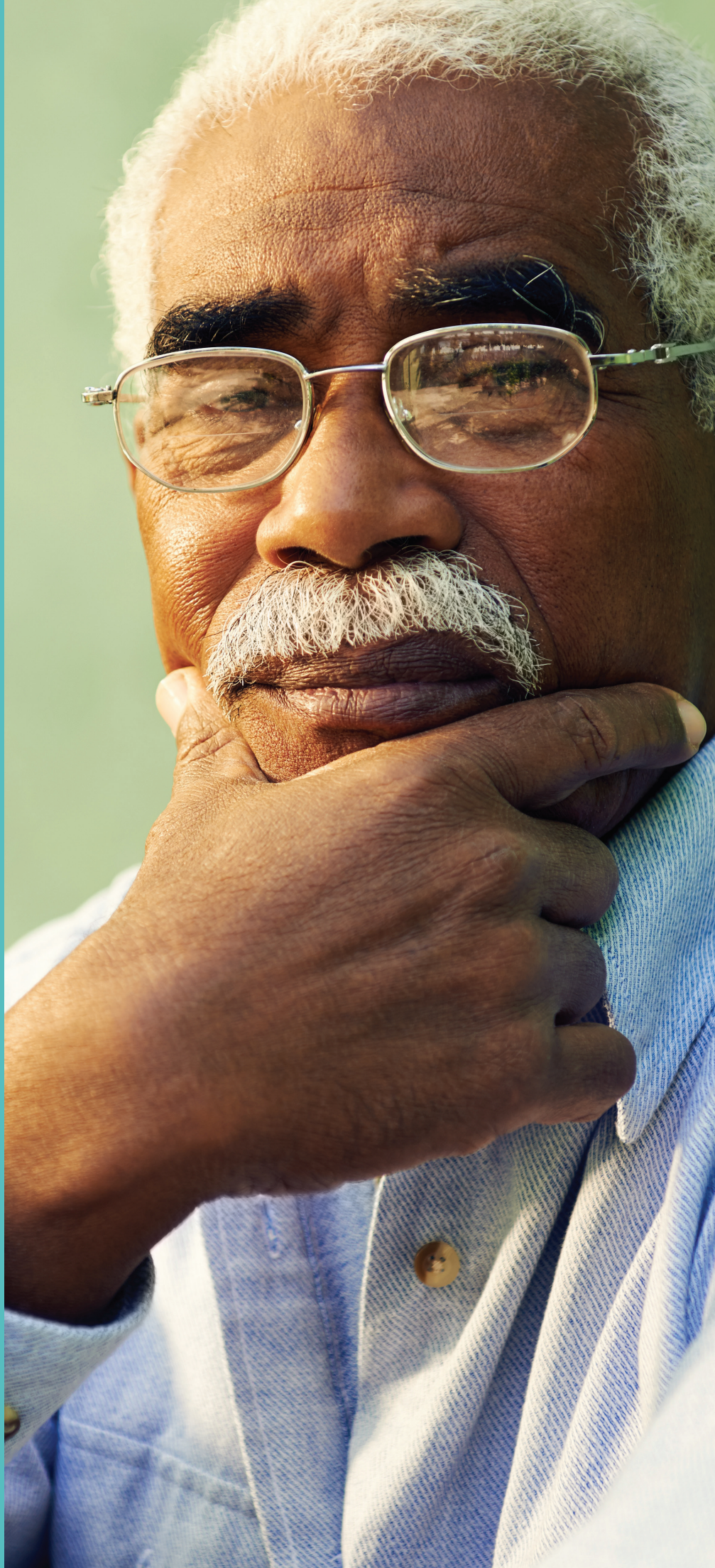


Overview of Aortic Stenosis

Prevalence

Diagnosis

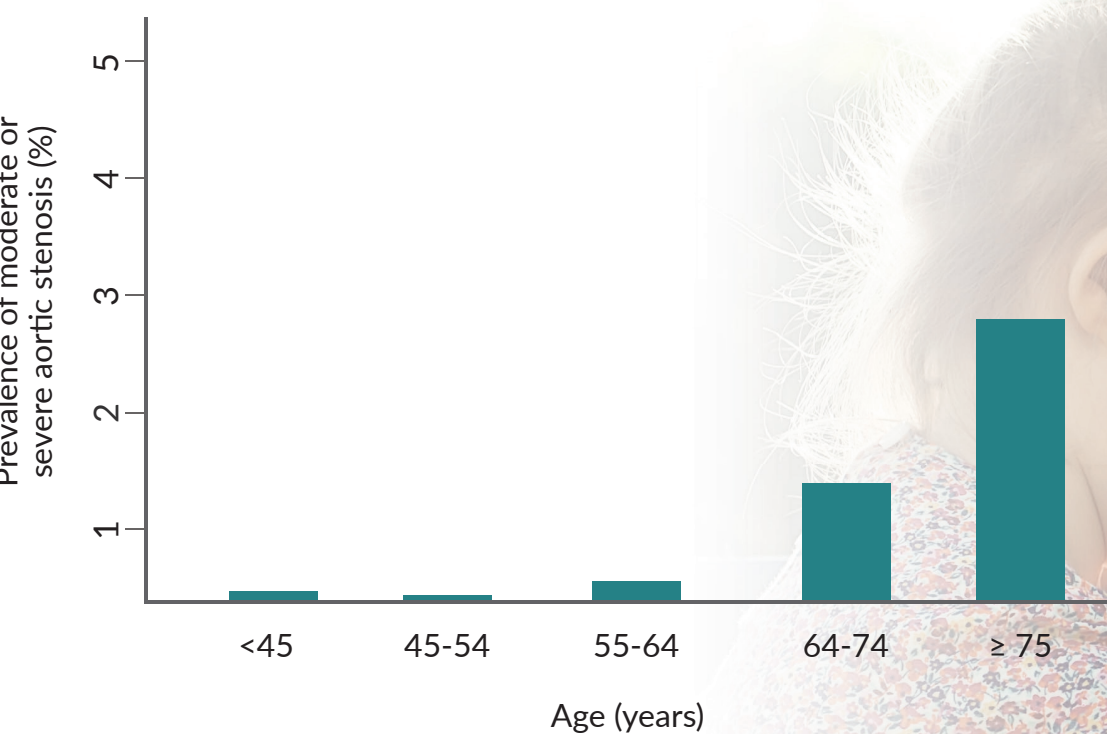
Treatment
Options



Prevalence

Aortic stenosis (AS) is a common heart valve disease in the United States:
About 1 in 8 people over the age of 75 suffer from AS.

Prevalence of AS by Age*



Studies show that there is a significant increase in the prevalence of aortic stenosis with age, especially in the population above the age of 65.¹

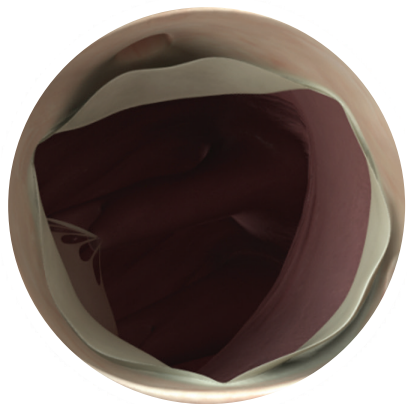
The number of people affected by AS is estimated to increase **twofold to threefold** as the population gets older.

* Nkomo VT, Gardin JM, Skelton TN et al. Burden of valvular heart diseases: a population-based study. Lancet 2006;368:1005-11

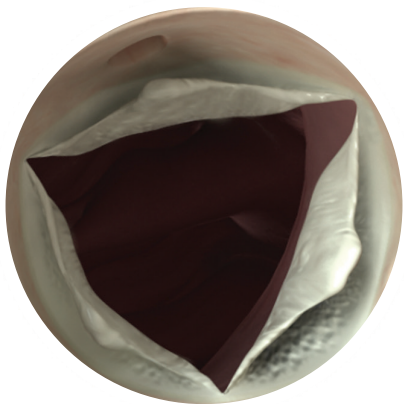
Progression

Through a degenerative process resulting in calcification, lipid accumulation and inflammation, the flexible aortic valve becomes stiff and immobile. This leads to a narrowing of the valve opening, obstructing blood flow and forcing the heart to pump harder.²

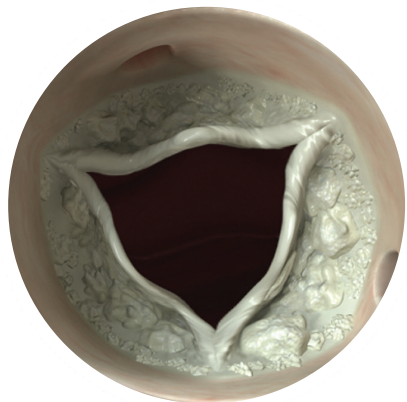
Visual progression of AS



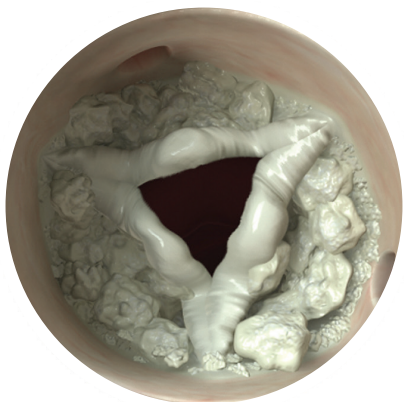
Normal



Mild



Moderate



Severe

According to American Heart Association and American College of Cardiology guidelines, once a patient has AS, an increase in hemodynamic severity is inevitable even if mild AS is present. In addition, the rate of progression to symptoms is high once severe aortic stenosis (SAS) is present. Hence, as the AS progresses in severity it can lead to symptoms of heart failure, angina or syncope.³

Symptoms may include:



Shortness of
breath in exertion



Syncope



Angina



Fatigue



Decreased exercise
tolerance



Palpitations



Swollen ankles
and feet



Potential HF

Risk Factors

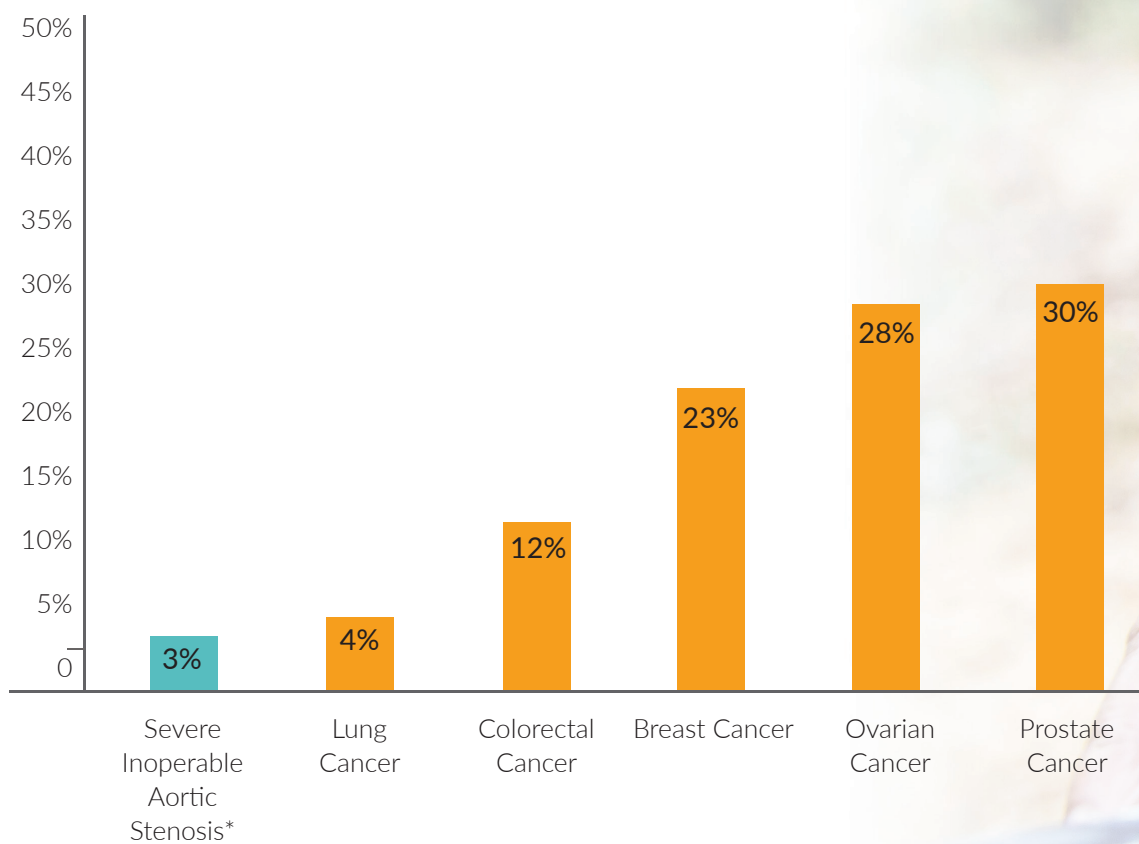
AS shares many risk factors with coronary artery disease (CAD).⁴ Among the main risk factors are:

- Advancing age (above the age of 65)
- Comorbidities such as coronary artery disease and chronic renal failure, and heart failure
- Other risks include: Hypertension, diabetes, smoking and dyslipidemia

Prognosis

Aortic stenosis (AS) patients have a worse prognosis than many patients with metastatic cancers when their disease becomes severe.

5-year survival rate (distant metastasis) of lung cancer, colorectal cancer, breast cancer, ovarian cancer and prostate cancer compared to severe inoperable aortic stenosis.



*Using constant hazard ratio. Data on file, Edwards Lifesciences LLC. Analysis courtesy of Murat Tuczu, MD, Cleveland Clinic

Detection

Unmasking AS is not a straightforward process. AS may be challenging to detect for several reasons:

- Lack of patient awareness on the disease and its symptoms
- Potential for confusion with concomitant cardiac conditions such as atrial fibrillation (AFib), coronary artery disease (CAD), and heart failure (HF)
- Inconsistency in physical and diagnostic examination to unmask the disease

A 2000 study showed that even in the hands of an experienced cardiologist, aortic stenosis was missed 30% of the time.*

Managing patients with this disease can require a patient-by-patient analysis of clinical, echocardiographic, and hemodynamic data.⁵ Having a consistent diagnosis approach may help you and your patients better detect AS. For your patients at risk of AS, consider the following approach:



Auscultate to detect a murmur



Confirm AS through an echocardiogram



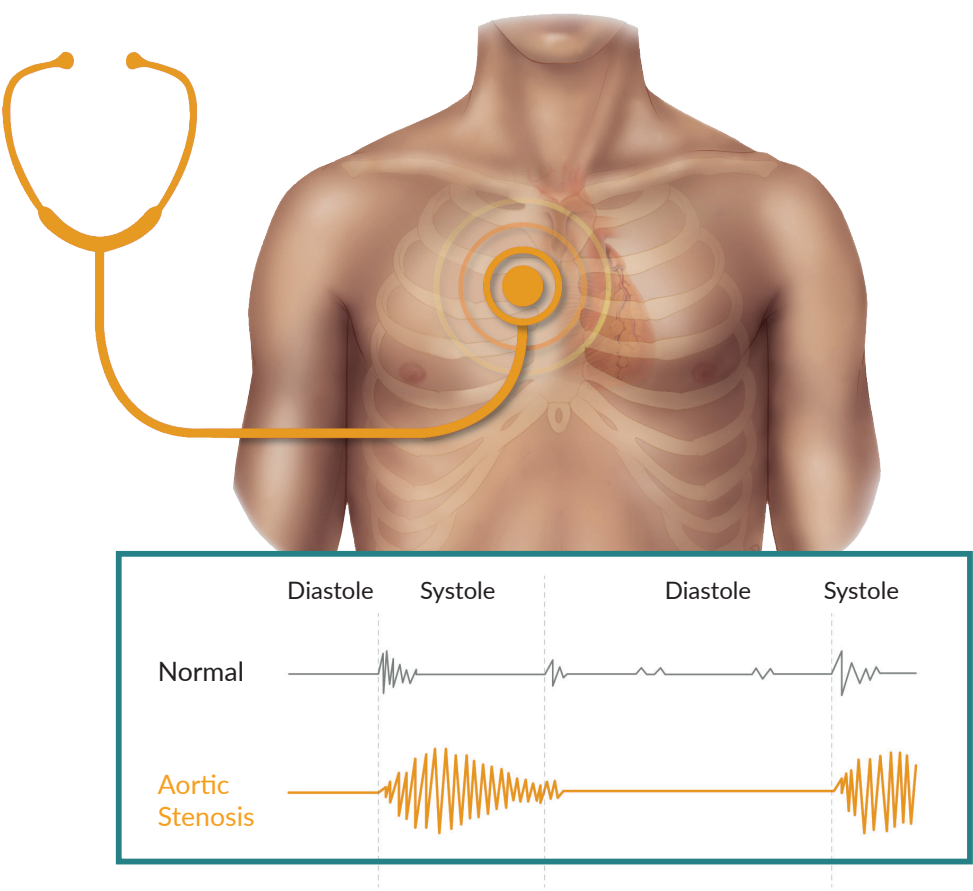
Unmask symptoms through discussions with your patients

*Attenhofer CH, Turina J, Mayer K, et al. Echocardiography in the evaluation of systolic murmur of unknown cause. Am J Med 2000;108:614-620

The Importance of Auscultation in AS Detection

Most patients with AS are first diagnosed when an auscultation reveals a systolic murmur.³ Almost all patients with moderate or severe aortic stenosis have an audible systolic murmur.⁶ Literature describes the classic sign of AS as a systolic murmur that is loudest over the second right intercostal space and radiates to the carotid arteries. Keep in mind that in older persons, the murmur might be less intense and often radiates to the apex instead of to the carotid arteries.*

*Grimard BH and Larson JM. Aortic Stenosis: Diagnosis and Treatment. AM Fam Physician 2008;78(6):717-25



Studies have shown that cardiac auscultatory skills among today’s health care professionals can be inadequate regardless of the level and/or type of training of the professional.⁶

In fact, more than 40% of murmurs are missed by physicians.⁷ Hence, it is hard to rule out aortic stenosis with physical examination findings alone.

Echocardiography: The Gold Standard Diagnosis Tool

If a patient may have aortic stenosis, it is important to order or perform an echocardiogram. A comprehensive transthoracic echocardiogram (TTE) with 2D doppler imaging can be performed to validate diagnosis from the initial physician examination. Echocardiographic measurements such as aortic valve area, peak and mean transvalvular gradients and maximum aortic jet velocity are key to validate disease severity.²

Transthoracic echocardiography (TTE) is the gold standard tool for diagnosis and evaluation of AS⁸

The Variability of Symptoms in AS Detection

The symptoms of aortic stenosis can be easily mistaken for “normal” signs of aging⁹ and patients very often adapt their lifestyle to minimize the impact of these symptoms. Hence, many patients are not aware of their symptoms.

After closer examination, an average of nearly 50% of asymptomatic patients reveal they have symptoms.¹⁰

Discussing these symptoms with your patients and sharing tools so that they may monitor changes in their health may help uncover aortic stenosis. This kit comes with a symptom tracker for your patients to track the onset and progression of symptoms. *You can download this resource and more at www.detectaorticstenosis.com.*

Treating AS Patients

Depending on the severity of the disease, you may recommend medical management of your patient’s symptoms, aortic balloon valvuloplasty or aortic valve replacement. There are no medical treatments to prevent or slow the progression of AS.¹¹ Aortic valve replacement is the only effective treatment for severe symptomatic aortic stenosis.²

There are two options to replace the aortic valve:

- Transcatheter Aortic Valve Replacement (TAVR)
- Open Heart Aortic Valve Replacement Surgery (SAVR)

Have a discussion with your AS patients so they have an understanding of the importance of treating aortic stenosis.

It is critical to refer your AS patients to your cardiovascular specialist in a timely manner to enhance their survival³



