had breast-conserving surgery for breast cancers 5 cm or less in size, with no spread to axillary lymph nodes.

This study, too, showed no significant differ-



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Introducing Dr. Jensen

The Florida Cancer Institute recently welcomed medical oncologist Cynthia L. Jensen, DO, to its practice.

Dr. Jensen completed her undergraduate studies at Lake Superior State University, Sault Ste. Marie, MI, and received her medical degree from Michigan State University College of Osteopathic Medicine, East Lansing.

She completed an oncology fellowship at the Breslin Cancer Center in Lansing and completed residencies at Ingham Regional Medical Center in Lansing and Botsford General Hospital in Farmington Hills.



Cynthia L.
Jensen, DO

ence in the rates of distant relapse or overall survival. It did show a significant difference in the rate of local relapse at five years: 7.7 percent of the tamoxifen-only group experienced relapse in the breast; 0.6 percent experienced relapse in the group with tamoxifen plus radiation. There were also differences in the five-year disease-free survival rates: 84% in the tamoxifen-only group versus 91% in the tamoxifen-plus-radiation group.

These trials indicate that for some older women with small, estrogen-receptor-positive breast cancer, lumpectomy plus adjuvant tamoxifen alone may be a reasonable choice of treatment. **FHCN**

Your hometown team ...

The oncologists at Florida Cancer Institute welcome questions regarding the newest advances in cancer care. For further information, call the institute, located at 8763 River Crossing Blvd. in New Port Richey, (727) 842-8411, or at 13906 Lakeshore Blvd., Suite 330, in Hudson, (727) 863-8563. You may fax questions to (727) 847-2923.