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Breast-Specific Gamma Imaging (BSGI) Found to be Highly Sensitive for Early Stage Breast Cancer

*Researchers Determine BSGI a Useful Tool in Detection, as Sensitive as MRI for Invasive Cancers
and perhaps more so for DCIS*

(Newport News, Virginia: May 29, 2008)– According to an article in the June issue of Radiology, researchers at The George Washington University Medical Center in Washington, D.C. have shown that Breast-Specific Gamma Imaging (BSGI) is highly sensitive in detecting the presence of cancer. The researchers determined that BSGI was a useful detection tool and that it was as sensitive as MRI for most cancers and perhaps more sensitive for ductal carcinoma in-situ, an early stage of breast cancer.

BSGI, molecular imaging of the breast utilizing a high-resolution, small-field-of-view gamma camera, is an increasingly utilized adjunct imaging modality for the diagnosis of breast cancer. Initial studies with this imaging technique report sensitivities similar to MRI with a higher specificity which is the ability of a test to show when disease is not present.

In the retrospective study, 146 women underwent BSGI and breast biopsy. Study images were assigned scores, and scores were classified as positive or negative and compared with biopsy results. BSGI helped detect cancer in 96.4% of the noted malignant lesions; the positive predictive value was 68.8%, specificity of 59.5% and the negative predictive value for nonmalignant lesions was 94.3%. The smallest invasive cancer and DCIS detected were both 1 mm, and BSGI helped detect occult cancer not visualized at mammography or ultrasonography in six patients

Mammography remains the imaging modality of choice for breast cancer screening. The overall sensitivity of mammography has been reported to be 78 - 85 percent; however, the sensitivity of mammography decreases to 42 - 68 percent in women with dense breasts. In addition, the false-positive rate of screening mammography is 15 - 30 percent, leading to many benign findings at biopsy. Limitations in the sensitivity and specificity of screening mammography led to the investigation of adjunct breast imaging modalities; specifically BSGI, which provides physiological data not obtained with the anatomic imaging techniques of mammography and ultrasound.



"Our study supports the use of BSGI because MR imaging would be used in clinical practice with equal sensitivity and higher specificity. An advantage of BSGI is the greater comfort of the patient, with the study being performed with the patient sitting as opposed to being placed in an MR imager. Additionally, BSGI results in four to eight images as compared with several hundred images in a breast MR examination, leading to a associated decrease in interpretation time. In our practice, BSGI has been integrated in the daily evaluation of patients, as appropriate," said Dr. Rachel Brem of The George Washington University Medical Center.

Breast-Specific Gamma Imaging as an Adjunct Imaging Modality for the Diagnosis of Breast Cancer Radiology, Volume 247, No 3, June 2008 (Rachel F. Brem, MD, Angelique C. Floerke, MD, PharmD, Jocelyn A. Rapelyea, MD, Christine Teal, MD, Tricia Kelly, MD, Vivek Mathur, MD).

About Dilon Technologies

Dilon Technologies 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 Breast-Specific Gamma Imaging (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.; Northwestern Memorial Hospital, Chicago; and The Rose, Houston. For more information on Dilon Technologies please visit www.dilon.com.

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