

## Breast Cancer Prevention and Diagnosis

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### Overview

Breast cancer is the most common female cancer and second leading cause of death in women in the United States. A woman's risk of breast cancer in the U.S. is about 12%, or 1 in every 8 women. By finding breast cancer early and getting treated, at least 90% of women with breast cancer are still alive after 5 years. This article will go over risk factors and explain how breast cancer is prevented and identified to help you understand your breast health. We will give you key information so you can discuss this further with your doctor.



### Risk Factors

Remember that breast cancer does not only affect women. While most breast cancers are diagnosed in females, males are also at risk. It is important for everyone to be aware of changes in their breast tissue.

**The following are risk factors for getting a breast cancer:**

#### **Female Breast Cancer**

- 🌱 First period before age 12
- 🌱 Late menopause (when you no longer have a period later than age 52)
- 🌱 Not having given birth
- 🌱 Using combined estrogen and progesterone hormone replacement therapy for longer than 5 years after menopause (this is different from oral birth control pills)
- 🌱 Previous therapeutic radiation therapy (as for the treatment of Hodgkin's lymphoma)
- 🌱 Extreme breast density

- ✦ If you have had a benign breast biopsy showing “atypical hyperplasia” or “lobar carcinoma in situ”
- ✦ Genetics
- ✦ 10% – 15% of breast cancers are hereditary. Signs that “a gene” may run in the family include the following personal or family history:
  - Breast cancer at age 50 or younger
  - Bilateral breast cancer
  - “Triple negative” breast cancer

### **Male Breast Cancer**

- ✦ Ovarian cancer
- ✦ Metastatic prostate cancer
- ✦ Ashkenazi Jewish ancestry with breast, ovarian, pancreatic or prostate cancer at any age
- ✦ Alcohol use or abuse (the more alcohol you drink, the higher your risk is)
- ✦ Postmenopausal Obesity or high body mass index (BMI)
- ✦ Increased age

It is interesting to note that more aggressive cancers appear in younger patients whereas less aggressive cancers appear in the elderly. While one’s likelihood of developing cancer increases with age, one’s risk of dying from breast cancer decreases with age.

## **Protective Factors**

- ✦ Giving birth, particularly under the age of 30
- ✦ Breastfeeding
- ✦ Exercise/physical activity
- ✦ If you have had a hysterectomy; estrogen-only hormone therapy
- ✦ Risk-reducing mastectomy (only for specific patient populations such as those with certain gene mutations)
- ✦ Tube and ovary removal, particularly age 40 or younger

## **Prevention and Screening**

Medical groups have debated breast cancer screening recommendations. On the one hand, doctors need to be able to diagnose and treat cancer early. But they don’t want to expose patients to harm such as anxiety, false-positive results, increased follow-up exams and unneeded treatments. While all guidelines recommend getting screened for breast cancer, the

rate at which the screenings are performed is still being debated. Review the general timeline of recommendations with your doctor so you know the risks and benefits of getting screened for breast cancer.

### **Breast Self-Exams and Self-Awareness:**

Among the U.S. Preventative Services Task Force (USPSTF), American Cancer Society (ACS), and American College of Obstetricians and Gynecologists (ACOG), breast self-exams are no longer recommended given the high rate of false positive findings. However, *breast awareness* is still highly advised. Self-awareness means being aware of the look and feel of your breasts without doing frequent checks of your breasts. You know your breasts best and data have proven it! About 71% of breast cancers in patients younger than 50 years old and half of breast cancers in patients over 50 years old are found by the patients themselves. While you do not need to routinely examine your breasts, you should contact your doctor if you notice changes such as redness, a mass, pain, breast skin changes, or nipple discharge.

### **Clinical Breast Exams:**

Clinical breast exams are breast exams performed by your doctor to detect any masses or changes of your breast tissue. ACOG recommends clinical breast exams every 1 – 3 years for 25 – 39 year olds and every year for women over 40 years old.

### **Mammography:**

A mammogram is an x-ray of your breast that allows doctors to see if there are any changes in your breast tissue that may be concerning for cancer. Each breast is placed between two x-ray plates with firm pressure so doctors can see as much breast tissue as possible in the x-rays.

The USPSTF recommends mammography every 2 years for people aged 50 to 74. If a patient has a first-degree family member who was diagnosed with breast cancer, screenings may start sooner (closer to age 40). Patients should talk with their doctor to discuss the benefits and risks of starting screenings before age 50.

ACOG recommends that patients are offered regular mammography every year starting at age 40 to reduce risk of death from breast cancer. If patients decline mammography in their 40s, screening should begin by 50 years old. Screening mammography should be performed every 1 – 2 years until at least 75 years old.

ACS recommends that patients start annual mammography screenings at age 45 years old (but patients can also choose to start at 40). Once patients are 55 years old,

screening exams can be every 2 years (or patients can continue to be screened annually).

The National Comprehensive Cancer Network (NCCN) and the American College of Radiology (ACR) recommend annual mammograms beginning at 40 and continuing as long as a woman is healthy.

## Diagnosis

The process of diagnosing breast cancer can be nerve-racking to patients due to many uncertainties. It usually results from a patient reporting breast changes to their doctor or from routine screening mammography. Nobody wants to receive the news from their doctor that there was an abnormality found and that further testing is needed. It is important to remember that if you have a concerning finding on mammography, it does not mean you have cancer. Up to 15% of women are called back on screening mammograms to evaluate abnormalities, and most of the time it is NOT cancer. However, if your doctor informs you of a concerning result, it is important to follow up to determine if you have cancer and how to proceed.

## Why is it so Important to Follow-up on an Abnormal Mammography Finding?

Mammograms are able to raise our suspicion that there is a cancerous or pre-cancerous area. If doctors can find a breast cancer before it has spread, your 5-year survival rate is very high. With early detection and follow up, we can try to keep your survival high.

When there is an abnormal physical finding or a mammographic abnormality, diagnostic breast imaging (which may include ultrasound) is the next step. Cancer is typically diagnosed with a core needle biopsy which allows for a sample of tissue to be collected and examined under the microscope.

If a patient elects to have a lumpectomy or mastectomy for breast cancer, a lymph node biopsy may be done at the time of surgery to see if the cancer has spread to the lymph nodes under the arm. The treatment options that you and your doctor discuss will depend on the type and stage of cancer you are diagnosed with and the receptors present on the tumor cells.

## Helpful Hints:

- Breast cancer is the most common cancer and 2<sup>nd</sup> leading cause of death for women in the U.S. Through early detection and better treatments, 5-year survival rates are very high.
- Risk factors for breast cancer include obesity, alcohol use, early first period, late menopause, increasing age, and family history of breast cancer. Decreasing alcohol intake and achieving/maintaining ideal body weight can reduce your breast cancer risk.
- While breast self-exams are not recommended, breast self-awareness is. Talk with your doctor about whether you think clinical breast exams are right for you.
- It is important to decide with your doctor when to begin mammography. You may start the screening test as early as age 40 and should begin no later than age 50. Screening mammography should be done every 1 – 2 years until 74 or as long as one is healthy, unless there is an abnormality found.
- If your doctor finds an abnormality on screening mammography or is suspicious of a finding on your breast, further testing may be needed. This may include the use of diagnostic breast imaging and biopsy.
- If you are diagnosed with breast cancer on a biopsy, additional staging of the cancer should be done to determine the best therapy for you. In this case, speak with your doctor about the results, next steps, and your goals.



## Useful Websites and References:

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No conflicts of interest to report.