



A patient guide to PERJETA[®] (pertuzumab)

Perjeta with **Herceptin[®]** (trastuzumab) and chemotherapy -
a strong combination for the treatment of
HER2-positive advanced breast cancer.



What is this booklet about?

This booklet is for people who have *HER2-positive breast cancer* that has spread to other areas of their body. This is known as *advanced breast cancer, metastatic breast cancer* or *secondary breast cancer*. All these different terms can be confusing, so we will call it **advanced breast cancer** throughout this booklet.

If you have been given this booklet, you are probably talking to your healthcare team about the different treatment options available to you. Perjeta® (pertuzumab) is one treatment for HER2-positive advanced breast cancer and this booklet is designed to help you decide if it is right for you.

Breast cancer affects men as well as women, however, women account for the vast majority of people with the disease. With that in mind, this booklet will sometimes refer to a breast cancer patient as a female.

The information contained is applicable to both men and women and no offence is intended either way.

This booklet has been divided into sections with each providing information to help you make decisions about your treatment.

Making decisions about your treatment is not always easy, and the decisions you make can affect the people around you. You may like to go through this booklet with someone you trust, such as a family member, or a member of your healthcare team.

Take your time going through this booklet. We recommend that you read the booklet in order. You may wish to come back to a section again, as you need to.

If you would like more information go to www.cancertreatments.co.nz

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

Other sources of information

There are many other sources of information such as the internet, other people, books or articles. It's important to remember that some sources of information are more accurate or trustworthy than others. This means that you can't trust all the information you read. This is especially true for information that you may read on the internet.

Speaking openly and honestly to those who will care for you is important, too. The more information you have, the better prepared you will be to make decisions that are right for you. If there is something you are not sure about, keep asking your doctor or nurse until you feel comfortable and completely informed.

This booklet has been written with support from a team of New Zealand health psychologists. Health psychologists support patients and their families to cope when they are faced with a physical illness such as cancer.



Understanding advanced breast cancer

When it comes to our health, we all have different information needs. Some people like to know everything about their condition, whereas others prefer to know very little. This section covers a general explanation of advanced breast cancer. Your doctor will be able to provide you with more information that is relevant to you and your cancer.



What is advanced breast cancer?

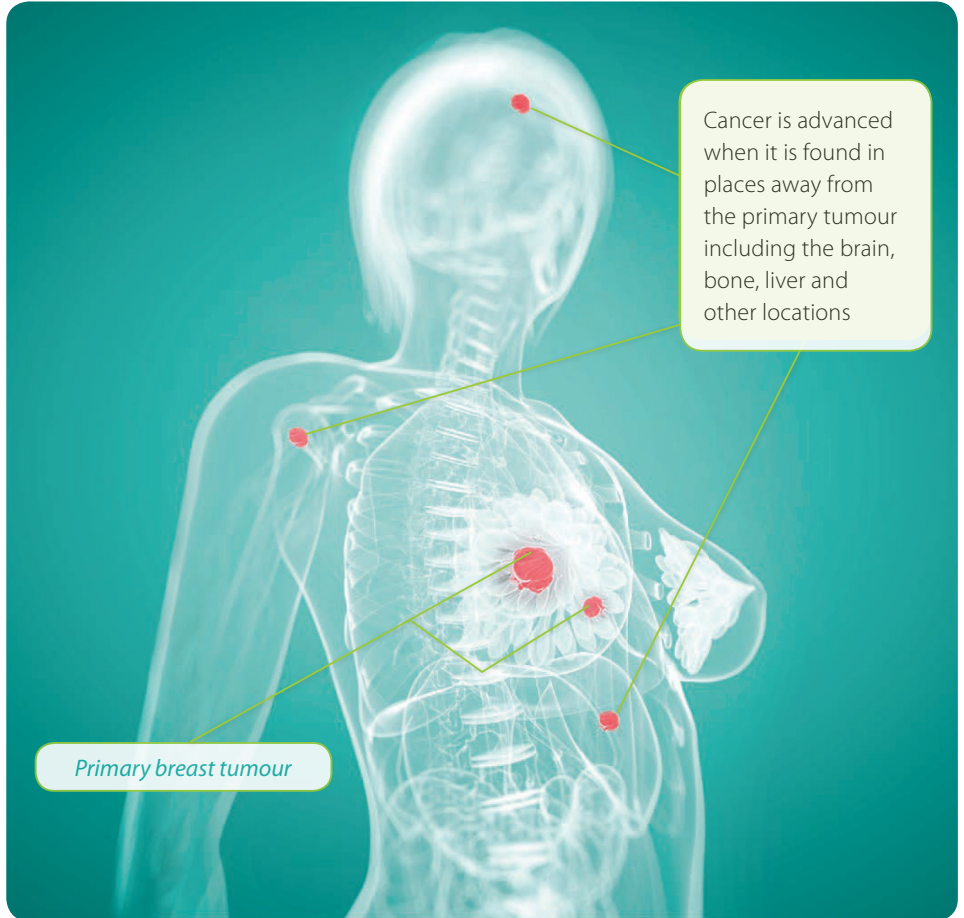
Advanced breast cancer means the cancer has spread beyond the breast, underarm area and *internal mammary lymph nodes*.

Breast cancer is caused by *abnormal cell growth*. When the abnormal cells split and reproduce they form a tumour in the breast area.

Sometimes the abnormal cells can break away from the breast tumour and move to other parts of the body, spreading the cancer. This includes bones, liver, lungs and the brain.

The types of symptoms you experience with advanced breast cancer will depend on where the cancer has spread.

There are a number of effective treatments for advanced breast cancer available in New Zealand. These treatments can help manage symptoms and slow down the spread of advanced breast cancer. Perjeta is one of these treatments.



Primary breast tumour

Cancer is advanced when it is found in places away from the primary tumour including the brain, bone, liver and other locations




What is HER2-positive breast cancer?

A lot more is known about breast cancer today. Research has shown us that there is not just one type of breast cancer. This means the abnormal cells in one tumour can look and act differently to the abnormal cells in another tumour.

HER2-positive breast cancer is an example of one type of breast cancer.

Sometimes the HER2 protein is not what causes the abnormal cell growth in breast cancer. When this happens the cancer is called HER2-negative breast cancer.



HER2 stands for: Human Epidermal Growth Factor Receptor Type 2

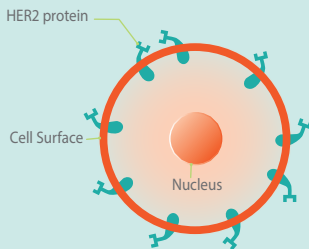
HER2-positive is often written as HER2+

HER2-negative is often written as HER2-

What is HER2?

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

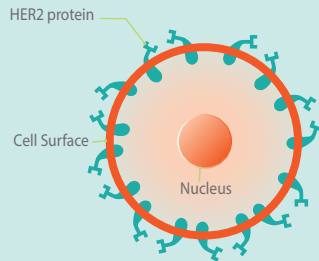
Normal cell in your body



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

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

Why is it helpful to know what type of breast cancer I have?

Knowing exactly what kind of breast cancer you have will help your doctor decide which treatment is best for you. Your doctor will have done some tests to find out what kind of breast cancer you have. If you haven't been told the results of these tests and would like to know, ask your doctor.

About 1 in 5 women diagnosed with breast cancer in New Zealand are HER2-positive.



Understanding your treatment options

There are a number of treatment options for HER2-positive advanced breast cancer. Some will be suitable for you, others may not. Deciding on what treatment to have is an important decision and should be discussed between you and your cancer doctor. You may also like to talk to your family and friends before making your decision.

HER2-positive advanced breast cancer is usually treated with medication that goes through the whole body. This is called 'systemic treatment'. HER2-positive advanced breast cancer can be controlled for periods of time with treatments such as *chemotherapy*, *radiotherapy* and *biologic therapies* like *Herceptin* and Perjeta.

Chemotherapy and radiotherapy

Chemotherapy goes through your whole body to stop the growth of new cancer cells.

Radiotherapy targets a specific area (like the breast) to stop cells growing in that part of the body.

Drugs that target HER2-positive cancer

These treatments are designed to attack cancer cells that have too many copies of HER2 receptors on their surface.

Tyrosine Kinase inhibitors (TKIs) are one group of drugs which work by targeting specific sites in HER2-positive cancer cells. Lapatinib is an example of this type of drug which is available in New Zealand.

Another group of medicines are *monoclonal antibodies* - a type of biologic therapy that uses the body's natural immune defences.

There are two monoclonal antibody medicines used as first-line treatment of HER2-positive advanced breast cancer.

Herceptin, also called trastuzumab targets and kills only the cancer cells that make too much HER2 protein. Herceptin is the most common treatment used along side chemotherapy to treat HER2-positive advanced breast cancer. It has been in use in New Zealand since 2007 and Herceptin *IV infusion* is fully funded by PHARMAC. Herceptin subcutaneous (SC) is currently not funded which means that patients need to pay for this themselves.

Perjeta, also called pertuzumab (per-too-zoo-mab), is a new monoclonal antibody that also targets HER2-positive advanced breast cancer and is used in combination with Herceptin and chemotherapy. Perjeta has been available in New Zealand for advanced breast cancer since 2013, and is funded by PHARMAC.



It's important to ask questions

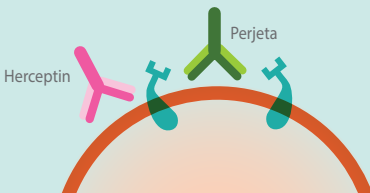
It is important you ask questions and fully understand the options you have before you make any decisions.

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

Perjeta for the treatment of advanced breast cancer

Perjeta is a HER2-targeted therapy that works by attaching to HER2 proteins on breast cancer cells. By attaching to the HER2 protein, Perjeta prevents HER2 signals which tell the breast cancer cells to grow and divide.

Perjeta and Herceptin target HER2



- Perjeta and Herceptin target the HER2 protein in different ways
- By attaching to the HER2 protein, Perjeta and Herceptin prevent HER2 signals, helping to stop the growth and spread of cancer cells

How Perjeta is given

Perjeta is given in combination with chemotherapy and Herceptin. You will only receive chemotherapy at the beginning of your treatment and your doctor will explain how long that will be. Once you have finished chemotherapy you can continue with Perjeta and Herceptin for as long as it works for you.



Perjeta is given as an IV infusion, which means that the drug is administered through a needle that your nurse inserts into a vein. If you've been treated for breast cancer before, you will be familiar with this. 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 usually given every 3 weeks. The number of infusions given depends on how you respond to treatment.



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



Perjeta helps control HER2-positive advanced breast cancer

Clinical studies are one of the best ways to learn what works best in treating diseases like cancer.

Clinical studies answer two important questions:

Does the treatment work?

If it does, how well does it work compared to existing treatments?

Is it safe?

No treatments or procedures are entirely without risk, but do the benefits outweigh the possible risks?

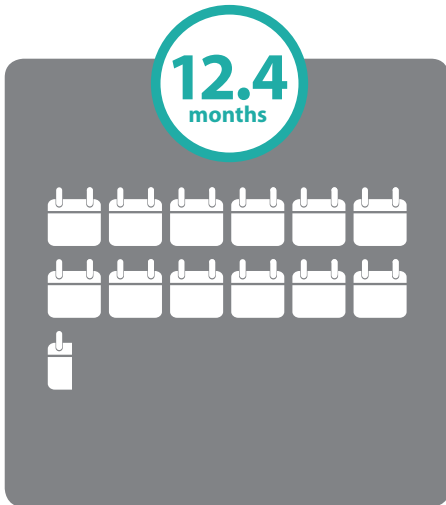
Over the next three pages the clinical benefits of treatment with Perjeta are outlined – that is, does it work?

A large study called *CLEOPATRA* looked at how well Perjeta plus Herceptin and chemotherapy (Perjeta group) worked compared to Herceptin plus chemotherapy alone (Control group).

Perjeta helped control the growth & spread of HER2-positive breast cancer

'Average time to spread' is the point in time when 50% of patients experience growth or spread of their cancer.

Control Group



The control group had an average of **12.4 months** before their cancer spread.

Perjeta Group



In the Perjeta group, the average length of time before the cancer spread was **18.7 months**.

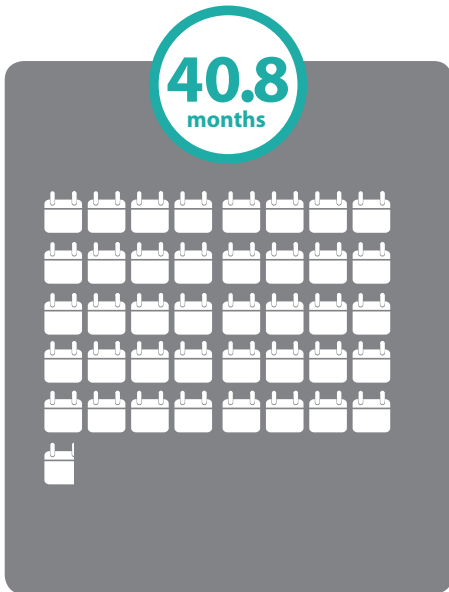
Importantly in the Perjeta group, the likelihood of remaining on treatment at 5 years was double that of the control group.

The study showed all survival outcomes were improved in the Perjeta group.

Perjeta helped people live longer

The CLEOPATRA study also looked at '*Overall Survival*': Median or average Overall Survival is the point in time when 50% of patients in the study have died. After long term follow-up of the study:

Control Group



The control group had an average overall survival of **40.8 months**.

Perjeta Group



Average overall survival was extended to **56.5 months** in the Perjeta group.

Perjeta shrinks HER2-positive tumours

'Response Rate' is a measure of the percentage of patients who receive benefit from treatment (treatment responders). In the CLEOPATRA study, the response rate was improved in the Perjeta group.

Treatment responders in the Perjeta group maintained their response for longer compared to the control group.

**80% of the Perjeta group
responded to treatment
i.e. had their tumours shrink**

**compared to 69%
of the control group**

- Treatment responders in the control group had an average of **12.5 months** before their cancer spread
- In the Perjeta group, treatment responders had an average of **20.2 months** before their cancer grew or spread

Remember, everyone is different and the response and benefit you may experience cannot be predicted.

All treatments need to be considered in line with your individual situation, and what is right for you may be different for someone else.

Adding Perjeta to Herceptin and chemotherapy:

- Helps control the growth and spread of cancer
- Improves the chance you may live longer
- Improves the chance you may benefit from treatment as well as the length of time you may experience the benefit



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.

Perjeta is given together 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.

In the CLEOPATRA study, the most common side effects of combined Perjeta, Herceptin and chemotherapy 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)

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

Patients in the study had less frequent side effects when they stopped receiving their chemotherapy. After stopping chemotherapy, all side effects in the Perjeta group happened in less than 10% of patients, except for diarrhoea, upper respiratory tract infection (a cold or sore throat), rash, headache, feeling tired and pain in the arms or legs.

For more detailed information on side effects you can also check out the consumer medicine information at: www.medsafe.govt.nz

Coping with advanced breast cancer and its treatment

A diagnosis of advanced breast cancer can bring with it a wide range of emotions. You may be feeling shocked, angry, sad, scared, or alone. Or you may just be feeling numb. These are all normal emotions given your situation. We may think that if we are experiencing these so called “negative emotions” it means we are not coping. But this is not necessarily the case. These “negative emotions” are a very normal reaction to a cancer diagnosis.

News like this can often bring quite a lot of uncertainty into your life as well. So if you are worrying or feeling anxious about the future for yourself and your family, this is also normal.

Although these feelings are normal, experiencing them can take a lot out of you. At this time you may also need to make a lot of decisions which can use a lot of mental and emotional energy. For this reason it is important for you to take extra care of yourself.

Accept practical and emotional support from family & friends

Our family and friends don't always know the right thing to say or do at a time like this. They often like being told what would be most helpful. As Kiwis, we can struggle to reach out and ask for help but you will find when you do, most people respond in a positive way. So the next time someone asks if there is anything they can do for you, think of something small they could do such as getting the mail for you or cooking a meal.

When we do turn to someone for support, it is helpful to stop and think about what their strengths are. Not everyone is good at listening. Just like not everyone will be good at making you laugh or cooking you a meal. If we go to the wrong person for support, we can sometimes end up feeling worse when it doesn't go well. Unfortunately this can make us less likely to reach out again in the future. So have a think about the people in your life and what they are good at. It can be helpful to write a list of possible support people and their strengths. That way you can look at it when you want to reach out for some support.



Support from your healthcare team

Being given information

Some people like to know every detail about their diagnosis and treatment. Having all that information is what helps them to cope better. Other people just want to know the smallest amount. Knowing very little is what helps them to cope better. These are both valid ways of coping. However your doctor won't necessarily know what you prefer. So it can be helpful to think about how you would like to receive and digest information. Then you can guide your healthcare team on how much information they should give you.

Asking questions

It is really normal for people to get into their doctor's office and then forget all the questions they had in their head. It is important for you to get the answers to those questions. So it can be helpful to write them down as they come up and then take that list with you when you see your doctor. On page 19 you can find a list of questions to ask your doctor that you may find useful.

Talking to your doctors about non-medical things

Even though your healthcare team is there to look after your medical needs, it is also important for them to know how you are coping in general. A lot of things can change at a time like this. There might be changes to your finances, your ability to get around at home or your emotional well-being. Your doctor might not be able to help you directly, but they will probably be able to refer you on to someone who can.



Things you can do to help yourself

- Take some time out for yourself - do something relaxing
- Don't be afraid to ask for help
- Accept support from others

Support from Patient Support Groups

New Zealand has a lot of Patient Support Groups that exist to support patients and their families through difficult times. There are a number of organisations that can support people with breast cancer. This is another way of getting support during this time and they offer many different services from providing information, to nursing and psychological support.

These organisations include:



Sweet Louise

www.sweetlouise.co.nz

0800 112 277

Sweet Louise helps to improve the quality of life for women and men living with advanced breast cancer. They offer information, advice, support and a range of practical and therapeutic services.



Breast Cancer Aotearoa Coalition (BCAC)

www.breastcancer.org.nz

BCAC provides information, support and representation, empowering people with a breast cancer diagnosis, to make informed choices about their treatment and care.



Cancer Society of NZ

www.cancernz.org.nz

0800 226 237



NZ Breast Cancer Foundation

www.nzbcf.org.nz

0800 902 732



Questions to ask your doctor

Below is a useful list of questions you may want to ask your doctor at your next appointment.

Questions to ask about your diagnosis

- + What kind of breast cancer do I have?
- + What stage is my cancer and how does it affect my treatment plan?
- + Has my tumour been tested for HER2?
- + If so, is my cancer HER2-positive?
- + What is the time frame for me to make decisions regarding my treatment?

Questions about your treatment

- + What are my treatment options?
- + How long will I need to stay on these treatments?
- + How will I know this treatment is working?
- + If I decide to have treatment, when can I start?

Questions about treatment with Perjeta

- + How does Perjeta combination treatment differ from Herceptin and chemotherapy alone?
- + How long will I need to stay on Perjeta?
- + What side effects can I expect to have?
- + Can I have Perjeta if I am pregnant?

Glossary

- > **Abnormal cell growth** cells that divide and reproduce without control.
- > **Advanced breast cancer** also known as metastatic or secondary breast cancer. Invasive breast cancer that has spread from the breast to other parts of the body.
- > **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** treatment with medicines that attack and kill rapidly growing cells, including normal cells.
- > **HER2** a protein found on all cells that helps cells grow and divide. It stands for Human Epidermal Growth Factor Receptor Type 2.
- > **HER2-positive breast cancer** a type of breast cancer that tests positive for the HER2 protein.
- > **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.
- > **Internal mammary lymph nodes** are lymph nodes within the breast tissue.
- > **IV infusion** also called an 'intravenous infusion'. A procedure where medicine is administered through a needle that a nurse inserts into a vein.
- > **Metastatic breast cancer** see 'advanced breast cancer'.
- > **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.
- > **Overall survival** The percentage of people in a study or treatment group who are still alive for a certain period of time after they were diagnosed with or started treatment for a disease, such as cancer.
- > **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.
- > **Primary breast tumour** an overgrowth of cells forming a lump that has not spread beyond the breast or the lymph glands under the arm.
- > **Radiotherapy** sometimes called 'radiation therapy'. A cancer treatment that uses x-rays, gamma rays, and alpha and beta particles to destroy cancer cells. Radiotherapy is localised to the tumour area.
- > **Secondary breast cancer** see 'advanced breast cancer'.
- > **Tyrosine Kinase inhibitors (TKIs)** drugs that block chemical messengers (enzymes) called tyrosine kinases. Tyrosine kinases help to send growth signals in cells. Blocking them stops the cell growing and dividing.



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 who have tumours with a large amount of the HER2 protein.

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 any of the ingredients, benzyl alcohol, or to any medicines that are made using Chinese hamster ovary cells.

Tell your doctor if: you have a history of coronary artery disease, poorly controlled high blood pressure, heart failure, arrhythmia (an abnormal or rapid heartbeat), angina (chest pain); you are currently taking any other medicines, including medicines for cancer, 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.

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; 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 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 16.04.2019.

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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 pregnant or breast-feeding, or plan to become pregnant or breast-feed.

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; 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 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 16.04.2019

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