

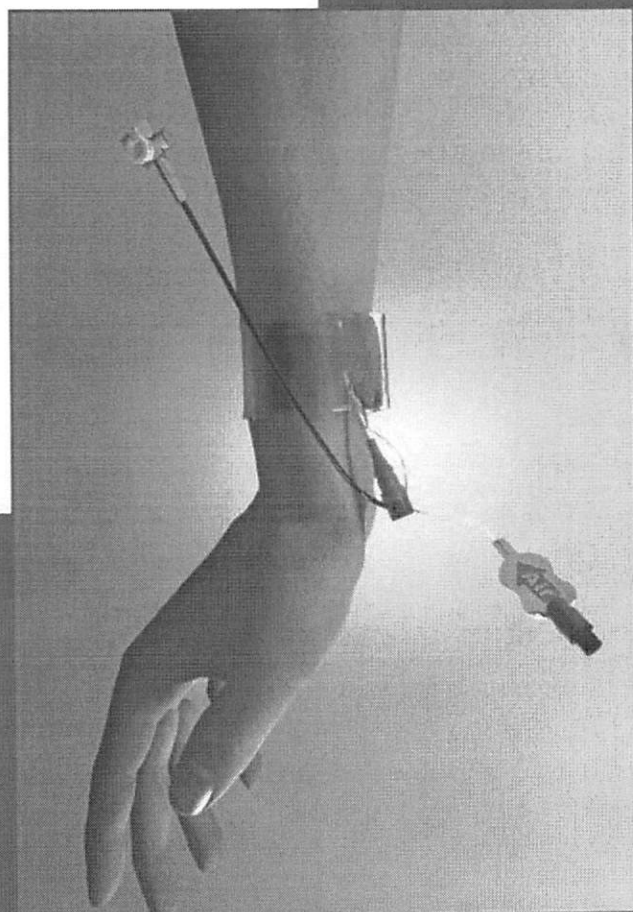
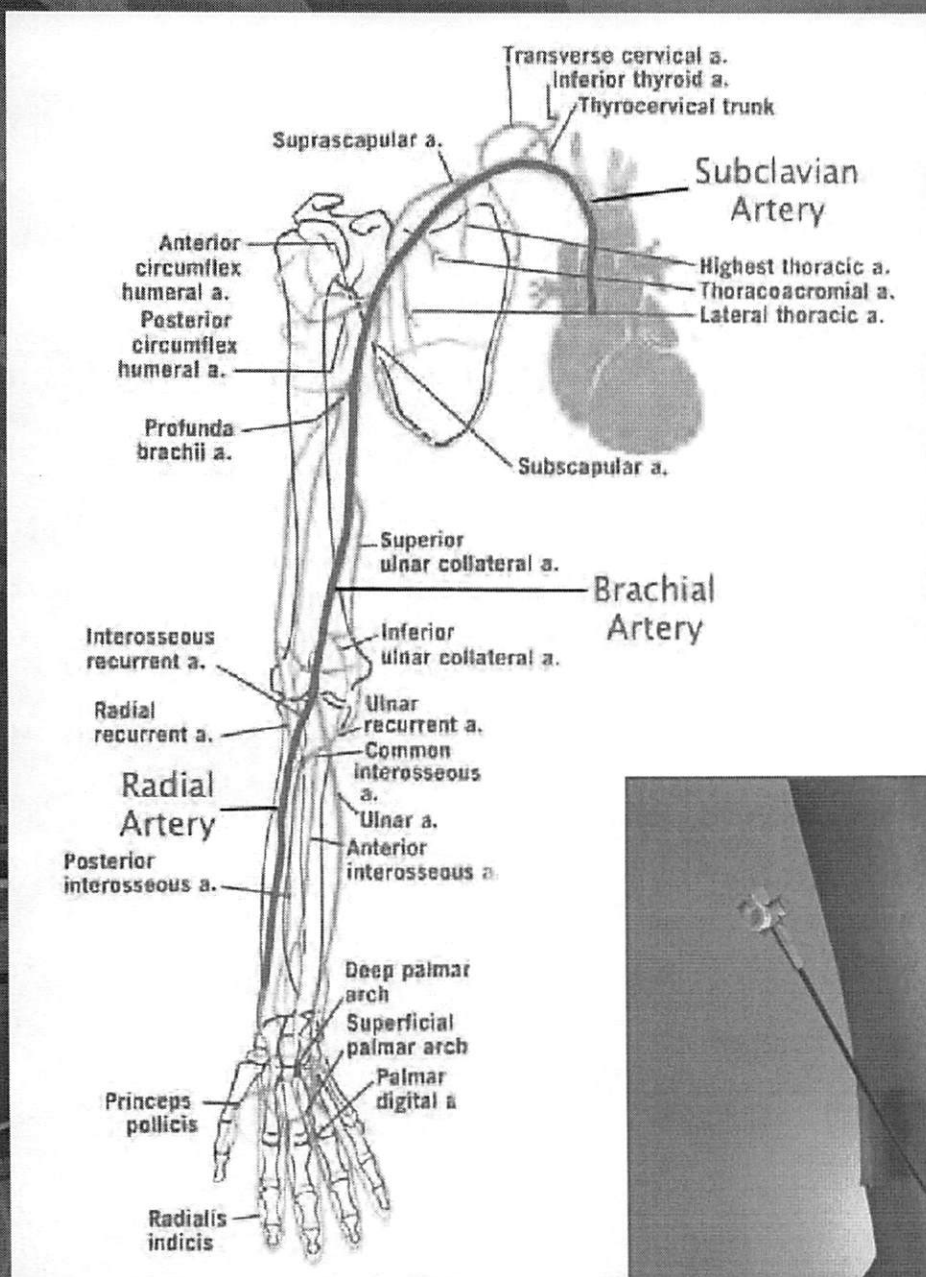


INNOVATIONS IN SURGERY: THE MINIMAL APPROACH

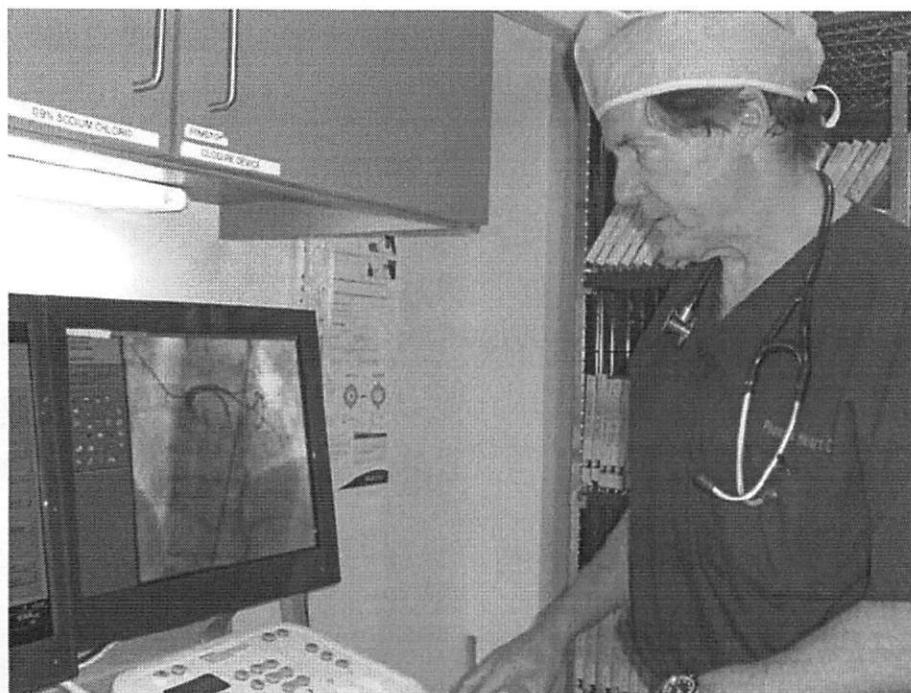
by Reisha Zang

Faster, better, easier...We are always looking for the next best thing that will change our lives. From electronics and transportation to energy drinks and work-out routines, inventors are constantly pushing to discover how to take everything we do and use to the next level. This same determination drives surgeons to find better techniques and procedures to improve patient outcomes and satisfaction.

One of the latest advancements in surgery utilizes minimal incision techniques. This new approach offers patients a less traumatic procedure and shortens recovery periods, making traditional methods that would include lengthy rehabilitation and post-operative restrictions virtually unnecessary. >



Above; Diagram of the radial approach.
 Right; *Radial First* through the wrist.
 Images courtesy of Terumo Medical Corporation.



Radial First
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When it was first introduced in the 1950s, cardiac catheterization was revolutionary. The procedure was and is still used today to detect blockages in the heart. It is accomplished by threading a long, thin, flexible tube, known as a catheter, into a blood vessel to gain access to the heart. Through this catheter a doctor can diagnose and treat certain heart conditions.

Traditionally, this procedure has been done through the femoral artery in the groin area. It is a large artery making it easy for any size catheter to fit; however, access to it can be difficult because it is a blind approach. Overweight patients, women and the elderly are more at risk for fatal complications from this technique. The biggest potential problem is bleeding. If this complication occurs, heavy pressure is required to stop the bleeding, and patients cannot move freely and need to lie down for an extended period of time.

Dr. Richard Heuser of the Phoenix Heart Center and chief of cardiology at St. Luke's Medical Center recently started using a new procedure known as Radial First. It involves performing a cardiac catheterization through the wrist instead of through the groin. The radial artery is located close to the surface of the skin resulting in less trauma to the body during insertion. "Radial First is a change in the paradigm of how do heart catheterization in the hospital," says Heuser. He introduced this technique

to Arizona about four years ago. "St. Luke's is one of only a handful of hospitals worldwide where we do the interventional procedures as an outpatient, with the patients being discharged a few hours after the procedure," he explains.

"We use Radial First in our lab for any patient that needs an angiogram to look at the coronary arteries," says Heuser. "In other labs, it is used only when doctors can't gain access through the leg because most doctors are not trained in this technique." Dr. Heuser and his team have done thousands of Radial First procedures. "It takes a certain different skill set, and the physician has to be comfortable in the method," explains Heuser. "In the wrist you have to manipulate the catheter a bit." This procedure does require a higher level of skill, but once the doctor masters it, it becomes the preferred method of approach because of the benefits it offers patients.

"The biggest advantage of this approach is that the complications are very low compared to the groin procedure," says Heuser. "By doing the procedure in the wrist, you reduce the complications by 80 percent." In reality, when done correctly, fatal complications are highly unusual. This technique is safer and easier to tolerate. "The patient is out of bed right away and usually goes home an hour or two after the catheterization," he says. Patients who have the benefit of undergoing Radial First also experience minimal discomfort, less bleeding and a faster recovery. ➤

