



ESC Congress Update on ESC/EACTS 2025 Valvular Heart Disease Guidelines: Establishing the Present and Designing the Future for the Therapy of the Aortic Valve

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AT THIS YEAR'S European Society of Cardiology (ESC) Congress held in Madrid, Spain, more than 40,000 participants shared updates over a full 4-day programme. Several new guidelines were presented, aiming to provide timely recommendations that assist clinical decision-making in everyday practice. In this context, the much-awaited update on the guidelines for the management of valvular heart disease was announced,¹ which was jointly endorsed by ESC and the European Association for Cardiothoracic Surgery (EACTS), and included several updates from older versions, as well as a total of 28 new recommendations. This feature aims to summarise the most important updates in the aortic valve interventions.

AORTIC STENOSIS UPDATES

The most discussed recommendation change in aortic stenosis (AS) intervention is the change of the age cut-off for performing transcatheter aortic valve implantation (TAVI), which has been reduced from 75 to 70 years old. Specifically, the guidelines provide a Class I recommendation with level of evidence A for performing TAVI in patients 70 years or older with tricuspid aortic valves, if the anatomy is suitable and transfemoral artery access is feasible.¹ This update results from recent data comparing TAVI and surgery in lower-risk patients, which have increasingly included patients younger than 75 years old, such as the DEDICATE-DZHK6, NOTION-2,

and Evolut Low Risk study, where the mean age ranged from 72–74 years old.^{2–4} In the absence of randomised data in individuals younger than 70, the recommendation for surgery in these patients remains unchanged. The lowering of the age cut-off for TAVI reflects the increasing number of younger individuals being treated with TAVI. However, it is met with scepticism, especially considering that the longest, to date, follow-up for TAVI comes mostly from the NOTION trial 10-year follow-up.⁵ Although in this study, major clinical outcomes were not different at 10 years, while the risk of severe bioprosthetic structural valve deterioration was lower in TAVI, the long-term risk for bioprosthetic failure in TAVI is not extensively known, which could impact treatment selection,

especially in younger patients. Moreover, the clinical entity of the bicuspid valve is related to a lower level of recommendation for TAVI, and only high surgical risk patients with suitable anatomy (another point of ongoing debate) can be assigned to transcatheter therapy. As longer-term data and a more thorough understanding of bioprosthetic valve degeneration in TAVI patients are needed, this updated recommendation is an important step towards reflecting and implementing trial findings in clinical practice, and allows for more comprehensive discussions and individualised care within heart team decision-making.

“**The lowering of the age cut-off for TAVI reflects the increasing number of younger individuals being treated with TAVI**”

Another important update concerns interventions on patients with asymptomatic severe AS, where guidelines suggest that aortic intervention should be considered as an alternative to watchful waiting in patients at low procedural risk and with a left ventricular ejection fraction (LVEF) $\geq 50\%$, with a Class IIa recommendation. Randomised data

on early intervention are scarce and conflicting, with the EARLY-TAVR trial⁶ documenting a significant reduction of the primary endpoint (all-cause mortality, stroke, or unplanned hospitalisation associated with pre-emptive intervention), mostly driven by the large number of ‘watchful-waiting’ patients crossing to TAVI due to symptoms or adverse events at 6 months (22.6%). On the other hand, the EVOLVeD study⁷ reported no reduction of all-cause death or unplanned AS-related hospitalisation compared with clinical surveillance, despite being underpowered. Importantly, a meta-analysis of available randomised studies showed a significant reduction in rehospitalisation and stroke, but not mortality.⁸ Based on the aforementioned data, the provided Class IIa recommendation suggests early intervention as an alternative to

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close patient surveillance, which could be particularly attractive in situations where rigorous follow-up is not feasible, in order to avoid future events. However, considering the heterogeneity and low number of available randomised studies, further data that could support an increase in the level of recommendation for early intervention in this setting are necessary and awaited in the near future.

dedicated valve is more appropriate, considering the increased risk for valve migration and residual AR seen with non-dedicated devices. The development of new, dedicated devices has been shown to mitigate this increased risk, as shown in the ALIGN-AR study.⁹ However, the authors note an increased new pacemaker implantation risk with dedicated devices (reaching 24%), which is an important consideration needing further aetiological clarification in future studies.

AORTIC REGURGITATION UPDATES

Significant insights have also been provided for aortic regurgitation (AR), where the guidelines provide a Class IIb recommendation for performing TAVI in symptomatic patients who are ineligible for surgery and have suitable anatomy. In the setting of AR, surgery remains the cornerstone of treatment. However, recent studies may support the use of TAVI, although the data are still early. As the guidelines note, selection of a

UPDATES REGARDING URGENT TRANSCATHETER AORTIC VALVE IMPLANTATION AND SEX DIFFERENCES

Finally, for the first time, urgent TAVI as well as sex differences have been discussed in the guidelines. Despite the fact that no specific recommendations are made, the guidelines note the use of TAVI in patients with AS-related cardiogenic shock, which



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24%



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has shown better results than balloon aortic valvuloplasty, which can be used as a bridge to more definitive treatment in decompensated AS. For AR, the guideline committee notes that surgery remains the standard, as only case reports have performed TAVI in acute AR. For females, the authors highlight the differences in both diagnosis (less and later referral of women to cardiology clinics and different cut-offs to define flow limitation) and intervention, particularly highlighting the results of the RHEIA trial, which showed that TAVI compared to surgery in female patients is superior in regard to the composite endpoint of death, stroke, or rehospitalisation at 1 year, mostly driven by reductions in rehospitalisation rates.¹⁰ Noting and discussing special phenotypes of valvular heart disease is of utmost importance for guiding clinical management, and the inclusion of such considerations in the new guidelines is certainly a step towards more individualised, evidence-based care.

CONCLUDING REMARKS

As 23 years have passed from the first TAVI, and whilst important knowledge has been gathered through the years, helping to tailor and improve the intervention, there are still several unknowns and gaps in knowledge in aortic interventions. The 2025 ESC/EACTS Guidelines on Valvular Heart Disease provide an important framework for guiding treatment in everyday practice, offering an updated perspective guided by the latest evidence. As research efforts continue in the coming years, the new guidelines act as the basis towards establishing a standard of care, advancing treatment options, and exploring new indications for less studied patient phenotypes that could further enhance patient outcomes in the future.

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