

Case Study: A Deep Level of Care

A venous thromboembolism clinic delivers comprehensive interventional radiology care to patients with deep venous conditions.

By Jenny Jones

Key Takeaways:

- Interventional radiologists at New York Presbyterian Hospital/Weill Cornell Medical College opened a clinic for treating and managing deep venous conditions.
- The clinic helps venous thromboembolism patients transition from inpatient to outpatient settings by ensuring they receive proper follow-up care.
- The clinic's interventional radiologists determine how to treat and manage each patient's deep venous condition.

Approximately 1 million cases of venous thromboembolism (VTE) are diagnosed in the United States annually. Many patients with the disease present at the emergency department and are admitted to the hospital for treatment. But as patients transition to an outpatient setting, it is difficult for primary care physicians to provide optimal follow-up care, especially with novel anticoagulants, emerging endovascular procedures, and advanced longitudinal multidisciplinary care changing the way the disease is managed. At New York Presbyterian Hospital/Weill Cornell Medical College, interventional radiologists (IRs) have bridged the gap between inpatient and outpatient VTE care by establishing a clinic where they work as part of the patient-care team to provide longitudinal clinical care for patients with deep venous conditions.

The Weill Cornell Vascular Program for Thrombosis and Deep Venous Health is located in the same building as Weill Cornell Vascular, an outpatient practice on Manhattan's Upper West Side that has provided clinical IR care to patients with superficial venous insufficiency since the late 1990s. A continuation of the superficial venous practice, the thrombosis clinic focuses on VTE, which includes deep vein thrombosis (DVT) and pulmonary embolism (PE), a condition responsible for about 100,000 deaths annually. "Before the clinic opened, there was no clear mechanism to handle the transition from an inpatient, urgent care, or emergency department to outpatient settings for this serious disease," says Akhilesh K. Sista, MD, assistant professor of radiology at Weill Cornell Medical College and director of the thrombosis program. "The clinic plays a vital role in the long-term care of these patients."

The clinic also expands the role of Weill Cornell's IRs, as championed in ACR's Imaging 3.0™ campaign, by allowing them to meet directly with patients to discuss deep venous conditions and determine whether a procedure, anticoagulation therapy, filter placement, or other treatment is necessary. "Involvement in the patient care team improves interventional radiology's standing as a clinical, rather than a technical, specialty and results in a higher-quality patient care experience," Sista says. The IRs also manage patients' follow-up care, including timely removal of temporary inferior vena cava (IVC) filters, for a more comprehensive



patient experience. "In the past, VTE patients didn't have anyone other than their primary care physicians to manage their care once they left the hospital," Sista explains. "At this clinic, patients can get all of their questions answered about their deep venous health and work with disease experts to manage their care."

Clinical Development

Sista learned how fractured VTE care was while serving as the site principal investigator for the National Institutes of Health-sponsored ATTRACT (Adjunctive Catheter-Directed Thrombolysis) Trial from 2011-2014. As he called DVT patients to inform them of their eligibility for the trial, Sista discovered that most patients didn't understand their condition, because they had never talked to a deep venous expert. "Many patients did not have a clear plan for going forward," Sista explains. "They didn't know how long they had to be on anticoagulation, what blood tests were necessary, or even that endovascular options existed to remove blood clots."

Reflecting on the experience, Sista got the idea for a clinic dedicated to advising referring physicians on clot removal appropriateness and helping VTE

ACR
1891 Preston White Drive
Reston, VA 20191
703-648-8900
www.acr.org/Imaging3

©Copyright 2015
American College of Radiology

Media contact: pr@acr.org

Continued on next page

Case Study: A Deep Level of Care



Continued from previous page

patients transition from an inpatient or emergency department setting to an outpatient program. He approached Robert J. Min, MD, MBA, chair of radiology at Weill Cornell and radiologist-in-chief at New York Presbyterian Hospital, about establishing the clinic. A pioneer in complete patient care, Min was immediately receptive to the idea. "VTE is a condition that I know is underserved and under recognized, and, subsequently, patients who suffer from deep venous disease don't get the care, management, or follow-up that they need," he says. "We already had a robust program for superficial venous care, so this proposal to support the other half of that disease made a lot of sense. We really provide a great patient experience from beginning to end."

Min encouraged Sista to develop a business plan for the clinic, which shares not only a building with the superficial venous program but also medical assistants, schedulers, billing administrators, and other staff. As he developed his proposal, Sista determined that the clinic would need its own nurse practitioner (NP) to schedule appointments and procedures and to help see patients. He outlined the anticipated costs of operating the clinic, including the NP's salary, as well as the income that the clinic was expected to generate from patient visits, imaging required to evaluate patients, and increased procedure volumes. ([View the presentation.](#))

Sista presented the plan to Min, who then worked with department administrators to ensure the projected expenses and receipts were accurate and all of the anticipated revenue generated from not only the consultations but also the related diagnostic tests and ancillary procedures, such as IVC filter retrievals, was included. "A lot of times people don't bother

to look at the so-called downstream revenues, but I encouraged Dr. Sista to include all of that in our business case," Min says. "When you do that, it doesn't take a lot to make it pay for itself, even within the first year."

Practice Building

Once the plan was approved, Sista began distributing brochures and sending emails to referring physicians, outlining the benefits of the program. ([View samples of the brochure and email.](#)) "The clinic reassures referring physicians that their patients will receive proper follow-up care from a clinical specialist who will keep a keen eye on their patients' progress," says Sista, who then began giving presentations about the clinic, many of which have occurred as part of Cornell's "grand rounds," where various departments, such as oncology and neurosurgery, hear from outside sources about topics relevant to their fields. Sista also visited physician practices and urgent care facilities to educate referring physicians about the clinic. "Other physicians often still have the perception that IRs don't have the interest or the experience in managing patient care beyond the procedures that we provide," Sista notes. "You must convince your referring physicians that you're more than a proceduralist, and that you will own the disease and manage patients in an outpatient setting."

While it could be difficult to garner support for a thrombosis clinic at some institutions, Sista hasn't had much trouble selling the program at Cornell, where IRs have a strong clinical history. Andrew I. Schafer, MD, professor of medicine in hematology and oncology and former chair of the department of medicine at Weill Cornell, says that he has embraced the VTE clinic because he knows the IRs are committed to comprehensive medicine. "I would have reservations elsewhere, but the IRs here do not have the so-called, silo mentality, about patient care that, unfortunately, so many of us in medicine have," Schafer explains. "They have built a reputation as both proceduralists and disease specialists."

Even before the clinic was created, the IRs managed some anticoagulation therapy and assisted referring physicians with complex cases, including patients with recurrent DVT and bilateral lower-extremity edema. Collaboration between the IRs and referring physicians has increased even further with the advent of the clinic. "If there is something unusual about a clot, I don't hesitate to run it by Dr. Sista or one of his colleagues," Schafer says. This free flow of ideas results in better care and greater value for patients by ensuring that challenging cases are examined from every angle. "Really good medical decisions are achieved when experts make arguments for or against certain kinds



ACR
1891 Preston White Drive
Reston, VA 20191
703-648-8900
www.acr.org/Imaging3

©Copyright 2015
American College of Radiology

Media contact: pr@acr.org

Continued on next page

Case Study: A Deep Level of Care



Continued from previous page

of management," Schafer says. "You come away with the best recommendation for the patient when that happens."

Accepting Patients

Since the clinic opened in November of 2014, its patient roster has grown steadily. Sista currently sees patients one day a week and the NP, Melissa Raddatz, sees patients every day in the clinic. During a typical visit, Sista or Raddatz reviews the patient's medical history, evaluates the patient, and talks to the patient about the condition at hand. They then use that information to determine whether the patient needs a procedure, such as catheter-directed thrombolysis, chronic venous recanalization, or saphenous vein ablation. "Many physicians don't know when to refer patients for potential procedures because there are nuances and details about VTE that a busy primary care provider is understandably not going to be up to speed on," Sista says. "When IRs make the determination about treatment, we eliminate the guesswork for the referring physician."

Once treatment is determined, the clinic schedules all of the necessary procedures, tests, and follow-up exams throughout the episode of care. The outpatient approach provides significant value to patients over inpatient care. Patients remain ambulatory, which prevents DVTs from forming and propagating, and they can maintain their normal lives while being monitored and treated for long-term morbidity. The number of patients who are unnecessarily admitted to the hospital is also reduced. "The emergency department will actually admit patients if the quality of their follow-up care is a concern," Sista explains. "We offer services so the emergency department can immediately discharge DVT patients to be seen in our clinic within a day or two."

Sista uses electronic records, emails, and telephone calls to keep referring physicians informed throughout a patient's treatment. "I send referring physicians a quick note to let them know that I've seen the patient that they referred," Sista explains. "Then I tell them exactly which treatment I recommend, make sure they approve of it, and give them our follow-up plan." This diligent communication builds trust with referring physicians and assures them that their patients are receiving the best care possible. "As we demonstrate that we provide excellent care for VTE disease management, referring physicians forget about their previous notions of what IRs do or should do," Sista says.

The ultimate goal of the clinic is to ensure that VTE patients at New York Presbyterian Hospital/Weill Cornell Medical College never slip through the cracks. So whether they have an IVC filter placed, anticoagulation therapy, a catheter-directed procedure, or other treatment, patients can take comfort in knowing that their care will be properly managed from beginning to end. "The full spectrum of this disease is only now beginning to be appreciated," Sista notes. "It affects quality of life and functionality and can cause tremendous anxiety in the months or years following an acute event. Patients need someone to take charge, and I hope to convince them and the medical community that an interventional radiologist is the best person to provide that proactive care. IR brings unique knowledge to treat this chronic disease. We understand anticoagulation, and we have the right infrastructure and expert resources in place, including an outpatient clinic staffed by disease specialists."

Next Steps

- Identify interventional radiologists who are passionate about following patients throughout the episode of care.
- Ensure the interventional radiologists are committed to learning about the disease state beyond radiology and procedures in order to provide comprehensive clinical care.
- Engage in practice building to partner with referring physicians and generate additional sources of funding.

Join the Discussion

Want to join the discussion about how a venous thromboembolism clinic delivers comprehensive interventional radiology care to patients with deep venous conditions? Let us know your thoughts on Twitter at #imaging3.

Have a case study idea you'd like to share with the radiology community? Please submit your idea to <http://bit.ly/CaseStudyForm>.



A Deep Level of Care by *American College of Radiology* is licensed under a *Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License*. Based on a work at www.acr.org/imaging3. Permissions beyond the scope of this license may be available at www.acr.org/Legal.

ACR
1891 Preston White Drive
Reston, VA 20191
703-648-8900
www.acr.org/Imaging3

©Copyright 2015
American College of Radiology

Media contact: pr@acr.org