Trastuzumab deruxtecan (Enhertu)

1. What is trastuzumab deruxtecan?
   Trastuzumab deruxtecan is a targeted (biological) therapy. Targeted therapies interfere with processes in cells that help cancer grow.

2. Who might be offered trastuzumab deruxtecan?
   You may be offered trastuzumab deruxtecan if you have HER2 positive breast cancer that has spread to another part of the body.

3. How trastuzumab deruxtecan works
   Some breast cancer cells have a higher than normal level of a protein called HER2 on their surface, which stimulates them to grow.
Trastuzumab attaches to the HER2 proteins and can stop the cancer cells growing. It also helps the body’s immune system destroy cancer cells.

When the trastuzumab attaches to the proteins, it delivers deruxtecan directly into the breast cancer cells to kill them.

Trastuzumab deruxtecan also has a ‘bystander effect’. This means it also kills any neighbouring cancer cells, even if they do not have a higher level of HER2 on their surface.

4. How trastuzumab deruxtecan is given

Trastuzumab deruxtecan is given into a vein (intravenously).

This will usually be as a drip (infusion) either in the back of the hand or lower arm.

Other intravenous methods may be used depending on factors such as how easy it is for your chemotherapy team to find suitable veins, and your preferences.

You’ll have the first infusion over 90 minutes. If you don’t have a bad reaction to your first infusion, your future infusions will usually be given over 30 minutes.

You’ll have trastuzumab deruxtecan as an outpatient every three weeks for as long as your treatment team feels you’re benefiting from the drug and any side effects are manageable.

5. Side effects of trastuzumab deruxtecan

Like any drug, trastuzumab deruxtecan 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.

You should be given a 24-hour contact number or told who to contact if you feel unwell or you are concerned about side effects at any time during your treatment, including at night or at the weekend.

Common side effects

Effects on the blood

Trastuzumab deruxtecan can temporarily affect the number of blood cells in the body.
You’ll have regular blood tests to check your blood count. Blood is made up of red cells, white cells and platelets.

If the number of blood cells is too low, your next cycle of treatment may be delayed or the dose reduced.

Doctors often tailor the dose of a drug by reducing it to suit an individual and to help manage its side effects. For some people this can help them stay on a treatment for longer.

**Risk of infection**

Not having enough white blood cells (neutropenia) can increase the risk of getting an infection.

Your treatment team may give you guidelines to follow for reporting signs of an infection, but generally you should contact your hospital immediately if you experience any of the following:

- A high temperature (over 37.5°C) or low temperature (under 36°C), or whatever your chemotherapy team has advised
- Suddenly feeling unwell, even with a normal temperature
- Symptoms of an infection, for example a sore throat, a cough, a need to pass urine frequently or feeling cold or shivery

Before you start trastuzumab deruxtecan your treatment team should give you a 24-hour contact number or tell you where to get emergency care.

**Anaemia**

Having too few red blood cells is called anaemia. If you feel particularly tired, breathless or dizzy, let your treatment team know.

**Bruising and bleeding**

Trastuzumab deruxtecan can reduce the number of platelets, which help the blood to clot. You may also bruise more easily, have nosebleeds or your gums may bleed when you brush your teeth. Tell your treatment team if you have any of these symptoms.

**Heart changes**

Trastuzumab deruxtecan may cause heart changes by weakening the heart muscle. This is usually temporary, but for a small number of people it may be permanent.

Contact your treatment team if you develop:
- Breathlessness
- Chest pain
- Changes to your heartbeat
- Swollen ankles

Before you start treatment your treatment team will arrange a heart (cardiac) function test to make sure your heart is working normally. This could be an echocardiogram (echo) or a multiple-gated acquisition (MUGA) test.

You will continue to have heart function tests regularly during treatment.

**Damage to the lungs**

Trastuzumab deruxtecan can cause scarring or inflammation of the lungs. You may hear this called interstitial lung disease (ILD) or pneumonitis.

Contact your treatment team straight away if you have:

- Shortness of breath
- A cough, with or without a high temperature
- Any new or worsening breathing problems

You may need a chest x-ray or CT scan to check if you have ILD.

If trastuzumab deruxtecan has caused scarring to your lungs, you may need to stop treatment temporarily and have steroids to treat the ILD.

Lung damage from ILD can be permanent and may get worse over time. Treatment can relieve symptoms, improve quality of life and slow the progression of the disease.

**Liver changes**

Trastuzumab deruxtecan can affect how the liver works. You will have blood tests to check your liver function while you’re having treatment.

Sometimes treatment may need to be delayed or the dose reduced if the blood tests show any problems with your liver.

**Nausea and vomiting**

You may feel sick (nausea) and be sick (vomit) but most people will not actually be sick.

You’ll be prescribed anti-sickness drugs to take home to reduce nausea or stop it happening. If you continue to feel sick or vomit, tell your treatment team as they may be able to change your anti-sickness drugs.
Diarrhoea or constipation

You may have diarrhoea or constipation. Your treatment team or GP can prescribe medicine to help control it.

Contact your team if you have four or more episodes of diarrhoea within a 24-hour period.

Cancer-related fatigue (extreme tiredness)

Cancer-related fatigue is extreme tiredness that doesn’t go away with rest or sleep. It’s a very common side effect of breast cancer treatment and may affect you physically and emotionally.

It has many causes, from psychological factors such as the stress of coping with the diagnosis, to physical ones such as the side effects of treatment or progression (growth and spread) of the cancer.

If you have fatigue, tell your GP or treatment team so you can be fully assessed and offered advice on how to manage your energy levels.

Find out more about managing fatigue.

Sore mouth

Looking after your mouth, including your teeth and gums, is very important during treatment.

If you need to have any dental treatment, talk with your oncologist about the best time to have this.

Hair thinning or hair loss

Trastuzumab deruxtecan may cause hair loss. Any hair loss caused should be temporary and in most cases your hair will begin to grow back once your treatment has ended.

Read more information about hair loss.

Loss of appetite

You may experience loss of appetite.

Eating small frequent meals or snacks can help keep up your food intake. If you struggle to maintain a healthy weight, ask your GP or specialist about being referred to a dietitian.

Find out more about diet and breast cancer treatment.
Low levels of potassium in the blood

You will have regular blood tests before and during treatment to check your potassium levels.

If your potassium levels are low your treatment team may prescribe supplements. Potassium levels usually go back to normal when your treatment finishes.

Other common side effects

Other common side effects of trastuzumab deruxtecan include:

- Headaches
- Skin rash
- Dry eyes
- Dizziness
- Abdominal pain
- Indigestion

Your treatment team can advise you on how to manage these.

Less common side effects of trastuzumab deruxtecan

Allergic reaction

If you have an allergic reaction to trastuzumab deruxtecan, it’s more likely to happen the first time you have the treatment. This is why your first treatment is given over 90 minutes.

You'll be monitored closely during your treatment so that any reaction can be dealt with immediately.

Symptoms include flushing, skin rash, itching, back pain, shortness of breath, faintness, fever or chills.

6. Other important information

Blood clots

People with breast cancer have a higher risk of blood clots such as a deep vein thrombosis (DVT). 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.
People with a DVT are at risk of developing a pulmonary embolism (PE). This is when part of the blood clot breaks away and travels to the lung.

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 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
- Pain or tightness in the chest
- Unexplained cough or coughing up blood

Find out more about blood clots.

**Sex, contraception and pregnancy**

You’re advised not to become pregnant while you’re having treatment because trastuzumab deruxtecan may have a harmful effect on a developing baby.

If you haven’t been through the menopause, talk to your treatment team about the most suitable method of contraception for you.

Women should continue using contraception during treatment and for at least seven months after their last dose of trastuzumab deruxtecan.

Men having trastuzumab deruxtecan should use effective contraception during treatment and for at least four months after the last dose.

You can still have sex during treatment. It’s not known if trastuzumab deruxtecan can pass into vaginal fluids or semen but this can’t be completely ruled out as chemotherapy drugs can pass into the blood and some other body fluids. Most hospital specialists will advise using barrier methods of contraception, such as condoms, during treatment and for a few days after treatment is given.

**Fertility**

The impact of trastuzumab deruxtecan on fertility is not currently known. It’s important to discuss any fertility concerns with your treatment team before you begin your treatment.

**Breastfeeding**
Breastfeeding is not recommended while having trastuzumab deruxtecan or within seven months of the last dose. This is because there is a risk the drugs could be passed on through breast milk.

**Travel and vaccinations**

If you’re planning a holiday or need to travel overseas, check with your treatment team first.

You shouldn’t have any live vaccines while you’re having treatment. Live vaccines include mumps, measles, rubella (German measles), polio, BCG (tuberculosis), shingles and yellow fever.

Live vaccines contain a small amount of live virus or bacteria. If you have a weakened immune system, which you may do during treatment, they could be harmful.

It’s safe to have these vaccinations six months after your treatment finishes. Talk to your GP or treatment team before having any vaccinations.

If anyone you have close contact with needs to have a live vaccine speak to your treatment team or GP. They can advise what precautions you may need to take depending on the vaccination.

**Flu vaccination**

Anyone at risk of a weakened immune system, and therefore more prone to infection, should have the flu vaccine. This includes people due to have, or already having, chemotherapy.

The flu vaccine is not a live vaccine so doesn’t contain any active viruses. Talk to your chemotherapy team or breast care nurse about the best time to have your flu jab.

**Coronavirus (Covid-19) vaccination**

People having trastuzumab deruxtecan are advised to speak to their treatment team before having a coronavirus (Covid-19) vaccination.

Find out more about [coronavirus vaccines](https://www.nhs.org.uk/coronavirus/vaccines).

**7. Further support**

Being diagnosed with secondary breast cancer can make you feel lonely and isolated.

Many people find it helps to talk to someone who has been through the same experience as them.
Living with Secondary Breast Cancer lets you share experiences with other people dealing with the uncertainty and challenges of secondary breast cancer.

Find out more about our support services.

If you would like any further information and support about breast cancer or just want to talk things through, you can speak to one of our experts by calling our free Helpline on 0808 800 6000.

**Last reviewed:** July 2021
Next planned review begins 2023