

## **REAL WORLD APPLICATION OF BSGI, INITIAL EXPERIENCE AT A COMMUNITY BREAST CENTER AND ITS POTENTIAL IMPACT ON CLINICAL CARE**

Minhao Zhou, Nathalie Johnson, Deb Blanchard, Sally Bryn, Joanne Nelson  
Department of Surgery, Oregon Health and Science University, Portland, OR

**Background:** Breast Specific Gamma Imaging (BSGI) has brought scintimammography back to the forefront, utilizing a dedicated small field-of-view system designed to detect and localize lesions down to 2 mm. Initial studies with this technique report sensitivities similar to MRI with a higher (90 %) specificity. We reviewed our initial experience to evaluate the impact of this new technology at our community breast center.

**Methods:** Retrospective review of the initial 176 patients who underwent BSGI.

**Results:** Forty seven patients with new diagnosis of cancer obtained BSGI for further workup. It was positive at a new location in 5 cases (10.6 %). Two (4.3 %) new cancers in the contralateral breast and 1 (2.1 %) in the ipsilateral breast. Two patients (4.3 %) had benign pathology. One hundred and twenty nine patients underwent BSGI because of suspicious imaging, abnormal physical exam, or high risk with dense breast. Twenty three patients (17.8 %) had negative BSGI with median BI-RADS class 4 (n=21) or positive MRI (n=2). Twelve (9.3 %) of those patients had confirmatory negative biopsy. In eleven patients (8.5 %), biopsy was avoided. There were 14 (10.9 %) with median BI-RADS class 2 and positive BSGI, 4 were malignant, 7 were benign, and 3 had negative follow up imaging. Of the 176 initial patients, clinical management was significantly changed in 14.7 % with another 6.8 % where a negative BSGI could have prevented a biopsy.

**Conclusion:** BSGI has played an important role in our clinical management of breast patients. A negative BSGI has the potential of preventing biopsies and interval imaging studies for some BI-RADS class 3 / 4 cases. BSGI is also a good adjunctive imaging tool in the work up of breast cancer patients with complex breast tissue.