



Pre-TAVR Patient Selection and Evaluation Guideline

April 2017



BMC2

Approach to Care

Key Approach	Essential Contributors	Heart Team Suggested Participants
Shared Decision Making	<ul style="list-style-type: none"> Heart Valve Team Referring physician Patient input Family input 	<ul style="list-style-type: none"> Cardiology: General Cardiology: Interventional Cardiology/Radiology: Imaging CT surgeon CV anesthesiologist Valve clinic care coordinators

Goals of Care

Overall Goal	Goal Considerations	Points to Consider
Live Longer, Feel Better	<ul style="list-style-type: none"> Life expectancy Patient preferences and values Goals and expectations End of life construct 	<ul style="list-style-type: none"> Life table estimates Symptoms and/or survival Which complications to avoid? Ideas about end of life?

Initial Patient Assessment

Categories to Consider	Essential Elements	Points to Consider
AS Symptoms and Severity	<ul style="list-style-type: none"> Symptoms AS severity 	<ul style="list-style-type: none"> Intensity, acuity Echocardiography and other imaging - See "Imaging Checklist"
Baseline Clinical Data	<ul style="list-style-type: none"> Cardiac history Physical exam and labs Chest irradiation Dental evaluation Allergies Social support 	<ul style="list-style-type: none"> Prior cardiac interventions Routine blood tests, PFTs Access issues, other cardiac effects Treat dental issues before TAVR Contrast, latex, medications Recovery, transportation, post-discharge planning

Major CV Comorbidity	<ul style="list-style-type: none"> • Coronary artery disease • LV systolic dysfunction • Concurrent valve disease • Pulmonary hypertension • Aortic disease • Peripheral vascular disease 	<ul style="list-style-type: none"> • Coronary angiography • LV ejection fraction • Severe MR or MS • Assess pulmonary pressures • Porcelain aorta (CT scan) • Prohibitive re-entry after previous open heart surgery (CT scan) • Hostile chest • See “Imaging for PVD”
Major Non-CV Comorbidity	<ul style="list-style-type: none"> • Malignancy • Gastrointestinal and liver disease, bleeding • Kidney disease • Pulmonary disease • Neurological disorders 	<ul style="list-style-type: none"> • Remote or active, life expectancy • IBD, cirrhosis, varices, GIB, ability to take anti-platelets/anticoagulation • eGFR <30cc/min/1.73m² or dialysis • Oxygen requirement, FEV1 < 50% predicted or DLCO < 50% predicted • Movement disorders, dementia

Patient Functional Assessment

Key Considerations	Essential Elements	Additional Points to Consider
Frailty and Disability	<ul style="list-style-type: none"> • Frailty assessment • Nutritional risk/status 	<ul style="list-style-type: none"> • Gait speed (<0.5 m/s or < 0.83 m/s with disability/cognitive impairment) • Frailty (not frail or frail by assessments) • Nutritional risk status (BMI <21 kg/m², albumin < 3.5 mg/dL, > 10 lb weight loss in past year, or </= 11 on MNA)
Physical Function	<ul style="list-style-type: none"> • Physical function and endurance • Independent living 	<ul style="list-style-type: none"> • 6-min walk < 50 m or unable to walk • Dependent in >/= 1 activities
Cognitive Function	<ul style="list-style-type: none"> • Cognitive impairment • Depression • Prior disabling stroke 	<ul style="list-style-type: none"> • MMSE < 24 or dementia • Depression history or positive screen
Futility	<ul style="list-style-type: none"> • Life expectancy • Lag-time to benefit 	<ul style="list-style-type: none"> • < 1-year life expectancy • Survival with benefit of < 25% at 2 years

Risk Categories

Key Considerations	
Low Risk	<ul style="list-style-type: none"> • STS-PROM < 4% and • No frailty and • No comorbidity and • No procedure specific impediments
Intermediate Risk	<ul style="list-style-type: none"> • STS-PROM 4% - 8% or • Mild frailty or • 1 major organ system compromise not to be improved post-operatively or • Possible procedure specific impediment
High Risk	<ul style="list-style-type: none"> • STS-PROM >8% or • Moderate to severe frailty or • >2 major organ system compromises not to be improved post-operatively or • A possible procedure specific impediment
Prohibitive Risk	<ul style="list-style-type: none"> • PROMM > 50% at 1 year or • >= 3 major organ system compromises not to be improved post-operatively or • Severe frailty • Severe procedure specific impediments

Integrated Benefit-Risk of TAVR and Shared Decision Making

Key Considerations	Essential Elements	Additional Considerations
No Current Indication for AVR	<ul style="list-style-type: none"> • AS not severe or • No AS symptoms or other indication for AVR 	<ul style="list-style-type: none"> • Periodic monitoring of AS severity and symptoms. • Re-evaluate when AS severe or symptoms occur
AVR Indicated but SAVR Preferred Over TAVR	<ul style="list-style-type: none"> • Lower risk for surgical AVR • Mechanical valve preferred • Other surgical considerations 	<ul style="list-style-type: none"> • SAVR recommended in lower-risk patients • Valve durability considerations in younger patients • Concurrent surgical procedure needed
TAVR Candidate with Expected Benefit > Risk	<ul style="list-style-type: none"> • Symptom relief or improved survival • Possible complications and expected recovery • Review of goals and expectations 	<ul style="list-style-type: none"> • Discussion with patient and family • Proceed with TAVR imaging evaluation and procedure

<p>Severe Symptomatic AS but Benefit < Risk (Futility)</p>	<ul style="list-style-type: none"> • Life expectancy < 1 year • Chance of survival with benefit at 2 years < 25% 	<ul style="list-style-type: none"> • Discussion with patient and family • Palliative care inputs • Palliative balloon aortic valvuloplasty in selected patients
<p>2017 ACC Expert Consensus Decision Pathway for Transcatheter Aortic Valve Replacement in the Management of Adults With Aortic Stenosis A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents Catherine M. Otto, MD, FACC, Co-Chair; Dharam J. Kumbhani, MD, SM, FACC, Co-Chair; Karen P. Alexander, MD, FACC; John H. Calhoun, MD, FACC; Milind Y. Desai, MD, FACC; Sanjay Kaul, MD, FACC; James C. Lee, MD; Carlos E. Ruiz, MD, PHD, FACC; Christina M. Vassileva, MD, FACC</p>		