

# 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. Women with breast cancer now have a much better chance of surviving their illness than they did in the past.

You can use our information to talk to your doctor and decide which treatments are best for you.

### What treatments work?

Women who have locally advanced breast cancer often need to have surgery to remove the breast that has the tumour.

But some women may be able to have breast-conserving surgery. This means that just the tumour is removed and most of the breast tissue is left intact. Improved breast-scanning techniques mean that more women are now able to have breast-conserving surgery. 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)
- radiotherapy (x-rays that kill cancer cells)
- 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 for most women a total mastectomy works just as well.

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

- fluid sometimes builds up around the scar on your chest and in your upper arm. You may need to have this fluid drained in 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.

Many women 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 reconstructed during the same operation.

### Breast-conserving surgery

In this operation the surgeon removes the tumour but leaves the breast intact. You might have heard it also 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 all women with locally advanced breast cancer. Often the cancer has spread so far that it's safest to remove the whole breast.

### Chemotherapy (cancer drugs)

Most women who have locally advanced breast cancer have chemotherapy. It's the standard treatment.

Chemotherapy drugs kill stray cancer cells left in the body. Chemotherapy is used after breast surgery and radiotherapy 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 women have chemotherapy before surgery to reduce the size of their tumour and make it easier to remove their breast.

Some chemotherapy drugs are given as tablets and others as a drip. You may get treatment at a clinic or 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.

A lot of women 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 like shopping and cooking.

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### Drugs for HER2-positive cancer

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

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 women who have HER2-positive breast cancer are carefully checked to see if they are healthy enough to be treated with these drugs. Women are also monitored throughout their treatment.

### Radiotherapy

If you have locally advanced breast cancer, having radiotherapy after surgery may reduce the chance that your breast cancer will come back. Radiotherapy may also help you live longer.

Radiotherapy uses radiation to kill any cancer cells in your breast left behind after surgery. If you have radiotherapy you will probably need sessions several times a week for several weeks.

Your doctor may suggest radiotherapy if there's a high risk that your cancer will come back in the chest wall. You may be at higher risk of your cancer coming back if your cancer is large and is growing quickly, or you have cancer in lots of your underarm lymph nodes.

Your skin may itch or change colour after radiotherapy, and your breast may feel tender. Some women 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 radiotherapy. These problems sound serious, but they are rare and they can be treated.

Radiotherapy 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

Some women have hormone treatment (sometimes called endocrine therapy) after chemotherapy or radiation. 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 have been through the menopause. For example, aromatase inhibitors only work 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 oestrogen. Oestrogen encourages these cancers to grow.

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Your doctor will do tests on your tumour to find out if it is oestrogen-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 oestrogen from working in the body. The aim is to reduce the chance that your cancer will come back.

Tamoxifen can cause side effects in some women, including symptoms of the menopause. This is more common if you haven't been through the menopause already. About half the women taking tamoxifen get one or more side effects, such as:

- hot flushes
- irregular periods
- vaginal dryness, and
- indigestion or nausea.

Rare side effects of tamoxifen include cataracts and deep vein thrombosis.

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

### Treatments during pregnancy

Treatment for women who had breast cancer while pregnant used to be mastectomy, with chemotherapy and radiotherapy delayed until after the birth.

But newer evidence suggests that some pregnant women might be able to have breast-conserving surgery, along with chemotherapy in the later stages of pregnancy, without harming their baby.

Radiotherapy still has to wait until after the birth.

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

Some cancer treatments can cause bones to become weaker, which makes fractures more likely. Drugs called bisphosphonates can help reduce this bone damage and help prevent fractures. But it's possible that they only help women who have been through the menopause.

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