

# Patient information from BMJ

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## Breast cancer, locally advanced: what treatments work?

It can be frightening to be told that you have breast cancer. But good treatments are available. If you are diagnosed with breast cancer now, you have a much better chance of surviving your illness than people did in the past.

You can use this leaflet to talk with your doctor and decide which treatments are best for you.

### What treatments work

People who have locally advanced breast cancer often need to have surgery to remove the breast that has the tumor.

But you might be able to have breast-conserving surgery. This means that just the tumor is removed and not the whole breast. Improved breast-scanning techniques mean that this type of surgery can be used more often. You can discuss with your doctor which type of surgery is the right one for you.

Other treatments that can help stop breast cancer spreading or returning include:

- Chemotherapy (drugs that kill cancer cells)
- Radiation therapy (x-rays that kill cancer cells), and
- Hormone therapy.

### Surgery

#### Mastectomy

The operation to remove a complete breast is called a **total mastectomy**. All of the breast tissue is removed along with some of the skin over the breast and the nipple. Some lymph nodes in the armpit are also removed.

Doctors used to do an operation called a **radical mastectomy**, which also removed some of the muscles under the breast. But this is not usually done any more, because usually a total mastectomy works just as well.

A mastectomy is a serious operation. As with any operation, there are risks. For example:

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- Fluid sometimes builds up around the scar on your chest and in your upper arm. You may need to have this fluid drained in a hospital.
- Removing the breast cannot guarantee that the area around your breast will be free from cancer cells. The breast cancer could return in the scar. But this is rare.
- You could get an infection in the wound and need antibiotics.

You might find it hard to come to terms with losing a breast. Breast reconstruction surgery may help. You may be able to have your breast removed and breast reconstruction carried out during the same operation.

### Breast-conserving surgery

In this operation the surgeon removes the tumor but not the whole breast. You might have heard it called **lumpectomy**. The aim is to remove the cancer while changing the appearance of the breast as little as possible.

But this operation isn't suitable for everyone with locally advanced breast cancer. For example, if your cancer has spread it's often safest to remove the whole breast.

### Chemotherapy (cancer drugs)

If you have locally advanced breast cancer, you are likely to have chemotherapy. It's the standard treatment.

Chemotherapy drugs kill stray cancer cells left in the body. Chemotherapy is used after breast surgery and radiation therapy to:

- Reduce the chance of breast cancer coming back
- Reduce the chance that breast cancer will spread further, and
- Control breast cancer that has spread to other parts of the body.

Some people have chemotherapy before surgery to reduce the size of their tumor and make it easier to remove.

Some chemotherapy drugs are given as pills and others as a drip. You may get treatment at a clinic or a hospital as an outpatient. You'll probably need to take a combination of drugs for several months.

Chemotherapy can have unpleasant side effects. You may feel sick and vomit during or after your treatment. You may also lose your hair, put on weight, and get symptoms of the menopause.

You might feel very tired during chemotherapy. This tiredness may be overwhelming, and it can continue after you stop treatment. It's a good idea to arrange help from friends and family while you're having chemotherapy, to help with everyday tasks.

### Drugs for HER2-positive cancer

About 1 in 5 women with breast cancer have a type called HER2-positive breast cancer.<sup>[1]</sup> These cancers grow faster and are more likely to come back than cancers that are HER2 negative.

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Women with HER2-positive disease may be offered drugs called monoclonal antibodies. These drugs slow down or stop the growth of HER2 cancer cells. You may have heard of one called Herceptin (trastuzumab).

But monoclonal antibodies can cause side effects, including serious heart and lung problems. So if you have HER-2 positive breast cancer you will be carefully checked to see if you are healthy enough to be treated with these drugs. You will also be monitored throughout treatment.

### Radiation therapy

If you have locally advanced breast cancer, having radiation therapy after surgery may reduce the chance that your breast cancer will come back.

Radiation therapy may also help you live longer. Radiation therapy uses radiation to kill any cancer cells in your breast left behind after surgery. If you have radiation therapy you will probably need sessions several times a week for several weeks.

Your skin may itch or change color after radiation therapy, and your breast may feel tender. You might feel more tired than usual. These problems are usually mild and go away after a few weeks.

A few people get nerve damage or inflammation (swelling) in their lungs some time after radiation therapy. These problems sound serious, but they are rare and they can be treated.

Radiation therapy and mastectomy treat only the breast area. If you have locally advanced cancer, you will also need chemotherapy to stop cancer spreading further and growing in other parts of your body.

### Hormone therapy

You might have hormone treatment (sometimes called endocrine therapy) after chemotherapy or radiation therapy. You may have heard of a treatment called tamoxifen, which is commonly used to treat breast cancer. But there are others, including drugs called aromatase inhibitors.

The type of hormone treatment you are offered might depend on whether you are a woman who has been through the menopause. For example, aromatase inhibitors seem to work best for women who are post menopausal (have been through the menopause).

Tamoxifen and other hormone treatments are used to treat breast cancers that are sensitive to the hormone estrogen. Estrogen encourages these cancers to grow. Your doctor will do tests on your tumor to find out if it is estrogen-receptor positive or progesterone-receptor positive. If it is, your doctor may prescribe tamoxifen or another hormone treatment for you for up to five years.

These treatments stop estrogen from working in the body. The aim is to reduce the chance that your cancer will come back.

Tamoxifen can cause side effects, including symptoms of the menopause in women. This is more common if you haven't been through the menopause already. Some of the side effects of tamoxifen include:

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- Hot flashes
- Tiredness
- Build-up of fluid, causing swelling of hands and legs
- Vaginal dryness
- Nausea.

Men taking tamoxifen can have side effects such as hot flushes and swelling of their hands and legs too. Rare side effects of tamoxifen that can affect both women and men include cataracts and deep vein thrombosis.

Aromatase inhibitors can cause stiffness and pain in the muscles and joints.

### Treatments during pregnancy

If you are pregnant and you have breast cancer, it is still possible to have surgery to remove the cancer. Your doctor will discuss your treatment options with you.

It is now considered safe to have some types of chemotherapy in the later stages of your pregnancy, without harming your baby. You won't be able to have radiation therapy until after your baby is born.

### Drugs to prevent bone damage (osteoporosis) caused by cancer treatments

Some cancer treatments can make your bones become weaker, which makes fractures more likely. Your breast cancer doctors and nurses will look at your risk of bone damage depending on the treatments you are receiving. They will also look at your other risk factors, such as your age and whether you smoke cigarettes. You may be advised on how to make sure you are getting enough calcium and vitamin D. You may be given drugs called bisphosphonates to help reduce bone damage and help prevent fractures.

1. Reichman ME, Altekruse S, Li CI, et al. Feasibility study for collection of HER2 data by National Cancer Institute (NCI) Surveillance, Epidemiology, and End Results (SEER) Program central cancer registries. *Cancer Epidemiol Biomarkers Prev.* 2010 Jan;19(1):144-7.

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