







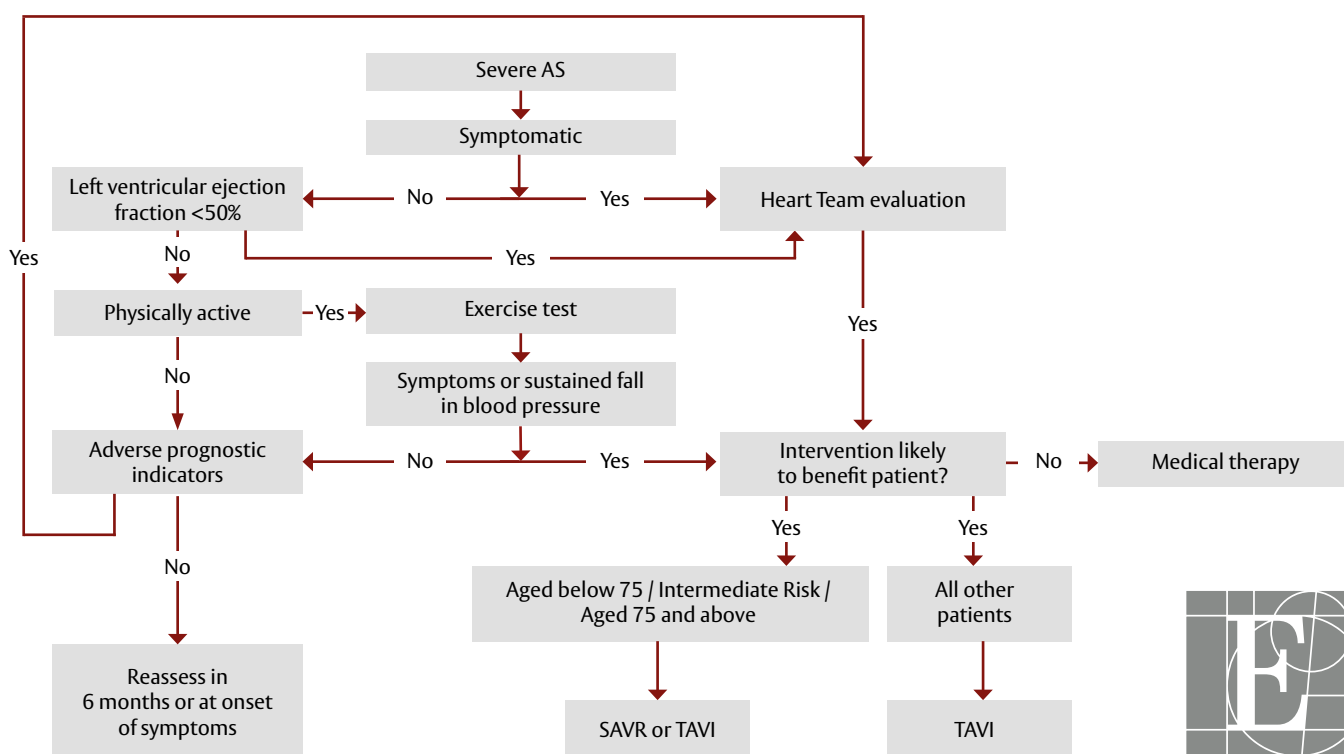
# Severe Aortic Stenosis Diagnosis and Treatment: A General Cardiologist's Guide



Understanding the gender-specific differences in the pathophysiology and diagnosis of aortic stenosis (AS) is crucial for improving female patient outcomes. The presentation and progression of AS can vary significantly between men and women, necessitating tailored diagnostic and treatment approaches. This guide outlines diagnostic considerations for referring and diagnosing female patients for either surgical aortic valve replacement (SAVR) or transcatheter aortic valve implantation (TAVI).

**Table 1. Epidemiological, pathophysiological, and diagnostic peculiarities in female patients affected by AS<sup>1</sup>**

 <b>Valvular pathophysiology</b>	<ul style="list-style-type: none"> <li>↑ Valvular fibrosis</li> <li>↓ Aortic valve calcification</li> </ul>	 <b>Clinical presentation</b>	<ul style="list-style-type: none"> <li>↑ Dizziness</li> <li>↑ Fatigue</li> <li>↑ Shortness of breath</li> </ul>
 <b>Ventricular pathophysiology</b>	<ul style="list-style-type: none"> <li>↑ Concentric hypertrophy</li> <li>↑ Wall thickness and left ventricular ejection fraction</li> <li>↓ Left ventricular cavities</li> <li>↓ Extent of ventricular fibrosis</li> </ul>	 <b>Echocardiography</b>	<ul style="list-style-type: none"> <li>↑ Left ventricular concentric remodelling</li> <li>↑ Paradoxical low-flow, low-gradient AS</li> </ul>
 <b>Anatomical features</b>	<ul style="list-style-type: none"> <li>↑ Concomitant valve disease</li> <li>↓ Aortic annuli/roots</li> </ul>	 <b>Multidetector computed tomography</b>	<ul style="list-style-type: none"> <li>↓ Coronary take-off</li> <li>↓ Aortic valve calcium threshold for severe AS</li> <li>↓ Ileo-femoral vessels and body surface area</li> </ul>



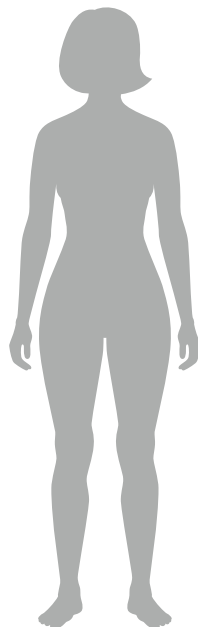
**Figure 1. Management of patients with severe AS<sup>2</sup>**



Edwards

## Pre-procedural screening

Transthoracic echocardiography  
Multidetector computed tomography (Electrocardiogram gated-acquisition, 3D-reconstruction)



## Peri-procedural considerations

Risk of vascular complications  
Risk of left ventricular perforation  
Risk of acute coronary occlusion/  
Aortic annular rupture  
Lifetime management strategy



## Device selection

Small anatomic root  
Low coronary ostia  
Small sheath-to-femoral artery ratio



## Post-procedural management

Short hospital stay



**Figure 2. Key components for optimal patient outcomes: early and accurate diagnosis, timely referrals, interdisciplinary collaboration, and patient-centered care<sup>1</sup>**

## Summary

**Early and accurate diagnosis:** Utilise sex-specific thresholds and consider symptomatic differences in women to ensure accurate diagnosis.

**Timely referrals:** Avoid delays in referring patients to heart specialists when severe AS is suspected, particularly in high-risk groups.

**Interdisciplinary collaboration:** Engage with Heart Teams early in the diagnosis process to facilitate comprehensive care planning.

**Patient-centred care:** Discuss all available treatment options, including SAVR and TAVI, with a focus on patient preferences and risk profiles.

## References

1. Masiero G, Paradies V, Franzone A, *et al.* Sex-specific considerations in degenerative aortic stenosis for female-tailored transfemoral aortic valve implantation management. *J Am Heart Assoc.* 2022; **11**: e025944.
2. Vahanian A, Beyersdorf F, Praz F, *et al.* 2021 ESC/EACTS guidelines for the management of valvular heart disease. *Eur Heart J.* 2022; **43**: 561-632.



Scan the QR code to learn more about aortic stenosis.



**Timely referral is crucial – guide your female patients with severe aortic stenosis to a Heart Team evaluation.**

Edwards, Edwards Lifesciences and the stylized E logo are trademarks or service marks of Edwards Lifesciences Corporation or its affiliates. All other trademarks or service marks are the property of their respective owners.

© 2024 Edwards Lifesciences Corporation. All rights reserved. PP--EU-8755 v2.0

Edwards Lifesciences Sàrl • Route de l'Etraz 70, 1260 Nyon, Switzerland • edwards.com



Edwards