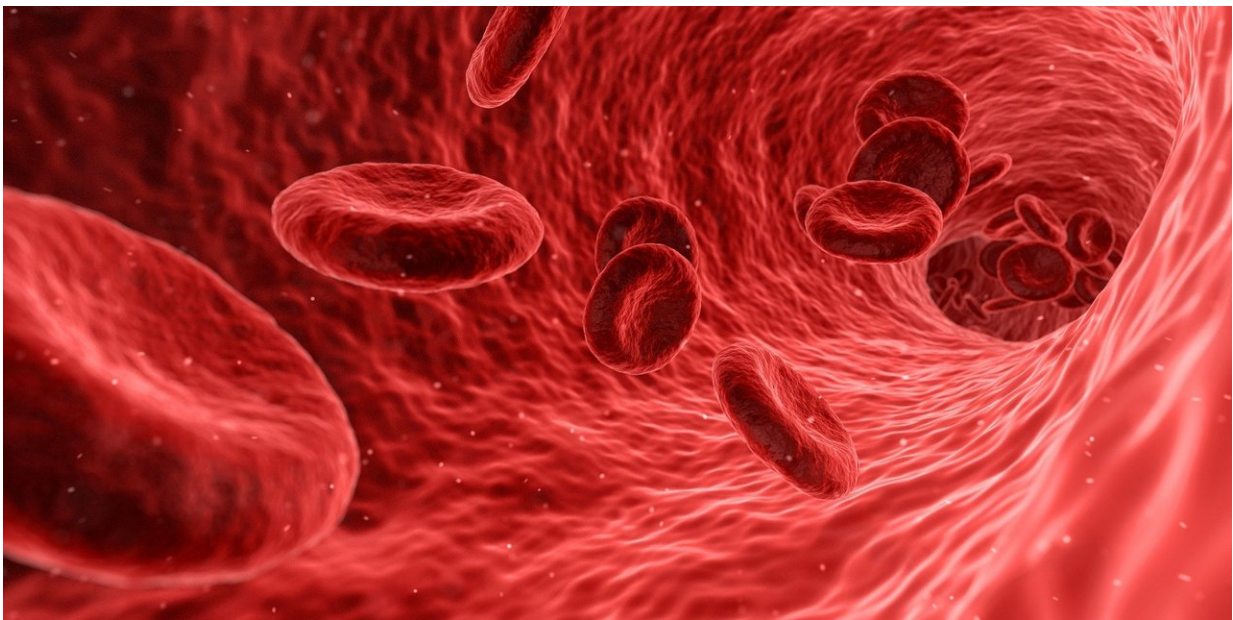


New study demonstrates inferior vena cava filters are safe and effective way to treat venous thromboembolism

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Few adverse events are connected to the use of inferior vena cava (IVC) filters to help prevent deep vein blood clots from developing into pulmonary embolisms (PE), according to the findings of the Predicting the Safety and Effectiveness of Inferior Vena Cava Filters (PRESERVE) trial, published jointly in the *Journal of Vascular and Interventional Radiology (JVIR)* and the *Journal of Vascular Surgery Venous and*

Lymphatics (JVSVL).

PRESERVE is an FDA-directed multicenter, prospective, open-label, non-randomized trial that studied the safety and efficacy of IVC filters from six manufacturers. It was a joint effort of the Society of Interventional Radiology (SIR) and the Society for Vascular Surgery (SVS). The study was conducted at 54 sites in the United States between Oct. 10, 2015, and March 31, 2019. During that time, filters were implanted in 1,421 [patients](#), of which 1,019 patients had an existing deep vein thrombosis (DVT) or pulmonary embolism (PE).

Researchers found that IVC filters were effective in helping to prevent PEs in patients experiencing a DVT where anticoagulation medicines failed or were not an option for the patient. Approximately half of the patients in the study had their filters removed within 3 months of placement without complication or recurrence of DVT or PE, according to study authors.

"The question shouldn't be only 'should we place a filter?' but 'how should we offer comprehensive filter-inclusive care of patients with venous blood clots, comprised of a detailed patient evaluation, a plan for retrieval after placement, and frequent follow up with evaluation for filter removal or replacement,'" said Matthew S. Johnson, MD, FSIR, an interventional radiologist and professor of radiology and surgery at Indiana University School of Medicine in Indianapolis and co-principal investigator on PRESERVE.

"PRESERVE showed what questions we should ask as clinicians: 'does this person continue to require protection against PE, and, in light of changing clinical status and available therapies, is the current filter needed?' and then make an informed decision on how to continue care."

"DVTs and PEs are a significant cause of death worldwide and

understanding fully how tools like IVC filters can be used to prevent the progression of a DVT into a PE allow physicians to safely treat patients at risk of death from VTE," said David L Gillespie, MD, FACS, a vascular surgeon at Beth Israel Deaconess Medical Center in Brockton, Massachusetts, and co-principal investigator on PRESERVE.

"Now that the study is complete, we now have a roadmap for better filter utilization. We need to solidify a clearer set of practice guidelines for venous thromboembolic disease, based on its symptoms, location and complications. Further studies will focus on how the different manifestations of venous thromboembolic disease may benefit from filter-inclusive care."

To date, PRESERVE is the largest prospective study investigating the real-world patient outcomes of IVC filter use.

"This trial represents an important step in collaborating across specialties to benefit the health and safety of our patients," said SIR President Parag J. Patel, MD, MS, FSIR. "Thanks to the work of Drs. Johnson and Gillespie and all the investigators and patients involved in the trial, we now have higher quality evidence to support appropriate utilization and management of IVC [filters](#) in patients with venous thromboembolic disease."

"Congratulations to Dr. Gillespie, Dr. Johnson and their many colleagues for shepherding this large collaborative multi-specialty, multi-center clinical trial to completion," said Michael C. Dalsing, MD, president of the Society for Vascular Surgery.

"This highly impactful study provides the real-world evidence needed when recommending IVC filter placement to protect our patients from a potentially lethal disease and when to remove that filter after it has accomplished the desired effect. It is a stellar example of collaboration

across specialties for the betterment of patient care."

More information: Matthew S. Johnson et al, Predicting the Safety and Effectiveness of Inferior Vena Cava Filters (PRESERVE): Outcomes at 12 months, *Journal of Vascular and Interventional Radiology* (2023). [DOI: 10.1016/j.jvir.2022.12.009](https://doi.org/10.1016/j.jvir.2022.12.009)

Matthew S. Johnson et al, Predicting the Safety and Effectiveness of Inferior Vena Cava Filters (PRESERVE): Outcomes at 12 months, *Journal of Vascular Surgery: Venous and Lymphatic Disorders* (2023). [DOI: 10.1016/j.jvsv.2022.11.002](https://doi.org/10.1016/j.jvsv.2022.11.002)

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