

Trastuzumab (Herceptin)



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**



Trastuzumab is the generic (non-branded) name of the drug, and is how it's referred to in this booklet. Its current brand name is Herceptin.

What is trastuzumab?

Trastuzumab belongs to a group of drugs called monoclonal antibodies. It is a targeted therapy (also called biological therapy).

How does it work?

Targeted therapies block the growth and spread of cancer. They target and interfere with processes in the cells that cause cancer to grow.

Some breast cancer cells have a higher than normal level (known as overexpression) of a protein called HER2 (human epidermal growth factor receptor 2) on their surface, which stimulates them to grow. Around 15–20% of 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 (also known as receptors) so that the cancer cells are no longer stimulated to grow. It also helps the body's immune system destroy breast cancer cells.

When is trastuzumab prescribed?

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

It is usually given following surgery, either with or after chemotherapy, to reduce the chance of the breast cancer returning or spreading to another part of the body. This is known as adjuvant treatment.

Trastuzumab isn't given without having chemotherapy as well because this is how the two treatments have been studied in clinical trials.

It can be given alongside other recommended treatments such as radiotherapy and hormone therapy.

Sometimes, chemotherapy and trastuzumab may be given before surgery. This is known as neo-adjuvant or primary therapy. For example, they may be used to slow the growth of rapidly growing 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.

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

Trastuzumab can be used to treat breast cancer that has come back in the chest/breast area (known as local recurrence) or surrounding area (known as locally advanced or regional recurrence). It can also be prescribed if you are diagnosed with secondary breast cancer (when cancer cells from the breast have spread to other parts of the body).

It may also be given alongside other targeted therapies or as part of a clinical trial.

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

Trastuzumab is not usually prescribed during pregnancy and women are advised not to become pregnant within seven months of the last dose. Breastfeeding is also not recommended while having trastuzumab or within seven months of the last dose.

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 between one and three weeks later.

Outside of a clinical trial, HER2 testing is normally only done on invasive breast cancer, so this is unlikely to be mentioned if you have ductal carcinoma in situ (DCIS).

There are various tests to measure HER2 levels. The three most commonly used tests are IHC (immunohistochemistry), FISH (fluorescent in situ hybridisation) and CISH (chromogenic in situ hybridisation).

IHC 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. A score of 0 or 1+ means the breast cancer is HER2 negative. A score of 2+ is borderline and a score of 3+ means the breast cancer is HER2 positive.

Breast cancers with a borderline result (2+) should be re-tested with FISH or CISH to determine if they are truly HER2 positive. These are more specialised tests and are reported as positive or negative.

How is trastuzumab given?

Trastuzumab is most commonly given once every three weeks. You'll normally have your treatment as an outpatient at the hospital. Some patients are able to have their treatment at home.

It 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), usually in your thigh.

Intravenous infusion

The first intravenous infusion is usually given over a period of an hour and a half. You will be asked to stay in the hospital for a few hours after your treatment to ensure you're not feeling unwell before leaving. If there are no problems, subsequent doses can be given over 30 minutes and you won't be asked to stay for as long after.

If it's difficult to find a vein, a central venous access device such as a skin-tunnelled catheter can be used. This stays in place throughout the course of the treatment and the trastuzumab is given through it. You can find out more about central venous devices in our **Chemotherapy for breast cancer** booklet.

Subcutaneous injection

The subcutaneous injection is usually given over 2–5 minutes. The injections are given into the right and left thighs alternately. You will 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 be asked to stay for as long after the other injections.

If you are already having trastuzumab as an intravenous infusion you may be offered a switch to the subcutaneous injection.

How long will I have trastuzumab for?

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

Can 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 you should discuss this with your specialist team beforehand.

What are the side effects of trastuzumab?

Like any drug, trastuzumab can cause side effects. Everyone reacts differently to drugs and some people have more side effects than others. Side effects are more likely with the first few treatments and in most cases reduce over time.

This booklet does not list all the possible side effects. If you have any questions about side effects, whether they are listed below or not, talk to your specialist team.

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

Blood clots

People with cancer may be at higher risk of developing a blood clot because of the cancer and its treatment. Tell your doctor straight away if you have any swelling, pain or redness in your leg, shortness of breath or chest pains.

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 specialist team or GP (local doctor) can prescribe drugs to help control this.

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

You may have other side effects after the first treatment including headaches, dizziness, joint and muscle pain, rash, vomiting or breathlessness. These side effects are often mild and don't usually happen after the other treatments.

Rarer side effects

Allergic reaction

If you have an allergic reaction to trastuzumab, it will 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 will 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 is a small chance of developing heart problems such as an abnormal heart rhythm, which can cause symptoms such as breathlessness and palpitations. Tests to check how well your heart is working, such as 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 and may be repeated every three to four months during treatment.

Heart problems are more likely when trastuzumab is given at the same time as chemotherapy, especially with a group of drugs called anthracyclines, or if you already have heart problems. Only a small number of people having trastuzumab develop heart problems and they usually reverse once treatment has finished. If you do develop heart problems, you'll probably need treatment for them and the trastuzumab and/or chemotherapy may need to be stopped temporarily. Occasionally the trastuzumab and/or chemotherapy may need to be stopped permanently.

If you already have significant heart or blood pressure problems, you may be advised not to have trastuzumab.

Vaccinations

Depending on whether or not you are 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 specialist team first.

Contraception

Women who are still having periods, or whose periods have stopped as a result of having chemotherapy (which may be temporary), should use a barrier method of contraception such as condoms during treatment, and for at least seven months afterwards, because trastuzumab may have a harmful effect on a developing baby.



4 ways to get support

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



Speak to trained experts, nurses or someone who's had breast cancer and been in your shoes. Call free on **0808 800 6000** (Monday to Friday 9am–5pm, Wednesdays til 7pm and Saturday 9am–1pm).



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.

We want to be there for every person facing the emotional and physical trauma of a breast cancer diagnosis. Donate today and together we can ensure that everyone affected by breast cancer has someone to turn to.

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- Please tick if you're happy to receive email from us
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We won't pass on your details to any other organisation or third parties.

Please return this form to Breast Cancer Care, Freepost RRRKZ-ARZY-YCKG,
5-13 Great Suffolk Street, London SE1 0NS



About this booklet

Trastuzumab (Herceptin) 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:

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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**

Central Office

Breast Cancer Care
5–13 Great Suffolk Street
London SE1 0NS
Phone: 0345 092 0800
Email: info@breastcancercare.org.uk

Registered charity in England and Wales 1017658
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