

## 'Many More Chances'

**MERI's cutting-edge Artis zee improves stroke, aneurism survival rate**

By Aisling Maki

It's a race against time to prevent permanent damage when a patient suffers a stroke or aneurism, but doctors from near and far are training on a cutting-edge device that provides detailed digital images of a patient's blood vessels during diagnostic and treatment procedures.

Medical device maker Siemens has loaned its Artis zee, a ceiling to floor-mounted angiography system that comes with a price tag of roughly \$1.8 million, to the Medical Education and Research Institute (MERI), a nonprofit medical teaching and training school at [44 S. Cleveland St.](#) in the heart of the Memphis Medical District.

"With the help of this device, and the skill and knowledge of all the physicians and surgeons who do these procedures, they're actually able to remove the blockage and the brain re-vascularizes," said MERI executive director Elizabeth Ostric. "So the devastating damage that was created by these aneurisms, up to and including death, doesn't really have to happen anymore. It gives you so many more chances."

The fully digital Artis zee features advanced technology in the form of flat-panel detectors, which enable physicians to obtain three-dimensional, high-resolution images. Physicians can see the smallest blood vessels and interventional devices, such as guide-wires and catheters, in great detail and from virtually any angle.

Doctors use a tableside touch-screen display that enables full system control and leads to improved confidence during the procedure.

"It allows us to have the latest, greatest training device so that when the doctors return to their hospitals, they'll be able to practice with confidence in their new skills and they learned it in a safe environment," Ostric said. "Beyond that, there are opportunities for research with a whole generation of new tools that come out of being able to see with this device, and we'll be able to help with that in terms of providing the environment to support the research."

For patients, devices like this eliminate time-consuming and uncomfortable repositioning in the exam room, making the procedure quicker, less stressful, and less invasive, with less downtime and decreased risk of infections and complications.

And unlike conventional X-ray techniques, Artis zee lacks the distortion of images while giving patients the lowest possible radiation dose, which is especially beneficial during angiographic procedures, which are often lengthy.



**Logan Swanberry, from left, Jason Owens and Dylan Cranmer train on the Artis zee angiography machine at Medical Education & Research Institute (MERI).**

(Photo: Lance Murphey)

Recently, a group of about 30 advanced neurosurgical residents from across the country joined members of The American Association of Neurological Surgeons at MERI for a course on endovascular techniques that incorporated the newly installed device – which is so heavy, the floor had to be readied to hold the machine’s weight.

The course using Siemens’ Artis zee is the first course in MERI’s Angiography Suite.

“We’re a school, so as far as education goes, the vascular education we can provide here is second to none,” Ostric said. “That’s because we have the help of an international faculty, the help of the people who’ve pioneered the procedures, and they have a tool they can use that really is the latest, greatest and best hope for someone who’s experiencing that kind of a problem.”

The nonprofit hopes the learning and research opportunities it’s providing will help train cardiovascular surgeons, neurosurgeons and interventional radiologists both locally and from around the world, as well as give local residents, fellows and physicians an opportunity to improve their skills and conduct research that will improve patient care in Memphis and beyond.

Ostric said she also hopes the opportunities MERI provides will bring new startup companies to the Memphis area.

“It creates an opportunity for Memphis for the development of new devices here,” she said. “It creates the opportunity to showcase Memphis as a location for people who are involved in device development and this kind of research, and they’ll consider locating here to be near it.”