

Your guide to treatment  
with neoadjuvant

**Perjeta<sup>®</sup>**  
(pertuzumab)

for early breast cancer

This booklet is for patients considering  
treatment with Perjeta + Herceptin<sup>®</sup>  
(trastuzumab) before surgery.

For more information on anything covered in  
this booklet, talk to your specialist, doctor or  
nurse or visit **[www.cancertreatments.co.nz](http://www.cancertreatments.co.nz)**

**PERJETA<sup>®</sup>**  
pertuzumab

**Herceptin<sup>®</sup>**  
trastuzumab

**DUAL HER2 BLOCKADE. PROVEN SYNERGY.**

A woman with dark hair pulled back, wearing a blue top, is shown in profile, looking towards the right. She has a traditional Maori tattoo (moko) on her chin. The background is softly blurred, showing green foliage in the foreground and a light-colored wall behind her.

For more information on HER2-positive breast cancer, Perjeta and Herceptin visit [www.cancertreatments.co.nz](http://www.cancertreatments.co.nz)

Models have been used throughout this booklet for the purpose of illustration only.

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## Resources

### Organisations

The following groups know what you are going through and can offer you support and valuable information.

#### **Cancer Society of NZ**

[www.cancernz.org.nz](http://www.cancernz.org.nz)  
0800 226 237

#### **NZ Breast Cancer Foundation**

[www.nzbcf.org.nz](http://www.nzbcf.org.nz)  
0800 902 732

#### **Breast Cancer Aotearoa Coalition (BCAC)**

[www.breastcancer.org.nz](http://www.breastcancer.org.nz)

All words in bold like **this** are explained in the glossary at the back of this booklet on page 11.

# What is neoadjuvant treatment?

When medicines are given before surgery to treat cancer, the treatment is called *neoadjuvant therapy*.

## Why might neoadjuvant therapy be recommended to treat your breast cancer?

- To reduce the size of your breast cancer (tumour) if it is too big to be removed in an operation
- If you have *inflammatory breast cancer*
- If you have *locally advanced breast cancer*
- To reduce the size of the tumour so that you can have breast conserving surgery (lumpectomy) instead of a mastectomy (removal of the whole breast)
- To give you time to have genetic testing if you have a strong family history of breast cancer
- To give you time to consider your surgical options

A *pathologist* checks the breast tissue and nodes removed during surgery for a pathologic response. This describes how much of the cancer is left in the breast and *lymph nodes*.

In some cases, neoadjuvant therapy will shrink the tumour so much that the pathologist can't detect any remaining cancer. This is called a *pathologic complete response (pCR)*.

A pCR can give some information about long term outcomes. Although a pCR is good news, it doesn't mean the cancer will never return. Also, many people who don't have a pCR will still do very well.

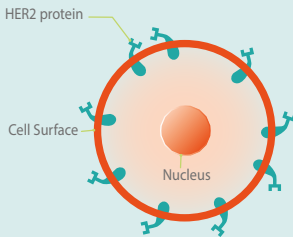
# What is HER2-positive breast cancer?

## What is HER2?

**HER2** is a protein on the surface of all normal cells in your body. HER2 helps regulate the way cells grow and divide into other cells.

*HER2 is a protein found on the surface of all normal cells in your body, like the cell shown below*

### Normal cell in your body

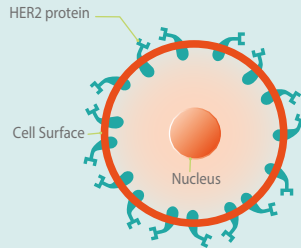


*The HER2 protein tells the cell how to grow and split to reproduce*

**About 1 in 5 women diagnosed with breast cancer are HER2-positive**

*When too many HER2 proteins grow on the surface of a cell, the cell becomes abnormal, like the cell shown below*

### Abnormal cell with too many HER2 proteins



*The extra HER2 proteins tell the cell to split and reproduce much faster than normal. This abnormal cell makes other abnormal cells and they go on to make even more abnormal cells. This process happens many times and that is how HER2-positive breast cancer develops*

When too much HER2 is present or expressed on the outside of some of your cells, these cells become 'abnormal'. The abnormal cells start multiplying rapidly and producing more abnormal cells. This group of abnormal cells is called a tumour.

## How do you know if your breast cancer is HER2-positive?

There are a number of different tests to determine each kind of cancer. One of these is HER2 and is critical in identifying the most appropriate treatment for you. Your specialist will have sent a sample of your breast cancer cells to a laboratory for a HER2 test.

# Neoadjuvant treatment of HER2-positive breast cancer with Perjeta

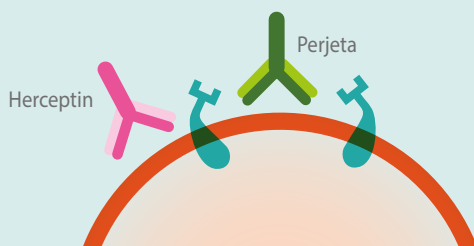
## Perjeta is a HER2-targeted therapy

Perjeta is a medicine for the treatment of **HER2-positive breast cancer**. It is a **targeted therapy** that is given as an **IV infusion**. Perjeta fights cancer cells that have too much HER2 and is designed to cause less harm to normal cells.

Normal cells also have HER2 (just not as much), so HER2-targeted therapies can also affect healthy cells and cause side effects, including serious side effects. Please see page 9 for additional safety information.

In New Zealand, Perjeta can be used in combination with Herceptin and chemotherapy as treatment of HER2-positive breast cancer before surgery.\*

## Perjeta and Herceptin target HER2



- Perjeta and Herceptin target the HER2 protein in different ways
- When used together, Perjeta and Herceptin provide a dual blockade to stop HER2 signals helping to shrink the tumour

*\*Herceptin IV is fully funded. Herceptin **Subcutaneous (SC)** and Perjeta neoadjuvant treatment are currently not funded. This means that patients need to pay for these medicines themselves.*

# Why is Perjeta used as neoadjuvant therapy?

Two clinical trials looked at how well Perjeta worked in combination with Herceptin and chemotherapy when given before surgery.

One of these showed that nearly 40 percent of people receiving the combination of Perjeta, Herceptin and chemotherapy had no evidence of tumour tissue detectable at the time of surgery (known as a **pathological complete response, or pCR**) compared to 21.5% of people who received Herceptin and chemotherapy.

**39.3%**

Of patients treated with **Perjeta, Herceptin, and chemotherapy** had a pCR

**VS**

**21.5%**

Of patients treated with **Herceptin and chemotherapy** had a pCR



# How is Perjeta administered?

Perjeta is given in combination with Herceptin and chemotherapy.

Perjeta is given as an **IV infusion**, which means that the medicine is administered through a needle that your nurse inserts into a vein.

If you haven't received an infusion before, you can ask your doctor or nurse to explain this to you in more detail.

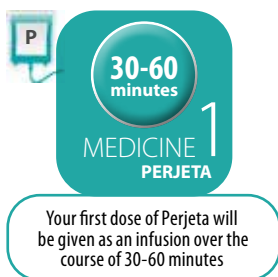
Perjeta is typically given every 3 weeks on the same day as Herceptin and chemotherapy. Your doctor will decide how many infusions you will be given.

## Your first infusion

- The amount of medicine you are given and how long each infusion will last are different for the first and following infusions for Perjeta.
- The medicines are given more slowly during your first visit. Your first dose of Perjeta will be given as an IV infusion over 60 minutes. You will be monitored for 30-60 minutes after your Perjeta infusion.

## Your subsequent infusions

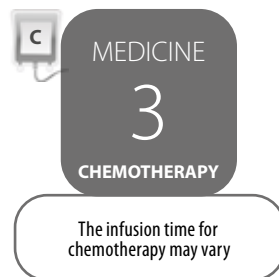
- If the first infusion is well tolerated, subsequent infusions may be given over 30 minutes. This will be followed by a 30 to 60 minutes observation time.
- The infusion may be slowed or interrupted if you experience side effects or have an allergic reaction. Your doctor will decide on the infusion time that is right for you.



A teal rounded square icon with a white 'P' in a square at the top left. Inside the square, a white circle contains the text '30-60 minutes'. Below the circle, the text 'MEDICINE 1' and 'PERJETA' are written. Below the icon, a teal rounded rectangle contains the text: 'Your first dose of Perjeta will be given as an infusion over the course of 30-60 minutes'.



A pink rounded square icon with a white 'H' in a square at the top left. Inside the square, a white circle contains the text '30-90 minutes'. Below the circle, the text 'MEDICINE 2' and 'HERCEPTIN' are written. Below the icon, a pink rounded rectangle contains the text: 'Herceptin will be given as an infusion over the course of 30-90 minutes'.



A grey rounded square icon with a white 'C' in a square at the top left. Inside the square, the text 'MEDICINE 3' and 'CHEMOTHERAPY' are written. Below the icon, a grey rounded rectangle contains the text: 'The infusion time for chemotherapy may vary'.



## Preparing for an infusion

- Bring something to help pass the time, like a magazine or book, or music to listen to during your infusion
- If you're unsure about driving, ask a friend or family member to drive you home after your infusion

## What is a complete treatment course for HER2-positive early breast cancer?

- Before surgery (neoadjuvant), Perjeta is given with Herceptin and chemotherapy.
- After surgery (**adjuvant**), Herceptin is given to complete a total of 1 year of treatment (time before and after surgery).

### One full year of Herceptin treatment



- Sometimes other medicines are also given with Herceptin after surgery.

## It's important to ask questions

It is important you ask questions and fully understand the options you have before you make any decisions.

If you're not sure where to start, a sample list of questions you may want to ask your doctor is listed on page 10 of this booklet.



# Possible side effects with Perjeta

All medicines can have side effects. Sometimes they are serious, most of the time they are not. It is important to know what side effects may happen and what symptoms you should watch out for. This section of the booklet outlines some of the most common side effects you may experience while on Perjeta treatment.

As you have already read, Perjeta is given with Herceptin and chemotherapy. Side effects can occur with this treatment plan. Not all people have serious side effects; however, side effects with Perjeta therapy are common.

The most common side effects of combined Perjeta, Herceptin and chemotherapy treatment were:

- Diarrhoea
- Hair loss
- Low levels of white blood cells with or without a fever
- Nausea
- Feeling tired
- Rash
- Damage to the nerves (numbness, tingling, pain in hands/feet)
- Decrease in or loss of appetite
- Confusion

If your doctor changes your treatment plan, you may see a change in the side effects.

## Will you need medical tests during treatment?

Yes. Perjeta is given with Herceptin (see page 6) and your heart function will be regularly monitored during treatment. Every three months or so you will have an echocardiogram (ultrasound heart scan) or MUGA (Multiple Gated Acquisition heart scan) so your specialist can check your heart function.

Your specialist may pause or stop your treatment if your heart is being affected.

For more detailed information on side effects you can also check out the consumer medicine information at: [www.medsafe.govt.nz](http://www.medsafe.govt.nz)

# Questions you may want to ask your healthcare team

To better understand your treatment plan, it may help to have a discussion with someone on your healthcare team who you're comfortable with. Here are some common questions to help you get started.

- Is treatment before surgery right for me?
- What can I expect during neoadjuvant treatment?
- Is Perjeta the right treatment choice for my type of breast cancer?
- How is Perjeta different from Herceptin?
- How is Perjeta different from chemotherapy?
- What do I need to do to prepare for my infusion?
- How long do I need to receive Perjeta?
- How long do I need to receive chemotherapy?
- What treatment options are available to me after surgery?
- What side effects should I expect, and how severe might they be?
- Are there methods to help manage certain side effects?
- How can I tell if the treatment is working?
- Is Perjeta recommended during pregnancy?



Perjeta for the treatment of HER2-positive breast cancer before surgery is not funded by PHARMAC.

Roche New Zealand has a [Cost Share Programme](#) for Perjeta which offers assistance with the cost of your medicine. There are criteria for enrolling into the Cost Share Programme and your doctor can give you the details.

# Glossary

## Adjuvant therapy:

Additional treatment for early breast cancer that is given after the main treatment (usually surgery) that may include radiation therapy, **chemotherapy, hormonal therapy,** or **targeted therapy**

## Biologic therapy:

A type of treatment that uses substances made from living organisms to treat disease. These substances may occur naturally in the body or may be made in the laboratory

## Chemotherapy:

A type of medicine that kills cells that grow and divide rapidly; these can include cancer cells or fast-growing normal cells

## Cost Share Programme:

A programme designed to assist patients access to non-PHARMAC funded medicines by making them more affordable for the patient

## HER2-positive:

When breast cancer cells have too many HER2 receptors, the disease is called HER2-positive or "HER2+" breast cancer

## HER2 receptor:

A type of protein that is found on the surface of cells in everyone. This protein tells cells to grow and divide. Too much HER2 is called "HER2 overexpression" and may result in the cells growing and dividing more quickly

## Herceptin® (trastuzumab):

A **monoclonal antibody** that targets and kills only the cancer cells that make too much HER2 protein. Herceptin is the most common **biologic therapy** used to treat HER2-positive breast cancer

## Hormonal therapy:

Helps fight tumors that thrive on hormones like estrogen or progesterone by acting on hormone receptors on tumor cells or by decreasing the amount of estrogen available to bind these receptors

## Inflammatory breast cancer:

A rare form of invasive breast cancer that affects the lymphatic vessels in the skin of the breast, causing the breast to become red and inflamed

## IV infusion:

A method of administering a drug by inserting a needle into your vein. Also known as an IV infusion, which means that medicine is slowly given directly into the bloodstream through a vein

**Locally advanced breast cancer:**

When the cancer cells have spread from the breast to the chest wall or the skin of the breast, or to many **lymph nodes** in the underarm area

**Lymph nodes:**

Glands in the armpit and other parts of the body that filter and drain lymph fluid, trapping bacteria, cancer cells and other particles that could be harmful to the body

**Monoclonal antibodies:**

Antibodies produced outside the body that are designed to target specific substances using the body's natural immune defences. For example, **Herceptin** activates the body's own immune system to target the **HER2** protein on the surface of **HER2-positive** breast cancer cells

**Neoadjuvant therapy/treatments:**

Treatment given prior to surgery

**Pathologist:**

A specialist who studies the causes and effects of diseases, and who also examines laboratory samples of body tissue for diagnostic or forensic purposes

**Pathological complete response (pCR):**

Pathological complete response is achieved when no cancer cells are detected in the breast tissue following surgery

**Perjeta® (pertuzumab):**

A **monoclonal antibody** that targets the protein **HER2**, which is found on the surface of some cancer cells. Perjeta is a treatment for breast cancer that that spread, has come back in the breast and also pre surgery

**PHARMAC**

The Pharmaceutical Management Agency. This is the New Zealand Crown agency that decides, on behalf of District Health Boards, which medicines and related products are subsidised for use in the community and public hospitals

**Subcutaneous (SC):**

Given under the skin

**Targeted therapy:**

A type of medicine that is designed to attack specific cancer cells and can also affect healthy cells

## Notes

## Notes



# Notes

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If you are pregnant or plan to become pregnant, Herceptin and Perjeta may be harmful to an unborn baby. If there is a need for Herceptin and Perjeta treatment when you are pregnant, your doctor will discuss the risks and benefits to you and the unborn baby. You should use effective contraception to avoid becoming pregnant while you are being treated with Herceptin and Perjeta and for 7 months after stopping treatment.

If you become pregnant while receiving Herceptin and Perjeta or within 7 months following the last dose of Herceptin and Perjeta, please contact your oncologist for medical advice. Report the pregnancy to Roche Patient Safety at [nz.drugsafety@roche.com](mailto:nz.drugsafety@roche.com) or 0800 276 243.

Additional information will be requested during a Herceptin and Perjeta-exposed pregnancy and the first year of the infant's life. This will enable Roche to better understand the safety of Herceptin and Perjeta and to provide appropriate information to health authorities, healthcare providers, and patients.

For additional information, please refer to the Herceptin and Perjeta Consumer Medicine Information at [www.medsafe.govt.nz](http://www.medsafe.govt.nz)

Perjeta® (pertuzumab), 420mg vial, is a **Prescription Medicine** used to treat breast cancer before surgery (neoadjuvant), after surgery (adjuvant) or metastatic (spreading) breast cancer. It is only used for patients whose tumour has tested positive to HER2.

**Tell your doctor if:** you have a history of heart problems such as heart failure, cardiac arrhythmias (an abnormal or rapid heartbeat), poorly controlled high blood pressure, or a recent heart attack; you have previously received chemotherapy treatment with medicines known as anthracyclines; you have experienced heart problems during previous treatment with Herceptin (trastuzumab); you have inflammation of the digestive tract, e.g. sore mouth or diarrhoea; you are allergic to any other medicines or any other substances such as foods, preservatives or dyes; you are pregnant or breast-feeding, or plan to become pregnant or breast-feed; you are currently taking any other medicines.

**Tell your doctor immediately or go to your nearest Accident and Emergency Centre if you notice any of the following:** swelling of your face, lips, tongue or throat with difficulty breathing; swelling of other parts of your body such as your hands or feet; shortness of breath, wheezing or trouble breathing; severe chest pain, spreading out to the arms, neck, shoulder or back; abnormal or irregular heartbeat; rash, itching or hives on the skin; feeling sick (nausea); headache; fever or chills or severe coughing. **Possible common side effects may also include:** diarrhoea (loose or frequent stools) or constipation; indigestion or stomach pain; sore mouth, throat or gut; getting tired more easily after light physical activity; shortness of breath especially when lying down or being woken from your sleep with shortness of breath; nail problems; hair loss; feeling dizzy, tired, looking pale; hot flushes; frequent infections with fever, severe chills, sore throat or mouth ulcers; nose bleeds; eye problems such as producing more tears; insomnia (trouble sleeping); weak, numb, tingling, prickling or painful sensations mainly affecting the feet and legs; loss of appetite; loss of or altered taste; joint or muscle pain or muscle weakness.

Perjeta has risks and benefits. Ask your oncologist if Perjeta is right for you. Use strictly as directed. If symptoms continue or you have side effects, see your healthcare professional. For further information on Perjeta, please talk to your health professional or visit [www.medsafe.govt.nz](http://www.medsafe.govt.nz) for Perjeta Consumer Medicine Information.

**Perjeta is a funded medicine for patients with HER2-positive metastatic breast cancer who meet pre-defined criteria.**

**Perjeta is not a PHARMAC funded medicine for the neoadjuvant or adjuvant treatment of early breast cancer.**

**A prescription charge and normal Doctor's fees may apply.**

Consumer panel dated May.2020

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Herceptin® (trastuzumab), 150mg and 440mg vials for intravenous (IV) infusion and 600mg/5ml solution for subcutaneous (SC) injection, is a **Prescription Medicine** used to treat patients with breast cancer whose tumour has tested positive to HER2.

**Do not use Herceptin if:** you have early breast cancer and have had an LVEF test (measures how well your heart can pump blood) of less than 45% or you have symptoms of heart failure; you have had an allergic reaction to Herceptin; or benzyl alcohol, or any proteins of Chinese hamster origin.

**Tell your doctor if:** you have a history of coronary artery disease, poorly controlled high blood pressure, heart failure, cardiac arrhythmia (an abnormal or rapid heartbeat), angina (chest pain); or if you have previously received chemotherapy treatment with medicines known as anthracyclines; you have breathing or lung problems; you are pregnant or breast-feeding, or plan to become pregnant or breast-feed; you are allergic to any other medicines or any other substances such as foods, preservatives or dyes; you are currently taking any other medicines; if you started any new medication within seven months of stopping any previous Herceptin treatment.

**Tell your doctor immediately or go to your nearest Accident and Emergency Centre if you notice any of the following:** swelling of your face, lips, tongue or throat with difficulty breathing; severe shortness of breath, difficulty breathing or wheezing; severe chest pain spreading out to the arms, neck, shoulder and/or back; rash, itching or hives on the skin; fever or chills; feeling sick (nausea); headache; dizziness; diarrhoea; abnormal or irregular heartbeat; severe swelling of the hands, feet or legs; severe coughing. **Possible common side effects may also include:** getting tired more easily after light physical activity; shortness of breath, especially when lying down or if it disturbs your sleep; runny or blocked nose or nosebleeds; difficulty sleeping, anxiety or depression; confusion; weakness or soreness in muscles and/or joints; increased cough; feeling dizzy, tired, looking pale; flu and/or cold symptoms, frequent infections with fever, severe chills, sore throat or mouth ulcers; hot flushes; diarrhoea; changes in weight (gain or loss); decrease in or loss of appetite; redness, dryness or peeling of the hands or feet; pain in hands or feet; unusual hair loss or thinning; nail problems; eye problems such as producing more tears, swollen runny eyes or conjunctivitis (discharge with itching of the eyes and crusty eyelids); pain or reaction at the site of injection.

Herceptin has risks and benefits. Ask your oncologist if Herceptin is right for you. Use strictly as directed. If symptoms continue or you have side effects, see your healthcare professional. For further information on Herceptin, please talk to your healthcare professional or visit [www.medsafe.govt.nz](http://www.medsafe.govt.nz) for Herceptin Consumer Medicine Information.

**Herceptin IV is a funded medicine for patients with HER2-positive breast cancer who meet pre-defined criteria. A prescription charge and normal Doctor's fees may apply.**  
**Herceptin SC is not funded by PHARMAC. You will need to pay the full cost of this medicine.**  
**A prescription charge and normal oncologist fees may apply.**

Consumer panel dated May 2020

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