

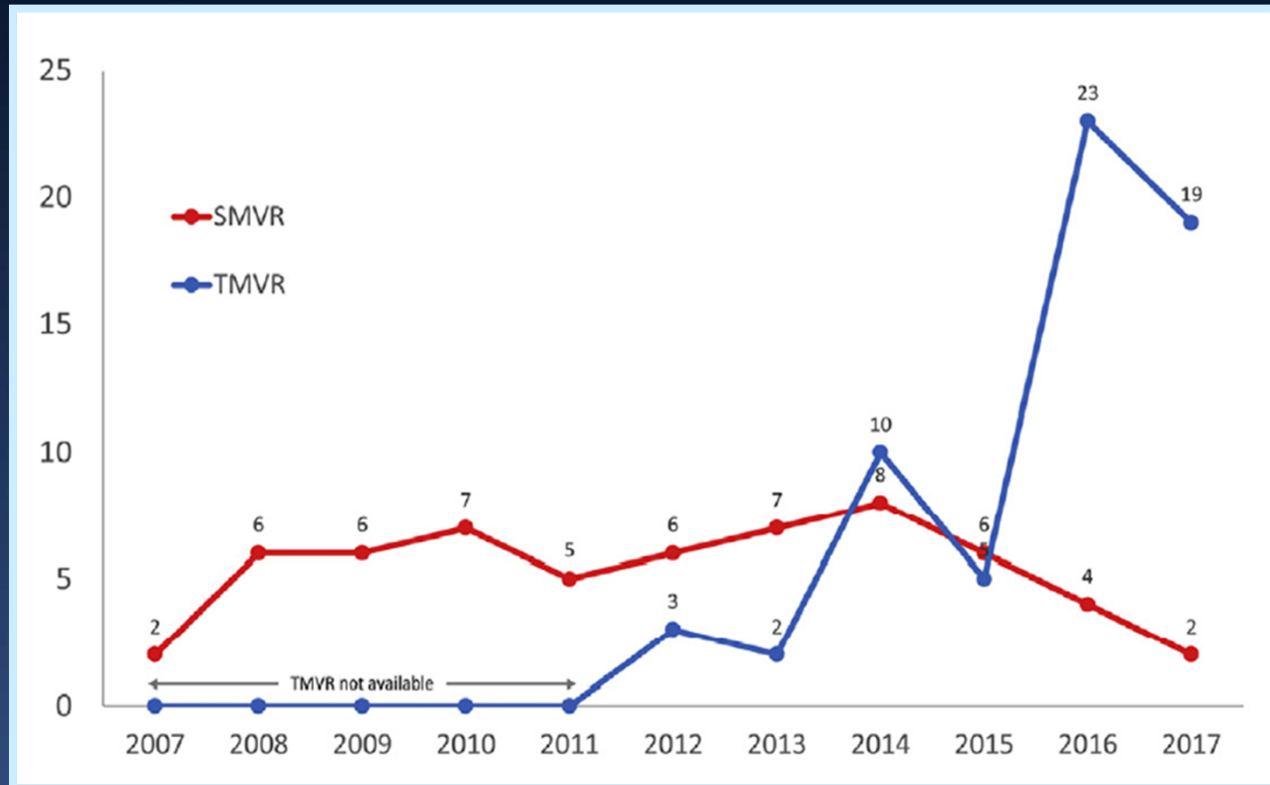
# Transcatheter Mitral Valve-In-Valve Replacement for Degenerated Bioprosthetic Mitral Valves

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# Change of the Number of TMVR Compared With Redo SMVR



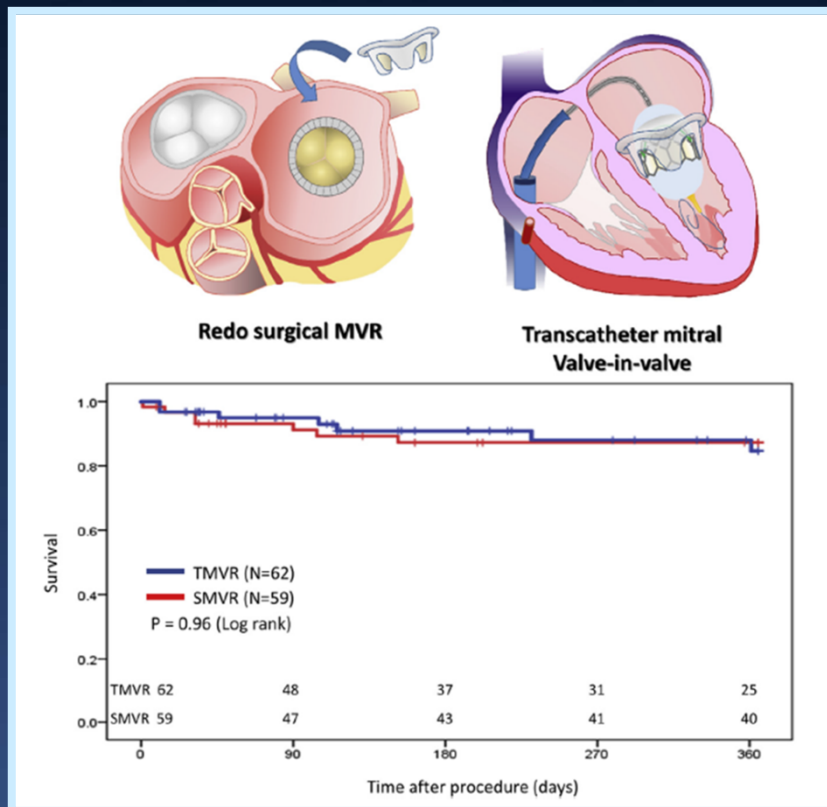
J Am Coll Cardiol Intv 2018;11:1131-8



THE CATHOLIC UNIVERSITY OF KOREA  
SEOUL ST. MARY'S HOSPITAL

Seoul St. Mary's Hospital  
Cardiovascular Center

# Survival Comparing TMVR With Redo SMVR



- SMVR (n=59) vs. TMVR (n=62)
  - Age:  
SMVR  $63.7 \pm 1.49$  vs. TMVR  $74.9 \pm 9.4$
  - STS PROM score:  
SMVR  $8.7 \pm 10.1$  vs. TMVR  $12.7 \pm 8.0$
- Despite the higher STS score in TMVR patients, there was **no difference in 1-year mortality between the TMVR and SMVR groups**

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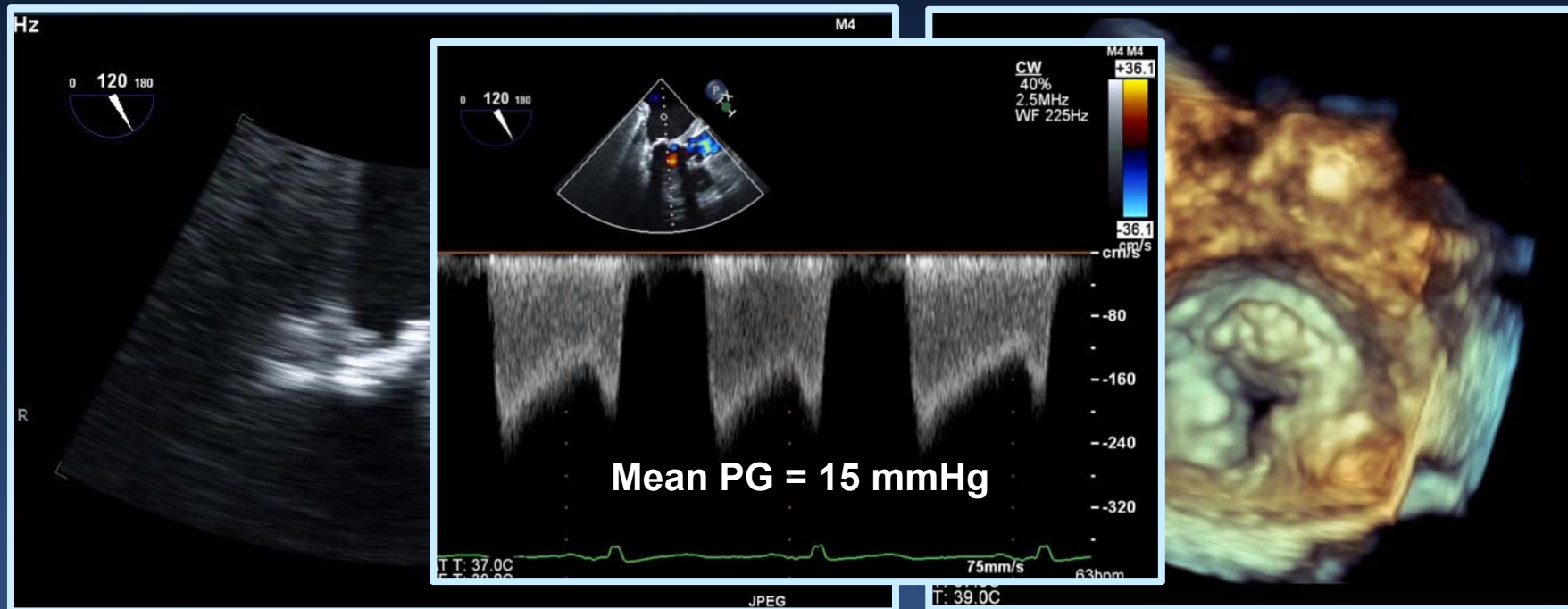
# Case I

- F/84
- C/C : aggravation of dyspnea and orthopnea for 1 week
- PMHx : severe MS s/p bioprosthetic MVR with 27 mm Epic valve (St. Jude Medical, St. Paul, MN), 2010), Paroxysmal AF on anticoagulation, HTN

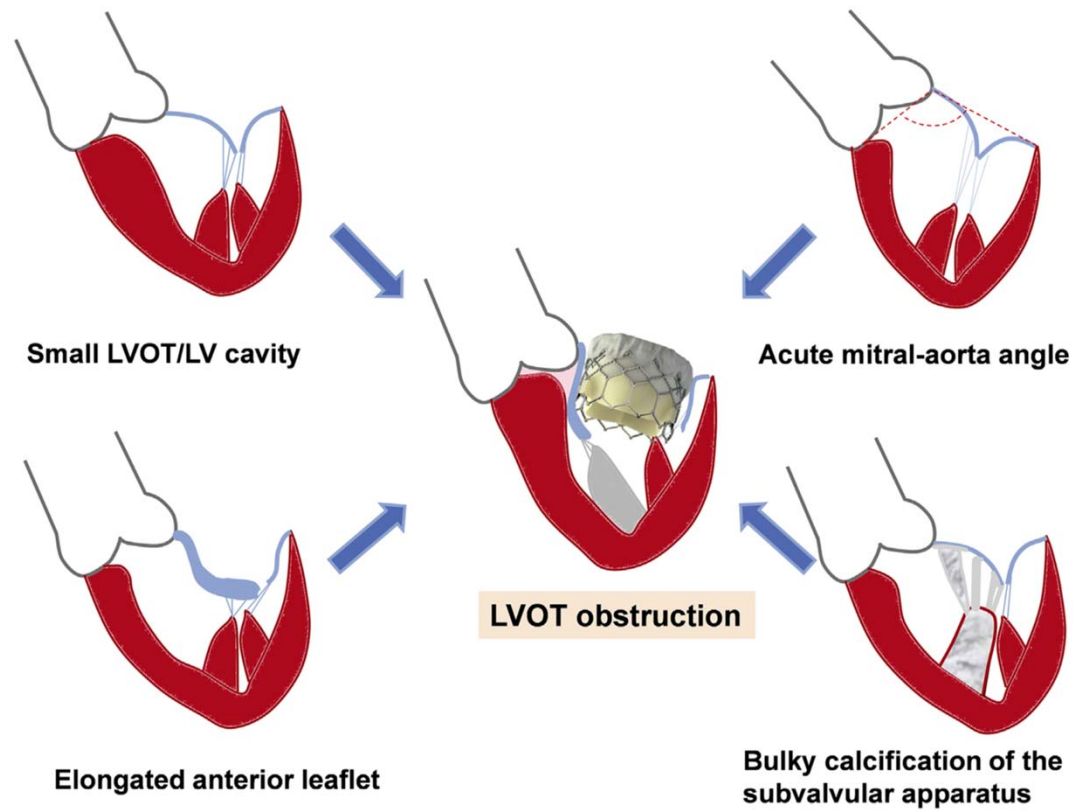


# Pre-procedural echo

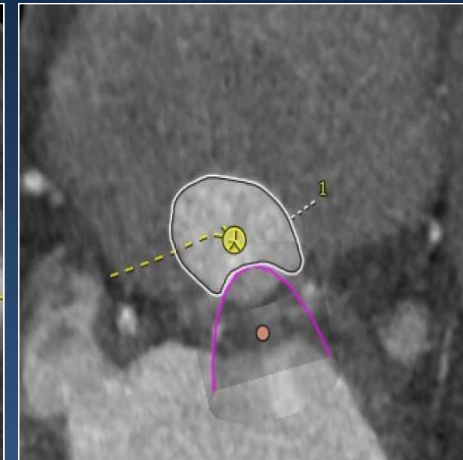
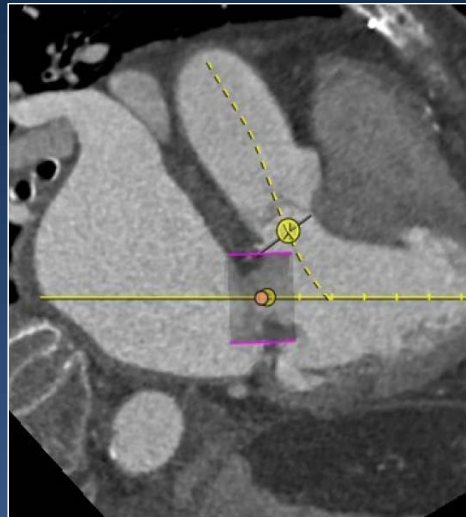
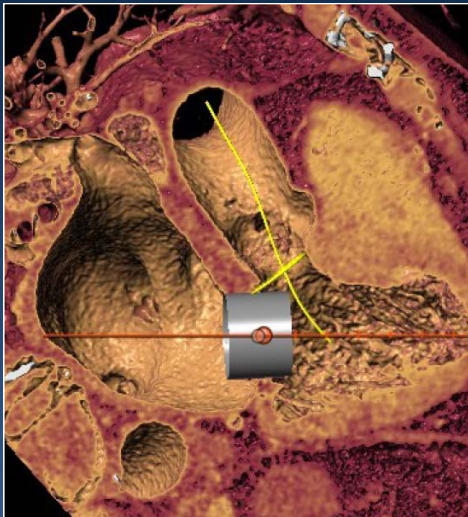
- Bioprosthetic mitral valve stenosis



# TMVR Work-Up ; LVOT obstruction



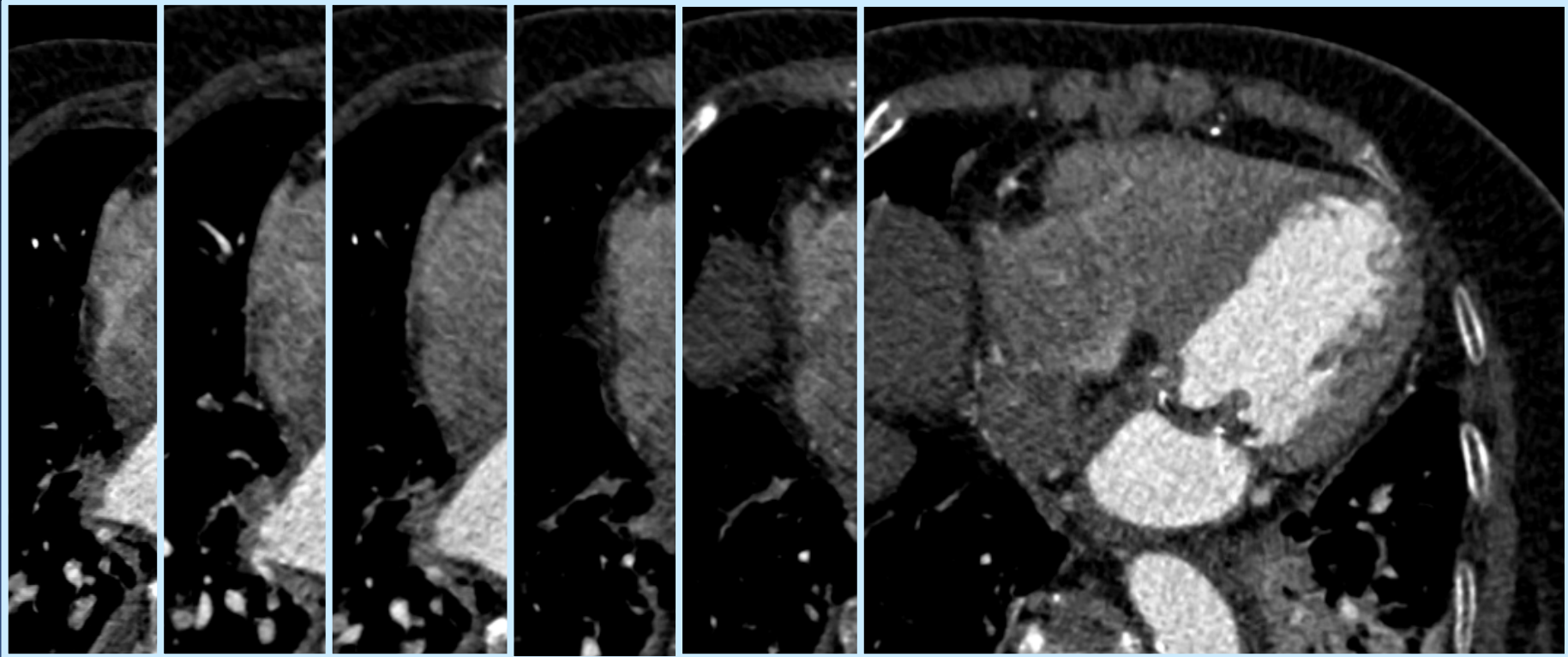
# TMVR Work-Up ; LVOT obstruction



Neo - LVOT 332.8mm<sup>2</sup>

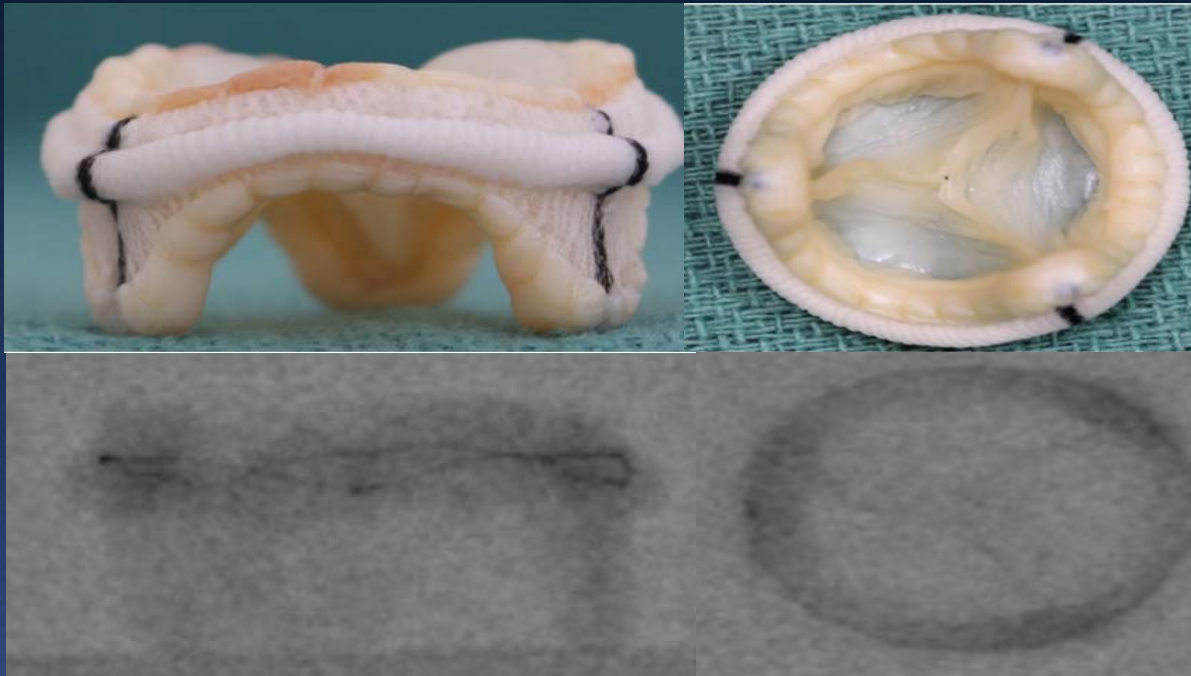
Geometric obstruction predicted by neoLVOT area <200 mm<sup>2</sup>

# CT – bioprosthetic mitral valve evaluation

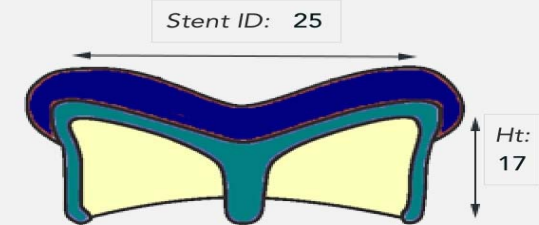




# Epic Valve



Biocor / Epic, 27



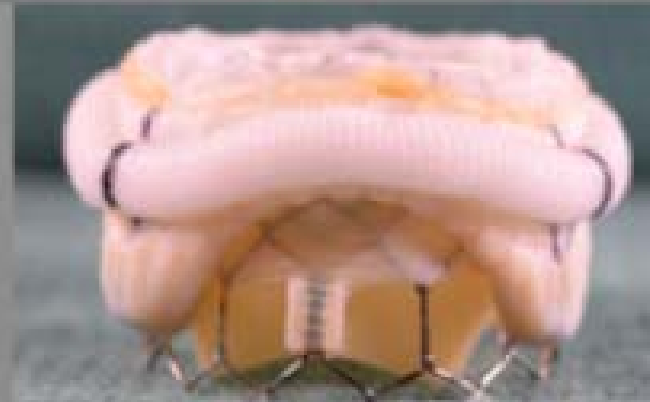
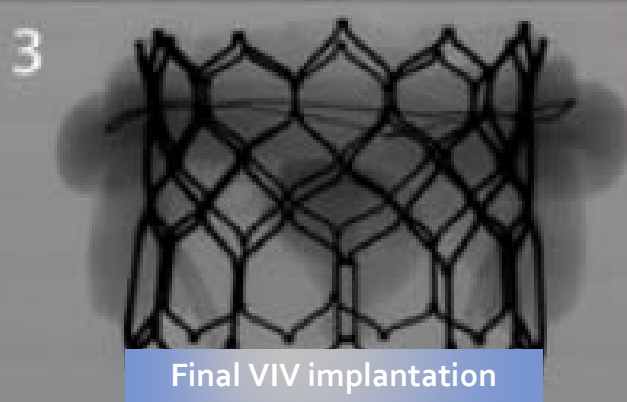
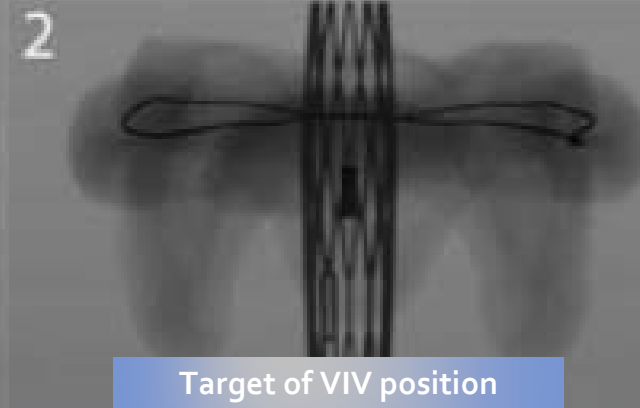
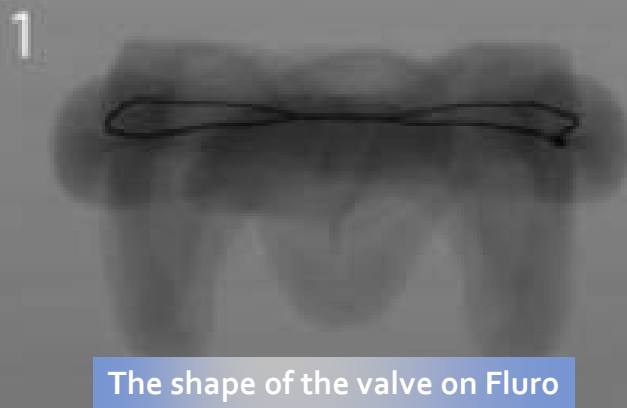
True ID

23

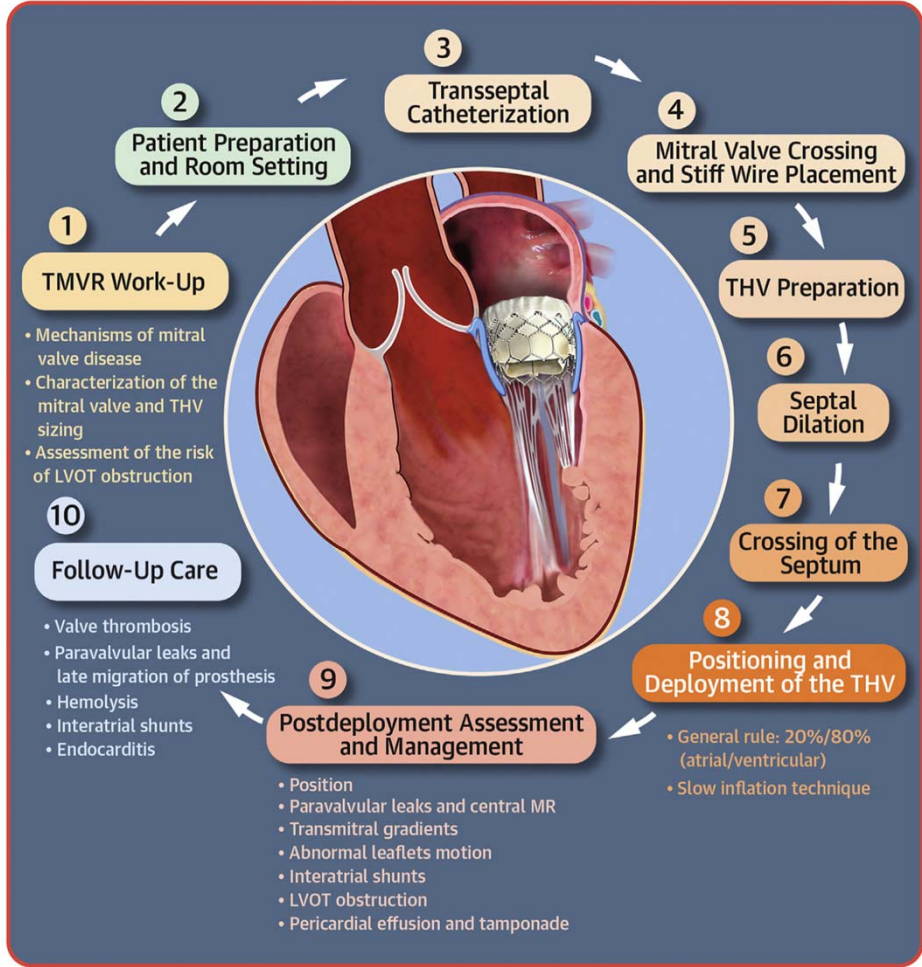
- Intra-annular design
- Visible sewing ring



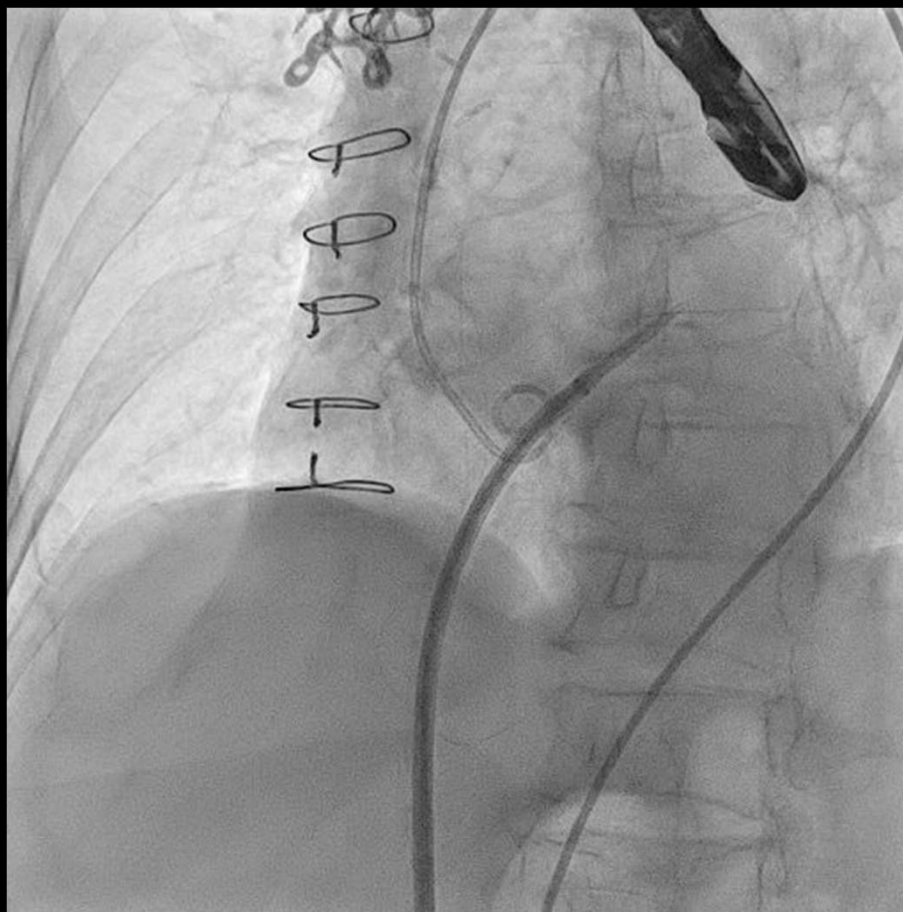
# TMVR Work-Up ; Position



## Major Steps of Transseptal Transcatheter Mitral Valve Replacement

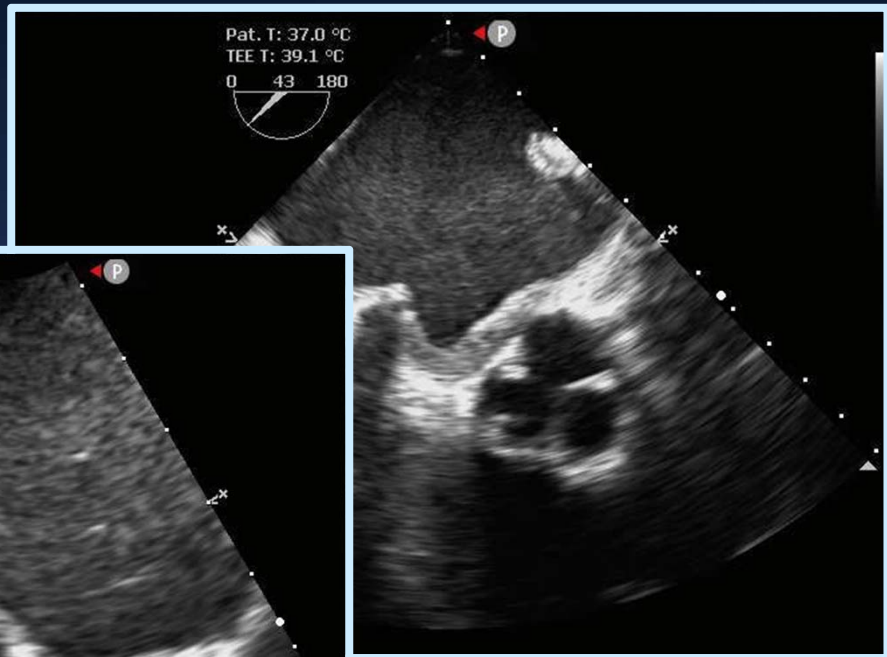
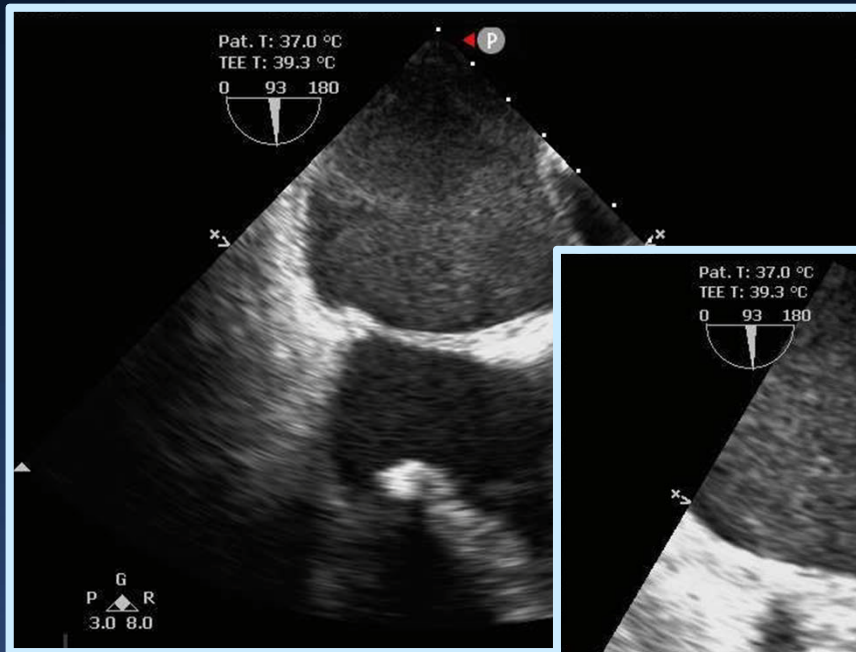


Urena, M. et al. *J Am Coll Cardiol Interv.* 2017;10(19):1905–19.

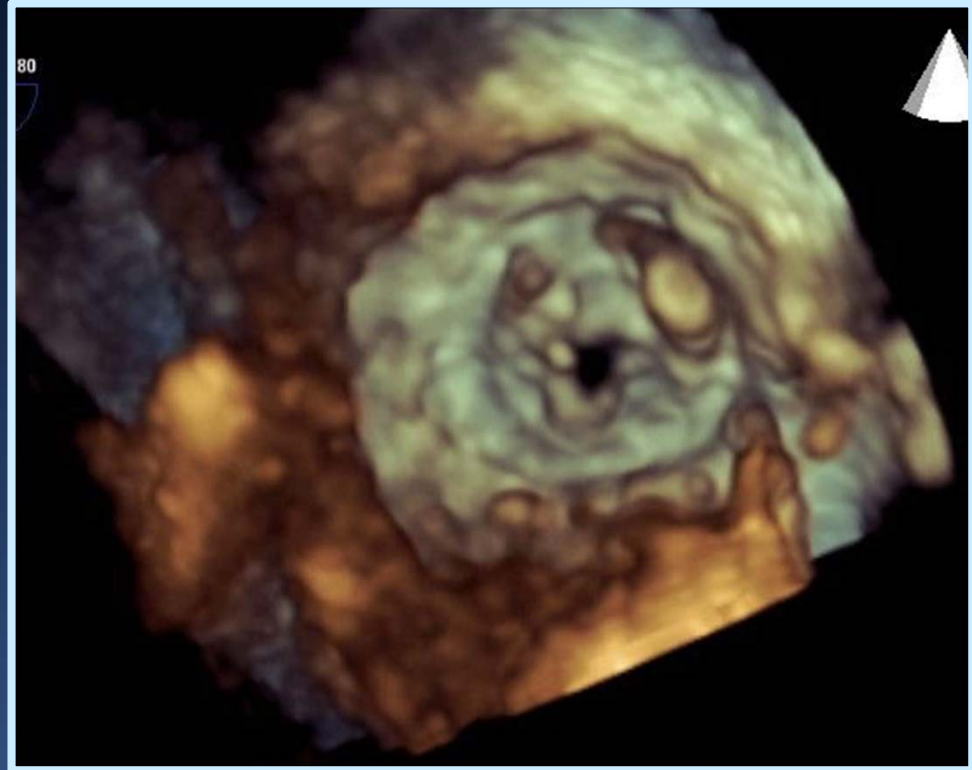
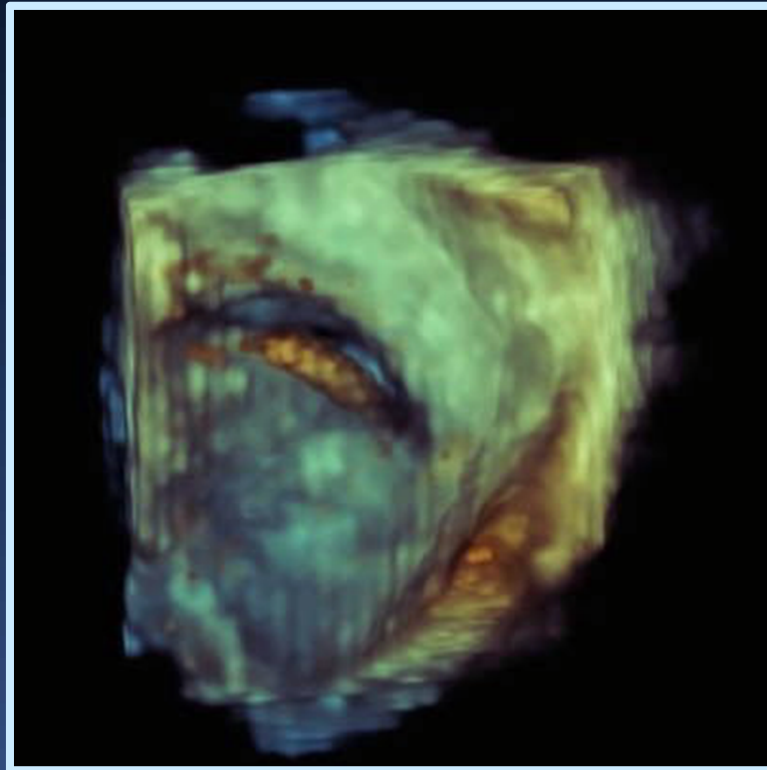


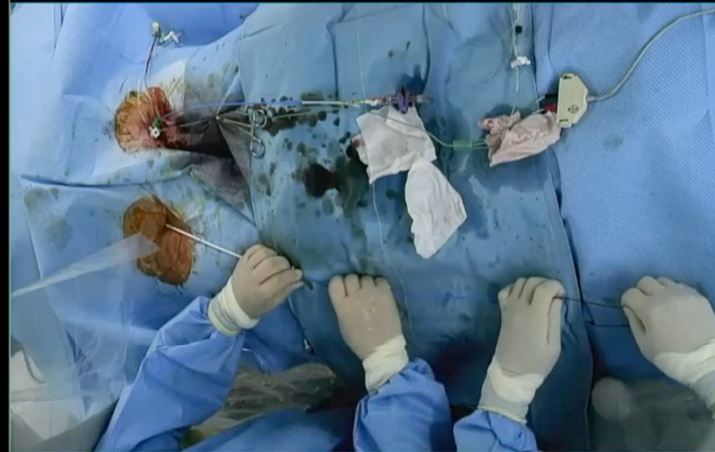
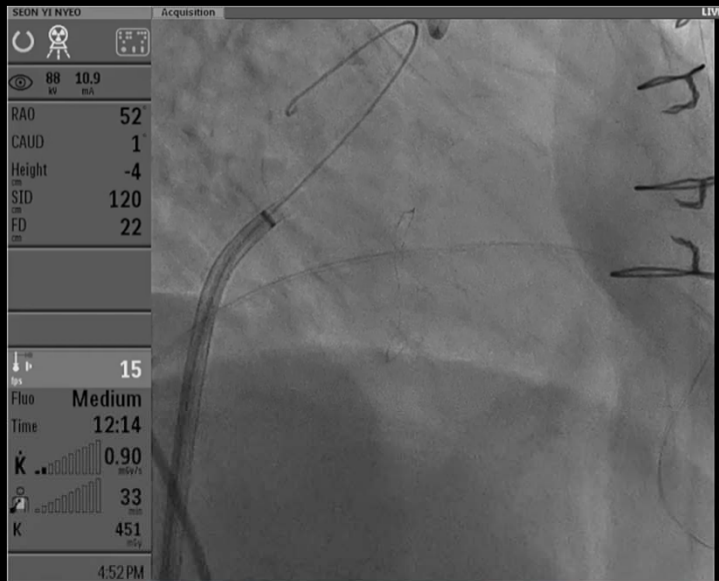
*Septal Puncture*

# Trans-septal puncture



# Post septal puncture

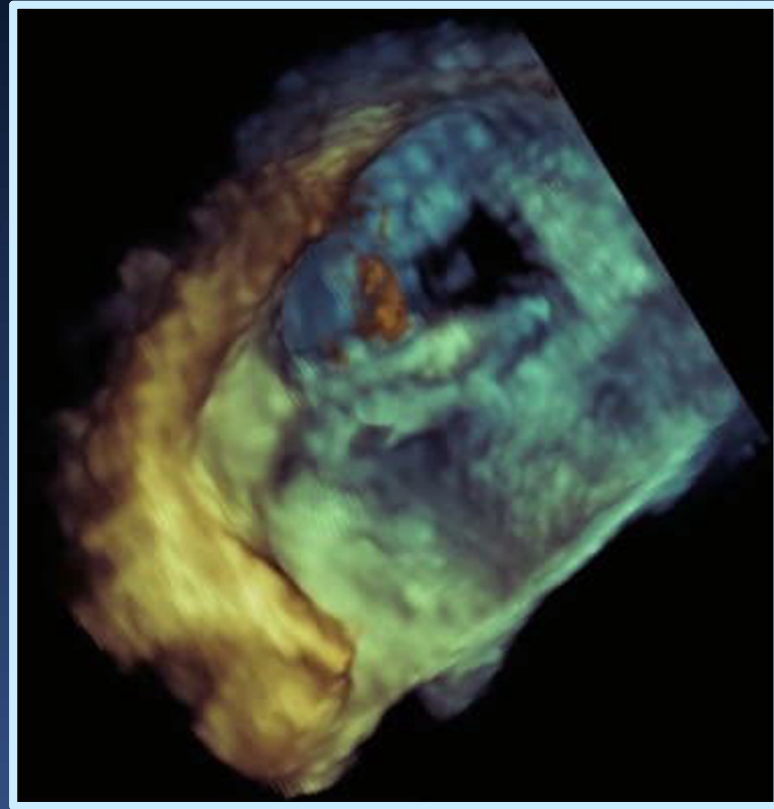
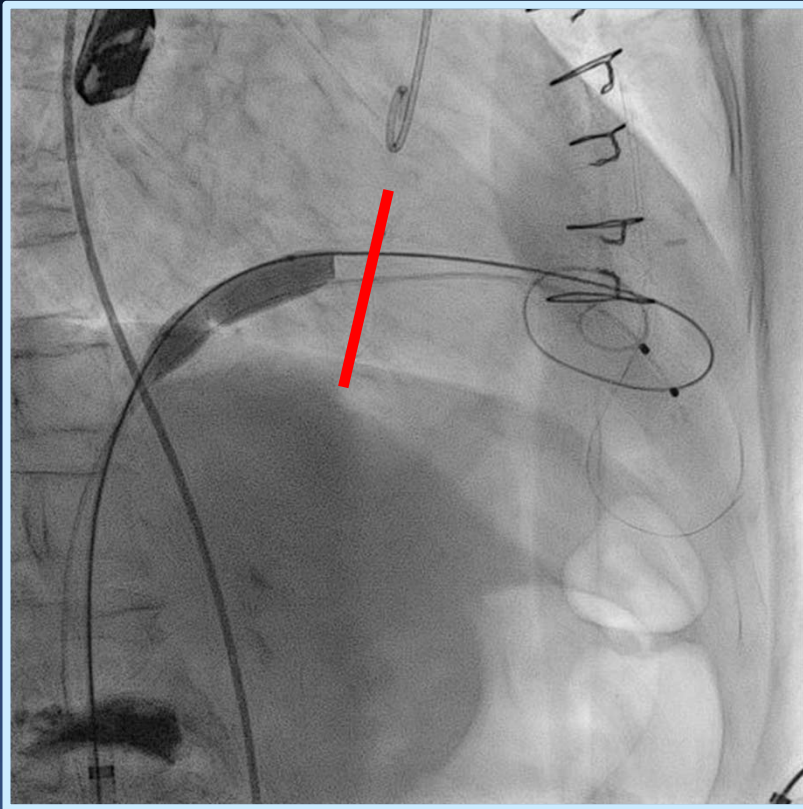




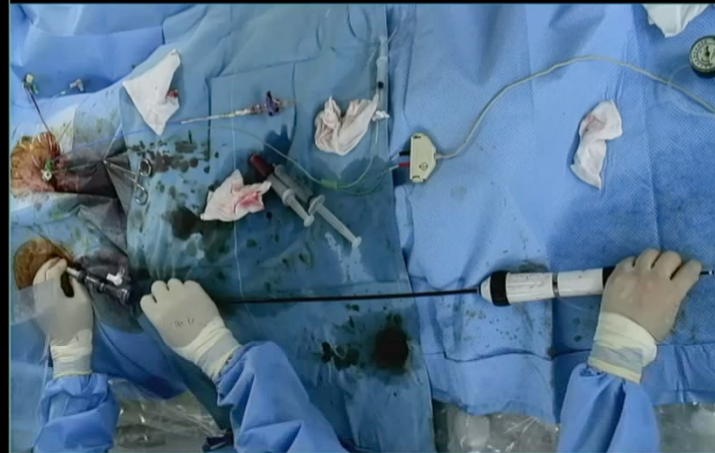
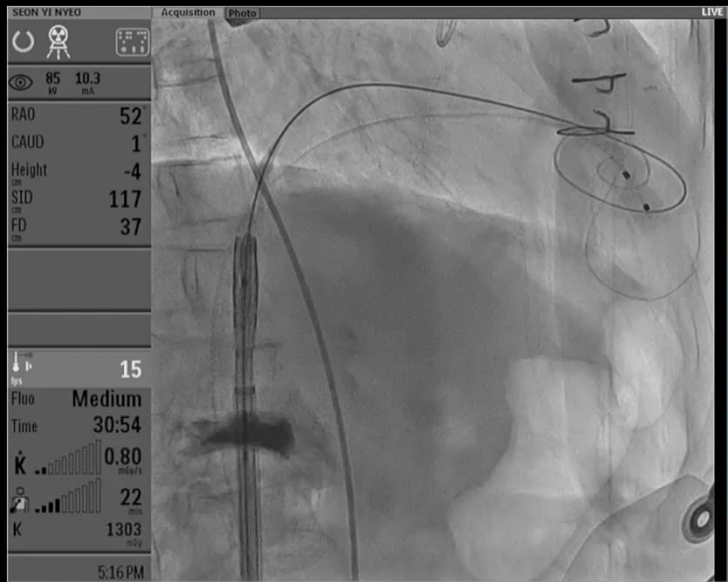
Old Epic 27 va

Wire Crossing

# Septosomy with 12 mm balloon

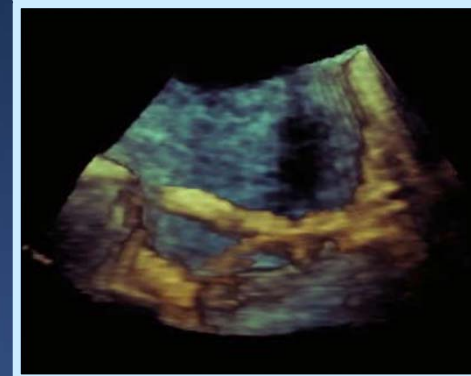
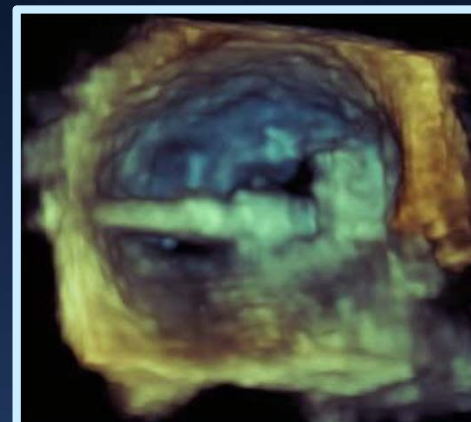
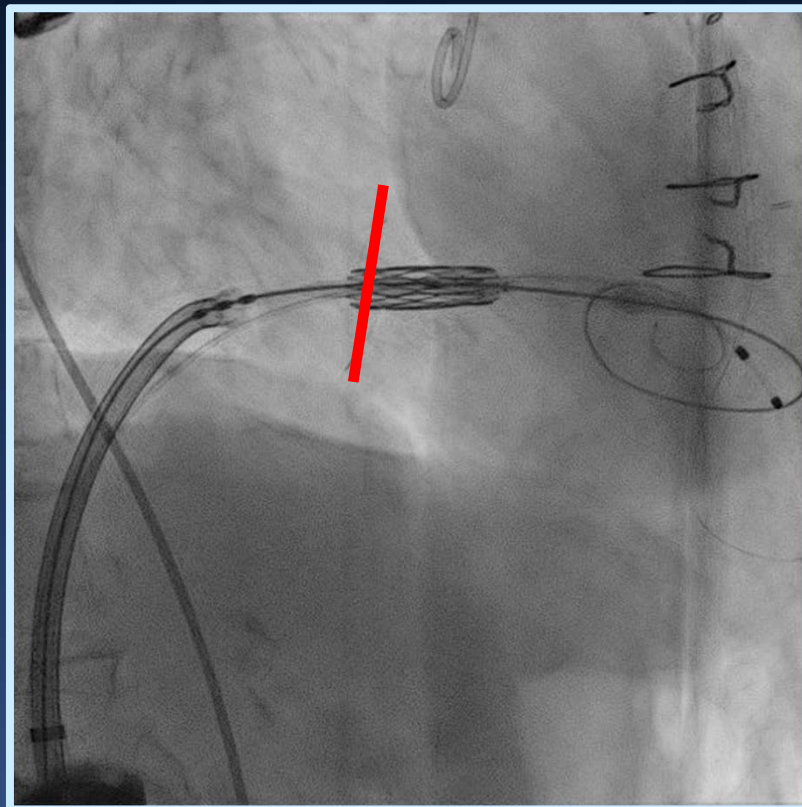




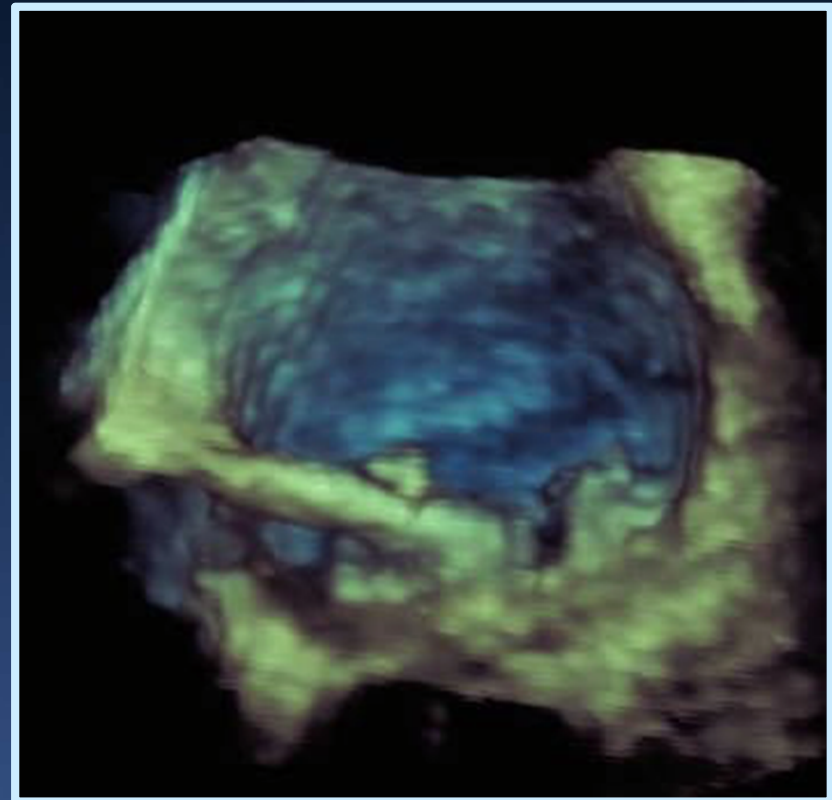
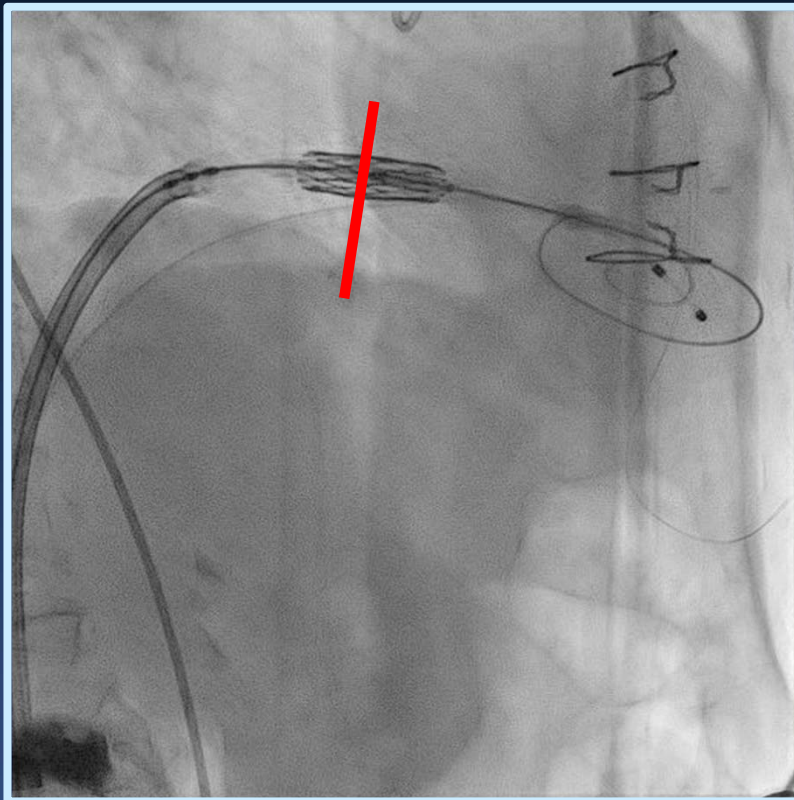


- *Crossing Septum & Mitral Valve*

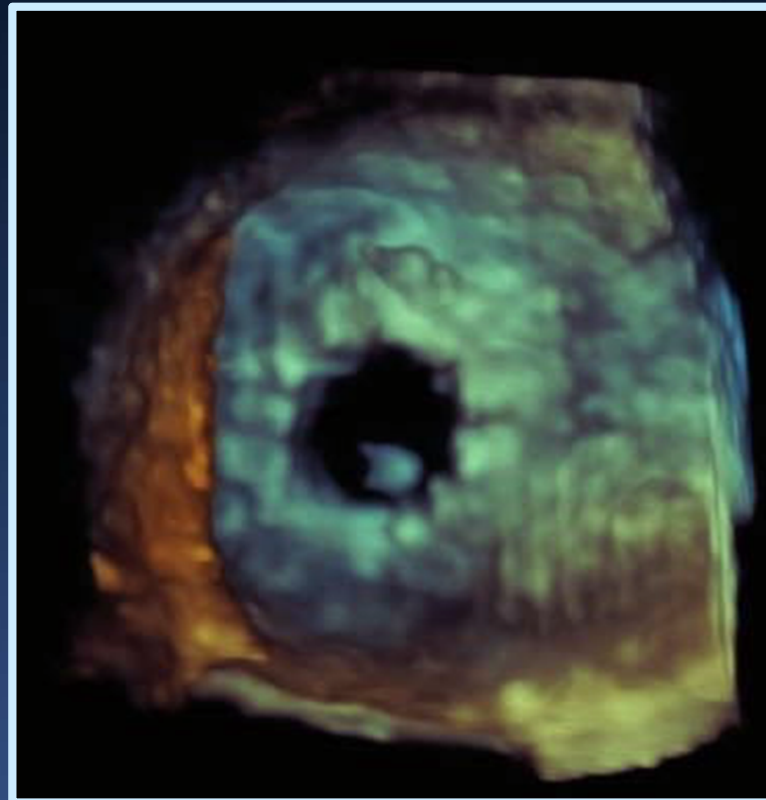
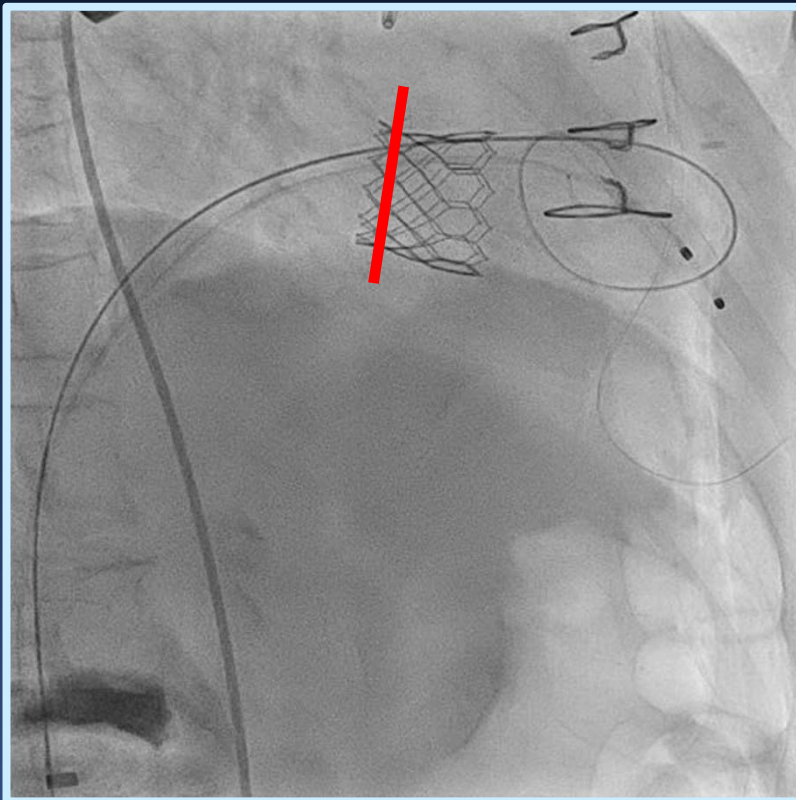
# Valve positioning



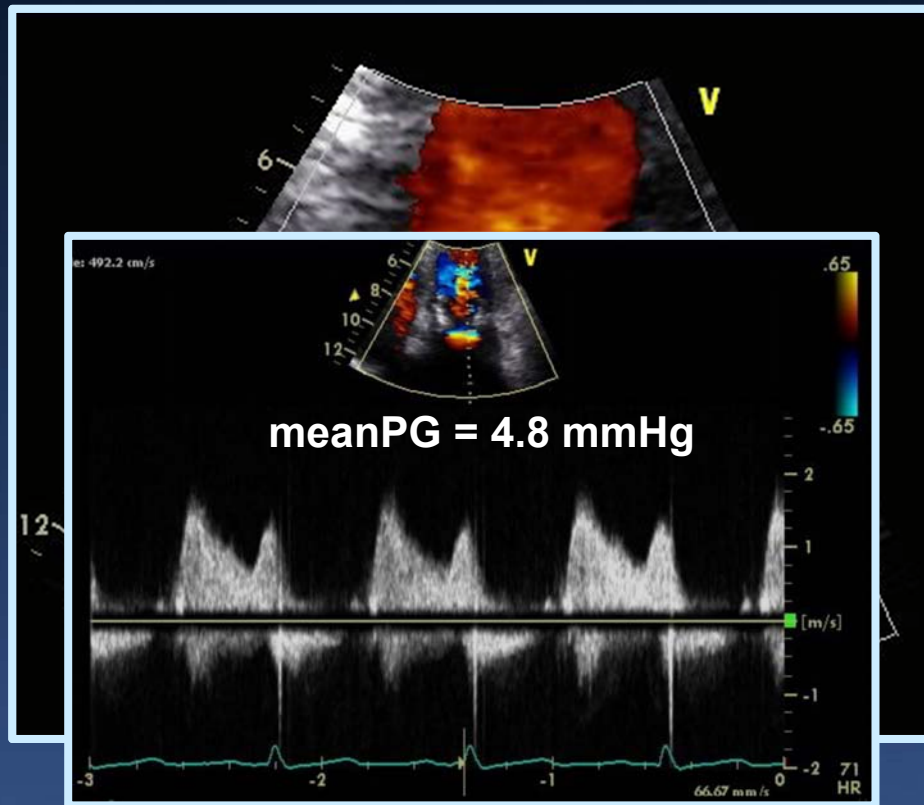
# Valve deployment



# Final result



# Post-procedure TTE

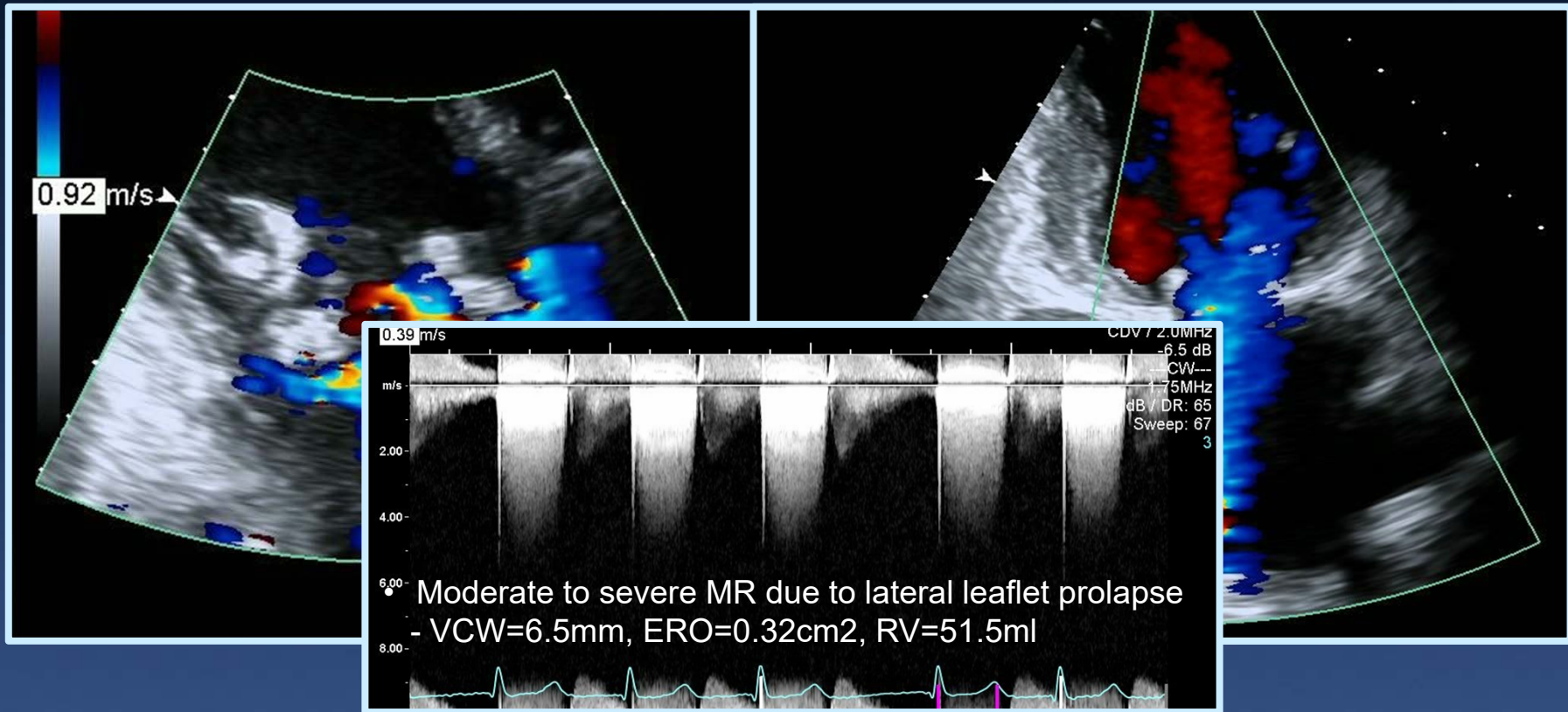


## Case II

- M/80
- C/C : Worsening dyspnea on exertion(NYHA III)(ICU admission due to pul.edema 1 month ago)
- PMHx : Rheumatic heart disease with severe MS s/p bioprosthetic MVR with 27 mm Epic valve(St. Jude Medical, St. Paul, MN), 2008), TV ring annuloplasty(2008), Persistent AF on anticoagulation, HTN
- STS score : 14%

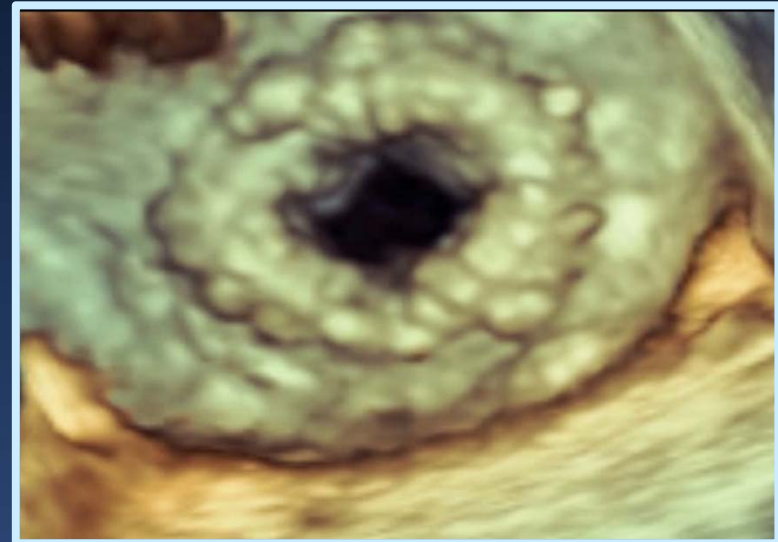
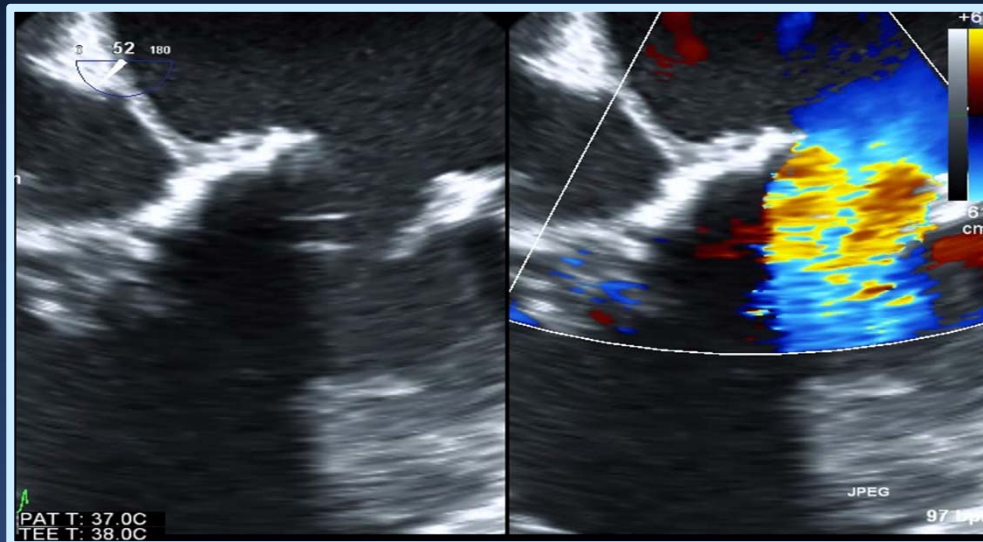


# Pre-procedure echo



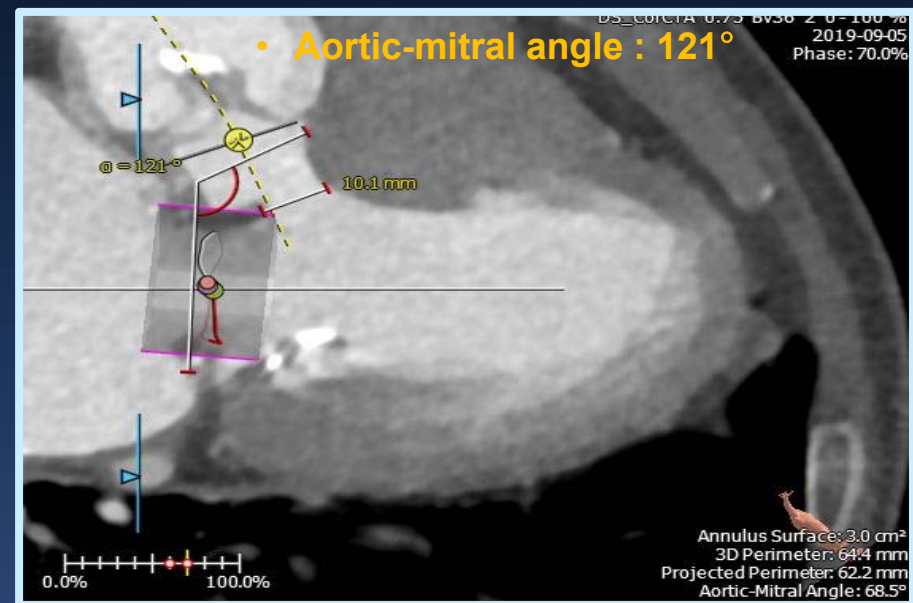
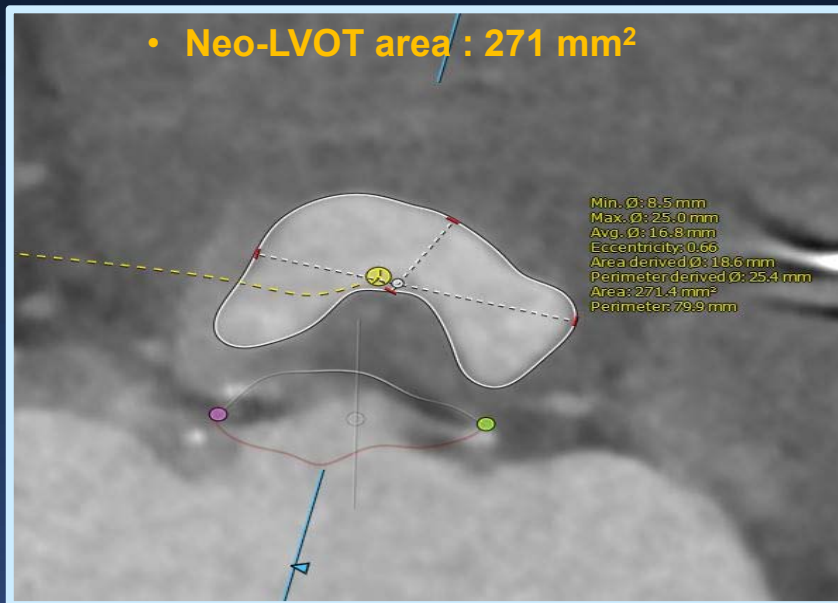
# Pre-procedure TEE

- Moderate to severe MR due to lateral leaflet prolapse

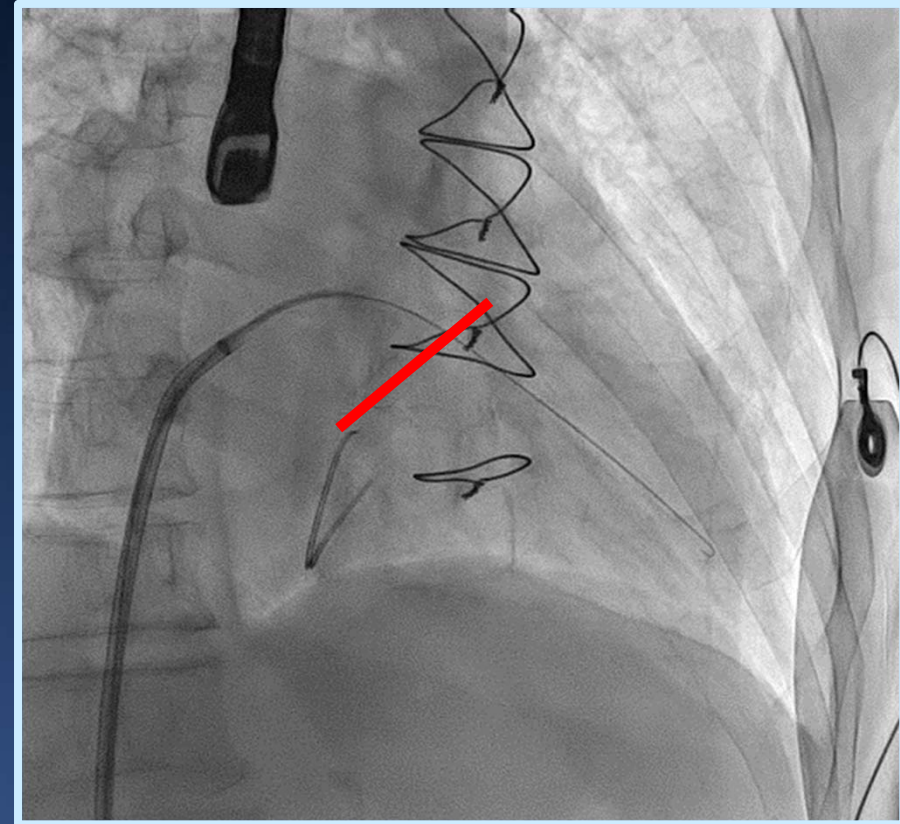
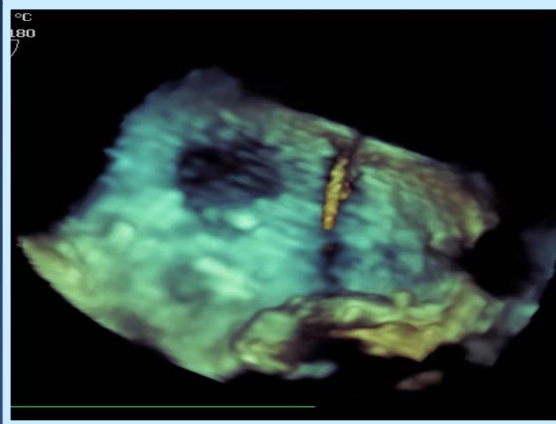
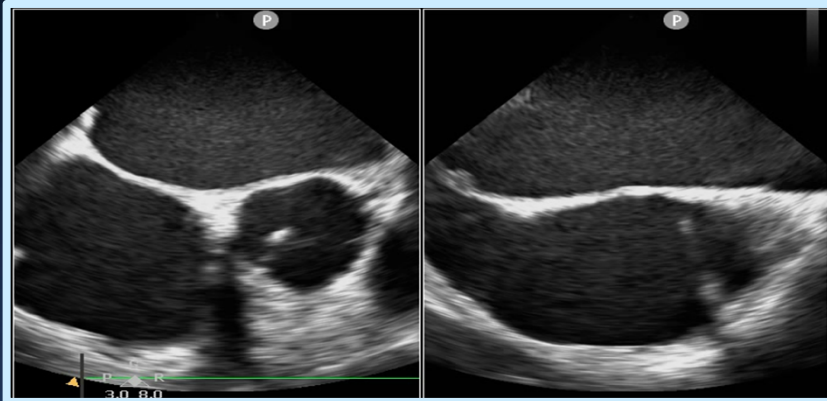




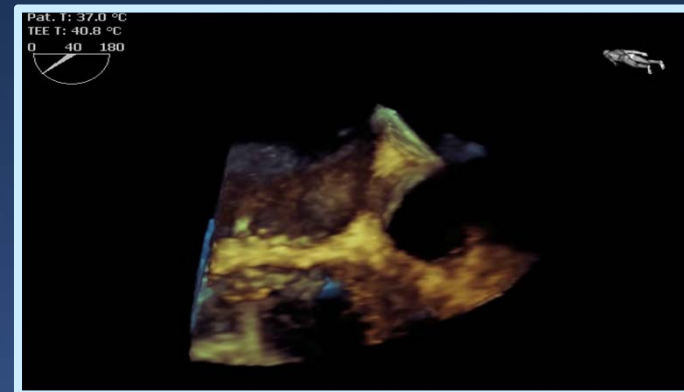
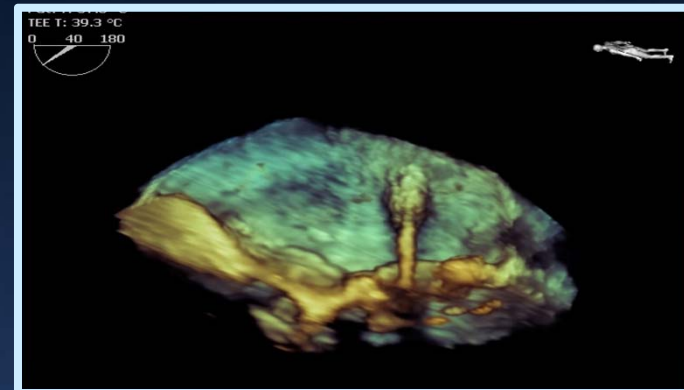
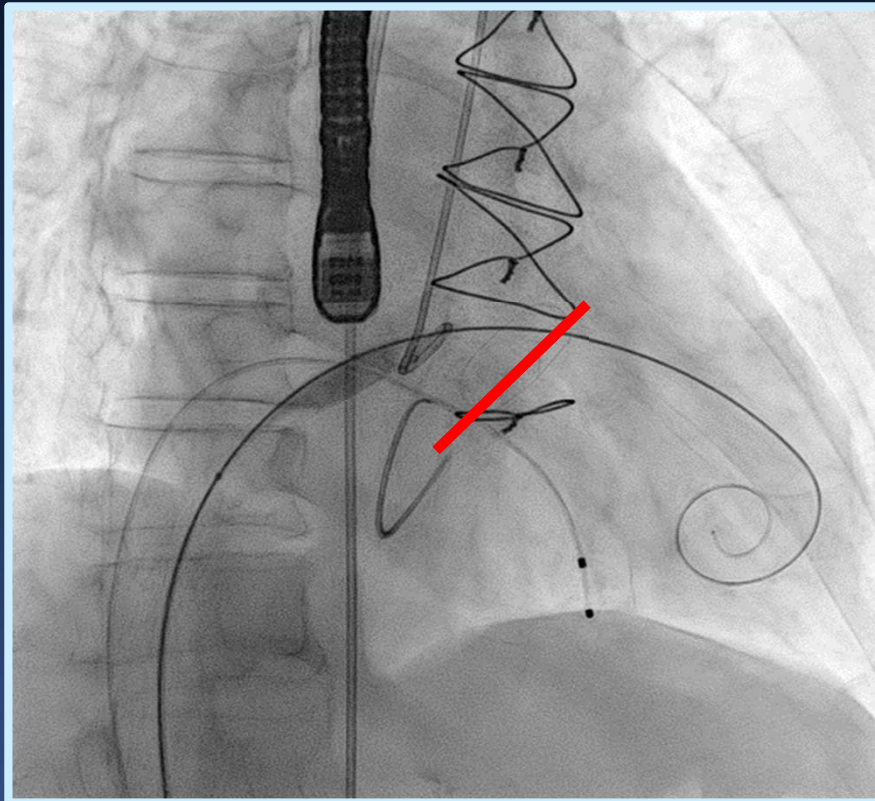
# CT angiogram



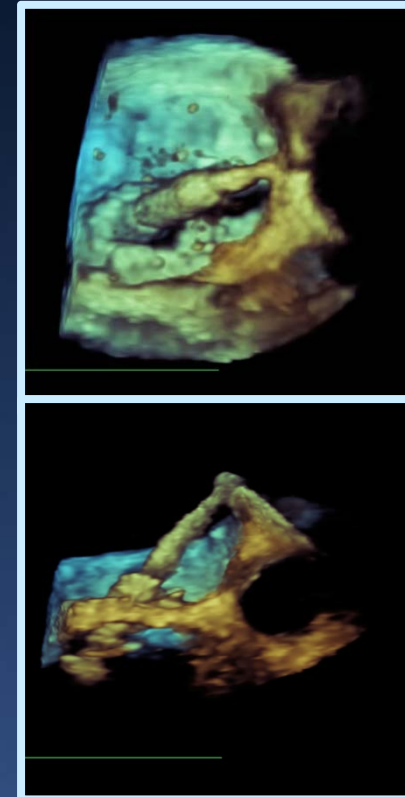
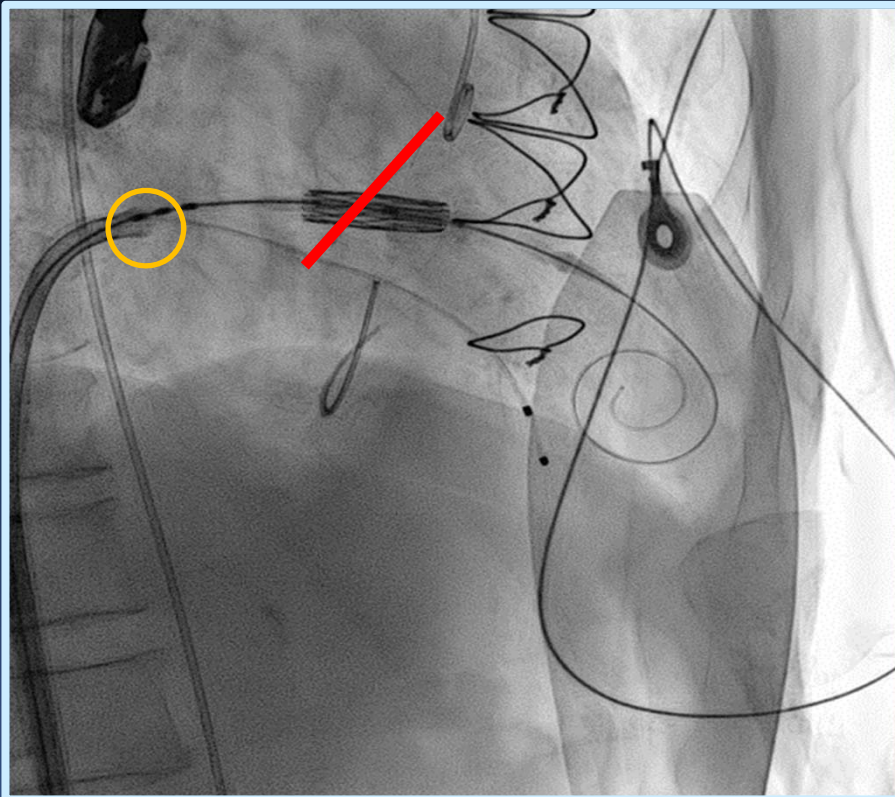
# Trans-septal puncture and wiring



# Septostomy



# Valve deployment



# Final Result

