



EFFECTIVE DATE: 01|01|2015
POLICY LAST UPDATED: 03|07|2017

OVERVIEW

Digital breast tomosynthesis uses modified digital mammography equipment to obtain additional radiographic data that are used to reconstruct cross-sectional “slices” of breast tissue. Tomosynthesis may improve the accuracy of digital mammography by reducing problems caused by overlapping tissue. Tomosynthesis typically involves additional imaging time and radiation exposure, although recent improvements may change this.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

BlueCHiP for Medicare and Commercial Products

Digital breast tomosynthesis is a covered service but providers will not be separately reimbursed for this service.

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage, or Subscriber Agreement for applicable radiology services/benefits.

BACKGROUND

Conventional mammography produces 2-dimensional (2D) images of the breast. Overlapping tissue on a 2D image can mask suspicious lesions or make benign tissue appear suspicious, particularly in women with dense breast tissue. As a result, women may be recalled for additional mammographic spot views. Inaccurate results may lead to unnecessary biopsies and emotional stress, or to a potential delay in diagnosis. Spot views often are used to evaluate microcalcifications, opacities, or architectural distortions; to distinguish masses from overlapping tissue; and to view possible findings close to the chest wall or in the retro-areolar area behind the nipple. The National Cancer Institute reports that approximately 20% of cancers are missed at mammography screening. Average recall rates are approximately 10%, with an average cancer detection rate of 4.7 per 1000 screening mammography examinations. The Mammography Quality Standards Act (MQSA) audit guidelines anticipate 2 to 10 cancers detected per 1000 screening mammograms. Interval cancers, which are detected between screenings, tend to have poorer prognoses.

Digital breast tomosynthesis (DBT) was developed to improve the accuracy of mammography by capturing a group of tomograms of the breast, further clarifying areas of overlapping tissue. Developers proposed that its use would result in increased sensitivity and specificity, as well as fewer recalls due to inconclusive results. DBT produces multiple low-dose images per view along an arc over the breast. During breast tomosynthesis, the compressed breast remains stationary while the x-ray tube moves approximately 1° for each image in a 15° to 50° arc, acquiring 11 to 49 images. These images are projected as cross-sectional “slices” of the breast, with each slice typically 1-mm thick. Adding breast tomosynthesis takes about 10 seconds per view. In 1 study in a research setting, mean time (SD) for interpretation of results was 1.22 (1.15) minutes for digital mammography and 2.39 (1.65) minutes for combined digital mammography and breast tomosynthesis. With

conventional 2D mammography, breast compression helps decrease tissue overlap and improve visibility. By reducing problems with overlapping tissue, compression with breast tomosynthesis may be reduced by up to 50%. This change could result in improved patient satisfaction.

A machine equipped with breast tomosynthesis can perform 2D digital mammography, DBT, or a combination of both 2D mammography and DBT during a single compression. Radiation exposure from tomosynthesis is roughly equivalent to mammography. Therefore, adding tomosynthesis to mammography doubles the radiation dose, although it still is below the maximum allowable dose established in the MQSA.

In May 2013, FDA approved new tomosynthesis software that permits creation of 2D images (called C-View) from images obtained during tomosynthesis. As a result, 2D mammography may become unnecessary, thereby lowering radiation dose. In other words, it is possible that only the tomosynthesis procedure will be needed, with the ability to create both conventional 2D and DBT images. It is too early to gauge how traditional mammography plus tomosynthesis compares with C-View plus tomosynthesis.

CODING

BlueCHiP for Medicare and Commercial Products

The following services are covered and providers will not be separately reimbursed. These codes are reported in addition to the appropriate breast mammography code (New CPT codes 77065 - 77067 effective 1/1/2017; 77055- 77057 deleted on 12/31/2016) or (G0202 - G0206).

G0279 Diagnostic digital breast tomosynthesis, unilateral or bilateral (file in addition to the Diagnostic Mammography code)

77063 Screening Digital Breast Tomosynthesis, Bilateral (file in addition to the Screening Mammography code)

For BlueCHiP for Medicare and Commercial Products the following services should be filed with HCPCS code G0279:

77061 Digital breast tomosynthesis; unilateral

77062 Digital breast tomosynthesis; bilateral

RELATED POLICIES

None

PUBLISHED

Provider Update, May 2017

Provider Update, May 2016

Provider Update, January 2015

Provider Update, May 2013

Provider Update, April 2012

REFERENCES

1. Tagliafico A, Astengo D, Cavagnetto Fetal. One-to-one comparison between digital spot compression view and digital breast tomosynthesis. *European radiology* 2012; 22(3):539-44.

2. National Cancer Institute (NCI). Factsheet: Mammograms. <http://www.cancer.gov/cancertopics/factsheet/detection/mammograms>. Accessed September 19, 2016.

3. Brandt KR, Craig DA, Hoskins TL et al. Can digital breast tomosynthesis replace conventional diagnostic mammography views for screening recalls without calcifications? A comparison study in a simulated clinical setting. *AJR. American journal of roentgenology* 2013; 200(2):291-8.

4. Alakhras M, Bourne R, Rickard M et al. Digital tomosynthesis: A new future for breast imaging? *Clinical radiology* 2013.

5. Gur D, Abrams GS, Chough DM et al. Digital breast tomosynthesis: observer performance study. *AJR. American journal of roentgenology* 2009; 193(2):586-91.
6. Skaane P, Bandos AI, Gullien R et al. Prospective trial comparing full-field digital mammography (FFDM) versus combined FFDM and tomosynthesis in a population-based screening programme using independent double reading with arbitration. *European radiology* 2013; 23(8):2061-71.
7. Friedewald SM, Rafferty EA, Rose SL et al. Breast cancer screening using tomosynthesis in combination with digital mammography. *JAMA* 2014; 311(24):2499-507.
8. Rose SL, Tidwell AL, Bujnoch LJ et al. Implementation of Breast Tomosynthesis in a Routine Screening Practice: An Observational Study. *AJR. American journal of roentgenology* 2013; 200(6):1401-08.
9. Destounis S, Arieno A, Morgan R. Initial experience with combination digital breast tomosynthesis plus full field digital mammography or full field digital mammography alone in the screening environment. *Journal of clinical imaging science* 2014; 4:9.
10. Greenberg JS, Javitt MC, Katzen J et al. Clinical Performance Metrics of 3D Digital Breast Tomosynthesis Compared With 2D Digital Mammography for Breast Cancer Screening in Community Practice. *AJR. American journal of roentgenology* 2014:1-7.
11. Skaane P, Bandos AI, Eben EB et al. Two-view digital breast tomosynthesis screening with synthetically reconstructed projection images: comparison with digital breast tomosynthesis with full-field digital mammographic images. *Radiology* 2014; 271(3):655-63.
12. Zuley ML, Guo B, Catullo VJ et al. Comparison of Two-dimensional Synthesized Mammograms versus Original Digital Mammograms Alone and in Combination with Tomosynthesis Images. *Radiology* 2014; 271(3):664-71.
13. Bernardi D, Macaskill P, Pellegrini M, et al. Breast cancer screening with tomosynthesis (3D mammography) with acquired or synthetic 2D mammography compared with 2D mammography alone (STORM-2): a population based prospective study. *Lancet Oncol.* Aug 2016; 17(8):1105-1113. PMID 27345635
14. Sharpe RE, Jr., Venkataraman S, Phillips J, et al. Increased cancer detection rate and variations in the recall rate resulting from implementation of 3D digital breast tomosynthesis into a population-based screening program.
15. American College of Radiology. ACR Appropriateness Criteria®: breast cancer screening; date of origin, 2015. <https://acsearch.acr.org/docs/70910/Narrative/>. Accessed September 14, 2016 *Radiology.* Mar 2016;278(3):698-706. PMID 26458206

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