

VASCULAR SURGERY & MEDICINE
PROGRAM GUIDE

SANGER HEART & VASCULAR INSTITUTE



Carolinas HealthCare System
Sanger Heart & Vascular Institute



Vascular Surgery & Medicine Program Guide

About Us.....	1
Vascular Surgery & Medicine	3
Comprehensive Aortic Disease Management	5
Complex Venous Interventions.....	9
Leading the Field.....	11
Referral Criteria	13



About Us

Sanger Heart & Vascular Institute

Sanger Heart & Vascular Institute

Sanger Heart & Vascular Institute is built on a strong history of innovation. Since our founding over 50 years ago, we've fostered a multidisciplinary, evidence-based approach and a deep dedication to delivering heart care that's world-class.

Today, we continue to evolve by bringing the latest science and capabilities to patients, and by growing our medical staff with nationally and internationally recognized experts. Currently, we maintain more than 100 physicians and 75 advanced care practitioners at over 20 care centers across the Carolinas.

Our vascular team is among the most skilled in the world, providing comprehensive, current, interdisciplinary care for vascular conditions ranging from varicose veins to complex thoracic aortic disease.

FIRST IN WORLD

to implant a branched stent graft specifically designed to repair thoracic aortic aneurysms, a less invasive option to open surgery. (2013)

Today, we have more than a dozen experts specializing in vascular imaging, vascular medicine and vascular surgery across three locations.

The Vascular Surgery & Medicine Program provides complete vascular care across the continuum, including non-invasive vascular imaging, medical management, diagnostic angiography and endovascular therapeutics, surgical and emergent care, and much more.

CORE AREAS

The Vascular Surgery & Medicine Program commonly evaluates and treats:

- Aortic disease
- Carotid disease
- Peripheral artery disease
- Venous disease

Vascular Surgery & Medicine



Full Spectrum of Care

We provide comprehensive evaluation and the most advanced treatment options for all types of vascular disease. We apply and are actively researching new techniques to treat and manage a wide range of vascular conditions including, but not limited to:

- Aortic aneurysms
- Aortic dissection or rupture
- Cerebrovascular disease including carotid artery stenosis and stroke prevention
- Critical limb ischemia
- Diabetic foot problems
- Dialysis access
- Peripheral arterial occlusive disease
- Renal artery disease
- Vascular trauma
- Vasculitis
- Vein problems including varicose veins

“We are consistently seen as a valuable resource for primary care providers and help to assure quality, guideline-based care for all vascular patients.”
– Timothy Roush, MD



What Sets Us Apart?

Our expertise.

We specialize in vascular care, giving patients access to a full array of proven treatments. As one of the highest volume centers in the region, our Vascular Surgery & Medicine Program performs more than 2,500 vascular procedures annually for patients with a variety of vascular diseases.

Our collaborative, multispecialty team approach.

We take a fully integrated team approach, partnering with referring physicians throughout the course of a patient's care. We bring together clinical experts from multiple disciplines and can seamlessly tap into other specialists under the Carolinas HealthCare System umbrella to develop the best treatment plan for individual patients. Our goal? To get patients back to their community and primary care teams.

Our holistic view.

We treat the whole patient, which becomes critical when patients present with other complicating health issues (such as diabetes).

Our outcomes.

Our outcomes continue to exceed national benchmarks as we continue to treat some of the most complex cases in the nation.

Our convenient locations.

We bring state-of-the-art care to three locations across North Carolina.



Comprehensive Aortic Disease

Management



World-Renowned Treatment of Aortic Disease

We are internationally regarded and lauded as one of the top implanters of aortic endografts. We treat all types of aortic disease and perform some of the most-complex endovascular surgeries. Our team works hand-in-hand with cardiothoracic surgeons, cardiologists and geneticists to evaluate the whole patient and ensure they receive the most appropriate treatment.

Frank R. Arko III, MD, vascular surgeon, is sought after for his expertise, and frequently travels around the world teaching others advanced techniques, helping to improve clinical knowledge and outcomes for people with aortic disease.

We treat all types of aortic diseases with traditional open procedures and minimally invasive endovascular repair techniques. In 2013, we became the first surgical team in the world to implant a branched stent graft specifically designed to repair thoracic aortic aneurysms, which is a less-invasive option to open surgery.

Our Center for Aortic Disease has established a strong collaboration between cardiothoracic and vascular surgeons, and continues to use aortic endograft devices in innovative ways. As a result, we are increasingly seen as a national resource for other hospitals looking to build aortic disease management programs and have trained physicians from across the world who come here to learn our techniques.

As a leader for thoracic endovascular aneurysm repair (TEVAR) and endovascular aneurysm repair (EVAR), our teams are adept at treating even the most complex of cases. We care for a large volume of patients, too. Nationwide, Sanger ranks in the top 5 for TEVAR and EVAR. With volume comes unparalleled experience and top outcomes, delivering peace of mind that your patients are in the best hands

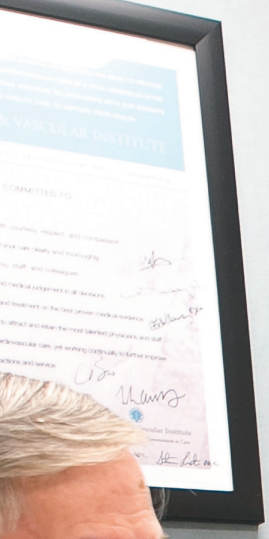
“A defining goal of our aortic program is to optimize patient outcomes by providing the highest quality care possible, ensuring the right patient gets the right care in the timeliest manner.” – Frank R. Arko III, MD

DID YOU KNOW?

Under the Screening Abdominal Aortic Aneurysms Very Efficiently Act (SAAAVE), Medicare now pays for a one-time ultrasound screening for abdominal aortic aneurysms (AAA) for beneficiaries who meet the following criteria:

- Men and women with a family history of AAA
- Men ages 65 to 75 who have smoked at least 100 cigarettes during their lifetime

Carolinas HealthCare System is your partner in helping screen at-risk patients for AAA. Our integrated health alert system automatically flags patients who are at high risk and should receive screenings.



Code Rupture and Code Dissection

Aneurysms and dissections present life-threatening scenarios. Through our rapid system-wide activation, we can quickly assess patients while simultaneously coordinating specialized medical teams to be on standby in our hybrid operating room. This innovative, streamlined process sets Sanger apart – and makes us uniquely poised to act fast and help save lives. In fact, we are one of the only centers in the region to offer this level of care.

“We have the infrastructure and algorithms in place to activate a system-wide code for these urgent situations, and we know timely access to emergent care gives patients the best opportunity for a good outcome.”

– John Frederick, MD

Limb Salvage

Through a pioneering limb salvage program, our Vascular Surgery & Medicine Program specializes in treating patients with peripheral vascular problems or ischemia who are at high risk of amputation. Our goal: to reduce unnecessary or preventable amputations and save patients' limbs.

Our patients have usually been under the care of their primary care physician, infectious disease doctor, orthopedist, endocrinologist, podiatrist or other specialist. We become an extension of that care team, offering advanced diagnostics and treatment that, in some cases, includes innovative therapies to help improve blood flow below the knee and into the foot.

PAD Claudication Program

In conjunction with cardiac rehab, this program offers patients a supervised exercise and walking program, which has been shown to improve functional capacity, decrease symptoms and achieve systemic risk-reduction benefits.

DID YOU KNOW?

- Many patients are not offered an evaluation to see whether there might be viable options to save their leg. Vascular evaluation is essential, particularly for people with non-healing wounds. At Sanger Heart & Vascular Institute, we offer an aggressive, multidisciplinary approach for healing.
- Most amputations (90 percent) are due to diabetes or PAD. Other at-risk groups include patients with renal failure and those with non-healing wounds, bone or wound infections, and resistant edema.



Complex Venous

Interventions

We are leaders in diagnosing, treating and preventing vein complications, and using lifestyle modifications and the latest minimally invasive endovenous and endovascular surgical interventions

Vein Clinic

Our vein clinics offer timely screenings and the full suite of treatments for venous disease, including:

- Compression stockings
- Microphlebectomy
- Radiofrequency
- Sclerotherapy
- Surgical intervention
- Venous stenting

Leading the --- Field

At Sanger Heart & Vascular Institute, we've demonstrated a commitment to innovation since the day we began. With an esteemed research program and state-of-the-art technology, we continue to stand at the forefront of clinical practice.

Vascular Clinical Trials

Our vascular surgeons, clinicians and researchers are involved in several innovative clinical trials to help advance science and improve care for vascular patients locally and worldwide.

Some highlights include:

- First-in-man VALIANT trial. Carolinas HealthCare System became the first in the world to implant a branched stent graft specifically designed for branch vessel repair of thoracic aortic aneurysms. Now in Phase II, Dr. Arko and his team are enrolling patients to further study this treatment approach that could help minimize the need for invasive surgery and extend the benefits of endovascular repair without additional surgery.

"Most of my career has been focused on treating complex aortic disease, including aneurysms.

Over the years, I've had the unique opportunity to envision and evaluate a number of new interventions and technologies that can ultimately lead to less invasive approaches for aortic repair. The Valiant Mona LSA stent is one such example, which—if successful—could eliminate the need for left subclavian artery (LSA) bypass surgery in patients with a thoracic aneurysm." - Frank R. Arko III, MD



- Co-investigator for SYMPPLICITY HTN-3. With high enrollment, results of this anticipated study found that renal denervation failed to reduce blood pressure among patients with drug-resistant hypertension.
- ANCHOR. We participated in a registry for aneurysm treatment using HeliFX aortic securement system to follow patients with previously implanted or currently implanted endografts, for the prevention of graft migration and the treatment of type 1a endoleak.
- Other trials include:
 - Testing the Nellix® System for endovascular abdominal aortic aneurysm repair (EVAS IDE clinical study)
 - Evaluating the Zilver® Vena™ venous stent to treat iliofemoral venous outflow obstruction (VIVO clinical study)
 - Roadster 2, a registry of transcarotid artery revascularization in patients with significant carotid artery disease

Researchers are also following patients in a number of other trials.



Referral

**Sanger Heart & Vascular
Institute-Charlotte**

1001 Blythe Boulevard, Suite 300
Charlotte, NC 28203
Phone: 704-373-0212
Fax: 704-373-2624

**Sanger Heart & Vascular
Institute-Monroe**

1550 Faulk St., Suite 3300
Monroe, NC 28112
Phone: 704-667-3810
Fax: 704-667-3479



4

**Sanger Heart & Vascular
Institute-Pineville**

10650 Park Rd., Suite 220
Charlotte, NC 28210
Phone: 704-667-3840
Fax: 704-342-5871

Center for Aortic Disease: 704-373-0212
Venous Disease: 704-373-0212

Supplemental

Program Information





Carolinas HealthCare System
Sanger Heart & Vascular Institute