

# ESHAP (Etoposide, Methylprednisolone, Cytarabine and Cisplatin) treatment and stem cell collection

Bone Marrow Transplant Unit

Produced: Jan 2023

Information for patients

Review: Jan 2026

Leaflet number: 640 Version: 4

---

## Important dates

Outpatient appointment for counselling

.....

Date for admission to hospital

.....

Date to start G-CSF / dose

.....

Date to attend for stem cell collection (at 8.30am)

.....

Date for next appointment and review

.....

## Introduction

Your medical team has decided that you would benefit from having high dose therapy and stem cell transplantation. We hope that this booklet will help you understand how the stem cells will be collected, in order for them to be transplanted at a later date.

Medical research has shown that combining chemotherapy (in this case, ESHAP chemotherapy) and G-CSF is the best way of enabling us to collect stem cells from the blood. G-CSF is a growth factor that is used to increase stem cell production. You will be given a separate leaflet with further information about G-CSF.

The same research has shown that ESHAP chemotherapy is an effective treatment for lymphoma.

---

**Health information and support is available at [www.nhs.uk](http://www.nhs.uk)  
or call 111 for non-emergency medical advice**

Visit [www.leicestershospitals.nhs.uk](http://www.leicestershospitals.nhs.uk) for maps and information about visiting Leicester's Hospitals  
To give feedback about this information sheet, contact [InformationForPatients@uhl-tr.nhs.uk](mailto:InformationForPatients@uhl-tr.nhs.uk)

## Before your treatment

Having signed a consent form and agreed to this treatment, you will have blood tests, including a viral screen. This test is to give us information about viruses you may have had in the past, and also routine elimination of serious viruses such as hepatitis and HIV.

We are not allowed to store your stem cells unless we have this information, and your doctor will have explained the reasons for this. Dates for your chemotherapy and peripheral blood stem cell collection have been planned (see dates below).

Before your treatment starts you will need to have a skin-tunnelled catheter inserted. A skin-tunnelled catheter is a fine tube inserted under the skin of your chest into a vein. The tip of the tube sits in a large vein just above your heart. The skin-tunnelled catheter will remain in place until your treatment is finished. If you require further information please ask a member of staff for a separate leaflet on skin-tunnelled catheters.

You will also have pulmonary function tests to check how your lungs are working and an echocardiogram to check on your heart.

## Starting treatment

**Day 1** (Date .....

You will be admitted to hospital for four to five days, depending on when your chemotherapy starts.

You will be seen by a doctor, who will make sure you are fit, and check that you have given your written consent to the procedure. During your stay you will receive a combination of drugs, which are etoposide, methylprednisolone, cytarabine and cisplatin (known as ESHAP chemotherapy). These are given continuously via a skin-tunnelled catheter. You will be given separate leaflets about these drugs and their possible side effects.

You will be given anti-sickness drugs.

**Day 6 onwards** (Date .....

During the time between your chemotherapy and stem cell collection your white blood cell count will fall to very low levels, and you will be vulnerable to infection. You should check your temperature daily.

**You must phone the hospital immediately if you feel unwell and / or have a temperature above 37.5° C, using the numbers listed on page 7 of this leaflet.**

You will also be given a leaflet about dietary precautions that you will need to take to avoid food-borne infections whilst your immunity is low.

You should avoid crowded places and visiting any friends or relatives who have colds, sore throats, sickness or diarrhoea.

**Day 8** (Date .....

You will start your daily injections of G-CSF. You may wish to administer the injections yourself, and your nurse will teach you how to do this. Alternatively, arrangements can be made for you district nurse to do this for you.

You will need these injections daily until your stem cell collection is completed. The injections are believed to work better if administered late afternoon or early evening.

While you are having G-CSF injections you may experience headaches, bone pain and flu-like symptoms, but you should check with the hospital before taking paracetamol.

**Day 15** (Day .....

Please come to Osborne Day Care on level 2 of the Osborne Building at Leicester Royal Infirmary at 8:30am. Please bring any unused G-CSF injections with you.

You will have a blood test to assess whether your blood count is at a suitable level for stem cell collection. If it is not, your collection will not take place that day and your doctors may decide that you need an additional drug called plerixafor.

Plerixafor helps to release stem cells from the bone marrow, and is given by injection. The nursing staff will give you this injection at about 5pm and you will be asked to lie down for 30 minutes before going home.

You will be advised to come back to the hospital the following day and, if your blood count is adequate, you will then have the stem cell collection.



A patient attached to a cell-separating machine

## How are the stem cells collected?

Stem cell collection is carried out using a cell-separating machine. The machine takes blood out of a vein, spins it in a centrifuge to separate the components and collects the stem cells into a bag. The remaining blood is then returned to the circulation via a different vein or your skin-tunnelled catheter.

The stem cell collection will take approximately four hours and needs good access to two different veins or a functioning skin-tunnelled catheter. You should expect to come for this procedure on more than one occasion, and possibly for three consecutive days. This is often necessary in order to obtain adequate numbers of cells for your transplant.

You should not feel unwell during or after the procedure, but should arrange for a responsible adult to take you home in a car or taxi.

## Cell storage

Your cells will be stored in an accredited facility, approved by the Human Tissue Authority. Whilst every care is taken to ensure your cells are transported and stored safely, we cannot be held responsible for events outside our control (for example: road traffic accidents or power failure) that may result in the loss of your cells.

Cells will be stored until required for your treatment, or up to five years. The need for continued storage will be kept under review. Your cells will be destroyed in the event of your death, or after five years in storage if your doctor decides they are no longer of any benefit to you. You will be issued with a form telling you what cells are stored on your behalf. If any cells are used in your treatment, or destroyed after five years, you will be sent an updated form. If you move house, please inform the laboratory using the details on the form.

## Contact numbers

If you have any questions at any time during the whole process, please phone the following numbers, according to the hospital you normally attend.

### Leicester Royal Infirmary

#### Hambleton Suite

Telephone: 0116 258 5124

Monday to Friday, 9am – 5pm

#### Osborne Day Care

Telephone: 0116 258 5263

Monday to Friday, 8.30am - 6pm, Saturday 8.30am - 4.30pm

#### Haematology Ward (Ward 41)

Tel: 0116 258 5088 or 258 6832 24 hours, 7 days a week

#### Bone Marrow Transplant Unit

Tel: 0116 258 5698

24 hours, 7 days a week

### Northampton General Hospital

#### Haematology Clinic

Tel: 01604 545031

Mon - Fri, 9am-5pm

#### Talbot Butler Ward

Tel: 01604 545334

24 hours, 7 days a week

### Kettering General Hospital

#### Centenary Wing

Tel: 01536 493638

Mon - Fri, 9am-5pm

#### Lilford Ward

Tel: 01536 492834

24 hours, 7 days a week

## Frequently asked questions

### Is the collection always successful?

No, in about 20% of patients we cannot obtain enough cells for transplantation to go ahead. If this happens you will be given an appointment with the Transplant Team to come and talk about the other options available to you.

### Will I have any side effects whilst I am attached to cell-separating machine?

Possible side effects include:

- a headache,
- a tingling sensation (caused by a low level of calcium in your blood)
- pain at the site of the needles.

### What should I do if I feel unwell after my treatment, for example if my anti-sickness tablets are not working?

Please contact us immediately using the telephone numbers in this booklet.



## Sources of further information

### Macmillan Information and Support Centre

Osborne Building, Leicester Royal Infirmary, Leicester LE1 5WW

Telephone: 0116 258 6189

Email: [cancerinfo@uhl-tr.nhs.uk](mailto:cancerinfo@uhl-tr.nhs.uk)

Website: [leicestershospitals.nhs.uk/cancerinfo](http://leicestershospitals.nhs.uk/cancerinfo)

### Coping with Cancer

Helen Webb House , 35 Westleigh Road, Leicester LE3 0HH

Tel: 0116 223 0055

### Macmillan Cancer Support

Freephone: 0808 808 00 00

Website: [www.macmillan.org.uk](http://www.macmillan.org.uk)

### Bloodwise

Telephone: 0808 2080 888

Website: [www.bloodwise.org.uk](http://www.bloodwise.org.uk)

### Lymphoma Action

Telephone: 0808 808 5555

Website: [www.lymphoma-action.org.uk](http://www.lymphoma-action.org.uk)

### Leukaemia Care

Telephone: 08088 010 444

Website: [www.leukaemiacare.org.uk](http://www.leukaemiacare.org.uk)

### Bloodwise

Telephone 0808 2080 888

Website: [www.bloodwise.org.uk](http://www.bloodwise.org.uk)

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔  
على هذه المعلومات بلغة أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل

જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਸਿ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਰਿਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।

Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email [equality@uhl-tr.nhs.uk](mailto:equality@uhl-tr.nhs.uk)



Leicester's Hospitals is a research active trust so you may find research happening on your ward or in your clinic. To find out about the benefits of research and become involved yourself, speak to your clinician or nurse, call 0116 258 8351 or visit [www.leicestersresearch.nhs.uk/patient-and-public-involvement](http://www.leicestersresearch.nhs.uk/patient-and-public-involvement)