

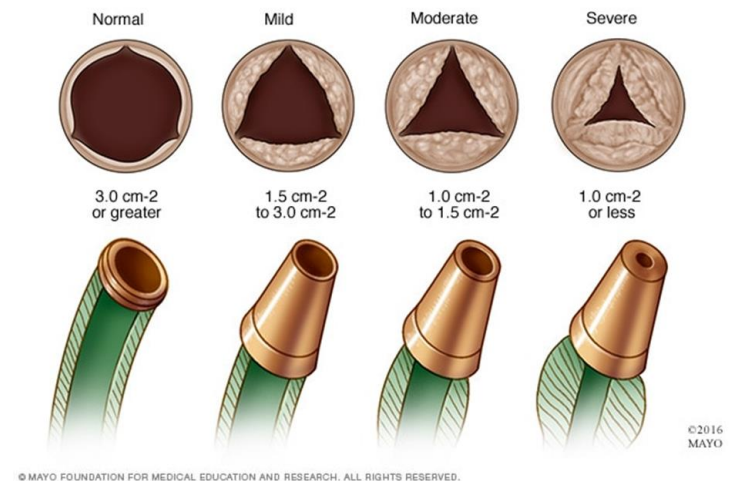
Structural Heart: Aortic Stenosis

Referral to Structural Heart Clinic

- Aortic Stenosis for Transcatheter AVR vs Surgical AVR
- Mitral Regurgitation with consideration for Mitraclip
- LAA occluder device with Watchman as an alternative to anticoagulation

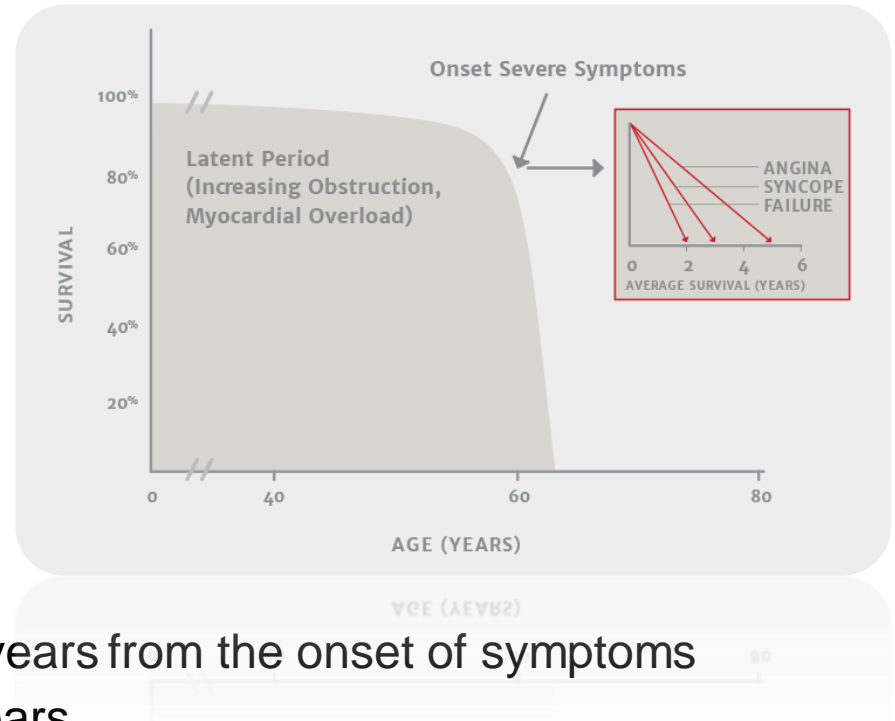
Aortic Stenosis

- Tricuspid valve
- Progressive narrowing due to thickening and calcification of the valve.
- Risk factors:
 - Degenerative calcification- same risk factors for coronary artery disease
 - Genetics (Bicuspid valve)
 - Age
 - 6th, 7th, and 8th decades of life (tricuspid)
 - 4th, 5th, and 6th decades of life (bicuspid)
- Chest radiation therapy



Signs/Symptoms:

- Early:
 - DOE, activity intolerance
 - Dizziness
 - Palpitations
- Late:
 - Chest discomfort/tightness
 - Syncope
 - Heart failure
- Severe symptomatic AS
 - Mortality approx 50% at two years from the onset of symptoms
 - Anticipate death within 3-5 years



Diagnostic criteria for Aortic Stenosis:

	MILD	MODERATE	SEVERE	CRITICAL
AVA	>1.5 cm ²	1.0-1.5cm ²	<=1.0 cm ²	
Peak Velocity	2.0-2.9 m/s	3-3.9 m/s	>4.0 m/s	>5.0 m/s
Mean Gradient	<20 mmHg	20-39 mmHg	>40 mmHg	>60 mmHg

- Mild: Echocardiogram 3-5 years
- Moderate: Echocardiogram 1-2 years
- Severe: Echocardiogram 6-12 months

ACC/AHA 2017 Indications for AVR

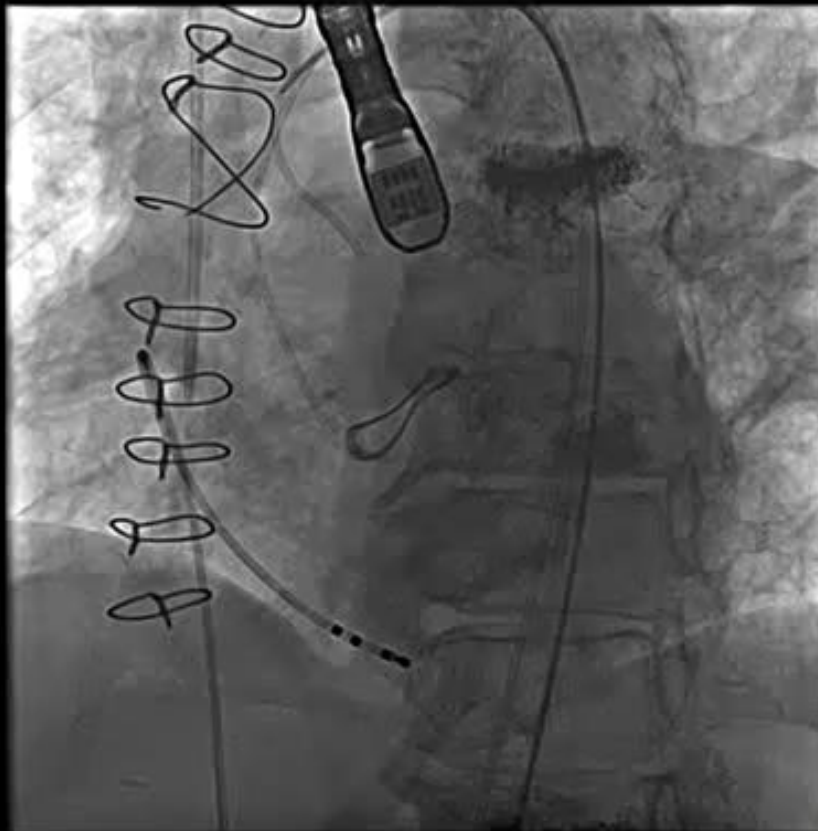
- Class I
 - Symptomatic severe AS
 - Asymptomatic severe AS with reduced EF <50%
- Class IIa
 - Symptomatic Low flow low gradient Aortic Stenosis
 - Critical Aortic stenosis

FDA Approval for TAVR

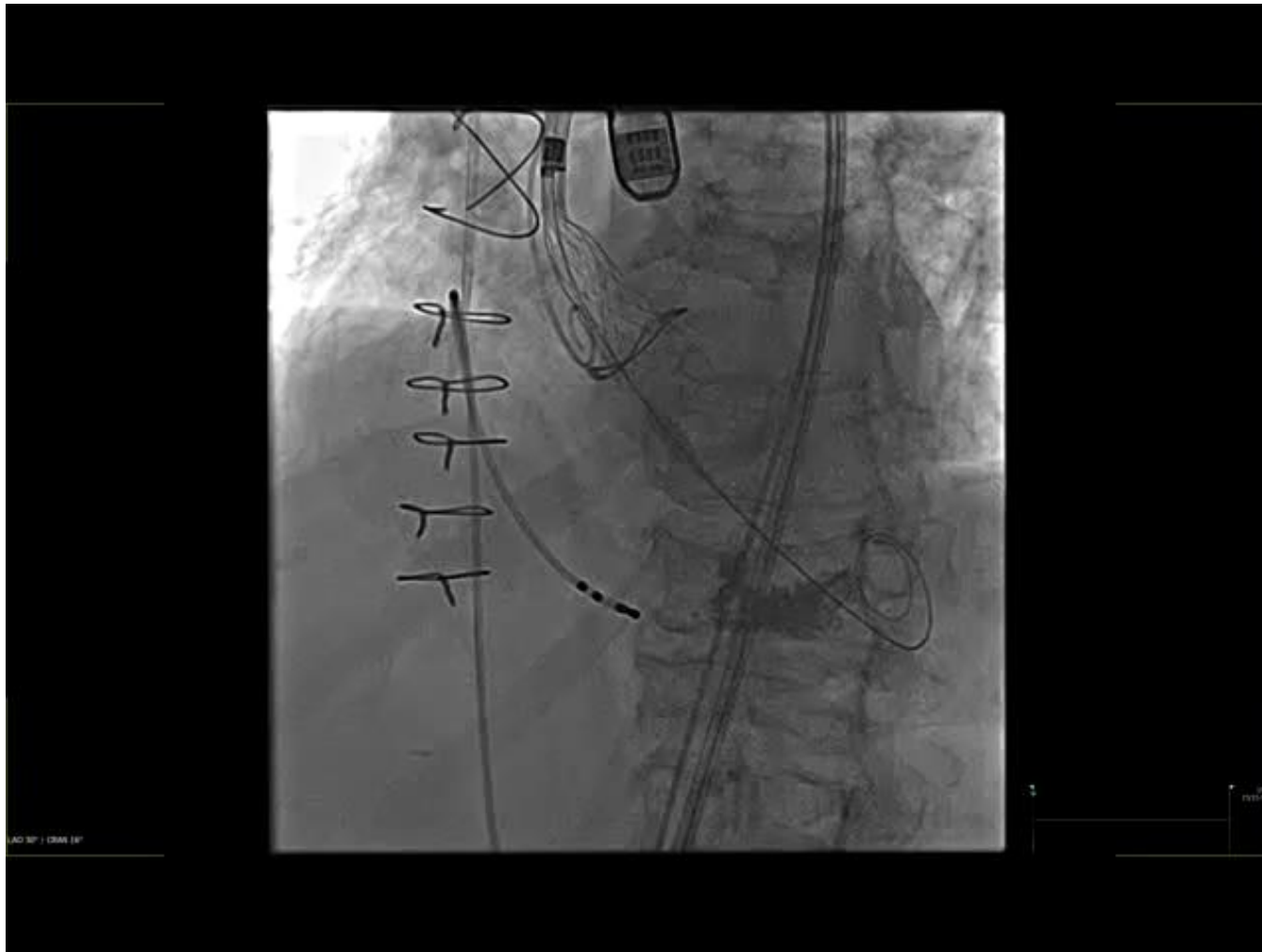
- TAVR has become the preferred treatment for all patient subsets with severe symptomatic aortic valve stenosis:
 - Inoperable ✓
 - High Risk ✓
 - Intermediate Risk ✓
 - Low Risk ✓
 - Bio prosthetic Valve ✓
 - Bicuspid Valve ✓

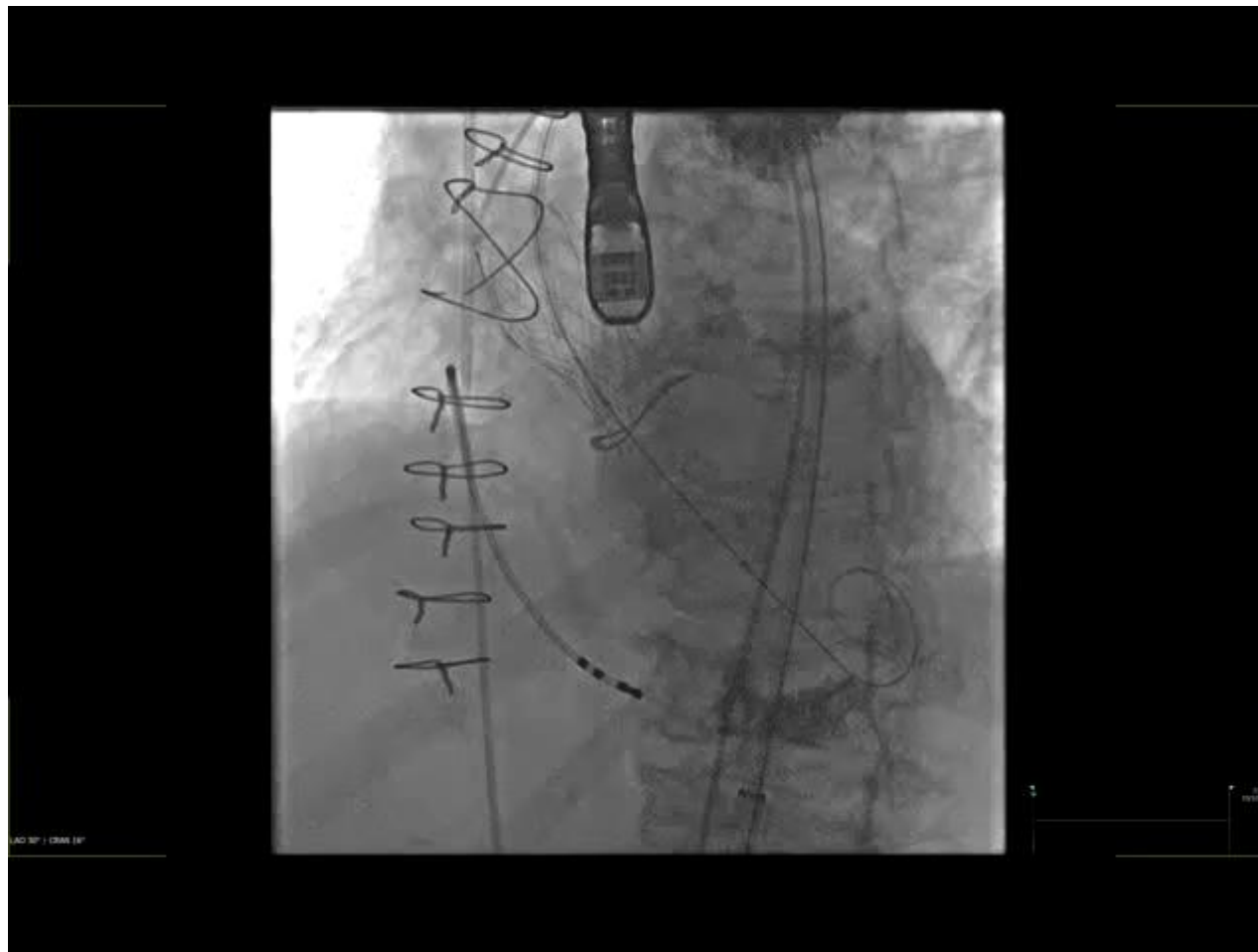
Case Study #1

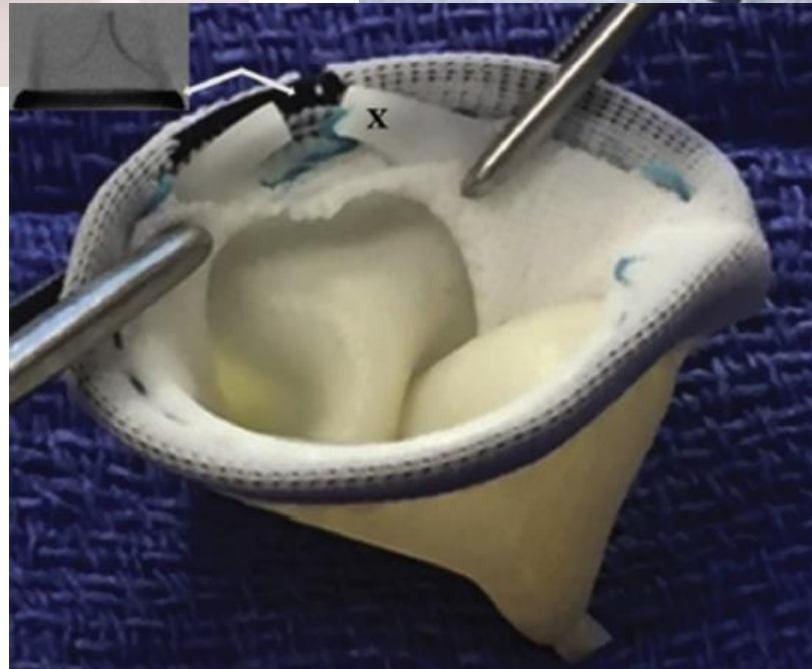
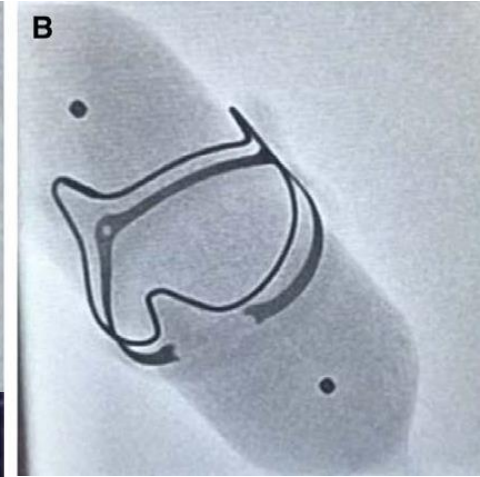
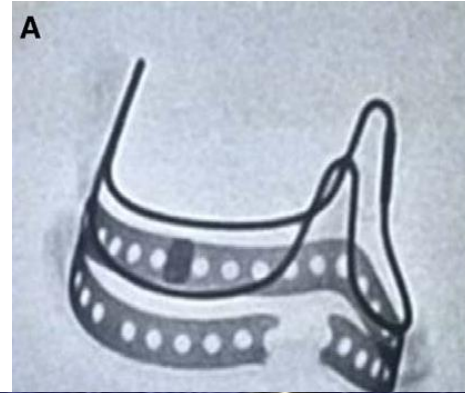
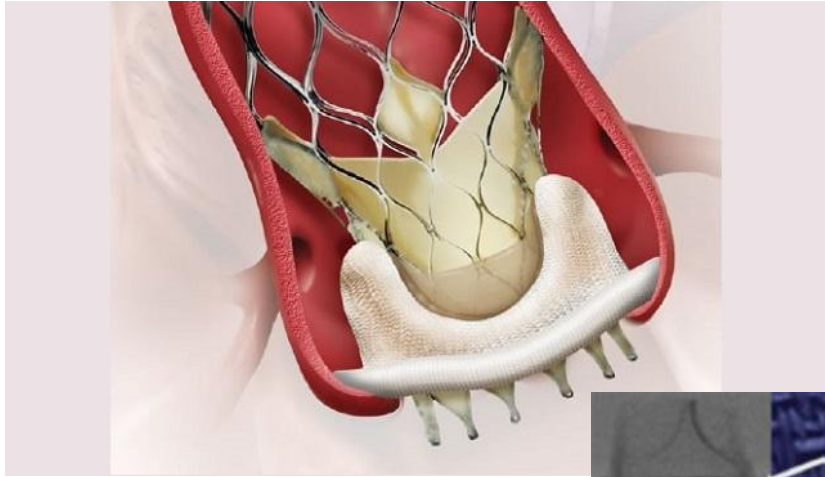
- 71 y/o male
 - PMH: CABG x 4 with concomitant AVR with #25 Sorin 4 Mitroflow in 2012, Hypertension, Hyperlipidemia
 - Echocardiogram: EF 63%, Sorin Mitroflow #25 with aortic valve area 0.9 cm², peak velocity 5 m/s, mean gradient 60 mmHg.
 - Sx: Worsening DOE x 2-3 months working on his ranch, intermittent lightheadedness, occasional chest pain. No syncope or heart failure.
 - Cardiac catheterization: Patent vein grafts, no intervention.



LAD 12° | CRAN 4°







Follow-up

- Echocardiogram: 26 mm Corevalve Evolut Pro bio prosthesis well seated within the 25 mm Mitroflow valve with aortic valve area 1.4 cm², peak velocity 2.7 m/s, mean gradient 9 mmHg.
- Symptoms: symptoms improved, mild shortness of breath

Thank you