Ask the Experts:

What was your decision-making process when purchasing an imaging system for your office-based lab?

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He has disclosed that his center is a luminary site for Ziehm Imaging and that he teaches courses for Spectranetics Corporation.
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Several years ago, our team at Bay Area Vein and Vascular Center decided to open an office-based laboratory (OBL) to deliver better patient care, reduce bureaucracy, and increase access to innovative technology. I was exhausted from the ever-changing hospital schedule leading to unproductive time and defaulting to the same big-name products under contract at the hospital. I wanted freedom of choice and improved efficiency.

The process of change was challenging and forced us to consider what was important in creating an ideal outpatient interventional suite. Surgeons are sometimes limited by their ability to utilize vascular imaging equipment due to availability at the hospital; imaging is the understated staple component to each procedure. In fact, one of the most critical decisions for our OBL was determining the type of x-ray unit that best facilitated procedural success and safety for patients and staff.

At the hospital, fixed x-ray systems offer flat detectors, large generators, and pulsed imaging; however, the cost and complexity of the install was a limiting factor for our OBL. Instead, we focused our attention on acquiring the best C-arm for our center. The attributes we felt were most important in this regard included image quality, versatility, reliability, safety, and affordability of the equipment. We also took into consideration the differences in time and expense required for maintenance of the various units we evaluated. Lastly, we wanted to expand the procedures offered in our practice and the network of physicians interested in treating patients at our facility.

In order to facilitate our purchase decision, we created a list of must-have features. Similar to a fixed x-ray unit, our list included: flat detector technology for best image quality; a powerful generator to allow visualization of the thoracic and abdominal vasculature, in addition to the extremities; road mapping capability with dual live screen function to assist with challenging anatomy (eg, chronic total occlusions); the largest field of view to reduce radiation exposure; and a motorized C-arm to enhance procedural efficiency and reduce staffing requirements. We also required the unit to be modular to maximize our space and operational efficiency.

Additionally, having the lowest possible malfunction rate and best support and service was of paramount importance given the obvious limitations to replacement units in an office-based setting. Intraprocedural malfunction in an OBL adds increased risk and could necessitate a transfer to the hospital.

Once I narrowed down the choices, I did a comparative evaluation through site visitations. The hands-on experience offered us insight into the attributes and challenges of each of the manufactures C-arms.

After much thought and consideration, we purchased the Ziehm Vision RFD motorized unit with a 30-cm X 30-cm flat-panel detector. Our experience with the unit and the company's service has been extremely positive.

We have completed nearly a thousand varied endovascular procedures over the past 2 years. Our patients have benefited from the improved quality and affordability of the OBL, and our workflow has greatly improved compared to the hospital environment.

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He has stated that he has no financial interests related to this article.

Both myself and my partner, Dr. Babatunde Almaroof, left a busy hospital-based practice to open the Vascular Institute of Michigan. Our newly constructed office has two procedure rooms specializing in peripheral vascular procedures. An office-based lab (OBL) allowed for more personal patient relationships and a higher level of patient satisfaction. I'm thrilled we are able to provide a deeper level of patient care in this community.

The imaging equipment is the engine that keeps an office-based procedure lab running. Not only must the equipment provide excellent image quality and usability, it must also be reliable and when service is needed, the response must be immediate. As a surgeon, I want to focus on patients, not the equipment, so we wanted an experienced and trusted partner who was familiar with the OBL market and could deliver the results we expected. We wanted to work with a company who had successfully set up OBLs nearby and had plenty of support professionals in close proximity.

From a technological standpoint, it was important for me to have total control of the entire imaging chain right from the bedside. It was also important to have the capabilities to shoot continuous fluoroscopy without binding images when performing runoffs.

After careful consideration, we purchased the OEC 9900 Elite vascular suite (GE Healthcare), which includes a NuBOOM M2s visualization system, IDI 100-4T carbon fiber floating table, Medrad Artereon auto injector, and GE Venue 50 ultrasound system. It fulfilled our wish list of technological components, and there were five service and support professionals within an hour of our office.

The OEC 9900 Elite has a peripheral vascular profile that optimizes the system for the types of procedures we routinely do in our lab, and it is equipped with an x-ray tube with active cooling to perform imaging for longer periods of time when needed without risk of overheating.

The NuBOOM M2s is an integral component and allows us to have the perfect viewing angle to evaluate the images no matter how crowded the procedure room may get. The system as a whole successfully mimics the functionality and feel of a fixed room at a much lower cost. ■