

Nome sessione

Hypertrophic cardiomyopathy: Current Role of Septal Reduction Therapies in the Era of Myosin Inhibition

Pelliccia Francesco



15-15 - 17:30

FENOTIPO IPERTROFICO: UPDATE 2026

Moderatori: C. Autore, Roma - F. Cecchi, Firenze

Red flags nella cardiopatia a fenotipo ipertrofico: tempo di un aggiornamento?

E. Monda, Napoli

Cardiomiopatia ipertrofica ostruttiva: la corretta diagnosi. Alla ricerca del gradiente

M. Graziosi, Bologna

Fibrosi miocardica e aritmogenesi nella cardiomiopatia ipertrofica

E. Bertero, Genova

Fibrillazione atriale nella cardiomiopatia ipertrofica: ruolo del substrato atriale elettro-anatomico nell'approccio ablativo

P. Di Donna, Genova

Cardiomiopatia ipertrofica: nuove terapie

C. Raineri, Torino

Cardiomiopatia ipertrofica: ruolo attuale delle terapie di ablazione del setto interventricolare nell'era degli inibitori della miosina

F. Pelliccia, Roma

Gli inibitori della miosina: cosa ci sta insegnando il registro Italiano

G. Bnacchi, Firenze

Ruolo del CPET nella stratificazione del rischio in cardiopatie con fenotipo ipertrofico

F. Re, Roma

Ruolo della CMR nella HCM: oltre la quantificazione del LGE?

G. Todiere, Pisa

Discussione

25. SALA GIOVE 2



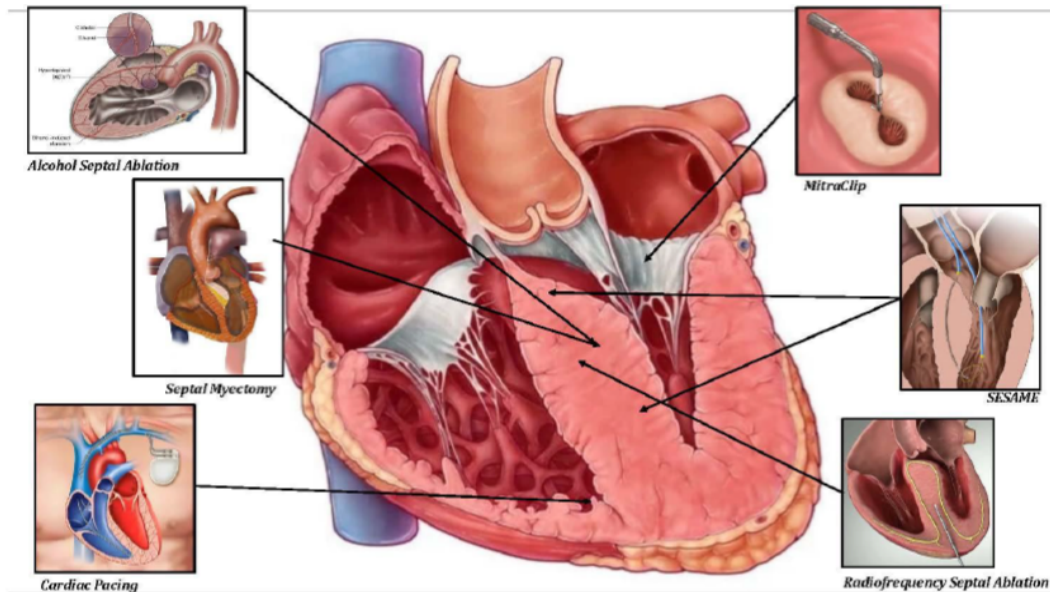
Disclosure Statement of Conflict of Interest

I, Francesco Pelliccia, do not have a financial interest, arrangement, or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

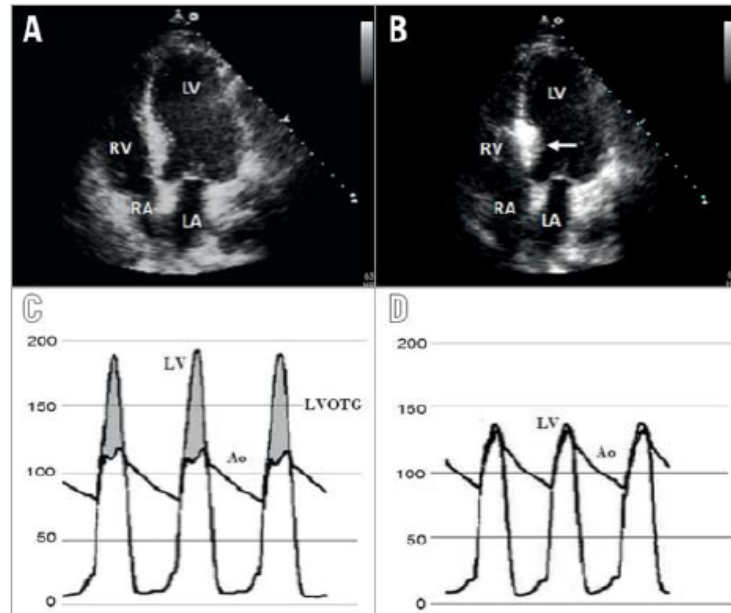
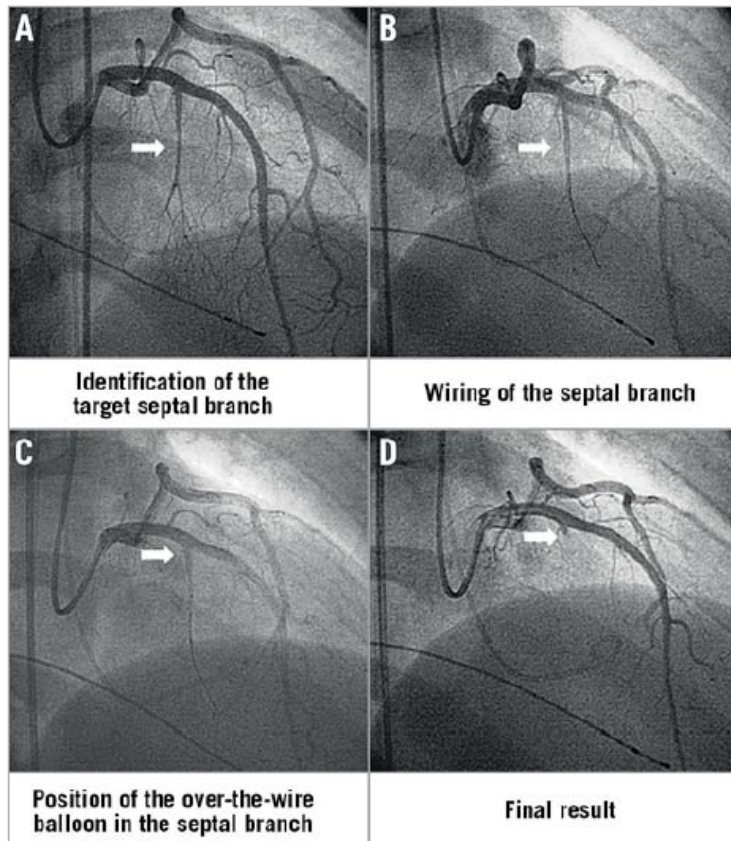


Invasive Therapies for HOCM

- 1960s — **Septal myectomy (SM)***[14, 15]
- 1963 — **SM with transmitral approach**[44]
- 1992 — **SM + mitral valve (MV) leaflet plication**[21]
- 1994 — **Extended SM**[20]
- 1995 — **Alcohol septal ablation (ASA)***[60]
- 1998 — **Myocardial contrast echocardiography guided ASA**[65]
- 2003 — **SM + MV leaflet extension**[22]
- 2004 — **Extended SM + MV apparatus surgery**[41]
SM + Alfieri stitch (Edge-to-Edge)[23]
Low dose ASA (1-2ml)[61]
- 2005 — **"Resection-Plication-Release" procedure**[24]
- 2008 — **SM + Papillary muscle reorientation**[49]
- 2012 — **SM with transapical approach** [42]
- 2015 — **SM + Secondary chordae cutting** [25]
- 2016 — **Echocardiographic algorithm to guide SM** [17]
Extended SM + Muscle bundles excision [50]
- 2018 — **PIMSRA***[26]
Extended SM for midventricular obstruction [18]
- 2022 — **SESAME***[79]
Right infra-axillary thoracotomy approach SM [57]
- 2023 — **TA-BSM***[23]
TCRFA*[28, 91]
- 2024 — **Midventricular and apical SM** [19]



Alcohol Septal Ablation

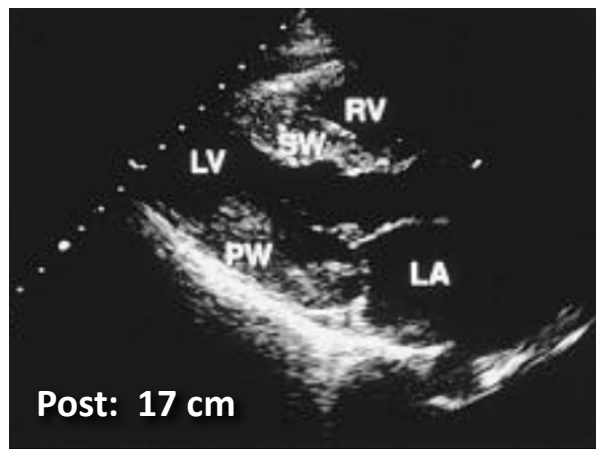
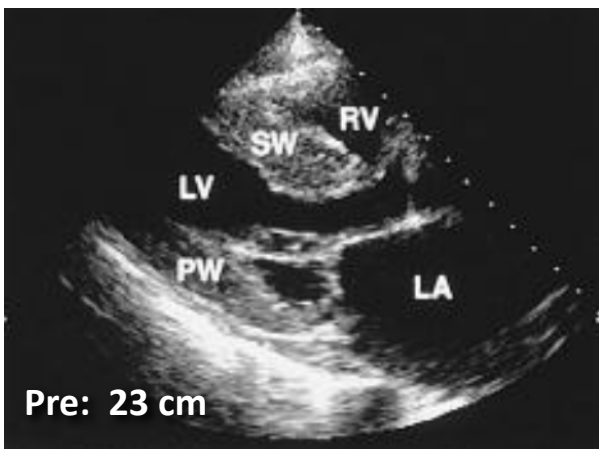
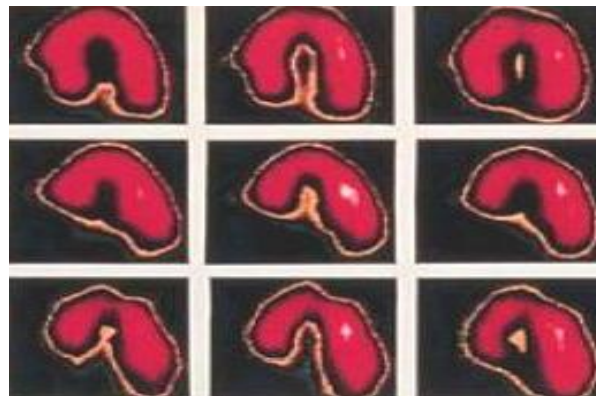
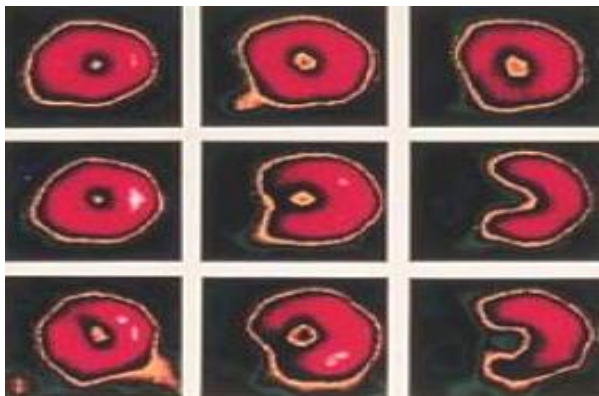


Pelliccia F et al

EuroIntervention
2019;15:411-417



Alcohol Septal Ablation



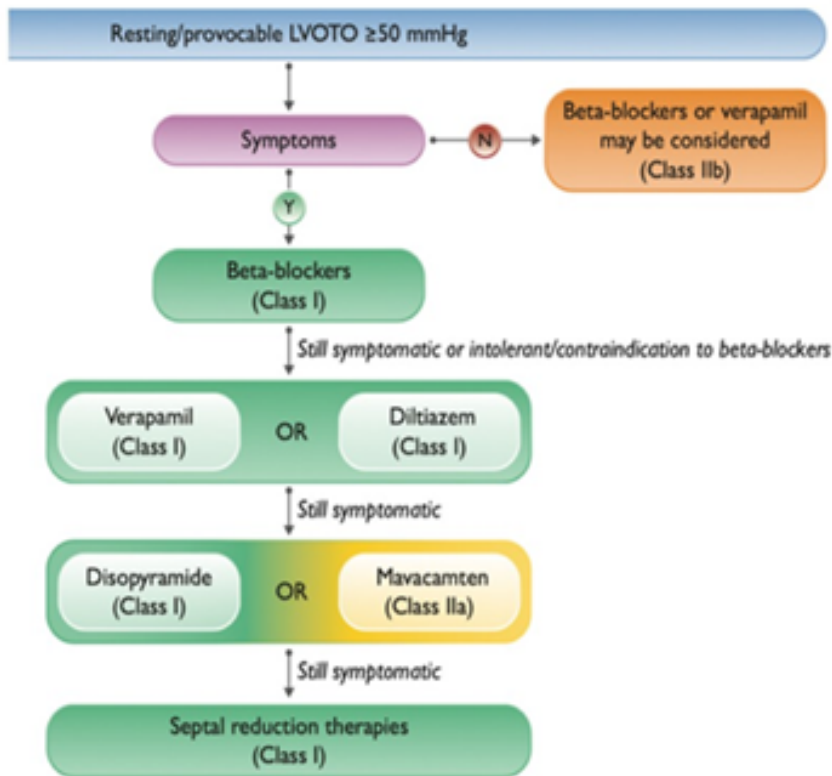
Septal Reduction Therapies for HOCM

Key Questions to Guide Success

1. Is there still a role for **ASA/Surgery** in the era of myosin inhibitors?

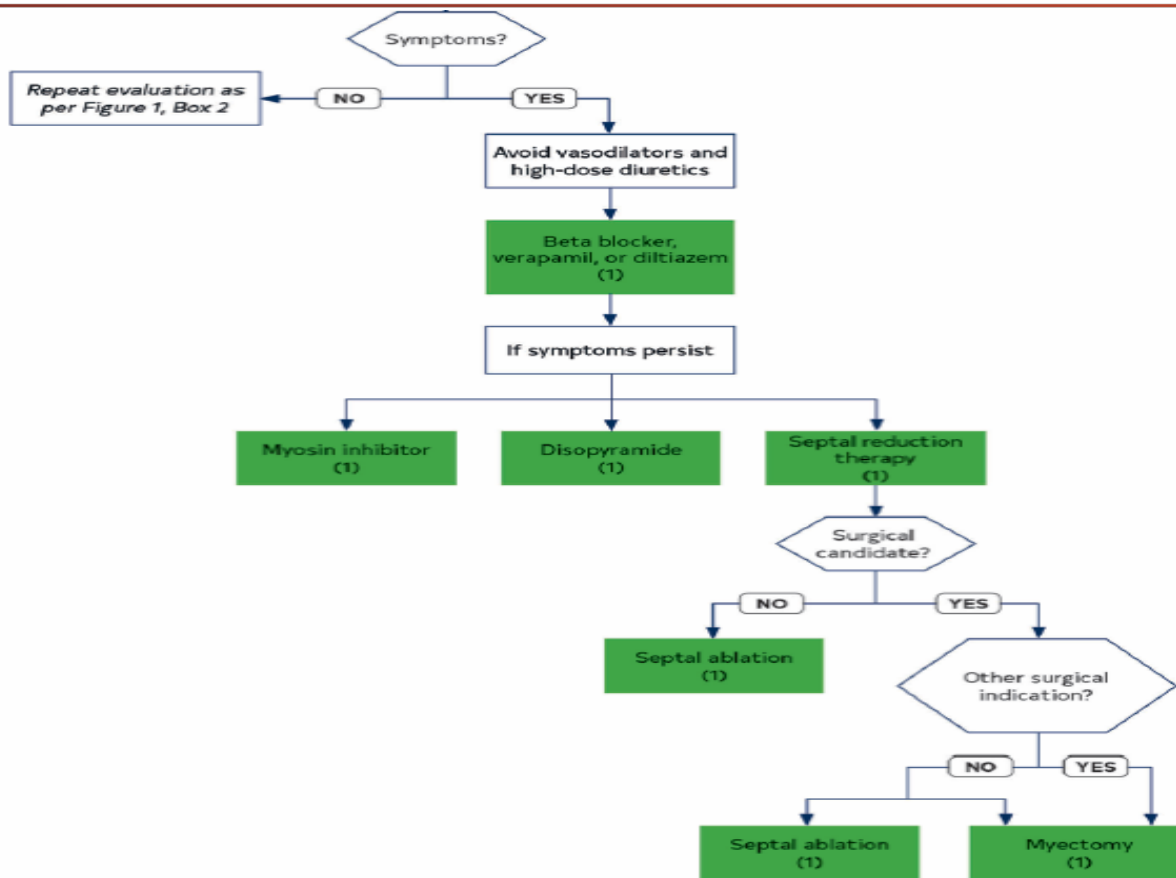


ESC Guidelines 2023



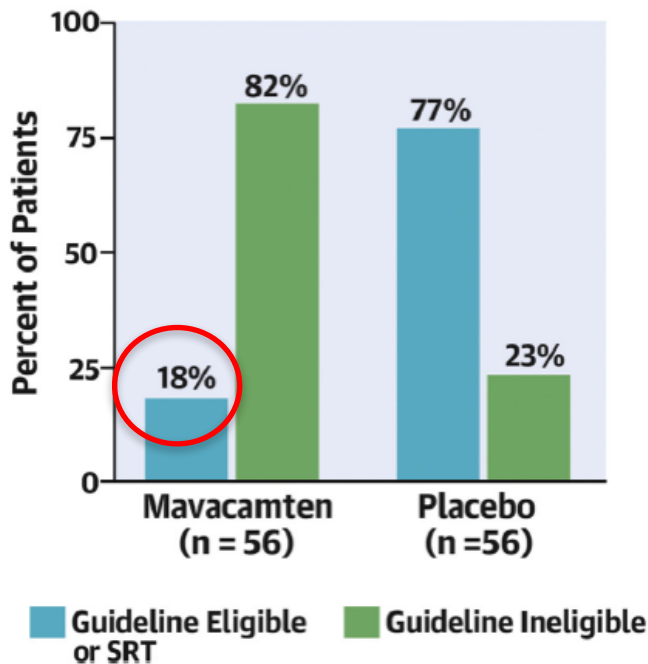
Eur Heart J. 2023;44:3503-3626.



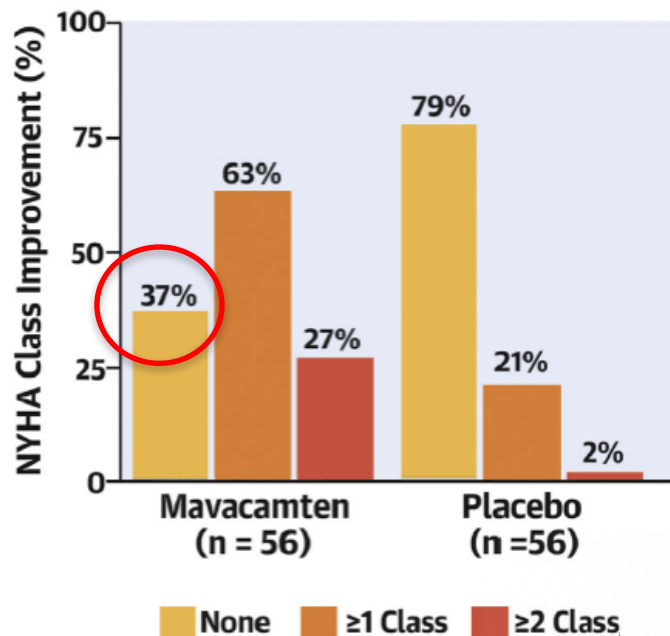


Myosin Inhibition in Patients With HOCM Referred for SRT

Patients Who Underwent SRT or Remained Guideline Eligible for SRT

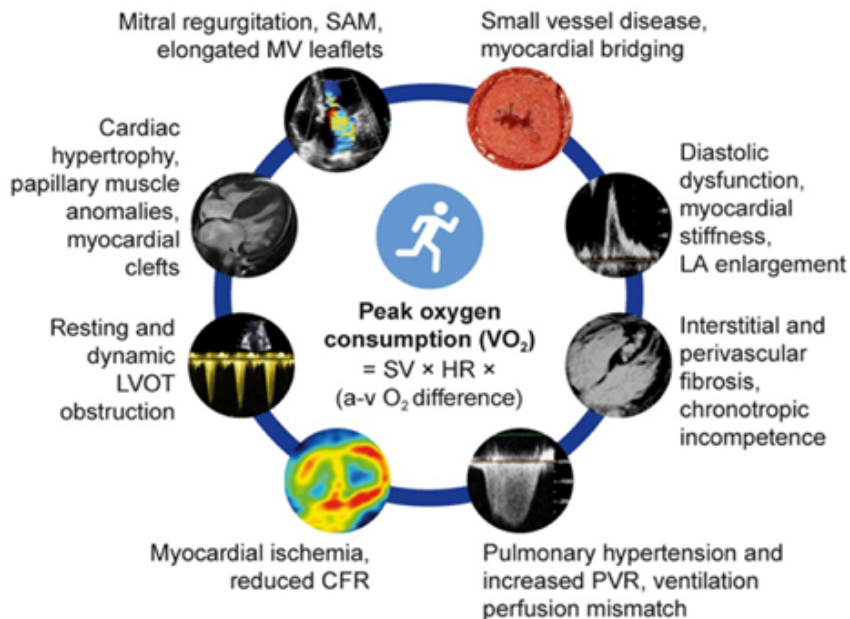


Patients Who Improved by 0, ≥ 1 , or ≥ 2 NYHA Class

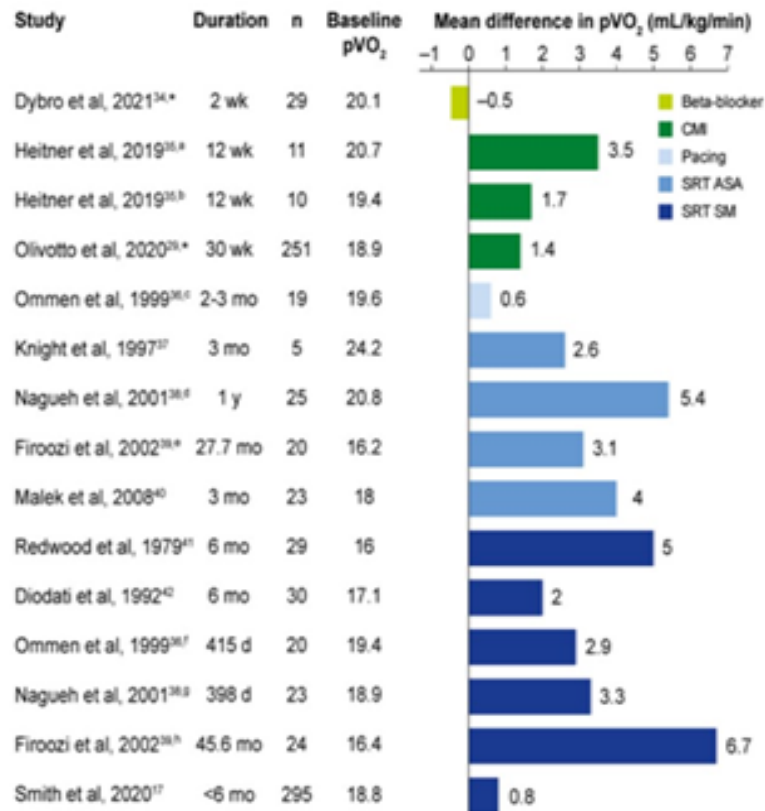


Desai MY, et al. J Am Coll Cardiol. 2022;80(2):95-108.





Coats CJ, et al; SEQUOIA-HCM Investigators. JACC Heart Fail. 2024;12:199-215.



Septal Reduction Therapies for HOCM

Key Questions to Guide Success

1. Is there still a role for ASA/Surgery in the era of myosin inhibitors?
2. **Do we have sufficient experience to be doing high quality/volume SRTs at our institution?**



Surgical myectomy for hypertrophic cardiomyopathy: procedural volume and outcomes



Multicentre cohort study at 12 hospitals in the Netherlands



335 patients with HOCM confirmed by a core laboratory

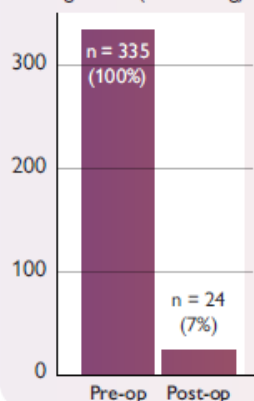


Low-volume hospitals (<10 procedures/year)

High-volume hospitals (≥10 procedures/year)

In-hospital echocardiography

Number of patients with a LVOT gradient (≥30 mmHg)



30-day complication rates



Reoperation
2%



VSD
2%



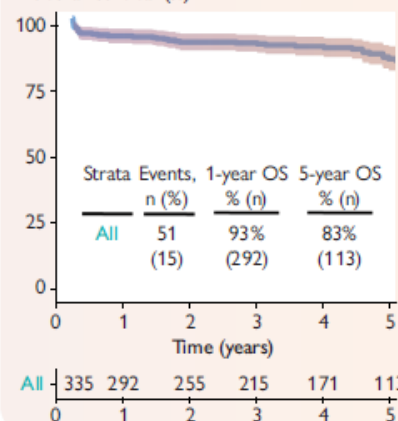
Mortality
5%



Stroke
3%

Overall survival

Overall survival (%)



Factors associated with increased 30-day complication rate



Female sex



≥2 concomitant procedures



Low-volume





Septal reduction therapies should only be performed at HCM Centers of Excellence performing > 10 procedures per year (50 cumulatively) ~ ACC/SCAI Competency



Key Questions to Guide Success

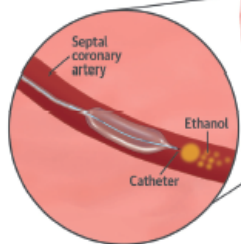
1. Is there still a role for ASA/Surgery in the era of myosin inhibitors?
2. Do we have sufficient experience to be doing high quality/volume SRTs at our institution?
3. **Is ASA or SM better for this patient? Which gives the most benefit at the least risk?**



Patients undergoing ASA have similarly low long-term mortality and (aborted) sudden cardiac death rates compared with patients undergoing myectomy

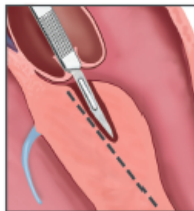


ASA and myectomy have comparable 30-day mortality rates



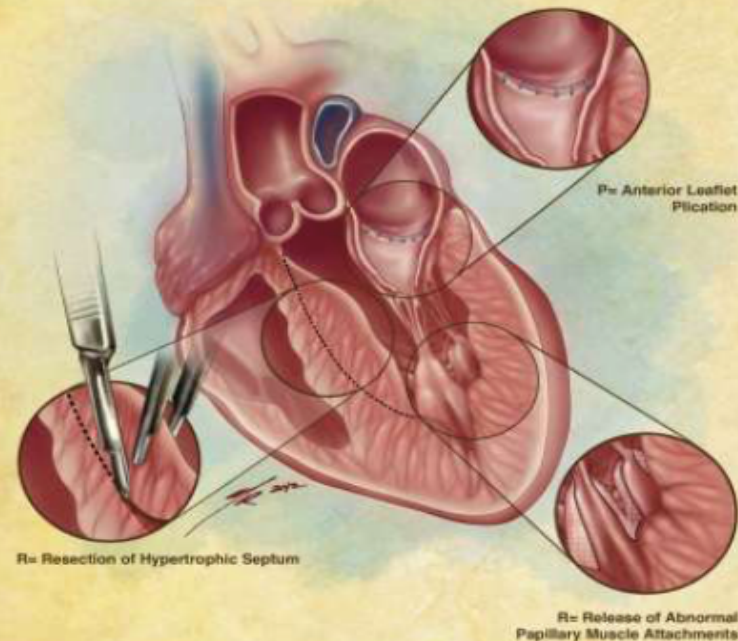
Alcohol volumes for ASA between 1.5 mL and 2.5 mL were found to be well balanced in terms of efficacy and safety for most patients

1/10 patients requires a permanent pacemaker following ASA compared with 1/25 following myectomy



1/13 ASA patients requires reintervention, 5x the risk following myectomy

Resection-Plication-Release (RPR) Repair for Hypertrophic Cardiomyopathy



Liebrechts, M. et al. J Am Coll Cardiol. 2017;70(4):481-8.



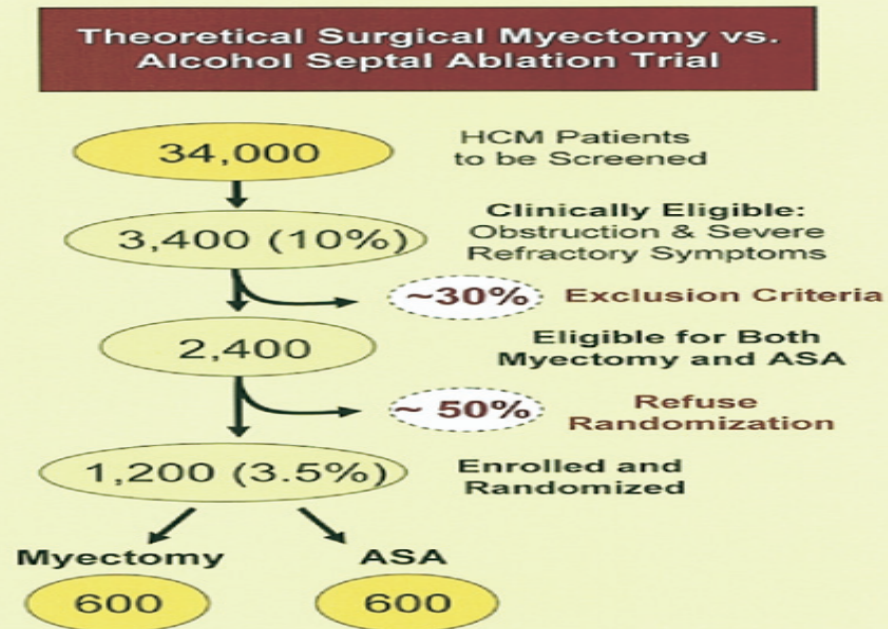
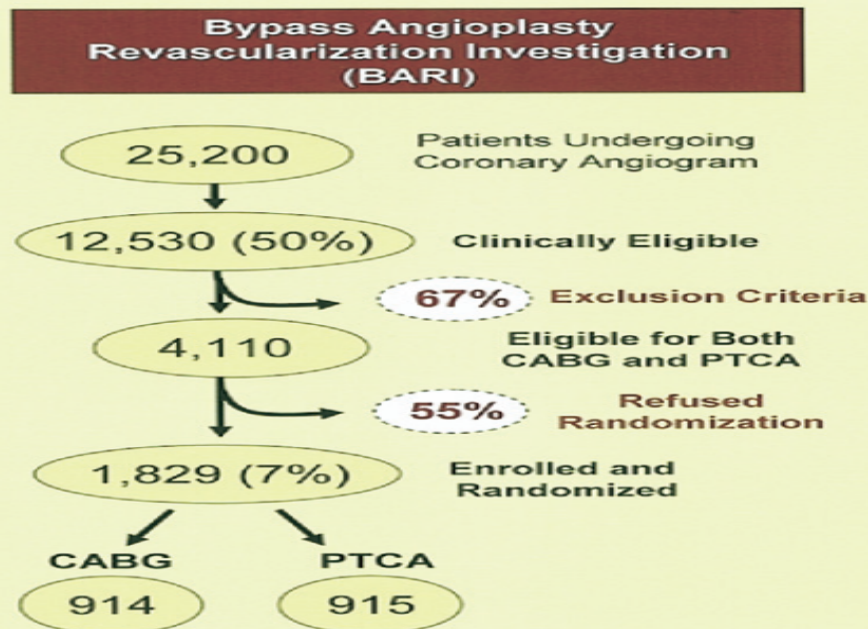
VIEWPOINT

Surgical Myectomy Versus Alcohol Septal Ablation for Obstructive Hypertrophic Cardiomyopathy

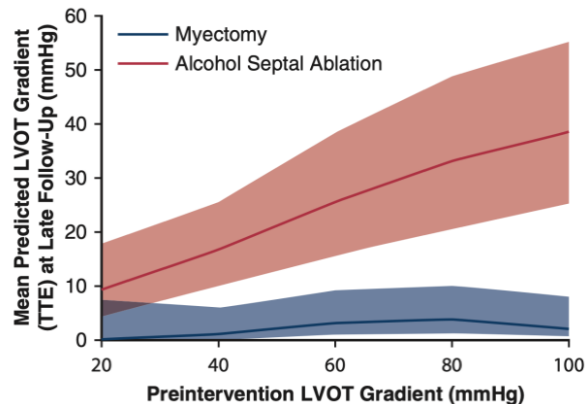
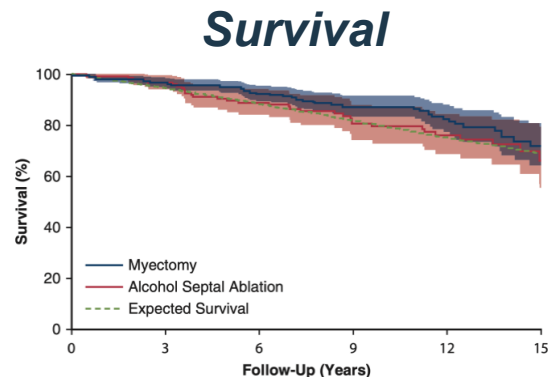
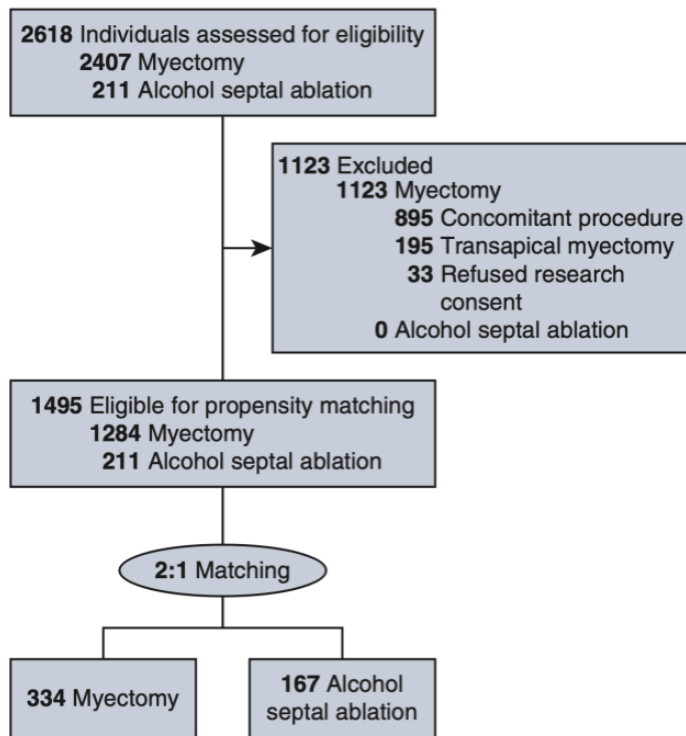
Will There Ever Be a Randomized Trial?

Iacopo Olivetto, MD,* Steve R. Ommen, MD,† Martin S. Maron, MD,§
Franco Cecchi, MD,* Barry J. Maron, MD‡

Florence, Italy; Rochester and Minneapolis, Minnesota; and Boston, Massachusetts



Septal Myectomy vs. Alcohol Septal Ablation: PSM study



Nguyen, et al. *J Thorac Cardiovasc Surg* 2019;157:306-15



Recommendations for septal reduction therapy (1)

Recommendations	Class	Level
It is recommended that SRT be performed by experienced operators working as part of a multidisciplinary team expert in the management of HCM.	I	C
SRT to improve symptoms is recommended in patients with a resting or maximum provoked LVOT gradient of ≥ 50 mmHg who are in NYHA/Ross functional class III–IV, despite maximum tolerated medical therapy.	I	B
Septal myectomy, rather than ASA, is recommended in children with an indication for SRT, as well as in adult patients with an indication for SRT and other lesions requiring surgical intervention (e.g. mitral valve abnormalities).	I	C
SRT should be considered in patients with recurrent exertional syncope caused by a resting or maximum provoked LVOTO gradient ≥ 50 mmHg despite optimal medical therapy.	IIa	C
Mitral valve repair or replacement should be considered in symptomatic patients with a resting or maximum provoked LVOTO gradient ≥ 50 mmHg and moderate-to-severe mitral regurgitation that cannot be corrected by SRT alone.	IIa	C

TAKE-HOME MESSAGE

The new life of myectomy in the era of myosin inhibitors

The spectrum of patients eligible for CMIs for symptomatic improvement is broader than that for surgical intervention, and the overlap between the two treatment approaches may be minimal in real-world populations

Quarta G et al.

Progress in Cardiovascular Diseases 2026

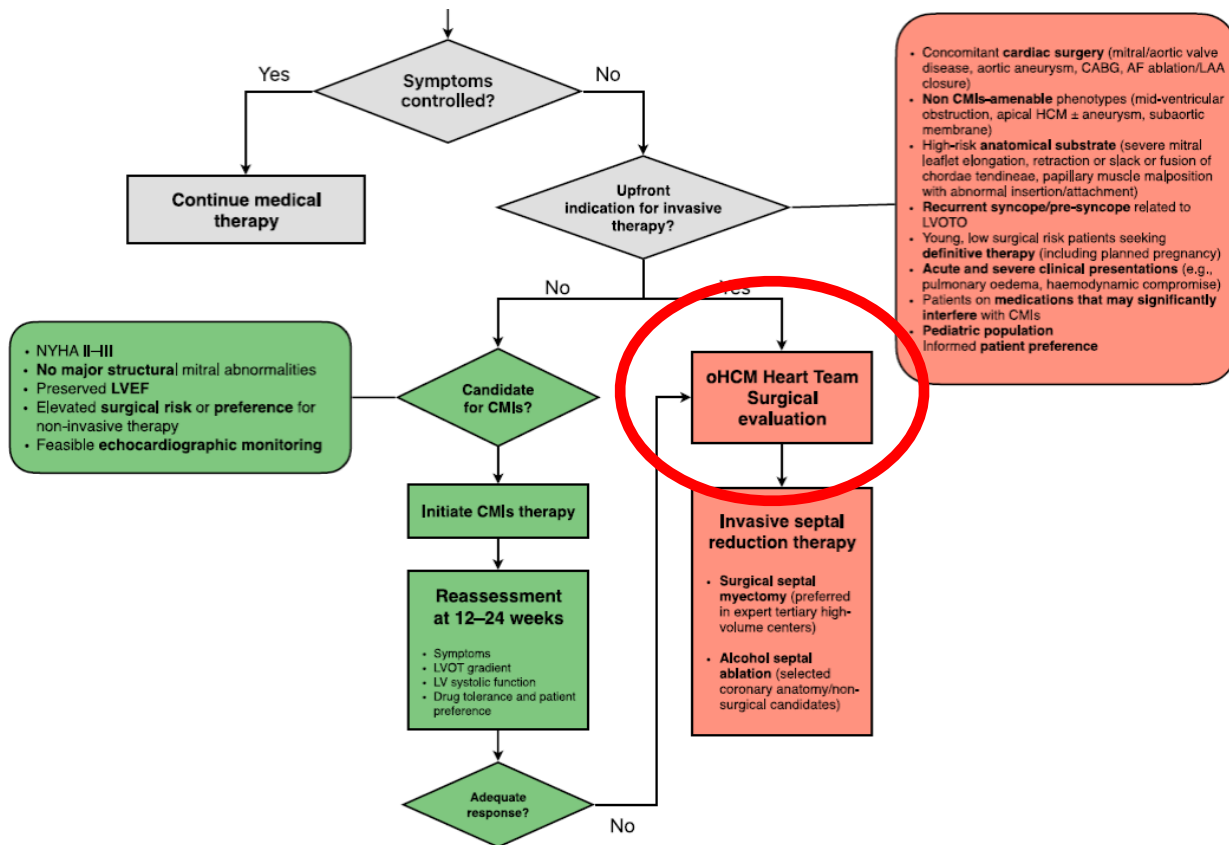


NONINVASIVE RELIEF
OF OBSTRUCTION
OR
MORE APPROPRIATE
SURGERY

BROADER RELIEF OF
OBSTRUCTION
IN NON-SURGICAL
CANDIDATES

DISEASE-
MODIFYING
EFFECTS ON THE
MYOCARDIUM



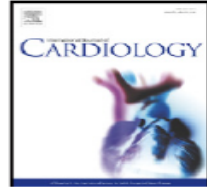




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Multidisciplinary evaluation and management of obstructive hypertrophic cardiomyopathy in 2020: Towards the HCM Heart Team



Francesco Pelliccia ^{a,*}, Ottavio Alfieri ^b, Paolo Calabrò ^{c,d}, Franco Cecchi ^e, Paolo Ferrazzi ^f, Felice Gagnano ^{c,d}, Juan Pablo Kaski ^g, Giuseppe Limongelli ^{d,h}, Martin Maron ⁱ, Claudio Rapezzi ^j, Hubert Seggewiss ^k, Magdi H. Yacoub ^l, Iacopo Olivetto ^m

A shared decision-making approach is always to be preferred, discussing risks and benefits of each treatment strategy, matching clinical aspects with the preferences of the individual patient.

For this purpose, it is crucial that the decisional process is carried out with a **multi-disciplinary approach** by an experienced team working in a dedicated cardiomyopathy center of excellence: the **HCM Heart Team**





Thanks for your
attention

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