The Christie
NHS Foundation Trust

Radiology department

Vena cava filter

Introduction
This leaflet tells you about the procedure known as vena cava filter insertion. It explains what is involved and the benefits and risks. It may make you think of the things you would like to discuss with your doctor.

What is vena cava filter?
A vena cava filter is a small wire mesh about 5cm (2 inches) long. The filter is placed in the vena cava. This is the large vein in the abdomen which brings blood back to the heart from the legs and pelvis. If there are blood clots in the veins in the legs or pelvis, these could pass up the vena cava and into the lungs. The filter will trap these blood clots and help prevent them entering the lungs and causing problems.

Why do I need a vena cava filter?
You are at risk of pulmonary embolism which is a blood clot on the lung coming from the veins in your legs or pelvis. These problems can usually be treated effectively with blood thinning drugs called anti-coagulants. However, the doctors feel that you need a further method of dealing with these blood clots.

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)
- it is important to tell the doctor or the radiology department **before attending for admission** 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.

Apixaban	Dabigatran	Rivaroxaban
Aspirin	Dalteparin	Warfarin
Clexane	Enoxaparin	
Clopidogrel	Fragmin	

Who has made the decision?
Your doctors and the radiologist inserting the vena cava filter will have discussed the situation, and feel this is the best treatment option.

Is there any preparation for my filter?

- You may need to have your blood tested a few days before, or on the day of the procedure. This is just to check that it is safe to go ahead.

- The radiologist will explain the procedure and any possible risks to you and ask you to sign a consent form.

Who will be inserting the vena cava filter?

A radiologist (specialist doctor) will insert the filter will insert the filter. Radiologists have special expertise in using X-ray equipment, 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 integrated procedure unit (IPU) in the special procedure room.

How do I prepare for insertion of a vena cava filter?

You will be asked to attend the IPU. Most patients will be discharged home on the day of the procedure, however it is sometimes necessary for you to stay overnight. We will ask you to put on a hospital gown. The procedure is usually carried out using the vein in your neck. Alternatively, if we are unable to access the vein in your neck we can use the vein in your groin.

Agreeing to treatment

We will ask you 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 doctor who specialises in treating this cancer. 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 withdrawn your consent, then a member of your treating team will discuss the possible consequences with you.

What actually happens during insertion of a vena cava filter?

- On arrival to the IPU you will have the opportunity to discuss the procedure with the radiologist or the radiology nurse specialist.

- They will explain all the benefits and possible risks associated with this procedure and will ask you to sign the consent form.

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

- You will have monitoring devices attached to you.

- The radiologist needs to keep everything as sterile as possible and will wear a theatre gown and gloves. The skin around the puncture site is swabbed with antiseptic and the area is covered 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. The radiologist will use the X-ray equipment and small amounts of dye to make sure that the catheter is in the right position. Once the radiologist is satisfied that this is correctly positioned, a wire guide is placed through the needle into the vein. Then the needle is withdrawn and a fine plastic tube, called a catheter, is placed over the wire into the vein. This catheter has the filter in it.

• The radiologist will use the X-ray equipment to make sure that the catheter and the wire are moved into the right position, and then the filter is released from the catheter.

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. As the dye passes around your body, you may get a warm feeling. However this soon passes and 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 it will take. As a guide expect to be in the procedure room for about an hour.

What will happen afterwards?

You will be taken back to the recovery bay on the IPU. The nurses there will carry out routine observations, such as your blood pressure and pulse at regular intervals. They will also look at the puncture site to make sure there is no bleeding from it. If there are no complications, you will be discharged home after a couple of hours.

Are there any risks or complications?

Vena cava filter insertion 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 by the catheter, and this may need to be treated by surgery or another radiological procedure.

• The filter is supposed to break up large clots floating from the legs into smaller pieces which are less likely to cause problems. In about 3 out of 100 procedures the filter can become blocked by a clot. This may cause swelling of the legs.

• As with any mechanical device, there is the possibility that the filter will eventually fail to work properly or may move.

• There is a very small risk of the filter moving to the wrong place or even the heart or lungs, but this is not common.

• Some filters can be removed but if we plan to remove the filter this will be discussed with you.

Despite these possible complications, the procedure is normally very safe, and the benefits are likely to outweigh the risks.

What are the benefits of the procedure?

The benefit is to reduce the risk of large clots on the lung (pulmonary embolus).

What are the alternatives?

Other treatment options include doing nothing or continuing with blood thinning medication.

Usually once the filter is implanted, it stays in place indefinitely. However, if your doctor decides that the filter is no longer needed it can be removed in the radiology department. Your doctors will discuss other treatments you may need.

Further information

Further information 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:

From 9:00am to 5:00pm:
Radiology department on **0161 918 2346**

Out of hours and weekends (for emergencies):
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.

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 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

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