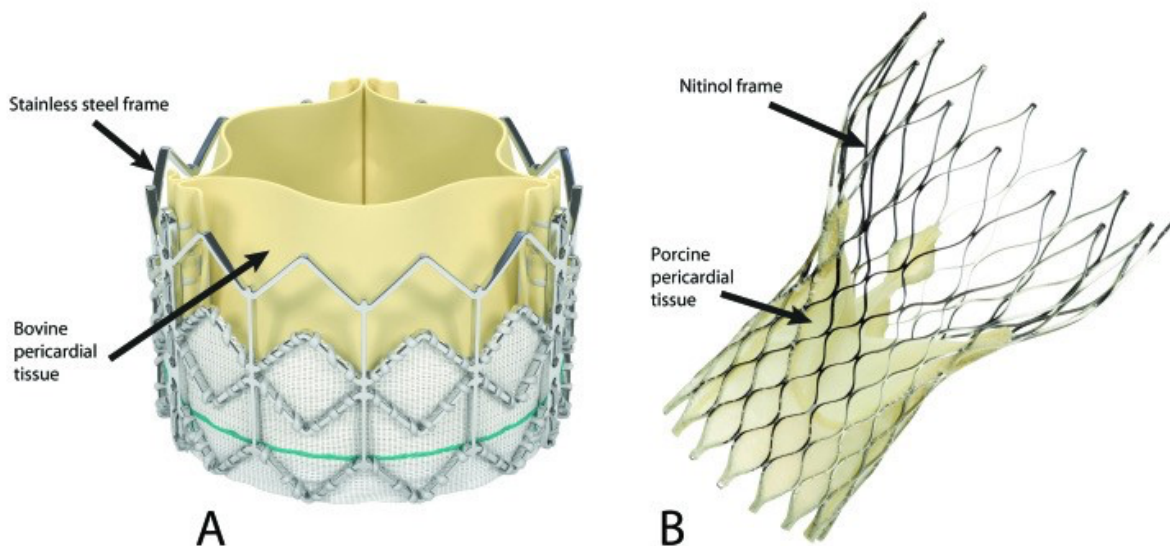


Transcatheter Aortic Valve Replacement

The aortic valve is the main opening through which your heart pumps out blood to your whole body. Aortic stenosis (AS) is a disease that slowly narrows the opening of your aortic valve over time. When the valve becomes calcified and stiff, it is not able to open all the way. This decreases the volume of blood and oxygen being supplied to your body and it makes your heart muscle work much harder to squeeze blood through the smaller opening. As a result, patients with severe AS can experience fainting and chest pain. Eventually, their heart muscle can weaken and enlarge, leading to congestive heart failure and heart rhythm abnormalities.

Historically, the standard treatment for aortic stenosis has been surgical valve replacement (open heart surgery). However, some patients are deemed to be too sick to withstand open heart surgery. Transcatheter Aortic Valve Replacement (TAVR) was developed for patients deemed to be high risk for conventional valve surgery.



(A) Edwards Sapien valve; and (B) Medtronic CoreValve

TAVR is a minimally invasive procedure that allows your interventional cardiologist and cardiac surgeon to deliver the replacement valve via a catheter inserted into the large blood vessels in the leg. The proceduralists will guide the valve into position inside your existing aortic valve using special X-ray and ultrasound imaging to maneuver inside a patient's heart.

The TAVR procedure has many advantages:

- No chest incision
- Less anesthesia required

- Quicker recovery
- Fewer activity restrictions afterward your procedure
- A shorter hospital stay of 1-2 days
- No chest tubes
- No need to use the heart bypass machine.

At MHVI we have an experienced Valve Nurse Coordinator who will assist with any scheduling needs and answer any questions you may have throughout the work up phase. It is also very important to have an involved family member or friend who can attend these appointments with you as there is a lot of information. This work up can typically take about 4 weeks or longer depending on your dental health and other health conditions that need to be considered.

The evaluation for TAVR include:

- Heart valve consult with one of our valve specialists
- 2 separate surgical consults on 2 separate days are required for insurance coverage
- Coronary angiogram to verify you have no other blockages in your heart arteries.
- Dental evaluation is required to ensure you have no infections in your gums that can infect your heart valve.
- Echocardiogram to examine your internal heart structure.
- CT scan to allow for the exact measurement of the valve size you need and to help the team plan your procedure.
- 15 foot walk to document baseline activity tolerance.
- Pulmonary function testing to assess your breathing and insure your lungs are safe for sedation.
- EKG to check the electrical function of your heart.
- Chest x-ray to ensure that no other issues are present.

What happens the day of my TAVR procedure?

Prior to your TAVR procedure day you will be informed about what time you should arrive, where to check in, what medications to take or not, and what items to bring with you. Once you are registered you will be taken to the surgery admissions area where you will be admitted to the hospital, have your blood drawn, and have an IV started in your arm. Next you will proceed to the anesthesia prep area. All your doctors and nurses involved will see you and there will be time for your questions. Your family is welcome to stay with you up until you are taken into the procedure room.

TAVR is performed in a specialized multipurpose room. This room is specifically designed to be a cardiac catheterization room and a high tech procedural suite. This design allows your heart team to convert your procedure to general anesthesia and provide necessary care in case any complications should arise.

After your TAVR is completed you will be awake and there will be small dressings placed on the puncture sites in your groin where the procedure catheters inserted. After recovery of 1-2 hours your will be moved to your hospital room on the heart floor. You will have approximately 4 hours of bedrest followed by being up in a chair and eventually walking in the hall later the same day.

Most often TAVR is performed under monitored anesthesia care. Occasionally, general anesthesia is necessary when transesophageal echocardiography (TEE) is needed to better assess placement of the TAVR valve. Discharge is typically within 1-2 days. Prior to discharge you will be evaluated by a cardiac rehab exercise therapist. Participating in this exercise program is strongly encouraged once you get home and will help your recovery process.

How do I choose my valve center if I want to be considered for TAVR?

It is important to choose a heart center that has experience with structural heart disease. All physicians on the valve team at Metropolitan Heart and Vascular Center have undergone extensive training specific to TAVR. Physician and staff training is on-going as new technologies are developed.

What kind of follow up is required after TAVR?

Post procedure care is very important to your continued heart health. We will be scheduling with you for the following appointments:

- A one week follow up appointment in the clinic with one of our advance practice providers just to make sure you are recovering well.
- A one month follow up that includes an echocardiogram, labs, and a clinic appointment.
- A follow up clinic appointment with your primary cardiologist around 4-6 months.
- A one year follow up that includes an echocardiogram, labs, and a clinic appointment.

Who is the Valve Team?

Your valve team consists of Interventional cardiologists, cardiac surgeons, anesthesiologists, advanced practice providers, a Valve RN Coordinator, image specialists, nurses and techs, your dentist, and appointment schedulers. Your cardiologist and surgeon will determine which valve is the best one for you based on your valve anatomy and health history.

For any questions regarding TAVR, please contact

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