

PACKER (carboplatin, vincristine, lomustine)

The possible benefits of this treatment vary; for some people this chemotherapy may reduce the risk of the cancer coming back, for others it may control the cancer and its symptoms. Your doctor or clinician will be happy to answer any questions you have about your treatment. You will find it useful to refer to the booklet 'Chemotherapy, a guide' which gives general information on chemotherapy and side effects.

Your treatment

Your doctor has prescribed for you a course of treatment with PACKER chemotherapy. The treatment consists of the following:

Day 1: Vincristine is given by a short intravenous infusion (into a vein).

Lomustine (CCNU) is a single dose of capsules taken together for 1 day only.

Carboplatin is given as an intravenous infusion (into a vein) over an hour.

This treatment is given every 6 weeks, for up to 8 cycles.

You will have a routine blood test and be reviewed by a member of the neuro-oncology team before the start of each cycle of treatment. Occasionally we may not be able to go ahead with your treatment until your blood counts are back to a safe level. If this happens your chemotherapy may be delayed a week or until your counts are recovered.

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.

Increased risk of serious infection (Warning!)

You are vulnerable to infection while you are having chemotherapy. Minor infections can become life-threatening in a matter of hours if left untreated. Symptoms of infection include fever, shivering, sweats, sore throat, 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 chemist.

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 straight away.

Kidney function

It is important to monitor how your kidneys are working while you are having treatment. We can do this by checking your blood results or we may ask you to attend for a type of scan which measures kidney function (GFR test).



Flu vaccinations

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

It's safe to have a flu jab, but depending on the sort of chemotherapy you have had, it may not give quite as much protection against infection as usual. Some patients may need 2 vaccinations. However, if you're thinking of having any other vaccinations, do check with your Christie doctor 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 with you the best time to have this.

Possible side effects

Chemotherapy can cause many different side effects. Some are more likely to occur than others. Everyone is different and not everyone gets all the side effects. Most side effects are usually temporary, but in some rare cases they can be life-threatening. It is important to tell your hospital doctor or nurse about any side effects so they can be monitored and, where possible, treated.

Common side effects (more than 1 in 10)

• Nausea and vomiting (sickness)

This treatment can cause nausea (feeling sick) and vomiting (being sick). This may occur immediately after the chemotherapy or up to 4 to 5 days later. You will be given anti-sickness medication (ondansetron) at least 30 minutes before starting your chemotherapy. This will continue regularly every 12 hours for 2 days after the treatment to prevent you feeling or being sick. You will also be provided with additional anti-sickness medication (metoclopramide) to take if you need it. If you still feel sick, please contact your GP, hospital doctor or specialist nurse as other types of anti-sickness medication may be prescribed for you.

• Bruising or bleeding (low platelets) (Warning!)

This treatment can reduce the production of platelets which help the blood to clot. This means you may bruise easily or experience bleeding, such as nosebleeds or bleeding gums. If you have any of these symptoms, contact The Christie Hotline on **0161 446 3658** or tell your doctor or nurse straight away. You may need a platelet transfusion.

• Anaemia (low number of red blood cells)

While having this treatment you may become anaemic. This may make you pale and feel tired and breathless. Let your doctor or nurse know if you have these symptoms. You may need a blood transfusion.

• Constipation

This may be quite troublesome, and you should try not to let constipation become too severe. Try to drink plenty of fluids and eat foods high in fibre. You can also try simple laxatives which you can buy from a pharmacy, but make sure you tell your Christie doctor about this. Your Christie doctor or GP can prescribe stronger laxatives if necessary. (See 'Severe constipation and abdominal pains' on page 3).

• Lethargy

Some people become very tired after chemotherapy. You may feel you need to rest during the day. It is important to try and do some exercise; even a walk around the block may help.

• Liver problems

This treatment can cause abnormal liver blood tests and jaundice. This is rarely very severe, but your liver function will be monitored every time you come to the clinic for your treatment.

- **Headache**

Let your doctor know if you get headaches while you are on treatment.

- **Loss of appetite**

If your appetite is affected, try to eat little and often. If you don't feel like eating, you can replace meals with nutritious, high calorie drinks. These are available from most chemists or can be prescribed by your GP. The Christie booklet 'Eating – help yourself' provides further information.

- **Jaw pain**

Some patients may also develop jaw pain caused by vincristine. This usually settles within 2 - 3 days and can be treated with simple painkillers like paracetamol. Using a mouthwash such as Difflam or Chlorhexidine is also helpful. If your symptoms are particularly severe, please tell your doctor on your next visit.

- **Diarrhoea**

If diarrhoea becomes a problem while you are having treatment, anti-diarrhoea tablets can be bought from a pharmacy or prescribed by your GP for a temporary period until it resolves. If the problem persists, please contact The Christie. However, if you develop severe diarrhoea, it is important to contact The Christie straight away on **0161 446 3658** as this may be a sign of a serious infection—don't delay!

Uncommon side effects (less than 1 in 10)

- **Immediate allergic reactions (Warning!)**

Allergic reactions to carboplatin and vincristine are uncommon. Please ask the staff for help **immediately** if you notice any of the following: fevers and chills, back pain, shortness of breath, headaches and swelling of the face may occur *during* the time the drug is being given. If this happens please tell the staff straight away. Your doctor may prescribe further medication that can help to reduce these side effects.

- **Painful, numb fingers and toes**

You may experience tingling, painful or numb fingers and toes. This usually occurs for a few minutes at a time and then settles. Occasionally it can be permanent so tell your doctor or nurse if you experience the problem.

- **Severe constipation and abdominal pains**

Vincristine can sometimes cause severe constipation, possibly with abdominal pains, a few days after the infusion. Take laxatives as soon as you get any symptoms, particularly if you have vomited or not opened your bowels for more than 2 days. Contact your GP or The Christie Hotline on **0161 446 3658** for further advice.

- **Sore mouth**

Your mouth may become sore or dry, or you may notice small mouth ulcers during this treatment. Drinking plenty of fluids and cleaning your teeth regularly and gently with a soft toothbrush can help to reduce the risk of this happening. We can prescribe a mouthwash for you to use during treatment. You can dilute this with water if your mouth is sore. Ask your doctor or nurse for further advice. There is also general mouth care information in the chemotherapy booklet. If you continue to have a sore mouth, please contact The Christie Hotline.

- **Hair thinning**

Hair loss is very unusual with this treatment. In rare cases some hair loss may occur during treatment. It is advisable to 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 can be permanent.

The cancer information centre offers a coping with hair loss service to all patients where support, information and advice will be given. Drop in, contact **0161 446 8100** or email **the-christie.informationcentre@nhs.net**. Information about the wig service can also be found here and vouchers for wigs can also be obtained for eligible patients. The wig room provides a drop in service, please see The Christie leaflet 'The wig fitting service' for further information.

The Maggie's Centre can support you with hair loss by helping you consider the practicalities as well as the emotional impact. You can call into Maggie's Monday to Friday, 9am-5pm to speak with their professional team. Maggie's provide expert care and support to everyone with cancer and those who love them. Contact Maggie's on **0161 641 4848**, email: **manchester@maggies.org** or drop in, their address is The Robert Parfett Building, 15 Kinnaird Road, Manchester, M20 4QL

Rare side effects (less than 1 in 100)

- **Tinnitus and high frequency hearing loss**

You may develop or continue to experience tinnitus (ringing in the ears) following previous cisplatin therapy. High frequency hearing loss can also occur with this chemotherapy. Sometimes, this can become permanent. This will be monitored regularly.

- **Blood clots (Warning!)**

During chemotherapy you are more at risk of blood clots in the legs (DVT) or lungs (PE). Occasionally these clots can be life-threatening. To help prevent clots, keep mobile and drink plenty of non-alcoholic fluids (around 2 litres per day). Symptoms of a blood clot include breathlessness; chest pain; fainting; coughing up blood; or pain, redness, swelling or warmth in an arm or leg. If you develop any of these symptoms you should ring **999** and go immediately to your nearest accident and emergency department.

- **Lung problems**

Rarely, this chemotherapy can cause changes to the lungs. Always tell your doctor if you develop wheezing, a cough, a fever or feel breathless. You should also let them know if any existing breathing problems get worse. If necessary, they can arrange for you to have tests to check your lungs.

- **Extravasation**

Rarely the chemotherapy can leak out of the vein around the cannula. If you develop redness, soreness or pain at the cannula site, please let the nurse treating you straight away.

Serious and potentially life threatening side effects

In a small proportion of patients chemotherapy can result in very severe side effects which may rarely result in death. The team caring for you will discuss the risk of these side effects with you.

Other medicines

Some medicines can be harmful to take when you are having chemotherapy. Let your doctor know about any medications you are taking, including non-prescribed medicines such as complementary therapies and herbal remedies.

Sex, contraception and fertility

Protecting your partner and contraception: We recommend that you or your partner use a barrier form of contraception during sexual intercourse while you are having the course of chemotherapy. Chemotherapy is dangerous to unborn babies and this will also protect you and your partner from any chemotherapy drugs that may be present in semen and in the vagina. If you suspect that you may be pregnant, please tell your doctor immediately.

Fertility: This chemotherapy may affect your ability to have children. Your doctor should have discussed this with you. If not, please ask them before you start treatment.

Loss of periods: Due to the effects of chemotherapy on the ovaries you may find that your periods become irregular or may eventually stop. In younger women this may be temporary, but if you are closer to your menopause it may be permanent. This may result in hot flushes, sweats and vaginal dryness. Please contact your specialist nurse if you would like advice about managing these 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 applies to you, the doctor will discuss these with you and note this on your consent form.

Contacts

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

Your key worker is:

Phone:

Your consultant's secretary:	Professor McBain	0161 918 7008
	Dr Patel/Dr Borst	0161 446 3362
	Dr Colaco/Dr Whitfield	0161 918 7197

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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