

## MAtRix (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. 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 a treatment which is called MAtRix. You will have your treatment in hospital. Treatment is repeated every 3 weeks. You will have up to 4 cycles with a repeat scan after 2 cycles to check how well the treatment is working and to decide if the final 2 cycles are needed. Your treatment includes the following:

- Day 1** Rituximab antibody infusion over 60 minutes to a few hours
- Day 2** Methotrexate infusion over 3¼ hours
- Day 3-4** Cytarabine infusion over 1 hour (repeated every 12 hours for 4 doses)
- Day 5** Thiotepa infusion over 30 minutes
- From day 6** Filgrastim (GSCF) injections daily for 7 days

As each cycle of chemotherapy is given over 5 days, you will need a central venous catheter (CVC) inserting. We will discuss this with you before treatment begins and arrange to have the CVC inserted before your chemotherapy starts.

You will need to have your urine checked and blood tests done each day to monitor the levels of methotrexate and ensure your kidney function is satisfactory. Fluids will be given by an infusion each day until your blood level and urine tests are within normal limits.

You will have a routine blood test and medical review before the start of every cycle of treatment. This is so your team can monitor and manage any side effects as well as assess your response to treatment. Occasionally it may not be possible to go ahead with your treatment until your blood counts are back to a safe level. If this happens your chemotherapy will usually be delayed by 1 week.

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 any other medicines:** It is important to tell the doctor if you are taking medication for any other condition. Some medicines can interact with your treatment so always tell your doctor at every visit about any other medicines or tablets you are taking.

**Medicines to be avoided on this regimen - do not take any medicines that contain aspirin, ibuprofen or co-trimoxazole.** Please be aware that some cold remedies and painkillers contain aspirin and ibuprofen. There are other medicines to avoid in addition to the above, please ask your doctor at The Christie for advice about any other medication you are taking, including non-prescribed medicines, complementary therapies and herbal medicines.

### **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.

### **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 if you have a lot of disease 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 a kidney-protective medicine called allopurinol for the first cycle of treatment, and your doctor may do additional blood tests to monitor this side effect. We sometimes admit patients for the first treatment to give intravenous fluids and kidney-protective medication and twice daily monitoring of blood tests for 48 hours.

### **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. 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 straight away.**

#### **• Infusion related reactions (Warning!)**

The side effects of Rituximab commonly occur while you are having the infusion including chills, fever and shivering. If you have any of these side effects please tell your nurse straight away, however, your progress will be monitored regularly. Rarely, you may also develop a skin rash, headache, tumour pain, 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 chemotherapy, please tell the nurse or doctor immediately. This may be an allergic reaction and they may need to slow down or stop the drip. You may feel tired and have a headache, these symptoms are related to your treatment and usually go when the infusion has finished.

If you do not have any reactions to your first treatment, we may be able to give you subsequent infusions over a shorter period of time.

#### **• 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 any of the symptoms listed above.

- **Nausea and vomiting (sickness)**

The severity of this varies from person to person. Anti-sickness medication will be given along with your chemotherapy to prevent this. You will also be given anti-sickness tablets to take at home. If you continue to feel or be sick, contact this hospital, because your anti-sickness medication may need to be changed or increased.

- **Reduced appetite**

This treatment 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.

- **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.

- **Kidney function**

Methotrexate can affect your kidney function. To prevent this from happening, an alkaline medication called sodium bicarbonate is given as a drip or as tablets. Your kidney function will be closely monitored during and after your treatment.

- **Diarrhoea**

If this becomes a problem while you are having treatment, anti-diarrhoea medication can be prescribed by your GP for a temporary period until this is resolved. If this problem persists contact this hospital for advice.

- **Hair loss**

Hair loss is usually total. The hair falls out gradually 10 to 14 days following the start of your first course of treatment. 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 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 [informationcentre@christie.nhs.uk](mailto: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 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 446 4848** or email [manchester@maggiescentres.org](mailto:manchester@maggiescentres.org)

- **Lethargy**

Some 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, rest and get help with household chores. Gentle exercise such as walking can be beneficial.

- **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.

- **Sore eyes**

Cytarabine can commonly cause sticky or sore eyes. We will give you dexamethasone eye drops to help prevent this. Do not wear contact lenses while you are having this treatment. Please let your nurse or doctor know if your eyes feel uncomfortable.

- **Flu-like symptoms (Warning!)**

Cytarabine may cause flu-like symptoms such as fever, aches and pains and shivering about 3 to 5 hours after it is given. These symptoms should be temporary and should go within 12 to 24 hours. Paracetamol will help. **As these symptoms can also be a sign of infection or sepsis, please inform your nurse or doctor if you are still on the ward. If you are at home, contact The Christie Hotline on 0161 446 3658 and tell them when you had chemotherapy and they will provide you with the appropriate advice.**

- **Skin reddening/rash**

Your skin may become reddened, itchy or you may develop a rash. Let your doctor or nurse know if you experience any of these symptoms.

## Uncommon side effects (less than 1 in 10)

- **Uncommon infections**

Rituximab causes immune suppression and can increase the risk of uncommon or unusual infections. Your doctor will discuss this side effect before you start treatment.

- **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 straightaway.

- **Reactivation of Hepatitis B**

You must tell your doctor at The Christie before starting rituximab if you have previously been diagnosed with hepatitis B. Rituximab can cause reactivation of the hepatitis B virus. Speak to your doctor if you wish to discuss this further.

- **Sensitivity to the sun**

Some chemotherapy can make your skin more sensitive to the sun than usual. Sit in the shade, avoid too much sun and use a high factor sunblock cream. Asian and African-Caribbean people may develop noticeable light patches on their skin.

- **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 on your next hospital visit.

### • **Abdominal pain**

Your stomach may become irritated. Tell your doctor if you have a pain or indigestion. Rarely, treatment may cause stomach ulcers. If you notice any blood when your bowels move, or if your stool is dark or tar-like please inform your team.

### • **Heart function**

You will have tests to see how well your heart is working before, during and sometimes after treatment. If you have pain or tightness in your chest, feel breathless or notice changes to your heartbeat at any time during or after treatment, tell a doctor straight away. These symptoms can be caused by other conditions, but it's important to get them checked by a doctor.

### • **Changes to your lungs**

This treatment 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.

## **Rare side effects (less than 1 in 100)**

### • **Effects on the nervous system**

This treatment may affect the nervous system. You may feel anxious or restless, drowsy or confused. Tell your doctor or nurse straight away if you notice any of these symptoms.

## **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.

## **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 the area where you are having treatment:

Haematology day unit - **0161 446 3924**

Lymphoma clinical nurse specialists - **0161 446 8573**

Lymphoma secretaries -

**0161 446 3753** - Professor Radford/Dr Linton

**0161 446 8574** - Professor Illidge

**0161 446 3956** - Dr Smith

**0161 446 3332** - Professor Cowan

**0161 446 3302** - Dr Harris/Dr Chan

**0161 446 3869** - Dr Bloor

Palatine treatment ward - **0161 446 3960/3961**

General enquiries - **0161 446 3000**

Your consultant is: .....

Your hospital number is: .....

Your key worker is: .....

© 2020 The Christie NHS Foundation Trust. This document may be copied for use within the NHS only on the condition that The Christie NHS Foundation Trust is acknowledged as the creator.

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 **patient.information@christie.nhs.uk**

For information and advice visit the cancer information centres at Withington, Oldham or Salford. 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