

Using your own tissue for Aortic Valve Replacement for natural blood flow and to regain an active life

For aortic stenosis and aortic regurgitation



What is the AVNeo® Procedure?



AVNeo is an established procedure for both children and adults in which a cardiac surgeon replaces a damaged aortic valve by constructing a new valve made from the patient's own tissue.*

Currently, the most common treatment for aortic valve disease involves the use of an artificial valve made out of animal tissue (biological prosthesis) or carbon/titanium (mechanical prosthesis).

Compared to surgical prosthetic valves, AVNeo:

- Does not require lifelong blood-thinning drugs
- Uses patient's own tissue
- Durability appears comparable or superior

Facts about the AVNeo® Procedure

The aortic valve is one of the four valves that directs blood flow through the heart. The aortic valve controls blood flow from the heart to the rest of the body. Aortic valve disease occurs when the aortic valve becomes narrow or does not properly or completely close.



AVNeo allows your aortic valve to open and close like a healthy aortic valve, maintaining natural blood flow. The AVNeo® procedure:

- ✓ Has been used for 15 years *
- Is offered by over 125 cardiac surgeons across 35 countries
- Has helped more than 7,000 adult and pediatric patients worldwide

Benefits of AVNeo® Procedure



Suitable for all ages, children to adults



Uses the body's own tissue (may reduce the risk of an inflammatory response)*



Supports natural blood flow from the heart to the rest of the body without the need for a fixed ring **



Does not require lifelong anticoagulation (blood-thinning) medication after the procedure, improving the quality of your life *

Compared to TAVR (Transcatheter Aortic Valve Replacement), AVNeo:

- Uses patient's own tissue
- Results in a larger opening of the valve, leading to healthy blood flow**
- Durability appears comparable or superior

AVNeo® Procedure for Children



AVNeo is an alternative treatment option appropriate for children. AVNeo only operates on the aortic valve, avoiding any procedure on the pulmonary valve or the coronary arteries, making AVNeo a simpler and less involved procedure. Because the AVNeo procedure uses the patient's own tissue, there is no need to implant any foreign material nor tissue from a cadaver donor.***

Compared to the ROSS procedure, AVNeo:

- Operates on only a single heart valve
- Considered a simpler procedure
- Uses only patient's own tissue



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- * Midterm outcomes after aortic valve neocuspidization with glutaraldehyde-treated autologous pericardium Ozaki S, Kawase I, et al. (2018) J Thor Cardiovasc Surg Jun;155(6):2379-2387
- ** Excellent Hemodynamic Performance After Aortic Valve Neocuspidization Using Autologous Pericardium Krane M, et al Ann Thorac Surg 2021;111:126-33
- *** Congenital Aortic and Truncal Valve Reconstruction Utilizing the Ozaki [AVNeo] Technique: Short-term Clinical Results from Boston Children's Hospital Baird C, et al (2020) The Journal of Thoracic and Cardiovascular Surgery 2021;161(5):1567-1577