



**BREAST SPECIFIC GAMMA IMAGING  
(BSGI)**

**Effective Date: September 21, 2009**  
**Date Of Origin: August 12, 2009**

**Review Dates: 8/09**  
**Status: New**

**I. DESCRIPTION**

Breast-specific gamma imaging (BSGI) was developed as a confirmatory test used after mammography and a clinical breast exam. This technique detects abnormal breast tissue based on uptake of technetium-99m sestamibi, a radioactive agent that emits gamma rays and that tends to accumulate in cancerous breast tissue. BSGI is typically performed on an outpatient basis by a nuclear medicine technician with results interpreted by a radiologist or physician specializing in nuclear medicine.

Results of the available studies do not provide conclusive evidence that BSGI can be relied on rather than biopsy in women who have suspicious breast lesions. Studies that compared the sensitivity of BSGI with other techniques showed no statistically significant differences in the sensitivity of BSGI, mammography, ultrasonography, and MRI. Although further studies may indicate that BSGI has greater sensitivity than ultrasonography and MRI, BSGI has the disadvantage that it requires radiation exposure. In addition, unlike biopsy, BSGI does not provide a definitive diagnosis since it has a 15% to 40% incidence of false-positive results. Further studies are needed to determine the clinical role of BSGI versus MRI and ultrasonography as adjuncts to mammography and clinical breast exams as well as to validate the impact of BSGI on patient survival.

**II. POLICY/CRITERIA**

- A. BSGI is considered experimental and investigational as an adjunct to mammography for imaging of breast tissue, for the detection of axillary metastases, staging the axillary lymph nodes in members with breast cancer, and to assess response to adjuvant chemotherapy in members with breast cancer and for all other indications because its effectiveness has not been established.
- B. BSGI may be covered when part of an IRB- approved clinical trial designed to assess its clinical utility for individuals with initial abnormal screening mammograms compared with other commonly used secondary screening techniques. Individual medical director review required.



**III. MEDICAL NECESSITY REVIEW**

- Required                       Not Required                       Not Applicable

**IV. APPLICATION TO PRODUCTS**

Coverage is subject to member’s specific benefits. Group specific policy will supersede this policy when applicable.

- ❖ **HMO/EPO:** *This policy applies to insured HMO/EPO plans.*
- ❖ **POS:** *This policy applies to insured POS plans.*
- ❖ **PPO:** *This policy applies to insured PPO plans.*
- ❖ **ASO:** *For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.*
- ❖ **INDIVIDUAL:** *For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.*
- ❖ **MEDICARE:** *Coverage is determined by the Centers for Medicare and Medicaid Services (CMS).*
- ❖ **MEDICAID:** *Coverage is determined by the Michigan Medicaid Provider Manual and the Michigan Medicaid Fee Schedule at: [http://www.michigan.gov/mdch/0,1607,7-132-2945\\_42542\\_42543\\_42546\\_42551-159815--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html).*
- ❖ **MICHILD:** *For MICHILD members, this policy will apply unless MICHILD certificate of coverage limits or extends coverage.*

**V. CODING INFORMATION**

**CPT/HCPCS Codes:**

*Not covered for any indication:*

- 78800 Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); limited area
- 78801 Radiopharmaceutical localization of tumor or distribution of radiopharmaceutical agent(s); multiple areas
- S8080 Scintimammography (radioimmunosciintigraphy of the breast), unilateral, including supply of radiopharmaceutical

**VI. REFERENCES**

1. National Academy of Sciences, Institute of Medicine, Committee on the Early Detection of Breast Cancer. Mammography and Beyond: Developing Technologies for the Early Detection of Breast Cancer. Washington, DC: National Academy Press; 2001.
2. Hindie E, de LV, Melliere D, et al. Parathyroid gland radionuclide scanning -- methods and indications. Joint Bone Spine. 2002;69(1):28-36.



3. Connolly LP, Drubach LA, Ted Treves S. Applications of nuclear medicine in pediatric oncology. *Clin Nucl Med.* 2002;27(2):117-125.
4. Leung JW. New modalities in breast imaging: Digital mammography, positron emission tomography, and sestamibi scintimammography. *Radiol Clin North Am.* 2002;40(3):467-482.
5. Ontario Ministry of Health and Long-Term Care, Medical Advisory Secretariat. Scintimammography. *Health Technology Scientific Literature Review.* Toronto, ON: Ontario Ministry of Health and Long-Term Care; February 2003; 1-35. Available at: <http://www.health.gov.on.ca/english/providers/program/mas/archive.html>. Accessed August 4, 2004.
6. Liberman M, Sampalis F, Mulder DS, Sampalis JS. Breast cancer diagnosis by scintimammography: A meta-analysis and review of the literature. *Breast Cancer Res Treat.* 2003;80(1):115-126.
7. Ontario Ministry of Health and Long-Term Care, Medical Advisory Secretariat (MAS). Scintimammography as an adjunctive breast imaging technology. *Integrated Health Technology Literature Review.* Toronto, ON: MAS; 2007.
8. O'Connor MK, Phillips SW, Hruska CB, et al. Molecular breast imaging: Advantages and limitations of a scintimammographic technique in patients with small breast tumors. *Breast J.* 2007;13(1):3-11.
9. Brem RF, Floerke AC, Rapelyea JA, et al. Breast-specific gamma imaging as an adjunct imaging modality for the diagnosis of breast cancer. *Radiology.* 2008;247(3):651-657.
10. Brem RF, Fishman M, Rapelyea JA. Detection of ductal carcinoma in situ with mammography, breast specific gamma imaging, and magnetic resonance imaging: a comparative study. *Acad Radiol.* 2007;14(8):945-950.
11. Civelek AC, Patel P, Ozalp E, Brem RF. Tc-99m sestamibi uptake in the chest mimicking a malignant lesion of the breast. *Breast.* 2006;15(1):111-114.
12. Brem RF, Rapelyea JA, Zisman G, et al. Occult breast cancer: scintimammography with high-resolution breast-specific gamma camera in women at high risk for breast cancer. *Radiology.* 2005;237(1):274-280. Epub 2005 Aug 26.
13. Brem RF, Schoonjans JM, Kieper DA, et al. High-resolution scintimammography: a pilot study. *J Nucl Med.* 2002;43(7):909-915.
14. Brem RF, Petrovitch I, Rapelyea JA, et al. Breast-specific gamma imaging with 99mTc-Sestamibi and magnetic resonance imaging in the diagnosis of breast cancer--a comparative study. *Breast J.* 2007;13(5):465-469.
15. Zhou M, Johnson N, Blanchard D, et al. Real-world application of breast-specific gamma imaging, initial experience at a community breast center and its potential impact on clinical care. *Am J Surg.* 2008;195(5):631-635.
16. Hayes Technology Assessment – Health Technology Brief: Breast Specific Gamma Imaging May 5, 2009.
17. Aetna Clinical Policy Bulletin: Tumor Scintigraphy Number: 0168 Review date 1/6/2009



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