



Heart & Vascular
Center

2024 Northern California Structural Heart Summit



Emerging Transcatheter TV Therapies: TTVR vs TTEER

Tai Pham, MD

University of California, Davis

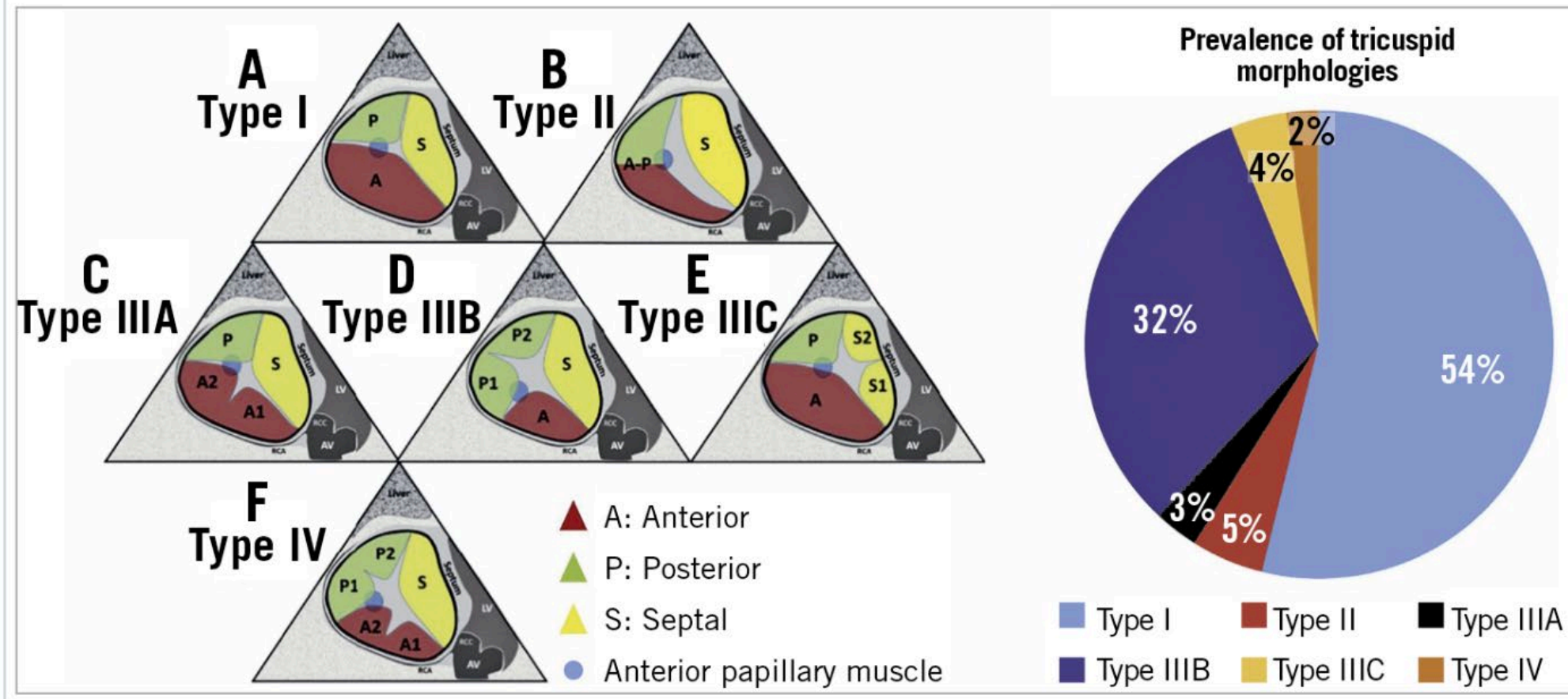
Nov 8, 2024

Objectives

- Review the mechanism and etiologies of primary and secondary TR
- Briefly explore the different emerging options for treatment of TR
 - T-TEER
 - TTVR
 - CAVI
- Discuss the specific considerations when deciding between TTEER vs TTVR



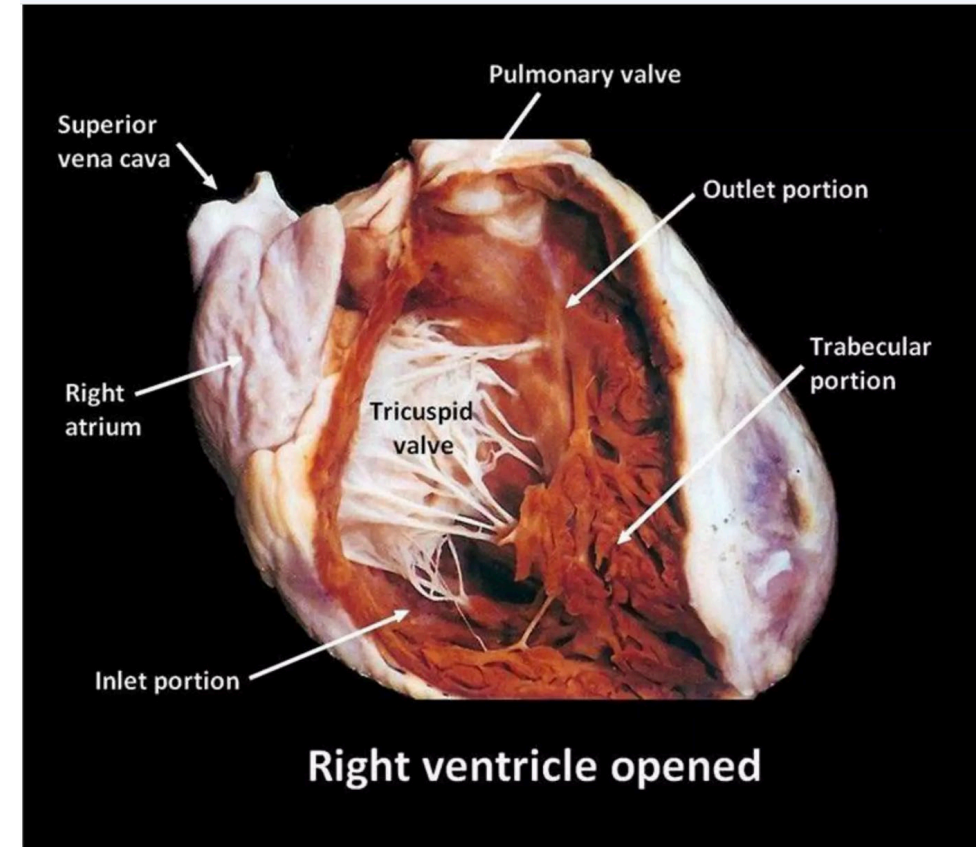
Proposed nomenclature for TV



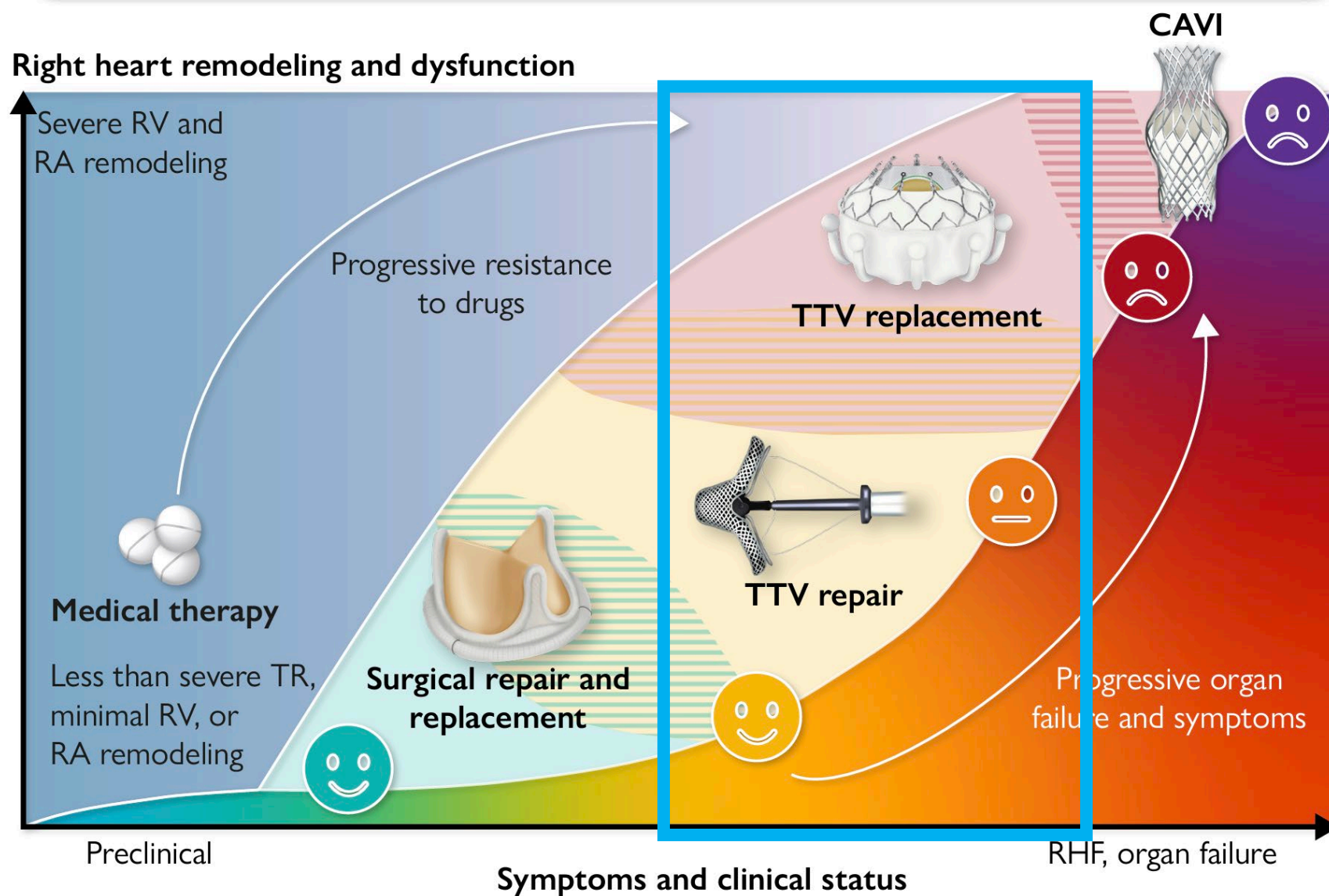
Hahn RT, et al. JACC Cardiovasc Imaging, 2021

Types of TR and Mechanism

- Primary TR
 - Pathology originating from the valve or the valve apparatus (chords, papillary muscle, or leaflets)
- Secondary TR
 - Primarily due to atrial and/or ventricular remodeling leading to annular dilatation
 - Interaction with CIED



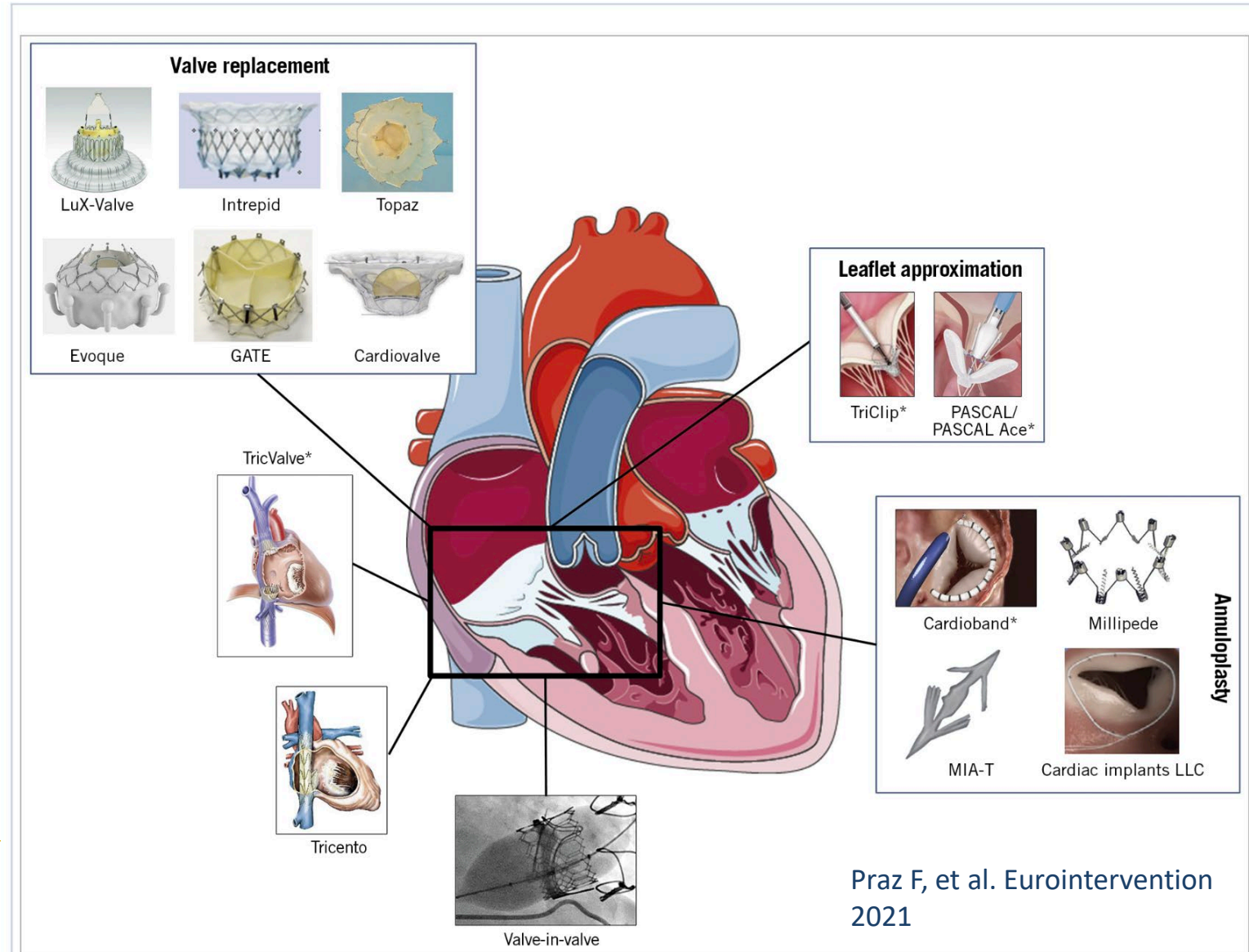
Emerging options for treatment



Maisano, et al. European Heart Journal. 2024

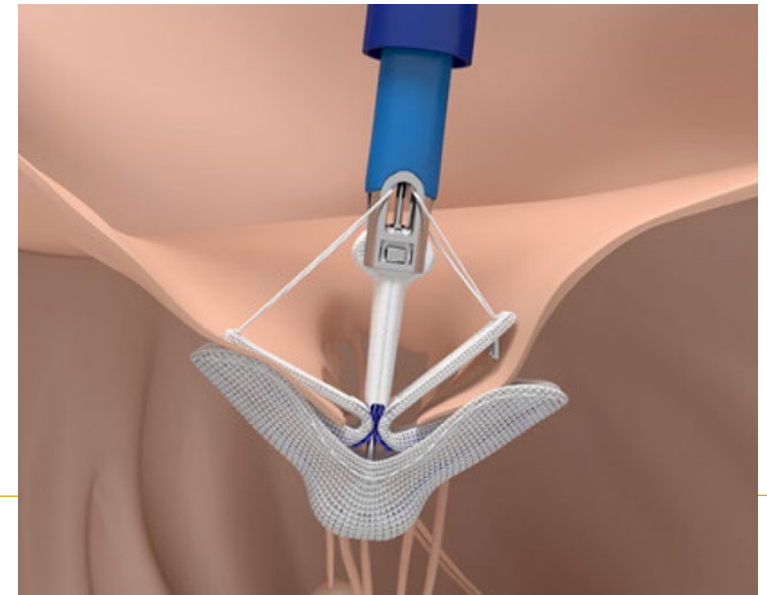
Transcatheter TV options

- Surgical therapy isolated TR rare with periop mortality high as 10%
- CE approval systems include Cardioband, TriClip/Pascal, TricValve
- FDA approved: TriClip and Evoque



T-TEER

- TEER with both TriClip and Pascal systems approved in Europe.
- TriClip FDA approved on 4/2/2024
 - TRILUMINATE Trial demonstrated high safety profile, durable TR reduction at 1 year, and improvement in QOL based on KCCQ
 - Early experience with increased risk of SLDA (compared to pivotal MTEER trials)
 - Adjunctive 3D ICE likely to improve



TTVR

- Involves replacement of TV via transvenous approach
- Orthotopic vs heterotopic
 - Orthotopic essentially eliminates TR, irrespective of coaptation gaps
 - Heterotopic reserved for palliative cases
- EVOQUE (Edwards Lifesciences) currently only FDA approved TTVR option



TRISCEND

- Published in 2022 demonstrating favorable safety outcomes and significant/sustained TR reduction
 - 56 patients treated. Of 36 previously without pacemakers, 4 (11.1%) needed PPM
 - Overall, significant improvement in NYHA class, 6MWD, and KCCQ



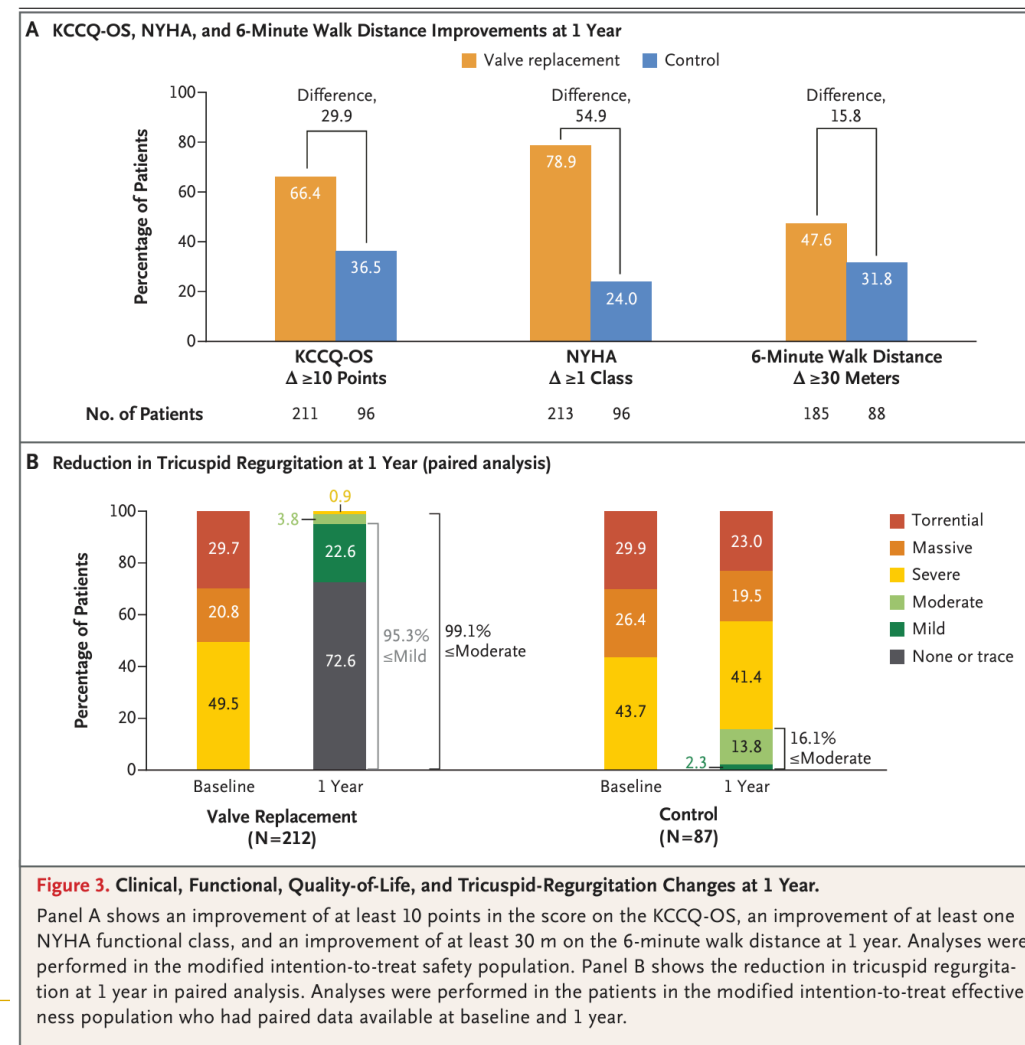
Kodali S, et al. JACC
Cardiovasc Interv 2022



Late Breaking: TRISCEND II



- 45 sites
- 267 pts randomized to TTVR, 133 to OMT
 - Severe bleeding and rates of PPM higher in TTVR arm (10.4 and 24.5%, respectively)
 - Nevertheless, TTVR arm had significant improvements in symptoms, function, and QOL at 1 year



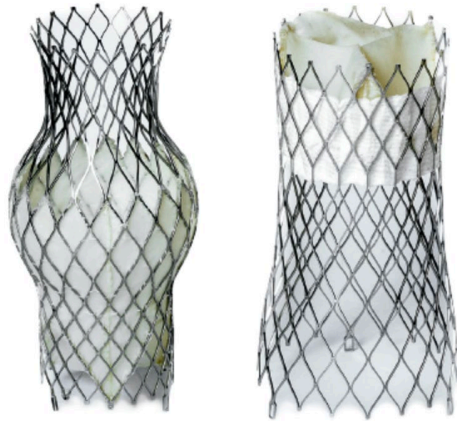
Hahn RT, et al. NEJM 2024

UC Davis Experience

- Participating site for both TRILUMINATE and TRISCEND
- TRILUMINATE
 - 38 patients treated overall (including 16 randomized, 7 single arm)
 - Since FDA approval, 20+ patients treated with commercial TriClip
- TRISCEND
 - 5 enrolled and treated

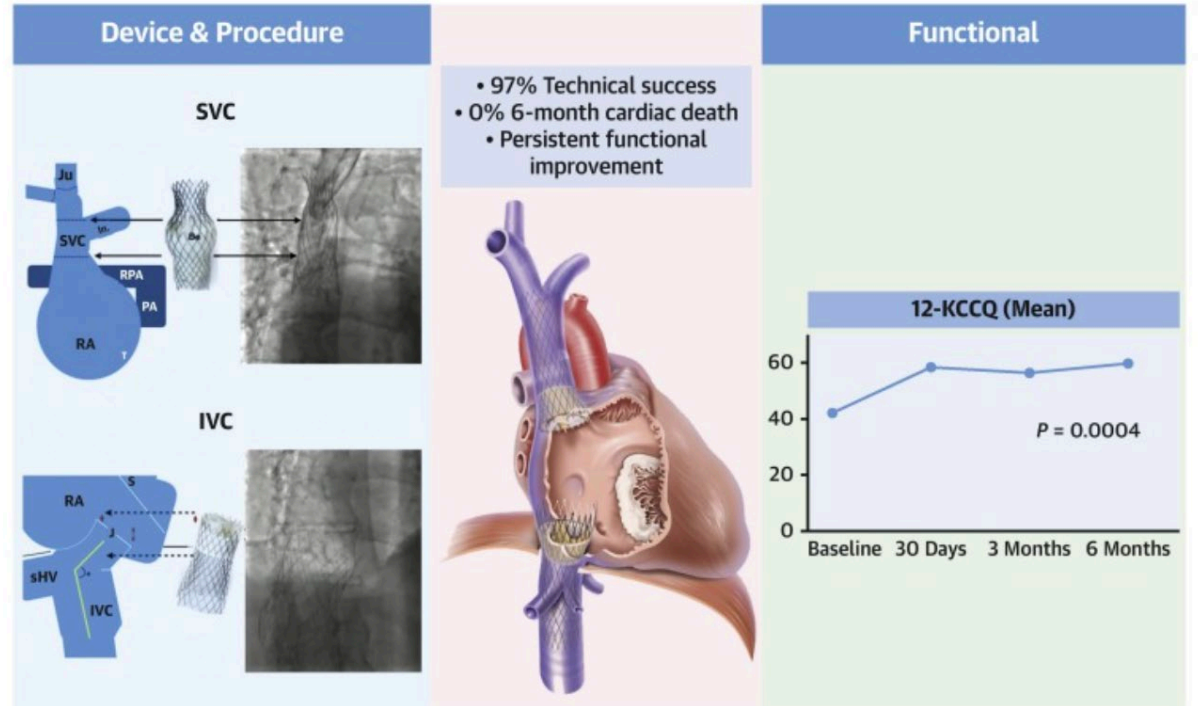


Heterotopic Strategies



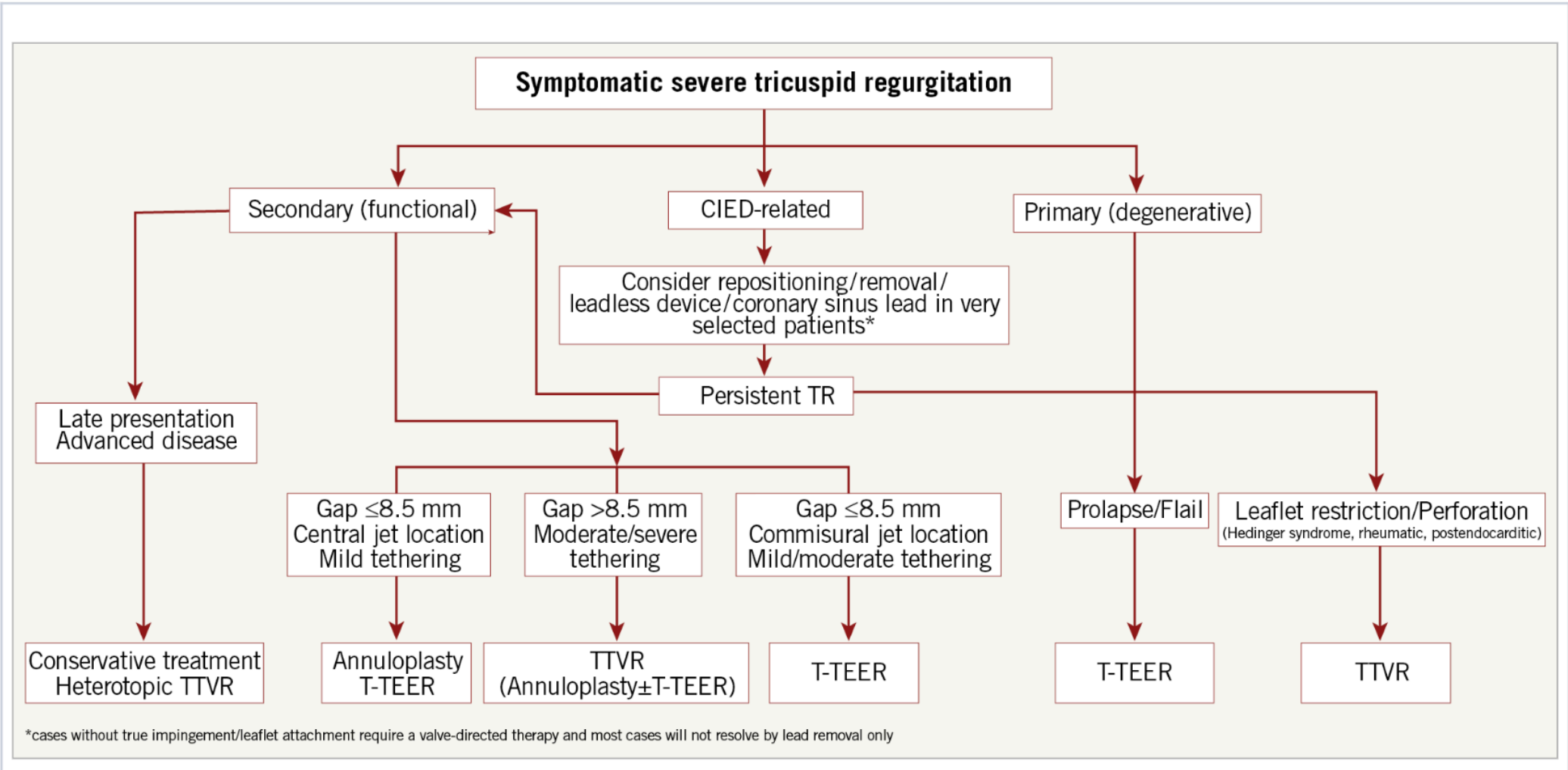
- Palliative strategy for patients at extreme risk or considered inoperable
- Two self-expanding bioprostheses implanted in SVC/IVC

CENTRAL ILLUSTRATION: 6-Month Outcomes of the TricValve System for Severe TR: TRICUS EURO Study (N = 35)



Estévez-Loureiro R, et al. J Am Coll Cardiol Interv. 2022;15(13):1366-1377.

SUMMARY



THANK YOU