

BREAST CANCER PREVENTION



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Per the National Institute of Health:

Breast cancer is the second most common cancer in women after skin cancer. The goal of breast cancer screening is to detect breast cancer at an early stage before a person discovers a lump. With early detection breast cancer is more easily treated and more likely to be cured (NIH, 2023).

The Two Standard Screening Methods Include:

- Breast Exams
- Mammograms



BREAST EXAMS



Clinical Breast Exam is an exam of a person's breast by a doctor or other health professional.

- During the exam they carefully feel the breasts and under the arms for lumps or anything else that may seem unusual.

Breast Self-Exam (BSE) is a step-by-step approach for women to examine their breasts for anything abnormal.

- It is important to know what is normal for you and see your physician if you notice any changes, such as:
 - Lump, hard knot or thickening inside the breast or underarm area.
 - Swelling, warmth, redness or darkening of the breast.
 - Change in the size or shape of the breast.
 - Dimpling or puckering of the skin.
 - Itchy, scaly sore or rash on the nipple.
 - Pulling in of the nipple or other parts of the breast.
 - Nipple discharge that starts suddenly.
 - New pain in one spot that doesn't go away.

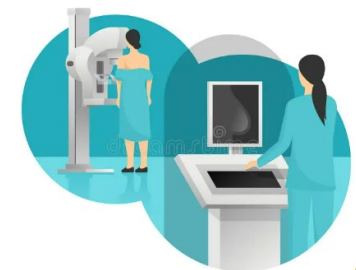
MAMMOGRAMS

Mammograms are an X-ray picture of the breast which can detect breast cancer early, possibly before it has spread.

- Women with breast implants may require a mammogram which uses a special technique known as '*implant displacement views*'.

Mammograms can be used as a **screening image** or a **diagnostic image**:

- A *screening mammogram* usually involves two or more X-ray pictures, or images of each breast. It is used to:
 - Detect tumors which cannot be felt.
 - Identify tiny deposits of calcium that sometimes can indicate the presence of breast cancer.
- A *diagnostic mammogram* can be used to check for breast cancer after a lump or other possible signs of breast cancer, including:
 - Breast pain.
 - Thickening of the skin of the breast.
 - Discharge from the nipple.
 - A change in the size or shape of the breast.



NOTE: *These possible signs may also be signs of benign (non-cancerous) conditions.*

MAMMOGRAMS

At times your physician may order a specific type of mammogram, including:

- **Digital Mammography**
 - Is a computer picture of the breast.
- **2-Dimensional Mammography (S2D)**
 - Uses X-rays to take pictures of the inside of the breast from two different angles. A computer or X-ray film is used to make a 2-D pictures of the breast.
- **Digital Breast Tomosynthesis (DBT)**
 - The DBT is also known as a '3-D Mammography.'
 - It is a type of mammography in where X-ray machines are used to take pictures of thin 'slices' of the breast from different angles. A computer is then used to make 3-D pictures of the breast from the X-rays.

- **Nuclear Magnetic Resonance Imaging (NMRI)**
 - NMRI uses a magnet, radio waves, and a computer to make detailed pictures of the inside of the body.
 - NMRI may be used to screen women who have a high risk of breast cancer, detect breast cancer, or other abnormal changes in the breast.
 - NMRI may also be:
 - Used as a supplemental screening for woman who have dense breasts.
 - Who have had changes in BRCA1 or BRCA2 genes.
 - Who have a close family history of breast cancer, such as Mother, Daughter, or Sister.
 - Who have genetic syndromes, such as Li-Fraumeni or Cowden syndrome.

BREAST CANCER SCREENING: BENEFITS VS POTENTIAL HARM



Benefits of Cancer Screenings:

- Early detection can help reduce deaths from breast cancer.
- If breast cancer is detected treatment can be started earlier.

Potential Harms of Mammography:

Any type of testing can have some harm associated with it, so it is important to talk to your doctor or other care provider about your risk of breast cancer, whether a screening test is right for you, and the benefits and harms of the screening tests.

- The potential harms of mammography may include the following:
 - False-positive test results can occur.
 - False-positive results can lead to extra testing and cause anxiety.
 - False-negative test results can delay diagnosis and treatment.
 - Finding breast cancer may lead to breast cancer treatment and side effects, but it may not improve a woman's health or help her live longer.
 - Mammography exposes the breast to low doses of radiation.
 - There may be pain or x-ray discomfort during a mammogram.

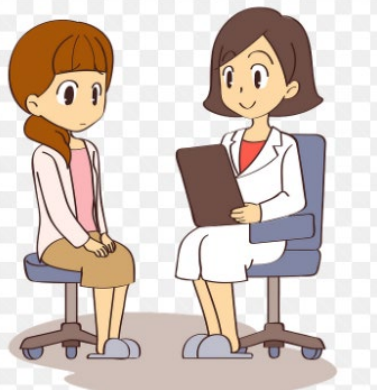
MAMMOGRAM RESULTS

- Understanding your mammogram report is important in knowing what the possible next steps would be, especially when speaking with your doctor or health professional.
- The standardized system used to report results of mammograms, ultrasounds, and MRIs is the **Breast Imaging Reporting and Data System (BI-RADS®)**:

| Breast Imaging Reporting and Data System (BI-RADS®) | | |
|---|--|--|
| Category | Finding (Assessment) | Recommended Next Steps |
| 0 | Need additional imaging evaluation | Additional imaging needed before a category can be assigned. |
| 1 | Negative | Continue regular screening mammograms |
| 2 | Benign (not cancer) | Continue regular screening mammograms |
| 3 | Probably benign | Receive a 6-month follow-up mammogram |
| 4 | Suspicious abnormality | May require biopsy |
| 5 | Highly suggestive of malignancy (cancer) | Requires biopsy |
| 6 | Known biopsy-proven malignancy (cancer) | Biopsy confirms presence of cancer before treatment begins. |

<https://www.cancer.gov/types/breast/mammograms-fact-sheet>

If you have any questions about your mammogram results don't hesitate to call your doctor or health professional.



Prevention is an action taken to lower the chance of developing cancer, which is known as a ‘cancer protective factor’.

Some protective factors for breast cancer include:

- Reproductive history resulting in less exposure to estrogen.
- Taking selective estrogen receptor modulators or aromatase inhibitors and inactivators
 - Selective estrogen receptor modulators
 - Aromatase inhibitors and inactivators
- Risk-reducing or prophylactic mastectomy
- Ovarian ablation
- Getting enough exercise



Additionally, being aware of risk factors may help prevent breast cancer, including:

- Older age
- A personal history of breast cancer or benign (noncancer) breast disease
- Inherited risk of breast cancer
- Dense breast tissue
- Reproductive history resulting in greater exposure to estrogen
- Taking hormone therapy for symptoms of menopause
- Radiation therapy to the breast or chest
- Obesity
- Drinking alcohol

FREE/LOW-COST SCREENING MAMMOGRAMS



The Centers for Disease Control and Prevention (CDC) provides breast and cervical cancer screenings and diagnostic services through their National Breast and Cervical Cancer Early Detection Program (NBCCEDP) for women who have low incomes and are uninsured or underinsured.

- **To be eligible for this service you must:**
 - Have no insurance, or your insurance does not cover screening exams.
 - Have a yearly income that is at or below 250% of the federal poverty level.
 - Be between 40 and 64 years of age for breast cancer screening.
 - Be between 21 and 64 years of age for cervical cancer screening.
 - Certain women who are younger or older may qualify for screening services.
- **In Pennsylvania to find out if you qualify for a free or low-cost mammogram and Pap test and where to get screened, call:**
 - 800-848-3367 in *Philadelphia, Chester, Delaware, Montgomery & Buck County*
 - Others call 800-215-7494
- **To find a program visit the CDC website:**
<https://www.cancer.gov/types/breast/mammograms-fact-sheet>

BREAST CANCER RESOURCES:

Finding reliable health information can be a challenge on the internet. For additional information the following organizations may be helpful:

- **National Cancer Institute:** 1-800-4-CANCER
(<https://www.cancer.gov/types/breast/patient/breast-screening-pdq>)
- **National Library of Medicine**
(<https://medlineplus.gov/mammography.html>)
- **Breast Screen Australia** (www.health.gov.au/initiatives-and-programs/breastscreen-australia-program)
- **Susan G. Komen:**
 - Breast Care Helpline: 1-877-465-6636 (**1-877 Go-Komen**)
 - Email: helpline@komen.org



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