Enhertu (trastuzumab deruxtecan)
An overview of Enhertu and why it is authorised in the EU

What is Enhertu and what is it used for?

Enhertu is a medicine used to treat breast cancer that is metastatic (has spread to other parts of the body) or cannot be removed by surgery.

It can only be used when the cancer has been shown to 'overexpress HER2': this means that the cancer produces a protein called HER2 in large quantities on the surface of the tumour cells, which makes the tumour cells grow more quickly.

Enhertu is used on its own in patients who have received two or more HER2-targeted treatments.

It contains the active substance trastuzumab deruxtecan.

How is Enhertu used?

Enhertu can only be obtained with a prescription. It should be prescribed by a doctor and given under the supervision of a healthcare professional who has experience in the use of cancer medicines.

It is given by infusion (drip) into a vein over 90 minutes once every 3 weeks. Patients who tolerate the first 90-minute infusion can receive subsequent infusions over 30 minutes. Treatment may be continued for as long as it remains effective. The dose depends on the patient’s weight.

The infusion may cause allergic reactions, so the patient should be monitored during and after the infusion for signs such as fever and chills. In case the patient develops side effects, the doctor may reduce the dose or stop treatment temporarily or permanently.

For more information about using Enhertu, see the package leaflet or contact your doctor or pharmacist.

How does Enhertu work?

The active substance in Enhertu, trastuzumab deruxtecan, is made up of two active components which are linked together:

- Trastuzumab, a monoclonal antibody (a type of protein) that has been designed to attach to HER2, which is found in large quantities on some cancer cells. By attaching to HER2, trastuzumab activates cells of the immune system, which then kill the cancer cells. Trastuzumab also stops...
HER2 from stimulating the growth of cancer cells. About a quarter of breast cancers overexpress HER2.

- Deruxtecan, a toxic substance that kills cells when they attempt to divide and grow. It becomes active once the trastuzumab component has attached to HER2 and enters the cancer cell. Deruxtecan blocks an enzyme called topoisomerase I, which is involved in copying cell DNA, which is needed to make new cells. By blocking the enzyme, cancer cells are prevented from multiplying and they eventually die.

**What benefits of Enhertu have been shown in studies?**

An ongoing main study showed that Enhertu was effective at shrinking the tumour in patients with metastatic breast cancer or breast cancer that could not be removed by surgery. All patients had received two or more HER2-based treatments.

The tumour shrank in around 61% of 184 patients treated with the recommended dose of Enhertu.

**What are the risks associated with Enhertu?**

The most common side effects with Enhertu (which may affect more than 20% of patients) are nausea (feeling sick), tiredness, vomiting, alopecia (hair loss), constipation, decreased appetite, anaemia (low red blood cell count), neutropenia (low levels of neutrophils, a type of white blood cell that fights infection), diarrhoea, thrombocytopenia (low blood platelet counts which can lead to bleeding and bruising), cough, leucopenia (low white blood cell counts) and headache.

The most common serious side effects are neutropenia, anaemia, nausea, tiredness, leucopenia, lymphopenia, vomiting, thrombocytopenia, hypokalaemia (low blood potassium levels which can cause weakness, muscle cramps, tingling and heart rhythm disturbance), interstitial lung disease (disorders causing scarring in the lungs), diarrhoea, neutropenia with fever, dyspnoea (difficulty breathing), abdominal pain (belly ache), decreased appetite, and increased levels of certain liver enzymes (alanine aminotransferase).

For the full list of side effects and restrictions of Enhertu, see the package leaflet.

**Why is Enhertu authorised in the EU?**

Enhertu was effective in shrinking the tumour, with almost two-thirds of patients in the main study responding to treatment. The side effects of Enhertu are similar to those of other trastuzumab-containing medicines, although the risk of lung disease may be higher with Enhertu. These side effects, including those affecting the lung, are mostly reversible and can be managed by modifying the dose and closely monitoring the patient.

The European Medicines Agency therefore decided that Enhertu’s benefits are greater than its risks and it can be authorised for use in the EU. Enhertu has been given ‘conditional authorisation’. This means that there is more evidence to come about the medicine, which the company is required to provide. Every year, the Agency will review any new information that becomes available and this overview will be updated as necessary.

**What information is still awaited for Enhertu?**

Since Enhertu has been given conditional authorisation, the company that markets Enhertu will provide results from a study comparing Enhertu with treatment of investigator’s choice in patients with metastatic breast cancer or breast cancer that cannot be surgically removed. The study will provide
information whether patients with Enhertu will live longer and how long the patients live without their disease getting worse.

**What measures are being taken to ensure the safe and effective use of Enhertu?**

The company that markets Enhertu will provide educational material to healthcare professionals to inform them that Enhertu can cause lung disease and what symptoms to watch out for. Patients who are prescribed Enhertu will also be provided with a patient alert card with this information.

Because of a potential risk of confusion between Enhertu and other trastuzumab-containing medicines, including Kadcyla, due to their similar sounding active substances (trastuzumab deruxtecan, trastuzumab emtansine and trastuzumab) the company will provide healthcare professionals expected to use these medicines with educational material to alert them not to use these medicines interchangeably and to inform them of measures they should take to avoid medication errors.

Recommendations and precautions to be followed by healthcare professionals and patients for the safe and effective use of Enhertu have also been included in the summary of product characteristics and the package leaflet.

As for all medicines, data on the use of Enhertu are continuously monitored. Side effects reported with Enhertu are carefully evaluated and any necessary action taken to protect patients.

**Other information about Enhertu**

Enhertu received a conditional marketing authorisation valid throughout the EU on 18.01.2021.


This overview was last updated in 01-2021.