

Pembrolizumab and lenvatinib (Lenvima®)

This leaflet is offered as a guide to you and your family. Pembrolizumab is a type of anti-cancer treatment called immunotherapy. Lenvatinib (Lenvima®) is a systemic anti-cancer therapy. This group of drugs stops cancer cells from growing. The possible benefits of treatment vary, from controlling the cancer, to reducing the symptoms. Your doctor or nurse will be happy to answer any questions you have about your treatment.

Your treatment

Your doctor or nurse clinician has prescribed for you a combination therapy with an immune therapy called pembrolizumab and an anti-cancer therapy called lenvatinib (Lenvima®).

Pembrolizumab is given every 3 weeks at a dose of 200mg. Lenvatinib is taken by mouth and is taken every day without a break. This treatment can be continued for as long as you are benefitting from it and the side effects are tolerated, for a maximum of 35 sets of 3-weekly cycles.

Pembrolizumab is given via an infusion (drip) over 30 minutes. You will usually be seen by a doctor or nurse clinician and have a routine blood test before the start of each cycle of treatment.

Lenvatinib capsules should be taken daily at about the same time every day.

Lenvatinib can be taken with or without food. Swallow the capsule whole with water. Do not open, crush or chew the capsule. Speak to your medical team if you struggle to swallow the capsules.

This treatment can have serious or possibly life-threatening side effects. It is very important that you report side effects straight away. Don't delay, if you feel unwell, please ring The Christie Hotline on **0161 446 3658**. The lines are open 24 hours a day.

If you are taking other medications

Some medicines can react/interfere with pembrolizumab and/or lenvatinib. It is important to tell your doctor about any other medicines you are taking. Make sure your doctor knows if you have:

- any immune system problems or HIV
- lung or breathing problems
- liver or kidney problems
- a serious rash
- any other medical problem.

If you are prescribed any new medications while on this treatment, please check with your GP and pharmacist that these are safe to take alongside pembrolizumab and lenvatinib, and inform your Christie team.



Flu vaccinations

Is it alright for me to have a flu jab during the time I'm having treatment?

It's safe to have a flu jab, but depending on your treatment, it may not give quite as much protection against infection as usual. Some patients may need two vaccinations. However, if you're thinking of having any other vaccinations, do check with your Christie doctor or nurse clinician first, because some vaccines should be avoided.

COVID-19 vaccinations

We advise that all patients receive a COVID-19 vaccination when this is offered. Your doctor will discuss this with you the best time to have this.

The increased risk of serious infections

Minor infections can become life-threatening if left untreated. Symptoms of infection include fever, shivering, sweats, sore throat, and diarrhoea, discomfort when you pass urine, cough or breathlessness. We recommend that you use a digital thermometer so you can check your temperature. You can buy one from your local pharmacy.

If you feel unwell, you have symptoms of an infection or your temperature is 37.5°C or above, or below 36°C, contact The Christie Hotline **0161 446 3658** (open 24 hours a day, 7 days a week).

Infusion-related reactions

Occasionally side effects can occur while you are having the infusion. These may include chills, fever and shivering. If you have any of these side effects please tell your nurse straight away, even though your progress will be monitored regularly.

Rarely, you may also develop a skin rash, headache, sore throat or sickness. If this happens or you notice any swelling around the eyes and face, feel dizzy or faint, or have any shortness of breath during the treatment, please tell the doctor or nurse immediately. This may be an allergic reaction and the drip may need to be slowed down or stopped. You may feel tired or have a headache. These symptoms are related to your treatment and usually resolve when the infusion has finished.

If you do have any reactions to your treatment, we may be able to give you medication to prevent this on your next infusion.

Possible side effects

Some patients do not get any side effects with pembrolizumab and lenvatinib. The most common side effects from pembrolizumab are related to the way that the drug treats the cancer by boosting the immune system. They are generally different from the side effects which occur following chemotherapy.

Some side-effects are more likely to occur than others. We are all different, so we may get different side effects with varying severity. Most side effects are usually temporary, but in some cases they can be life-threatening.

It is important to tell your Christie doctor or nurse about any side effects so they can be monitored and, where possible, treated. If side effects are severe, you may need to stop your treatment, have a break from treatment, or have a dose reduction. A small number of people do not tolerate treatment.

Very common side effects (more than 1 in 10)

- **Fatigue**

Pembrolizumab and lenvatinib may make you feel tired and lacking in energy. It can be frustrating when you feel unable to cope with routine tasks. If you do feel tired, take a rest and get help with household chores. If necessary, take time off work. Gentle exercise such as walking can be beneficial.

IF YOU EXPERIENCE PROFOUND TIREDNESS, where you do not feel able to get out of bed or feel dizzy or faint, contact The Christie Hotline number on **0161 446 3658**. This may be related to inflammation of the hormone producing glands.

- **Skin rash, or hand/foot skin reaction**

This can vary from mild to severe. Contact The Christie Hotline or your medical team if the rash covers more than half of your body, if it is very itchy or painful, or if you develop blisters or peeling skin. Some people can experience reddening and peeling of the skin on the hands and feet only. Simple moisturisers can help if this is mild, but if it interferes with walking or normal use of hands or fingers, please contact The Christie Hotline.

- **Mucositis (sore mouth and mouth ulcers)**

This treatment can cause a sore mouth and mouth ulcers. Usually this is mild and clears with mouth washes. If it is preventing you from eating and drinking normally, please contact The Christie Hotline.

- **Urinary tract infections**

Mild urinary infections are common with lenvatinib. These can be treated with a course of antibiotic tablets. If you have burning sensation or pain when you pass urine or the urine has a cloudy appearance or foul odour please contact The Christie Hotline.

- **Protein in urine (proteinuria)**

You will have regular urine tests. Sometimes the dose of lenvatinib is adjusted or the treatment is stopped if you have too much protein in your urine.

- **Hypertension (high blood pressure) or hypotension (low blood pressure)**

Your blood pressure is measured at each appointment. We also recommend that you measure your blood pressure regularly at home. If you develop high blood pressure, the team will discuss commencing medication to control your blood pressure. Occasionally, we will need to stop your lenvatinib if your blood pressure remains uncontrolled despite medication.

- **Diarrhoea**

Mild diarrhoea is common. Anti-diarrhoeal tablets (loperamide) can be prescribed to control your symptoms. Take 2 capsules as soon as the first liquid stool occurs. Then take one capsule with each liquid stool up to a maximum of 8 capsules in 24 hours. Severe diarrhoea is less common. If you continue to have more than 3 liquid stools a day, if you are having diarrhoea at night or if the diarrhoea continues for more than 3 days, please contact The Christie Hotline.

You should also contact The Hotline if you have any blood or mucus in your stools, or they become a darker colour, or if you develop any tenderness or pain in your abdomen.

- **Constipation**

Some patients may experience constipation, rather than diarrhoea. Laxatives can be prescribed to control your symptoms. Severe constipation is less common. If you develop abdominal pain with constipation, please contact The Christie Hotline.

- **Unexpected bleeding**

Patients taking lenvatinib have reported being easily bruised or have noticed bleeding from the nose, gums or blood in the urine. A small number of patients have experienced serious bleeding complications. Please contact The Christie Hotline if you experience any of the following:

- coughing up blood or blood clots
- vomiting blood or brown 'coffee granules' liquid
- black bowel motions
- menstrual/vaginal bleeding that is heavier than usual.

- **Thyroid function changes**

Pembrolizumab and lenvatinib can affect the way your thyroid gland works. We will monitor this regularly through a blood test. In some cases, patients may need medication (e.g. levothyroxine) to correct this.

- **Decreased appetite and weight loss**

We advise you to try to eat and drink as normal. We will monitor your weight at outpatient appointments.

- **Indigestion and change in taste**

Some patients experience indigestion. Please contact your hospital team for clinical advice. Indigestion tablets may be prescribed by your team or your GP. Patients may also experience a change in how food and drink tastes.

- **Hair loss/thinning**

Some hair loss may occur during treatment, including body and facial hair. Avoid perms, colours, use of hot brushes and vigorous frequent washing that could increase hair loss. Please remember that this is a temporary side effect and your hair will grow back when your treatment is completed.

Very rarely, hair loss may be permanent. If you would like an appointment with the wig service, this can be arranged for you by visiting the cancer information centre. It is a good idea to get your wig before you lose a lot of hair which you can then match to your natural colour. Ask the staff for a copy of the 'Wig fitting service at The Christie'.

The Maggie's Centre runs a Talking Heads hair loss support workshop for anyone who is anticipating or experiencing hair loss (both men and women). These sessions cover the practicalities of hair loss as well as offering support with its emotional impact. Contact Maggie's on **0161 6414848** or email manchester@maggies.org

- **Generalised aches and leg swelling**

You may experience mild back pain or muscle pain in your arms or legs. Some patients experience mild leg swelling. Painkillers can be prescribed for your pain. Contact The Christie Hotline if your pain is not controlled.

- **A low level of calcium or potassium in your blood**

Your levels will be routinely monitored during treatment. You may experience symptoms such as tiredness, muscle cramps or twitching and tingling in the lips, fingers or toes. If any of these symptoms occur, please contact your medical team or The Christie Hotline for advice.

- **Headaches**

Some patients may experience mild headaches or dizziness with the treatment. It is rare to have a severe headache. You should seek emergency medical attention (by ringing 999 or going immediately to your nearest accident and emergency department) if you develop a sudden severe headache, arm or leg weakness.

- **Change in voice**

You may develop a quieter voice or your voice may become hoarse. This is usually temporary.

- **Nausea and vomiting**

If you feel sick, you can be prescribed anti-sickness medication.

- **Shortness of breath or coughing**

This treatment can cause shortness of breath or a cough.

Less common side effects (less than 1 in 10)

- **Changes in heart rhythm**

Lenvatinib may affect the heart rhythm. We will monitor this at regular intervals via an electrocardiogram (ECG). Speak to your medical team or contact The Christie Hotline if you experience palpitations or a racing heart.

- **Chest pain or stroke or blood clots in the lung**

Some patients receiving lenvatinib may experience chest pain (angina) or a heart attack. Other complications such as a stroke or mini-stroke or blood clots in the lung can also happen. To help prevent clots, keep mobile and drink plenty of non-alcoholic fluids (around 2 to 3 litres per day).

If you develop chest pain or a sudden onset of breathlessness or neurological symptoms, you should seek emergency medical attention by ringing 999 or going immediately to your nearest accident and emergency department.

- **Liver and kidney problems**

Lenvatinib and pembrolizumab can affect the way your liver and kidneys function. We will monitor this on a regular basis. If you develop yellowing of the skin or eyes (jaundice), have very dark urine or pain on the right side of your stomach you should contact The Christie Hotline straight away. You may be given treatment or have your dose adjusted if required.

- **Fistula**

This is an abnormal connection between different organs in the body or between the skin and an underlying structure such as the throat or windpipe. The symptoms depend on where the fistula is located. Anal fistulas for example, can cause anal discharge. Other types of fistula are rare. Talk to your Christie team if you experience any new or unusual symptoms such as coughing when swallowing.

Uncommon but potentially serious side effects (less than 1 in 100)

- **Slow wound healing**

Lenvatinib can slow the healing of wounds. Please discuss any planned surgical, dental or invasive procedures with your clinician in advance. You should tell your dentist you are having cancer treatment in the event of an unplanned dental treatment.

- **Inflammation of the lungs**

Rarely pembrolizumab can cause inflammation of the lungs which is potentially serious. Call the Hotline if you have any shortness of breath or a cough.

- **Inflammation of the hormone producing glands**

Sometimes pembrolizumab may cause inflammation of the glands that produce vital hormones (especially the pituitary, adrenal and thyroid glands) which in turn can affect the way they work. Contact The Christie if you develop any of the following: headaches, blurred or double vision, profound tiredness, decreased sexual drive or if you become irritable or forgetful.

- **Immune-related kidney problems**

This is caused when the kidneys become inflamed and can stop working properly. We will be monitoring your kidney function carefully but contact The Christie Hotline if you find that you are very tired or if you notice that you are passing less urine than usual.

- **Inflammation of the eyes**

Sometimes pembrolizumab can cause the eyes to become inflamed. Contact the hospital if you develop any redness or pain in your eye or you develop any problems with your vision.

Rare but potentially serious side effects (less than 1 in 1000)

- **Neurological (brain) disorder**

Lenvatinib can cause a rare condition affecting the brain, called reversible posterior leukoencephalopathy syndrome (RPLS). If you experience severe headaches, disturbances in your vision, confusion or seizures then please seek urgent medical attention by ringing 999 or going immediately to your nearest accident and emergency department.

- **Inflammation of the nerves**

Contact the Hotline if you develop muscle weakness, numbness or tingling in your hands or feet or any dizziness or loss of consciousness.

- **Inflammation of the bowel leading to bowel perforation**

Rarely the bowel can become very inflamed, and this can lead to a small hole developing in the wall of the bowel (perforation). You will be closely monitored for this but if you develop severe diarrhoea as described above, any abdominal pain or blood or mucous in the stools, contact The Christie Hotline on **0161 446 3658** immediately.

Serious and potentially life-threatening side effects

In a very small number of patients anti-cancer therapy can cause very severe side effects which may rarely result in permanent disability or death. Should you wish to discuss this further ask the team caring for you. Not all side effects are listed above and there may be some rare and unusual side effects that we are unaware of. Please contact the medical team if you experience any unusual symptoms.

Late side effects

Some side effects may become evident only after a number of years. In reaching any decision with you about treatment, the potential benefit you receive from treatment will be weighed against the risks of serious long term side effects to the heart, lungs, kidneys and bone marrow.

With some drugs there is also a small but definite risk of developing another cancer. If any of these problems specifically apply to you, the doctor will discuss these with you and note this on your consent form.

Sex, contraception and fertility

It is important that you or your partner do not get pregnant while on treatment. We recommend that you or your partner use a condom during sexual intercourse whilst you are having the course of treatment and for 1 month after treatment. There is evidence that these drugs can affect the unborn child. It is important that you use effective birth control for as long as you are on the treatment and for at least 4 months after.

Women should stop breastfeeding while being treated with pembrolizumab and lenvatinib since it is unknown if the medication is excreted through breast milk.

Fertility

We do not know if pembrolizumab affects fertility. Lenvatinib may affect your ability to have children. Your doctor or nurse will discuss this with you (if applicable); if they have not, please ask them before you start treatment.

Contacts

For urgent advice ring The Christie Hotline on **0161 446 3658** (24 hours a day, 7 days a week).

If you have any general questions or concerns about your treatment, please ring:

- The nurse specialist or nurse clinician for your clinical team
- General enquires on **0161 446 3000**

Your consultant is:

Your hospital number is:.....

Your key worker is:

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If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard. If you would like to have details about the sources used please contact **the-christie.patient.information@nhs.net**

For information and advice visit the cancer information centres at Withington, Oldham, Salford or Macclesfield. Opening times can vary, please check before making a special journey.



Contact The Christie Hotline for
urgent support and specialist advice
The Christie Hotline: 0161 446 3658
Open 24 hours a day, 7 days a week