

# 31 Truths About Breast Cancer

Compiled by the Breast Cancer Coalition of Rochester (Updated June 28, 2017)

1. More than three-and-a-quarter million women in our country are living in the aftermath of a breast cancer diagnosis. The National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program estimates that, in 2014, there were 3,327,552 women living in the United States who had a history of breast cancer.
2. Breast cancer is second only to non-melanoma skin cancer as the most commonly diagnosed cancer among women in the United States. Female breast cancer represents 15% of all new cancer cases in our country.
3. The biggest risk factors for breast cancer are being a woman and growing older. The median age of diagnosis is 62.
4. A woman in the United States has a 1 in 8 chance of developing breast cancer during her lifetime. It is estimated that a woman age 30 has about a 1 in 227 risk of developing breast cancer in the next 10 years; for a woman age 40, it is about 1 in 68; for a woman age 50, it is about 1 in 42; for a woman age 60, it is about 1 in 28; and for a woman age 70, it is 1 in 26.
5. Breast cancer awareness campaigns have helped destigmatize the disease but have not had a significant impact on the incidence of Stage IV disease or on mortality. Stage IV breast cancer is disease that has, at initial diagnosis, spread to distant sites within the body. The incidence of this has not changed since 1975. In 2017, an estimated 40,610 women in our country will die as a result of breast cancer.
6. True prevention means stopping breast cancer before it develops. As a result of early detection awareness campaigns, which do not prevent breast cancer, there has been an increase in over-diagnosis and over-treatment for many women, involving surgery, radiation, and chemotherapy to treat non-life threatening cancers.
7. It is estimated that 252,710 new cases of invasive breast cancer (cancer that has spread from the site where it started into surrounding, healthy breast tissue) will be diagnosed among women in the U.S. in 2017. In addition to invasive cancers, it is projected that 63,410 cases of non-invasive (in situ) breast cancer will be diagnosed.
8. Men do get breast cancer. While less than 1% of new breast cancer diagnoses occur among men, it is possible for men to develop the disease. It's estimated that about 2,470 new cases of breast cancer will be diagnosed in men in 2017. For males, the lifetime risk of getting breast cancer is about 1 in 1,000.
9. The overwhelming majority (approximately 85%) of those diagnosed with breast cancer have no relatives with the disease. A family history is only one risk factor. Other risk factors include getting older, benign breast problems, early exposure to ionizing radiation, having children later in life or not at all, longer exposure to estrogen and progesterone, lack of exercise, and drinking alcohol.
10. An estimated 154,794 Americans are currently living with metastatic breast cancer, which occurs when cancer in the breast spreads to other parts of the body, most often the lungs, liver, bones, and brain. One quarter of this number represents those whose metastatic disease was found at diagnosis, while three-quarters have experienced metastatic recurrence of early stage disease. Approximately 20% to 30% of people first diagnosed with early stage disease will later develop advanced or metastatic breast cancer.
11. Complementary therapies are often used in conjunction with medical breast cancer treatments (such as surgery, radiation, chemotherapy, and hormonal therapy) as well as by those who have completed treatment. These may include nutrition and exercise, Traditional Chinese Medicine, Ayurveda, homeopathy, acupuncture, mindfulness meditation, yoga, massage, Feldenkrais, Reiki, Qi Gong, Tai Chi, and support networking groups. Before using any complementary therapy, patients should talk with their care team to make sure all aspects of their cancer care work together.
12. White women are more likely to receive a diagnosis of breast cancer, but African American women have a higher mortality rate. The mortality rate for breast cancer for African American women is 29.2 per 100,000 women compared to 20.6 per 100,000 white women. Comparatively speaking, Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native women have lower mortality rates compared to white women.

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## 31 Truths About Breast Cancer, continued

13. All breast cancers are not the same, just as breast tumors do not all grow at the same rate or spread in the same way. The biology of the tumor and its microenvironment (the normal cells and molecules around it) can matter more than its size in determining the aggressiveness of the cancer. Some breast cancers grow quickly; despite early detection while they're still small, they can be deadly. Others grow more slowly, including some that would never pose a threat. Because there is no sure way to know which slow-growing cancers are potentially life-threatening, all are treated..

14. There are several types of breast cancer based on the biology of the tumors. These subtypes respond to different treatments and have different prognoses. Breast tumors are currently classified using three primary immunohistochemical (IHC) tumor markers: Estrogen Receptor (ER), Progesterone Receptor (PR), and Human Epidermal Growth Factor Receptor 2 (HER-2/Neu). The term "Triple Negative" indicates none of these markers are prevalent.

15. Exposure to environmental estrogens is a potential risk factor for breast and gynecologic cancers. Environmental estrogens are a variety of synthetic chemicals and natural plant compounds that, when absorbed into the body, behave like estrogen or block the natural hormone. These include pesticides such as the now-banned DDT and polychlorinated biphenyls (PCBs); Bisphenol-A (BPA); phytoestrogens (naturally occurring estrogen-like plant compounds); and a host of other chemicals.

16. Some breast cancer risk factors such as being a woman, age, genetics, and having dense breasts can't be changed. Others, however, are in your control. Make responsible health choices: eat a healthy diet, practice stress management techniques that work for you, stay active, and minimize your exposures to environmental chemicals. Be an informed consumer by learning about the ingredients in products you use. If needed, consider safer alternatives for yourself and your family.

17. If you are diagnosed with breast cancer, it's not your fault. 85-90% of breast cancers are caused by random genetic changes, and are not the result of a genetic mutation inherited from one of your parents. Maintaining a healthy lifestyle is good for many reasons, and can help minimize your risk for breast

cancer, but that risk can never be reduced to zero. Resist the urge to play the blame game; no one wins.

18. At least 900 synthetic compounds in industrial and commercial products have been identified as endocrine disrupting compounds (EDCs) – chemicals that mimic or interfere with natural hormones. EDCs that mimic estrogen cause concern because of their potential links to women's health. Many have been specifically shown to make estrogen-dependent human breast cancer cells grow in lab tests. These compounds are found in everyday products such as some pesticides, detergents, and plastics.

19. Epigenetics studies the processes regulating how and when certain genes are turned on and turned off. Cancer affects these processes. Nutrigenomics investigates the ways in which certain foods, nutritional supplements, and other lifestyle variables such as cigarette smoking and alcohol consumption may interact with specific genes to increase or decrease risks of conditions such as type II diabetes, obesity, heart disease, stroke, and certain cancers.

20. Breast cancer is ultimately a disease of malfunctioning genes. Many factors can generate growth-promoting signals to cells already primed to become cancerous, or may already be cancerous, because of changes in their genes. Most people are born with normal genes, but across time, a long and complex succession of genetic changes can lead to cancer. These genetic changes are called somatic mutations, and are not inherited.

21. A substantial and growing body of evidence indicates that exposures to chemicals commonly found in the environment and many consumer products – and in women's bodies – are contributing to the rising rates of breast cancer seen in the decades following WWII, paralleling the production of synthetic chemicals. Federal law permits the usage of chemicals such as parabens, phthalates, flame retardants, and pesticides, many of which are endocrine disruptors. You have a right to know if the products you use contain compounds that may increase your risk for disease, including breast cancer.

22. To end breast cancer, we need more focus on understanding how to prevent the disease from developing and how to stop the disease from spreading to other parts of the body. We need a greater understanding

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## 31 Truths About Breast Cancer, continued

of how to find the aggressive cancers that are not detected with mammography, how to keep breast cancer from recurring, and how to prevent it from metastasizing to other parts of the body and becoming lethal.

23. Most self-detected lumps that turn out to be breast cancer are found during normal routines such as showering or getting dressed, not during monthly breast self-exams. About 80% of breast cancers not discovered by mammography are discovered by women themselves. Knowing the landscape of your body and noticing slight changes is always wise. Becoming familiar with one's breasts can help detect breast cancers that mammograms may miss.

24. If you are diagnosed with breast cancer, ask questions. Ask about all treatment options for your specific tumor type. Ask about costs and side effects of treatments. Ask how and why a particular treatment option has been recommended for YOU.

25. According to the American Cancer Society, women ages 40 to 44 who are at average risk of breast cancer should have the choice to start annual breast cancer screening with mammograms if they wish to do so. Breast cancer survivors do not fall into this category and should talk with their health care providers about individualized screening recommendations. All women should be familiar with the recognized benefits, limitations, and potential harms associated with breast cancer screening.

26. Mammography is not prevention. Mammography is a screening test to detect cancer already present in the breast. Getting regular mammograms does not prevent you from getting breast cancer, nor will it always detect the disease. If you have a personal history of breast cancer, never rely on technology as your sole method of surveillance. Knowing what is normal for you is important.

27. The current infrastructure and focus in breast cancer has not led to significant progress in ending the disease or in preventing deaths from the disease. This is true for research and health care and also advocacy: more of the same will not produce different results.

28. Five year breast cancer survival rates do not give an accurate picture of progress against breast cancer. Breast cancer can take many years, sometimes

decades, to develop and spread throughout the body. Counting the number of people alive five years after diagnosis does not accurately portray the true impact of the disease. Following trends in mortality rates over time is the only way to get an accurate picture of the true impact of breast cancer and the progress – or lack thereof – made against the disease.

29. Hormone Replacement Therapy (HRT) may increase your risk of breast cancer. The Women's Health Initiative (WHI) launched clinical trials in 1991 to study the effects of HRT, among other medical/lifestyle interventions, in 161,808 healthy postmenopausal women for impacts on incidence of heart disease, fractures, and breast and colorectal cancer. In 2002, results regarding HRT were published. Researchers found that the estrogen-only HRT group did not have higher incidence of breast cancer, but the risks far outweighed the benefits in the estrogen-plus-progestin arm, which showed a 24% increase in breast cancer rates.

30. In many cases, more treatment is not necessarily better treatment. Recent advances have shown that less invasive treatments are, in certain cases, as effective as more aggressive treatments that have become the standard of care. For those in whom less treatment yields the same result as a more intensive approach, long-term side effects, which are sometimes severe and occasionally fatal, can be minimized.

31. No one needs go through breast cancer alone. If you or a loved one receives a diagnosis of breast cancer, the Breast Cancer Coalition is here to help. The Coalition offers education and support programs for those with breast or gynecologic cancers, advocates on many levels for those affected by these diseases, and provides funding to local researchers whose work addresses either primary prevention or understanding metastasis of breast cancer. The Coalition is a full-scope, grass-roots breast cancer organization serving survivors and families throughout the Finger Lakes Region of Central and Western New York. We can help you find resources in your own community. Contact us.