

BREAST CANCER AWARENESS



WHAT IS BREAST CANCER?

The body is made up of trillions of living cells. Normal body cells grow, divide into new cells, and die in an orderly way. During the early years of a person's life, normal cells divide faster to allow the person to grow. After the person becomes an adult, most cells divide only to replace worn-out, damaged, or dying cells.

Cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of this out-of-control growth of abnormal cells.

Cancer cell growth is different from normal cell growth. Instead of dying, cancer cells keep on growing and form new cancer cells. These cancer cells can grow into (invade) other tissues, something that normal cells cannot do. Being able to grow out of control and invade other tissues are what makes a cell a cancer cell.

In most cases the cancer cells form a tumor. But some cancers, like leukemia, rarely form tumors. Instead, these cancer cells are in the blood and bone marrow.

When cancer cells get into the bloodstream or lymph vessels, they can travel to other parts of the body. There they begin to grow and form new tumors that replace normal tissue. This process is called *metastasis*.

No matter where a cancer may spread, it is always named for the place where it started. For instance, breast cancer that has spread to the liver is still called breast cancer, not liver cancer. Likewise, prostate cancer that has spread to the bone is called metastatic prostate cancer, not bone cancer.

Different types of cancer can behave very differently. For example, lung cancer and breast cancer are very different diseases. They grow at different rates and respond to different treatments. That is why people with cancer need treatment that is aimed at their own kind of cancer.

Not all tumors are cancerous. Tumors that aren't cancer are called *benign*. Benign tumors can cause problems – they can grow very large and press on healthy organs and tissues. But they cannot grow into other tissues. Because of this, they also can't spread to other parts of the body (metastasize). These tumors are almost never life threatening.

CAUSES, RISK FACTORS, AND PREVENTION

While we do not yet know exactly what causes breast cancer, we do know that certain risk factors are linked to the disease. A risk factor is something that affects your chance of getting a disease such as cancer. Different cancers have different risk factors. Some risk factors, such as smoking, drinking, and diet are linked to things a person does. Others, like a person's age, race, or family history, can't be changed.

But risk factors don't tell us everything. Having a risk factor, or even several, doesn't mean that a woman will get breast cancer. Some women who have one or more risk factors never get the disease. And most women who do get breast cancer don't have any risk factors (other than being a woman and growing older). Some risk factors have a bigger effect than others, and your risk for breast cancer can change over time because of aging or lifestyle changes.

Although many risk factors may increase your chance of having breast cancer, it is not yet known just how some of these risk factors cause cells to become cancer. Hormones seem to play a role in many cases of breast cancer, but just how this happens is not fully understood.

Risk factors you cannot change

- Gender: Breast cancer is much more common in women than in men.
- Age: risk goes up with age.
- Genetic risk factors: Inherited changes (mutations) in certain genes like *BRCA1* and *BRCA2* can increase the risk.
- Family history: Breast cancer risk is higher among women whose close blood relatives have this disease.
- Personal history of breast cancer: A woman with cancer in one breast has a greater chance of getting another breast cancer (this is different from a return of the first cancer).
- Race: Overall, white women are slightly more likely to get breast cancer than African-American women. African-American women, though, are more likely to die of breast cancer.
- Dense breast tissue: [Dense breast tissue](#) means there is more gland tissue and less fatty tissue. Women with denser breast tissue have a higher risk of breast cancer.
- Certain benign (not cancer) breast problems: Women who have certain benign breast changes may have an increased risk of breast cancer. Some of these are more closely linked to breast cancer risk than others. For more details about these, see our document [Non-cancerous Breast Conditions](#).
- Lobular carcinoma in situ: In this condition, cells that look like cancer cells are in the milk-making glands (lobules), but do not grow through the wall of the lobules and cannot spread to other parts of the body. It is not a true cancer or pre-cancer, but having LCIS increases a woman's risk of getting cancer in either breast later.
- Menstrual periods: Women who began having periods early (before age 12) or who went through menopause (stopped having periods) after the age of 55 have a slightly increased risk of breast cancer.

- Breast radiation early in life: Women who have had radiation treatment to the chest area (as treatment for another cancer) as a child or young adult have a greatly increased risk of breast cancer.
- Treatment with DES: Women who were given the drug DES (diethylstilbestrol) during pregnancy have a slightly increased risk of getting breast cancer. For more information on DES see our document [DES Exposure: Questions and Answers](#).

Breast cancer risk and lifestyle choices

- Not having children or having them later in life: Women who have not had children, or who had their first child after age 30, have a slightly higher risk of breast cancer. Being pregnant many times or pregnant when younger reduces breast cancer risk.
- Certain kinds of birth control: Studies have found that women who are using birth control pills or an injectable form of birth control called *depot-medroxyprogesterone acetate* (DMPA or Depo-Provera®) have a slightly greater risk of breast cancer than women who have never used them. This risk seems to go back to normal over time once the pills are stopped.
- Using hormone therapy after menopause: Taking estrogen and progesterone after menopause (sometimes called *combined hormone therapy*) increases the risk of getting breast cancer. This risk seems to go back to normal over time once the hormones are stopped. For more information about this, see our document [Menopausal Hormone Therapy](#).
- Not breastfeeding: Some studies have shown that breastfeeding slightly lowers breast cancer risk, especially if breastfeeding lasts 1½ to 2 years.
- Alcohol: The [use of alcohol](#) is clearly linked to an increased risk of getting breast cancer. Even as little as one drink a day can increase risk.
- Being overweight or obese: [Being overweight or obese](#) after menopause (or because of weight gain that took place as an adult) is linked to a higher risk of breast cancer.

Risk factors that are less clear or have been disproven

- Tobacco smoke: [Smoking](#) may increase the risk of breast cancer. The increased risk seems to affect certain groups, such as women who started smoking before they had their first child.
- Night work: A few studies have suggested that women who work at night (nurses on the night shift, for instance) have a higher risk of breast cancer.

Certain factors have been studied without finding a link to breast cancer:

- Antiperspirants
- Bras
- Induced abortions (see our document [Is Abortion Linked to Breast Cancer?](#))
- Breast implants: These may be linked to a rare type of lymphoma, though
- Chemicals: At this time research does not show a clear link between breast cancer risk and exposure to things like plastics, certain cosmetics and personal care products, and pesticides

(such as DDE). Research is being done on the possible health effects of these and similar compounds.

Our document [Breast Cancer](#) has more detailed information about these risk factors.

EARLY DETECTION, DIAGNOSIS, AND STAGING

Screening for breast cancer

The term *screening* refers to tests and exams used to find a disease like cancer in people who do not have any symptoms. The earlier breast cancer is found, the better the chances that treatment will work. The goal is to find cancers before they start to cause [symptoms](#).

The mammogram and clinical breast exam are the main tests recommended by the American Cancer Society to find breast cancer early. For women who are at high risk of breast cancer due to certain factors, the American Cancer Society also recommends breast MRI.

TREATING BREAST CANCER

How is breast cancer treated?

This information represents the views of the doctors and nurses serving on the American Cancer Society's Cancer Information Database Editorial Board. These views are based on their interpretation of studies published in medical journals, as well as their own professional experience.

The treatment information in this document is not official policy of the Society and is not intended as medical advice to replace the expertise and judgment of your cancer care team. It is intended to help you and your family make informed decisions, together with your doctor.

Your doctor may have reasons for suggesting a treatment plan different from these general treatment options. Don't hesitate to ask him or her questions about your treatment options.

General types of treatment

The main types of treatment for breast cancer are:

- [Surgery](#)
- [Radiation](#)
- [Chemotherapy](#)
- [Hormone therapy](#)
- [Targeted therapy](#)
- [Bone-directed therapy](#)

Treatments can be put into broad groups based on how they work and when they are used. It is important to discuss all of your treatment options, including their goals and possible side effects, with your doctors to help make the decision that best fits your needs. It's also very important to ask questions if there is anything you're not sure about. You can find some good questions to ask in the section "[What should you ask your doctor about breast cancer?](#)"

Adjuvant and neoadjuvant therapy

When people who seem to have no cancer left after surgery are given more treatment it is called *adjuvant therapy*. Doctors know that cancer cells can break away from the main tumor and begin to spread through the bloodstream in the early stages of the disease. It's very hard to tell if this has happened. But if it has, the cancer cells can start new tumors in other organs or in the bones. The goal of adjuvant therapy is to kill these hidden cells. Both systemic therapy (like chemo, hormone treatment, and targeted therapy) and radiation can be used as adjuvant therapy. But not every patient needs adjuvant therapy.

Some people are given systemic treatment or radiation before surgery to shrink a tumor. This is called *neoadjuvant therapy*.

TALKING WITH YOUR DOCTOR

What are some questions I can ask my doctor about breast cancer?

As you cope with cancer and cancer treatment, we encourage you to have honest, open talks with your doctor. Ask any question that's on your mind, no matter how small it might seem. Here are some questions you might want to ask. Be sure to add your own questions as you think of them. Nurses, social workers, and other members of the treatment team may also be able to answer many of your questions.

- Would you please write down the [exact type of cancer](#) I have?
- How does this affect my [treatment options](#) and outlook?
- May I have a copy of my [pathology report](#)?
- Has the cancer spread to my lymph nodes or other organs?
- What is the [stage of the cancer](#)? What does that mean for me?
- Will I need other [tests](#) before we can decide on treatment?
- What are my treatment choices? What do you recommend? Why?
- Should I think about [genetic testing](#)?
- Should I look into taking part in a [clinical trial](#)?
- What are the risks or side effects of different treatments?
- What can I do to get ready for treatment?
- How well can I expect breast reconstruction surgery to work if I need or want it?
- What are the pros and cons of having it done right away or waiting until later?
- What will my breasts look and feel like after treatment?
- Will I have normal feeling in my breasts after treatment?
- Will I lose my hair? If so, what can I do about it?

- What are the chances of the cancer coming back with the treatment you suggest?
- What would we do if that happens?
- Should I follow a special diet or make other lifestyle changes?
- Will I go through menopause as a result of treatment?
- Will I be able to have children after treatment?
- What are my chances of survival, based on my cancer as you see it?
- What type of [follow-up](#) will I need after treatment?

Be sure to write down any questions you have that are not on this list. For instance, you might want to ask about recovery times so that you can plan your work schedule. Or you may want to ask about second opinions. Taking another person and/or a tape recorder with you to doctor visits can be helpful. Keeping copies of your medical records, pathology reports, and radiology reports may be useful in case you wish to get a second opinion later.

AFTER TREATMENT

Moving on after treatment for breast cancer

For many women with breast cancer, [treatment](#) may remove or destroy the cancer. Completing treatment can be both stressful and exciting. You may be relieved to finish treatment, but find it hard not to worry about cancer coming back. (When cancer comes back after treatment, it is called *recurrence*.) This is a very common concern in people who have had cancer.

It may take a while before your fears lessen. But it may help to know that many cancer survivors have learned to live with this uncertainty and are leading full lives. Our document [Living with Uncertainty: The Fear of Cancer Recurrence](#) gives more detailed information on this.

For other women, the cancer may never go away completely. They may get regular treatments with chemotherapy (chemo), radiation, or other treatments to try to help keep the cancer in check. Learning to live with cancer that does not go away can be hard and stressful. It has its own type of uncertainty. Our document [When Cancer Doesn't Go Away](#) talks more about this.

Follow-up care

After your treatment is over, ongoing follow-up is very important. During these visits, your doctors will ask about symptoms and do a physical exam. These visits will be scheduled more often at first, and then less often as time goes by. Unless you have had both breasts removed, you will get regular mammograms. Blood tests and imaging studies (like CT scans or MRIs), though, are not a standard part of follow-up for early breast cancer. These tests may only be ordered if you are having problems. Follow-up is needed to watch for treatment side effects and to check for cancer that has come back or spread.

If you are taking [tamoxifen](#) or [toremifene](#), you should have a pelvic exam every year. Be sure to tell your doctor right away if you have abnormal vaginal bleeding because these drugs can increase the risk of [uterine cancer](#). If you are taking an aromatase inhibitor, your doctor might want to have your bone density checked.

Almost any cancer treatment can have side effects. Some may last for a few weeks or months, but others can be permanent. Please tell your cancer care team about any symptoms or side effects that bother you so they can help you manage them. Use this time to ask your health care team questions and discuss any concerns you might have.

If anything suggests that the cancer might have come back, the doctor will want to do more tests. If cancer does come back, the treatment will depend on the place of the cancer and what treatments you've had before. Treatment could be surgery, radiation, hormone therapy, targeted therapy, chemo, or some combination of these.

It is also important to keep health insurance. While you hope your cancer won't come back, it could happen. If it does, you don't want to have to worry about paying for treatment. Should your cancer come back, our document [When Your Cancer Comes Back: Cancer Recurrence](#) helps you manage and cope with this phase of your treatment.

WHAT'S NEW IN BREAST CANCER RESEARCH?

Research into the causes, prevention, and treatment of breast cancer is being done in many medical centers throughout the world.

Causes of breast cancer

Studies continue to find lifestyle factors and habits that alter breast cancer risk. Some studies are looking at the effect of exercise, weight gain or loss, and diet on breast cancer risk. We are also learning more about how genes influence breast cancer. This should happen more quickly now that the human genome has been mapped out.

Treatment

Radiation treatment

For women who need radiation after breast-conserving surgery, newer methods are being studied to see if they work as well as standard treatments in keeping breast cancer from coming back. They can make it easier to get treatment since the treatment can be done in a shorter time.

New chemotherapy drugs

Because advanced breast cancers are often hard to treat, researchers are looking for newer, better drugs. A drug class has been developed that targets cancers caused by *BRCA* mutations. This class of drugs is called *PARP inhibitors* and they have shown promise in [clinical trials](#) treating breast, ovarian, and prostate cancers that had spread and were resistant to other treatments. Further studies are being done to see if this drug can help patients without *BRCA* mutations.

Targeted therapies

[Targeted therapies](#) are a group of newer drugs that take advantage of gene changes in cells that cause cancer.

Drugs that target HER2: A number of drugs are approved to target excess HER2 protein. Studies are being done to see how best to use these in treating early breast cancer. Other drugs that target the HER2 protein are being tested in clinical trials. Researchers are also looking at using a vaccine to target the HER2 protein.

Anti-angiogenesis drugs: For cancers to grow, blood vessels must be made to feed the cancer cells. New drugs are being made that may be useful in stopping breast cancer growth by keeping new blood vessels from forming. Some of these drugs are now being tested in [clinical trials](#).

Other targeted drugs: [Everolimus](#) (Afinitor) is a targeted therapy drug that seems to help hormone therapy drugs work better. It is approved to be given with one certain hormone therapy drug to treat advanced hormone receptor-positive breast cancer in women who have gone through menopause. It has also been studied with other hormone therapy drugs and for treatment of earlier stage breast cancer.

Other possible targets for new breast cancer drugs have been identified in recent years. Drugs based on these targets are now being studied, but most are still in the early stages of clinical trials.

Source

