

## Medical Coverage Policy | Scintimammography and Gamma Imaging of the Breast and Axilla



**EFFECTIVE DATE:** 02|17|2017

**POLICY LAST UPDATED:** 04|18|2017

### OVERVIEW

Scintimammography refers to the use of radiotracers with nuclear medicine imaging as a diagnostic tool for abnormalities of the breast. Breast-specific gamma imaging (BSGI), or molecular breast imaging (MBI), refers to specific types of imaging machines that are used in conjunction with scintimammography to improve diagnostic performance.

### MEDICAL CRITERIA

None Applicable

### PRIOR AUTHORIZATION

Not applicable

### POLICY STATEMENT

#### **BlueCHiP for Medicare and Commercial Products**

Scintimammography, BSGI, and MBI are considered not medically necessary in all applications, including but not limited to their use as an adjunct to mammography or in staging the axillary lymph nodes as the evidence is insufficient to determine the effects of the technology on health outcomes.

Use of gamma detection following radiopharmaceutical administration for localization of sentinel lymph nodes in patients with breast cancer may be considered medically necessary.

### COVERAGE

#### **BlueCHiP for Medicare and Commercial Products**

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit Booklet for applicable not medically necessary benefits/coverage.

### BACKGROUND:

Scintimammography is a diagnostic modality using radiopharmaceuticals to detect tumors of the breast. After injection of a radiopharmaceutical, the breast is evaluated with planar imaging. Scintimammography is performed with the patient lying prone and the camera positioned laterally, which increases the distance between the breast and the camera. Scintimammography using conventional imaging modalities has relatively poor sensitivity in detecting smaller lesions (e.g., smaller than 15 mm), because of the relatively poor resolution of conventional gamma cameras in imaging the breast.

BSGI and MBI were developed to address this issue. Breast-specific gamma cameras acquire images while the patient is seated in a position similar to that in mammography, and the breast is lightly compressed. The detector head(s) is immediately next to the breast, increasing resolution, and the images can be compared with the mammographic images. Breast-specific gamma imaging and molecular breast imaging differ primarily in the type and number of detectors used (multi-crystal arrays of cesium iodide or sodium iodide versus semiconductor materials, such as cadmium zinc telluride, respectively). In some configurations, a detector is placed on each side of the breast and used to lightly compress it. The maximum distance between the detector and the breast is therefore from the surface to the midpoint of the breast. Much of the research on BSGI and MBI has been conducted at the Mayo Clinic. The radiotracer usually utilized is technetium Tc99m sestamibi. MBI imaging takes approximately 40 minutes.

Preoperative lymphoscintigraphy and/or intraoperative hand-held gamma detection of sentinel lymph nodes is a method of identifying sentinel lymph nodes for biopsy after radiotracer injection. Surgical removal of 1 or more sentinel lymph nodes is an alternative to full axillary lymph node dissection for staging evaluation and management of breast cancer. Several trials have compared outcomes following sentinel lymph node biopsy versus axillary lymph node dissection for managing patients with breast cancer.

Breast-specific gamma imaging and molecular breast imaging have been suggested for a variety of applications:

1. For individuals who have dense breasts or high risk for breast cancer who receive scintimammography, BSGI or MBI as adjunct to mammography, the evidence includes diagnostic accuracy studies.
2. For individuals who have indeterminate or suspicious breast lesions who receive scintimammography and BSGI, the evidence includes diagnostic accuracy studies.
3. For individuals who have breast cancer undergoing detection of residual tumor after neoadjuvant therapy who receive scintimammography and BSGI, the evidence includes diagnostic accuracy studies and a meta-analysis.
4. For individuals who have breast cancer undergoing surgical planning for breast-conserving therapy who receive scintimammography and BSGI, the evidence includes 1 retrospective observational study.
5. For individuals who have breast cancer undergoing detection of axillary metastases who receive scintimammography and BSGI, the evidence includes diagnostic accuracy studies and systematic reviews of diagnostic accuracy studies.

#### **Localization of Sentinel Lymph Nodes Using Radiopharmaceutical and Gamma Detection**

For individuals who have breast cancer undergoing sentinel lymph node biopsy for detection of axillary metastases who receive radiopharmaceutical and gamma detection for localization of sentinel lymph nodes, the evidence includes 3 studies and a meta-analysis. Relevant outcomes are overall survival, disease-specific survival, test accuracy and validity, and treatment-related morbidity. The evidence to date does not provide sufficient support for any of the uses discussed. For these reasons, BSGI is considered not medically necessary as there is no proven efficacy.

#### **CODING**

##### **BlueCHiP for Medicare and Commercial Products**

The following code is considered not medically necessary as an adjunct to mammography or in staging the axillary lymph nodes

S8080 Scintimammography (radioimmunoscintigraphy of the breast), unilateral, including supply of radiopharmaceutical

#### **RELATED POLICIES**

None

#### **PUBLISHED**

Provider Update, June 2017

Provider Update, January 2017

Provider Update, April 2015

Provider Update, January 2014

Provider Update, March 2012  
Provider Update, February 2011

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