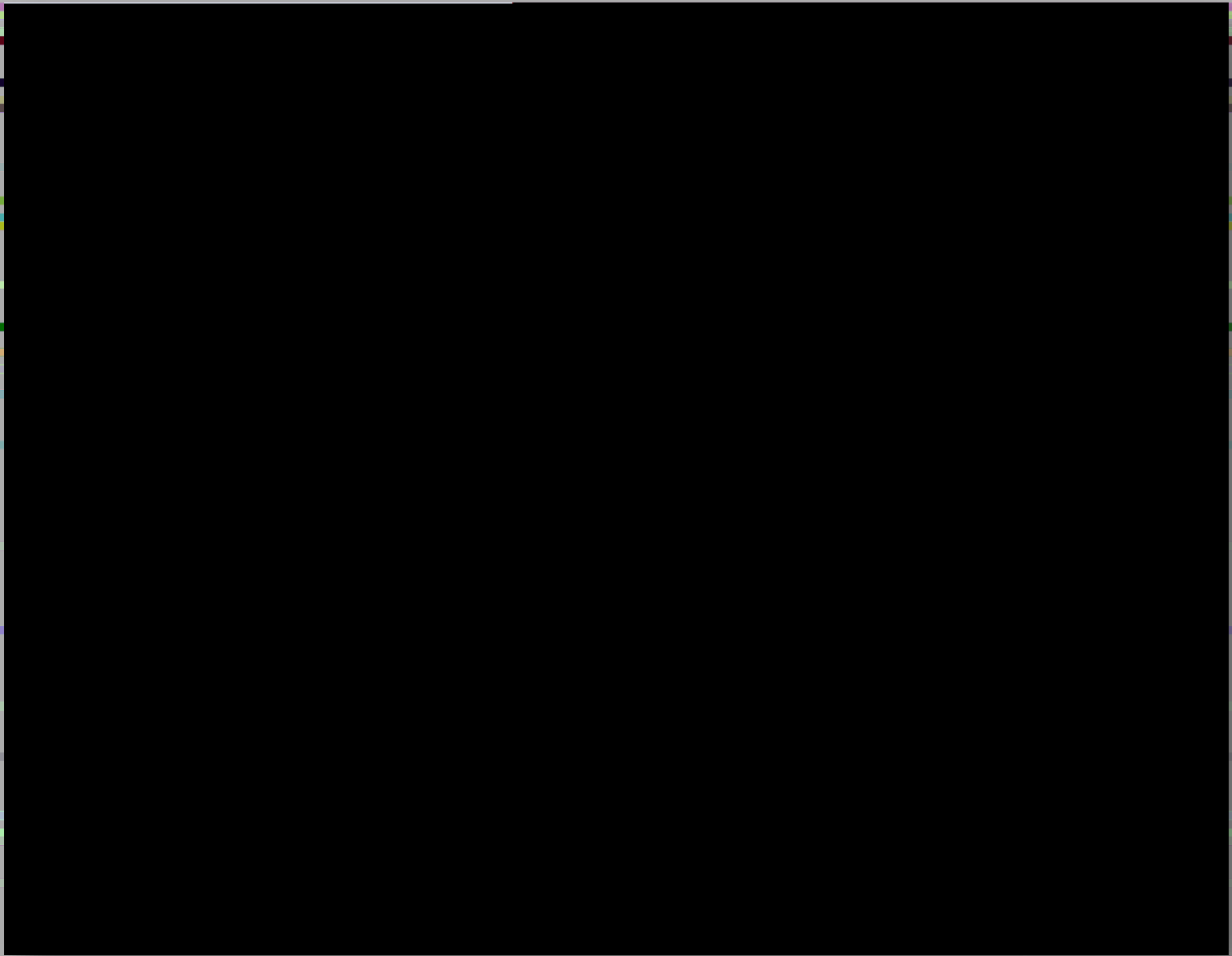




Underdiagnosis and Undertreatment Issues

2015 Severe Symptomatic AS Patients in the U.S.



Nkomo 2006, Iivanainen 1996, Aronow 1991, Bach 2007, Freed 2010, Iung 2007, Pelikka 2005, Brown 2008, Thourani 2015

Underdiagnosis and Undertreatment Issues

2015 Severe Symptomatic AS Patients in the U.S.



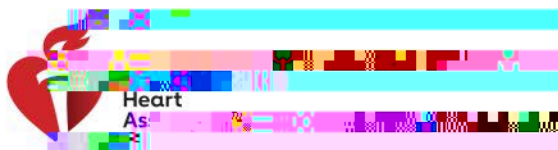
Nkomo 2006, Iivanainen 1996, Aronow 1991, Bach 2007, Freed 2010, Jung 2007, Pelikka 2005, Brown 2008, Thourani 2015

Underdiagnosis and Undertreatment Issues

Especially in Underserved Minorities

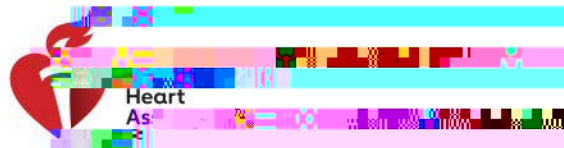
Table 13. The Evaluation and Management of Aortic Stenosis

STAGE	VALVE ANATOMY	VALVE HEMODYNAMICS	SYMPTOMS
A At risk of AS	- Bicuspid aortic valve or other congenital valve anomaly - Aortic valve sclerosis	Aortic $V_{max} < 2$ m/s with normal leaflet motion	None
B Progressive AS	- Mild to moderate leaflet calcification - Fibrosis of a bicuspid or trileaflet valve with reduction in systolic motion - Rheumatic valve changes with commissural fusion	- Mild AS: V_{max} 2-2.9 m/s or mean ΔP 10-19 mmHg - Moderate AS: V_{max} 3-3.9 m/s or mean ΔP 20-39 mmHg	None
C Asymptomatic Severe AS	- C1: Asymptomatic severe AS - C2: Asymptomatic severe AS with left ventricular systolic dysfunction (LVEF $< 50\%$) - Both C1 and C2 may show: - Severe leaflet calcification/fibrosis - Congenital stenosis with severely reduced leaflet opening	- C1 and C2: $V_{max} \geq 4$ m/s or $\Delta P \geq 40$ mmHg (or $\Delta P_{mean} \geq 30$ mmHg) but not required to define severe AS - Very severe AS: $V_{max} \geq 5$ m/s or $\Delta P \geq 60$ mmHg	C1: None; exercise testing reasonable to confirm symptom status C2: None
D Symptomatic Severe AS	- D1: Symptomatic severe high gradient AS - D2: Symptomatic severe low/low gradient AS with reduced LVEF ($< 50\%$) - D3: Symptomatic severe low gradient AS with normal LVEF ($> 50\%$) or paradoxical low flow severe AS - D1, D2, and D3 may show: - Severe leaflet calcification/fibrosis with reduced leaflet motion	D1: $V_{max} \geq 4$ m/s	



Evaluation of the Patient With Known or Suspected Native VHD

Abbreviations:



Additional Diagnostic Evaluation in VHD

Chest X - Ray

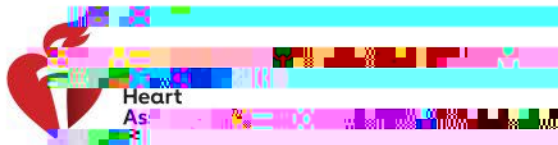
- Important for symptomatic patient
- Establishes heart size
- Presence or absence of pulmonary vascular congestion, intrinsic lung disease, calcification of aorta & pericardium

TEE

Provides high quality

assessment of mitral regurgitation (MR) and aortic regurgitation (AR). TEE is also useful for assessing the severity of aortic stenosis (AS) and for identifying the cause of heart failure (HF).

Abbreviations: CW indicates continuous wave; LV, left ventricle; PASP, pulmonary artery systolic pressure; PW, pulsed wave; PE, transthoracic echocardiography; and VHD, valvular heart disease.



The Multidisciplinary Heart Valve Team and Heart Valve Centers

COR	LOE	Recommendations
1	C-EO	1. Patients with severe VHD should be evaluated by a Multidisciplinary Heart Valve Team (MDT) when intervention is considered .
2a	C-LD	2. Consultation with or referral to a Primary or Comprehensive Heart Valve Center is reasonable when treatment options are being discussed for: 1) asymptomatic patients with severe VHD, 2) patients who may benefit from valve repair versus valve replacement, 3) patients with multiple comorbidities for whom valve intervention is considered .



Clinical Decision Making in Aortic Stenosis

