

TRANSCATHETER AORTIC VALVE REPLACEMENT EXPLAINED

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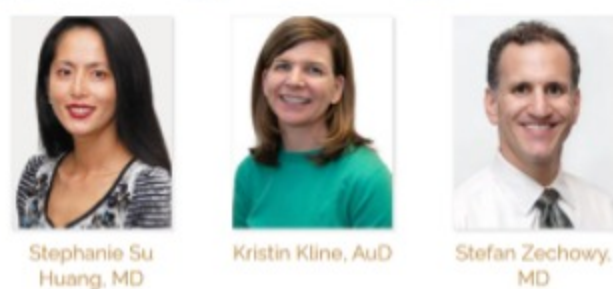


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HERE'S WHAT YOU SHOULD KNOW WHEN YOU TALK WITH YOUR DOCTOR ABOUT HEART VALVE REPAIR/REPLACEMENT OPTIONS



NCMA cardiologist Dr. Patrick Coleman, center, performs a transcatheter aortic valve replacement (TAVR) procedure at Santa Rosa Memorial Hospital on March 14, 2018. NCMA cardiologist Dr. Vishal Patel stands on the right. (Beth Schlanker / The Press Democrat)

Santa Rosa, California, August 2, 2018

Heart valves which are damaged beyond a simple repair can often be replaced. Transcatheter aortic valve replacement (TAVR), also referred to as transcatheter aortic valve implantation (TAVI), is a minimally invasive heart procedure now available in Santa Rosa that replaces a damaged aortic valve with a porcine or bovine prosthetic valve.

TAVR is an FDA-approved procedure for people who have been diagnosed with symptomatic aortic valve narrowing ([aortic stenosis](#)) and are considered either extreme-risk, high-risk or immediate-risk for standard surgical valve replacement. Narrowing of the aortic valve or aortic stenosis is a common and very serious valve disease problem. As people age the aortic valve becomes calcified and stiff, preventing the valve from opening completely. The aortic valve regulates blood flow from the heart to the body and if this valve becomes narrowed it increases the stress on a patient's heart. Once a patient develops symptoms, their chances of surviving for two years is only 50 percent unless the valve is replaced.

Before TAVR many patients with symptomatic aortic stenosis were treated with open heart surgery and valve replacement. This involved a surgical procedure called a sternotomy, which involves the opening of the chest. In contrast, TAVR involves two small incisions in the groin. This leaves the chest wall intact and is much more comfortable for patients.

All surgeries involve risks. But the risks involved in TAVR procedures versus sternotomies are, though still significant, minimized. Compared to a sternotomy, a TAVR procedure will typically offer:

- Shorter surgery time.
- Shorter recovery time.
(Hospital stays following cath-based procedures like TAVR are usually just one or two days. Patients sometimes stay a week or more following open-heart surgery.)
- Fewer stitches and scarring.
- Reduced risk of infection.
- Less bleeding/trauma.

To be clear, TAVR is not meant to replace all sternotomy procedures. In some cases, a sternotomy is still in a patient's best health interests. But TAVR is a less invasive option for patients with severe aortic stenosis who may otherwise not receive adequate treatment due to their high risk for open heart surgery.

Factors that might make open-heart surgery too risky for you can include:

- Advanced age,
- A weakened heart,
- Previous heart surgery,
- History of stroke,
- Chronic obstructive lung disease (COPD),
- Diabetes and other renal diseases,
- Previous radiation treatment to your chest, and
- The presence of large calcium deposits in your ascending aorta (the blood vessel that carries blood away from your heart).

WHAT HAPPENS DURING A TAVR PROCEDURE?

During a TAVR procedure a catheter with a replacement valve is inserted through the existing valve and the new valve is deployed. This pushes the old valve leaflets out of the way without damage. Sometimes a balloon catheter is then used to further expand the valve. The valve is inserted into the body — usually through the arteries in the groin. In patients who have vascular disease preventing use of the groin arteries, the catheter is placed from the artery under the left collarbone, the right side of the neck, or occasionally from a small incision in the middle of the chest.

Watch a brief animated video from the American Heart Association's interactive cardiovascular library to see [how a transcatheter aortic valve replacement is done](#).

IS TAVR EXPERIMENTAL OR NEW TECHNOLOGY?

TAVR is FDA approved. More than 100,000 patients have received TAVR procedures since the FDA's first approval in 2011. Before it was approved, the procedure was only available through clinical trials.

In early 2018, NCMA cardiologist Patrick Coleman, MD, helped make Sonoma County healthcare history by performing the area's first TAVR procedure. Dr. Coleman is the head of the team in Santa Rosa Memorial Hospital that performs this procedure. Dr. Coleman and colleagues have performed more than 30 successful TAVR procedures in the first six months of the program.

TAVR is a significant advancement for patients with severe aortic stenosis and provides a minimally invasive way to correct aortic valve stenosis. If your doctor has identified TAVR as an option for you, make sure you know all the facts about your health risks. Discuss any concerns with your doctor before the procedure. Your medical team can help you understand what to expect pre-surgery, during the procedure and what your recovery from a TAVR procedure will be like.

For more information about transcatheter aortic valve replacement/implantation, read:

- Press Democrat: [Medical device makers continue to make strides in Sonoma County—March 18, 2018](#)
- St. Joseph Health: [Santa Rosa Memorial Hospital offers new minimally invasive procedure to treat severe aortic stenosis—Jan. 29, 2018](#)
- American Heart Association: [What is TAVR?—Feb. 17, 2017](#)