

David Rizik, M.D. Interventional Cardiologist

“Interventional cardiology is like a jealous lover,” says Dr. David Rizik, medical director of Invasive Cardiology at Scottsdale Healthcare Shea Medical Center. “It really does require a lot of your focus.” That’s because, day and night, he’s stalking a killer that could strike without warning: the heart attack.

In 2008, NBC newsman Tim Russert’s unexpected death from previously asymptomatic coronary artery disease sparked interest in identifying risk factors for sudden heart attacks. Enter the LipiScan.

Think of the LipiScan as the night vision goggles of cardiology. Physicians performing angiograms are in the dark when it comes to detecting potentially deadly plaque in the arteries called lipid core: It simply can’t be seen. But using this new infrared technology, they can view an artery’s chemical content in living color: Red indicates low lipid, yellow reveals high lipid. It’s like putting on infrared night goggles and suddenly seeing all the things in the dark waiting to attack you.

Last summer, Rizik performed the state’s first LipiScan procedure. Now, he and his Scottsdale Healthcare team have the most experience of the 12 centers in the world using the device. “What we are seeing now in terms of lipid core in the blood vessel, it required autopsies to see before,” Rizik says.

This plaque may be a reason why Russert and others with minimal disease die suddenly. “We believe a high content of lipid is the thumbprint of coronary arteries that are vulnerable to worsening,” Rizik says.

The next step is building on this technology to identify which patients are most vulnerable, so physicians can “interrupt the pathologic process and prevent heart attacks and sudden death,” Rizik says.

Rizik, who was principal investigator on the first U.S. drug-eluting stent trial and performed the world’s first bifurcation procedure using drug-eluting stents (i.e., stenting a two-pronged artery), is also working on new stent technology. In conjunction with Abbott Vascular, he is helping develop bioabsorbable stents that scaffold the artery for nine months before breaking down into natural materials.

He and his colleagues are also experimenting with infusing super-saturated saline into the coronary artery after angioplasty. This, Rizik says, reduces the amount of damage in the heart muscle from about 25 percent to about 18 percent.

