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IVC Filters: Society of Interventional Radiology Leads in Patient Care, Safety, Research

Journal of Vascular and Interventional Radiology Includes Largest Single Patient Population Study to Date on Placement Success, Patient Follow-up

FAIRFAX, Va.—Researchers have published the largest single patient population study to date on a method for following patients with retrievable inferior vena cava (IVC) filters—devices used to keep blood clots from traveling to the lungs. This study, which is important for individuals with IVC filters and their doctors, supports existing guidelines developed by the Society of Interventional Radiology, a national organization of nearly 4,700 doctors, scientists and allied health professionals dedicated to improving health care through minimally invasive treatments.

“Results from this IVC filter study reinforce SIR’s existing guidelines surrounding either successful retrieval or permanent placement,” said SIR President Timothy P. Murphy, M.D., FSIR. “SIR knows that this is an important and vigorously debated issue. This research—an important addition to the inferior vena cava filter discussion—supports the call for continued rigorous patient/doctor communication and detailed data collection throughout the process, especially after filter placement in order for there to be success,” noted Murphy, an interventional radiologist and director of the Vascular Disease Research Center at Rhode Island Hospital in Providence. “Research like this may also provide a framework that doctors can use to guide practice and treat patients safely,” he added.

Between 350,000 and 600,000 people each year in this country are affected by blood clots, and between 100,000 and 180,000 people die of pulmonary embolism (a blood clot that travels to the lungs) each year, reports the U.S. Surgeon General. Most patients with blood clots are treated with blood-thinning drugs, which are usually effective in preventing pulmonary embolism. IVC filters—devices inserted inside a large abdominal vein that trap large clot fragments and prevent them from traveling to the heart and lungs—are a treatment option for those individuals who can’t take blood-thinning drugs or who develop clots despite medication and remain at risk for pulmonary embolism. According to the U.S. Food and Drug Administration (FDA), the use of IVC filters has grown over the years, from 167,000 in 2007 with projections to 259,000 in 2012. The majority of these filters are intended to be left in place forever; some types called *retrievable IVC filters* can later be removed by a doctor. The FDA has recognized that some retrievable IVC filters can fracture or migrate to other parts of the bloodstream and has urged doctors who implant filters to regularly consider the risk/benefit profile for each individual patient and to give strong consideration to removing these devices from patients who may no longer be at increased risk of pulmonary embolism.

“A Method for Following Patients With Retrievable Inferior Vena Cava Filters: Results and Lessons Learned From the First 1,100 Patients” illustrates the importance of the medical team’s adherence to a strategy for continuing to monitor individuals and may provide a way to possibly avoid long-term complications of filter placement, note the researchers from Penn State Hershey Medical Center, Heart and Vascular Institute in Hershey, Pa.

“Because retrievable filters may need to be removed within four to six weeks of placement, after which they may become too firmly attached to the IVC to be removable, it is important that individuals remain in contact with their physicians during that time to discuss the filter’s possible removal,” stated Charles E. Ray Jr., M.D., Ph.D., FSIR. “The primary barriers to filter removal remain those of patient selection and losing touch during the important period of follow-up. The degree of dedication brought to this study resulted in an amazingly low number of subjects lost to follow-up,” said Ray, an interventional radiologist at the University of Colorado Denver in Aurora.

SIR has already-established guidelines—and recently published quality improvement guidelines—for IVC filter placement and clinical care that closely parallel current FDA recommendations. The society strongly urges close communication between doctor and patient and notes that the interventional radiologist—part of the team of physicians involved in the management of this disease process for any given patient—is committed to patient safety above all else.

SIR encourages individuals with IVC filters to talk to their interventional radiologists and their other doctors about any concerns or questions. Those with filters should always discuss with their doctors whether and when filter removal is an option. It should also be noted that even the filters that have the option to be removed may be left in place permanently and the filters on the market have FDA approval for permanent placement.

The Journal of Vascular and Interventional Radiology has published the below IVC filter-related articles.

- “A Method for Following Patients With Retrievable Inferior Vena Cava Filters: Results and Lessons Learned From the First 1,100 Patients”
- “Quality Improvement Guidelines for the Performance of Inferior Vena Cava Filter Placement for the Prevention of Pulmonary Embolism” (Covers all facets of IVC filter placement, including permanent and temporary, defining procedural success and addressing complications, such as filter movement, loss of the filter’s structural integrity and insertion problems)
- “Incidence and Management of Inferior Vena Cava Filter Thrombus Detected at Time of Filter Retrieval”
- “A Systematic Review of the Use of Retrievable Inferior Vena Cava Filters”
- “CT Fluoroscopy–Guided Placement of Inferior Vena Cava Filters: Feasibility Study in Pigs”

More information about the Society of Interventional Radiology and the Journal of Vascular and Interventional Radiology can be found online at www.SIRweb.org.

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About the Society of Interventional Radiology

Interventional radiologists are physicians who specialize in minimally invasive, targeted treatments. They offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-ray, MRI and other imaging to advance a catheter in the body, such as in an artery, to treat at the source of the disease internally. As the inventors of angioplasty and the catheter-delivered stent, which were first used in the legs to treat peripheral arterial disease, interventional radiologists pioneered minimally invasive modern medicine. Today, interventional oncology is a growing specialty area of interventional radiology. Interventional radiologists can deliver treatments for cancer directly to the tumor without significant side effects or damage to nearby normal tissue.

Many conditions that once required surgery can be treated less invasively by interventional radiologists. Interventional radiology treatments offer less risk, less pain and less recovery time compared to open surgery. Visit www.SIRweb.org.

Reporters: To obtain a copy of any of these articles or to arrange local interviews, please contact Ellen Acconcia, SIR communications manager/practice areas, eaconcia@SIRweb.org, (703) 460-5582, or Maryann Verrillo, SIR director of communications and public relations, mverrillo@SIRweb.org, (703) 460-5572.