

Palbociclib (Ibrance)

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1. What is palbociclib?

Palbociclib is a targeted (biological) therapy. This group of drugs block the growth and spread of cancer. They target and interfere with processes in the cells that cause cancer to grow. Palbociclib is the non-branded name. Its branded name is Ibrance. When used to treat breast cancer, palbociclib is taken alongside hormone (endocrine) therapy.

2. Who might be offered palbociclib?

Palbociclib may be offered to people who have locally advanced or secondary breast cancer that is both:

- oestrogen receptor positive (ER+) (breast cancer that has receptors within the cell that bind to the hormone oestrogen and stimulate the cancer to grow)

- HER2 negative (breast cancer that has a normal level of the HER2 protein)

If you haven't had any treatment for locally advanced or secondary breast cancer, palbociclib may be given in combination with an aromatase inhibitor such as letrozole.

Some people who have previously had hormone therapy for secondary breast cancer may be offered palbociclib in combination with fulvestrant.

If you haven't been through the menopause you will also have treatment to prevent the ovaries from producing oestrogen, either temporarily or permanently. This is known as ovarian suppression.

Availability

Palbociclib is currently only available on the NHS for people who haven't already had any treatment for locally advanced or secondary breast cancer.

You may be offered palbociclib as part of a clinical trial.

Palbociclib is not currently given for primary (early) breast cancer. However clinical trials are looking at whether it may be useful.

3. How does palbociclib work?

Certain proteins in the body cause cells to grow and divide. In ER positive (ER+), HER2 negative breast cancer, these proteins can become overactive and stimulate breast cancer cells to grow. Palbociclib works by blocking these proteins, helping to stop the cancer cells growing and dividing.

When combined with hormone therapies that block the effects of oestrogen on cancer cells, palbociclib helps to delay the growth of ER+, HER2 negative breast cancer.

4. How is palbociclib given?

Palbociclib is a capsule (125mg) that must be taken whole with water, at the same time each day, and within 30 minutes of a meal.

Palbociclib is always given alongside hormone therapy.

Palbociclib and an aromatase inhibitor

Palbociclib is taken over a four-week cycle. For the first 21 days one capsule is taken daily, followed by a seven-day break. An aromatase inhibitor drug is taken once a day continually throughout the 28 days. The cycle is then repeated.

Palbociclib and fulvestrant

Palbociclib is taken over a four-week cycle. For the first 21 days one capsule is taken daily, followed by a seven-day break. The cycle is then repeated.

Fulvestrant (500mg) is given in two injections, one in each buttock. These are known as intramuscular (IM) injections. It's usually given every two weeks for the first three doses, then once a month for as long as you are receiving palbociclib.

What happens if I miss a dose?

If you miss a dose of palbociclib, or vomit soon after taking it, do not take an extra dose to make up for the one you missed. Keep to your usual amount and speak to someone in your specialist team.

How long will I take palbociclib for?

You'll have palbociclib alongside hormone therapy for as long as your specialist team feels you're benefiting from the treatment and you are tolerating it.

5. Common side effects of palbociclib

Like any drug, palbociclib can cause side effects. Everyone reacts differently to drugs and some people have more side effects than others. These side effects can usually be controlled and those described here will not affect everyone.

Because it's given alongside hormone therapy, you may also experience side effects from that drug as well.

If you're concerned about any side effects, regardless of whether they're listed here, talk to your chemotherapy nurse or cancer specialist (oncologist).

Effects on the blood

Palbociclib can temporarily affect the number of healthy blood cells in the body. Blood cells (white blood cells, red blood cells and platelets) are made by the bone marrow (the spongy material found in the hollow part of bones) to replace those which are naturally used up in the body. Palbociclib reduces the ability of the bone marrow to make these cells.

You'll have regular blood tests both before and throughout your treatment to check your blood count.

It's recommended that blood tests are done every two weeks for the first two cycles of treatment, then every four weeks before each cycle.

Risk of infection

When the white blood cells fall below a certain level, it's known as neutropenia. Not having enough white blood cells can increase the risk of getting an infection. Chest infections are the most common type of infection while taking palbociclib.

The number of white blood cells usually returns to normal before your next cycle of treatment. Low white cell blood counts are very common when taking palbociclib. Having a high temperature with neutropenia (known as febrile neutropenia) is less common and occurs much less frequently than with chemotherapy.

Contact your hospital immediately if:

- **you have a high temperature (over 37.5°C) or low temperature (under 36°C), or whatever your specialist team has advised**
- **you suddenly feel unwell, even with a normal temperature**
- **you have any symptoms of an infection, for example a sore throat, a cough, a need to pass urine frequently or feeling cold and/or shivery**

Before starting palbociclib you should be given a 24-hour contact number or told where to get emergency care by your specialist team. You may need antibiotics.

If you develop low white blood cell counts during treatment with palbociclib, your doctor may decrease the dose, delay your next cycle of treatment or stop your treatment.

Anaemia

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

Bruising and bleeding

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

Fatigue (extreme tiredness)

It's common to feel extremely tired during your treatment. There are different ways of coping with and managing fatigue. You can speak to your specialist team or contact Breast Cancer Care for more information and support.

Loss of appetite

You may not feel like eating, especially if you're feeling sick. It might help to eat small meals, regularly.

Sore mouth and taste change

Your mouth may become sore or dry and you may get ulcers. You may be given mouthwash to reduce soreness of the mouth and gums and to try to stop mouth ulcers developing.

Good mouth hygiene is very important during treatment. It's advisable to see your dentist for a dental check-up before your treatment begins. Check with your specialist team before having any dental work done.

Nausea and vomiting

You may experience nausea (feeling sick) and vomiting (being sick). Although not usually needed, anti-sickness drugs can be prescribed to help with this.

Diarrhoea

Tell your specialist or GP if you have diarrhoea as they can prescribe drugs to help. Contact your specialist team if you have four or more episodes of diarrhoea within a 24-hour period. Drink plenty of fluids to avoid getting dehydrated.

Rash

This can be uncomfortable, but using a moisturiser and a high factor sunscreen may help. Your specialist team may suggest drugs such as antihistamines to reduce any itching.

Hair thinning and hair loss

Palbociclib can cause hair thinning or hair loss. For more information you can download our Breast cancer and hair loss booklet.

6. Less common side effects of palbociclib

Liver changes

Palbociclib 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.

If you experience any of the following symptoms contact your specialist team straight away:

- yellowing of your skin or the whites of your eyes (jaundice)
- pain on your right side under the ribs
- bleeding or bruising more easily than normal
- feeling more tired
- passing dark brown urine

Blurred vision, dry eyes and increased tears

Palbociclib may cause eyesight changes such as blurred vision, dry eyes and increased tear production.

It's important to contact your oncologist or specialist nurse as soon as possible if you have any of these symptoms. They can arrange for you to see an optician if necessary.

Dry skin

You may experience dry skin including mild scaling, roughness, feelings of tightness or itching.

It may help to:

- use a moisturiser regularly and avoid perfumed products
- protect your hands when doing household/outdoor chores
- rinse and dry your hands carefully, particularly after contact with cleaning products
- pat your skin dry with a soft towel, rather than rubbing vigorously
- take care when shaving
- wear cotton clothes where possible next to the skin and wash clothes in mild detergent

Change in taste

Your taste can change and some food may taste different (for example more salty, bitter or metallic). It can be helpful to experiment with different types of food to find the ones you prefer to eat.

7. Rare side effects of palbociclib

Allergic reaction

Very occasionally allergic reactions to palbociclib can occur. Reactions vary from mild to severe, although severe reactions are uncommon. If you have any swelling, wheezing, chest pain or difficulty breathing after taking palbociclib, contact your hospital immediately.

8. Blood clots

People with breast cancer have a higher risk of blood clots. 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. Having palbociclib increases the risk of blood clots such as a pulmonary embolism (a blood clot in 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 specialist team straight away:

- pain, redness/discolouration, heat and swelling of the calf, leg 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
- tightness in the chest
- unexplained cough (may cough up blood)

9. Medicines and food to avoid when taking palbociclib

There are a number of drugs that should not be taken with palbociclib, so it's important to tell your specialist about any prescribed or over-the-counter medicines you are taking. If a healthcare professional (such as your GP or dentist) prescribes you a new drug, you should tell them you're taking palbociclib.

Many people consider taking herbal medicines or supplements while having treatment for breast cancer. Palbociclib must not be taken with anything containing St John's Wort. You should ask for advice from your specialist team before taking any herbal medicines or supplements.

Eating grapefruit, or drinking grapefruit juice should also be avoided while you are taking palbociclib.

Palbociclib contains lactose. If you know you are lactose intolerant it is important to discuss this with your specialist team.

10. Sex and contraception

Taking palbociclib while pregnant may be harmful to a developing baby. Some women can still become pregnant even if their periods are irregular or have stopped.

Women should continue using an effective barrier contraception during and for at least three weeks after stopping treatment.

Men taking palbociclib should use effective contraception during and for 14 weeks after stopping treatment.

While female fertility may not be affected, palbociclib can decrease fertility in men. Men taking palbociclib may want to talk to their specialist team about sperm preservation prior to treatment starting.

Palbociclib and breastfeeding

You will be advised not to breastfeed during treatment and for at least three weeks after your last dose. This is because there is a chance that your baby may absorb the drug through your breast milk, which may cause harm.

11. Vaccinations

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

Live vaccines contain a small amount of live virus or bacteria. These could be harmful and cause infections.

If you're planning a trip and need vaccinations, discuss this with your specialist team.

If someone you live with needs to have a live vaccine speak to your specialist 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 having, or due to have, treatment for breast cancer. The flu vaccine is not a live vaccine so doesn't contain any active viruses. If you're already having treatment, talk to your specialist team about the best time to have your flu jab.

12. Further support

Being diagnosed with 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. Breast Cancer Care's Living with Secondary Breast Cancer service can provide an opportunity to meet those in a similar situation, and offers helpful support and information in a relaxed environment. You might also find it helpful to join one of our Live Chat sessions, or visit our confidential online Forum.

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.

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Next planned review begins 2020