

Medical Coverage Policy | Scintimammography Breast Specific Gamma Imaging



EFFECTIVE DATE: 12|07|2010
POLICY LAST UPDATED: 11|05|2013

OVERVIEW

Scintimammography refers to the use of radiotracers with nuclear medicine imaging as a diagnostic tool for abnormalities of the breast.

PRIOR AUTHORIZATION

Not Applicable

POLICY STATEMENT

BlueCHiP for Medicare and Commercial:

Scintimammography or breast-specific gamma imaging is considered **not medically necessary** in all applications, including but not limited to its use as an adjunct to mammography or in staging the axillary lymph nodes as there is insufficient peer-reviewed scientific literature that demonstrates the procedure/service is effective.

MEDICAL CRITERIA

None.

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. Breast-specific gamma imaging (BSGI) and molecular breast imaging (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. (1)

Breast-specific gamma imaging and molecular breast imaging have been suggested for a variety of applications. In practice guidelines for breast scintigraphy with breast-specific gamma cameras, the Society for Nuclear Medicine provides a list of common uses, as follows:

1. Among patients with recently detected breast malignancy, initial staging; detecting multicentric, multifocal, or bilateral disease; and assessing response to neoadjuvant chemotherapy.

2. Among patients at high risk for malignancy, evaluating suspected recurrence or using it when a mammogram is limited or a previous malignancy was occult on mammogram.
3. Among patients with indeterminate breast abnormalities and remaining diagnostic concerns, evaluating lesions identified by other breast imaging techniques, palpable or non-palpable, aiding in biopsy targeting, and a number of others.
4. Among patients with technically difficult breast imaging, such as radiodense breast tissue or implants, free silicone, or paraffin injections.
5. Among patients for whom breast magnetic resonance imaging (MRI) is indicated but contraindicated, e.g., patients with implanted pacemakers or pumps, or as an alternative for patients who meet MRI screening criteria, such as BRCA1, BRCA2 mutations.
6. Among patients undergoing preoperative chemotherapy, for monitoring tumor response in order to determine the impact of therapy of plan for residual disease.

The guideline also mentions other efforts, such as the American College of Radiology’s Appropriateness Criteria and the American College of Surgeons’ Consensus Conference III.

The evidence to date does not provide sufficient support for any of the uses discussed. The published literature on BSGI, MBI, and scintimammography with breast-specific gamma camera is limited by a number of factors. The studies include populations that usually do not represent those encountered in clinical practice and that have mixed indications. There are methodologic limitations in the available studies, which have been judged to have medium to high risk of bias, and they lack information on the impact on therapeutic efficacy. Limited evidence on the diagnostic accuracy of BSGI reports that the test has a relatively high sensitivity and specificity for detecting malignancy. However, the evidence does not establish that BSGI improves outcomes when used as an adjunct to mammography for breast cancer screening. In the available studies, the negative predictive value of BSGI has not been high enough to preclude biopsy in patients with inconclusive mammograms. The relatively high radiation dose also should be taken into account. In addition, the evidence is not sufficient to conclude that BSGI is better than MRI for this purpose. Larger, higher-quality studies are required to determine whether BSGI has a useful role as an adjunct to mammography. For these reasons, BSGI is considered not medically necessary as there is no proven efficacy.

COVERAGE

BlueCHiP for Medicare and Commercial:

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.

CODING

BlueCHiP for Medicare and Commercial:

The following code is considered not medically necessary:

S8080

RELATED POLICIES

None.

PUBLISHED

Provider Update	Jan 2014
Provider Update	Mar 2012
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