

Transcatheter Aortic Valve Replacement Prosthesis Selection:

A Case of Annular and Sinotubular Junction Size Mismatch

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Disclosure of Relevant Financial Relationships

Within the prior 24 months, I have had a financial relationship with a company producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients:

Nature of Financial Relationship

Grant/Research Support

Consultant Fees/Honoraria

Individual Stock(s)/Stock Options

Royalties/Patent Beneficiary

Executive Role/Ownership Interest

Other Financial Benefit

Ineligible Company

Company Name(s)

Edwards Lifesciences
Abbott Structural Heart

Company Name(s)

Company Name(s)

Company Name(s)

Company Name(s)

Case Background

63yoM with CAD s/p 2v CABG, prior chest radiation, chronic systolic heart failure, and severe low flow low gradient AS

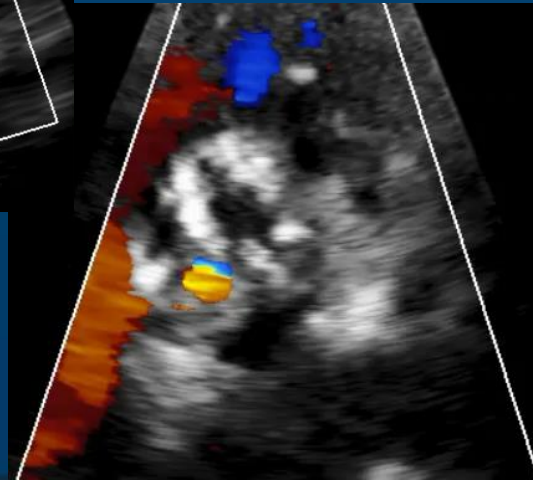
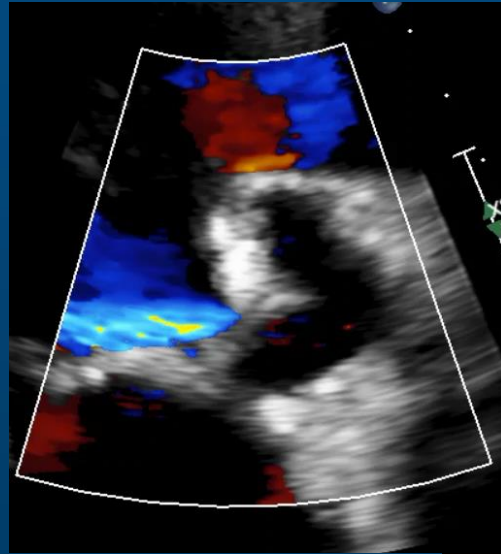
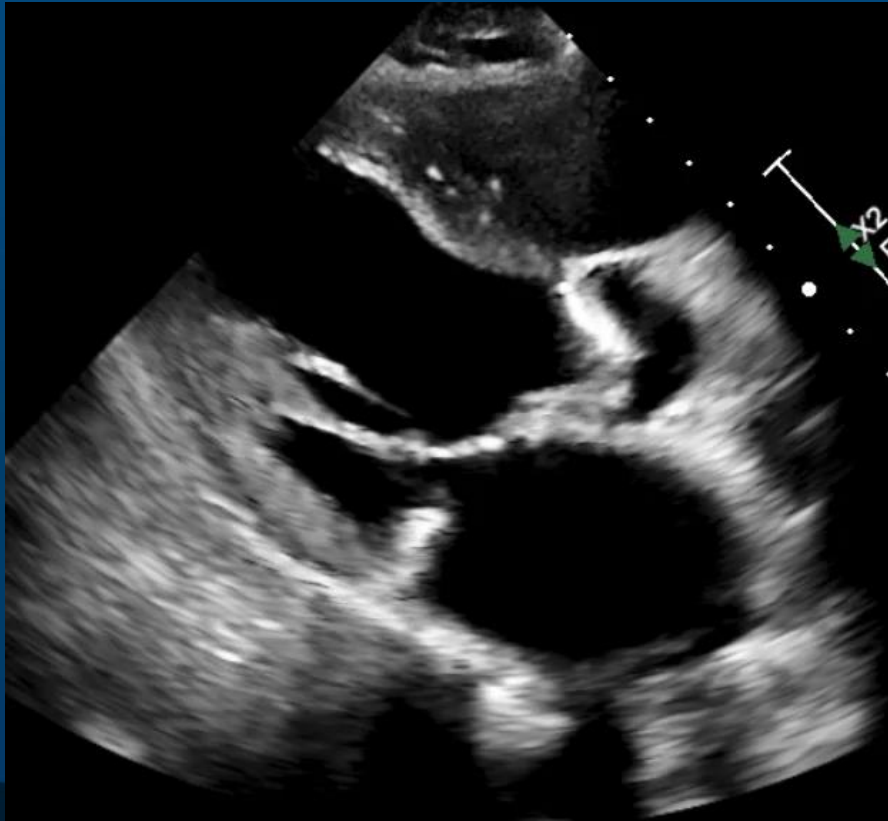
Past Medical History

- HIV on antiretroviral tx
- Prior chest radiation – Hodgkin lymphoma
- Left chest melanoma s/p wide axillary excision
- CAD s/p 2v CABG
- Chronic systolic heart failure

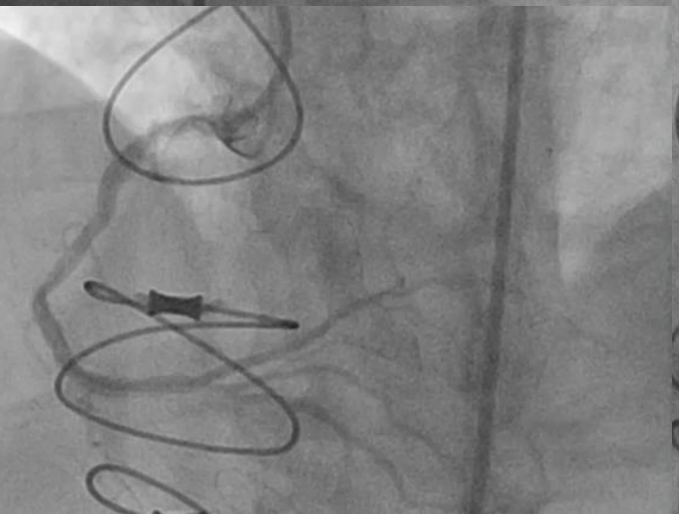
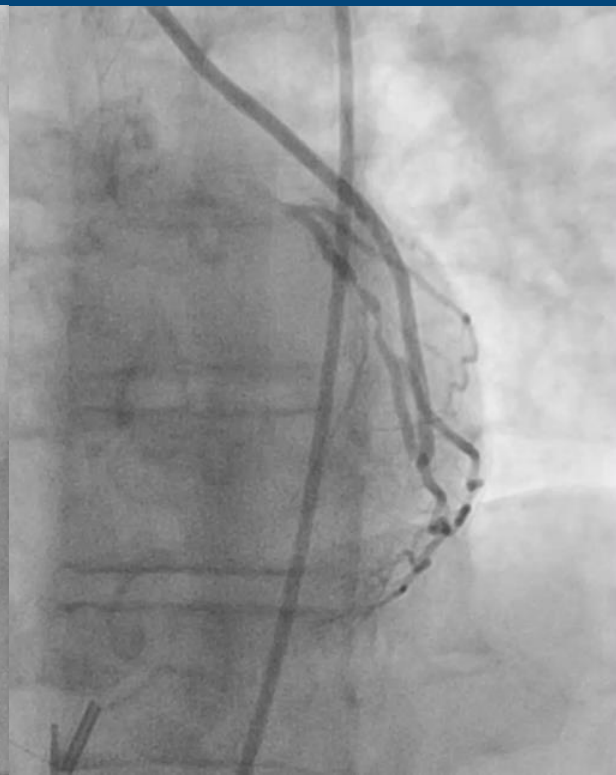
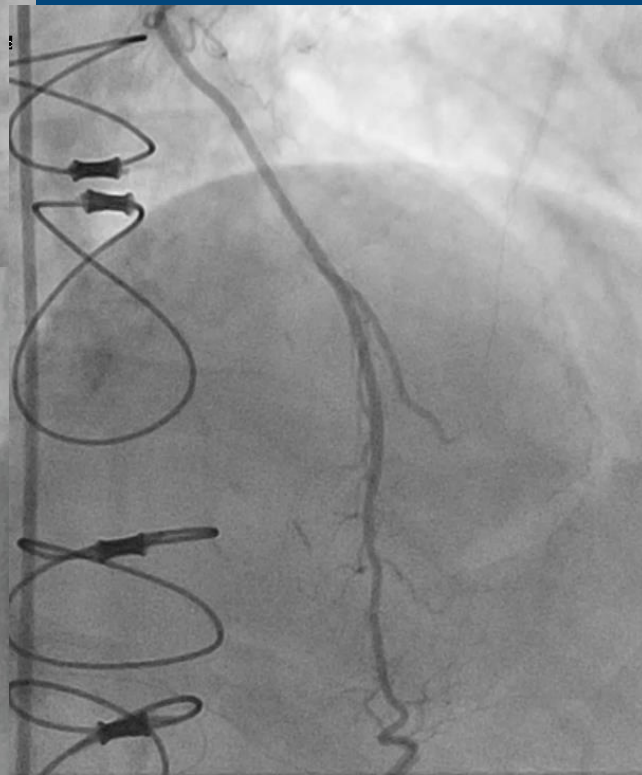
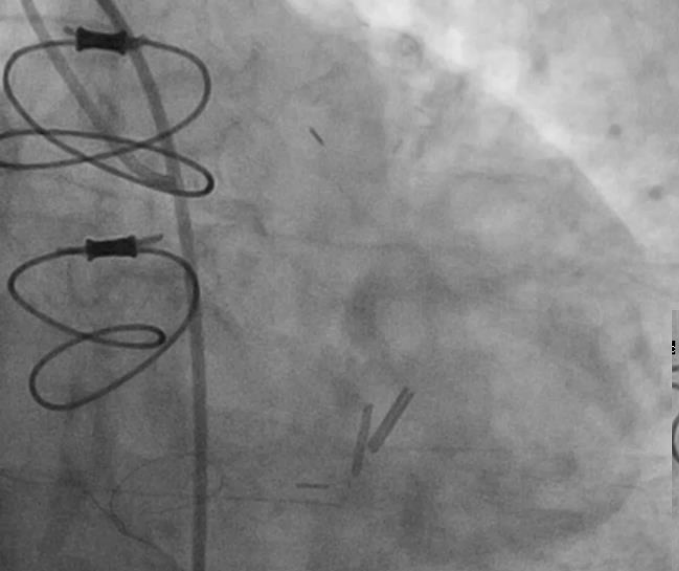
Anatomic Challenges

- Prior sternotomy
- Prior chest radiation
- Heavily calcified and narrow sinotubular junction
- Large, heavily calcified aortic annulus

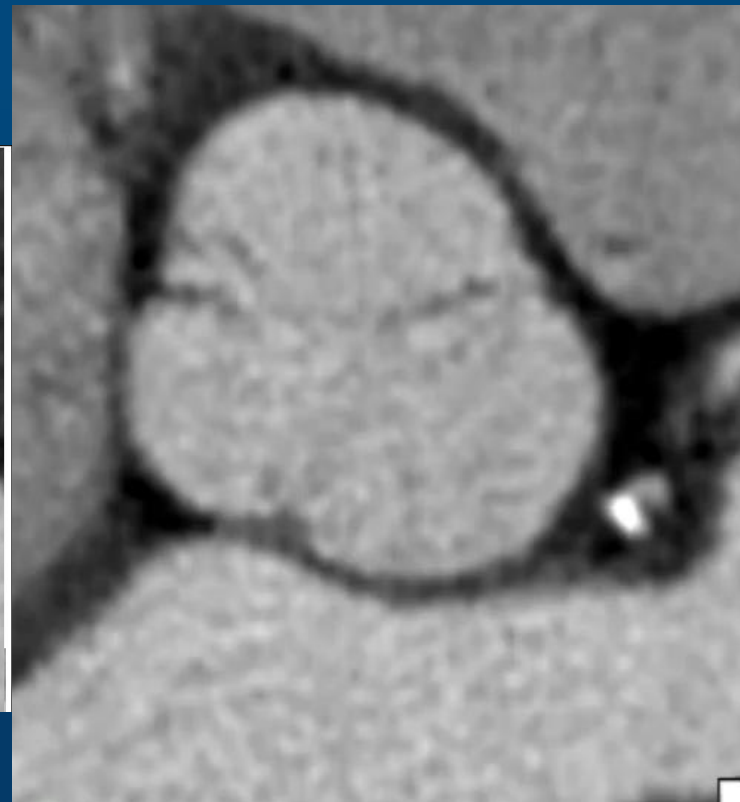
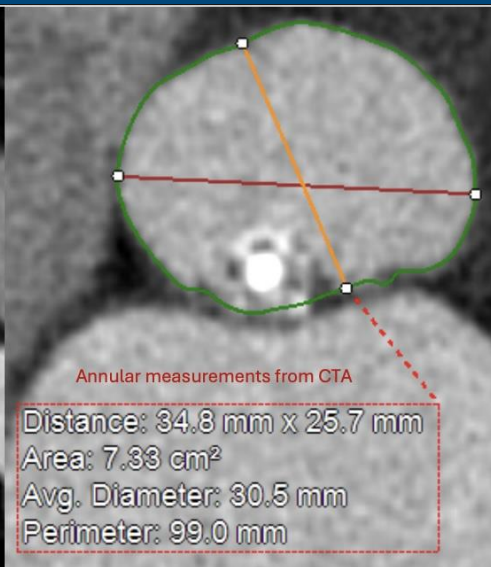
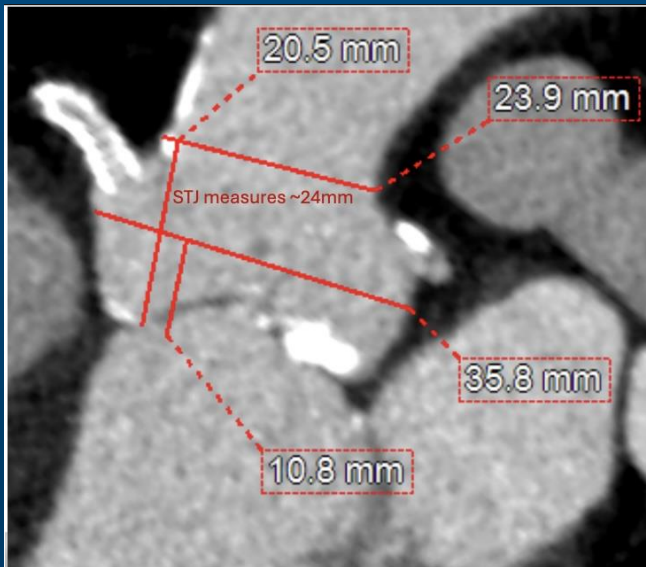
Transthoracic Echo Imaging



Coronary and Graft Angiography



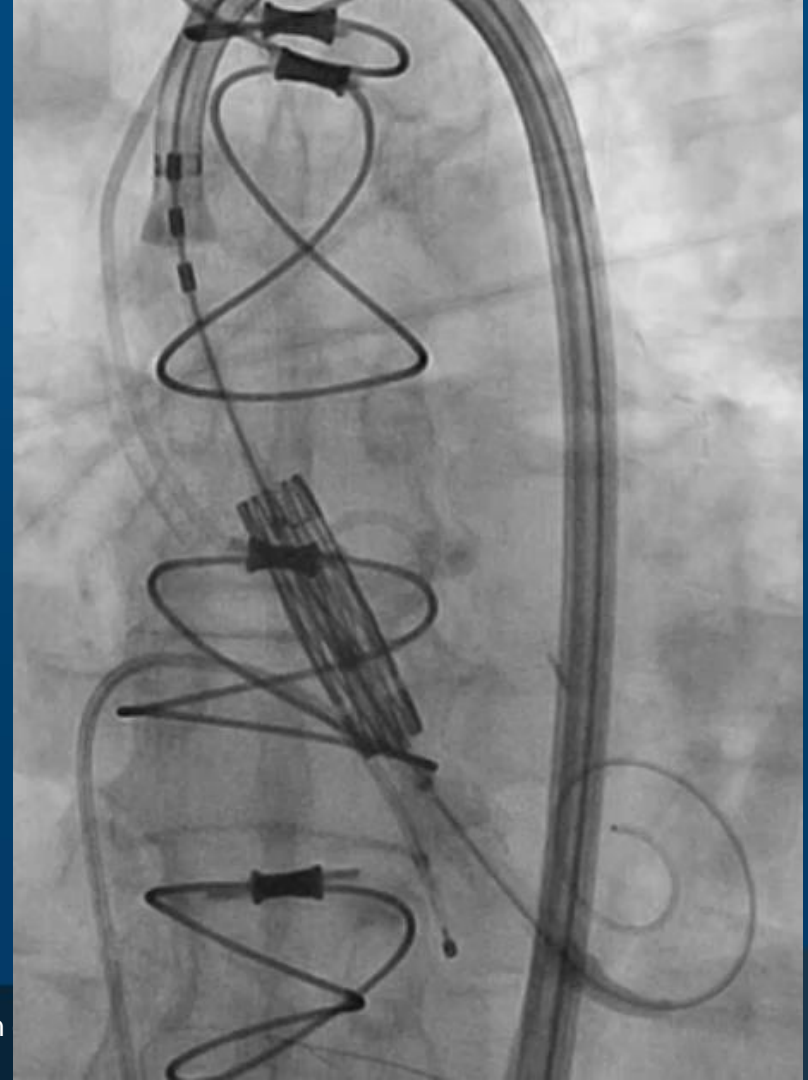
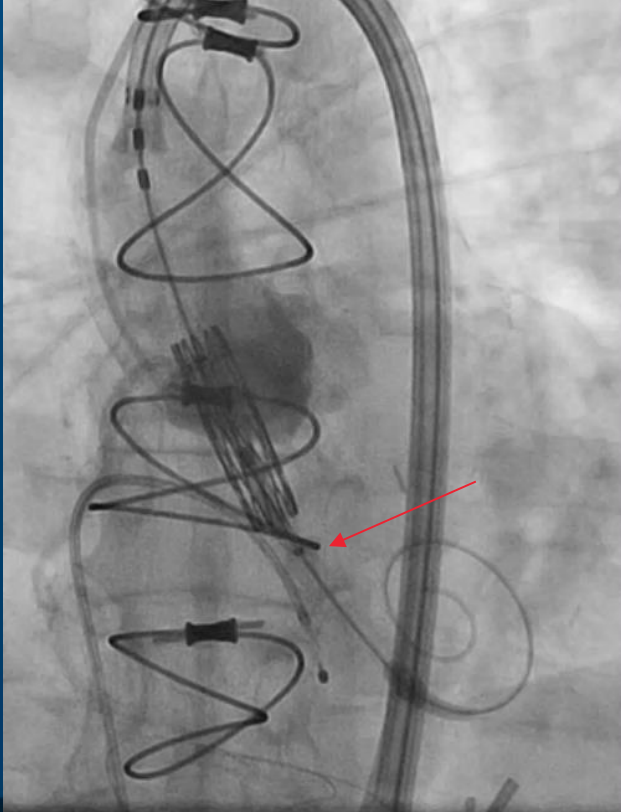
CTA Imaging



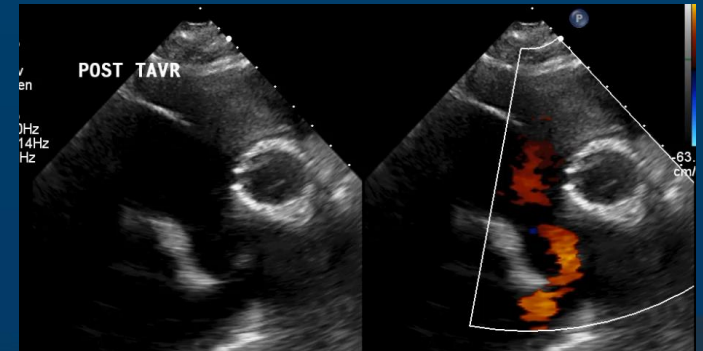
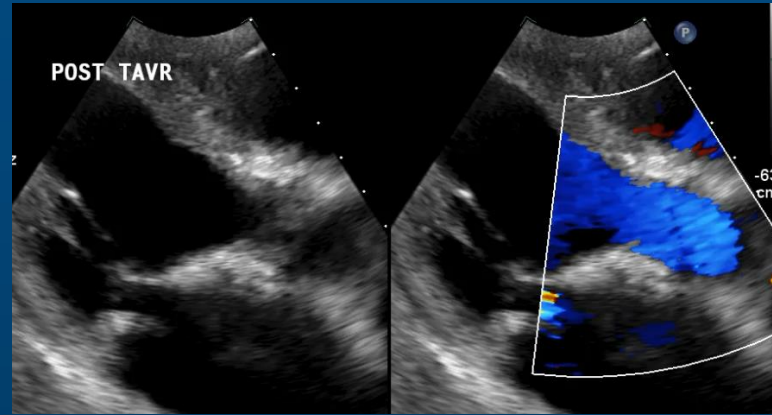
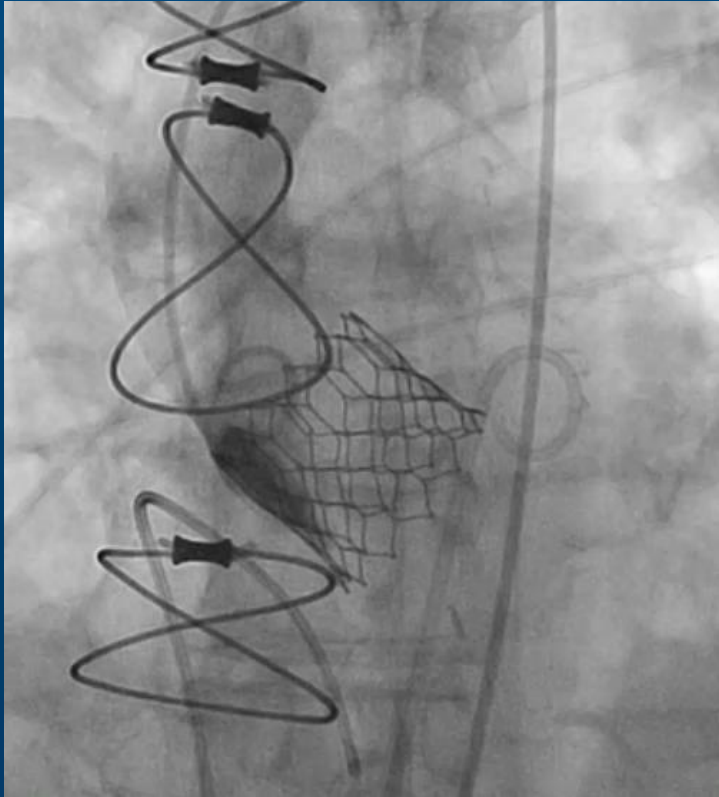
Multidisciplinary Case Planning

- Discussed alternative TAVR protheses and cardiac surgery
 - Annular size, coronary disease
- Repeat independent visits with IC and CTS
- *“His reoperative status in an irradiated chest with poor right heart function (not to mention his right heart stuck to the back of his sternum) makes him a poor surgical candidate. His fibrous trigone is completely calcified and might require a reoperative Hemi commando procedure mandating the resection of his mitral valve as well. The 30-day risk of death with that procedure is at least as high as TAVR.”*

Case Completion



Clinical Outcome



Conclusion

- **Cautious** undermounting of TAVR prosthesis on the deployment balloon
- Indeflator pressure monitoring during **slow** deployment
- More **ventricular** deployment that usually preferred
- Post-deployment aortography for assessment of outcome

