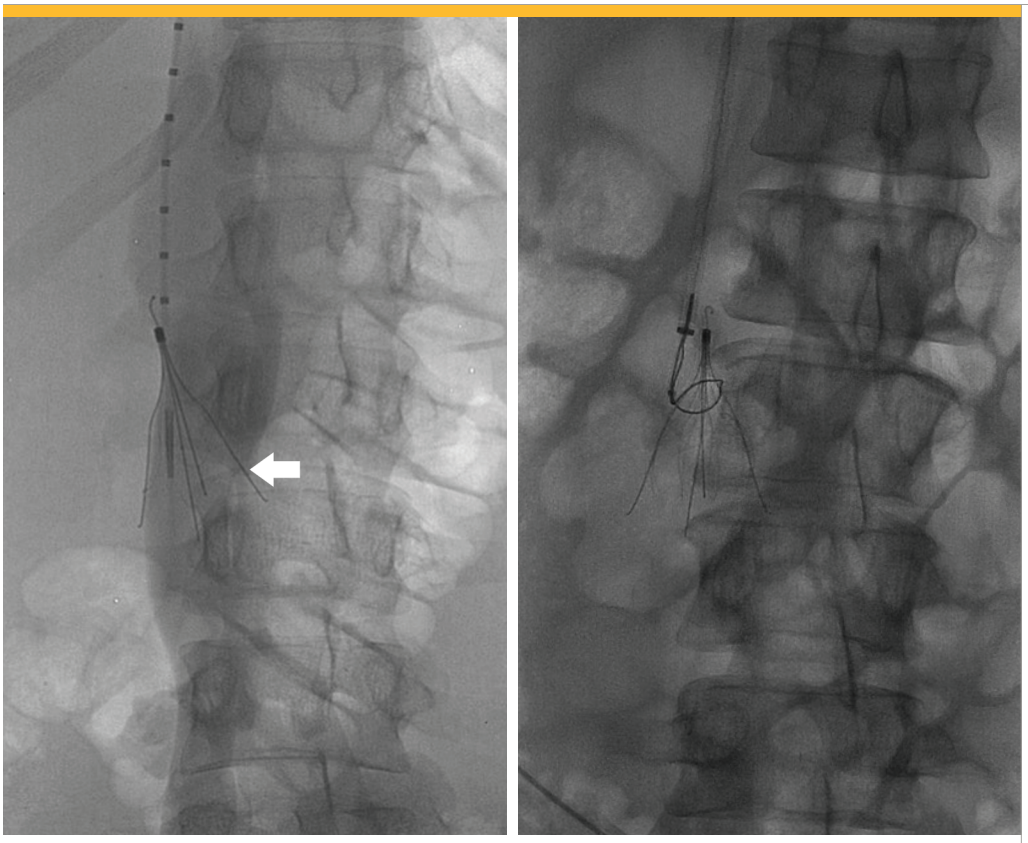
UCLA Health

UCLA specializes in inferior vena cava filter placement and removal



Left: An IVC filter that has tilted out of alignment with the blood vessel. One of the filter legs has perforated the vessel wall (arrow). Right: A snare has been positioned to engage the hook at the top of an IVC filter for retrieval.

For decades, inferior vena cava (IVC) filters have been recommended for select patients to prevent blood clots from traveling to the heart and lungs. While they are very successful at preventing pulmonary emboli (PE), the devices are now at the center of significant controversy. The U.S. Food and Drug Administration has received hundreds of adverse-event reports relating to IVC filter migration, perforation and fracture, and the devices have been the subject of a number of lawsuits. The FDA recommends the removal of IVC filters as soon as protection from blood clots is no longer needed.

UCLA has established an Inferior Vena Cava Filter Clinic to meet the growing need for expedient patient consultations and expert placement and removal of the devices.

Patients with IVC filters should be evaluated

Too many patients do not have IVC filters removed in a timely manner, says John Moriarty, MD, an interventional radiologist and director of the UCLA Inferior Vena Cava Filter Clinic.

"In patients who require them, they are very effective," he says. "But patients have to be monitored so that the filters are left in only as long as they have benefit. The longer the IVC filters are in position, the higher the complication rate."

The highly experienced team at the UCLA IVC clinic treats some of the most challenging cases.

"We have a dedicated team that has developed an expertise with this," Dr. Moriarty says. "The No. 1 question we get asked is, 'I've been told that my filter cannot be removed, is this true?' The answer is no. Almost all filters that should be removed, can be removed. We see patients who have had IVC filters for many years or who have undergone unsuccessful attempts at removal elsewhere. Here at UCLA, we have the experience, advanced techniques and equipment to be successful."

Complications linked to IVC filters

IVC filters are small, metal cages placed in the inferior vena cava blood vessel, the large vein in the abdomen that returns blood from the lower extremities to the heart. The filter is designed to trap blood clots before they can move into the heart and lungs. Blood clots are common among a variety of patients, including surgical and cancer patients. Deep-vein thrombosis occurs at a rate of about one to three cases per 1,000 people. Blood clots can travel to the heart and lungs, causing a life-threatening pulmonary embolism. IVC filters are typically recommended for people who are at higher risk for deep-vein thrombosis and who can't tolerate, or are not candidates for, anticoagulant medications. The retrievable filter is placed via a catheter into the vein by an interventional radiologist using imaging guidance.

Reports of adverse events linked to IVC filters began to emerge several years ago. Studies show the devices can break apart, with metal pieces traveling through the vein and becoming lodged elsewhere in the body, or that the entire device can migrate from its intended location, perforating the blood vessel or even moving into the heart or lungs. Filters that have migrated can cause bleeding, arrhythmia or even death. Research also shows IVC filters can raise the risk of blood clots in the lower part of the body or abdomen, causing swelling of the limbs and immobility. Due to these risks, it is critical the IVC filter is removed when it no longer benefits the patient.

While IVC filters are meant to be in place temporarily — typically six months — many patients do not have their filters removed. Despite FDA recommendations, the majority of patients nationwide treated with IVC filters do not have the filters removed.

UCLA expertise on IVC filters

UCLA's interventional radiologists provide comprehensive consultations to patients with IVC filters. Patients undergo a dedicated examination and review of imaging. If retrieval is recommended, the filter is removed in a minimally invasive, outpatient procedure. A small rod, or snare, is inserted through a catheter to engage a hook at the top of the filter and retrieve the device. The patient is typically discharged one hour after the procedure and experiences minimal pain or discomfort.

UCLA's team has extensive experience with the devices and related complications. The clinic is equipped with the most advanced MRI imaging to assist with decisions about retrieval and identification of blood clots. Interventional radiologists also utilize specially constructed forceps and laser technology to remove filters that are embedded in scar tissue or that have migrated into surrounding tissue. UCLA physicians have removed filters that have been in place for more than a decade. Almost all IVC filters can be safely removed.

The clinic, which treats patients in Westwood, Santa Monica and the South Bay, also specializes in the placement of IVC filters for patients who may benefit from the device. Patients are monitored during the period of high risk for clotting, and the filter is retrieved at the appropriate time.

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Participating Physicians

John Moriarty, MD, RPVI
Associate Professor, Radiology and Medicine
Director, UCLA IVC Filter Clinic

Adam Plotnik, MD
Assistant Professor of Radiology
Co-Director, UCLA IVC Filter Clinic

Scott Genshaft, MD
Assistant Professor of Radiology

Antoinette Gomes, MD
Professor of Radiology

Cheryl Hoffman, MD, RPVI
Associate Professor of Radiology

Neema Jamshidi, MD, PhD
Assistant Professor of Radiology

Stephen Kee, MD
Professor of Radiology
Chief, Interventional Radiology

Edward W. Lee, MD, PhD
Assistant Professor of Radiology

Justin McWilliams, MD
Associate Professor of Radiology

Siddharth Padia, MD
Associate Professor of Radiology

Contact Information

UCLA IVC Filter Clinic
100 UCLA Medical Plaza, Suite 100
Los Angeles, CA 90095

(310) 481-7545 Phone
(310) 794-9070 Fax

radiology.ucla.edu/ivc-filter