

Trastuzumab

This booklet explains what trastuzumab is, how it works, when it may be prescribed and the side effects you may experience.



This information is by Breast Cancer Care.

We are the only specialist UK-wide charity that supports people affected by breast cancer. We've been supporting them, their family and friends and campaigning on their behalf since 1973.

Today, we continue to offer reliable information and personal support, over the phone and online, from nurses and people who've been there. We also offer local support across the UK.

From the moment you notice something isn't right, through to treatment and beyond, we're here to help you feel more in control.

For breast cancer care, support and information, call us free on **0808 800 6000** or visit **breastcancercare.org.uk**



What is trastuzumab?

Trastuzumab is a targeted (biological) therapy. Targeted therapies block the growth and spread of cancer. They target and interfere with processes in the cells that help cancer grow.

You may have a brand of trastuzumab called Herceptin, or you may have a biosimilar (see page 5). Trastuzumab biosimilars include Herzuma, Kanjinti and Ontruzant and more will be available in future.

How does trastuzumab work?

Some breast cancer cells have a higher than normal level of a protein called HER2 on their surface, which stimulates them to grow. Around one in five invasive breast cancers (breast cancer that has the potential to spread to other parts of the body) have this and are called HER2 positive.

Trastuzumab works by attaching itself to the HER2 proteins so that the cancer cells are no longer stimulated to grow. It also helps the body's immune system destroy breast cancer cells.

Who might be offered trastuzumab?

Only people with HER2 positive breast cancer will benefit from having trastuzumab. If your cancer is HER2 negative, then trastuzumab will not be of any benefit.

There are various tests to measure HER2 levels which are done on breast tissue removed during a biopsy or surgery (see page 7).

HER2 testing is normally only done on invasive breast cancer, so it's unlikely to be mentioned if you have an early form of breast cancer called ductal carcinoma in situ (DCIS).

Trastuzumab may not be suitable for people who have heart problems or high blood pressure (hypertension) that's not well controlled. If your breast cancer is HER2 positive and you have heart problems, your treatment team will usually arrange additional tests to check how well your heart is working.

What is a biosimilar?

The drug you're offered may be a trastuzumab biosimilar.

Once a patent for a new drug has expired, other companies can reproduce it. A biosimilar is a drug that's very similar to an original biological drug.

Many drugs are made by mixing chemical ingredients, but biological drugs and biosimilars are made from living organisms.

Biosimilars:

- work in the same way as the original patented biological drug
- are carefully tested for quality, safety and effectiveness
- are cheaper than the original biological drug
- have been used in the treatment of other diseases for several years

When is trastuzumab given?

Primary breast cancer

Trastuzumab can be used as a treatment for primary breast cancer (breast cancer that has not spread beyond the breast or the lymph nodes under the arm).

Before surgery

Sometimes, trastuzumab is given before surgery. This is known as neo-adjuvant or primary therapy. It may be used to slow down the growth of breast cancer to reduce the chance of it spreading to other parts of the body, or to help shrink a large breast cancer before surgery. It may be given with chemotherapy, and sometimes with another drug called pertuzumab (Perjeta).

Your treatment team will be able to explain the reasons for recommending each treatment and when it'll be given.

After surgery

It can be given after surgery to reduce the likelihood of the breast cancer returning or spreading to another part of the body. This is known as adjuvant treatment. It may be given with or after chemotherapy, and sometimes with pertuzumab.

Breast cancer recurrence

Trastuzumab may be used to treat breast cancer that's come back in the chest, breast or skin near the original site or scar (known as local recurrence).

Trastuzumab can also be used when the breast cancer has come back and spread to the tissues and lymph nodes around the chest, neck and under the breastbone (known as locally advanced or regional recurrence).

Secondary breast cancer

Trastuzumab can be used to treat secondary breast cancer. This is when cancer cells from the breast have spread to other parts of the body such as the bones, lungs, liver or brain.

How do I know if my breast cancer is HER2 positive or HER2 negative?

All invasive breast cancers are tested for HER2 levels. This is done in a hospital laboratory on a sample of breast cancer tissue removed during a biopsy or surgery. The results are usually available within one to three weeks.

There are various tests to measure HER2 levels. IHC (immunohistochemistry) is usually done first. It involves a special staining process performed on a sample of breast cancer tissue.

It's reported as a score ranging from 0–3:

- 0 or 1+ means the breast cancer is HER2 negative
- 2+ is borderline
- 3+ means the breast cancer is HER2 positive

Breast cancers with a borderline result (2+) should be retested using more specialised techniques to determine if they are truly HER2 positive.

How is trastuzumab given?

Trastuzumab can be given as a drip into a vein (intravenous infusion) in your arm or hand.

It can also be given as an injection into the fatty tissue under the skin (subcutaneous injection) in your thigh.

It's most commonly given once every three weeks. Some people have it weekly. You'll usually have your treatment as an outpatient at the hospital, although some people are able to have their treatment at home.

Trastuzumab is usually given with chemotherapy because this is how it has been studied in clinical trials. It can also be given alongside other treatments such as radiotherapy, hormone therapy and another biological therapy called pertuzumab (Perjeta).

As a drip

The first infusion is usually given over an hour and a half. You will be asked to stay in the hospital for several hours after your treatment to ensure you're not feeling unwell before leaving. If there are no problems, future doses can be given over 30 minutes and you'll only need to stay for a couple of hours afterwards.

The drug may be given through a tube that's put into the vein each time you have the treatment, or it may be given through a device that stays in place throughout the whole course of the treatment.

As an injection

This is given over two to five minutes. The injections are given into the right and left thighs alternately. You'll be asked to stay in the hospital for a few hours after your first injection to make sure you're not feeling unwell before leaving. If there are no problems you won't need to stay as long after future doses.

If you're already having trastuzumab as an intravenous infusion you may be switched to the subcutaneous injection.

The trastuzumab biosimilars Herzuma, Kanjinti and Ontruzant aren't available as a subcutaneous injection.

What happens if I miss a dose?

If you're having trastuzumab over many months you may want to miss or delay one treatment, for example to take a holiday. If you want to do this, discuss it with your treatment team beforehand.

How long will I have trastuzumab for?

If you're having trastuzumab to treat primary breast cancer after surgery it's usually given for one year (around 18 cycles).

If you're having trastuzumab before surgery you'll usually have four to six cycles.

If you're having trastuzumab to treat secondary breast cancer it's usually given for as long as it's keeping the cancer under control.

What are the possible side effects of trastuzumab?

Like any treatment, trastuzumab can cause side effects. Everyone reacts differently to drugs and some people have more side effects than others. These side effects can usually be managed and those described here will not affect everyone.

If you're concerned about any side effects, regardless of whether they're listed here, talk to your treatment team as soon as possible.

If you're being given chemotherapy and trastuzumab at the same time you may have other side effects from the chemotherapy.

Blood clots

People with breast cancer have a higher risk of blood clots. Their risk is higher because of the cancer itself and some treatments for breast cancer.

If the cancer has spread to other parts of the body (secondary breast cancer), this also increases the risk.

Blood clots can be harmful but are treatable so it's important to report symptoms as soon as possible.

If you experience any of the following symptoms contact your local A&E department, GP or treatment team straight away:

- pain, redness/discolouration, heat and swelling of the calf, leg or thigh
- swelling, redness or tenderness where a central line is inserted to give chemotherapy, for example in the arm, chest area or up into the neck
- shortness of breath
- tightness in the chest
- unexplained cough (may cough up blood)

Common side effects

Flu-like symptoms

Fever, chills and mild pain in some parts of the body can occur during or shortly after your treatment. These symptoms are more common the first time you have trastuzumab and don't usually last long. Taking pain relief can help.

Nausea (feeling sick)

This is usually mild and doesn't last long. Anti-sickness drugs can be prescribed to relieve it.

Diarrhoea

You may have mild diarrhoea. Your treatment team or GP can prescribe drugs to help control it. Contact your treatment team if you have four or more episodes of diarrhoea within 24 hours.

Soreness at the injection site

You may experience some soreness at the injection site if you have trastuzumab as a subcutaneous injection.

Less common side effects

After the first treatment you may have other side effects including:

- headaches
- dizziness
- joint and muscle pain
- rash
- vomiting (being sick)
- breathlessness

These side effects are often mild and don't usually continue with future treatments.

Rarer side effects

Allergic reaction

If you have an allergic reaction to trastuzumab, it'll probably happen within the first few hours after your treatment and will most likely be the first or second time you have the drug. Reactions can vary from mild to severe, but severe reactions are uncommon. You'll be monitored closely during your treatment so that any reaction can be dealt with immediately.

Symptoms of an allergic reaction include flushing, skin rash, itching, back pain, shortness of breath, faintness, fever or chills. If you have a severe reaction, treatment will be stopped immediately.

Occasionally these symptoms start later than six hours after your treatment. If this happens contact your hospital immediately.

Heart problems

There's a small chance of developing heart problems, such as an abnormal heart rhythm, which can cause symptoms such as breathlessness, discomfort in the chest or a feeling like your heart is racing.

Tests to check how well your heart is working, including an echocardiogram (an ultrasound of the heart) or multiple-gated acquisition (MUGA) scan (a scan that uses a small amount of radioactive material), are usually carried out before treatment starts.

You may continue to have tests (usually an echocardiogram) every three months during treatment, and every six months for two years after your last dose of trastuzumab.

Heart problems are more likely when trastuzumab is given at the same time as chemotherapy or if you already have a heart condition.

If you do develop heart problems, treatment may be stopped temporarily. Occasionally it may need to be stopped permanently. You may need to have treatment for any heart problems that develop as a result of having trastuzumab.

Only a small number of people having trastuzumab develop heart problems and they usually reverse once treatment has finished.

Pregnancy, contraception and breastfeeding

Trastuzumab isn't usually prescribed during pregnancy and women are advised not to become pregnant as it may be harmful to a developing baby. Some women can still become pregnant even if their periods are irregular or have stopped, so effective barrier contraception, such as a condom, should be used for at least seven months after treatment finishes.

Breastfeeding is also not recommended while having trastuzumab or within seven months of the last dose.

Travel and vaccinations

Depending on whether or not you're having trastuzumab alongside or following chemotherapy, you may or may not be able to have travel or routine vaccinations. If you need a vaccination, discuss this with your treatment team first.

Four ways to get support

We hope this information was helpful, but if you have questions, want to talk to someone or read more about breast cancer, here's how you can.



Speak to our nurses or trained experts. Call our free Helpline on **0808 800 6000** (Monday to Friday 9am–4pm and Saturday 9am–1pm). The Helpline can also put you in touch with someone who knows what it's like to have breast cancer.



Chat to other women who understand what you're going through in our friendly community, for support day and night. Look around, share, ask a question or support others at forum.breastcancercare.org.uk



Find trusted information you might need to understand your situation and take control of your diagnosis or order information booklets at breastcancercare.org.uk



See what support we have in your local area. We'll give you the chance to find out more about treatments and side effects as well as meet other people like you. Visit breastcancercare.org.uk/in-your-area

We're here for you: help us to be there for other people too

If you found this booklet helpful, please use this form to send us a donation. Our information resources and other services are only free because of support from people such as you.

Donate today and together we can ensure that everyone affected by breast cancer has someone to turn to.

Donate online

Donate using your debit or credit card breastcancercare.org.uk/donate

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Please accept my donation of **£10/£20/my own choice of £**

I enclose a cheque/PO/CAF voucher made payable to **Breast Cancer Care**

Name _____

Address _____

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In addition, we'd love to keep you updated about our work and provide you with other opportunities to get involved with Breast Cancer Care. Please tell us how you would like to hear from us (by ticking these boxes you confirm you are 18 or over)

- I'd like to hear from you by email
- I'd like to hear from you by text message or SMS
- Please do not contact me by post
- Please do not contact me by telephone

We never give your information to other organisations to use for their own purposes. To change your preferences, or find out more information on how we use your data, please view our privacy policy at breastcancercare.org.uk or contact supporter services on 0345 092 0800.

Please return this form to Breast Cancer Care, Freepost RRRKZ-ARZY-YCKG, Chester House, 1-3 Brixton Road, London SW9 6DE

From 1 April 2019 Breast Cancer Care will merge with Breast Cancer Now so after that date donations will go to Breast Cancer Care and Breast Cancer Now a company limited by guarantee in England 9347608 and a charity registered in England and Wales 1160558, Scotland SC045584 and Isle of Man 1200, with registered office: Fifth Floor, Ibex House, 42-47 Minories, London EC3N 1DY.

Code: LP



About this booklet

Trastuzumab was written by Breast Cancer Care's clinical specialists, and reviewed by healthcare professionals and people affected by breast cancer.



For a full list of the sources we used to research it:

Phone **0345 092 0808**

Email **publications@breastcancercare.org.uk**



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When you have breast cancer, everything changes. At Breast Cancer Care, we understand the emotions, challenges and decisions you face every day, and we know that everyone's experience is different.

For breast cancer care, support and information, call us free on **0808 800 6000** or visit **breastcancercare.org.uk**

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