

## [Clinical utility of breast-specific gamma imaging for evaluating disease extent in the newly diagnosed breast cancer patient](#)

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### **Background**

Breast-specific gamma imaging (BSGI) is a functional imaging modality that has comparable sensitivity but superior specificity compared with magnetic resonance imaging, yielding fewer false-positive results and thereby improving clinical management of the newly diagnosed breast cancer patient.

### **Methods**

A retrospective review was performed from 2 community-based breast imaging centers of newly diagnosed breast cancer patients in whom BSGI was performed as part of the imaging work-up.

### **Results**

A total of 138 patients (69 invasive ductal carcinoma, 20 invasive lobular carcinoma, 32 ductal carcinoma in situ, and 17 mixtures of invasive ductal carcinoma, invasive lobular carcinoma, or ductal carcinoma in situ and other) were reviewed. Twenty-five patients (18.1%) had a positive BSGI study at a site remote from their known cancer or more extensive disease than detected from previous imaging. Fifteen patients (10.9%) were positive for a synchronous or more extensive malignancy in the same or contralateral breast. Five patients had benign findings on pathology, 5 benign on ultrasound follow-up (false-positive rate, 7.2%). Findings converted 7 patients to mastectomy, 1 patient to neoadjuvant chemotherapy, and 7 patients were found to have previously undetected contralateral cancer. The positive predictive value for BSGI was 92.9%.

### **Conclusions**

BSGI detected additional or more extensive malignancy in the same or contralateral breast in 10.9% of newly diagnosed breast cancer patients. Only 7.2% incurred an additional work-up. BSGI provides accurate evaluation of remaining breast tissue in newly diagnosed breast cancer patients with few false-positive readings.