



About Breast Cancer - A Quick Guide



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This is a brief summary of the information on 'About breast cancer' from our website. You will find more detailed information on the website.

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The breasts and lymphatic system

The breasts are made up of fat, connective tissue, and gland tissue divided into lobes. A network of ducts spreads from the lobes towards the nipple.

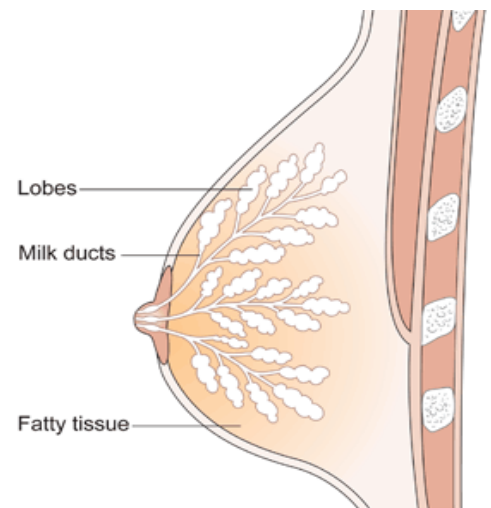


Diagram showing the lobes and ducts of a breast
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Breast size and density

The breasts are not usually the same size as each other. They may also feel different at different times of the month – for example, just before a period they can feel lumpy. Younger women have more glandular tissue in their breasts, which makes them dense. Once a woman is past her menopause, the glandular tissue is gradually replaced by fat, which is less dense.



The lymph nodes

An area of breast tissue leads into the armpit (axilla). The armpits have many lymph glands, also known as lymph nodes. They are part of the lymphatic system. The lymphatic system is made up of a network of lymph glands, connected throughout the body by tiny tubes called lymph vessels. Lymph is a yellow fluid that flows through the lymphatic system and eventually drains into veins. This system helps to get rid of waste products from the body.

Lymph glands are important in cancer care because any cancer cells that have broken away from a tumour can be carried by the lymph to the nearest lymph glands. If you have cancer, but no cancer cells in any of your lymph glands, your cancer is less likely to have spread.

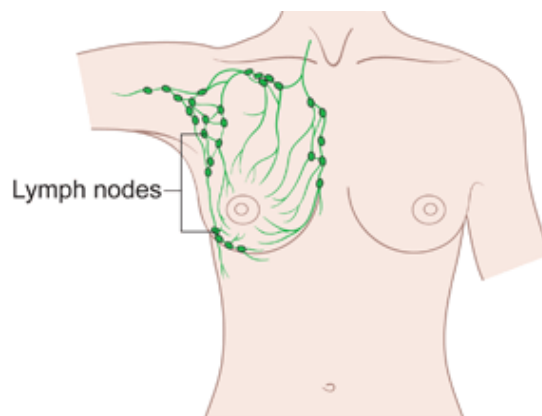


Diagram showing the network of lymph nodes in and around the breast
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Finding breast cancer early

Why be breast aware?

The earlier a breast cancer is diagnosed, the easier it is likely to be to treat it and the better the chance of cure. Being breast aware simply means getting to know how your breasts normally look and feel at different times of the month. If you notice a change that isn't normal for you, **talk it over with your doctor.**

What to look for

You don't need to examine your breasts every day or even every week. Some women have lumpier breasts around the time of a period. If the lumpiness comes and goes with your menstrual cycle, it is nothing to worry about.

It is easiest to check your breasts in the shower or bath. Run a soapy hand over each breast and up under your arm. The NHS breast awareness five-point code says

- Know what is normal for you
- Look and feel
- Know what changes to look for
- Report any changes **straight away**
- Attend for breast screening when you are invited



Breast cancer symptoms

Breast lumps in general

The first symptom of breast cancer for many women is a lump in their breast. But 9 out of 10 breast lumps (90%) are benign. That means they are not cancers. But if you spot a lump, see your doctor straight away.

What to look out for

Changes that could be due to a breast cancer are

- A lump or thickening in an area of the breast
- A change in the size or shape of a breast
- Dimpling of the skin
- A change in the shape of your nipple, particularly if it turns in, sinks into the breast or becomes irregular in shape
- A blood stained discharge from the nipple
- A rash on a nipple or surrounding area
- A swelling or lump in your armpit

These signs don't necessarily mean cancer. But if any of these things happen to you, you should get it checked out.

In a rare type of breast cancer called inflammatory breast cancer, the whole breast can look red and inflamed and can be very sore. Another rare type of breast cancer shows up as a rash on and around the nipple. It is called Paget's disease. It looks a bit like eczema and is sometimes mistaken for that at first.

Definite breast cancer risks

Researchers have identified a number of things that can affect your risk of breast cancer. Breast cancer risk increases with

age. Your risk is increased if you've had it before, or if someone in your family has. You have a particularly increased risk if you carry a breast cancer gene. A history of some non cancerous breast diseases or having had DCIS or LCIS also increases risk.

Hormonal factors

There are some hormonal factors that increase risk, including

- Having higher levels of hormones in your blood after the menopause
- Starting periods early and having a late menopause
- Having no children or having them late in life
- Taking hormone replacement therapy (HRT) or the contraceptive pill.

Lifestyle and past medical treatment

There are also some lifestyle factors that increase risk, including alcohol intake, body weight and night shift work. Some types of medical treatment can affect breast cancer risk, for example taking blood pressure medicines, or exposure to radiation, including treatment for Hodgkin lymphoma.

Breast cancer genes

It is possible to be born with a gene fault that increases the risk of breast cancer. If you have a gene fault it doesn't mean you will necessarily get cancer. But it means that you are more likely to develop it than the average person.

How much breast cancer genes increase your risk

The first breast cancer gene faults to be found were BRCA1 and BRCA2. Women with these genes have a 50 to 80% chance of getting breast cancer in their lifetime. Genetic tests are available to women with a



high risk of having changes in BRCA1, BRCA2, or two other genes called TP53 and PTEN.

Genetic testing

You can have a genetic test if you have a strong family history of breast cancer. Ask your GP for a referral to a specialist breast clinic. If they think that your risk is high, they will refer you to a specialist genetics service. To be tested, you usually need to have a living relative with breast cancer, and they need to be tested first. Some labs can do a test without having blood from a relative, but this is less likely to find the fault. No test is 100% accurate and genetic tests can miss the fault.

Possible breast cancer risks

Researchers are investigating several factors that might increase breast cancer risk including

- Uneven breasts - A recent study showed that women who have one breast larger than the other may be at a slightly increased risk of developing breast cancer. But any increase in risk is small compared to other risk factors. For most women it is normal to have slightly uneven (asymmetrical) breasts.
- Injury to the breast - Scientific research has not identified this as a risk factor but one study did suggest a link. We need more studies to prove or disprove this.

Pesticides, having a pregnancy terminated and stress have all been investigated as well. But research has found that they don't seem to increase risk.

Breast cancer protective factors

Possible breast cancer protective factors

Some things lower the risk of breast cancer such as having a generally healthy lifestyle, including being physically active, and maintaining a healthy body weight. Statistically, if you breastfeed you are at less risk of developing breast cancer, particularly if you have your children when you are younger.

Some research suggests that people with coeliac disease have a lower risk of getting breast cancer.

Drugs to prevent breast cancer

There is research into using drugs to prevent breast cancer. Trials show that the drug tamoxifen can lower breast cancer risk in women at high risk. But there are concerns about side effects for women who are otherwise healthy. We know from other research that women taking aspirin or other non steroid anti inflammatories (such as ibuprofen) have a small reduction in risk of breast cancer. But you shouldn't start taking these medicines without talking to your GP as they can cause other health problems



Diet and breast cancer risk

Research into diet and breast cancer is very difficult because we all eat such a range of different foods in such differing amounts. But several big studies and a big Europe wide research project called EPIC (European Prospective Investigation into Cancer) are starting to give ideas about how diet may affect breast cancer risk. So far many findings have been inconclusive and inconsistent. But there is some evidence that the following may increase the risk of breast cancer

- A diet high in saturated fats – such as oils, butter, margarine, fat in meats, fish and nuts, and fat in sweets, biscuits and cakes
- A high carbohydrate diet in women younger than 50

Some things may reduce the risk of breast cancer but we need more research to be sure. They include diets high in

- Dairy products – due to their high calcium content
- Fibre (in premenopausal women)
- Fruit – possibly due to their antioxidants and fibre
- Plant oestrogens called phyto oestrogens (in post menopausal women) – phyto oestrogens are found in soya bean products and the fibre of whole grains, fruit, vegetables and flax seed

Types of breast cancer

DCIS – ductal carcinoma in situ

If you have ductal cancer in situ (DCIS), it means that cells inside some of the ducts of your breast have started to turn into cancer cells. These cells are all inside the ducts and have not started to spread into the surrounding breast tissue. So, there is very little chance that any of the cells have spread to the lymph nodes or elsewhere in the body.

Invasive ductal breast cancer and DCIS are not the same thing. In invasive ductal breast cancer, the cells have broken out of the ducts and so there is a chance they can spread into nearby lymph nodes or other parts of the body.

Treatment for DCIS

The main treatment for DCIS is surgery. Many women have removal of just the area of DCIS with a border of healthy tissue around it (local excision). But some women have removal of the whole breast (mastectomy). After local excision, you may have radiotherapy to the rest of the breast tissue if the DCIS is high grade.

You might have tamoxifen (a type of hormone therapy) to try to reduce the risk of developing an invasive breast cancer in the future. Trials are looking at using other types of hormone therapy to see if they can also help to reduce the risk of DCIS coming back or developing into an invasive breast cancer.

Whichever treatment you have, you will have regular follow up appointments to make sure that if DCIS comes back, it is picked up as quickly as possible.



LCIS – lobular carcinoma in situ

Lobular cancer in situ (LCIS) means that there are cell changes inside the breast lobes. This is not cancer. But having LCIS means that you have an increased risk of getting breast cancer in the future. Even so, most women with LCIS will not get breast cancer. Men can develop LCIS but this is very rare.

It is important to note that there is a type of breast cancer called invasive lobular breast cancer, and this is different to LCIS.

Treatment for LCIS

Most people with LCIS will not get breast cancer. So you don't usually need treatment. But because of the increased risk of breast cancer your doctor is likely to suggest keeping a close eye on you with

- A breast examination every 6 to 12 months
- A breast X-ray (mammogram) every 1 to 2 years

If a cancer does start to develop, the monitoring should pick it up at a very early stage so that you can have the breast cancer treatment you need as early as possible.

Your doctor may suggest you take a type of hormone therapy to lower the chance of breast cancer if you have LCIS.

Invasive ductal breast cancer

Ductal breast cancer is the most common type of breast cancer. Between 70 and 80 out of every 100 breast cancers diagnosed (70 to 80%) are this type. It is also called ductal carcinoma. An invasive ductal carcinoma of the breast is a cancer that started in the cells that line the ducts of the

breasts and has spread into the surrounding breast tissue.

Most often, ductal carcinoma is described as being of no special type. You may see this written as NST or NOS (not otherwise specified).

Treatment for ductal breast cancer

For ductal breast cancer, you may have

- Surgery
- Radiotherapy
- Chemotherapy
- Hormone therapy
- Biological therapy
- Or a combination of some of the above

On our website we have information on which treatment is used for the different stages of breast cancer. The stage of a cancer tells you how big it is and whether it has spread.

Invasive lobular breast cancer

About 1 in 10 breast cancers diagnosed (10%) are invasive lobular carcinoma. This means that the cancer started in the cells that line the lobules of the breast. Invasive lobular cancer is most common in women between 45 and 55 years old. It is possible for men to get invasive lobular breast cancer, but this is very rare.

If your doctor has told you that you have lobular carcinoma in situ or LCIS, you do not have invasive lobular breast cancer.

Symptoms and diagnosis

Invasive lobular breast cancer does not always show up as a firm lump. And it does not show up on breast X-rays (mammograms). So it can be difficult to



diagnose. You may have a thickened area of breast tissue instead of a definite lump.

Treatment for invasive lobular breast cancer

Usually you will have surgery, possibly followed by radiotherapy, chemotherapy, biological therapy, or a combination of treatments. You may also have hormone therapy after surgery if your cancer cells are oestrogen receptor positive.

Inflammatory breast cancer

This is a rare type of breast cancer. Only about 1 to 4 breast cancers out of every 100 diagnosed (1 or 4%) are this type. It is called inflammatory because the breast tissue becomes inflamed. The cancer cells block the smallest lymph channels in the breast. The lymph channels drain excess fluid away from the tissues and organs.

Symptoms

Because the lymph channels are blocked, the breast becomes swollen, red, firm or hard, and hot to the touch. It may be painful, but this is not always the case. Other possible symptoms include thickening, ridges or pitting of the skin of the breast. Sometimes there is a lump in the breast. The nipple may become inverted (pulled in to the breast), or there may be a discharge from the nipple.

Inflammatory breast cancer symptoms can appear quite suddenly. It is often confused with an infection of the breast (mastitis).

Treatment

The treatment for inflammatory breast cancer can be slightly different than for other types of breast cancer. Usually, chemotherapy is the first treatment you have. After chemotherapy, you are most

likely to have surgery. You may also have radiotherapy and hormone therapy or biological therapy after your surgery, to try to reduce the risk of the cancer coming back.

Paget's disease

Paget's disease is a rare disease that occurs sometimes alongside breast cancer. It is found in 1 or 2 out of every 100 breast cancers (1 to 2%). Paget's disease starts in the nipple or in the area of darker skin surrounding it (the areola). It usually first appears as a red, scaly rash. It can be itchy. It looks very similar to other skin conditions such as psoriasis or eczema and may be mistaken for these.

How Paget's disease is diagnosed

A breast surgeon takes a sample of the affected skin tissue (a biopsy) from the nipple and sends it for examination under a microscope. If the biopsy shows Paget's disease, you then have a breast X-ray (mammogram). In many cases, Paget's disease is a sign of breast cancer or ductal carcinoma in situ (DCIS). DCIS means that there are cancer cells but they are contained within the lining of the ducts or lobes of the breast. About half of the women with Paget's disease have a lump behind the nipple. In 9 out of 10 cases, this is an invasive breast cancer.

How Paget's disease is treated

You have surgery to remove either the whole breast (a mastectomy) or just the affected area (wide local excision). If you have invasive breast cancer your doctor may offer you radiotherapy, chemotherapy, hormone therapy or biological therapy after your surgery.



Rare types of breast cancer

Doctors have developed ways of grouping breast cancers into different types. They call rarer breast cancers **special type** and the more common breast cancers **no special type**. The most common breast cancer is ductal carcinoma and this is often described as being of no special type. You may see this written as NST or NOS (not otherwise specified).

Special type breast cancers have cells with particular features. As well as the rare cancers listed here, lobular breast cancer is also classed as a special type.

Rare types of breast cancer include

- Medullary breast cancer
- Mucinous (muroid or colloid) breast cancer
- Tubular breast cancer
- Adenoid cystic carcinoma of the breast
- Metaplastic breast cancer
- Angiosarcoma of the breast
- Lymphoma of the breast
- Basal type breast cancer
- Phyllodes or cytosarcoma phyllodes
- Papillary breast cancer

Breast cancer in men

In men, breast cancer is very rare. There are about 370 men diagnosed each year in the UK, compared with around 48,400 cases of breast cancer in women.

Is the information the same for men?

Most of the information that men with breast cancer need is the same as for women. The symptoms, diagnosis and treatment are all very similar to women with breast cancer.

Risks and causes

As with women, the single biggest risk factor for male breast cancer is getting older. Most cases are diagnosed in men between the ages of 60 and 70. Other risk factors are high oestrogen levels, exposure to radiation, a family history of cancer, a recognised breast cancer gene in the family, and a rare genetic condition called Klinefelter's syndrome.

Finding support

A diagnosis of breast cancer can be particularly difficult for men. You may feel confused and isolated. It is very common to hear about breast cancer in women but not at all common to hear about it in men. Your consultant may know other men with breast cancer you could talk to. Or you could contact the charity Breast Cancer Care. They have male volunteers you can talk to on the phone.

Screening for breast cancer

Mammograms in breast screening

A mammogram is an X-ray of the breast. The NHS breast screening programme uses mammograms to screen for breast cancer in women aged 50 to 70. They are expanding this from the ages of 47 to 73. You are also likely to have a mammogram if you have breast cancer symptoms, such as a lump, but this happens outside the screening service.

How you have a mammogram

A radiographer helps you to position one breast at a time between 2 flat plates on the X-ray machine. The plates press your breast firmly between them for a few moments to take the X-ray. You have 2 X-rays of each breast. The compression of the breast helps to give a clear picture. Having a mammogram can be uncomfortable. Some



people find it painful. But the discomfort only lasts for the short time that your breast is compressed.

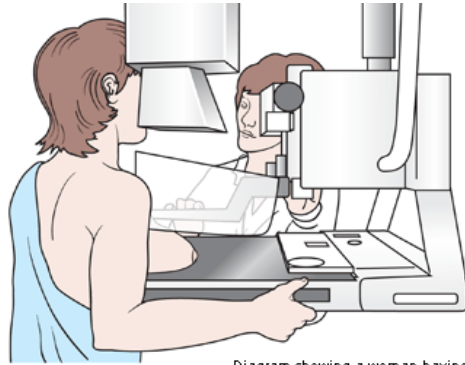


Diagram showing a woman having a mammogram
Copyright © CancerHelp UK

After the mammogram

Two film readers (radiologists) will look at your mammogram and see if there are any signs of cancer. If there is any doubt at all about your mammogram, they will call you back for more tests. Some cancers do not show clear signs on the mammogram. So, if you find any suspicious lump in your breast, always tell your doctor, even if you recently had a mammogram.

Who is screened for breast cancer?

The NHS breast screening programme uses breast X-rays (mammograms) to screen all women in the UK aged 50 to 70 who are registered with a GP. They are sent an invitation to go for screening every 3 years. The breast screening programme is expanding the screening to cover women between the ages of 47 and 73. Women older than 70 can make their own appointment for screening at their local breast screening unit.

The older you are, the more at risk you are of getting breast cancer. So it makes sense to keep having mammograms. If you are under 50, your risk of breast cancer is very low. Mammograms are more difficult to read in younger women because the breast tissue is more dense. Some women have a high risk of breast cancer due to a family history of the disease or an inherited faulty gene. These women can be screened from a younger age using MRI scans, mammograms or both, depending on the level of risk.

If you think you might be at increased risk of breast cancer, speak to your GP. They can refer you to a genetic specialist, who will be able to assess your risk. Not everyone with a family history of cancer is at increased risk themselves. The National Institute for Health and Clinical Excellence (NICE) now recommend that some women with a moderate or high risk because of their family history should start having MRI scans in their 30's and mammograms in their 40's.

Breast awareness

You should still make sure you know how your breasts normally look and feel, even if you are having mammograms every 3 years. Many breast cancers are still found by women themselves. If you notice any symptoms that could be due to breast cancer, don't wait until your next mammogram. See your GP straight away.

Should I see a breast cancer specialist?

It can be very difficult for GPs to decide who may have a breast cancer and who may have a non cancerous breast condition. But there are particular symptoms that mean your GP should refer you to a specialist straight away. The National



Institute for Health and Clinical Excellence (NICE) has produced guidelines for GPs to help them decide which patients need to be seen urgently by a specialist. You should ideally get an appointment within 2 weeks for an urgent referral.

The symptoms that need urgent referral for possible breast cancer are

- A fixed, hard lump in the breast at any age
- Women aged 30 or over with a lump that is still there after their next period
- A woman with a lump that appears after menopause
- Women under 30 with a lump that is getting bigger, is fixed and hard, or who have other reasons for concern, such as a strong family history of breast cancer
- Anyone who has had breast cancer before and has another lump or other suspicious symptoms
- A rash on one nipple or in the surrounding area (this is very rare), that has not responded to treatment
- Nipples that have turned in (inverted) recently
- A blood stained discharge from the nipple for no apparent reason
- Men, aged 50 or over with a firm lump under one nipple, with or without changes in nipple shape or to the surrounding skin

Symptoms such as a distinct lump in a woman under 30, or breast pain, need referral, but not urgently.

What to ask your doctor about breast cancer

- How can I tell if changes in my breasts are normal and not a breast cancer symptom?
- If I have a lump, how likely is it to be cancer?
- Am I more likely to get breast cancer than anyone else?
- Is my family at increased risk of breast cancer?
- How can I reduce my risk of breast cancer?
- Will changing my diet reduce my risk of breast cancer?
- Should I have breast screening?
- What happens during screening?
- Does breast screening hurt?
- How reliable are mammograms at finding breast cancer in women of my age?
- Can I have screening for free if I am over 73 or under 47?
- Where is my nearest breast screening centre?
- What happens if I am called back after breast screening?



Notes

More information

For more information about breast cancer, visit our website
<http://cancerhelp.cancerresearchuk.org>

You will find a wide range of detailed, up to date information for people affected by cancer, including a clinical trials database that you can search for cancer trials in the UK. You can view or print the information in a larger size if you need to.

For answers to your questions about cancer call our Cancer Information Nurses on
0808 800 4040 9am till 5pm Monday to Friday

Adapted from Cancer Research UK's Patient Information Website CancerHelp UK in November 2012. CancerHelp UK is not designed to provide medical advice or professional services and is intended to be for educational use only. The information provided through CancerHelp UK and our nurse team is not a substitute for professional care and should not be used for diagnosing or treating a health problem or disease. If you have, or suspect you may have, a health problem you should consult your doctor. © Cancer Research UK 2012. Cancer Research UK is a registered charity in England and Wales (1089464), Scotland (SC041666) and in the Isle of Man (1103).