



Understanding Cancer What We Know About Breast Cancer

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Did you know?

About 1 in 8 women will find out they have breast cancer at some point in their life.¹ Except for skin cancer, breast cancer is the most common cancer among women in the U.S., accounting for nearly 29% of newly diagnosed cancers. One case of breast cancer is diagnosed every two minutes, and one woman dies of breast cancer every 13 minutes in the U.S.²

Breast cancer is the second leading cause of cancer death among American women. Among women age 40 – 59, it is the leading cause of cancer death. Although breast cancer in men is rare, an estimated 2,350 men will be diagnosed with breast cancer and approximately 440 will die each year.³ Death rates for breast cancer have steadily decreased in women since 1989 as a result of improvements in early detection and treatment.⁴

Female Breast Cancer Statistics:⁴

Estimated number of new cases in 2016:

- US : 246,660 *
- VA: 6,620

*U.S, Male breast cancer: 2,600 new cases

Estimated number of deaths in 2016:

- US death rate: 40,290 *
- VA death rate: 1,090

* U.S, Male Breast Cancer death: 440

5-year Survival Rate:

Based on data from SEER, 89.7 % of females with breast cancer will survive 5 years after diagnosis.⁵



The 5-year relative survival rate for women diagnosed with localized breast cancer is 99%; if the cancer has spread to nearby tissues or lymph nodes (regional stage) or distant organs (distant stage), the survival rate falls to 84% and 24%, respectively.⁶

Types of Female Breast Cancer:⁷

- *Ductal carcinoma in situ (DCIS)*: 1 in 5 of new breast cancer cases.
- *Invasive ductal carcinoma*: The most common type, 80% of all breast cancers.
- *Invasive lobular carcinoma*: 1% to 3% of all breast cancers.

There are also other rare types of breast cancers that account for less than 1 percent of all types of breast cancers.

Symptoms of Breast Cancer:⁸

Breast lump or mass	Skin/nipple scaliness, redness or thickening
Breast Pain	Nipple discharge
Skin irritation/redness	Nipple retraction
Skin dimpling	Swelling of all or part of breast

Note: Although any of these symptoms can be caused by things other than breast cancer, if you have them, see your health care provider who is experienced in diagnosing breast diseases.

Early Detection & Screening:

U.S Preventive Services Task Force Guidelines

Age < 50: Decide on regular biennial screening mammography based on an individual assessment of benefits and risks

Age 50-74: Biennial screening mammography

Age > 74: There is insufficient evidence to assess the benefits and harms of screening mammography.

Note: Other organizations have different screening recommendations including the "National Comprehensive Cancer Network"⁹ and the American Cancer Society.¹⁰ A doctor should be consulted about when to start screening.

Treatment: ⁶

There are several treatment options for breast cancer. Treatment options are specific to the type and stage of the cancer and may consist of one or more of the following:

- Breast Conserving Surgery (BCS)
- Mastectomy (removal of the breast)
- Radiation
- Chemotherapy
- Hormone therapy

Risk Factors:¹¹

The following factors are associated with increased risk of breast cancer.

Older Age
Being white
Obesity
Starting menstruation before age 12
Menopause after age 55
First pregnancy after age 30 or never having given birth
Post-menopausal estrogen + progestin hormone therapy
Recent oral contraceptive use
Radiation therapy to the breast / chest
Dense breasts

High Risk Populations:^{9, 12}

- Personal history of breast cancer
- Family history of breast cancer
- Genetic mutation (BRCA1 & 2, etc.)
- Presence of certain benign breast conditions (Proliferative lesions with & without atypia, lobular carcinoma in situ)

Note: Women with high risk for breast cancer should start regular screening earlier. Consult a doctor about individual risk and screening recommendations.

Prevention:¹³

Anything that decreases the chance of getting a disease is called a protective factor.

Protective factors for breast cancer include:

✓ *Knowing your risk:*

Talk to your doctor to determine if you have increased risk of breast cancer and whether you should have early screening

✓ *Maintain a healthy body weight*

Gaining weight as an adult and being overweight or obese after menopause increases the risk of breast cancer. This may be due to estrogen production from fat tissue in post-menopausal women and increased insulin in women who are overweight.^{14, 15}

✓ *Eat a healthy diet:*

Choose foods and beverages in amounts that help maintain a healthy weight, limit consumption of processed meat and red meat, eat at least 2½ cups of vegetables and fruits each day, choose whole grains instead of refined-grain products.¹⁶

✓ *Be physically active*

Women who exercise regularly have 10%-25% lower risk of breast cancer.¹⁷ This benefit is even greater in postmenopausal women.¹⁸

Avoid sedentary behavior and participate in at least 150 minutes of moderate-intensity (e.g. brisk walking) aerobic exercise, and 2 days of muscle strengthening exercise per week.¹⁹

✓ *Get screened*

Early detection and effective treatment have resulted in a 36 % decline in breast cancer mortality in the U.S. between 1989 and 2012.²⁰

✓ *Avoid drinking alcohol*

Data from 53 studies found that the relative risk of breast cancer increased by about 7% for each alcoholic drink consumed per day. Women who had 2 to 3 alcoholic drinks per day had a 20% higher risk of breast cancer.²¹

✓ *Breastfeed*

Breastfeeding is associated with a slight reduction in a woman's overall risk of breast cancer. Breastfeeding for a longer duration reduces the risk further.²²

Remember: Being a woman puts you at risk for breast cancer.



Glossary of Terms:

Mammogram: Photograph of breasts made by X-rays

Mastectomy: Surgical removal of all or part of breast

Breast Lump: Growth of tissue within your breast

Estrogen: General term for female steroid sex hormone

Additional Resources:

National Cancer Institute: <http://www.cancer.gov/>

American Cancer Society: <http://www.cancer.org/>

Centers for Disease Control and Prevention: <http://www.cdc.gov/cancer/breast/>

Surveillance, Epidemiology, and End Results Program: <http://www.seer.cancer.gov>

American Institute for Cancer Research – <http://www.aicr.org>

¹ National Cancer Institute, Breast Cancer Risk in American Women, retrieved from:

<http://www.cancer.gov/types/breast/risk-fact-sheet>

² Susan G. Komen, 2015 Breast Cancer Fact Sheet, retrieved from:

<http://komenchattanooga.org/wp-content/uploads/2015/03/2015-Breast-Cancer-Fact-Sheet-FINAL-1-21-15.pdf>

³ National Breast Cancer Foundation, Breast Cancer Facts, retrieved from:

<http://www.nationalbreastcancer.org/breast-cancer-facts>

⁴ Cancer facts & figures 2016. *American Cancer Society*. retrieved from:

https://cancerstatisticscenter.cancer.org/?_ga=1.153251440.932196037.1446575516#/cancer-site/Breast

⁵ Surveillance, Epidemiology, and End Results Program. (n.d.). based on data from 2006-2012, retrieved May 9th , 2016, from: <http://seer.cancer.gov/statfacts/html/breast.html>

⁶ American Cancer Society, Cancer Treatment and Survivorship Facts and Figures, 2014-2015, Estimated Numbers of Cancer Survivors by State as of January 1, 2014, retrieved from:

<http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-042801.pdf>

⁷ American Cancer Society, Types of breast Cancer , Last Medical Review: 09/25/2014, retrieved from:

<http://www.cancer.org/cancer/breastcancer/detailedguide/breast-cancer-breast-cancer-types>

⁸ American Cancer Society, Signs and Symptoms of Breast Cancer, last Medical Review: 10/09/2015, retrieved from:

<http://www.cancer.org/cancer/breastcancer/moreinformation/breastcancerearlydetection/breast-cancer-early-detection-signs-symptoms-br-ca>

⁹ U.S Preventive Services Task Force Guidelines, Breast Cancer Screening, January 2016, retrieved from:

<http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/breast-cancer-screening1>

¹⁰ American Cancer Society, American Cancer Society recommendations for early breast cancer detection in women without breast symptoms, retrieved from:

<http://www.cancer.org/cancer/breastcancer/moreinformation/breastcancerearlydetection/breast-cancer-early-detection-ac-s-recs>

¹¹ National Cancer Institute, Breast Cancer Treatment, general information about breast cancer, Nov 2015, retrieved from:

<http://www.cancer.gov/types/breast/patient/breast-treatment-pdq>

¹² American Cancer Society, What are the risk factors for breast cancer?, retrieved from:

<http://www.cancer.org/cancer/breastcancer/detailedguide/breast-cancer-risk-factors>

¹³ Understanding Breast Changes, A Health Guide for Women, National Cancer Institute, 2014, retrieved from:

<http://www.cancer.gov/types/breast/understanding-breast-changes/understanding-breast-changes.pdf>

¹⁴ Key TJ, Appleby PN, Reeves GK, et al. for the Endogenous Hormones and Breast Cancer Collaborative Group. Circulating sex hormones and breast cancer risk factors in postmenopausal women: reanalysis of 13 studies. *Br J Cancer*. 105(5):709-22, 2011

¹⁵ Eliassen AH, Colditz GA, Rosner B, et al. Adult weight change and risk of postmenopausal breast cancer. *JAMA*. 296(2):193-201, 2006

¹⁶ American Cancer Society, Breast Cancer Facts and Figures, 2015-2016, retrieved from:

<http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-046381.pdf>

¹⁷ Eliassen AH, Hankinson SE, Rosner B, Holmes MD, Willett WC. Physical activity and risk of breast cancer among postmenopausal women. *Arch Intern Med*. 170(19):1758-64, 2010

¹⁸ Hildebrand JS, Gapstur SM, Campbell PT, Gaudet MM, Patel AV. Recreational physical activity and leisure-time sitting in relation to postmenopausal breast cancer risk. *Cancer Epidemiol Biomarkers Prev*. 22(10):1906-12, 2013

¹⁹ ACSM | News Releases. (n.d.). Retrieved February 23, 2016, from <http://www.acsm.org/about-acsm/media-room/news-releases/2011/08/01/acsm-issues-new-recommendations-on-quantity-and-quality-of-exercise>

²⁰ Howlader N, Noone AM, Krapcho M, et al. SEER Cancer Statistics Review, 1975-2012.

http://seer.cancer.gov/csr/1975_2012/, based on November 2014 SEER data submission, posted to the SEER web site, April 2015. Bethesda, MD: National Cancer Institute, 2015

²¹ Hamajima N, Hirose K, Tajima K, et al. for the Collaborative Group on Hormonal Factors in Breast Cancer. Alcohol, tobacco and breast cancer—collaborative reanalysis of individual data from 53 epidemiological studies, including 58,515 women with breast cancer and 95,067 women without the disease. *Br J Cancer*. 87(11):1234-45, 2002

²² Faupel-Badger JM, Arcaro KF, Balkam JJ, et al. Postpartum remodeling, lactation, and breast cancer risk: summary of a National Cancer Institute-sponsored workshop. *J Natl Cancer Inst*. 2013;105: 166-174