

# PLACE

PLATFORM OF LABORATORIES FOR ADVANCES IN CARDIAC EXPERIENCE

**ROMA**

9<sup>a</sup> Edizione

Centro Congressi  
di Confindustria  
**Auditorium  
della Tecnica**

**30 Settembre**

**1 Ottobre**

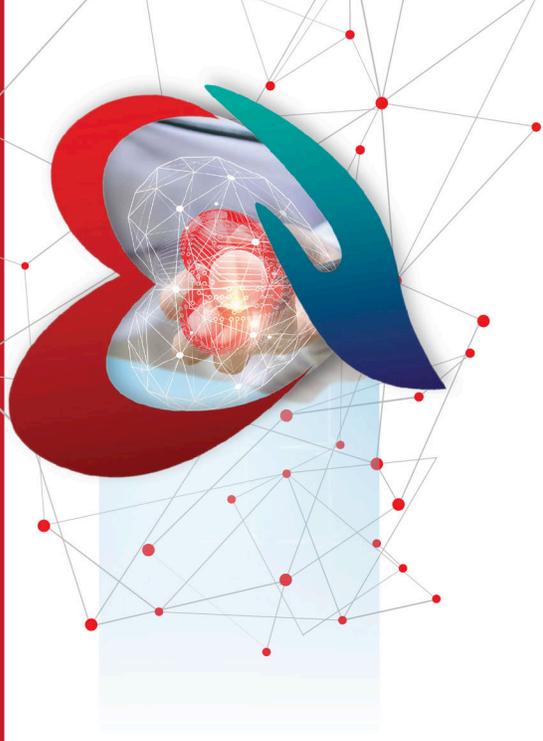
**2022**

**CARDIOMIOPATIA IPERTROFICA: UPDATE 2022**

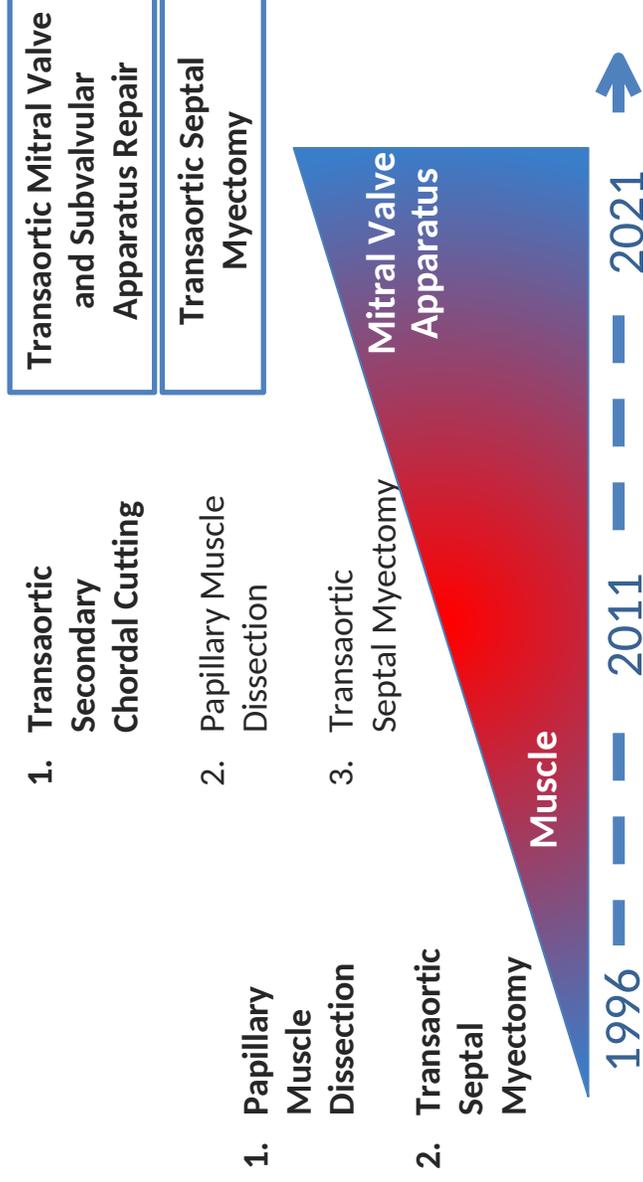
# MIECTOMIA

**Paolo Ferrazzi**

**Centro per la Cardiomiopatia Ipertrofica – Policlinico di Monza**



# From Myectomy To Personalized Surgery in HOCM



# Ventricular Septal Myectomy for Obstructive Hypertrophic Cardiomyopathy (Analysis Spanning 60 Years Of Practice): AJC Expert Panel

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*“Surgical myectomy remains the time-honored primary treatment for hypertrophic cardiomyopathy patients with drug refractory limiting symptoms due to L V outflow obstruction”.*

**(Am J Cardiol 2022;180:124–139)**



# Ventricular Septal Myectomy for Obstructive Hypertrophic Cardiomyopathy (Analysis Spanning 60 Years Of Practice): AJC Expert Panel

Table 1  
Tabulated data for surgical myectomy at 10 consortium HCM centers

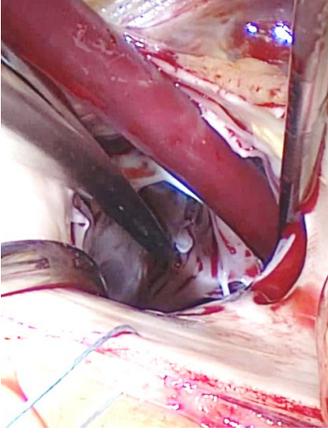
Variable	Total number myectomy	Age at myectomy (years)	Male	VSD	PPM <sup>†</sup>	MVR as sole operative strategy	Operative (30-day) mortality, n	Operative mortality
<b>Cleveland Clinic</b>	2851	56 ± 14	53%	0.1%	4.1%	153*	21	0.7%
<b>Mayo Clinic</b>	2782	57 ± 16	54%	0.1%	6.6%	0	14	0.5%
<b>Fuwai</b>	2220	47 ± 15	60%	0.5%	0.9%	0	11	0.5%
<b>Tufts</b>	825	54 ± 15	54%	0.7%	6.0%	0	5	0.6%
<b>Toronto</b>	740	55 ± 14	61%	0.3%	6.6%	14	7	0.9%
<b>Monza/Bergamo</b>	665	53 ± 16	55%	0.2%	3.2%	0	3	0.4%
<b>NYU</b>	515	57 ± 13	51%	0.6%	2.7%	3	4	0.8%
<b>UCLA</b>	171	41 ± 29	50%	0	8.8%	24	1	0.6%
<b>Barcelona</b>	144	61 ± 14	45%	1%	4.8%	8	1	0.6%
<b>Sydney</b>	60	52 ± 18	46%	5%	15.0%	0	0	0
<b>Total</b>	10,973	54	55%	0.3%	4%	202 (1.8%)	67	0.6%

(Am J Cardiol 2022;180:124–139)

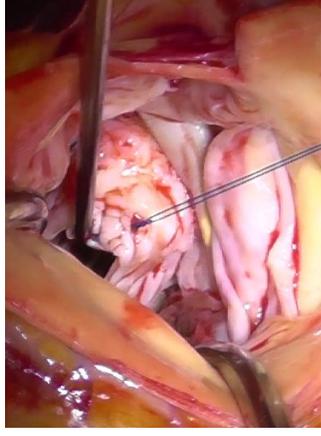


# Our Surgical Personalized Transaortic Approach to Patients with HOCM

Myectomy extended below MV septal contact



Papillary muscles and commissure mobilization

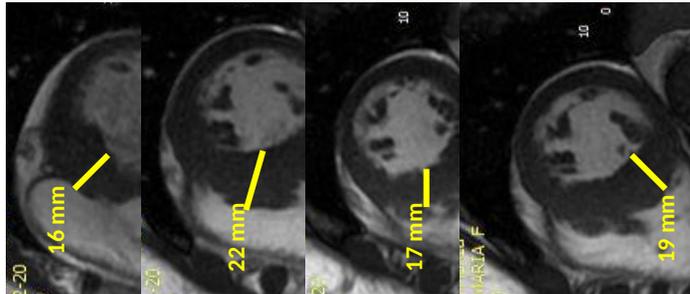


Secondary chordal cutting

Plication of MV leaflets in selected patients

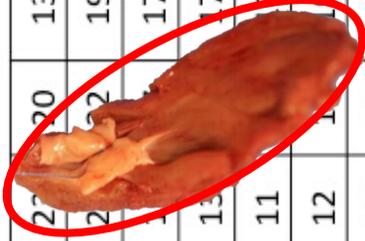


# MRI PLANNING: EVALUATION OF HYPERTROPHY EXTENSION



**Aortic annulus**

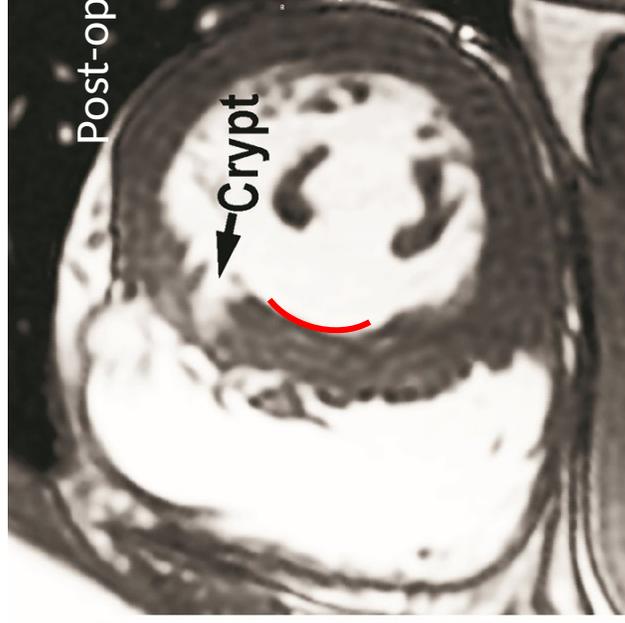
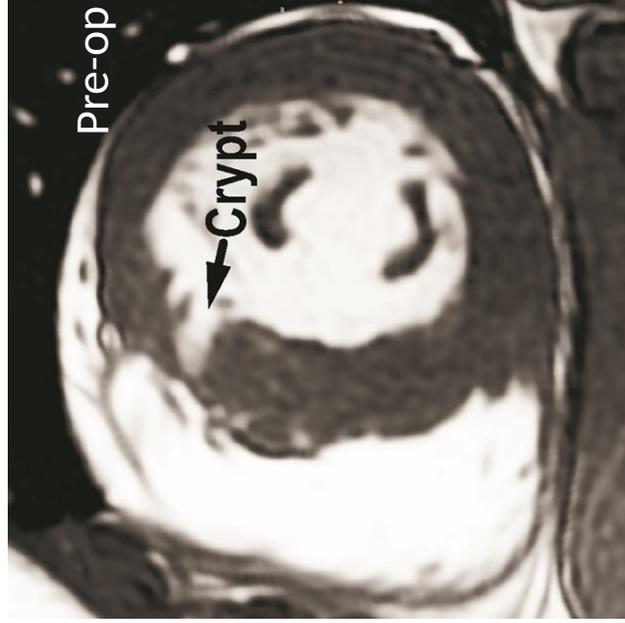
Length of myectomy	Anterior wall	Anterior IVS	Mid IVS
0 mm	22	20	13
6 mm	22	22	19
12 mm	13	15	17
18 mm	13	15	17
24 mm	11	11	13
30 mm	12	11	19
36 mm	12	13	13



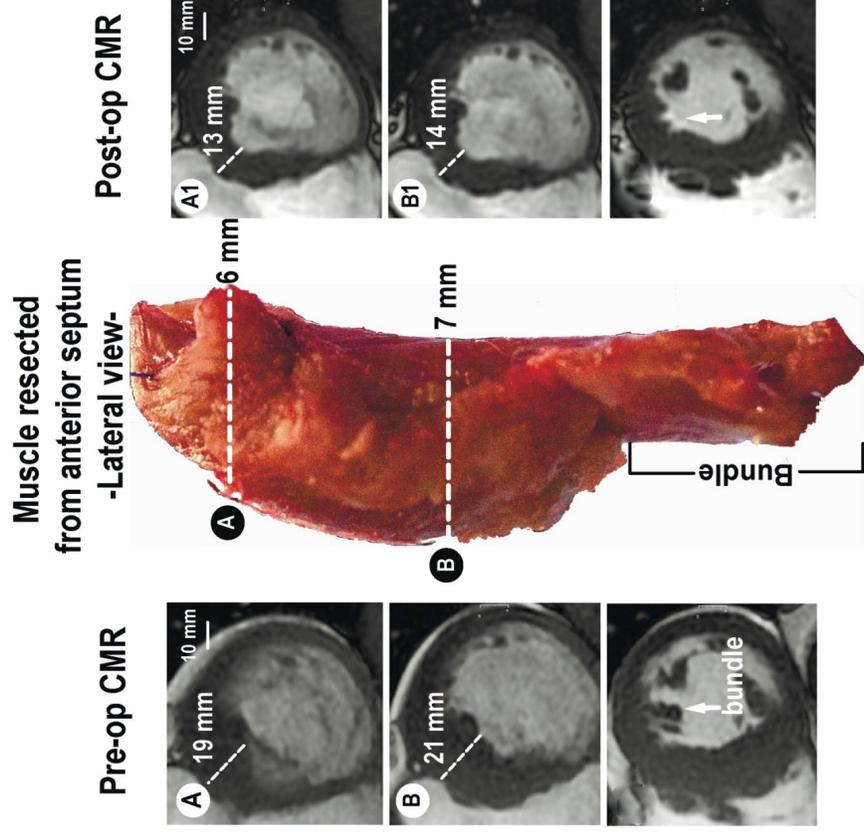
**LV APEX**

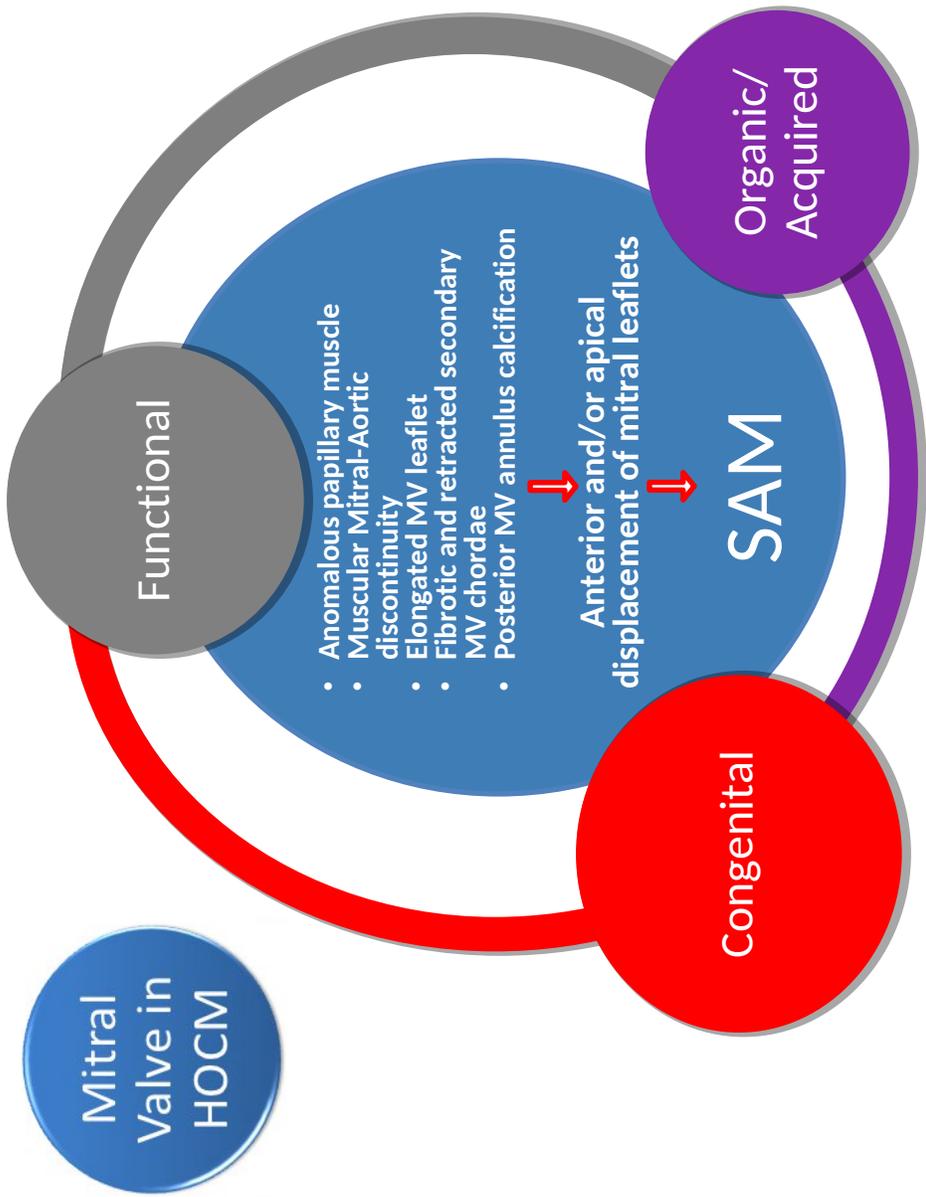


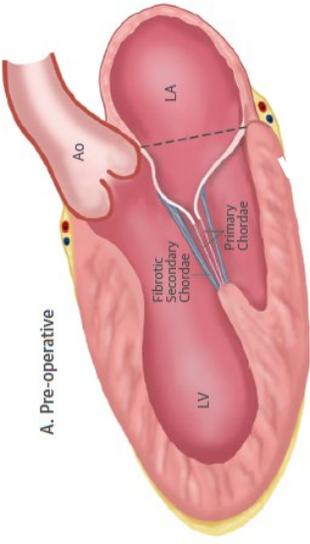
# MRI PLANNING: CRYPTS



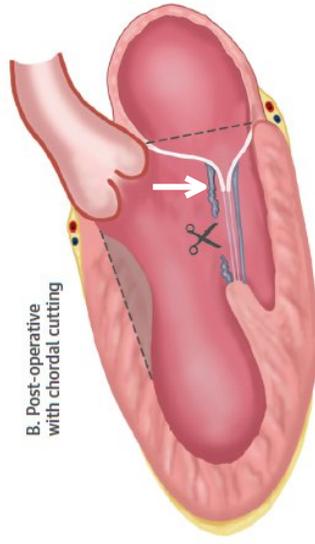
# MRI PLANNING: ANOMALOUS BUNDLES



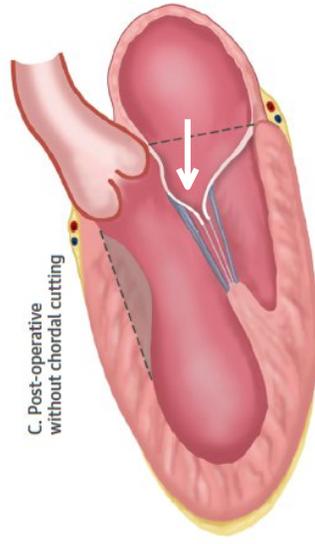




**Pre-op**



**N = 39 patients with chordal cutting**



**N = 25 patients without chordal cutting**

**Schematic illustrations in early systole**





ESC

European Society  
of Cardiology

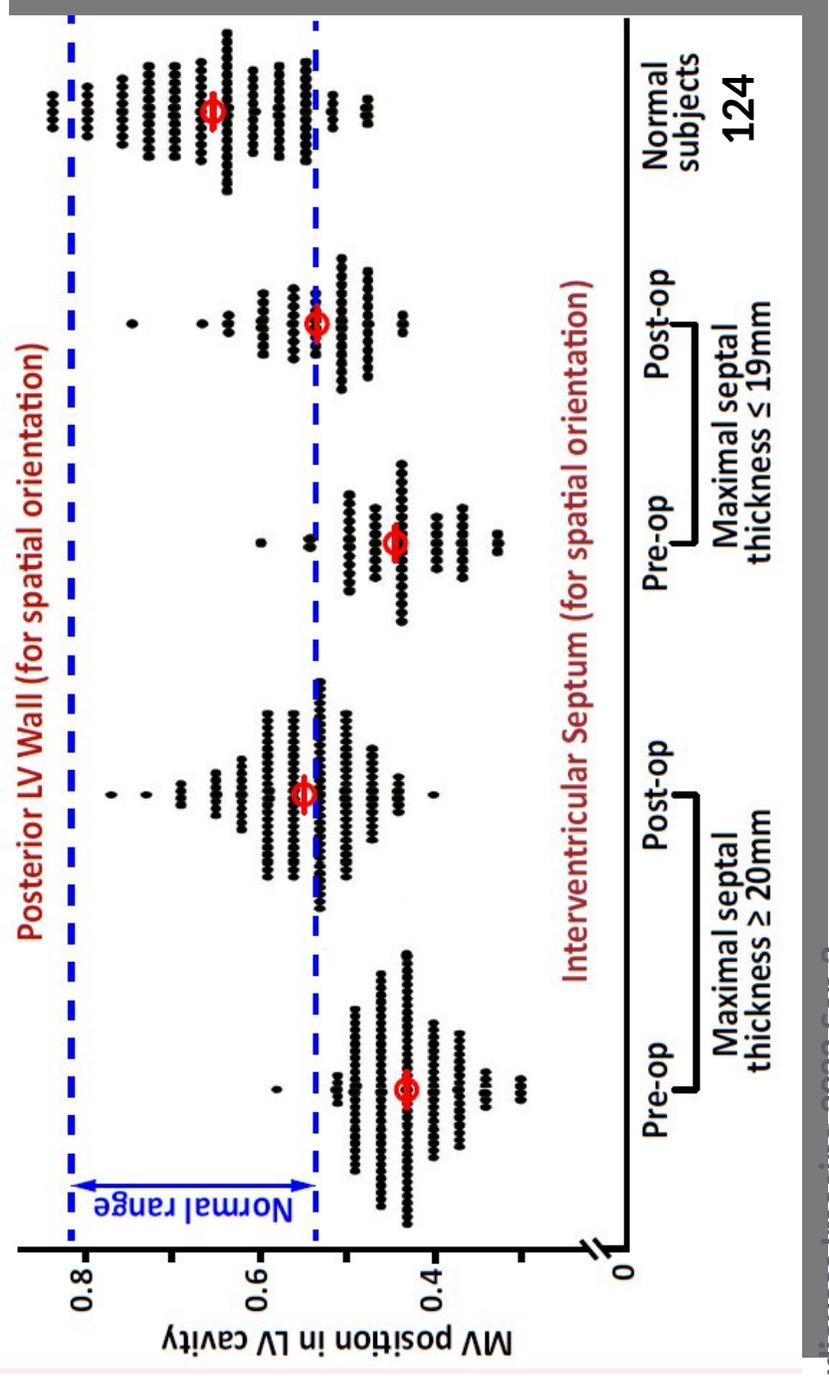
European Heart Journal - Cardiovascular Imaging (2022) 00, 1–9  
<https://doi.org/10.1093/ehjci/jeac179>

ORIGINAL PAPER

# Impact of secondary mitral valve chordal cutting on valve geometry in obstructive hypertrophic cardiomyopathy with marked septal hypertrophy

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Daniele Poggio <sup>1</sup>, Giuseppe Vaccari <sup>1</sup>, Irene Binaco <sup>1,3</sup>, Massimiliano Grillo <sup>1</sup>,  
Lucian Dorobantu <sup>4</sup>, Luca Boni <sup>5</sup>, and Paolo Ferrazzi <sup>1</sup>

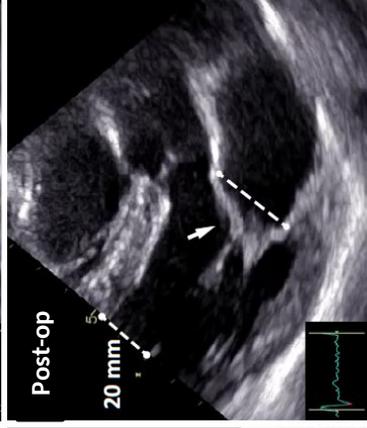
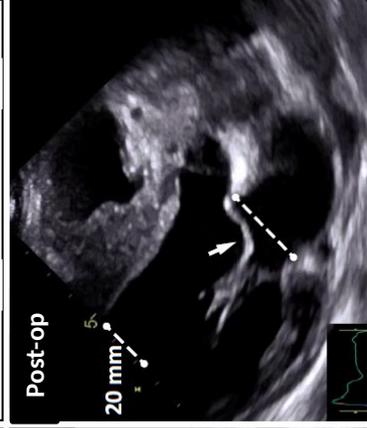
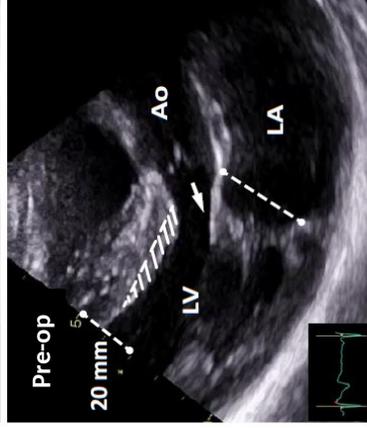
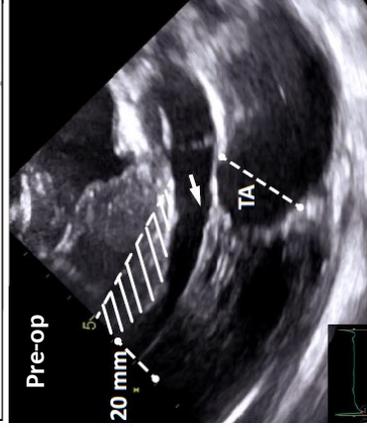
# MV POSITION BEFORE AND AFTER SURGERY 226 PATIENTS



# ECHOCARDIOGRAPHIC RESULTS

**Pre-op**

IVS Thickness 32 mm

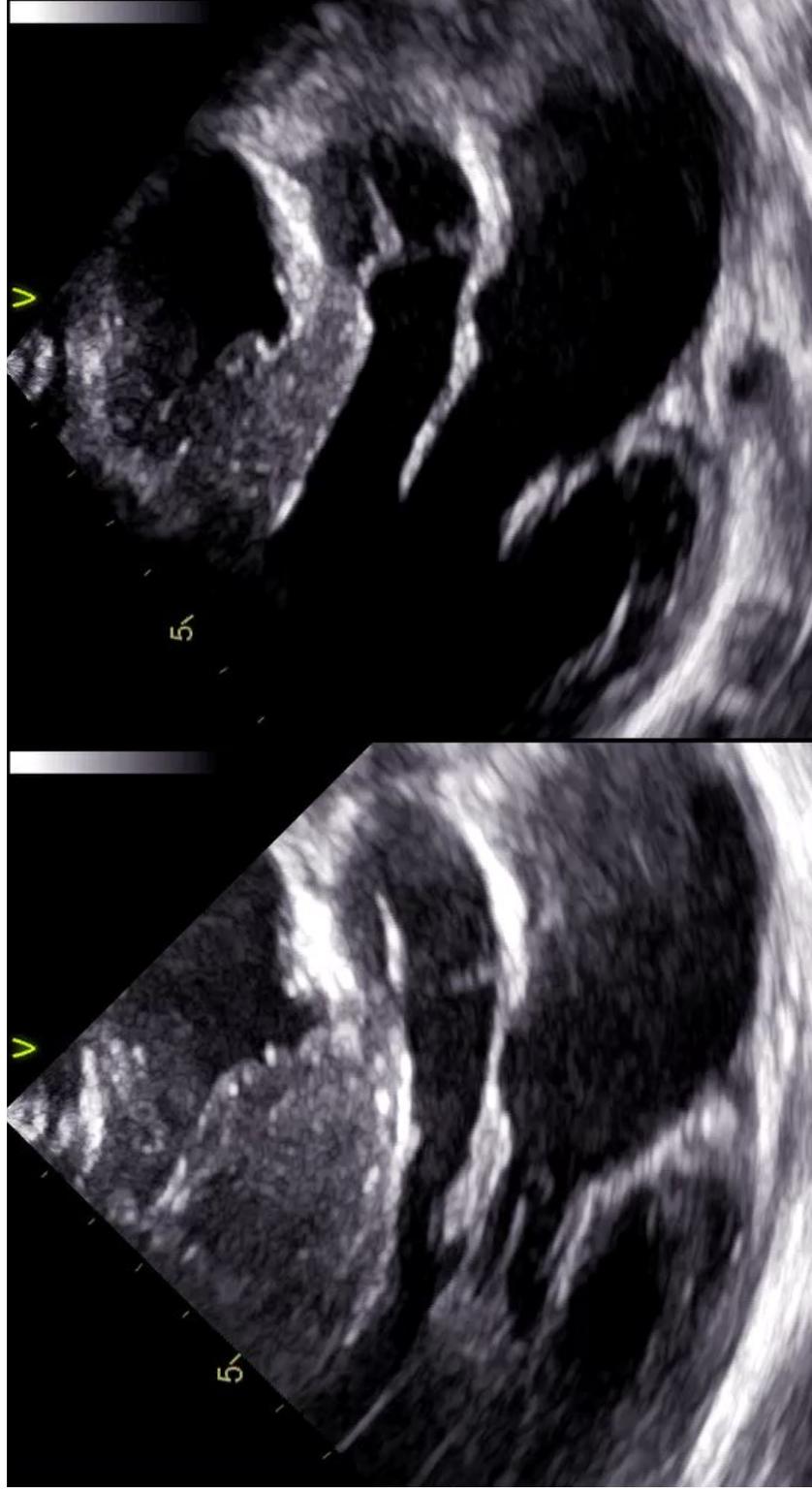


**Post-op**

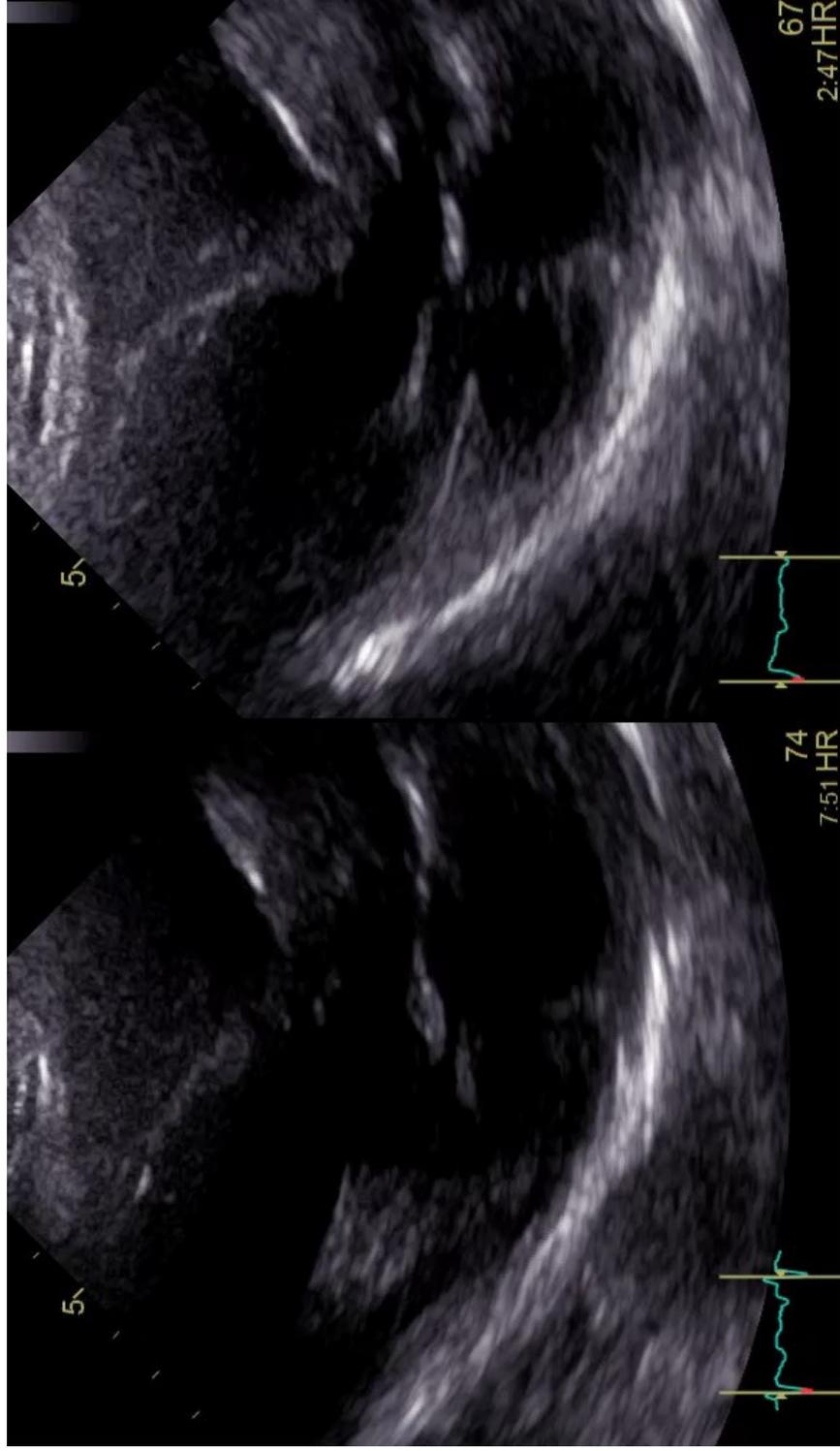
IVS Thickness 21 mm

IVS Thickness 11 mm

# ECHOCARDIOGRAPHIC RESULTS



# ECHOCARDIOGRAPHIC RESULTS



# Conclusions

- Surgery is actually the only strategy that allows a tailored treatment of HOCM;
- The LV outflow gradient results from a complex interaction between the hypertrophied septum and MV primary and secondary abnormalities;
- Transaortic resection of abnormal secondary chordae moved the MV apparatus away from the LV outflow tract, independently of septal thickness.
- Research on the mitral valve and subvalvular apparatus anomalies in HCM could help to identify a personalized treatment (medical, catheter based and surgical) for each patient

