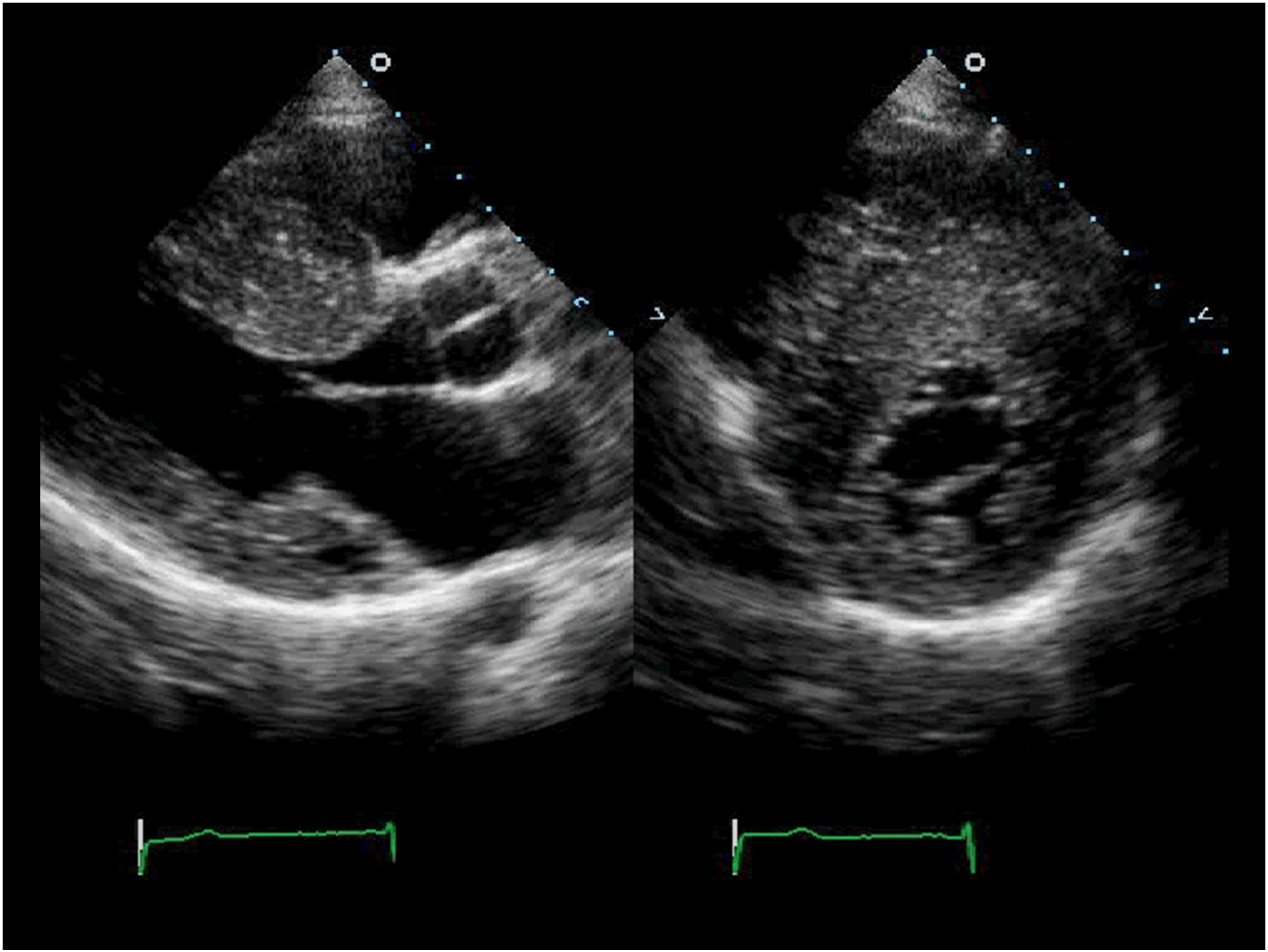
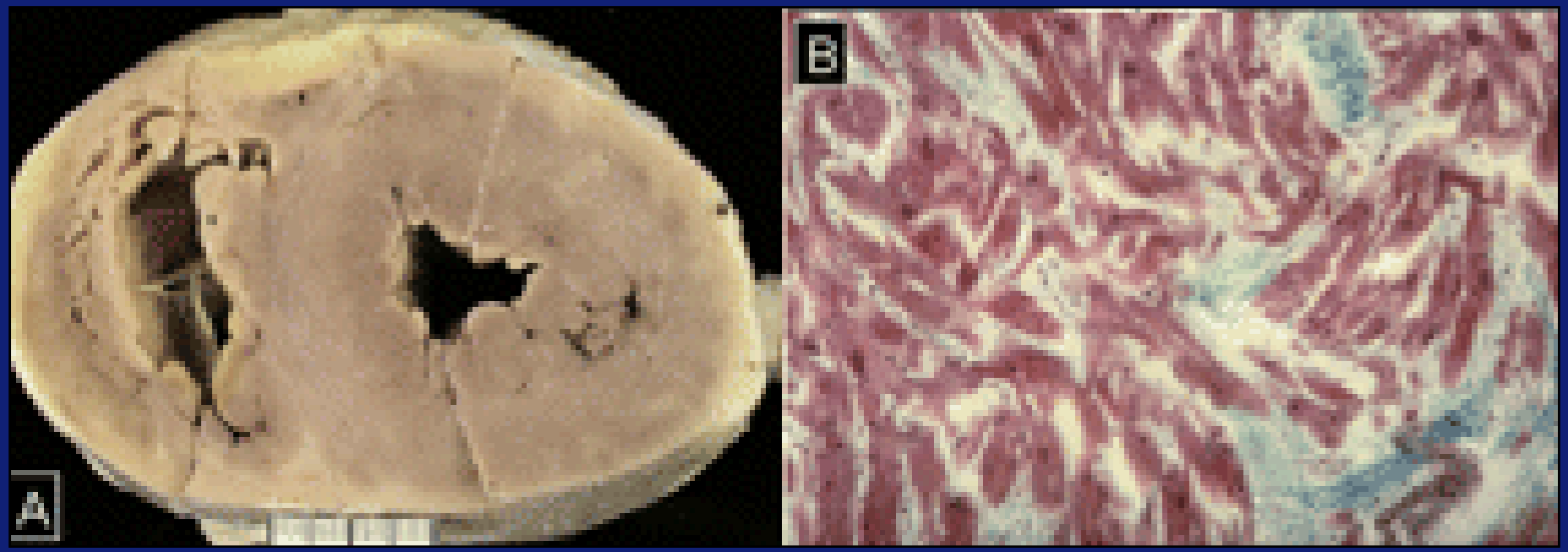
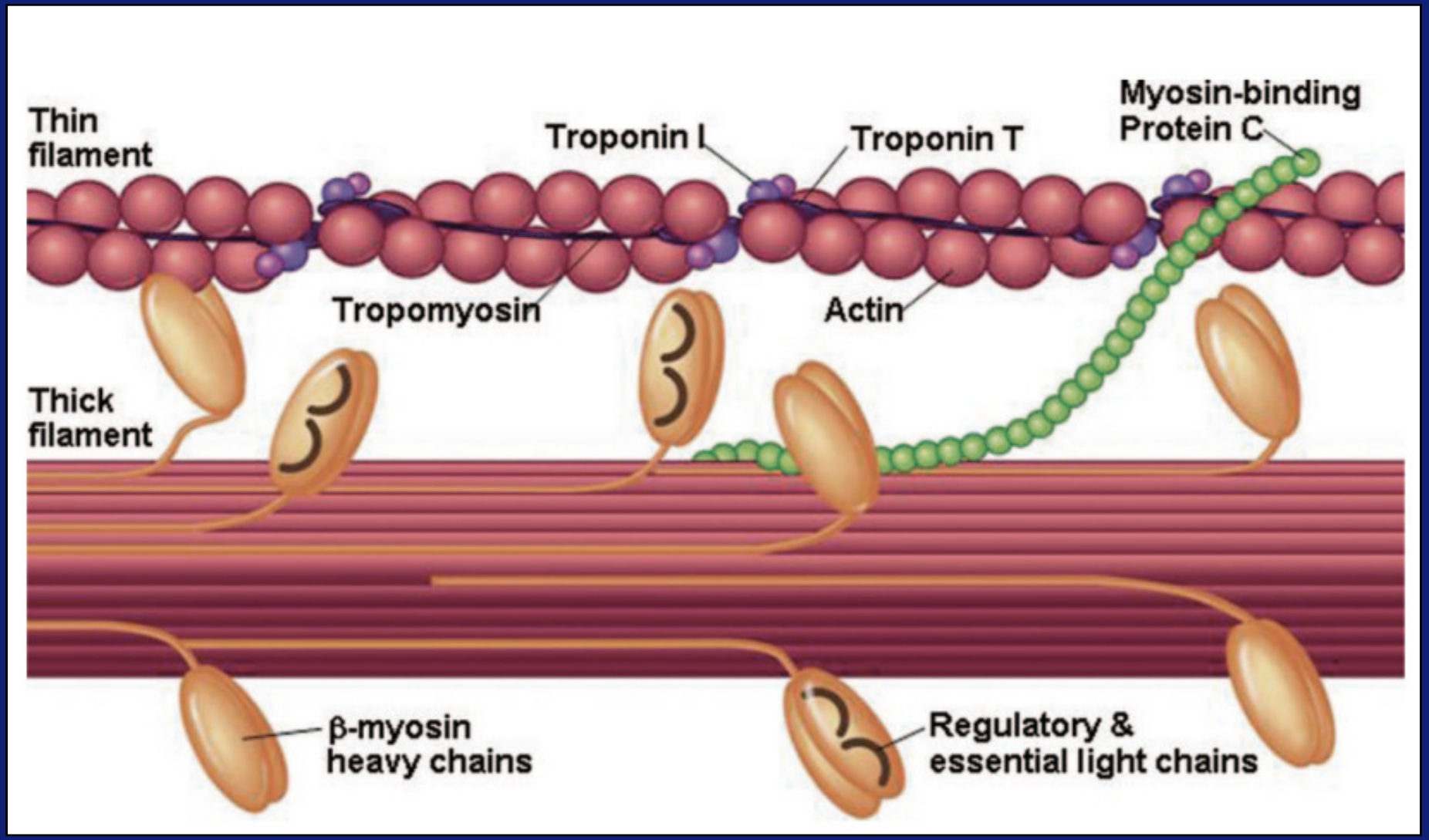

Erasmus MC
University Medical Center Rotterdam
Erasmus
Interventional therapy in obstructive hypertrophic cardiomyopathy
P. A. Vriesendorp
CNE Utrecht, 25 maart 2014

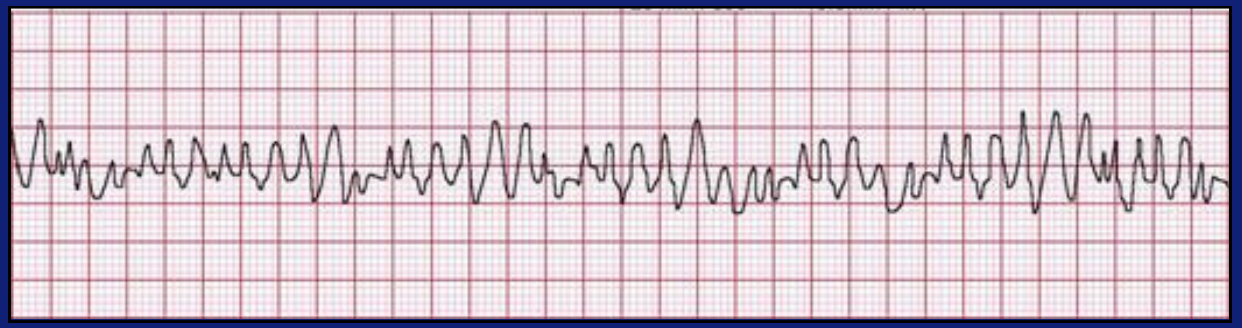
Disclosures

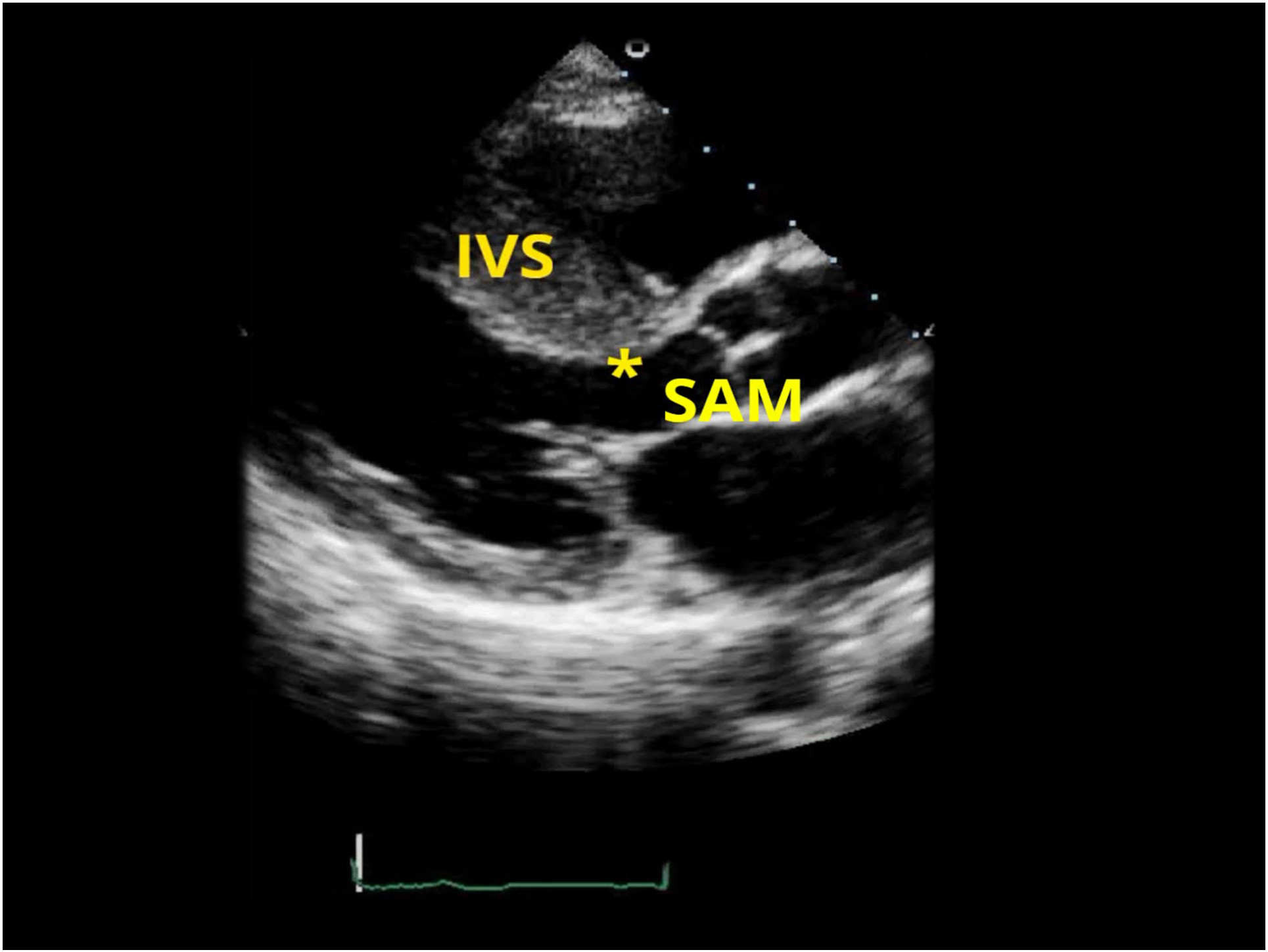
none




A
B


Thin filament
Troponin I
Troponin T
Myosin-binding Protein C
Tropomyosin
Actin
Thick filament
β-myosin heavy chains
Regulatory & essential light chains




IVS
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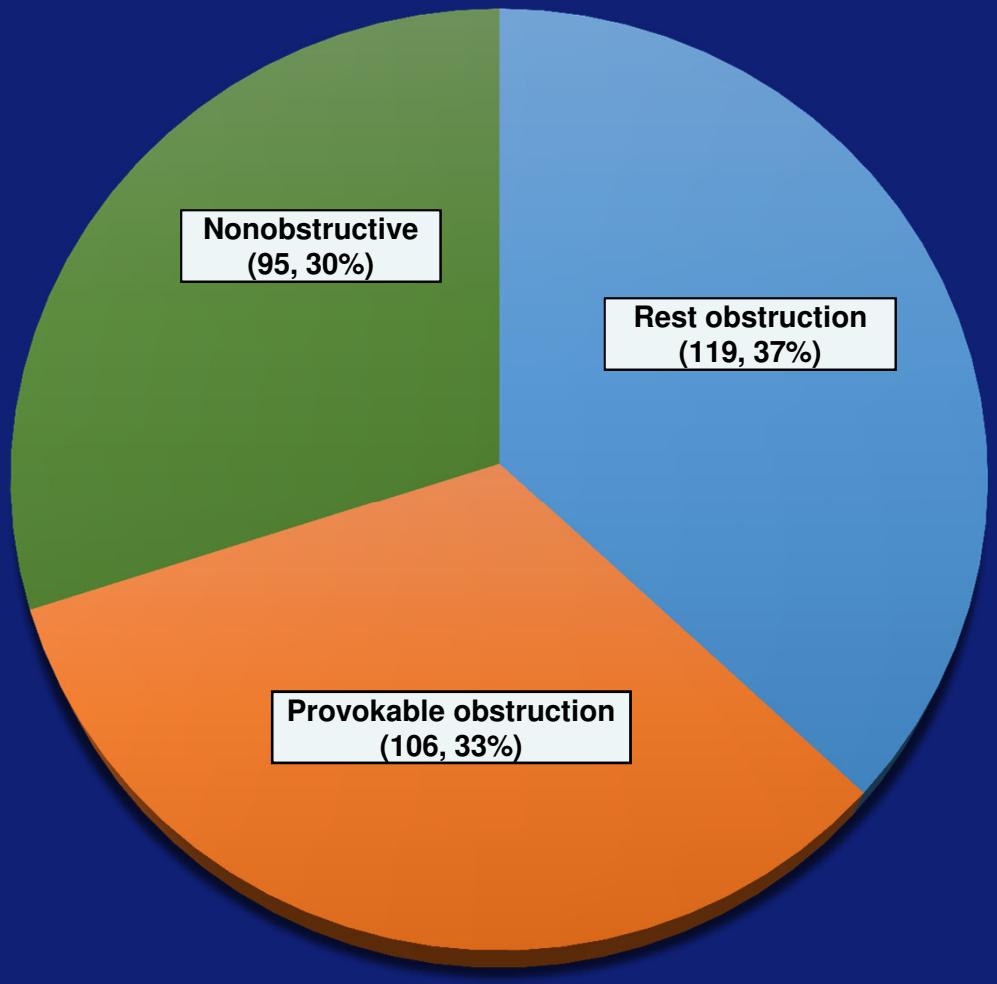
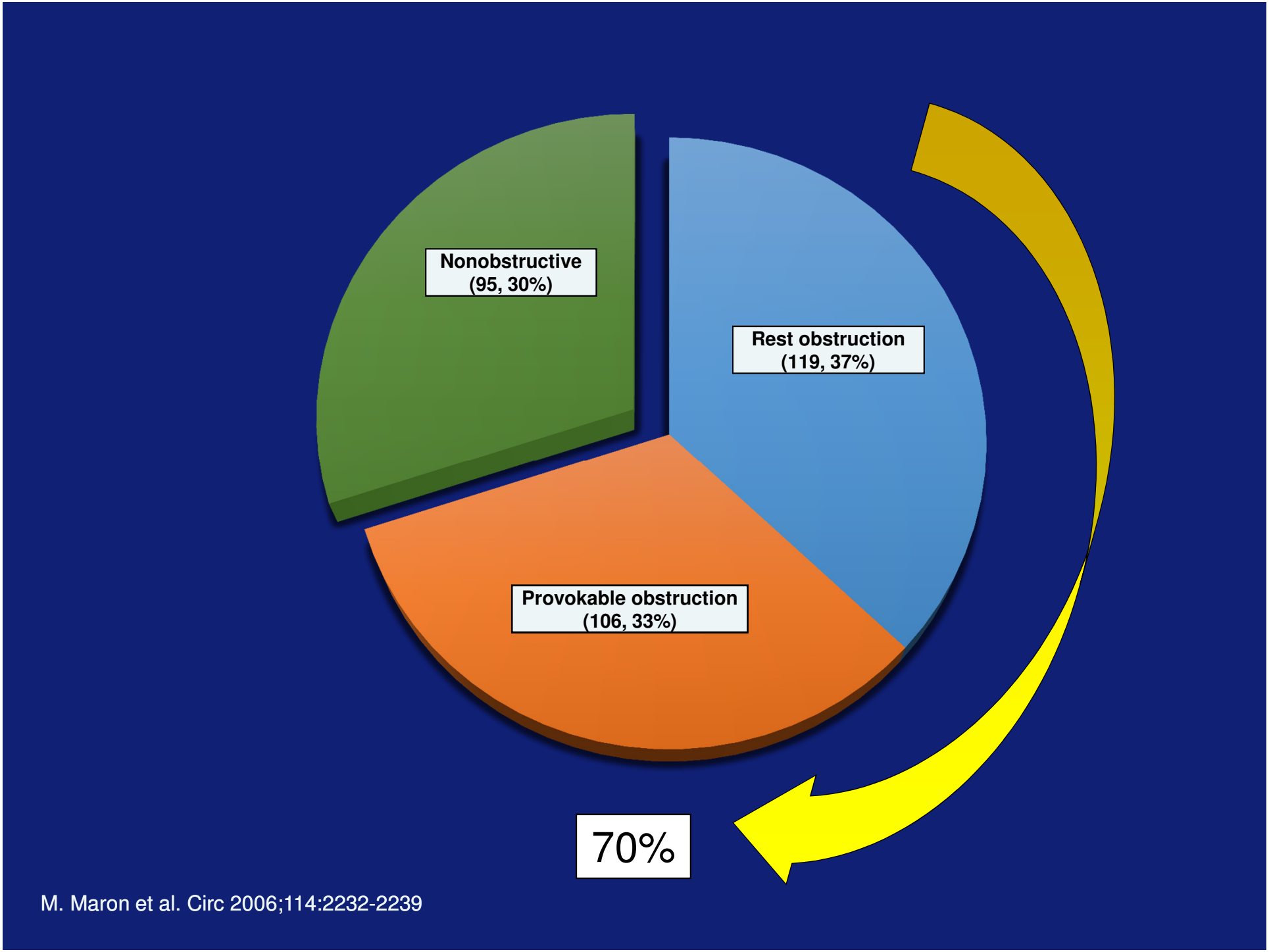


M. Maron et al. Circ 2006;114:2232-2239



M. Maron et al. Circ 2006;114:2232-2239

ORIGINAL ARTICLE

During the follow-up period, patients with obstruction had a significantly greater likelihood of death related to hypertrophic cardiomyopathy than patients without obstruction (relative risk, 2.0; 95 percent confidence interval, 1.3 to 3.0; P=0.001)

ABSTRACT

BA

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The probability of sudden death among patients with obstruction was significantly higher than that among patients without obstruction (relative risk, 2.1; 95 percent confidence interval, 1.1 to 3.7; P=0.02)

RES

Of

outflow under basal (resting) conditions with a peak instantaneous gradient of at least 30 mm Hg. A total of 127 patients (12 percent) died of hypertrophic cardiomyopathy, and 216 surviving patients (20 percent) had severe, disabling symptoms of progressive heart failure (New York Heart Association [NYHA] functional class III or IV). The overall probability of death related to hypertrophic cardiomyopathy was sig-

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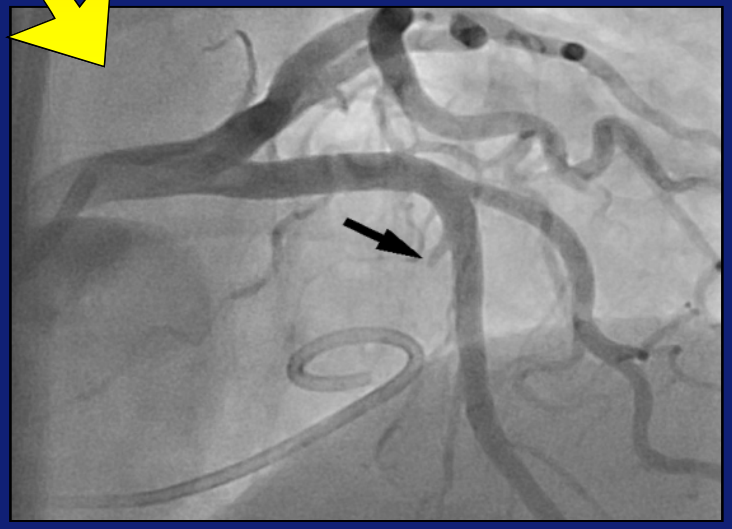
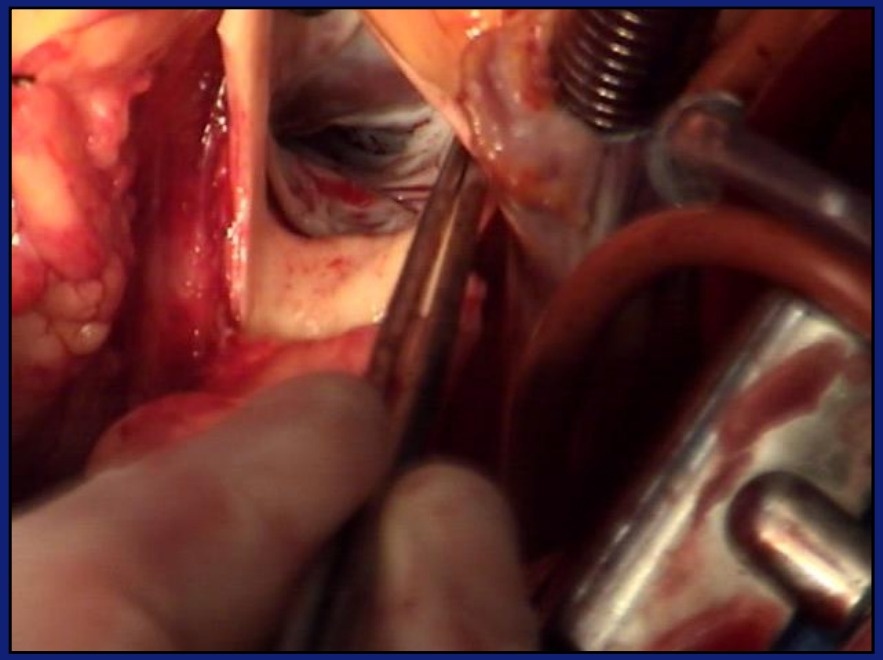
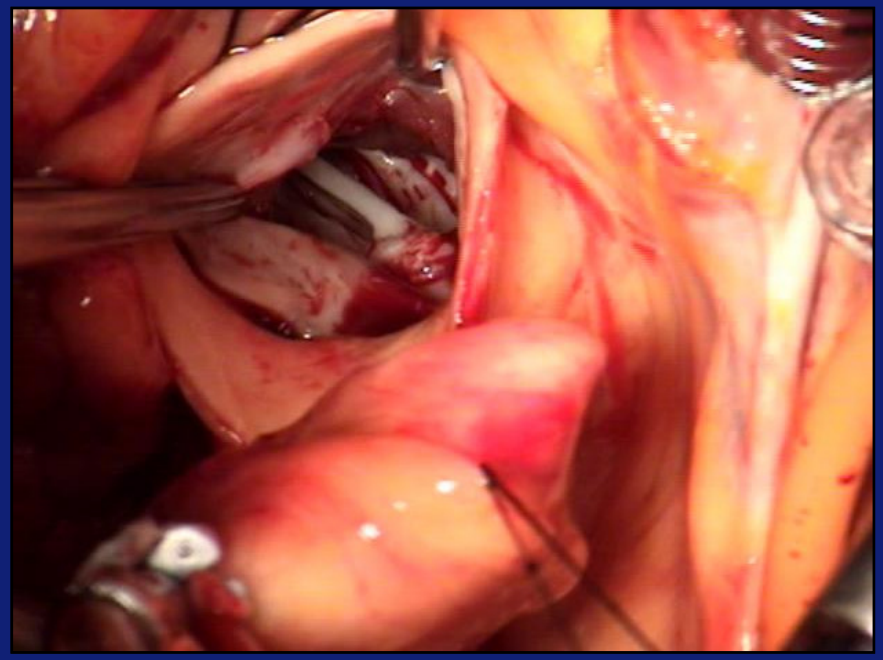
Foundation,
J.M.). Address
Maron at the
y Center, Minneapolis Heart Institute Foundation, 920 E. 28th St., Suite 60, Minneapolis, MN 55407, or at hcm.maron@mhif.org.

N Engl J Med 2003;348:295-303.

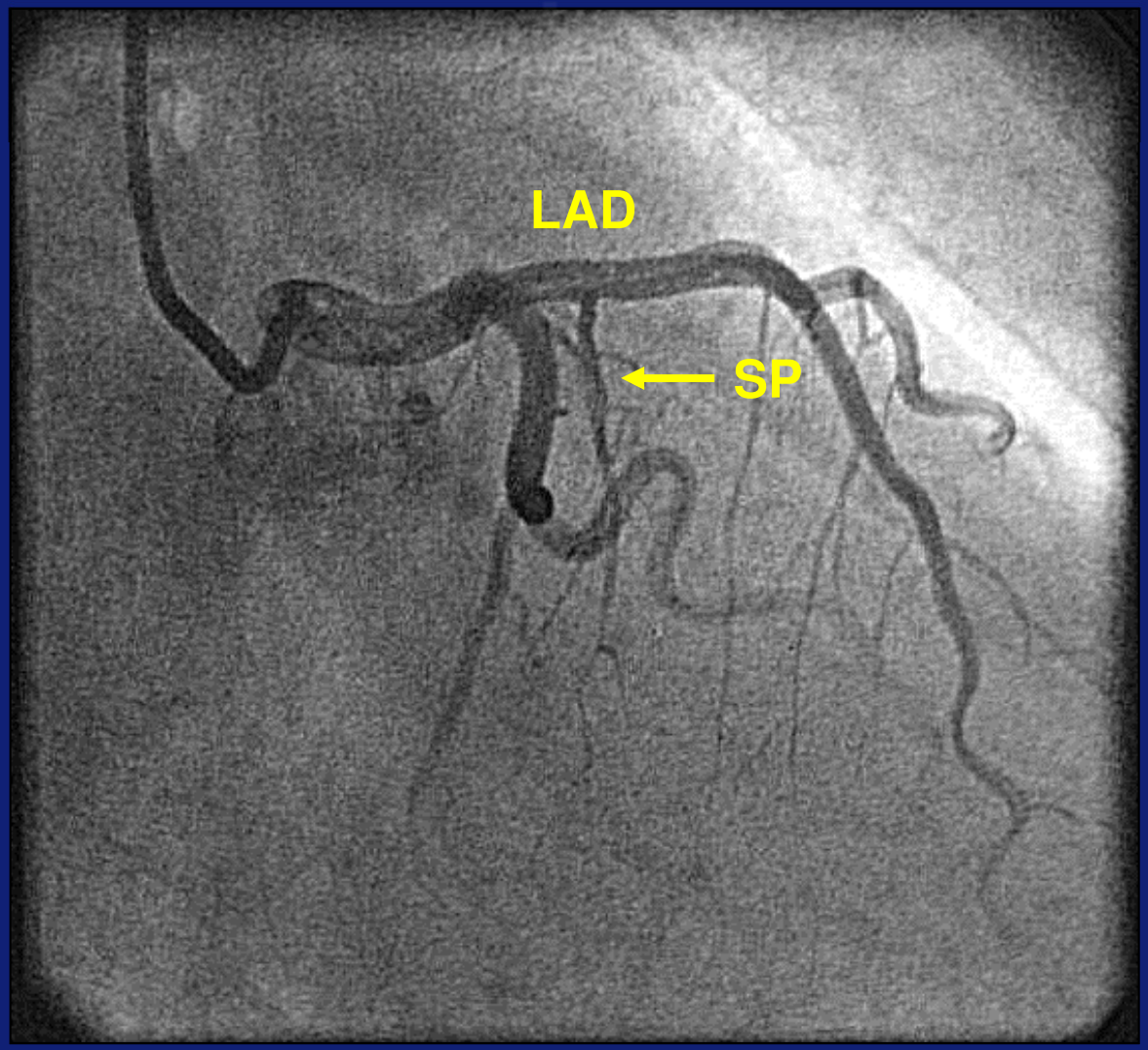


Myectomy



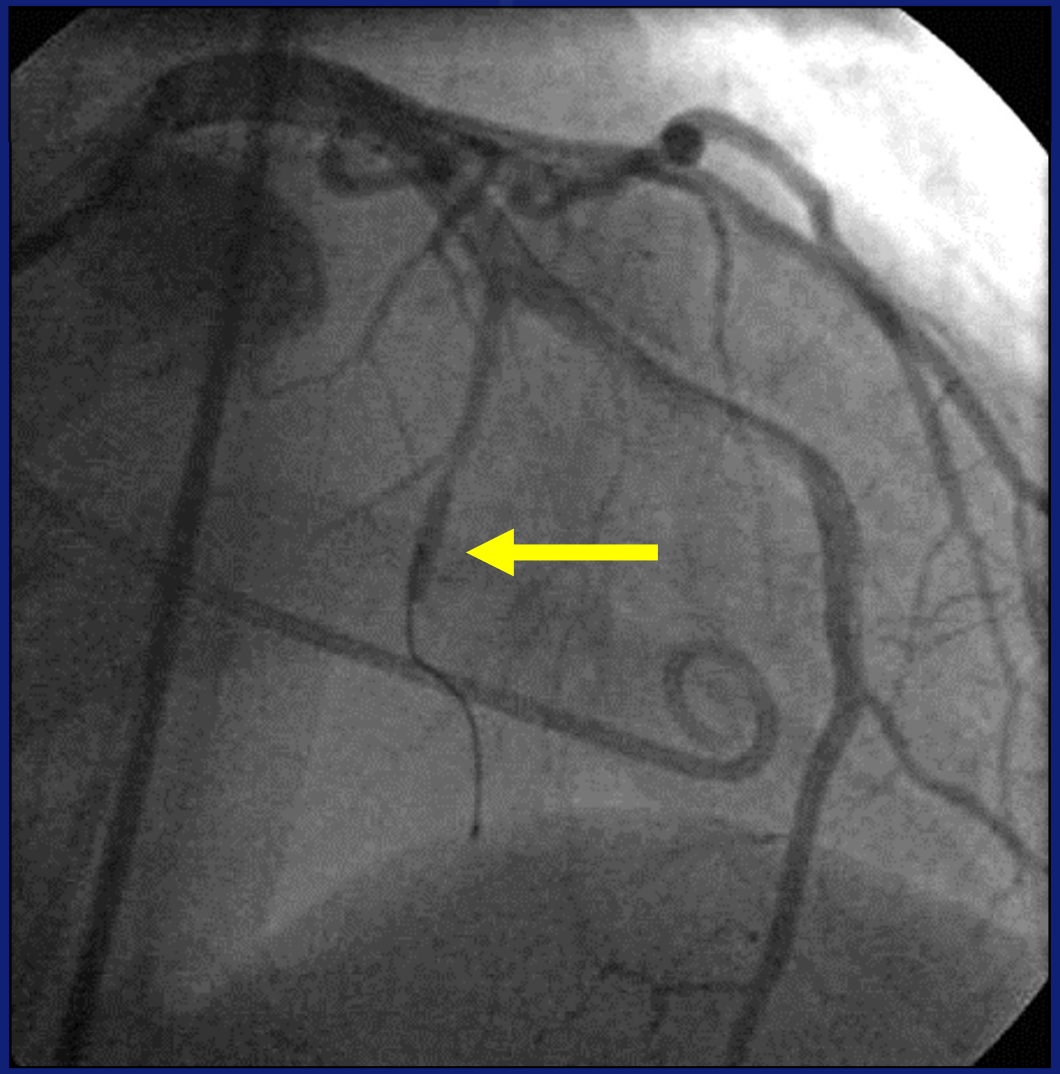


Alcohol septal ablation



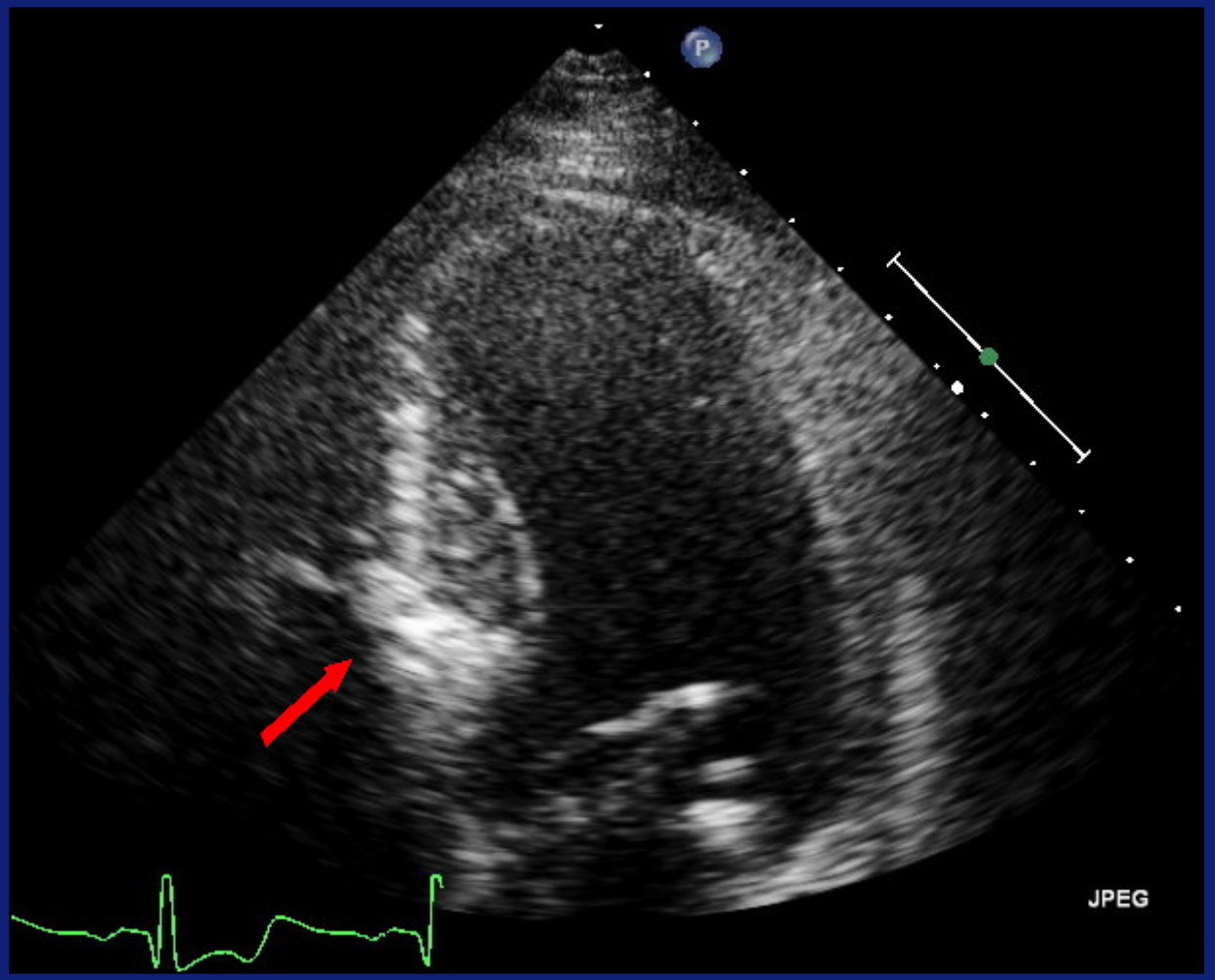
Target septal perforator RAO

Alcohol septal ablation

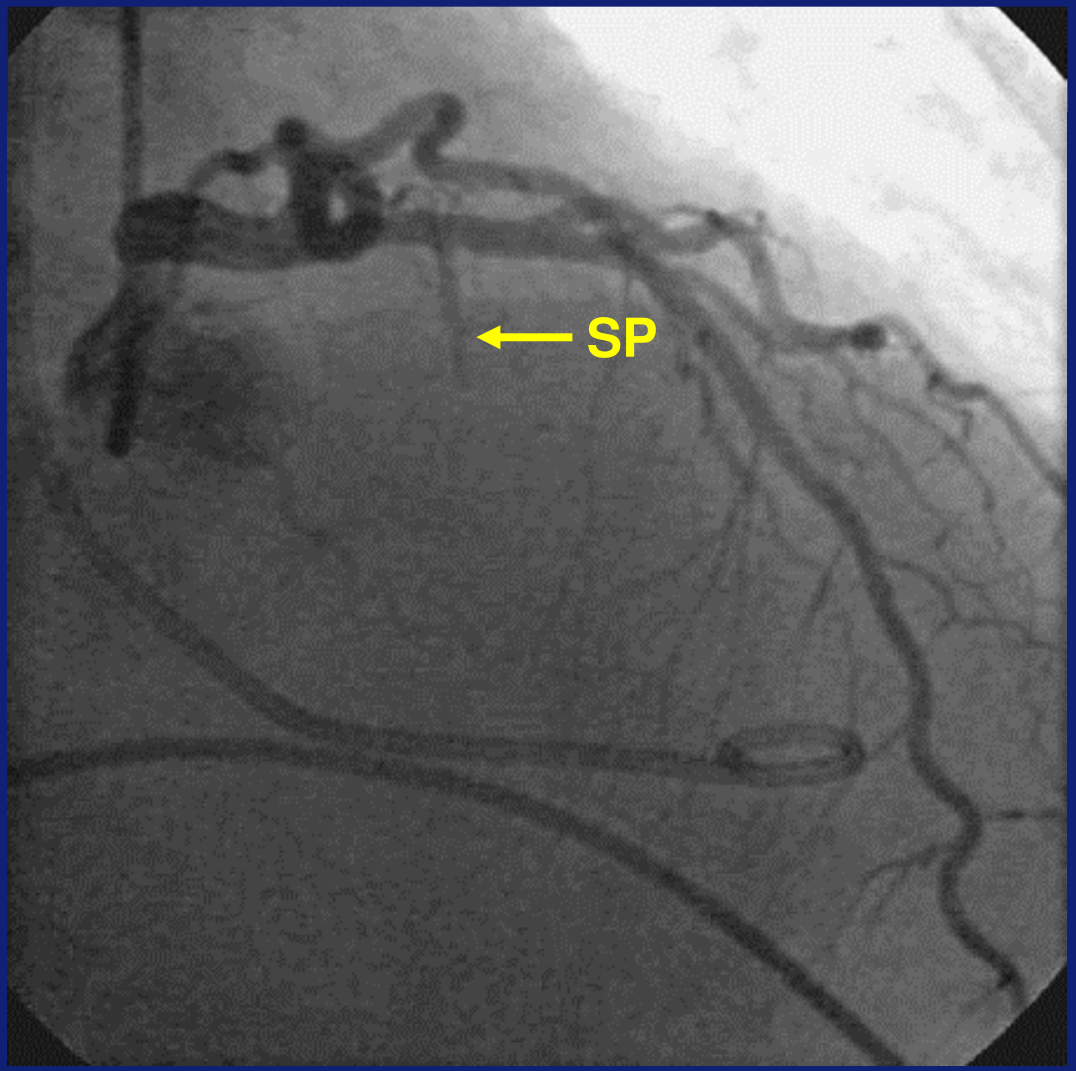


Balloon in the septal perforator artery

Alcohol septal ablation



Alcohol septal ablation



Alcohol septal ablation or myectomy?

	Myectomy	ASA
Procedural mortality	<1%	1–2%
Post procedure gradient (rest)	<10 mmHg	<25 mmHg
Symptoms	Improved	Improved
Effective despite anatomic variation	Yes	Sometimes
Post procedure pacemaker	1–2%	5–10%
Late sudden-death risk	Very low	**Uncertain**
Available follow-up	>40 years	~15 years

Modified from the American College of Cardiology and the European Society of Cardiology consensus statement. Maron et al. Eur Heart J 2003

Casus

Patiente A, º 1948

VG: HCM, COPD, DM

2006: vanuit Ikazia naar EMC owv 2nd Op.
2012: opnieuw verwezen bij ↑ klachten

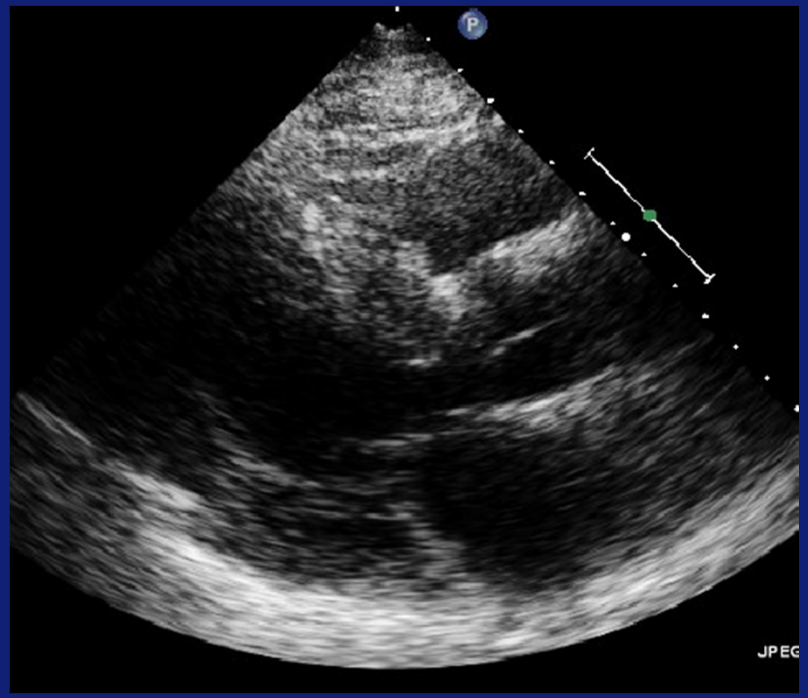
Casus

A: POB CCS klasse II-III, Dyspnoe NYHA III

LO: BMI 41(!), BD 110/70, syst souffle 3/6

Medicatie: metoprolol, verapamil, flixotide/ventolin

TTE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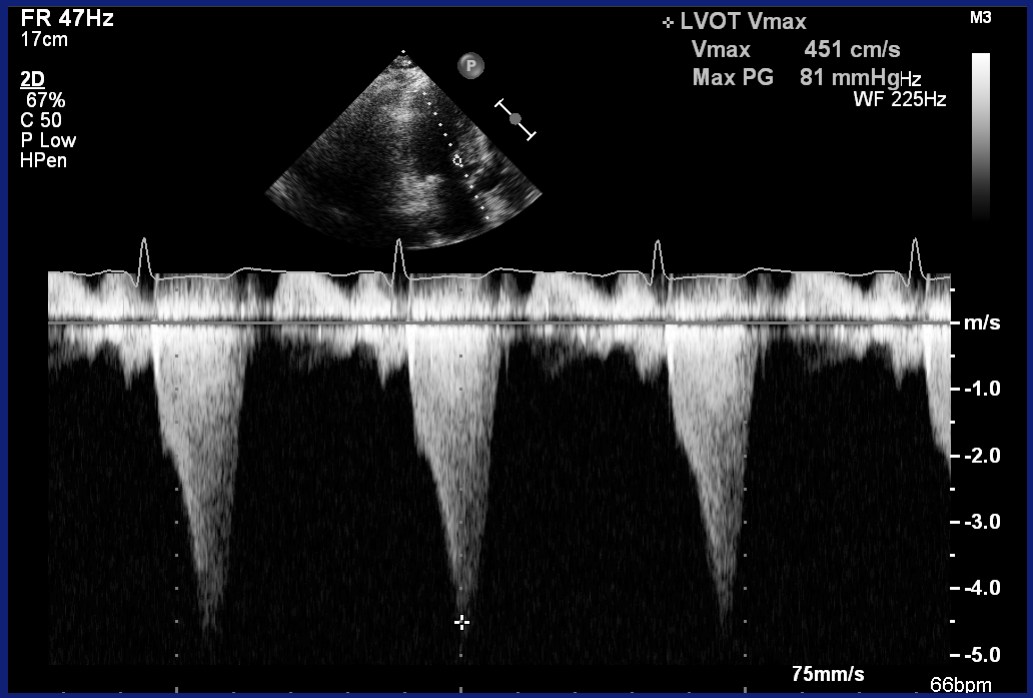
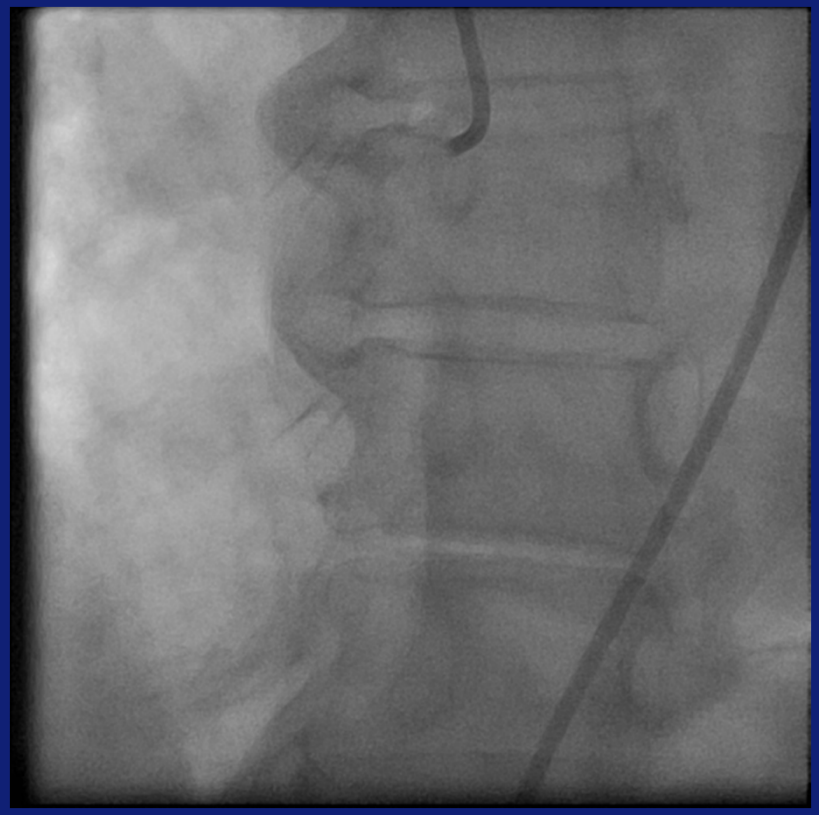
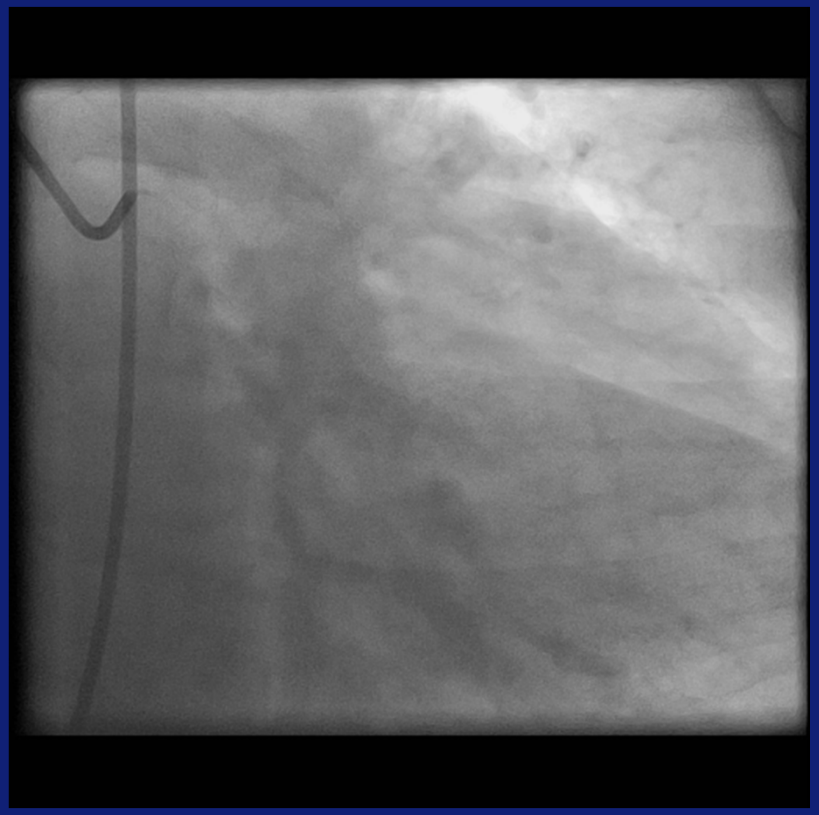
JPEG


FR 47Hz
17cm
2D
67%
C 50
P Low
HPen
LVOT Vmax
Vmax 451 cm/s
Max PG 81 mmHg
WF 225Hz
M3
m/s
-1.0
-2.0
-3.0
-4.0
-5.0
75mm/s
66bpm

Angio





Moet er invasief ingegrepen worden?

Chirurgisch of percutaan?

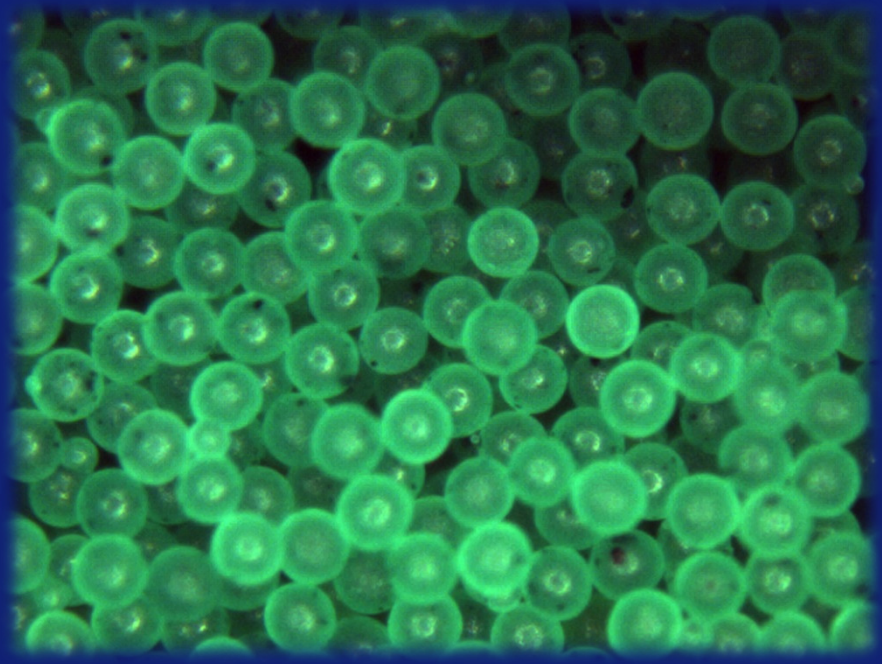
DM, ernstig morbide obesitas, COPD
Geen CAD of (sub)valvulair-lijden

Euroscore-II: 1,43%

In HT wordt besloten tot percutane behandeling

Microspheres

Coils en covered stents: geen goede resultaten, daarom wordt gekozen voor:

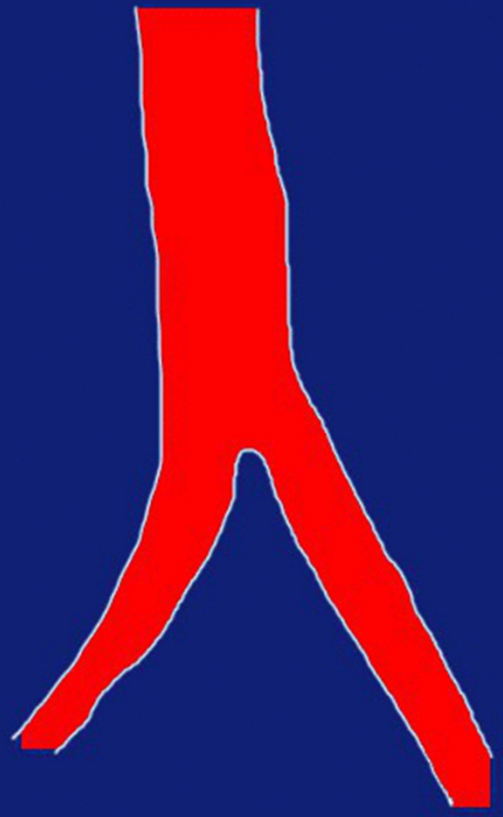


Microspheres

Embozene ® microspheres: biocompatibel, niet absorbeerbaar

Gebruikt voor embolizatie van o.a. lever- en baarmoedertumoren

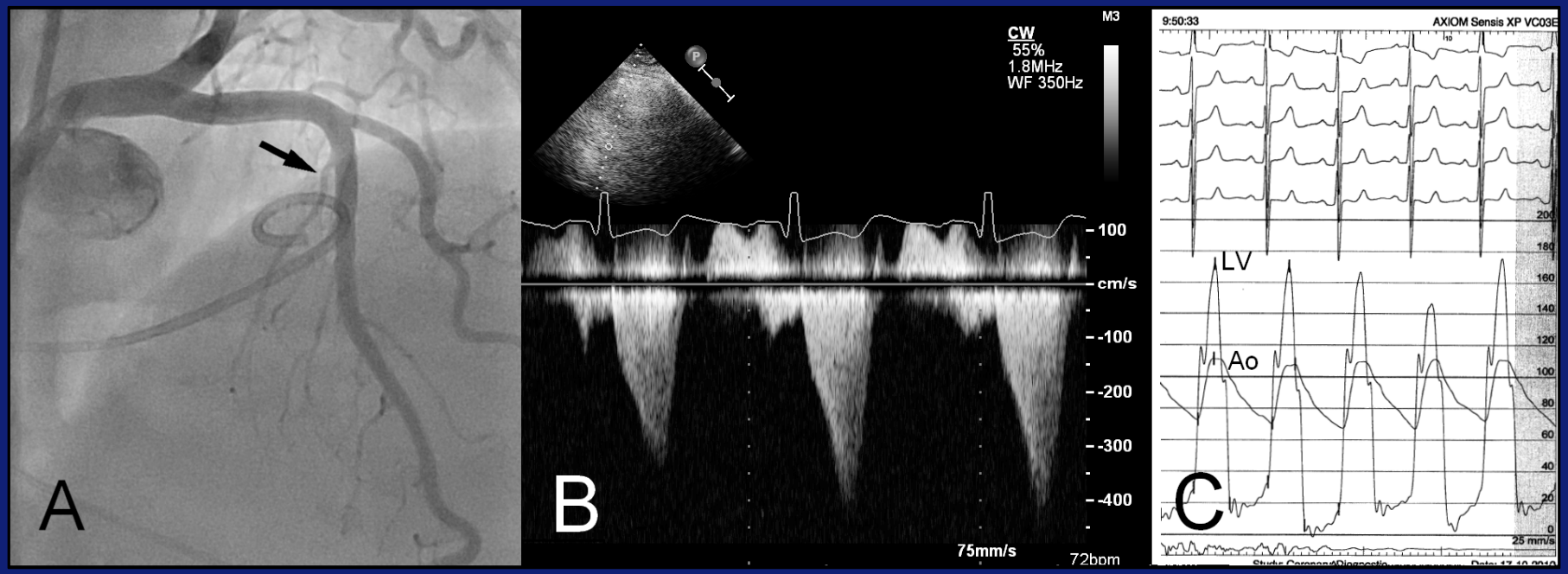
Microspheres?



Niet cardiotoxisch, infarct door occlusie van septaaltak

Minder kans op collateralen??

Pre procedure



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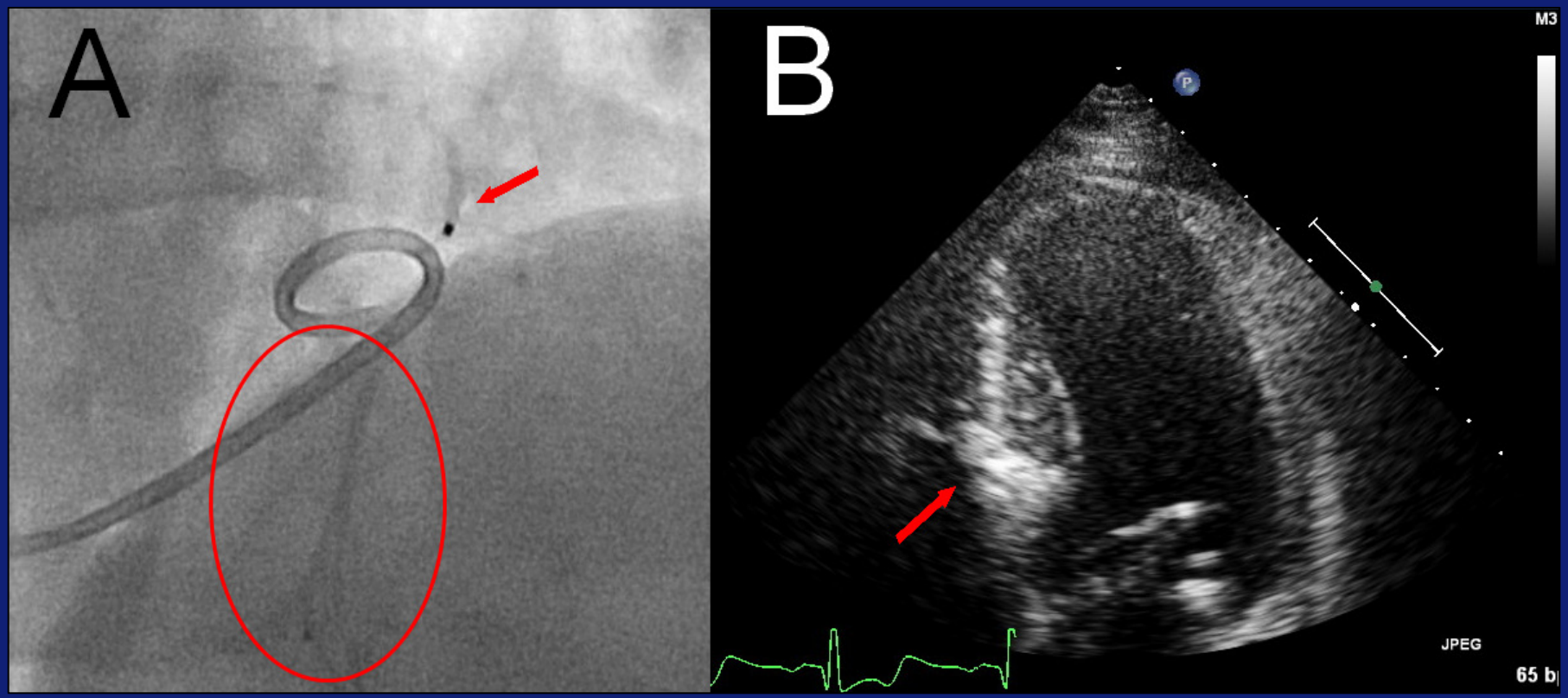

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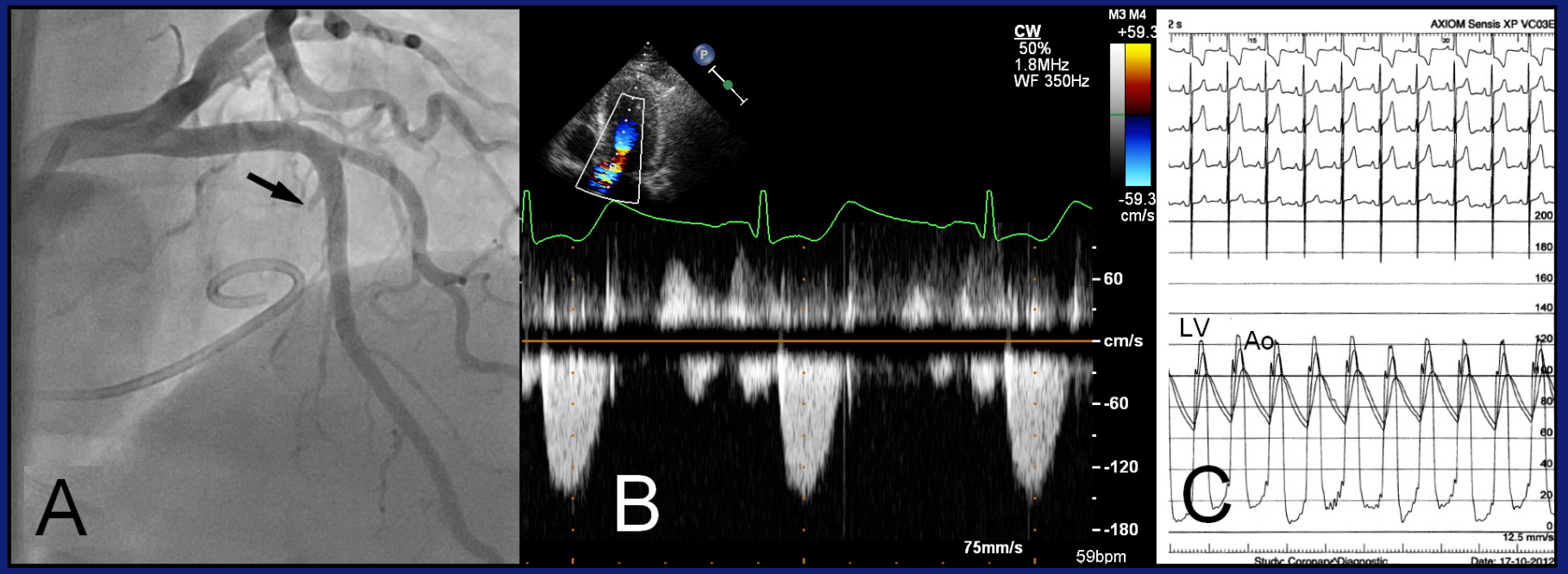
Post procedure



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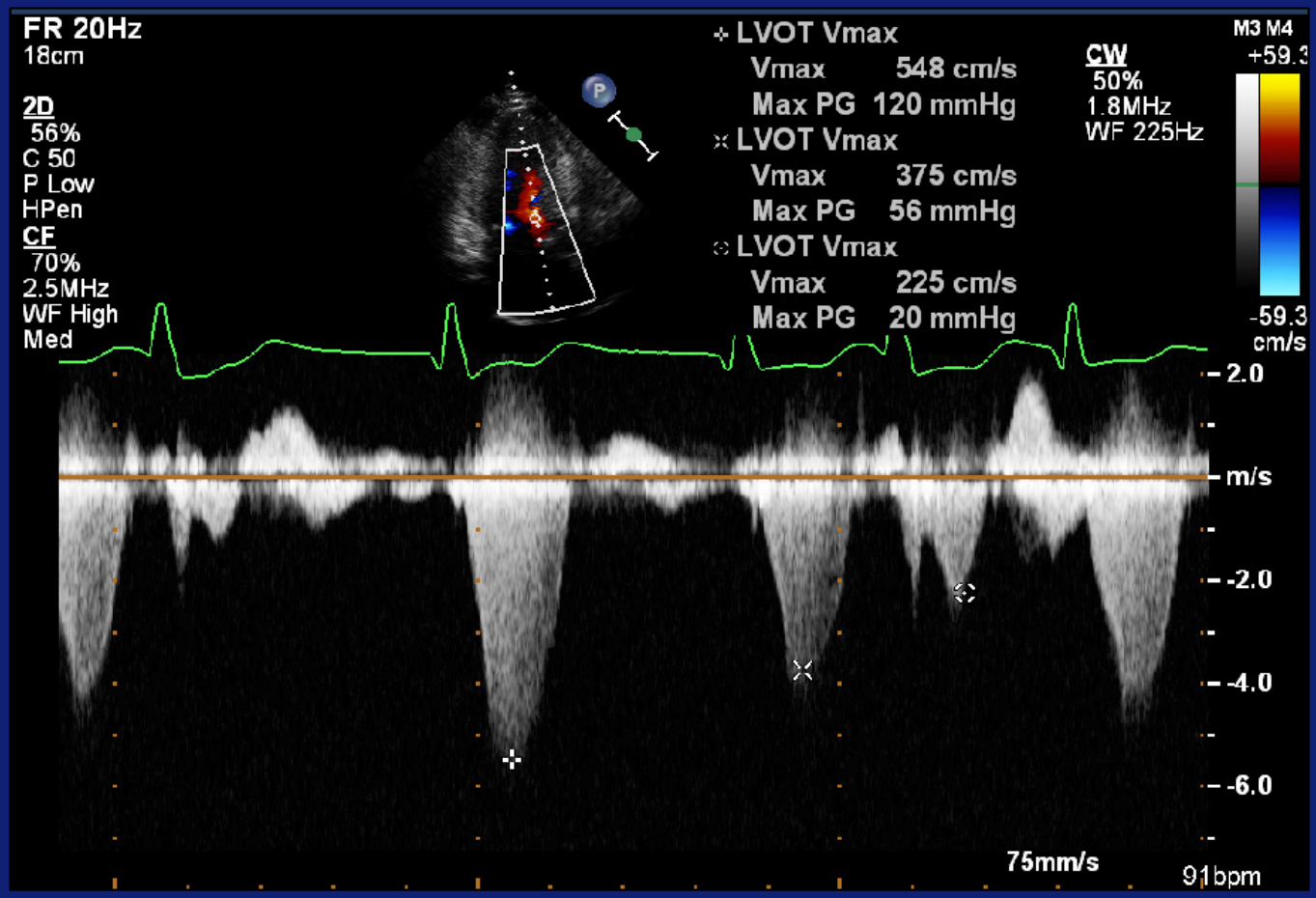
TTE na 3 dagen



TTE na 3 maanden

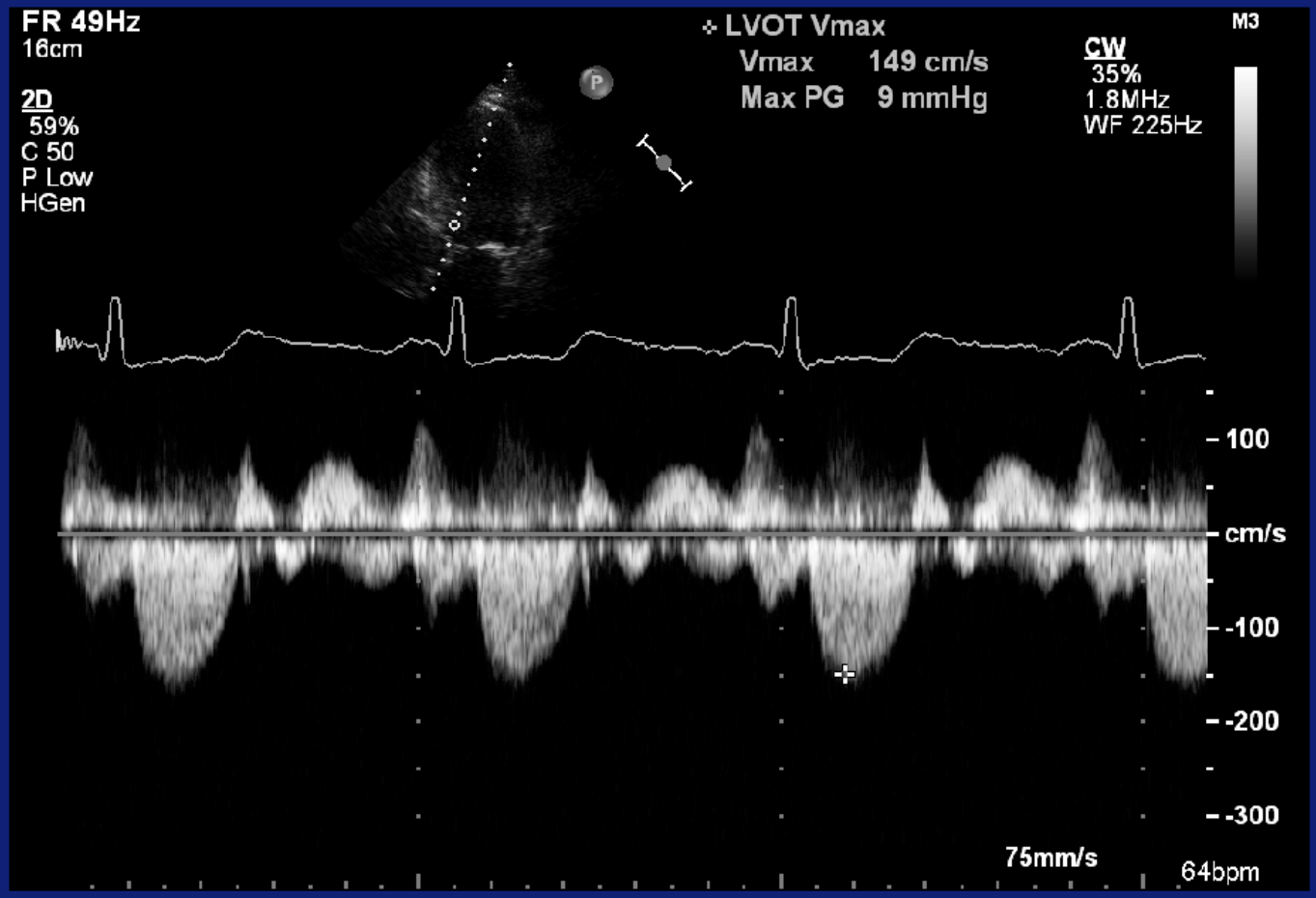


Table 1. Clinical characteristics in 8 SME patients.

	N= 8
AGE, y	69 ± 5
FEMALE (%)	5 (63)
FOLLOW-UP TIME, m	9 ± 9
AMOUNT MICROSPHERES (X 10^3)	3234 ± 1312
CK-MB MAX, µg/l	191 ± 172
PRE-PROCEDURE LVOT GRADIENT, mmHg	93 ± 25
POST-PROCEDURE LVOT GRADIENT, mmHg	14 ± 8
LAST FOLLOW-UP LVOT GRADIENT, mmHg	25 ± 18

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Take home message 1

Recommendations	Class	Level
Septal reduction therapy should be performed only by experienced operators	I	C
Surgical septal myectomy is the first consideration for the majority of eligible patients with HOCM	IIa	B
Alcohol septal ablation may be beneficial if surgery is contraindicated or the risk is considered unacceptable	IIa	B

Take home message 2

Korte termijn resultaten SME: veilig en effectief

Lange termijn onduidelijk – blijft de obstructie weg?