

ICE (lymphoma)

The possible benefits of 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. Chemotherapy is the most commonly prescribed anti-cancer treatment but other types of treatment are also used. Your doctor will explain to you whether you will receive chemotherapy or another type of treatment, or a combination of both. Your doctor or nurse 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 or nurse clinician has prescribed for you an inpatient treatment which includes, ifosfamide and mesna, carboplatin and etoposide. You will be admitted to the hospital for around 3 to 4 days to receive this treatment. The treatment is given as an infusion (drip) into your vein. The treatment consists of the following:

Day 1 Etoposide by an infusion over 1 hour.

Day 2 Etoposide by an infusion over 1 hour.
Carboplatin by an infusion over 1 hour.
Ifosfamide and mesna by infusion for 24 hours.

Day 3 Etoposide by an infusion over 1 hour.
Mesna by infusion over 6 hours.

The treatment is usually given every 3 weeks dependent on how quickly you recover. You may have 2-3 cycles.

- You will have routine blood tests weekly and a medical review before the start of each cycle. This is so your team can monitor and manage any side effects as well as assess response to treatment.
- Depending upon any previous problems with inserting cannulas into your veins, it is possible you will need a central venous catheter (CVC) inserting from the start of this treatment. We will discuss this with you.
- It is important to tell the doctor if you are taking medicine for any other condition. Some medicines can react with your treatment. So always tell your doctor at every visit about any other medicines or tablets you are taking.

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.

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.



Tumour lysis syndrome

This treatment may cause the rapid breakdown of lymphoma cells, which may lead to abnormalities in the blood. This problem is more likely with the first cycle of treatment, if your disease is extensive, or if your kidneys do not work as well as they should do. Your doctor will tell you if you are at risk. You may be given kidney-protective medicines such as allopurinol or rasburicase and intravenous fluids. Your doctor may do additional blood tests to monitor this side effect.

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)

• Increased risk of serious infection

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 when you are at home. You can buy one from your local chemist.

You will be prescribed injections for 5 to 7 days to help to keep white blood cells raised during the chemotherapy. This aims to reduce the risk of infection but it will not eliminate the risk. The injections are given under your skin in your abdomen which you or your family member can be taught to do or a district nurse can be arranged for you.

• Bruising or bleeding

This treatment can reduce the production of platelets which help the blood clot. Let your nurse or doctor know if you have any unexplained bruising or bleeding, such as nosebleeds, bloodspots or rashes on the skin, and bleeding gums. 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 feel tired and breathless. Let your doctor or nurse know if these symptoms are a problem. You may need a blood transfusion. You will have a routine blood test every day while you are in hospital to monitor the effects of the chemotherapy, but please tell your nurse if you experience tiredness or breathlessness.

• Nausea and vomiting (sickness)

This treatment can cause nausea and vomiting. You will be given regular anti-sickness medication whilst in hospital and to take at home. If you continue to feel or be sick your anti-sickness medication may need to be changed or increased.

• Reduced appetite

This chemotherapy can suppress your appetite. Ask the staff for a copy of 'Eating: help yourself' which has useful ideas about diet when you are having treatment.

- **Constipation**

Etoposide and some anti-sickness tablets can cause constipation. Drink plenty of fluids and eat foods high in fibre. Report this to your doctor or nurse who may prescribe a suitable laxative. Ask the staff for a copy of 'Eating: help yourself' which has useful ideas about diet when you are having treatment.

- **Diarrhoea**

This chemotherapy can cause diarrhoea. If this becomes a problem during or after your treatment, anti-diarrhoea tablets can be prescribed by your doctor once infection has been ruled out. Ask the staff for a copy of Eating: help yourself which has some useful ideas about diet when you are having treatment.

- **Hair loss**

Hair loss is usually total. The hair falls out gradually 10 to 14 days following your first course of treatment. Body and facial hair can also fall out. The time scale varies from person to person. Please remember that this is a temporary side effect and your hair will grow back when your treatment is complete. 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 informationcentre@christie.nhs.uk. 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 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 641 4848** or email manchester@maggiescentres.org.

- **Fatigue (tiredness)**

This chemotherapy 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 rest and get help with household chores. If necessary, take time off work. Gentle exercise such as walking can be beneficial.

- **Skin**

Sometimes as a result of the chemotherapy, your skin may appear darker in colour or lightly tanned, especially around the joints. This is known as hyperpigmentation. Your skin may also become red, itchy or you may develop a rash. Rarely this is severe. Let your doctor or nurse know if you experience any of these symptoms.

- **Sore mouth and altered taste**

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. Occasionally during treatment you may have a strange taste (metallic or bitter) or, less commonly, loss of taste. A strongly flavoured sweet or mint will help to disguise this. Normal taste will usually return after the treatment finishes.

- **Bladder irritation**

Ifosfamide can cause a burning sensation on passing urine. This is caused by irritation of the bladder walls by the chemotherapy leaving the body. The medication, mesna, which you have been given should prevent this side effect. But if you do have a burning sensation on passing urine or notice any blood in your urine, please contact The Christie straight away.

- **Changes to liver function**

This chemotherapy can cause changes to your liver function. Your liver function will be monitored with your routine blood tests. Doses of medication may need to be changed if your blood tests are abnormal.

- **Tingling and numbness in the fingers or toes/muscle weakness**

This is usually only mild and temporary. It can sometimes last for some time or become permanent. Sometimes you may also have difficulty controlling the muscles in your arms and legs or your balance. Please report these symptoms to your doctor or nurse.

- **Changes to hearing**

Carboplatin may cause you to develop tinnitus (ringing in the ears); this sensation usually subsides when your treatment finishes. Please tell your doctor if this occurs. High frequency hearing loss can also occur with this chemotherapy. This may be permanent.

- **Headaches/dizziness**

This chemotherapy and some anti sickness medication can cause headaches and/or dizziness. Speak to your doctor or nurse for advice if you experience these symptoms.

Uncommon side effects (less than 1 in 10)

- **Irritation to the brain**

Ifosfamide can cause irritation to the brain. You may notice vivid dreams while you are on the drip (while the chemotherapy is actually being given). Sometimes people get very drowsy and sleepy or may have visual hallucinations. Please tell the nurse if you begin to feel any of these symptoms. These symptoms usually quickly go away if the drip is stopped and there are no permanent effects. However, rarely, ifosfamide can cause a loss of consciousness which can last for several days. Your doctor or nurse can give you more information about this.

- **Kidney function**

This chemotherapy can damage your kidneys. You will need to have your kidney function measured before you have this treatment and you will need to have additional fluids to keep your kidneys flushed. It is important to drink plenty of fluids to keep hydrated when you are at home. If you have problems with nausea, vomiting or diarrhoea you will become dehydrated very quickly, so you must phone The Christie Hotline straight away.

- **Changes to your lung function**

This chemotherapy can cause some changes to your lung tissue. Report any cough or breathlessness to your doctor or nurse.

Rare side effects (less than 1 in 100)

- **Extravasation**

Extravasation is when chemotherapy leaks outside the vein. If you develop redness, soreness or pain at the injection site at any time please let us know straight away. This happens rarely when you have a central line fitted.

- **Heart function**

Ifosfamide may cause changes in the rhythm of the heart, which can affect how the heart works. The effect on the heart depends on the dose given. Etoposide can also increase the risk of having a heart attack. It is unusual for the heart to be affected if you receive standard doses. Tests to see how well your heart is working will sometimes be carried out before the drug is given.

- **Allergic reactions (Warning!)**

This treatment can sometimes cause immediate allergic reactions when it is being given. Please tell your nurse straight away if you have any of these symptoms: skin rash, itching, fever, shivering, dizziness, headache or breathlessness.

- **Changes to your vision**

Rarely, etoposide can cause swelling of the optic nerve that can affect your eyesight. Temporary loss of vision can also occur. Report any changes straight away to your doctor or nurse or if you are home contact the 24 hour hotline.

- **Herbal medicine**

Some herbal medicine including St John's Wort can affect the chemotherapy. You should let your doctor or nurse know if you are taking any herbal medication, complementary or alternative medicines, including vitamins, minerals and medicines purchased over-the-counter.

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.

Sex, contraception and fertility

Protecting your partner and contraception

We recommend that you or your partner use a condom 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 or nurse should have discussed this with you. If not, please ask them before you start treatment.

Protecting your partner and contraception

We recommend that you or your partner use a condom 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.

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. Etoposide and ifosfamide can increase the risk of developing leukaemia in the future. 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.

Changes to the heart: Some chemotherapy may cause changes in the muscle of the heart. This can affect how the heart works. The effect on the heart depends on the dose given. It is very unusual for the heart to be affected if you have standard doses. Tests to see how well your heart is working may sometimes be carried out before the chemotherapy is given.

Contacts

If you have any general questions or concerns about your treatment, please ring the area where you are having treatment:

Haematology day unit - **0161 446 3924**

Lymphoma clinical nurse specialists - **0161 446 9573**

Lymphoma secretaries -

0161 446 3753 - Professor Radford/Dr Linton/Dr Phillips/Dr Broadbent

0161 446 8574 - Professor Illidge

0161 446 3333 - Dr Hague/Dr Chan

0161 446 3302 - Dr Harris

0161 446 3869 - Professor Bloor

Palatine treatment ward - **0161 446 3925**

General enquiries - **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