Introduction
This leaflet tells you about the procedure known as ‘inferior vena cava (IVC) filter removal’. It explains what is involved and what the benefits and risks are. It may help you to think of things that you would like to discuss with your doctor.

What is an IVC filter removal?
This is a procedure in which the umbrella-like IVC filter, which was placed in the large vein in your abdomen through either your neck or groin area, is removed. The filter was originally placed to prevent large clots from travelling to the lungs. It is now considered safe for you to have the filter removed.

Why do I need an IVC filter removal?
The IVC filter can be left in place long term but this carries its own risks, which can include blockage of the filter.

What to tell the doctor
• If you have any allergies.
• If you have had a previous reaction to intravenous contrast medium (the dye used for some X-rays and CT scanning).
• If you are taking medication to prevent blood clots. Below is a list of some of the medications which are used to thin the blood and help to prevent blood clots.

If you are currently taking any of these medications, please contact your referring doctor or the radiology department on 0161 918 2346 as soon as possible, as these may need to be stopped prior to your procedure. Failure to do so may result in your procedure being postponed.

- Aspirin
- Apixaban
- Clopidogrel
- Clexane
- Dabigatran
- Dalteparin
- Enoxaparin
- Fragmin
- Heparin
- Rivaroxaban
- Warfarin
Who has made the decision?
Your doctors and the interventional radiologist (specialist doctor) will have discussed your situation and have recommended that filter removal is the best treatment option for you. However, if following discussion with your doctors you do not wish to have the procedure, you can decide against it.

Who will be doing the IVC filter removal?
An interventional radiologist will remove the filter. Interventional radiologists have special expertise in using X-ray equipment to perform procedures and also in interpreting the images produced. They need to look at these images while carrying out the procedure.

Where will the procedure take place?
In the procedure room in the radiology department (X-ray department). This room is adapted for specialised procedures.

How do I prepare for an IVC filter removal?
We will ask you not to eat for 6 hours beforehand, though you can drink clear water up to 2 hours before the procedure.

You will be asked to come to the integrated procedures unit (IPU). You will be admitted a couple of hours before your procedure so we can take blood samples and insert an intravenous cannula, this is a small, flexible tube which is placed into one of your veins.

You may receive an injection of a sedative and a pain killer to make you more relaxed but usually this is not necessary.

The vein in your neck will be used to remove the IVC filter even if it was previously inserted via the groin.

Agreeing to treatment
The radiologist will explain the procedure and discuss any possible risks to you. You will be asked to sign a consent form agreeing to accept the treatment that you are being offered. The basis of the agreement is that you have had The Christie’s written description of the proposed treatment and that you have been given an opportunity to discuss any concerns.

You are entitled to request a second opinion from another specialist doctor. You can ask your own consultant or your GP to refer you. Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent then a member of your treating team will discuss the possible consequences with you.

What actually happens during the IVC filter removal?
The procedure is very similar to when you had the IVC filter inserted. It usually takes between 30 to 60 minutes.

On arrival at the radiology department you will have the opportunity to discuss the procedure with the radiologist. The radiologist will explain all the benefits and possible risks associated with this procedure and you will be asked to sign a consent form.

You will lie on your back on the X-ray table.

You will have monitoring devices attached to you and have oxygen delivered through small tubes in your nose.

The radiologist needs to keep everything sterile and will wear a theatre gown and gloves. He or she will swab the skin around the puncture site with antiseptic and cover the area with theatre towels.
The skin and deeper tissues over the vein will be anaesthetised with local anaesthetic and then a needle will be inserted into the vein. A guide wire is then placed through the needle into the vein. The radiologist will use the X-ray equipment to make sure that the wire is in the correct position.

The needle is then withdrawn and a fine plastic tube, called a catheter, is placed over the wire into the vein. Dye is then injected to check that it is safe to remove the filter. The filter is removed through the catheter and all the tubes are removed from the neck.

The radiologist will press on your neck for a couple of minutes to reduce the risk of bleeding.

Will it hurt?
You may feel some discomfort in the skin and deeper tissues during the injection of the local anaesthetic. After this, the procedure should not be painful. There will be a nurse or another member of clinical staff looking after you. You will be awake during the procedure and be able to tell the staff if you are uncomfortable in any way. As the dye passes around your body, you may get a warm feeling. However, this soon passes and it should not worry you.

How long will it take?
Every patient’s situation is different and it is not always easy to predict how long the procedure will take. As a guide, expect to be in the X-ray room for up to an hour.

What will happen afterwards?
You will be taken to the recovery area on the IPU. The recovery nurses will carry out routine observations, such as your blood pressure and pulse at regular intervals. They will also look at the site in the neck from where the filter was removed to make sure there is no bleeding. You will normally be able to leave the hospital 2-4 hours following the procedure.

Are there any risks or complications?
IVC filter removal is a safe procedure but there are some risks and complications that can arise. There may occasionally be a bruise or bleeding from the site where the needle has been inserted.

Very rarely, some damage can be caused to the vein or the nearby artery and this may need to be treated by surgery or another radiological procedure.

Sometimes we may not be able to remove the filter as it may be too firmly attached to the wall of the vein or there may be a clot trapped within the filter, which could go to the lungs if removed. If this is the case you will be seen again by your consultant who will discuss this with you further.

Despite these possible complications, the procedure is normally very safe.

Further information
This is available from the radiology department on the phone numbers below or from the following websites:

Macmillan Cancer Support:  www.macmillan.org.uk
British Society of Interventional Radiology:  www.bsir.org
If you have any problems or worries, please contact:

Monday to Friday, 9am to 5pm: Radiology nurse on 0161 918 2346 or

Out of hours and weekends:
Ring The Christie on 0161 446 3000 and ask for the on-call radiologist

The Christie Hotline: 0161 446 3658 (24 hours)

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.

We try to ensure that all our information given to patients is accurate, balanced and based on the most up-to-date scientific evidence. 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

The Christie Patient Information Service
Tel: 0161 446 3000   www.christie.nhs.uk