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# Mammography

**Number: 0584**

## Policy

- I. Aetna considers annual mammography screening a medically necessary preventive service for women aged 40 and older. Annual mammography is also considered medically necessary for younger women who are judged to be at high-risk including:
  - A. BRCA1 or BRCA2 mutation carrier; *or*
  - B. Women who meet criteria for BRCA mutation testing in [CPB 227 - BRCA Testing, Prophylactic Mastectomy, and Prophylactic Oophorectomy](#) ([../200\\_299/0227.html](#)); *or*
  - C. Women with diagnosis of, or has first-degree relative with, one or more of the following:
    1. Bannayan-Riley-Ruvalcaba syndrome; *or*
    2. Cowden syndrome; *or*
    3. Li-Fraumeni syndrome; *or*
    4. Personal history of radiation to chest between ages 10 and 30 years.

## Policy History

[Last Review](#)

07/01/2017

Effective: 02/05/2002

Next Review: 06/07/2018

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[Review History](#)

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[Definitions](#)

## Additional Information

[Clinical Policy Bulletin Notes](#)

Screening mammography for other women is considered experimental and investigational because its benefits in these other women are unproven.

- II. Aetna considers screening mammography for men experimental and investigational, as the clinical benefits of such screening in men are unproven. Current guidelines from the U.S. Preventive Services Task Force and the American College of Radiology recommend such screening only for women. Aetna considers mammography medically necessary for surveillance of men with a prior history of breast cancer.
- III. Aetna considers diagnostic mammography medically necessary for members with signs or symptoms of breast disease or history of breast cancer.  
  
Note: Diagnostic mammography is covered regardless of whether the member has preventive services benefits
- IV. Aetna considers digital mammography a medically necessary acceptable alternative to film mammography.
- V. Aetna considers digital breast tomosynthesis ("3D mammography") as a medically necessary acceptable alternative to standard (2D) mammography.
- VI. Aetna considers computer-aided detection (CAD) a medically necessary adjunct to mammography.
- VII. Aetna considers xeroradiography for breast imaging experimental and investigational because this method of radiography is obsolete.
- VIII. Aetna considers contrast-enhanced spectral mammography experimental and investigational because of insufficient evidence of its effectiveness.

See also [CPB 0105 - Magnetic Resonance Imaging \(MRI\) of the](#)

[Breast](#) ([../100\\_199/0105.html](#)); [CPB 0269 - Breast Biopsy Procedures](#) ([../200\\_299/0269.html](#)) and [CPB 0386 - Breast Transillumination and Electrical Impedance Scanning \(EIS\), and Elastography](#) ([../300\\_399/0386.html](#)).

## Background

A mammogram is an x-ray of the breast. A screening mammography is one of several tools that are used for early detection of breast cancer in asymptomatic women. Other screening tools include the clinical breast examination and breast self-examination. Diagnostic mammography is used to diagnose breast cancer in women who have signs or symptoms of breast disease, or who has a history of breast cancer.

With screen-film mammography, 2D X-ray images of the breasts are recorded onto photographic film. Each breast is positioned and compressed between two clear plates, which are attached to a specialized camera, and pictures are taken from two directions.

With full field digital mammography (FFDM), two-dimensional (2D) X-ray images are recorded onto a computer, rather than directly onto film. The technique is the same as in screen-film mammography. Adjustments can be made during the procedure, thus reducing the need to repeat mammograms and reducing the exposure to radiation. Images of the entire breast can be captured regardless of tissue density.

Screening mammography aims to reduce morbidity and mortality from breast cancer by early detection and treatment of occult malignancies. There is extensive evidence from a variety of well-conducted, randomized controlled studies that annual or biennial mammography is effective in reducing breast cancer mortality by 30 % in women aged 50 to 69 years. Data on women under age 50 are less clear. Results from the Canadian National Breast Screening Study (CNBSS) suggest that the contribution of mammography over good physical examinations to breast cancer mortality reduction may be less

than has been assumed. This observation re-emphasizes a truism of screening -- that it is not necessary to detect cancers as early as possible to obtain a benefit -- it is only necessary to detect them early enough. What is early enough in any individual case is uncertain because there are insufficient outcomes data. This has made it difficult for professional societies to develop specific mammography screening recommendations for high-risk women.

The U.S. Preventive Services Task Force (USPSTF) revised their recommendations for mammography screening in 2009. Whereas they had formerly recommended routine screening every 1 to 2 years starting at age 40, they now recommend against routine screening for women aged 40 to 49 and biennial rather than annual screening for women aged 50 to 74. In their 2009 recommendations, the USPSTF recommend that women aged 40 to 49 consider their personal risk for developing breast cancer before deciding to participate in regular, biennial screening. The USPSTF concluded that the current evidence is insufficient to assess the additional benefits and harms of (i) screening mammography in women aged 75 years or older, (ii) clinical breast examination (CBE) beyond screening mammography in women aged 40 years or older, and (iii) either digital mammography or magnetic resonance imaging instead of film mammography as screening modalities for breast cancer. In addition, the USPSTF recommended against clinicians teaching women how to perform breast self-examination.

The American Medical Association (AMA), the Society of Breast Imaging (SBI), the American College of Radiology (ACR), and the American Cancer Society (ACS), all support screening with mammography and CBE beginning at age 40. Recent recommendations from the SBI and the ACR (2010) released after the 2009 USPSTF recommendations, which recommended that average-risk women wait until age 50 to undergo screening mammography, continue to support yearly screening mammography beginning at age 40 for women at average-risk

for breast cancer. The American College of Obstetricians and Gynecologists (ACOG, 2000) supports screening with mammography beginning at age 40 and CBE beginning at age 19. The Canadian Task Force on Preventive Health Care (CTFPHC), the American Academy of Family Physicians (AAFP), and the American College of Preventive Medicine (ACPM) recommend beginning mammography for average-risk women at age 50. The AAFP and ACPM recommend that mammography in high-risk women begin at age 40, and AAFP recommends that all women aged 40 to 49 be counseled about the risks and benefits of mammography before making decisions about screening.

A 1997 Consensus Development Panel convened by the National Institutes of Health concluded that the evidence was insufficient to determine the benefits of mammography among women aged 40 to 49. This panel recommended that women aged 40 to 49 should be counseled about potential benefits and harms before making decisions about mammography. In 2001, the CTFPHC concluded there was insufficient evidence to recommend for or against mammography in women aged 40 to 49.

Organizations differ on their recommendations for the appropriate interval for mammography. Annual mammography is recommended by AMA, ACR, and ACS. Mammography every 1 to 2 years is recommended by AAFP, ACPM, and the CTFPHC. ACOG recommends mammography every 1 to 2 years for women aged 40 to 49 and annually for women aged 50 and older.

On behalf of the USPSTF, Siu (2016) updated the 2009 USPSTF recommendation on screening for breast cancer. The USPSTF reviewed the evidence on the following: effectiveness of breast cancer screening in reducing breast cancer-specific and all-cause mortality, as well as the incidence of advanced breast cancer and treatment-related morbidity; harms of breast cancer screening; test performance characteristics of digital