

South Charlotte General & Vascular Surgery

Vascular Disease Management spoke with Vascular and Endovascular Surgeon Elias Arbid, MD, FACS, FSVS, about this office-based lab (OBL) in Charlotte, North Carolina, founded by James Antezana, MD, RPVI, FSVS. Additional surgeons include Peter Ford, MD, FACS, RPVI, and Steven Weston, MD, FACS.

What is the size of your facility and number of staff members? What is the mix of physician credentials at your lab?

The facility is 10,000 square feet, with 5000 square feet dedicated to the OBL with 2 angiography suites. We currently have 3 vascular and endovascular surgeons, 1 general surgeon who is a wound expert, and 1 cardiologist. In total, we have 20 onsite staff members.

What procedures are performed at your facility? Approximately how many are performed each month?

We perform a wide range of arterial, venous, and general surgical procedures, including, but not limited to:

- angiography, intravascular ultrasound (IVUS), atherectomy, angioplasty, stenting for peripheral arterial disease and chronic limb ischemia (CLI): 25 to 30 procedures monthly
- venography, intravascular IVUS, angioplasty, stenting for May-Thurner syndrome: 8 to 10 procedures monthly
- venography, IVUS, coiling, and embolization for pelvic venous reflux: 2 to 3 procedures monthly
- inferior vena cava filter placement and removal, mediport placement and removal, dialysis catheter placement and removal, maintenance of dialysis access: 5 to 10 procedures monthly.

What types of equipment are commonly used in the lab? What imaging technology do you use?

We use duplex ultrasound, pulse volume recording with exercise; IVUS, C-arm with vascular package; a Philips integrated fixed system; atherectomy devices (laser, CSI); and balloons and stents, including drug-coated balloons.

Do you use ultrasound? What other modalities do you use to help guide access and treatment?

We use duplex ultrasound for imaging and access as well as IVUS for live evaluation of arteries and veins.

Tell us what a typical day might be like in your lab.

Usually, we'll have first stick at 7 am and will do between 4 and 6 cases a day, 3 days a week.



Dr. Antezana, Dr. Arbid, and the surgical team.

In what ways has the COVID-19 pandemic impacted your lab or practice?

Initially, it did slow us down a bit but we quickly adjusted; we instituted telemedicine very quickly and COVID-19 testing daily so we were able to continue seeing patients and perform procedures rapidly after the pandemic started.

Is your lab involved in clinical research?

Not at this time, but we are planning to get started relatively soon with clinical studies.

What measures has your lab implemented to cut or contain costs?

We regularly review the cost of all cases through an integrated inventory management software. We analyze cath lab time, use of fluoroscopy, and use of disposables products. We try to keep the cost per case at the very minimum, and we average costs at about 18% to 20% of collected payment for most cases.

How does your lab compete for patients? Have you formed an alliance with others in the area?

We have an aggressive outreach program to all physicians within a 100-mile radius, and we have accumulated an extensive digitalized



Antezana Medical Building.



Nurses' station.

database and visit physicians regularly. Our office manager is in constant contact with the managers of referring physicians to ensure satisfaction and streaming of the referrals.

How are new employees oriented and trained at your facility? How many staff members do you have now with less than a year's experience?

Following the completion required of the initial 2 days of regulatory videos and paperwork, employees are eased into clinical duties. Depending on their position and assignment, they receive a full day of orientation with more senior staff. They are then mentored and counseled for 2 weeks and will gradually become independent.

Education is of prime importance in our practice, and we have a biweekly meeting with the clinical staff to go over topics of interest. We have a monthly educational meeting for the vascular lab where cases are reviewed, as well protocols adjusted, if needed.

We have 2 staff members with less than a year's experience: a vascular technologist who we had worked with at the hospital and a receptionist who worked for an outside vein center. The staff in the cath lab include a RN with ICU background and an angiography tech who has been trained onsite and has been with us for more than 5 years.

How is staff competency evaluated?

The clinical staff is evaluated quarterly by the lead nurse, and we review their evaluation and counsel them as needed. The administrative staff works closely with the office manager, who addresses their concerns daily and counsels them. The vascular lab, as mentioned before, holds a quarterly meeting for review as

well as a quarterly meeting for the cath lab staff. Employees are encouraged to voice their ideas and concerns and are truly part of the team.

What type of continuing education opportunities are provided to staff members?

CME is offered for the nurse practitioner as well as the lead nurse. Ultrasound technologists are offered 1 week of CME paid by our institution on a yearly basis. A library with reference books is available to all our staff for their ongoing education as well as online resources, such as UpToDate.

How do you prevent staff burnout? What approaches do you use for team building?

We encourage staff to voice any concerns or dissatisfaction early on to avoid burnout, and they have done so. We meet quarterly to discuss flow in the office and openly review any issue that may cause burnout and address it.

How do you handle vendor visits to your lab?

By appointment. We have a conference room where we meet with them before the procedures. We also have a control room with speakerphone where vendors can watch and participate in the case if needed. They are allowed to come into the lab but we try to minimize their entry if possible.

Have you realized procedural cost-savings by moving patients to an outpatient environment? Or would you say that costs have increased, but they are offset by improved access and efficiency?



Four-bed recovery area.

We have experienced tremendous cost-savings as many studies have shown, both to the insurance companies and to the patients. We are very proud of our efficiency, improved access, and patient satisfaction, which cannot be matched in the hospital system.

Does your lab do electives on weekends and or holidays?

Our lab is closed on weekends and holidays.

Is there a problem or challenge your lab has faced? How was it addressed?

The most recent challenge has been to have a smooth transition to our new state-of-the-art facility. With the unwavering help of our dedicated staff, we were able to move the offices, vascular lab, and cath lab over one weekend and were able to resume seeing patients the next week and perform procedures.

Describe a particularly memorable case from your lab and how it was addressed.

Like in any lab, unexpected occurrences are always challenging. We had a patient recently have an anaphylactic shock to fentanyl in the middle of the procedure, which required resuscitation and stopping the procedure. We had to transfer her immediately to the emergency room across the street after we stabilized her. That was an occurrence we did not anticipate as she had denied any allergy to narcotics on her intake questioning.

How do you manage patient recovery and avoid post-discharge complications?

Patients are monitored for the duration of their stay in the lab by our trained medical assistants under the supervision of one of



Surgical suite.

our RNs and our physicians, who are always in the lab when procedures are ongoing.

Do your operators maintain privileges at a local hospital? How do you handle inter-institutional transfer?

Yes, most of our surgeons have privileges at 2 hospitals. In case of an emergency, we are fortunate to have an emergency room across the street and we would transfer a patient by ambulance after contacting the attending physician at the facility.

How do you reassure patients who might be uneasy undergoing what they perceive might be a complicated procedure outside of the hospital?

We have a lengthy discussion with patients about the indications, risks, and benefits of the procedure before obtaining consent. We also allow patients to visit the facility if we think that would help them feel better about having the procedure. Our staff is very supportive and are constantly being praised by patients for their professionalism and compassion.

How is patient education managed?

By the providing physician and nurse practitioner with visual aids, video, and lengthy discussions to educate our patients.

What is unique about your lab in comparison to others you've visited?

The facility itself, which is unique in the Carolinas, is the first of its kind in the private sector located in the southern part of Charlotte. The facility is equipped with state-of-the-art equipment, and the quality of our staff—expert surgeons with proven outcomes—

makes us uniquely qualified to provide the best vascular care. Our founder, Dr. Antezana, has been serving the area for over a decade and has laid out the path to our success, making an impact in limb salvage, and with the addition of more surgeons, we have significantly increased our momentum in our region, becoming a center for limb salvage of excellence and venous care.

How do you get the word out in your community that amputation is not the easy answer for CLI? And that there are treatments that can make amputation unnecessary?

For nearly a decade, the practice was fueled primarily by word-of-mouth from satisfied patients, referring physicians, and family members of our patients. With the addition of more vascular surgeons, we have implemented a very active outreach program to physicians and various community groups in the area. We have a very well-designed website and have put together a brochure on amputation prevention, which we mail out. We are currently putting together a multimedia campaign to educate the public on that topic.

But above all, we are so proud that our best advertisement continues to be through our own patients. They feel like we are their extended family. ■

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