

*Understanding*

# Stem Cell Collection

*Caring for people with cancer*



Irish Cancer Society  
43/45 Northumberland Road, Dublin 4  
Tel: 01 231 0500 Fax: 01 231 0555  
Email: [info@irishcancer.ie](mailto:info@irishcancer.ie) Website: [www.cancer.ie](http://www.cancer.ie)

National Cancer Helpline Freephone 1800 200 700  
Open Monday to Thursday 9am–7pm; Friday 9am–5pm  
Email: [helpline@irishcancer.ie](mailto:helpline@irishcancer.ie)



Find us on Facebook  
Follow us on Twitter (@IrishCancerSoc)



## Understanding stem cell collection

This short booklet has been written to help you understand more about collecting stem cells. It has been prepared and checked by cancer doctors and nurses, and the information is an agreed view on collecting stem cells.

If you are a patient, your doctor or nurse may wish to go through the booklet with you and mark sections that are important for you. You can also make a note below of the contact names and information you may need.



Haematology nurse specialist Tel:

Family doctor (GP) Tel:

Haematologist Tel:

Medical oncologist Tel:

Medical social worker Tel:

Emergency number Tel:

If you like, you can also add:

Your name

Address

This booklet has been produced by Nursing Services of the Irish Cancer Society and the haematology staff of St James's Hospital, Dublin to meet the need for improved communication, information and support for cancer patients and their families throughout diagnosis and treatment. We would like to thank all those patients, families and professionals whose support and advice made this publication possible.

#### STEM CELL ADVISERS

Prof Elisabeth Vandenberghe, Consultant Haematologist  
Dr Patrick Hayden, Consultant Haematologist  
Mairead Ní Chonghaile, Transplant Co-ordinator  
Katherine Mullarkey, Clinical Nurse Manager in Apheresis

#### COMPILED BY

Liz Higgins, Transplant Co-ordinator

#### EDITOR

Antoinette Walker

#### SERIES EDITOR

Joan Kelly, Nursing Services Manager

The following sources were used in the publication of this booklet:

- *A Strategy for Cancer Control in Ireland*, National Cancer Forum, 2006.
- Stem cell transplantation in Europe: trends and prospects. SS Tan, CA Uyl de-Groot, PC Huijgens, WE Fibbe. *European Journal of Cancer* 2007; 43: 2359–65.
- Recommended screening and preventive practices for long-term survivors after hematopoietic cell transplantation: joint recommendations of the European Group for Blood and Marrow Transplantation. Rizzo JD et al. Center for International Blood and Marrow Transplant Research, and the American Society for Blood and Marrow Transplantation EBMT/CIBMTR/ASBMT. *Biology of Blood and Marrow Transplantation*, 2006; 12(2): 138–151.
- *DeVita, Hellman, and Rosenberg's Cancer: Principles and Practice of Oncology*. R Govindan (ed), 9th edn. Lippincott Williams & Wilkins, 2011.

Published in Ireland by the Irish Cancer Society.

© Irish Cancer Society, 2013

Next revise: 2015

Product or brand names that appear in this booklet are for example only. The Irish Cancer Society does not endorse any specific product or brand.

All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means, electronic or mechanical, including photocopying, recording or any information storage and retrieval system, without permission in writing from the Irish Cancer Society.

ISBN 0-95323-690-1

## Contents

### 4 Introduction

#### About stem cells

- 5 What are stem cells?
- 6 Why must my stem cells be collected?
- 6 What tests are needed before collecting the stem cells?
- 8 How are the stem cells moved into my bloodstream?
- 9 When are the stem cells collected?

#### Collecting the stem cells

- 11 How are the stem cells collected?
- 12 Will I feel anything while connected to the machine?
- 14 How long does the collection take?
- 14 What happens once the cells are collected?
- 15 Is there anything I can do to help?

#### Coping and emotions

- 17 How can I cope with my feelings about stem cell collection?

#### Support resources

- 19 Contact details of stem cell transplant centres
- 20 Irish Cancer Society services
- 24 Useful organisations
- 29 Helpful books
- 30 What does that word mean?
- 32 Questions to ask your doctor
- 33 Your own questions

## Introduction

This booklet has been written to help you and your family understand how stem cells are moved out of your bone marrow and collected. The medical name for this is peripheral blood stem mobilisation and collection or harvest. Naturally, you and those close to you might feel daunted at this process and it can be a stressful time.

The booklet aims to help and guide you through each stage of this process. No doubt you will have many questions to ask and concerns of your own. We hope this booklet answers some of those questions and encourages you to discuss them and others with your doctors and nurses. They are more than willing to answer any queries you may have, so just ask. At the end of the booklet, you will find a list of websites and special groups to help and support you at this time.

If you are due to have a stem cell transplant in the near future using your stem cells, there is a useful booklet available. It is called *Understanding Autologous Stem Cell Transplants*. Call the National Cancer Helpline on 1800 200 700 for a free copy.



### Reading this booklet

Remember you do not need to know everything about collecting stem cells straight away. First read a section about a particular item as it happens. Then when you feel relaxed and want to know more, read another section.



If you do not understand something that has been written, discuss it with your doctor or nurse. You can also call the National Cancer Helpline on Freephone 1800 200 700. It is open Monday to Thursday 9am–7pm and Friday 9am–5pm. Or if you wish, you can also visit a Daffodil Centre if one is located in your hospital. See page 20 for more about Daffodil Centres.

National Cancer Helpline Freephone 1800 200 700

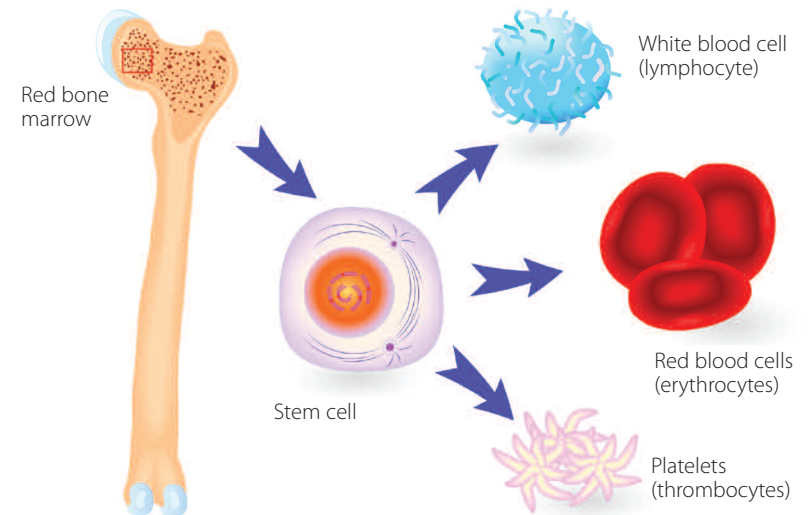
## About stem cells

### What are stem cells?

Stem cells are the cells that will be collected from you. These cells are found in your bone marrow. Bone marrow is a spongy tissue found within bone and in particular within your hip bones. Bone marrow makes all of your body's blood cells. These are:

- **Red cells** – to carry oxygen
- **White cells** – to help fight infection
- **Platelets** – to help blood clot and prevent bleeding

Stem cells are blood cells that are immature or at the earliest stage of development. They can develop into mature red cells, white cells and platelets.



At one stage the only way to get these stem cells was to gather or harvest the cells directly from the bone marrow. But it involved having a general anaesthetic. Now it is possible to move or mobilise these cells into your veins and arteries so they can be collected in your bloodstream. This kind of collection is known as leucapheresis or peripheral blood stem cell harvest (PBSCH).

## Why must my stem cells be collected?

Once your stem cells are collected, they will be frozen (cryopreserved) and used at a later date. Sometimes your collected cells may simply be stored in case you ever need them, or they can be re-infused as part of your treatment plan later. Re-infusing stem cells is known by different names: as an autologous peripheral blood stem cell transplant, autograft or stem cell rescue. For more information, see the booklet *Understanding Autologous Stem Cell Transplant*. Call the National Cancer Helpline on 1800 200 700 for a free copy.

Having your stem cells in storage allows your doctor to increase the dose of chemotherapy to treat your condition. Because chemotherapy cannot tell the difference between normal and diseased cells, your bone marrow cells will also be affected by the chemotherapy drugs.

As a result, the red cell count, white cell count and platelet count in your blood will drop significantly. This will make you prone to infection, bleeding and anaemia. If your stem cells are given back to you after this high dose of chemotherapy, they will find their way back into your bone marrow and start to make new blood cells again. Quite simply, the stem cells will rescue you from the high dose chemotherapy. It will allow your bone marrow to work again, reducing the risk of serious infection and severe bleeding.

## What tests are needed before collecting the stem cells?

Before your stem cells are collected, you will be asked to attend the haematology clinic for a number of reasons. First, you will meet the haematology team including the doctors, nurses and transplant co-ordinators. This visit also gives you a chance to ask questions and get to know the haematology clinic. You must bring along a partner or family member when you visit. On the day, you will meet with your haematologist and the transplant co-ordinator, who is the nurse organising your care.

Next you will be introduced to the team of nurses who will take care of you when your cells are being harvested. They are known as the apheresis team. You will also get a chance to ask any questions and get any concerns cleared up. All the staff will explain in detail what is involved. You will be asked to sign a consent form allowing them to go ahead and organise the moving and harvesting of the stem cells.

### Blood tests

Some blood tests will be taken to make sure you are medically fit for the stem cells to be collected. These blood tests will check:

- Your kidney, liver and bone function
- A full blood count
- Your blood group
- Your clotting levels
- The presence of viruses, for example, HIV, hepatitis A, B, C and syphilis

These tests are important and must be done for all patients or donors of blood, tissues or organs. Your doctor or transplant co-ordinator will let you know if you have any abnormal results. If the viral test is positive, counselling can be arranged through the infectious disease team.

>>> Some blood tests will be taken to make sure you are medically fit for the stem cells to be collected.

### Other tests

You will also be weighed and your blood pressure and pulse recorded as a baseline. Because your veins will be used to collect the stem cells, a nurse will check if they are suitable for the type of needles put in to collect the cells. Other tests may be needed depending on your condition. Your doctor or transplant co-ordinator will explain these in more detail on the day of your visit.

National Cancer Helpline Freefone 1800 200 700

## How are the stem cells moved into my bloodstream?

There are several ways that bone marrow cells can be moved into your bloodstream to allow them to be collected. The method will be decided by your doctor, depending on your condition. The most common ways are:

- Giving growth factors (G-CSF)
- or
- Giving chemotherapy and growth factors (G-CSF)

### Growth factors (G-CSF)

Growth factors are hormones that occur naturally and can help to control how blood cells are made. The most common one is G-CSF, which stands for granulocyte colony-stimulating factor. When given by injection, G-CSF causes blood stem cells to be released from your bone marrow into your bloodstream. These stem cells can then be collected (harvested) in your bloodstream. G-CSF is known under several names, for example Neupogen®.

The growth factors are given as a daily injection under your skin for several days. This is done until the desired amount of stem cells have been collected. It is important that the injection is given in the evening at roughly the same time each day. Remember the injections must be given every day and only stopped when the transplant team tells you to do so. The haematology team will discuss how to give the injection with you. A family member, partner, public health nurse or regional hospital can be organised to give the injections. If you wish, you can also give the injections by yourself.

**Side-effects:** The most common side-effect of these injections is bone pain. This usually happens in the chest and back area and is a spasmodic type of pain. The pain is usually relieved by simple painkillers such as paracetamol. Take these as soon as you start to feel any pain and continue to take them regularly until your harvest is complete. In some cases these painkillers may not relieve the symptom. If this happens, the best advice is to contact your hospital.

Other side-effects include flu-like symptoms, tiredness, headache, sleeplessness and irritability. A slight tingling sensation and occasionally redness may occur at the injection site and bruising may also occur. Sometimes G-CSF can cause allergic reactions, which can be easily treated.

### Chemotherapy and growth factors (G-CSF)

A course of chemotherapy may be given to you before starting the G-CSF injections. This is given both to treat your condition and to increase the number of stem cells mobilised. Some chemotherapy courses may be given as an inpatient, while others are given as an outpatient. Your doctors and nurses will discuss with you the chemotherapy you might receive.

## When are the stem cells collected?

The ideal time to collect stem cells is when your white blood cells begin to rise rapidly. This can be known by checking your full blood count regularly. Blood must also be tested for a special protein called the CD34 level. This level reads the number of stem cells circulating in your bloodstream. Based on this result, the transplant team will know when your stem cells are ready to be collected.

When checking this level, blood samples need to be taken for a number of consecutive days to find out the ideal day to start collecting the stem cells. Your nurse will let you know at what time this blood sample will be taken each day. Remember there is a chance that your blood count may not ever rise to the level needed to collect the stem cells. There is also the chance that the number of stem cells harvested is not enough to allow for future use. If this happens, other options will be discussed with you.



Apheresis machine



## Collecting the stem cells

### How are the stem cells collected?

Collecting the stem cells is called harvesting. The stem cells are collected using a machine called a cell separator. It is also known as an apheresis machine. This machine contains a centrifuge that spins your blood at high speed. You will notice on the day of your harvest



Collecting stem cells

that the machine makes a low humming noise like a washing machine spinning. The spinning allows your blood to separate into layers.

The layer with the stem cells is selected and collected into a sterile bag by the machine. Also, the machine will remove some of your plasma each day, usually about 400mls. Plasma is the name given to the pale yellow liquid part of blood minus the blood cells. All of the remaining blood is then returned to you. The machine processes two to three times the amount of blood in your body. But at any one time only about 200mls of blood is spinning in the centrifuge. All the kits used in the machine containing the lines and bag are disposable, so no blood actually comes in contact with the inside of the machine.

### Putting in needles

To collect the stem cells, a special needle must be put in the bend of both your arms. One of these needles helps to take the blood from you and into the machine. The other is to allow the blood that is no longer needed to be returned to you.

During the collection, you cannot move your arms freely and will need to stay in the one place. This is to prevent the needles moving or dislodging. But your arms will be placed in a comfortable, supported

position beforehand. Once the stem cells are collected the needles will be removed. You may notice some bruising and tenderness around the needle area but this should clear up within a few days.

If your veins are too small or not suitable, you may need to have a temporary line put into a large vein. This line or tube is called a catheter. The vein can be located in your neck, upper chest or groin. A local anaesthetic is given first and X-rays are taken to guide the catheter into your vein. As this is like minor surgery, you will need to sign a consent form. But any risks will be explained to you beforehand. The catheter will be left in place until all the stem cells are collected and will then be removed.



Catheters in the neck

Again, once removed, the area around the catheter may be tender and may also bruise. But this should clear up within a few days. Some catheters can be left in place to allow for any further chemotherapy and your transplant. The transplant co-ordinator will discuss this with you.

## Will I feel anything while connected to the machine?

Once you are connected to the machine you should not feel anything. Your nurse will remain with you for the entire time. Certain side-effects can occur and are mainly due to:

- A change in the amount of blood in your system
- The anticoagulant used

The side-effects can include:

- Feeling light-headed
- Feeling dizzy

- Nausea
- A sour taste in your mouth
- Tingling around your lips, fingertips and other sensitive areas
- Bleeding or bruising
- Tiredness

## Amount of blood in your system

Usually about 200mls of blood is spinning through the machine at any one time. Having slightly less blood in your system may cause you to feel light-headed, dizzy or nauseated. If these side-effects occur, do tell your nurse as they can be easily treated.

## Anticoagulant used

Once blood leaves your body it will clot in a matter of time. To prevent the blood in the machine from clotting, an anti-clotting drug known as ACDA is added. As blood is returned to you so too will some of this anticoagulant. The anticoagulant may drop the calcium level in your body causing a sour or metallic taste in your mouth. You might also notice some tingling around your lips, fingertips and other areas with sensitive nerve endings. Other symptoms include nausea or feeling cold and shivery. These can be treated simply with a glass of milk or a calcium tablet or drip. Again please let the staff caring for you know if this symptom occurs.

## Bleeding or bruising

Some red cells and platelets may be unavoidably removed when collecting the stem cells. This may reduce your platelet count. As a result, you may be more prone to bleeding or bruising. Within days the platelets will rise to the normal level naturally, but if your count is very low you may need a platelet transfusion. This will be discussed with you in more detail if needed.

## Tiredness

Afterwards you will probably feel quite tired, but again this should ease off once you have rested.



## How long does the collection take?

In general each session takes around 4–5 hours. Afterwards you will be asked to stay on for about half an hour to make sure you are feeling well. During this time you will be offered a light diet.

## What happens once the cells are collected?

Once the collection is over, the bag of stem cells will be removed from the machine. About 200–300mls of stem cells are collected per day. You will get the chance to see the stem cells if you wish. From there the cells are brought to the laboratory where the number of stem cells in the bag are counted. The stem cells are then mixed with a preservative called DMSO and frozen to  $-196^{\circ}\text{C}$  until needed. This freezing is known as cryopreservation.

Once frozen, the stem cells can be stored for several years. On the evening of your harvest, one of the haematology team will contact you to tell you if a second or third day of harvesting will be needed. This routine will be the same on each day of harvesting. No more than 3 days of harvesting will be done. If you need another day of harvesting, then it is important to keep taking your growth factor (G-CSF) injections.



Stem cells

You will need your blood count checked a week after the collection. Do ask your transplant co-ordinator about it and they will organise it for you.

## Is there anything I can do to help?

Yes! There are many things that you can do to help.



### Hints & Tips



- Do not take aspirin or tablets containing aspirin 2 weeks before your stem cell collection. This will be discussed with you by the transplant team.
- Make sure you have a milky breakfast on the morning(s) of your harvest to boost your calcium level. If you prefer, you can eat yoghurt or cheese instead.
- Wear or bring a short-sleeved top to allow easy access to your arms.
- If the day is cold, wrap up well. Keeping warm will help enlarge your veins and make it easier to put in the needles.
- Use the bathroom before you are connected to the machine. As you will be 3 to 4 hours on the machine, it may be difficult to use the toilet.
- Do bring a companion along. Often the time on the machine can be quite boring. Feel free to bring a Walkman or iPod to listen to, if you wish. It is best not to bring reading materials as your movements will be restricted. Most units have a television for your entertainment.
- Do not drive after the harvesting. It is a good idea to have someone collect you afterwards.
- Avoid strenuous activity on the days of harvesting. Do rest for the evening.
- Avoid smoking for at least 2 hours after the harvest.
- You can return to work the day after your last harvest if you wish.



## Coping and emotions

### How can I cope with my feelings about stem cell collection?

You may have a range of feelings and emotions when preparing for a stem cell collection. You might worry about what it will involve, will it hurt, or will it work. The idea of being connected to a machine might scare you or seeing blood might make you feel squeamish. The whole process may even overwhelm you. It is normal to have these kinds of worries at this time. If you are due to have a stem cell transplant in the near future, you might also be nervous about that. Do talk to your nurse or doctor if you are feeling anxious and concerned. They will give you all the information you need and reassure you.

It can help to talk about your feelings to those close to you as well or to someone who is a good listener. Do make a list of any concerns you have and discuss them with your doctor or nurse.

### Cancer diagnosis

Your emotions might also be linked to your cancer diagnosis and if your treatment is hard going. If you are finding it particularly hard to cope, do seek professional advice early. A useful booklet called *Understanding the Emotional Effects of Cancer* has been written for people with cancer and is available from the Irish Cancer Society. Call the National Cancer Helpline on 1800 200 700 for a free copy.

The Helpline can also put you in touch with cancer support centres and counsellors if you feel that would help. Or if you wish, you can visit a Daffodil Centre if one is located in your hospital.



## Support resources

### Contact details of stem cell transplant centres

#### St James's Hospital, Dublin

Ms Liz Higgins, Transplant Co-ordinator.

St James's Hospital  
James's Street  
Dublin 8

Tel:	01 410 3000 Bleep 187
Mobile:	087 787 5089
Email:	ehiggins@stjames.ie
St James's Hospital:	01 410 3000
Denis Burkitt Unit (inpatient ward):	01 416 2271 / 01 416 2265
<i>Please use at weekends and out of hours.</i>	
Haematology Day Ward:	01 410 3970 / 01 416 2168

#### St Vincent's University Hospital, Dublin

Ms Joy Lewis/Ms Michelle Connell, Haematology Clinical Nurse Specialists.

St Vincent's University Hospital  
Elm Park  
Dublin 4

Direct Tel:	01 221 4373
Tel:	01 221 4000 Bleep 656
Email:	j.lewis@st-vincent's.ie / m.connell2@st-vincent's.ie

Main hospital:	01 221 4000
St Anne's Ward/Haematology Day Ward:	01 221 6692 / 221 6687

#### University Hospital Galway

The service is co-ordinated by medical consultants and clinical nurse specialists.

University Hospital Galway  
Newcastle Road  
Galway

Tel:	091 524 222 Bleep 214 / 730
St Joseph's Ward:	091 544 430
St Patrick's Ward:	091 544 759
Haematology Day Ward:	091 544 610

## Irish Cancer Society services

The Irish Cancer Society funds a range of support services that provide care and support for people with cancer at home and in hospital.

- Cancer Information Service (CIS)
- Daffodil Centres
- Cancer support groups
- Survivors Supporting Survivors
- Counselling
- Night nursing
- Oncology liaison nurses
- Cancer information booklets
- Financial support
- Care to Drive transport project

### Cancer Information Service (CIS)

The Society provides a Cancer Information Service with a wide range of services. The **National Cancer Helpline 1800 200 700** is a freefone service that gives confidential information, support and guidance to people concerned about cancer. It is staffed by specialist cancer nurses who have access to the most up-to-date facts on cancer-related issues. These include prevention of cancer, risk factors, screening, dealing with a cancer diagnosis, different treatments, counselling and other support services. The helpline can also put you in contact with the various support groups that are available. The helpline is open Monday to Thursday from 9am to 7pm, and every Friday from 9am to 5pm.

- All queries or concerns about cancer can be emailed to the CIS at **helpline@irishcancer.ie**
- **Message Board** is a discussion space on our website (**www.cancer.ie**) to share your stories, ideas and advice with others.
- The **CancerChat** service is a live chatroom with a link to a Cancer Information Service nurse.
- Find us on Facebook and follow us on Twitter (**@IrishCancerSoc**).

### Daffodil Centres

Daffodil Centres are located in a number of Irish hospitals. They have been set up by the Irish Cancer Society in partnership with each hospital and are an extension of the Cancer Information Service. They

are generally found near the main entrance of the hospital and are open during the day. Staffed by a specialist nurse and trained volunteers, they provide a range of information, advice, help and support on all aspects of cancer, free of charge.

Daffodil Centres give you a chance to talk in confidence and be listened to and heard. If you are concerned about cancer, diagnosed with cancer or caring for someone with cancer, you are welcome to visit the centre. Do check to see if there is a Daffodil Centre in your hospital.

### Cancer support groups

The Irish Cancer Society funds a range of support groups set up to support you and your family at time of diagnosis, throughout treatment and afterwards. See pages 24–28 for more details.

### Survivors Supporting Survivors

Being diagnosed with cancer can be one of the hardest situations to face in your lifetime. Survivors Supporting Survivors is a one-to-one support programme run by the Irish Cancer Society. It provides emotional and practical support to newly diagnosed patients. It can provide you and your relatives with information, advice and emotional support from time of diagnosis and for as long as is needed. All the volunteers have had a personal experience of cancer and understand the emotional and physical impacts of the disease. They are carefully selected after recovery and are trained to provide information and reassurance. The service is provided on a one-to-one basis and is confidential. If you would like to make contact with a volunteer, call the National Cancer Helpline on 1800 200 700.

### Counselling

Coping with a diagnosis of cancer can be very stressful at times. Sometimes it can be hard for you and your family to come to terms with your illness. You might also find it difficult to talk to a close friend or relative. In this case, counselling can give you emotional support in a safe and confidential environment. Call the helpline 1800 200 700 to find out about counselling services provided by the Irish Cancer Society and services available in your area.

## Night nursing

The Society can provide a night nurse, free of charge, for up to 10 nights if you need end-of-life care at home. The night nurse can also give practical support and reassurance to your family. You can find out more about this service from your GP, local public health nurse, a member of the homecare team or the palliative care services at the hospital. Homecare nurses can offer advice on pain control and managing other symptoms.

## Oncology liaison nurses

The Society funds some oncology liaison nurses who can give you and your family information as well as emotional and practical support. Oncology liaison nurses work as part of the hospital team in specialist cancer centres.

## Cancer information booklets

These booklets provide information on all aspects of cancer and its treatment. They also offer practical advice on learning how to cope with your illness. The booklets are available free of charge from the Irish Cancer Society by contacting 1800 200 700. They can also be picked up at a Daffodil Centre or downloaded from [www.cancer.ie](http://www.cancer.ie)



## Financial support

A diagnosis of cancer can bring with it the added burden of financial worries. In certain circumstances, the Irish Cancer Society can provide limited financial help to patients in need. You may be suitable for schemes such as Travel2Care or Financial Aid.

Travel2Care is funded by the National Cancer Control Programme (NCCP) and managed by the Irish Cancer Society. The scheme can help with your travel costs if you have genuine financial hardship due to travelling to a designated cancer centre or approved satellite centre. It will help with the costs of public transport, such as trains or buses, private transport costs, or petrol and parking. If you are travelling to a Rapid Access Diagnostic Clinic, you may qualify for the Travel2Care scheme.

**Travel2Care:** If you would like to request this kind of help, contact your oncology nurse or the Irish Cancer Society at (01) 231 6643 / 231 6619 or email [travel2care@irishcancer.ie](mailto:travel2care@irishcancer.ie)

**Financial Aid:** A special fund has been created to help families in financial hardship when faced with a cancer diagnosis. If this applies to you, contact the medical social work department in your hospital. You can also speak to your oncology nurse or contact the Irish Cancer Society at (01) 231 6619.

## Care to Drive transport project

Care to Drive is a scheme operated by the Irish Cancer Society. It provides free transport for patients to and from their treatments using volunteer drivers. All of the volunteers are carefully selected, vetted and trained. You are collected from your home, driven to your appointment and brought back home again. Call (01) 231 0522 for more information.



If you would like more information on any of the above services, call the National Cancer Helpline on 1800 200 700. Or visit our website: [www.cancer.ie](http://www.cancer.ie)



## Useful organisations

### Irish Cancer Society

43/45 Northumberland Road  
Dublin 4  
Tel: 01 231 0500  
National Cancer Helpline Freephone:  
1800 200 700  
Email: [helpline@irishcancer.ie](mailto:helpline@irishcancer.ie)  
Website: [www.cancer.ie](http://www.cancer.ie)

### Citizens Information

Citizen Information Phone Service: 0761  
07 4000  
Email:  
[information@citizensinformation.ie](mailto:information@citizensinformation.ie)  
Website: [www.citizensinformation.ie](http://www.citizensinformation.ie)

Irish Oncology and Haematology Social  
Workers Group  
Website:  
<http://socialworkandcancer.com>

### Money Advice and Budgeting Service (MABS)

Commercial House  
Westend Commercial Village  
Blanchardstown  
Dublin 15  
Tel: 01 812 9350  
Helpline 0761 07 2000  
Email: [helpline@mabs.ie](mailto:helpline@mabs.ie)  
Website: [www.mabs.ie](http://www.mabs.ie)

### Health insurers

#### AVIVA Health

(formerly VIVAS Health)  
PO Box 764  
Togher  
Cork  
Tel: 1850 717 717  
Email: [info@avivahealth.ie](mailto:info@avivahealth.ie)  
Website: [www.avivahealth.ie](http://www.avivahealth.ie)

#### GloHealth

PO Box 12218  
Dublin 18  
Tel: 1890 781 781  
Email: [findoutmore@glohealth.ie](mailto:findoutmore@glohealth.ie)  
Website: [www.glohealth.ie](http://www.glohealth.ie)

### Laya Healthcare (formerly Quinn)

Eastgate Road  
Eastgate Business Park  
Little Island  
Co Cork  
Tel: 021 202 2000  
Locall: 1890 700 890  
Email: [info@layahealthcare.ie](mailto:info@layahealthcare.ie)  
Website: [www.layahealthcare.ie](http://www.layahealthcare.ie)

### Voluntary Health Insurance (VHI)

IDA Business Park  
Purcellsinch  
Dublin Road  
Kilkenny  
CallSave: 1850 44 44 44  
Email: [info@vhi.ie](mailto:info@vhi.ie)  
Website: [www.vhi.ie](http://www.vhi.ie)

## National support groups

### ARC Cancer Support Centres

Dublin and Cork (see pages 25 and 27).

### CanTeen Ireland

Young Peoples' Cancer Support Group  
Carmichael Centre  
North Brunswick Street  
Dublin 7  
Tel: 01 872 2012  
Email: [info@canteen.ie](mailto:info@canteen.ie)  
Website: [www.canteen.ie](http://www.canteen.ie)

### I've Got What?!

[Support for young adults affected by cancer]  
c/o Cross Cause Charity Shop  
Blackrock  
Co Louth  
Tel: 086 339 5690

### Lakelands Area Retreat & Cancer Centre

Multyfarnham  
Mullingar  
Co Westmeath  
Tel: 044 937 1971  
Callsave 1850 719 719  
Email: [info@larcc.ie](mailto:info@larcc.ie)  
Website: [www.larcc.ie](http://www.larcc.ie)

## Connaught support groups & centres

### Athenry Cancer Care

Social Service Centre  
New Line  
Athenry  
Co Galway  
Tel: 091 844 319 / 087 412 8080

### Ballinasloe Cancer Support Centre

Society Street  
Ballinasloe  
Co Galway  
Tel: 090 964 5574 / 087 945 2300  
Email: [ballinasloecancer@yahoo.co.uk](mailto:ballinasloecancer@yahoo.co.uk)

### Cancer Care West

Inis Aoibhinn  
University Hospital Galway  
Costello Road  
Galway  
Tel: 091 545 000  
Email: [info@cancercarewest.ie](mailto:info@cancercarewest.ie)  
Website: [www.cancercarewest.ie](http://www.cancercarewest.ie)

### Cara Iorrais Cancer Support Centre

2 Church Street  
Belmullet  
Co Mayo  
Tel: 097 20590  
Email: [caraiorrais@gmail.com](mailto:caraiorrais@gmail.com)

### East Galway Cancer Support Centre

The Family Centre  
John Dunne Avenue  
Ballinasloe  
Co Galway  
Tel: 087 984 5574 / 087 945 2300  
Website:  
[www.eastgalwaycancersupport.com](http://www.eastgalwaycancersupport.com)

### Gort Cancer Support Group

The Hawthorn  
Ennis Road  
Gort  
Co Galway  
Tel: 086 312 4220  
Email: [gcsupport@eircom.net](mailto:gcsupport@eircom.net)  
Website: [www.gortcs.ie](http://www.gortcs.ie)

### Mayo Cancer Support Association

Rock Rose House  
32 St Patrick's Avenue  
Castlebar  
Co Mayo  
Tel: 094 903 8407  
Email: [info@mayocancer.ie](mailto:info@mayocancer.ie)  
Website: [www.mayocancer.ie](http://www.mayocancer.ie)

### Roscommon Cancer Support Group

Vita House Family Centre  
Abbey Street  
Roscommon  
Tel: 090 662 5898  
Email: [vitahouse@eircom.net](mailto:vitahouse@eircom.net)

### Sligo Cancer Support Centre

44 Wine Street  
Sligo  
Tel: 071 917 0399  
Email: [scsc@eircom.net](mailto:scsc@eircom.net)  
Website: [www.sligocancersupportcentre.ie](http://www.sligocancersupportcentre.ie)

### Tuam Cancer Care Centre

Cricknet Court  
Dunmore Road  
Tuam  
Co Galway  
Tel: 093 28522  
Email: [support@tuamcancercare.ie](mailto:support@tuamcancercare.ie)  
Website: [www.tuamcancercare.ie](http://www.tuamcancercare.ie)

## Leinster support groups & centres

### ARC Cancer Support Centre

ARC House  
65 Eccles Street  
Dublin 7  
Tel: 01 830 7333  
Email:  
[info@arccancersupport.ie](mailto:info@arccancersupport.ie)  
Website: [www.arccancersupport.ie](http://www.arccancersupport.ie)

### ARC Cancer Support Centre

ARC House  
559 South Circular Road  
Dublin 8  
Tel: 01 707 8880  
Email: [info@arccancersupport.ie](mailto:info@arccancersupport.ie)  
Website: [www.arccancersupport.ie](http://www.arccancersupport.ie)

**Arklow Cancer Support Group**

25 Kingshill  
Arklow  
Co Wicklow  
Tel: 085 110 0066  
Email: arklowcancersupport@gmail.com

**Balbriggan Cancer Support Group**

Unit 23, Balbriggan Business Park  
Balbriggan  
Co Dublin  
Tel: 087 353 2872

**Bray Cancer Support & Information Centre**

36B Main Street  
Bray  
Co Wicklow  
Tel: 01 286 6966  
Email: info@braycancersupport.ie  
Website: www.braycancersupport.ie

**Cuisle Centre**

Cancer Support Group  
Block Road  
Portlaoise  
Co Laois  
Tel: 057 868 1492  
Email: info@cuislecentre  
Website: www.cuislecentre.com

**Dóchas: Offaly Cancer Support**

Teach Dóchas  
Offaly Street  
Tullamore  
Co Offaly  
Tel: 057 932 8268  
Email: info@dochasoffaly.ie  
Website: www.dochasoffaly.ie

**Dundalk Cancer Support Group**

Philipstown  
Hackballs Cross  
Dundalk  
Co Louth  
Tel: 086 107 4257

**Éist Cancer Support Centre Carlow**

The Waterfront  
Mill Lane  
Carlow  
Tel: 059 913 9684  
Mobile: 085 144 0510  
Email: info@eistcarlowcancersupport.ie  
Website: www.eistcarlowcancersupport.ie

**Gary Kelly Support Centre**

George's Street  
Drogheda  
Co Louth  
Tel: 041 980 5100 / 086 817 2473  
Email: services@gkcancersupport.com  
Website: www.gkcancersupport.com

**Greystones Cancer Support**

La Touche Place  
Greystones  
Co Wicklow  
Tel: 01 287 1601  
Email: info@greystonescancersupport  
Website: www.greystonescancersupport.com

**Haven Cancer Support and Therapy Group**

Haven House  
68 Hazelwood  
Gorey  
Co Wexford  
Tel: 053 942 0707 / 086 250 1452  
Email: info@thehavengroup.ie  
Website: www.thehavengroup.ie

**HOPE Cancer Support Centre**

22 Upper Weafer Street  
Enniscorthy  
Co Wexford  
Tel: 053 923 8555  
Email: mary@hopesupportcentre.ie  
Website: www.hopesupportcentre.ie

**Kilkenny Cancer Support Services**

Walkin Street  
Kilkenny City  
Tel: 085 721 9280  
Email: info@kilkennycancersupport.com  
Website: www.kilkennycancersupport.com

**Lakelands Area Retreat & Cancer Centre**

Ballinalack  
Mullingar  
Co Westmeath  
Tel: 044 937 1971  
Callsave 1850 719 719  
Email: info@larcc.ie  
Website: www.larcc.ie

**Midlands Myeloma Support Group**

c/o ROHDU  
Tullamore General Hospital  
Tullamore  
Co Offaly  
Tel: 086 780 4007 / 057 932 1501 (Bleep 317)  
Email: info@dochasoffaly.ie / Maryb.Kelly@hse.ie  
Website: www.mymyeloma.ie

**Rathdrum Cancer Support Centre**

34 Main Street  
Rathdrum  
Co Wicklow  
Tel: 087 292 8660  
Email: rathcan@gmail.com

**Stillorgan Cancer Support**

c/o Marsham Court  
Stillorgan  
Co Dublin  
Tel: 01 288 5725

**Tallaght Cancer Support Group**

Millbrook Lawns  
Tallaght  
Dublin 24  
Tel: 087 217 6486  
Email: ctallaght@yahoo.ie

**Wicklow Cancer Support Centre**

1 Morton's Lane  
Wicklow  
Tel: 0404 32696  
Email: wicklowcancersupport@gmail.com

**Munster support groups & centres****Cancer Information & Support Centre**

Mid-Western Regional Hospital  
Dooradoyle  
Co Limerick  
Tel: 061 485 163  
Website: www.midwesterncancercentre.ie

**CARE Cancer Support Centre**

14 Wellington Street  
Clonmel  
Co Tipperary  
Tel: 052 618 2667  
Email: cancersupport@eircom.net  
Website: www.cancercare.ie

**Cork ARC Cancer Support House**

Cliffdale  
5 O'Donovan Rossa Road  
Cork  
Tel: 021 427 6688  
Email: karen@corkcancersupport.ie  
Website: www.corkcancersupport.ie

**Cúnamh: Bons Secours Cancer Support Group**

Bon Secours Hospital  
College Road  
Cork  
Tel: 021 480 1676  
Website: www.cunamh.ie

**Kerry Cancer Support Group**

124 Tralee Town House Apartments  
Maine Street  
Tralee  
Co Kerry  
Tel: 066 719 5560 / 087 230 8734  
Email: kerrycancersupport@eircom.net  
Website: www.kerrycancersupport.com

**Recovery Haven**

5 Haig's Terrace  
Tralee  
Co Kerry  
Tel: 066 719 2122  
Email: recoveryhaven@gmail.com  
Website: www.recoveryhavenkerry.org

**Sláinte an Chláir: Clare Cancer Support**

Tír Mhuire  
Kilnamona  
Ennis  
Co Clare  
Tel: 1850 211 630 / 087 691 2396  
Email: admin@clarecancersupport.com  
Website: www.clarecancersupport.com

**South Eastern Cancer Foundation**

Solas Centre  
7 Sealy Close  
Earls court  
Waterford  
Tel: 051 876 629  
Email: infosecf@eircom.net  
Website: www.secf.ie

**Suimhneas Cancer Support Centre**

2 Clonastee  
Gortland Roe  
Nenagh  
Co Tipperary  
Tel: 067 37403  
Email: suaimhneascancersupport@eircom.net

**Suir Haven Cancer Support Centre**

Clongour Road  
Thurles  
Co Tipperary  
Tel: 0504 21197  
Email: suirhaven@gmail.com

**Youghal Cancer Support Group**

161 North Main Street  
Youghal  
Co Cork  
Tel: 024 92353 / 087 273 1121

**West Cork Cancer Support**

Community Work Department  
HSE Skibbereen  
Co Cork  
Tel: 027 53485 / 086 862 5417

**Ulster support groups & centres****Cancer Support and Social Club**

Tiernaleague  
Carndonagh  
Co Donegal  
Tel: 086 602 8993 / 087 763 4596

**Crocus: Monaghan Cancer Support Centre**

The Wellness Centre  
19 The Grange  
Plantation Walk  
Monaghan  
Tel: 087 368 0965

**The Forge Cancer Support Group**

The Forge Family Resource Centre  
Pettigo  
Co Donegal  
Tel: 071 986 1924

**Good and New Cancer Drop In Centre**

Unit 1, Portlink Business Park  
Port Road  
Letterkenny  
Co Donegal  
Tel: 074 911 3437

**Killybegs Cancer Support Group**

Kille  
Kilcar  
Co Donegal  
Tel: 074 973 1292  
Email: riverbankdunne@eircom.net

**Living Beyond Cancer**

Oncology Day Services  
Letterkenny General Hospital  
Letterkenny  
Co Donegal  
Tel: 074 912 5888 (Bleep 674/734) / 074 910 4477

**Solace: Donegal Cancer Support Centre**

St Joseph's Avenue  
Donegal Town  
Tel: 074 974 0837  
Email: solacedonegal@eircom.net

**Yana Cancer Support Centre**

Belturbet  
Co Cavan  
Tel: 087 994 7360

For other support groups or centres  
in your area, call 1800 200 700.

**Useful contacts outside Republic of Ireland****Action Cancer**

Action Cancer House  
1 Marlborough Park  
Belfast BT9 6XS  
Tel: 028 9080 3344  
Email: info@actioncancer.org  
Website: www.actioncancer.org

**American Cancer Society**

Website: www.cancer.org

**Cancer Focus Northern Ireland**

40–44 Eglantine Avenue  
Belfast BT9 6DX  
Tel: 048 9066 3281  
Website: www.cancerfocusni.org

**Cancer Network Buddies**

Website:  
www.cancerbuddiesnetwork.org

**Cancer Research UK**

Tel: 0044 20 7242 0200  
Website: www.cancerhelp.org.uk

**Healthtalkonline**

Website: www.healthtalkonline.org

**Macmillan Cancer Support (UK)**

Tel: 0044 20 7840 7840  
Email: cancerline@macmillan.org.uk  
Website: www.macmillan.org.uk

**Macmillan Support & Information Centre**

Belfast City Hospital Trust  
77–81 Lisburn Road  
Belfast BT9 7AB  
Tel: 028 9069 9202  
Email: cancerinfo@belfasttrust.hscni.net

**National Cancer Institute (US)**

Website: www.nci.nih.gov

## Helpful books

**Free booklets from the Irish Cancer Society:**

- *Understanding Autologous Stem Cell Transplants*
- *Understanding Acute Lymphoblastic Leukaemia*
- *Understanding Acute Myeloid Leukaemia*
- *Understanding Chronic Lymphocytic Leukaemia*
- *Understanding Myeloma*
- *Understanding Hodgkin Lymphoma*
- *Understanding Non-Hodgkin Lymphoma*
- *Understanding Testicular Cancer*
- *Understanding Chemotherapy*
- *Understanding Radiotherapy*
- *Understanding Cancer and Complementary Therapies*
- *Diet and Cancer*
- *Coping with Fatigue*
- *Understanding the Emotional Effects of Cancer*
- *Lost for Words: How to Talk to Someone with Cancer*
- *Who Can Ever Understand? Taking About Your Cancer*
- *Talking to Children about Cancer: A Guide for Parents*
- *Managing the Financial Impact of Cancer: A Guide for Patients and Their Families*
- *Journey Journal: Keeping Track of Your Cancer Treatment*
- *A Time to Care: Caring for Someone Seriously Ill at Home*





## What does that word mean?

<b>Allogeneic</b>	The use of someone else's tissue.
<b>Allograft</b>	A transplant using matched donated tissue.
<b>Anaemia</b>	A shortage of red blood cells in your blood.
<b>Antibody</b>	A protein that kills off cells that cause disease or infection.
<b>Autologous</b>	The use of your own tissue.
<b>Autograft</b>	A transplant using your own tissue.
<b>Blood count</b>	A blood test that counts all the different types of cells in your blood. This includes red blood cells, white blood cells and platelets.
<b>Bone marrow</b>	The spongy material at the centre of long bones that makes your body's blood cells.
<b>Central line</b>	A flexible tube that is put into a large vein in your chest. It allows chemotherapy to be given and blood to be taken through the one line. Also called a catheter.
<b>Erythrocytes</b>	Red blood cells.
<b>Fatigue</b>	Ongoing tiredness often not helped by rest.
<b>G-CSF</b>	A special type of protein called a growth factor. It stimulates the bone marrow to make white blood cells. Its full name is granulocyte colony-stimulating factor.
<b>Haematologist</b>	A doctor specialising in diseases of the blood and bone marrow.
<b>Histology</b>	The study and description of cells.
<b>Immune system</b>	The parts of your body that fight off and prevent infection.

<b>Intravenous</b>	Into a vein.
<b>Lymph</b>	The straw-coloured fluid that circulates material through the lymphatic system.
<b>Lymphatic vessels</b>	The tubes that carry lymph and connect with the lymph nodes.
<b>Lymph node</b>	A gland that forms a sieve in your lymphatic system and which is involved in fighting infection.
<b>Lymphocytes</b>	A type of white blood cell.
<b>Neutropenia</b>	A shortage of neutrophils in your blood. Neutrophils are the most common type of white blood cell.
<b>Oncologist</b>	A doctor specialising in the treatment of cancer.
<b>Plasma</b>	The pale yellow liquid part of blood without the blood cells.
<b>Stem cells</b>	Immature cells that develop into different types of mature cells in your blood.
<b>Subcutaneous</b>	Underneath your skin.
<b>Thrombocytopenia</b>	A shortage of platelets in your blood. Platelets help to stop bleeding.
<b>Tissue typing</b>	Blood tests that measure substances called antigens on the surface of body cells and tissues. These are known as histocompatibility antigens. The tests find out if a person's cells or tissues are suitable for transplant to another person.
<b>Transplant co-ordinator</b>	A clinical nurse specialist with particular knowledge of stem cell transplants.

## Questions to ask your doctor

Here is a list of questions that you may wish to ask your doctor. There is also some space for you to write down your own questions if you would like. Never be shy about asking questions. It is always better to ask than to worry.

- Why do you need to collect my stem cells?
- What difference will it make to my condition?
- What tests do I need beforehand?
- When are the stem cells collected?
- How do I prepare for the cells to be collected?
- How are the stem cells moved into my bloodstream?
- Is collecting the stem cells painful?
- Are there any risks or side-effects when collecting stem cells?
- What happens if you cannot collect enough stem cells?
- What happens after the stem cells are collected?
- When will the stem cells be returned to me?
- What happens if I never need the stem cells?

## Your own questions

1

Answer

2

Answer

3

Answer

4

Answer


5

Answer


6

Answer

>>> **Notes**



>>> **Notes**



## Acknowledgements

We would like to extend a special word of thanks to the following for their invaluable contributions to this booklet:

Haematology staff, St James's Hospital, Dublin

Joy Lewis, Haematology Clinical Nurse Specialist

Sheila McCrorie, Clinical Nurse Manager in Cancer Services

Karen Mulhall, Haematology Clinical Nurse Specialist

Michelle Connell, Haematology Clinical Nurse Specialist

## Would you like more information?

We hope this booklet has been of help to you. If you feel you would like more information or someone to talk to, please call the National Cancer Helpline on 1800 200 700.

### Would you like to be a patient reviewer?



If you have any suggestions as to how this booklet could be improved, we would be delighted to hear from you. The views of patients, relatives, carers and friends are all welcome. Your comments would help us greatly in the preparation of future information booklets for people with cancer and their carers.

If you wish to email your comments, have an idea for a new booklet, or would like to review any of our booklets, please contact us at **reviewers@irishcancer.ie**

If you would prefer to phone or write to us, see contact details below.

## Would you like to help us?

The Irish Cancer Society relies entirely on voluntary contributions from the public to fund its programmes of patient care, education and research. This includes patient education booklets. If you would like to support our work in any way – perhaps by making a donation or by organising a local fundraising event – please contact us at CallSave 1850 60 60 60 or email **fundraising@irishcancer.ie**

**Irish Cancer Society, 43/45 Northumberland Road, Dublin 4**

**Tel:** 01 231 0500 **Email:** info@irishcancer.ie **Website:** www.cancer.ie

The mission of the Irish Cancer Society is to play a vital role in achieving world-class cancer services in Ireland, to ensure fewer people get cancer and those that do have better outcomes. Our goals are focused around prevention, survival and quality of life with three programme areas to achieve them: advocacy, cancer services and research.

