

DEPARTMENT OF DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDICINE

Patient Information Sheet

Inferior Vena Cava filters (insertion and removal)

General Indications for the Procedure: Patients who are at high risk of having a clot travel from their pelvis or legs to their lungs can have a filter (an IVC filter) placed in the main vein of their abdomen (the inferior vena cava or IVC) to prevent clots from traveling to the lungs.

Description of the Procedure:

IVC filters are placed by inserting them through a large vein in the patient's groin, arm or neck. The first step in placing an IVC filter is to decide the best place to insert the filter. To do this, ultrasound pictures are taken of the veins of the neck, arms or groins to identify suitable veins. Once the best site is found, the area is carefully cleaned with antiseptic solution and covered with sterile sheets. Medicine to numb the skin (called a local anesthetic) may be injected with a tiny needle. This causes a brief stinging or pinching sensation. Once the area is completely numb, a second needle is placed into the selected large vein. A small wire is advanced through the needle into the vein, the needle is removed, and a small plastic tube (a catheter) is advanced over the wire into the vein. The tube is advanced to the IVC, and contrast medium (X-ray dye) is injected through the tube, so X-ray pictures of the IVC can be taken. Using these pictures, the best area to place the filter is selected. The filter is then inserted and advanced to the selected place. More X-ray dye is then injected, and additional X-ray pictures are taken to make certain that the filter is in good position. The filter may be permanent or may be removed at a later time.

If there is no longer risk of blood clots traveling to the lung, the filter may be removed. The patient returns to the Interventional Radiology service. Using the same method as was used to insert the filter, a small tube (a catheter) is put into a large vein, usually in the neck, and advanced to the IVC. X-ray pictures with dye are taken to make certain there are no clots in the filter. If the filter is free of clots, a "lasso" or snare is inserted through the catheter to catch the filter and remove it. Once the filter is removed more X-ray pictures with dye are taken to make sure that the IVC is intact.

Risks of the Procedure: The most common complications include bleeding, infection, movement of the filter away from the correct place (filter migration) and/or abdominal pain. The risks of these complications are very low. Complications may also occur during filter removal. Although it is extremely unusual, the most common complication is that it is impossible to remove the filter, and that it must stay as a permanent device within the patient's body. This is not a very serious complication, but it does mean that a patient will be more prone to develop a clot in the veins of the legs.

Alternatives to the Procedure: The alternative procedure is to have the IVC ligated (tied off) at surgery, a more risky procedure that is seldom performed.

Probable Consequences of Refusing the Procedure: If a patient refuses to have this procedure, there is a large risk that the patient will have blood clots move to the lungs and block the main arteries of the lungs. This can make a patient very sick, or even cause sudden death.

Persons Performing the Procedure: The key portions of the procedure will be performed by an attending physician who is a member of the medical staff of Rush University Medical Center, or a Licensed Physician's Assistant, resident or fellow in Interventional Radiology who will be observed and supervised by a member of the medical staff. Residents are licensed physicians in an approved residency program. Fellows are licensed physicians who have completed a residency in radiology and are in an approved post-residency training program. Physician's Assistants are specially trained practitioners who are licensed by the State of Illinois and who are qualified to perform parts of these procedures under supervision. The parts of the procedures physician's assistants, residents or fellows will perform will be based on their level of training and competence.