

# Surgical Treatment of Left Ventricular Outflow Tract Obstruction: How WE Do It

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# Disclosures

- Edwards Lifesciences- Consultant, Investigator
- Abbot – Consultant
- LivaNova – Consultant, Investigator
- Cryolife – Consultant, Investigator
- WL Gore - Investigator

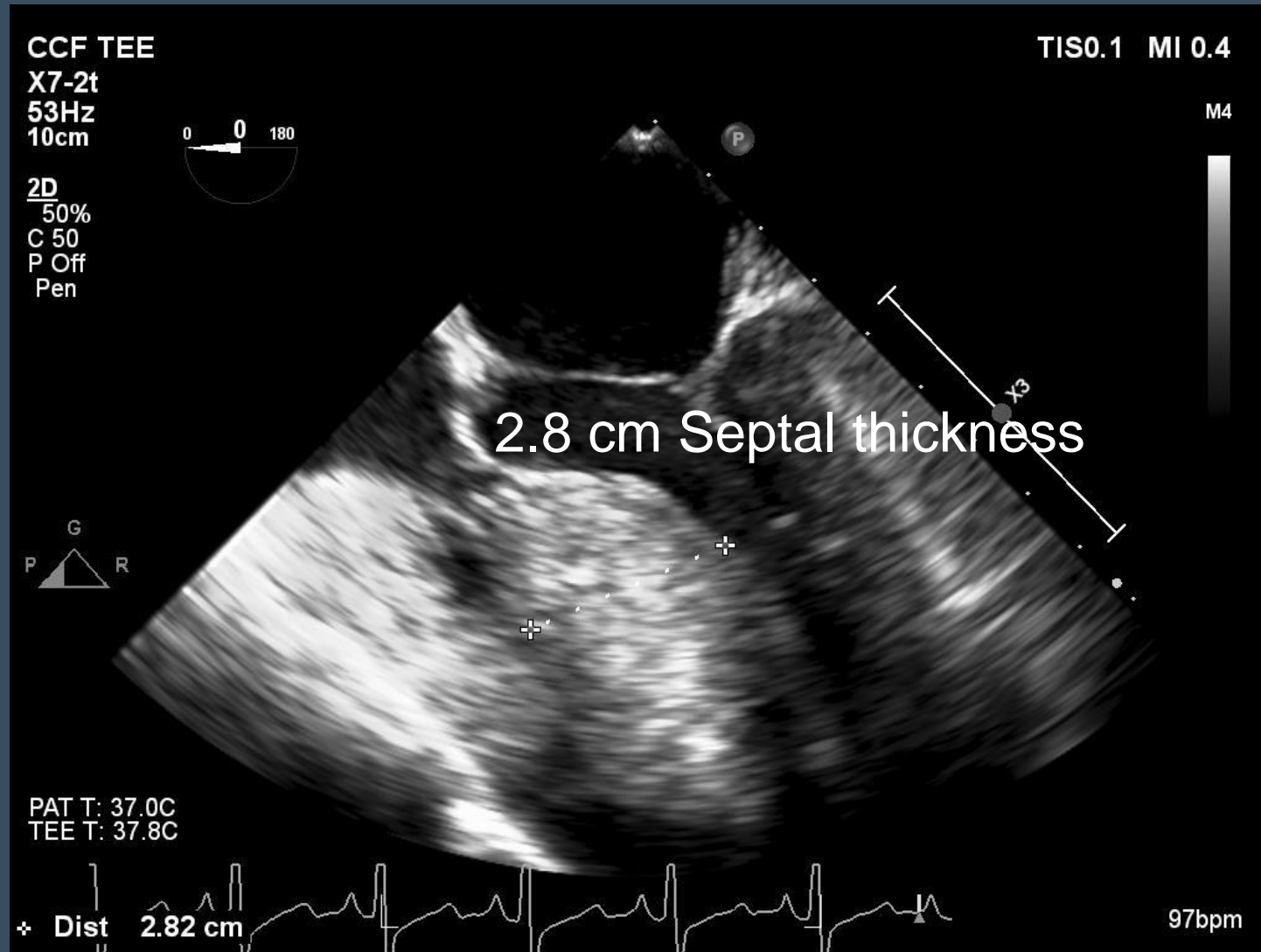


# Objectives

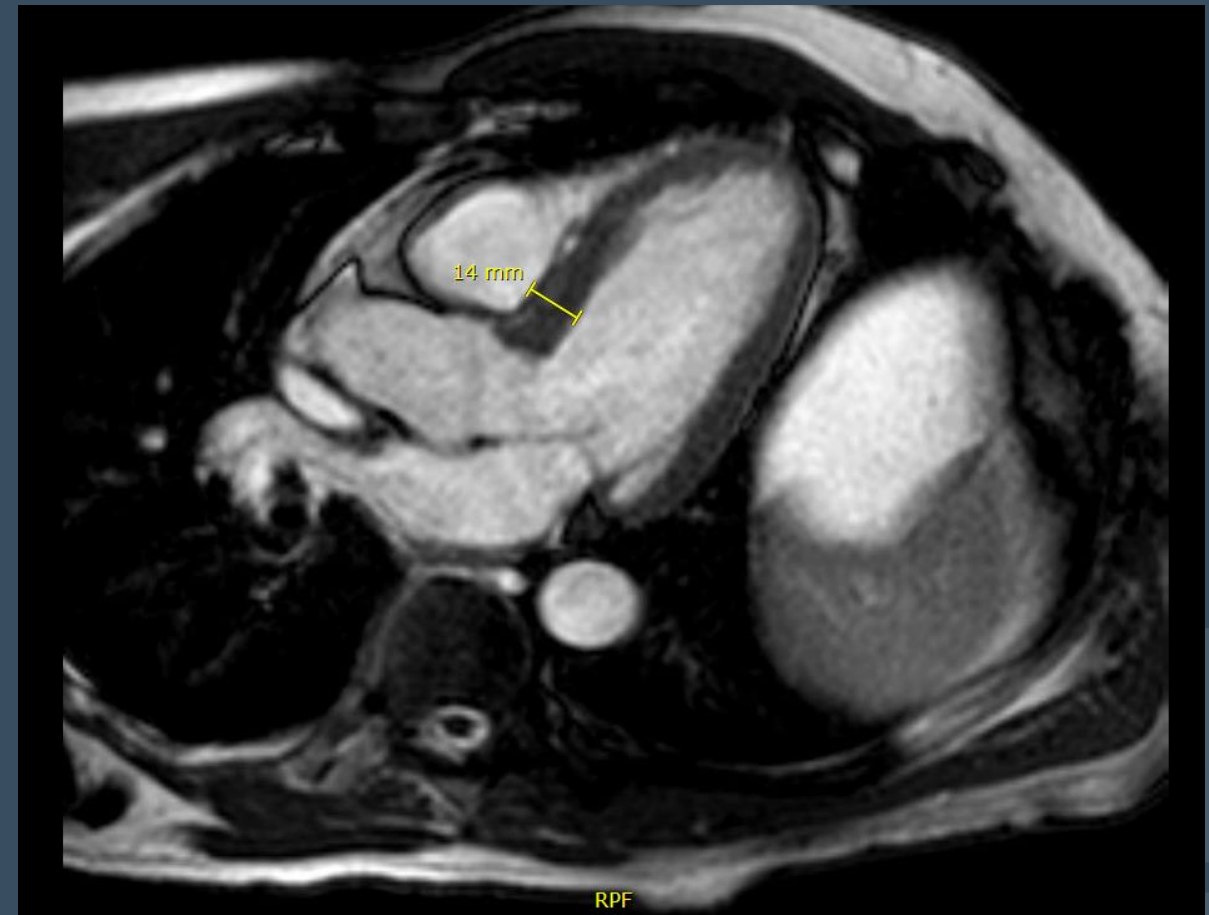
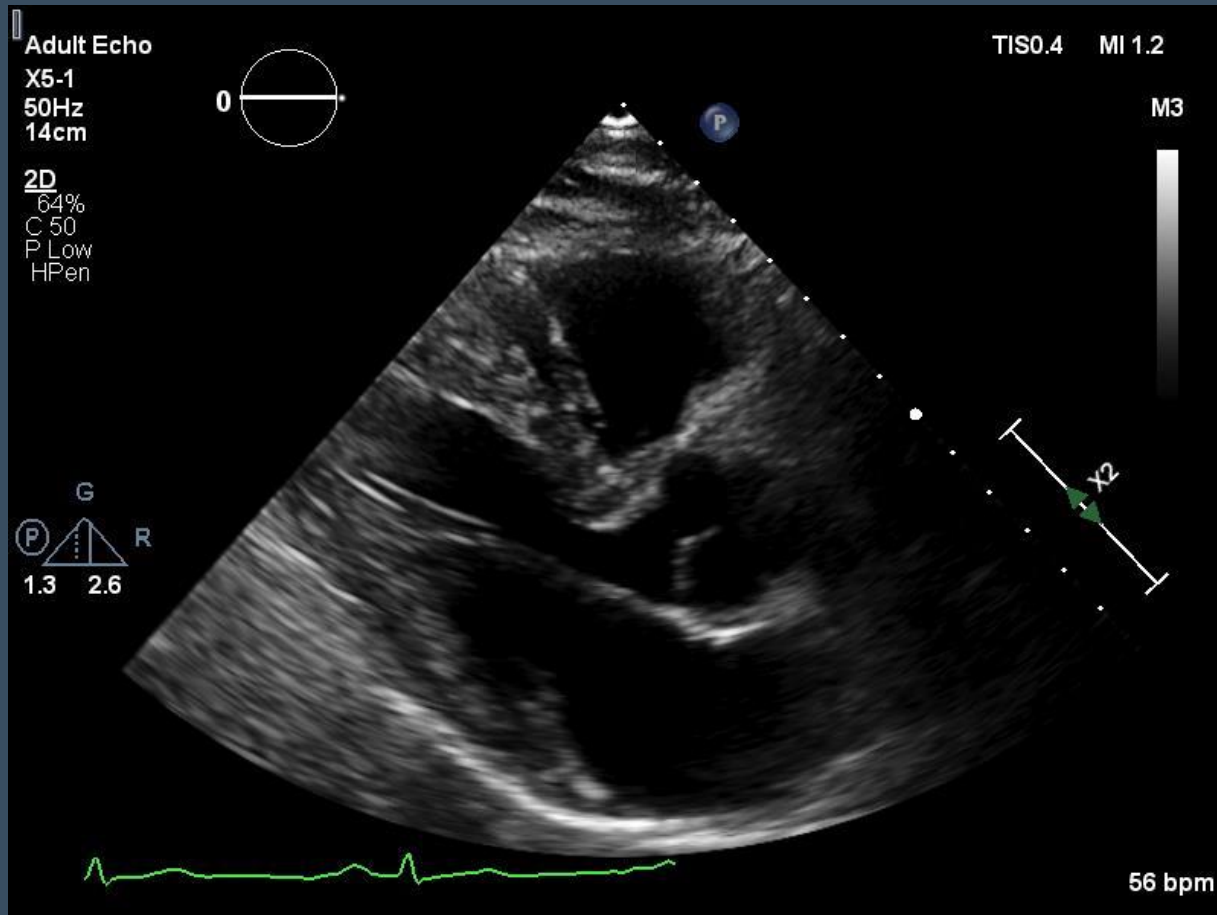
- What are the operative considerations for managing LVOT obstruction
- When is myectomy vs alternative procedures indicated and how do we do it?



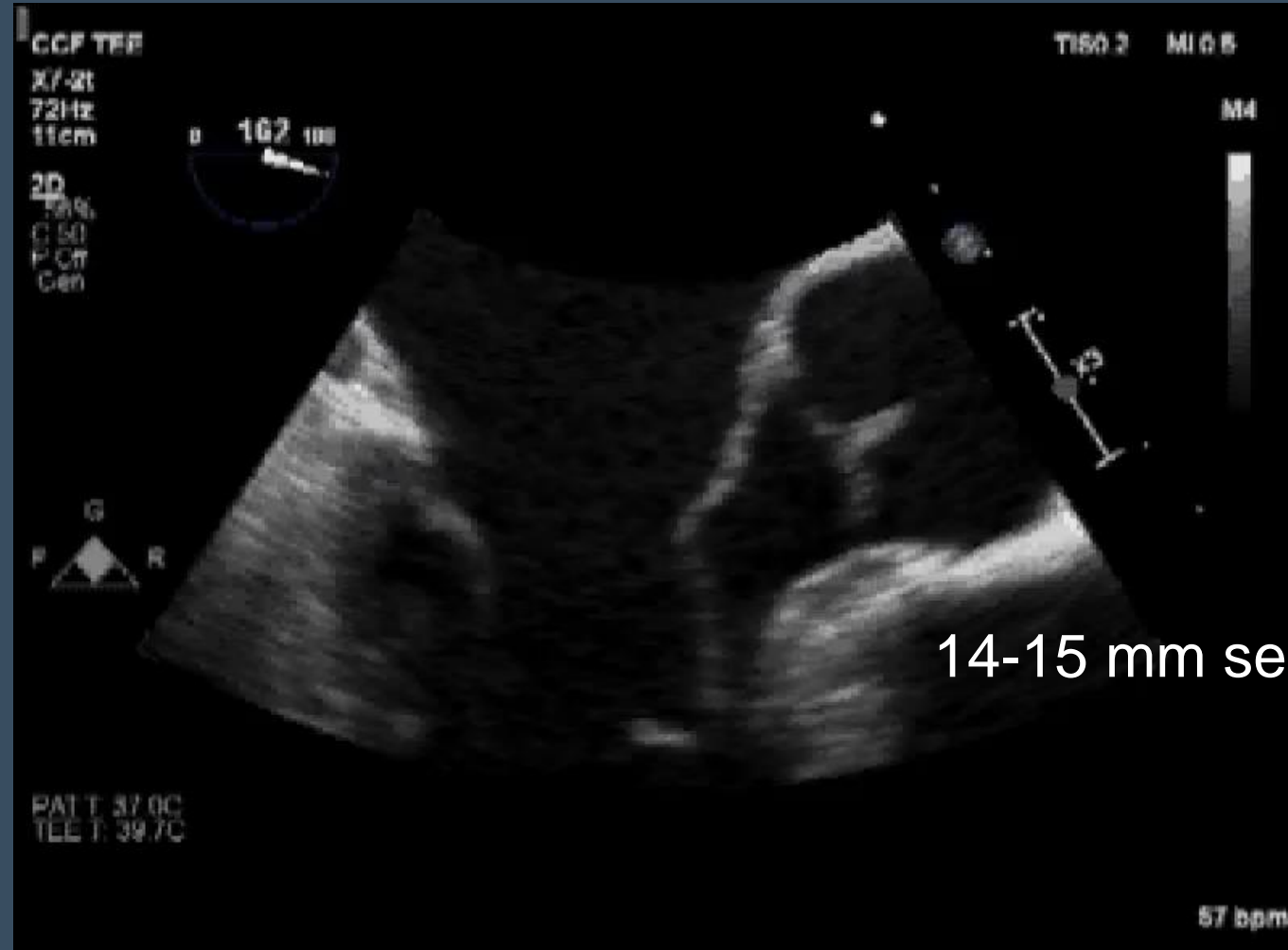
# 16 y.o. with severe LVOTO



50 yo with numerous episodes of near syncope and exercise induced SAM with gradient of 182 mm Hg. MRI report "no LVH".



60 yo with long anterior leaflet and a septum of 15 mm.



# Patients

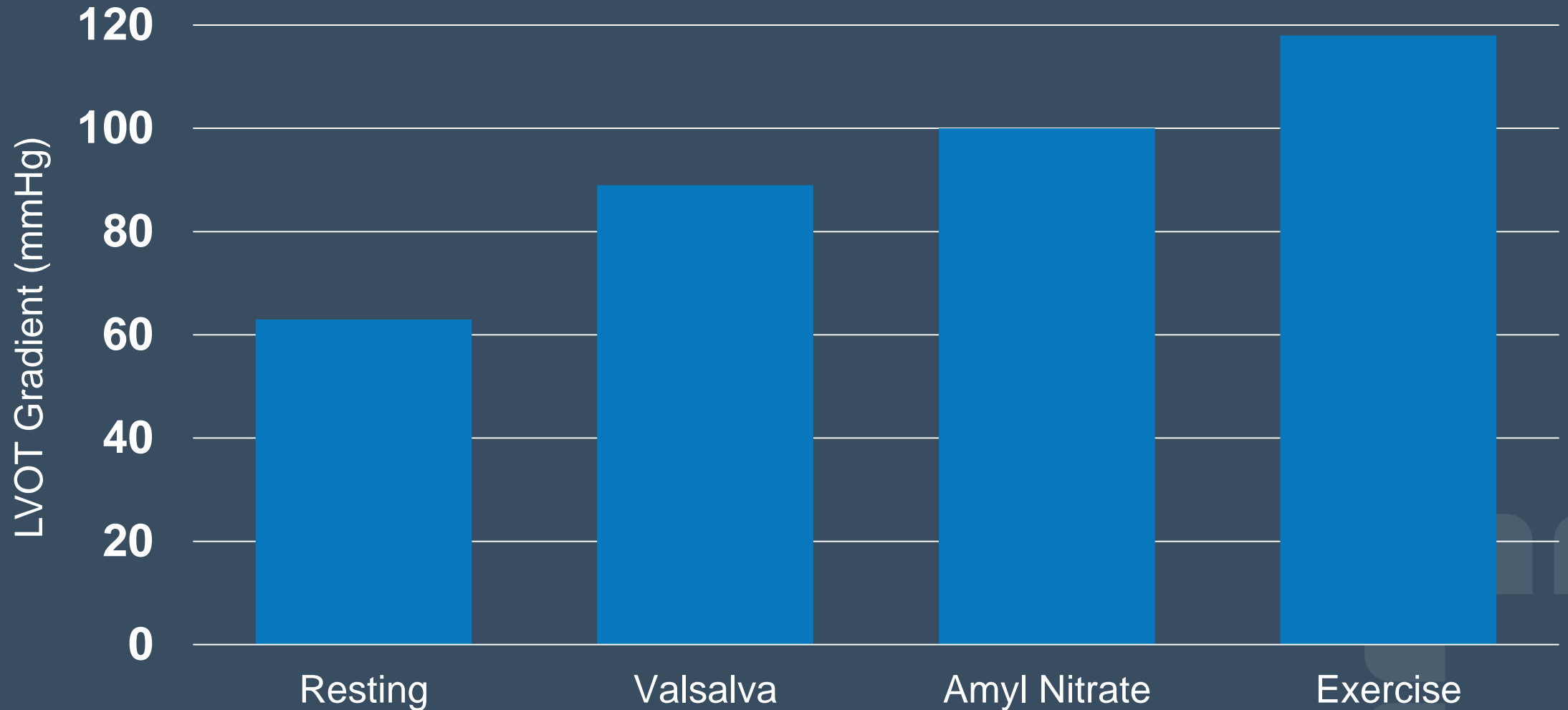
January 2005 – December 2015

1,549 patients

1,559 operations

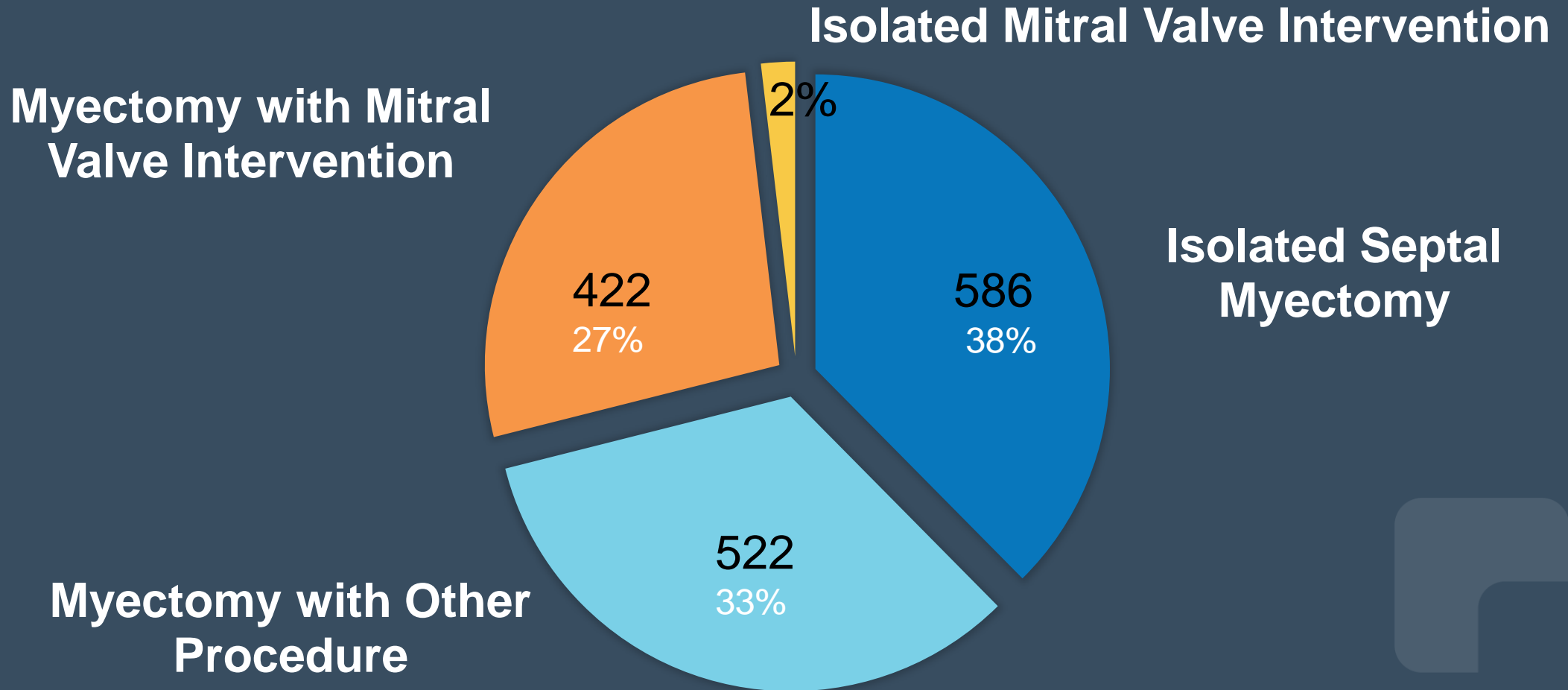


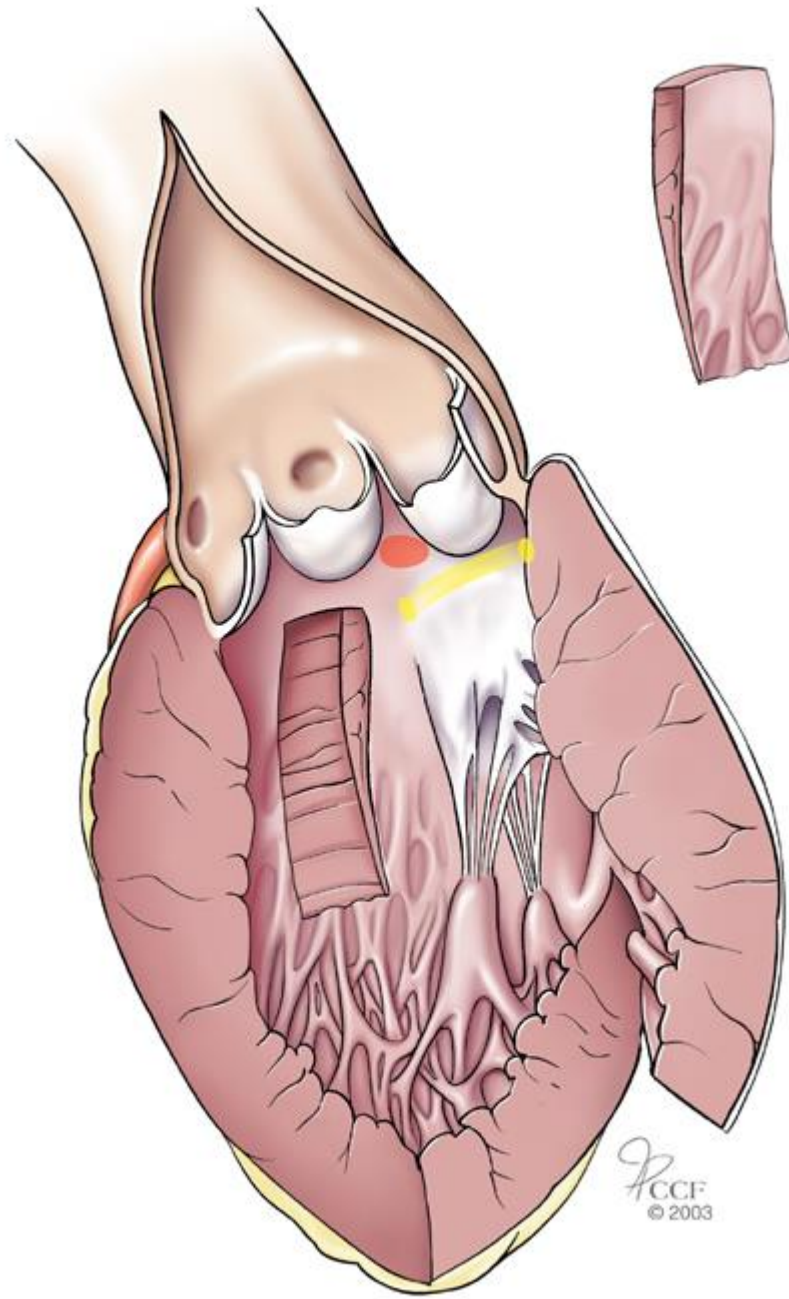
# Preoperative LVOT Gradients

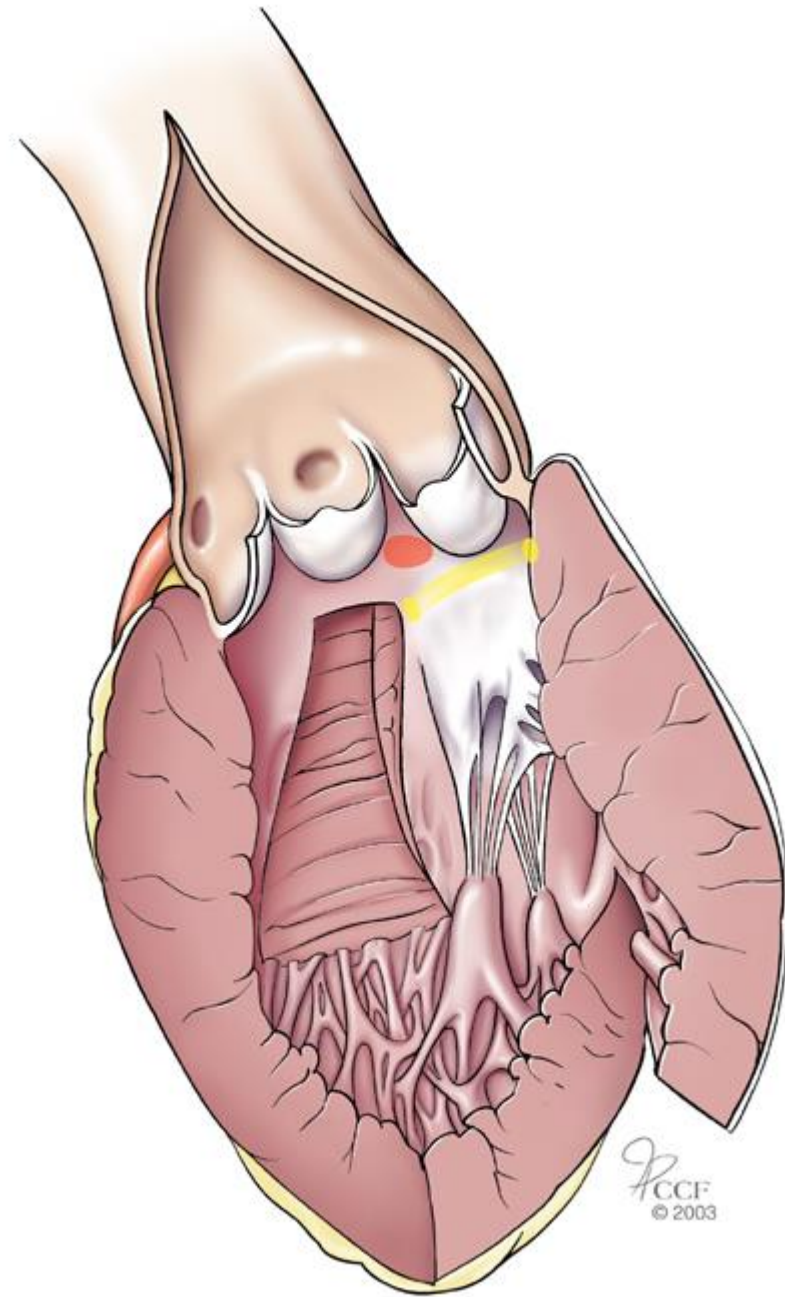


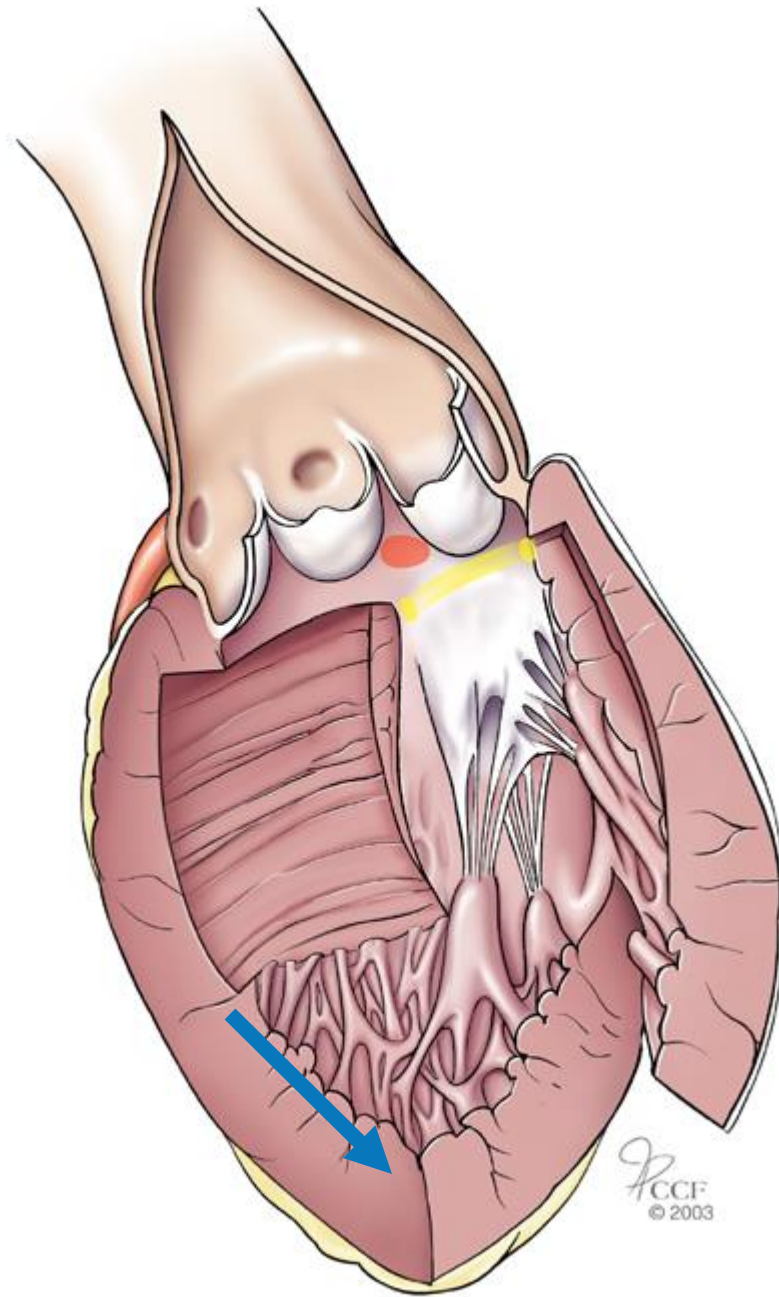


# Operations Performed





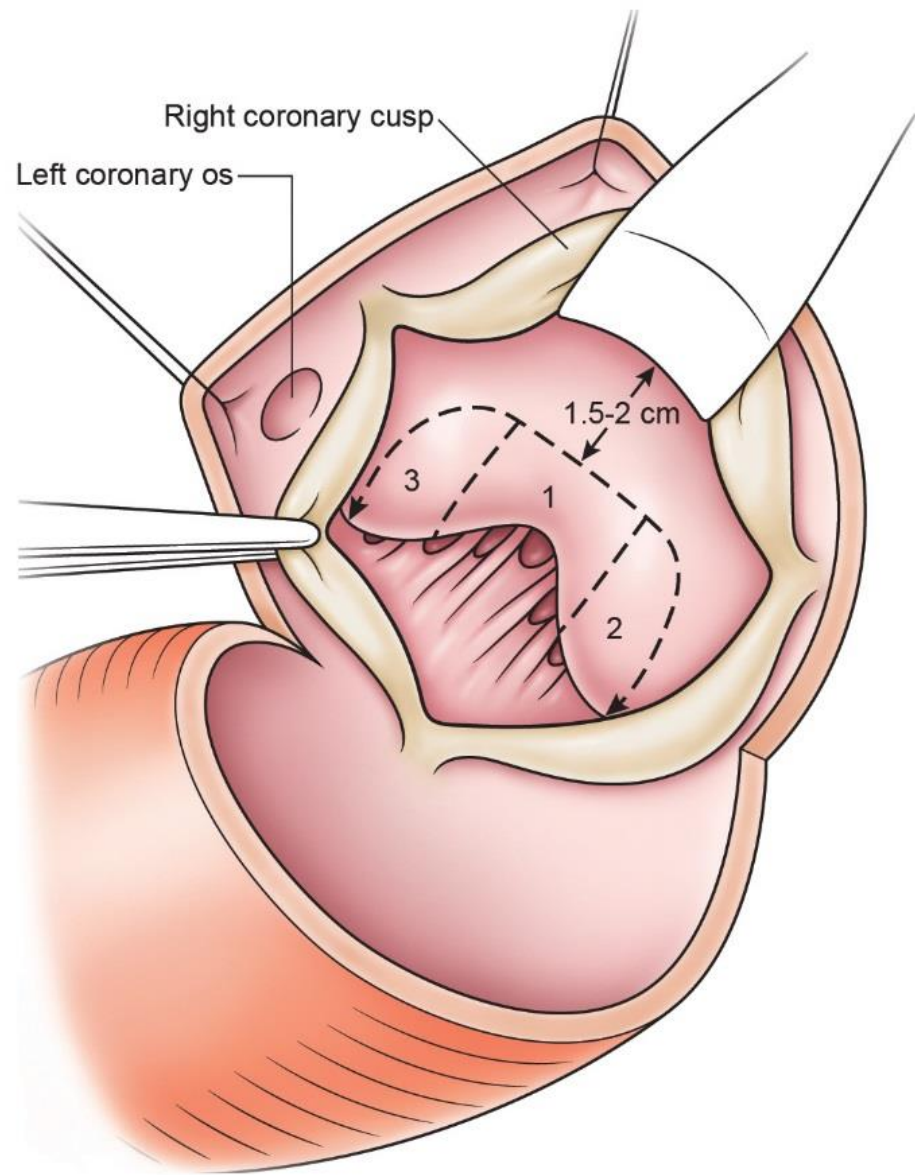




1 L 2.1 cm



69  
HR



Right coronary cusp

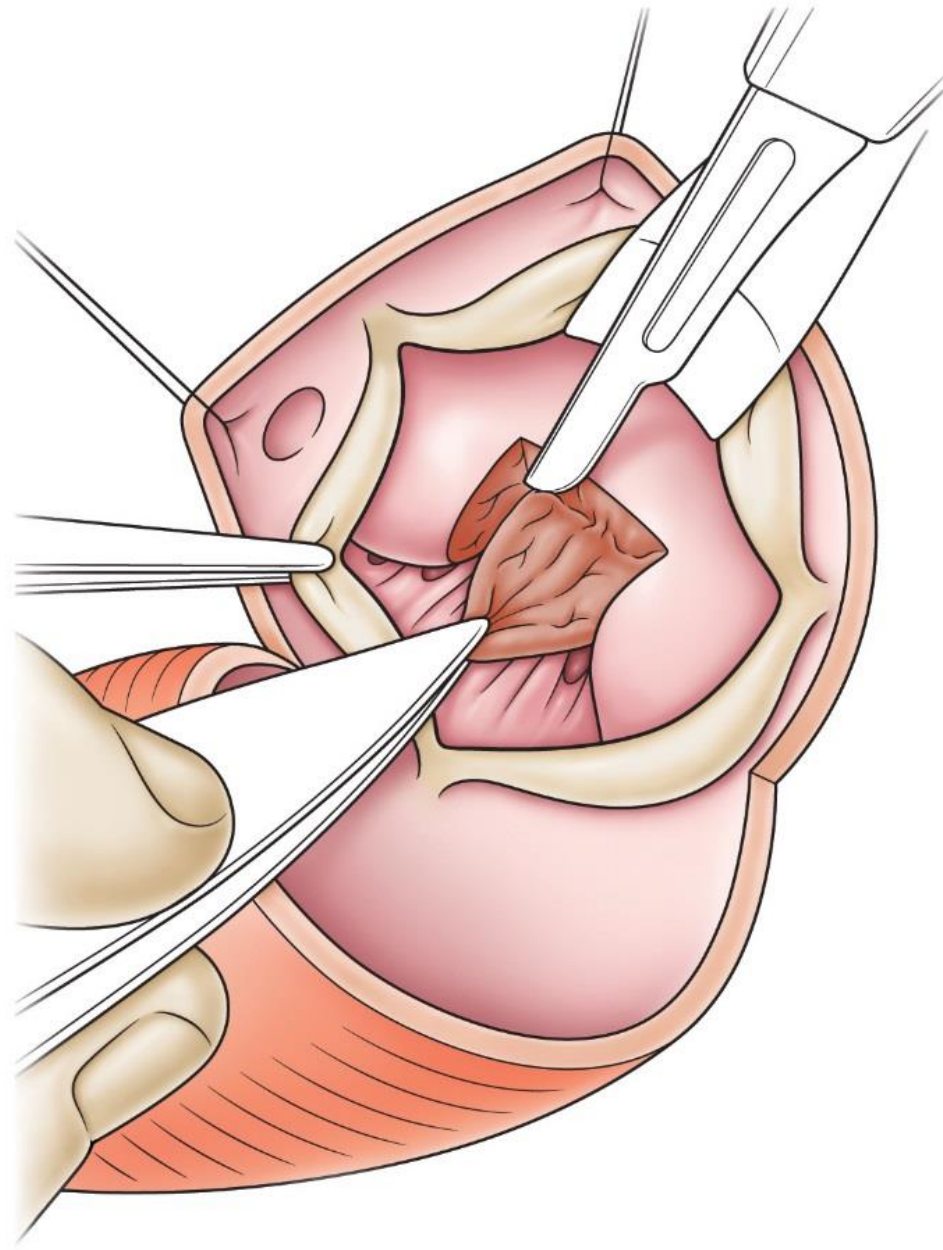
Left coronary os

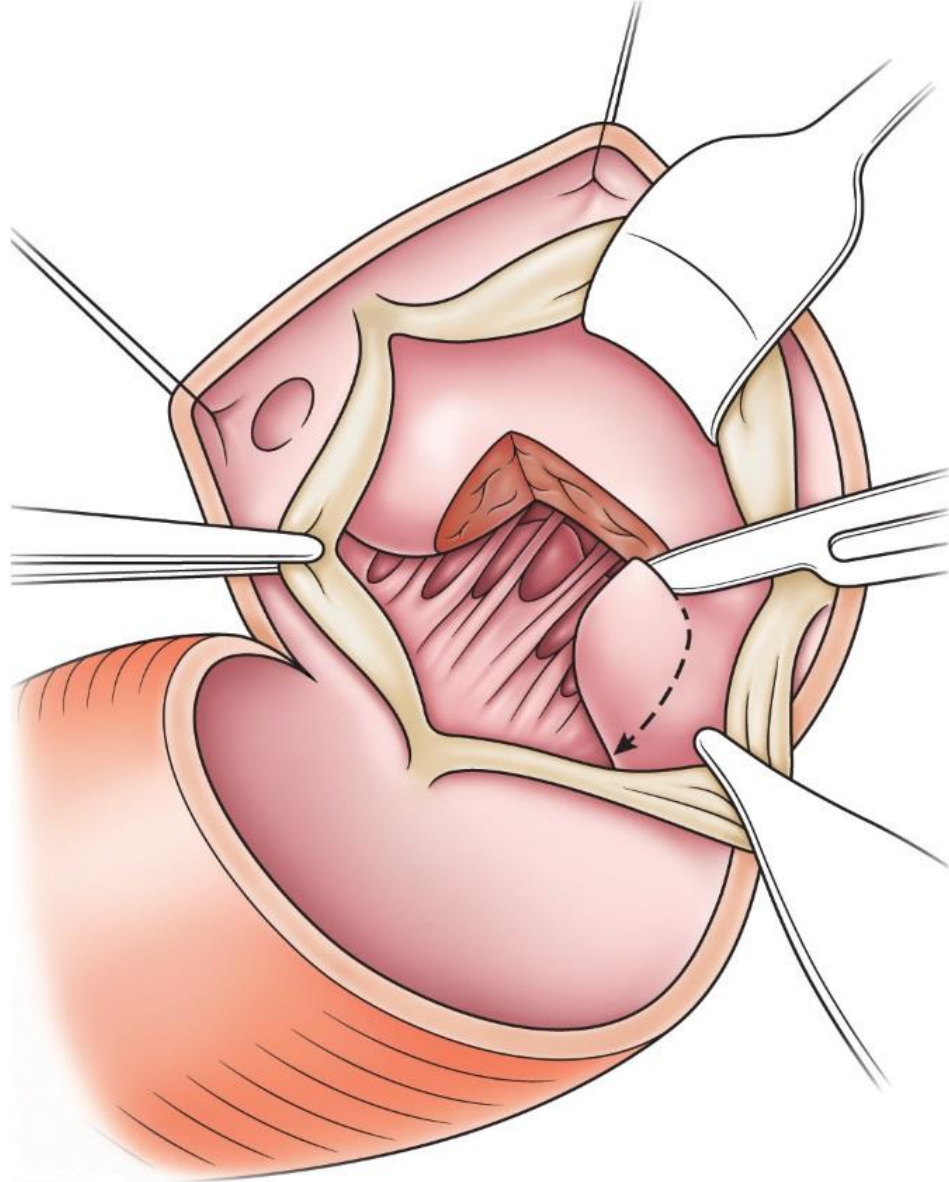
1.5-2 cm

3

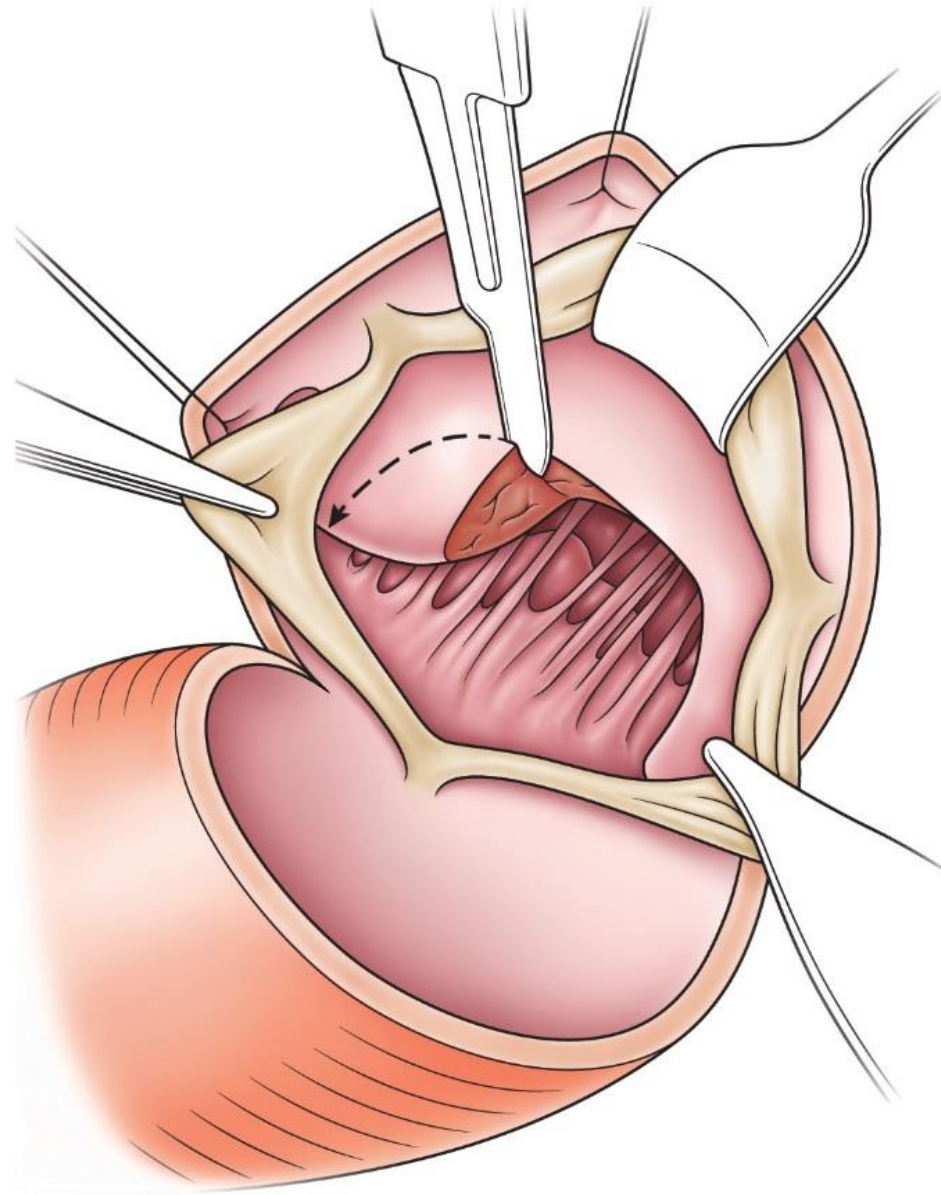
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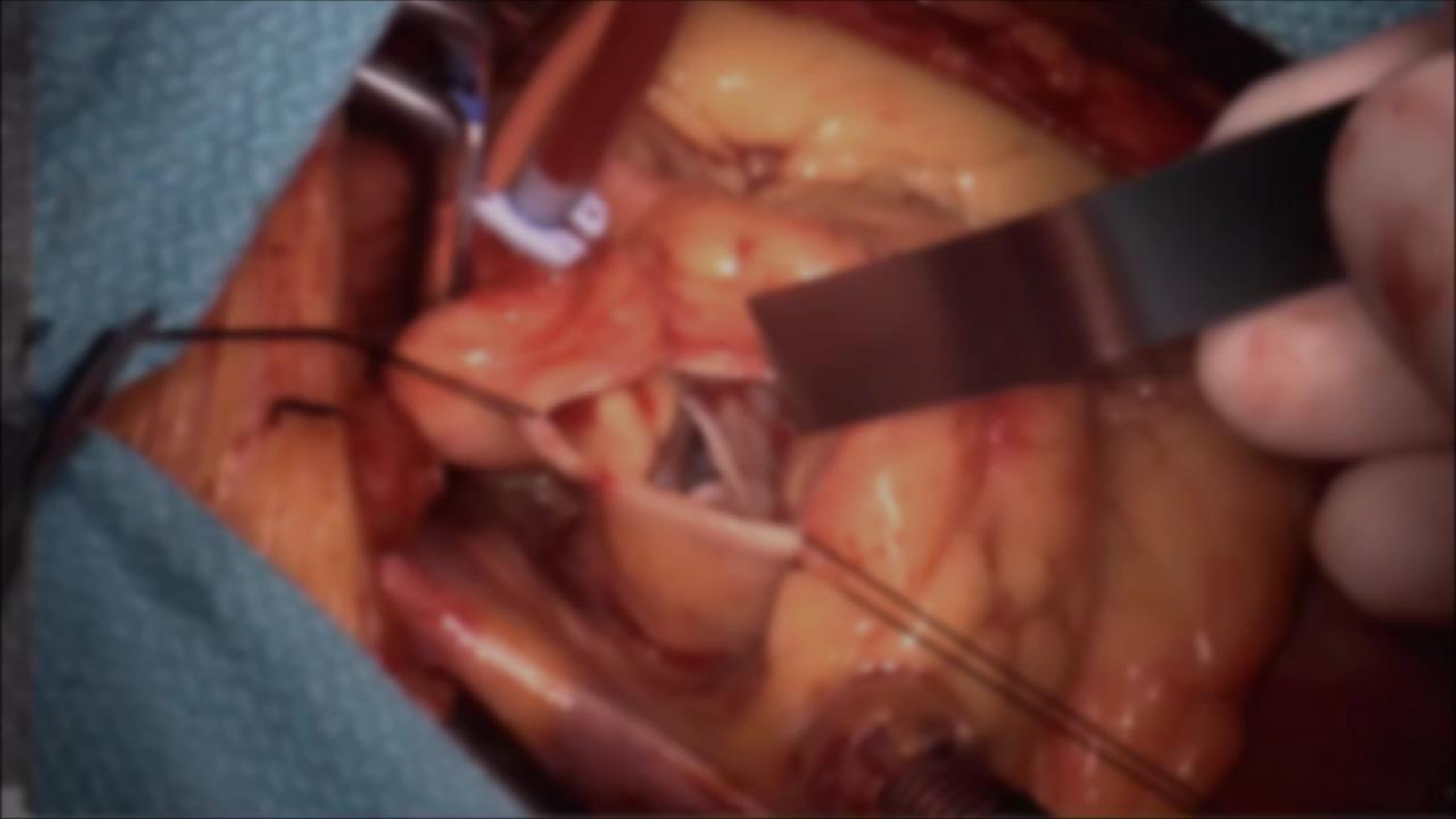
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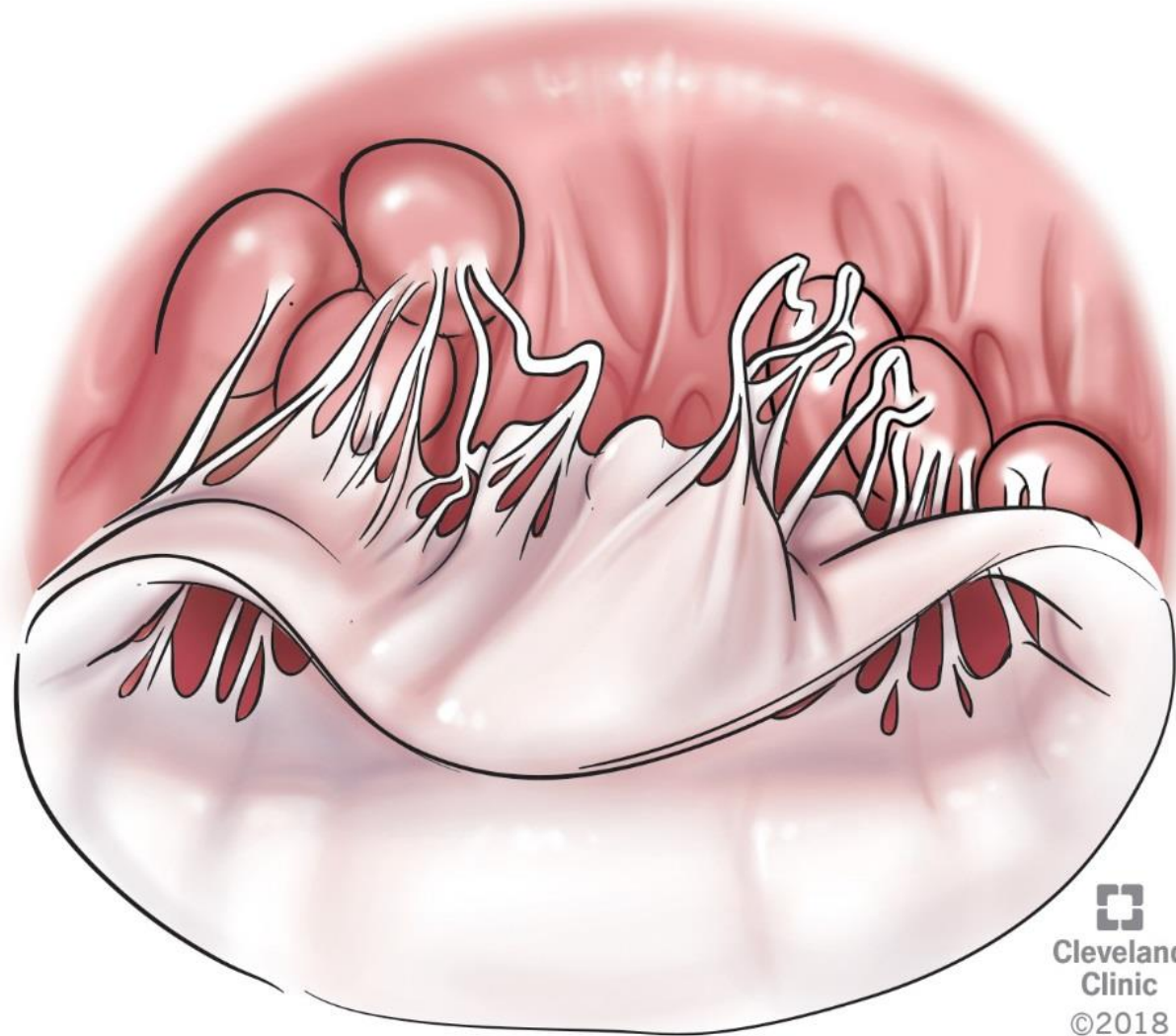


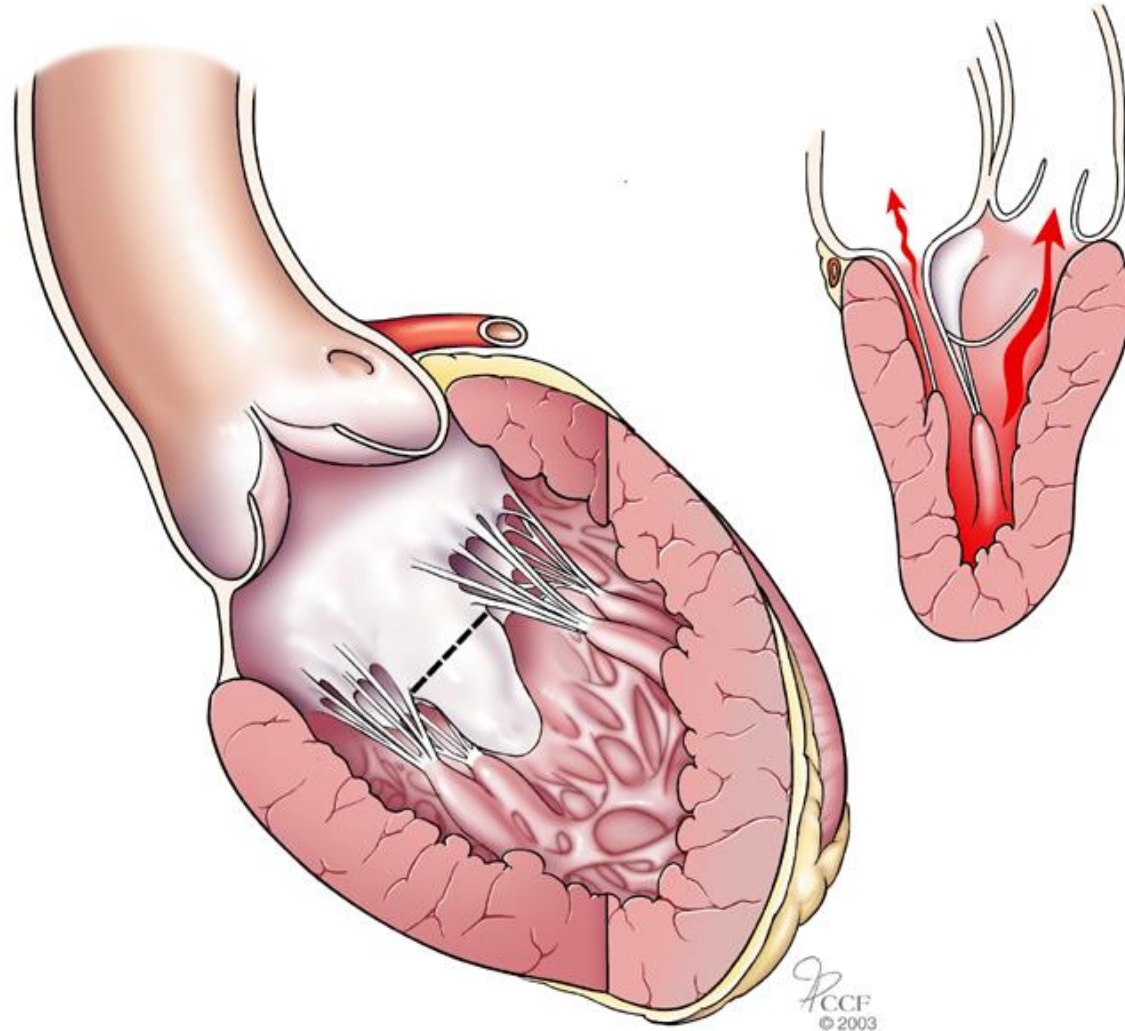


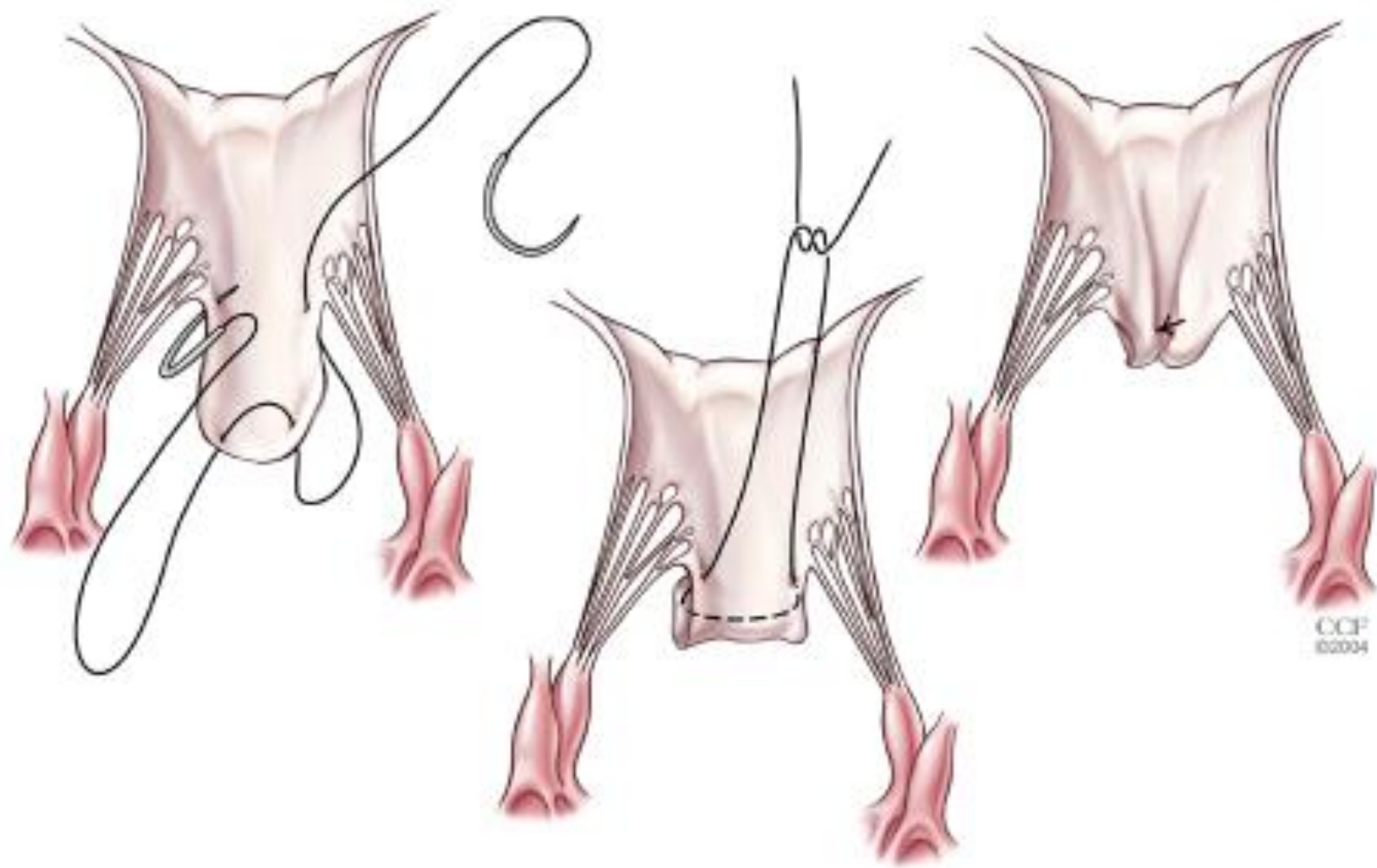




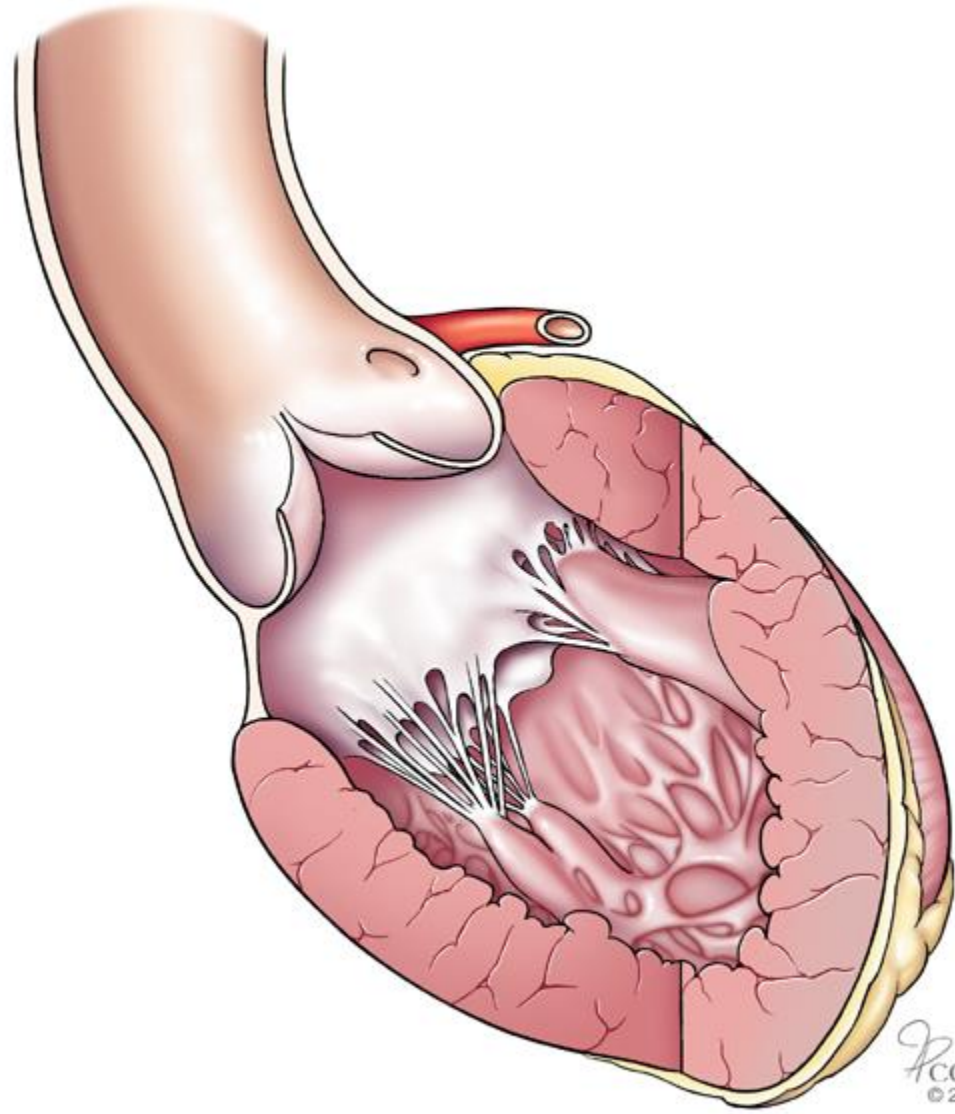




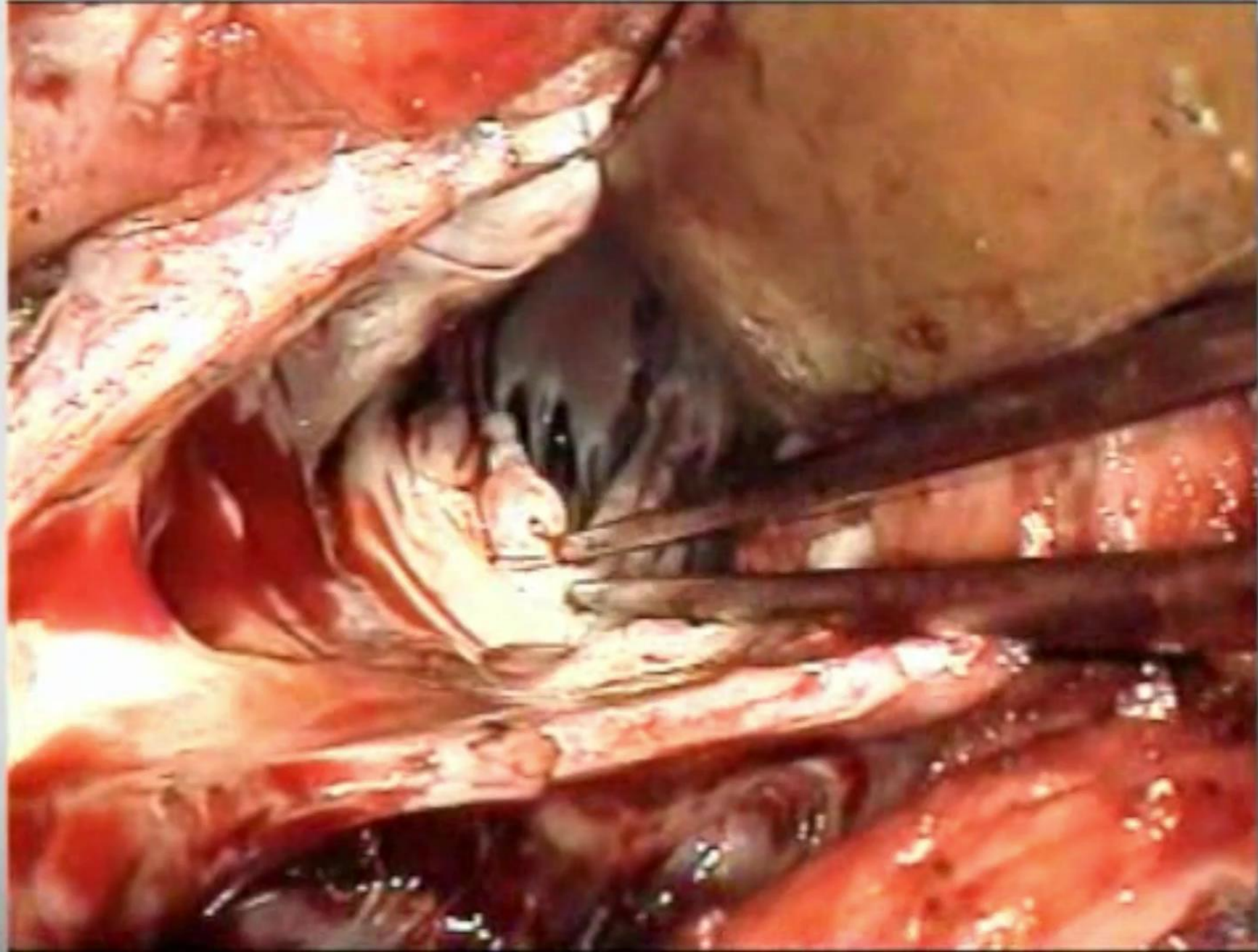


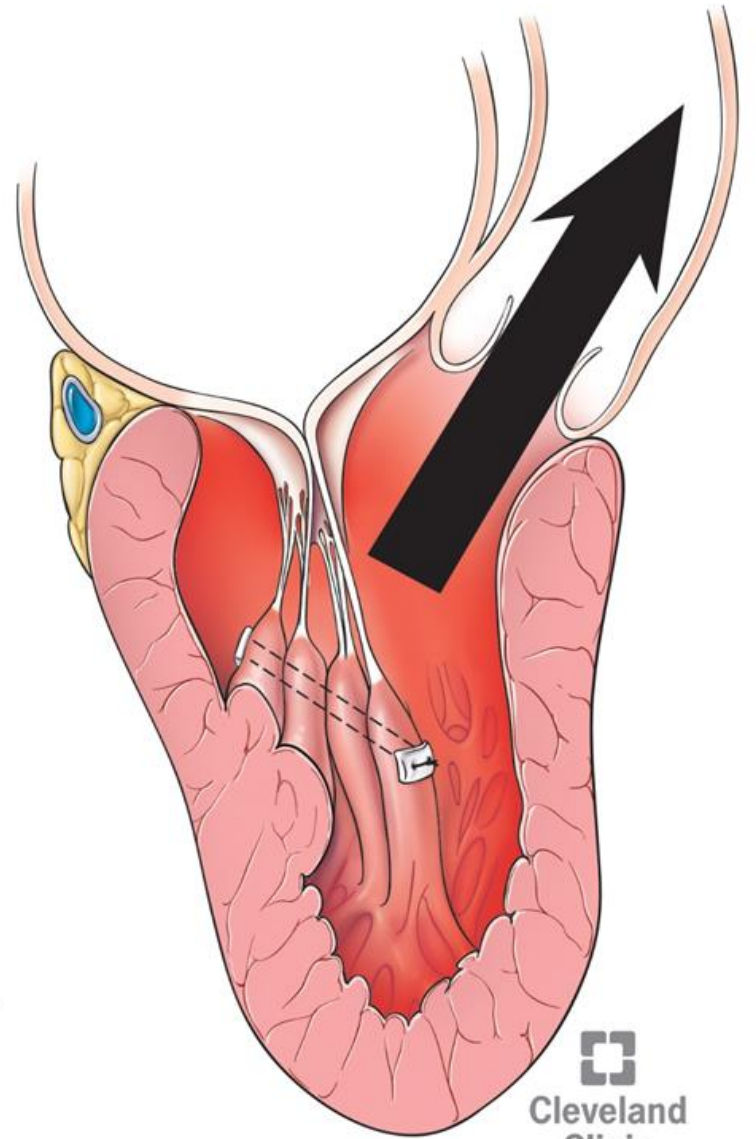
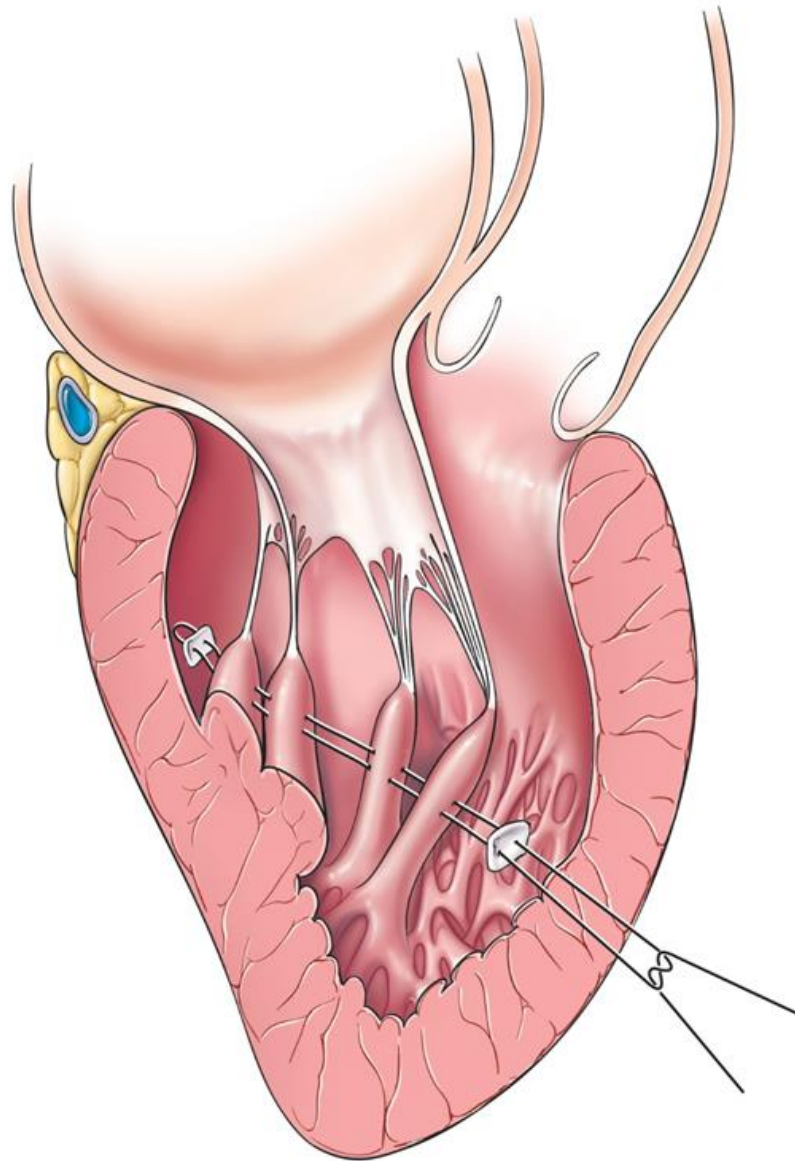
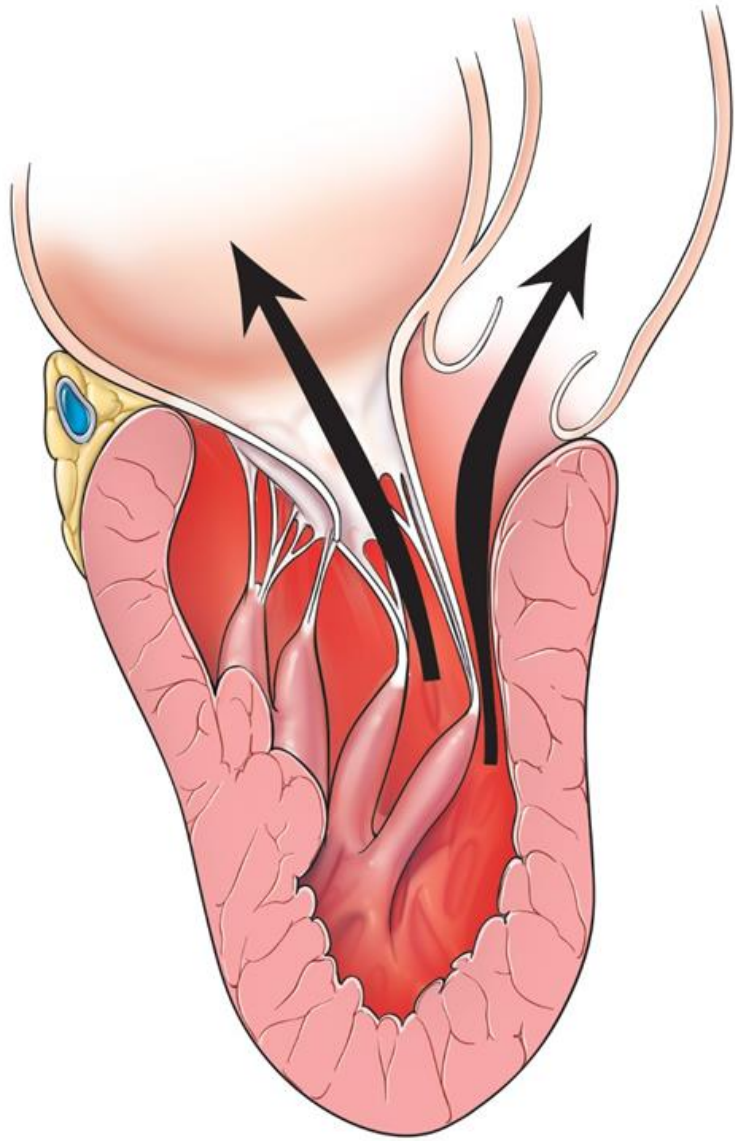


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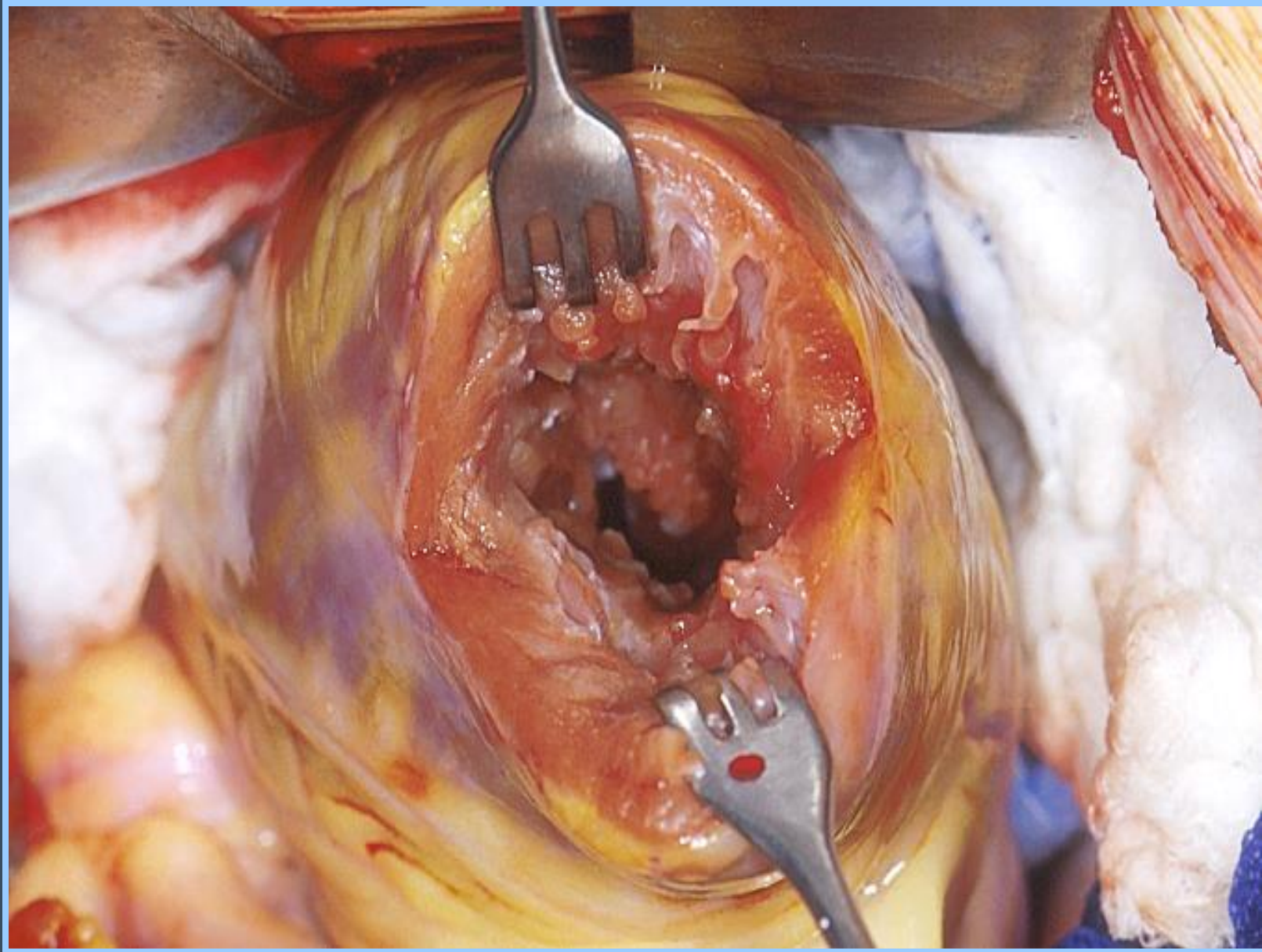
PCCF  
© 2003



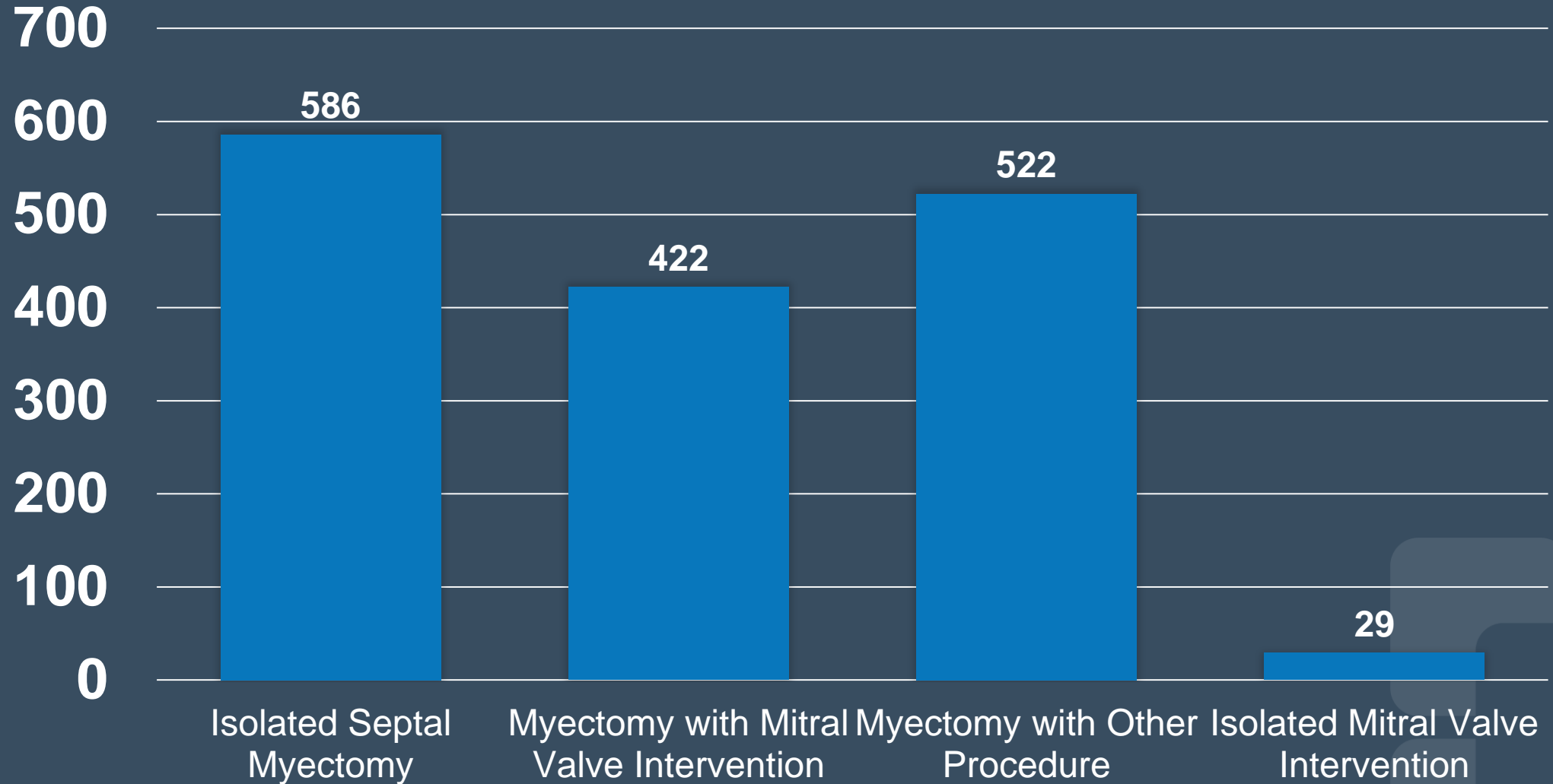




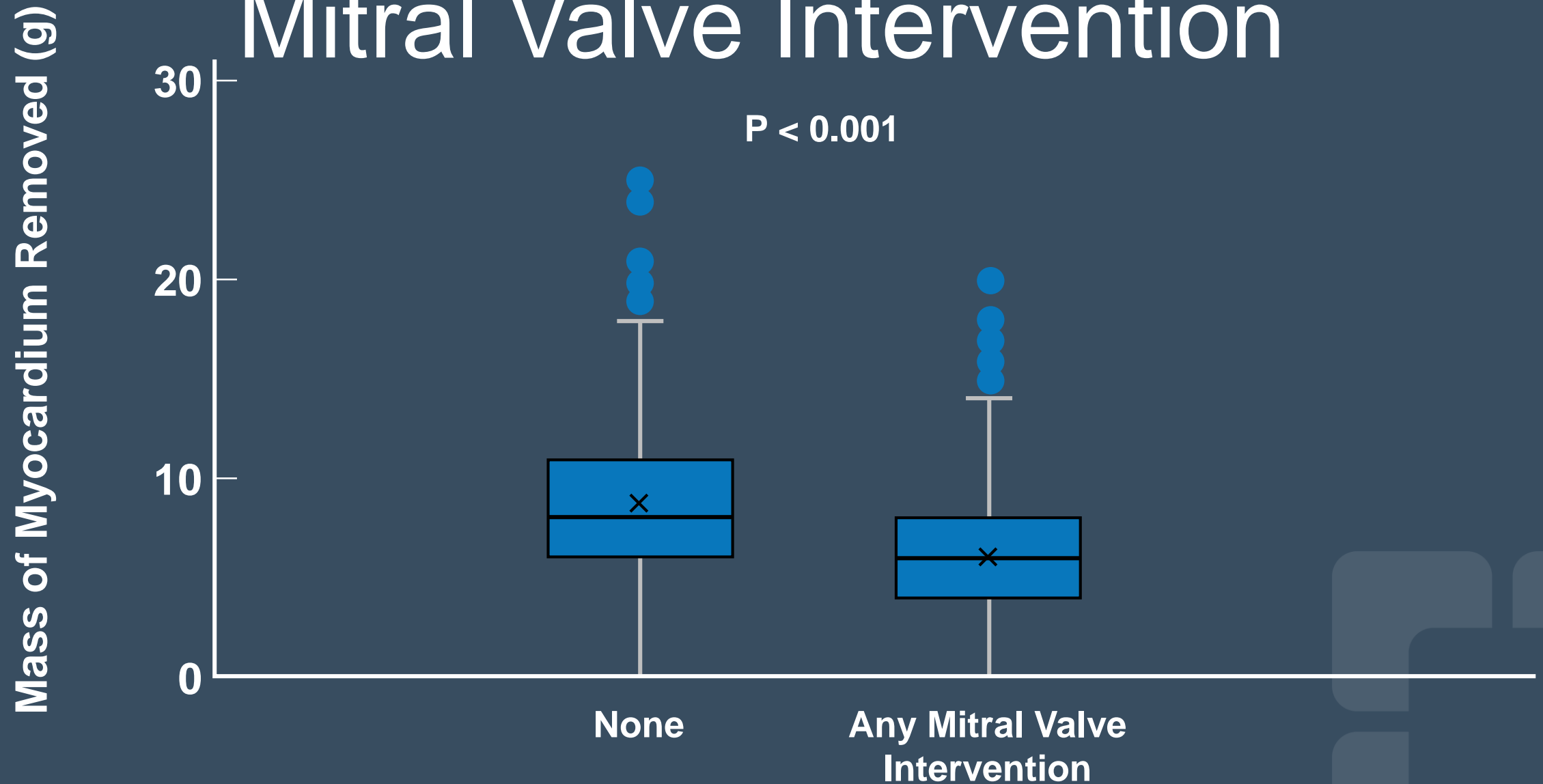




# Operations Performed



# Mass of Myocardium Removed by Mitral Valve Intervention

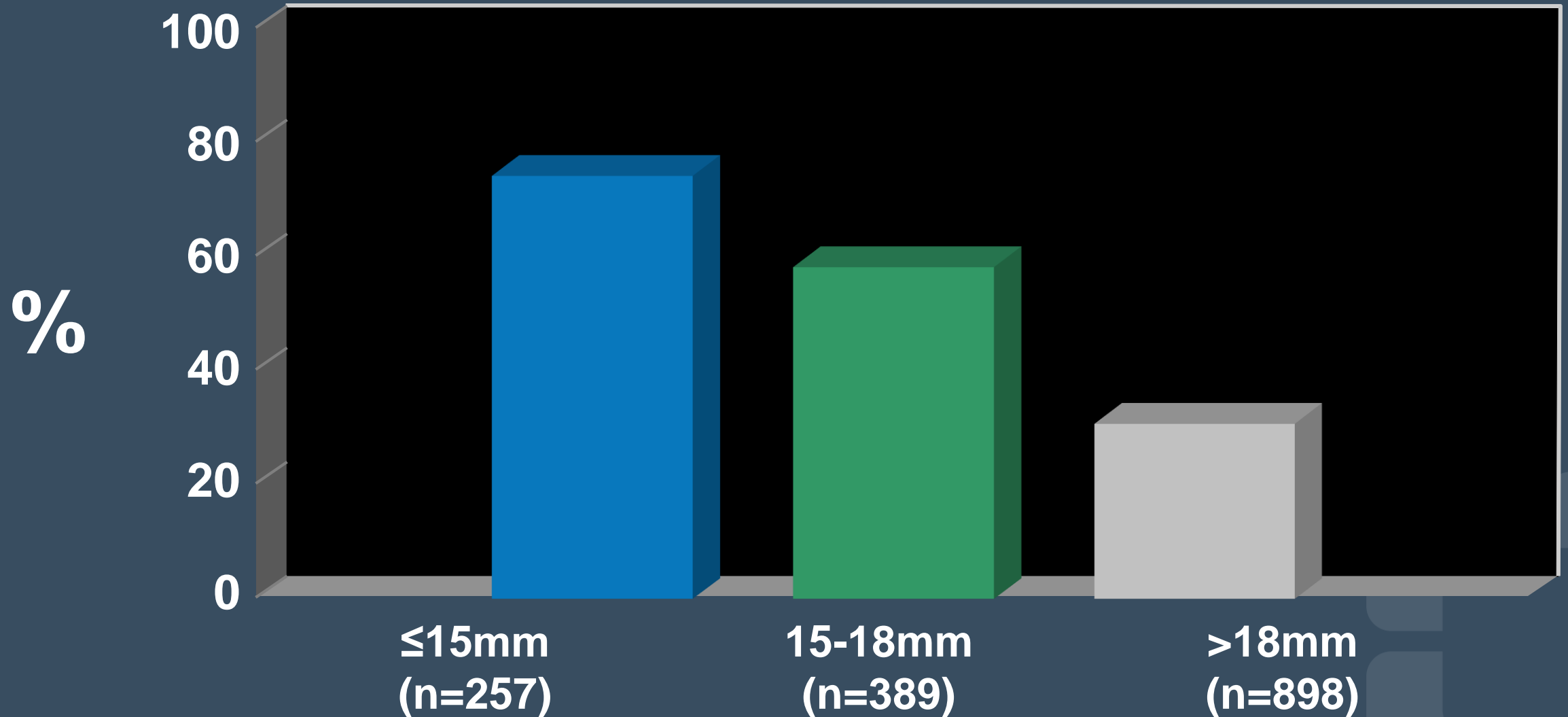


# Isolated Myectomy

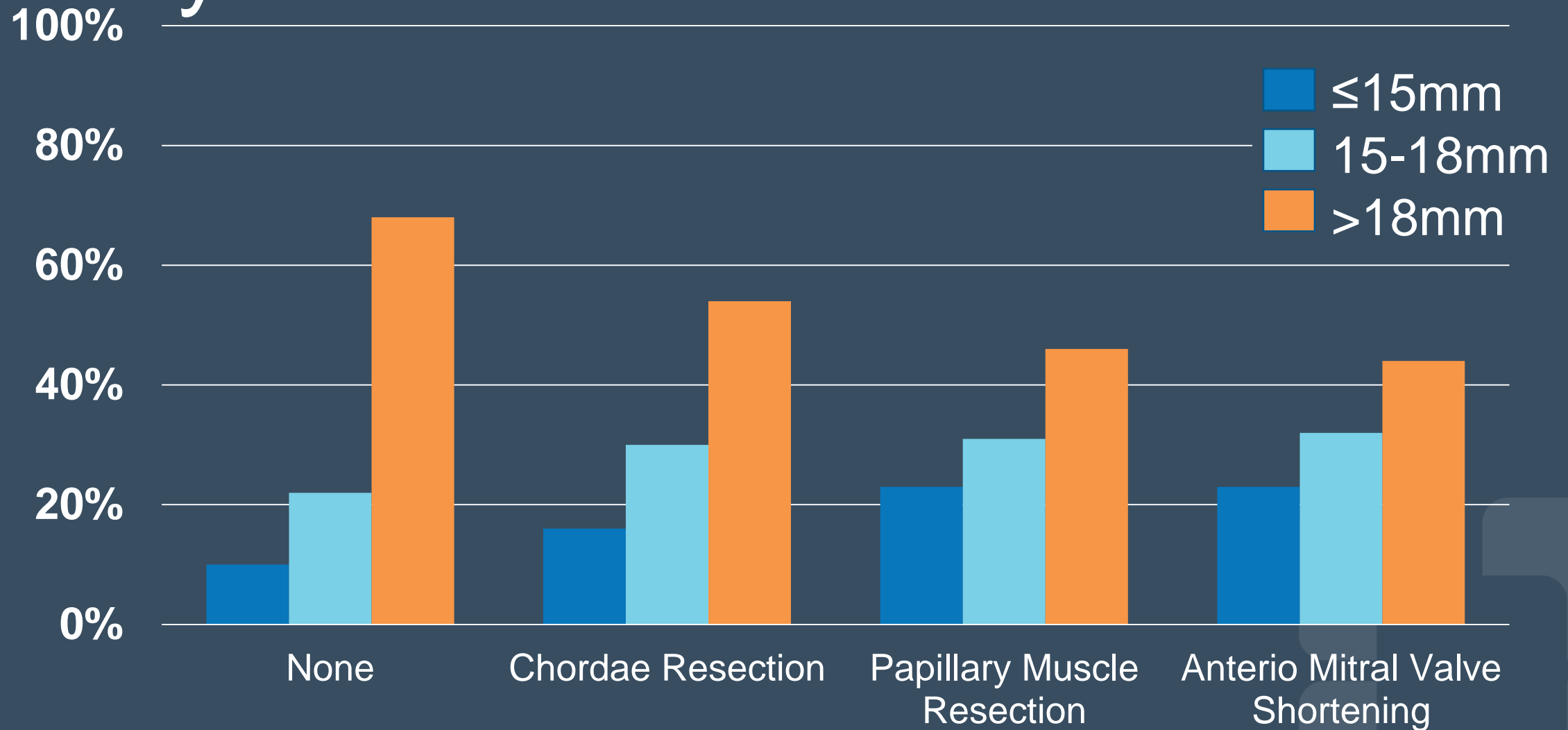
# Myectomy and Mitral Valve Repair



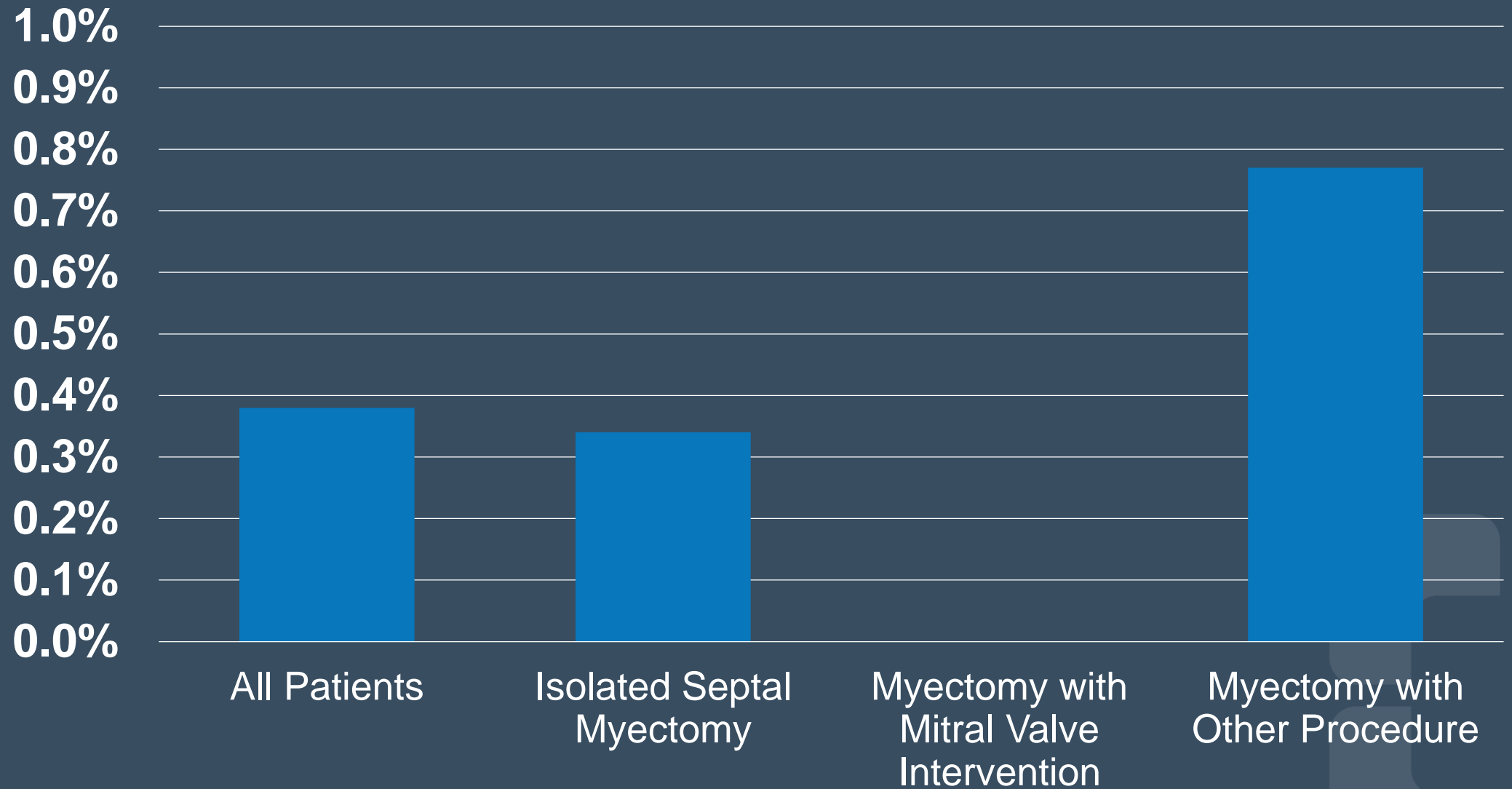
# Likelihood of Mitral Valve Intervention by Preoperative Septal Thickness



# Septal Thickness by Mitral Valve Intervention



# Mortality





# Conclusions

- Increasing recognition and diagnosis of LVOTO.
- Causes are multifactorial.
- Ventricular geometry and morphology are quite variable.



# Conclusions

- With experience LVOTO can be safely and quickly treated with very low rates of VSD, pacemaker and mortality.
- Selective use of MV repairs can enhance the safety and efficacy of LVOTO surgery, especially early in the surgeon's learning curve and avoid MVR in patients with minimal septal hypertrophy.