



Contact:
Nancy F. Morter
Dilon Technologies Inc.
C: 757-589-3914
O: 757-269-4910 x 302
E: nfmorter@dilon.com
www.dilon.com

**Breast-Specific Gamma Imaging (BSGI) Can Reduce the Number
of Unnecessary Breast Biopsies When Compared to MRI**
Pivotal Study Presented at Interdisciplinary Breast Center Conference

Newport News, Va., March 18, 2009 — Women that require additional diagnostic imaging after a questionable mammogram may be at risk for unnecessary biopsies when only magnetic resonance imaging (MRI) is offered, according to a new study presented at the 19th Annual National Interdisciplinary Breast Center Conference in Las Vegas.

“Our goal was to see if BSGI could be used to improve upon the specificity of MRI, and also reduce the number of biopsies. The study is important because with the addition of BSGI, we could eliminate the need for 50 percent of biopsies or possibly change a patient’s decision to have more radical surgery,” said Dr. Leora Lanzkowsky, Director of Women's Imaging, CHW - Nevada Imaging Centers in Las Vegas.

BSGI has comparable sensitivity, but superior specificity when compared to MRI. *Sensitivity* refers to the ability of an imaging technique to detect the presence of disease. *Specificity* refers to the technique's ability to detect that disease is actually not present.

BSGI, a molecular breast imaging technique, is a follow-up to mammography that can see lesions independent of tissue density and discover early stage cancers. With BSGI, the patient receives a pharmaceutical tracing agent that is absorbed by all the cells in the body. Due to their increased rate of metabolic activity, cancerous cells in the breast absorb a greater amount of the tracing agent than normal, healthy cells and generally appear as “hot spots” on the BSGI image. The Dilon 6800 Gamma Camera is a high-resolution, compact gamma camera, optimized to perform BSGI. The camera provides a manageable four to 16 images versus up to thousands of images with breast MRI.

The Study

Over the course of 18 months, at three medical centers, BSGI and MRI were performed in women requiring additional diagnostic imaging following a mammogram as deemed necessary by a physician. The majority of these patients had either a personal history of breast cancer or a combination of other factors placing them at high-risk for breast carcinoma. The interpreting radiologist had access to all prior images and patient information for image interpretation for both studies. All biopsies were performed as deemed necessary by a physician.

Sensitivity Results

There were 120 women who had 122 abnormal biopsies requiring additional intervention. There were a total of 16 high-risk lesions (11 ADH, four LCIS and one papilloma) and 106 malignant lesions (17 DCIS, 70 IDC, 14 ILC, three papillary carcinomas, one tubular and one squamous cell carcinoma). BSGI was negative in a total of 10 cases (six malignancies and four high risk lesions) and indeterminate in three (all malignancies). MRI was negative in a total of 11 cases (seven malignancies and four high risk lesions) and indeterminate in six (three malignancies and three high-risk lesions). Excluding the indeterminate findings from the sensitivity analysis, BSGI was positive 110/120 cases (90.6 percent sensitivity) and MRI was positive in 106 out of 117 cases (90.6 percent sensitivity). BSGI was equal in sensitivity to breast MRI in the detection of malignant and high-risk breast lesions, while reducing the rate of indeterminate findings by 50 percent.

Specificity Results

Of the 37 patients who had benign biopsy results, MRI and BSGI were concordant in 16 patients yielding a specificity of 38%. For the patients with discordant MRI and BSGI findings, BSGI specificity was 52% while MRI had a specificity of 19%. Overall, the specificity for BSGI and MRI were 46% and 27% respectively.

“If we can utilize BSGI to avoid unnecessary biopsies, not only are we saving women from an uncomfortable procedure, scarring and the expense of surgery, we save time so patients can move more quickly to treatment ,” said Dr. Lanzkowsky. She went on to say, “In this group of patients with complex radiographic findings requiring both BSGI and MRI in the course of clinical care, BSGI provided comparable sensitivity, higher specificity and fewer indeterminate results than MRI.”



About Dilon Technologies

Dilon Technologies Inc. is bringing innovative new medical imaging products to market. Dilon's cornerstone product, the Dilon 6800, is a high-resolution, small field-of-view gamma camera, optimized to perform BSGI, a molecular breast imaging procedure which images the metabolic activity of breast lesions through radiotracer uptake. Many leading medical centers around the country are now offering BSGI to their patients, including: Cornell University Medical Center, New York; George Washington University Medical Center, Washington, D.C.; and The Rose, Houston. For more information on Dilon Technologies please visit www.dilon.com.

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