Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/clinical-practice/cardiology/advancing-care-for-women-with-aortic-stenosis-2-year-outcomes-for-women-in-the-5-year-smart-trial/39669/

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Advancing Care for Women With Aortic Stenosis: 2-Year Outcomes for Women in the 5-Year SMART Trial

Opening:
You're listening to ReachMD. This activity, titled Advancing Care for Women With Aortic Stenosis: 2-Year Outcomes for Women in the 5-Year SMART Trial is provided by Medtelligence.

Dr. Mehran:
After much anticipation, we now have the 2-year women's subanalysis of the SMART trial. Let's explore the data that offer new insights into valve performance and outcomes in women with aortic stenosis, especially with a small annulus.

This is ReachMD, and I'm Roxana Mehran.

Clinical trial design for this particular trial was an important prospective, randomized study of 2 different valve types that were explored in this analysis.

This is a self-expanding Evolut supra-annular TAVR device versus the intra-annular balloon-expandable SAPIEN device.

How we interpret these 2-year results is the key takeaway, and that is that both contemporary TAVR platforms delivered excellent and durable clinical outcomes in women with a small aortic annulus. No meaningful differences were observed in the composite endpoint of all-cause mortality, disabling stroke, or heart failure hospitalization.

However, a very important nuance lies in the hemodynamic profile. At 2 years, the Evolut platform demonstrated markedly lower rates of bioprosthetic valve dysfunction, spanning structural deterioration reflected by significantly fewer cases of elevated gradients, and nonstructural issues such as patient-prosthesis mismatch or paravalvular regurgitation. These findings translate to a more efficient transvalvular flow, lower residual gradients, and greater effective orifice area, all of which are critical, especially in those patients with a small annuli, where space constraints inherently raise the risk of high gradients and accelerated valve stress.

Evolut also demonstrated favorable trends towards quality of life improvement using the KCCQ scores in women.

These data reinforce that in women with a small annulus and severe aortic stenosis treated with TAVR, long-term valve hemodynamics matter.

When you pair that with favorable trends in quality of life improvement on KCCQ, this supports the concept that optimal hemodynamics can translate into a better functional recovery and symptom relief over time.

There are important key takeaways here. Anatomy-based TAVR planning is essential, and this is important for the heart team to think about, especially in women who often present with a small annulus and a higher risk of prosthesis–patient mismatch. A very careful assessment of the annular dimensions, leaflet calcium burden, left ventricular outflow tract geometry, and coronary heights allows us to select the valve platform that provides the most durable hemodynamic profile while minimizing procedural risk.

In practice, this means proactively tailoring device choice to anatomy, rather than applying a one-size-fits-all approach, with a special focus on optimizing valve performance and long-term flow characteristics in women to preserve function and quality of life over time.

Well, that's all the time we have today. So I want to thank you for joining me as we explore what the 2-year SMART data mean for women with aortic stenosis and a small annulus. Let's continue pushing forward on individualized but important evidence-based care for our patients with cardiovascular disease and especially valvular heart disease, with a heart team approach and evidence-based care.

Thank you.

Closing:
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