

BREAST CANCER TARGETTED THERAPY

What is targeted therapy?

This is a group of drugs that block the growth and spread of cancer. They target and interfere with processes in the cells that cause cancer to grow. The most well-known targeted therapy is trastuzumab (Herceptin).

Overview

Trastuzumab (Herceptin) belongs to a group of drugs called monoclonal antibodies. It's a targeted therapy (also called biological therapy). Targeted therapies block the growth and spread of cancer. They target and interfere with processes in the cells that cause cancer to grow. Trastuzumab is the generic (non-branded) name of the drug. Its current brand name is Herceptin.

How does trastuzumab work?

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 cancer is HER2 negative, then trastuzumab will not be of benefit.

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 are 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.

The 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 one is diagnosed with secondary breast cancer.

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

What is the duration of trastuzumab therapy?

For primary breast cancer, it is usually given for one year (around 18 cycles).

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

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.

Blood clots

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

Common side effects

There are a number of common side effects from trastuzumab.

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 trastuzumab is administered 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

Mild diarrhoea can occur. Specialist team can prescribe drugs to help control this.

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 one already has heart problems. Only a small number of people having trastuzumab develop heart problems and they usually reverse once treatment has finished. If they do occur, you'll probably need treatment for them and the trastuzumab and/or chemotherapy may need to be stopped temporarily. Occasionally trastuzumab and/or chemotherapy may need to be stopped permanently.

If there is significant heart or blood pressure problems, the patient may be advised not to have trastuzumab.

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 with trastuzumab, and for at least seven months afterwards, because it may have a harmful effect on a developing baby