

New Catheter Procedures Gives High-Risk Cardiac Patients Lifesaving Options

By Kapil Lotun, MD, associate professor of medicine in the UA College of Medicine, Department of Medicine, Division of Cardiology; director, Structural Heart Disease Program; medical director, Transcatheter Aortic Valve Replacement (TAVR) Program; and associate director, Cardiac Catheterization Laboratory at University of Arizona Medical Center – University Campus.

Ultrasound device provides TAVR team with images that guide valve placement

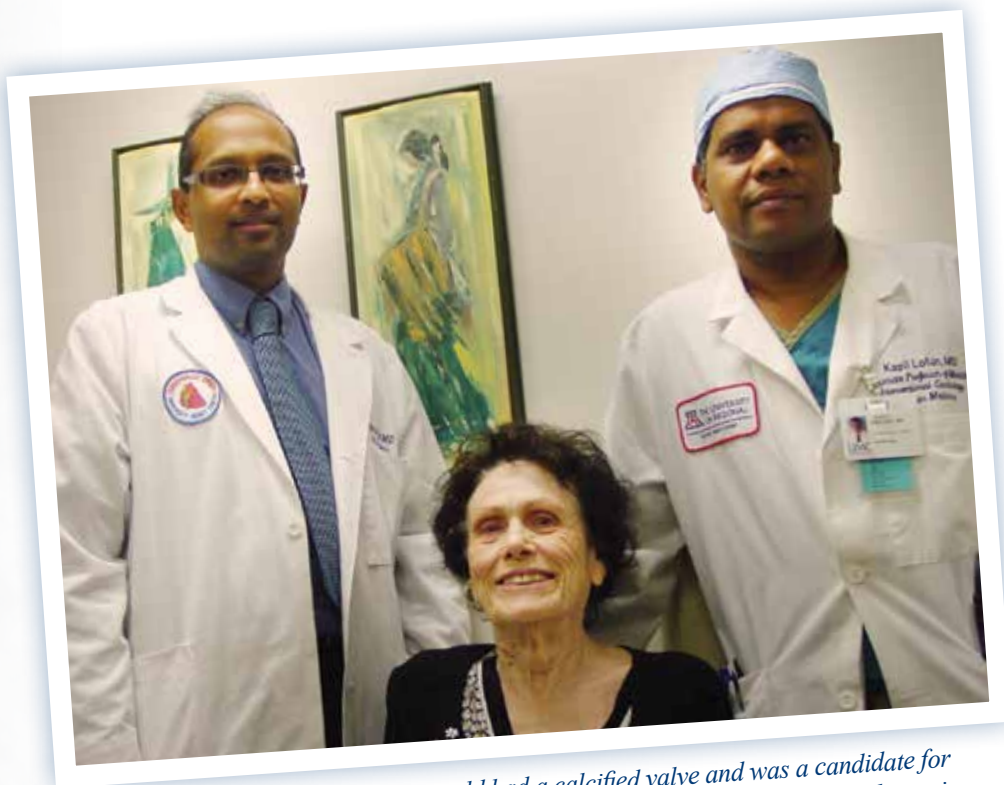
Pliable Valve

Balloon opens the space in the existing valve

Pacemaker wire stops and starts the heart during valve placement procedure



Replacement valve is implanted in the existing space of the blocked valve.



Wynema Schwarz (center) at 80 years old had a calcified valve and was a candidate for a TAVR procedure in which the team inserts a catheter through the artery near the groin area. It contains a pliable valve that is opened and implanted into the damaged valve. "Age shouldn't keep you from living a better life with your family and grandchildren," said Mrs. Schwarz. Also pictured: Sreekumar Subramanian, MD, assistant professor of surgery in the Division of Cardiothoracic Surgery (left) and Kapil Lotun, MD.

Until recently, management of congestive heart failure symptoms was the only treatment option for elderly high-risk patients who suffered from heart valve diseases or leaks around surgically replaced valves. Now, non-surgical catheter procedures are available for many of these patients whose conditions are considered too risky or not suitable for open-heart surgery.

In some valvular patients, the aging process causes calcium and scar tissue build up that leads to blockage of the aortic valve. In other cases, congenital heart conditions, can increase risk of

heart failure or stroke.

Open-heart surgery currently is the gold standard for treating such conditions, but in some cases, the patient's health is considered too risky for surviving open-heart surgery. In such cases, recently developed procedures are now available in which an interventional cardiologist inserts a catheter through a small incision in the groin area and feeds it through the arteries to the site of the diseased or leaking valve.

Who is eligible for this procedure? Patients who are high risk for open heart surgery: typically, a person who is

evaluated by two surgeons and whose condition is deemed too risky for open-heart surgery.

Why aren't these procedures offered to all patients needing valve replacement or repair? While the results are very good and appear to be comparable to open-heart surgery for these very high-risk patients, more data need to be gathered before these procedures can be recommended as the standard of care for patients who are candidates for heart-valve replacement. In the TAVR procedure, the valves used may not last for decades and presently are only indicated for elderly patients at very high risk of not surviving open-heart surgery. ♥

About UAMC's Program

Under the direction of Dr. Lotun, the medical director of TAVR and the director of the Structural Heart Disease Program, and Dr. Robert Poston, the surgical director of TAVR, patients are evaluated for aortic valve disease in the dedicated Valve Clinic. In addition, the University of Arizona Section of Interventional Surgery offers the latest and newest treatment options for patients with coronary artery and structural heart diseases including valve diseases, atrial septal defects and patent foramen ovale, paravalvular leaks, alcohol septal ablation and other complex cardiac diseases.