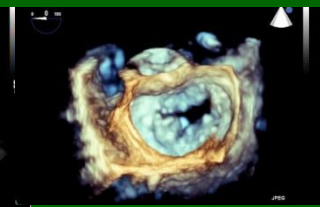
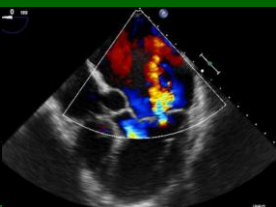




EuroValve

January 26-27, 2017
Barcelona, SPAIN

MitraClip Device



Who can benefit now from the TMVR Therapy?

Echo/anatomical perspective

Marta Sitges, MD, PhD
Cardiovascular Institute,
Hospital Clinic,
Universitat de Barcelona





Who can benefit? Echo view

- Severe MR
- Functional or degenerative etiology
- Adequate anatomy

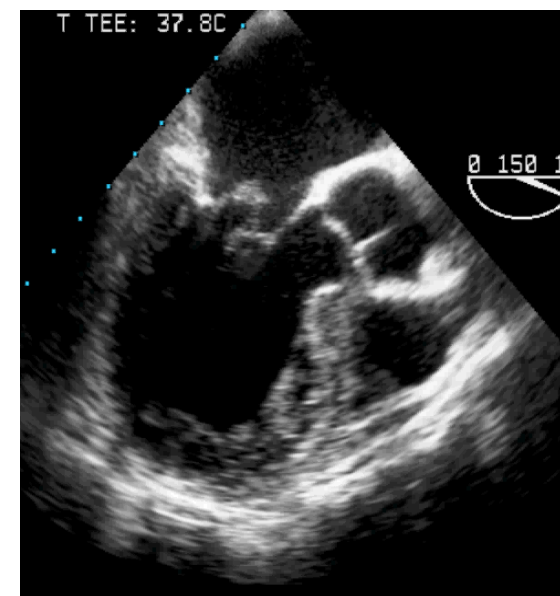
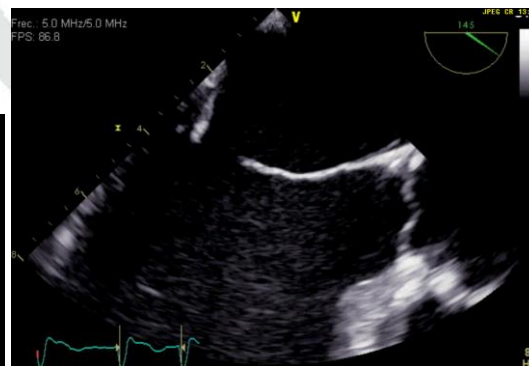
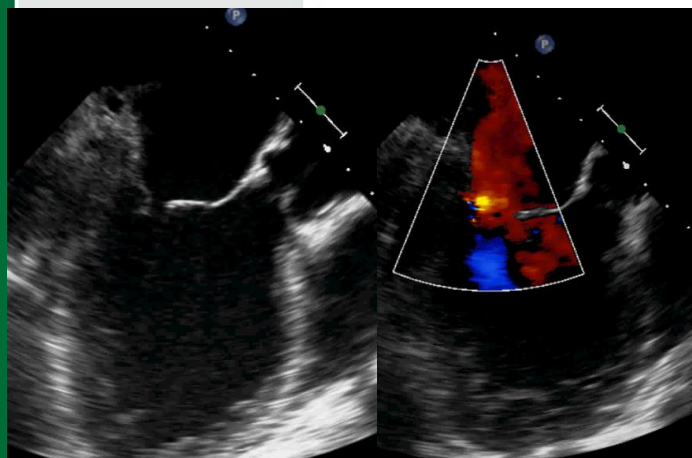


Etiology

**Functional
or
Secondary**

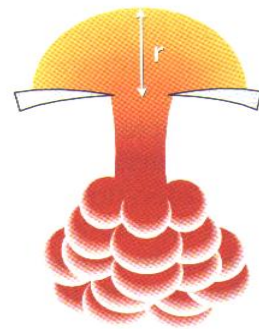
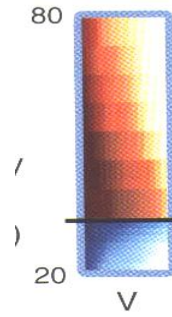
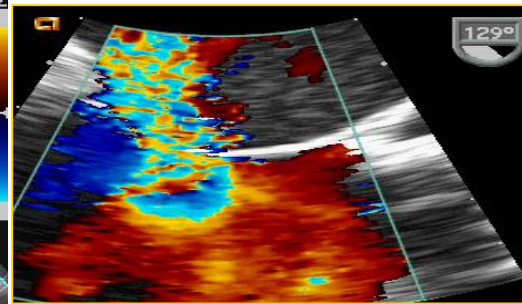
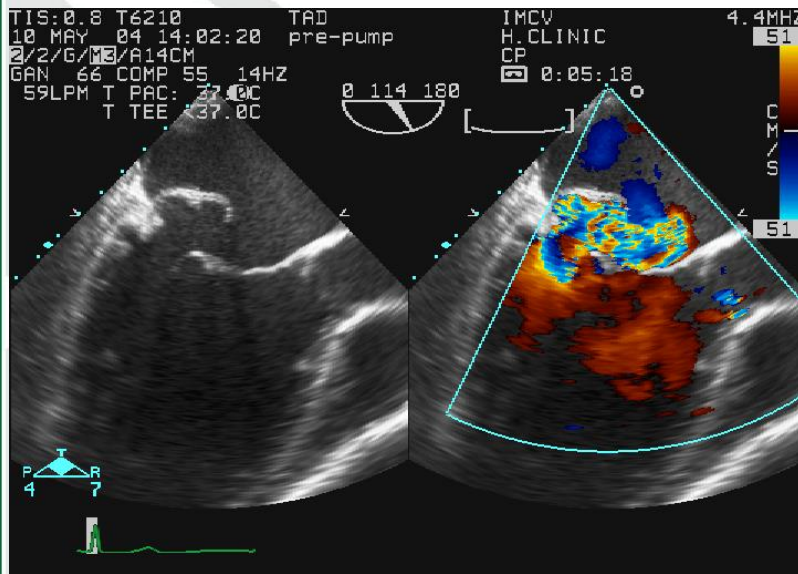
Mixed

**Organic
or
Primary**

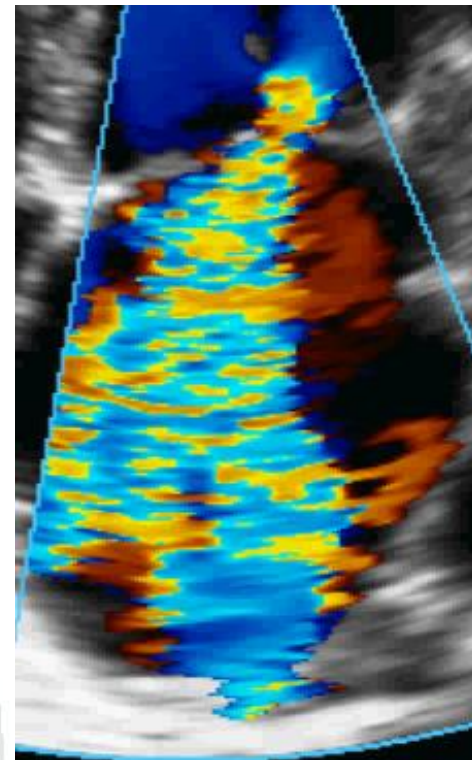
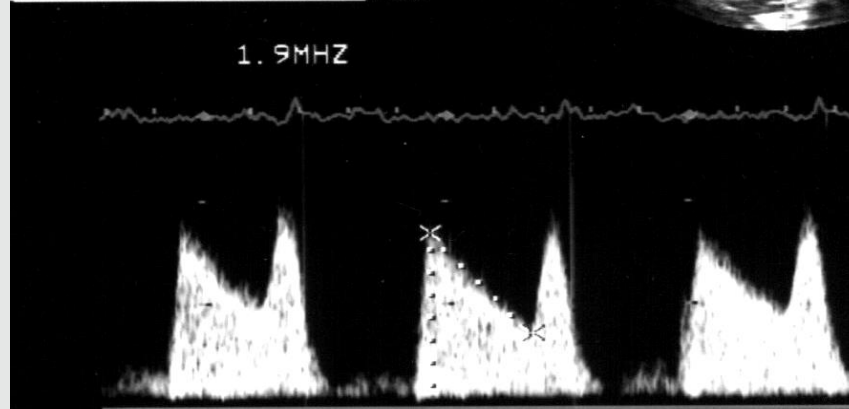




What is severe MR?



V MAX =170. CM/S 1/0/E
TIEMPO =.410 SEG M
PENDTE.=237. CM/S2 17:00
GP MAX =11.6 mmHg C 99
P1/2t =210. mseg :00



Mitral Regurgitation

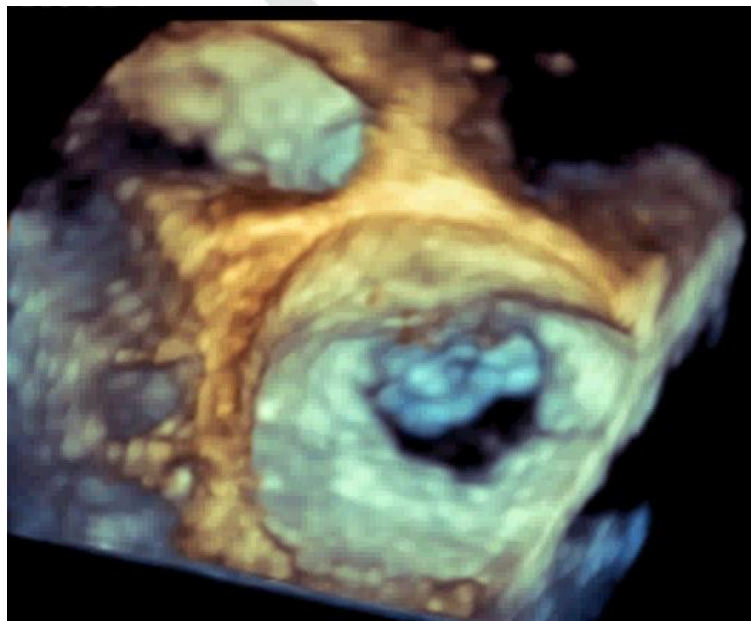
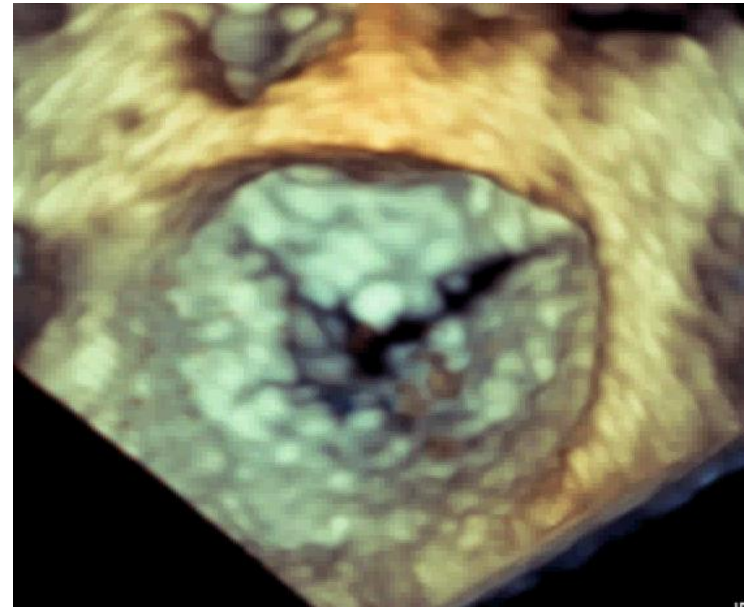
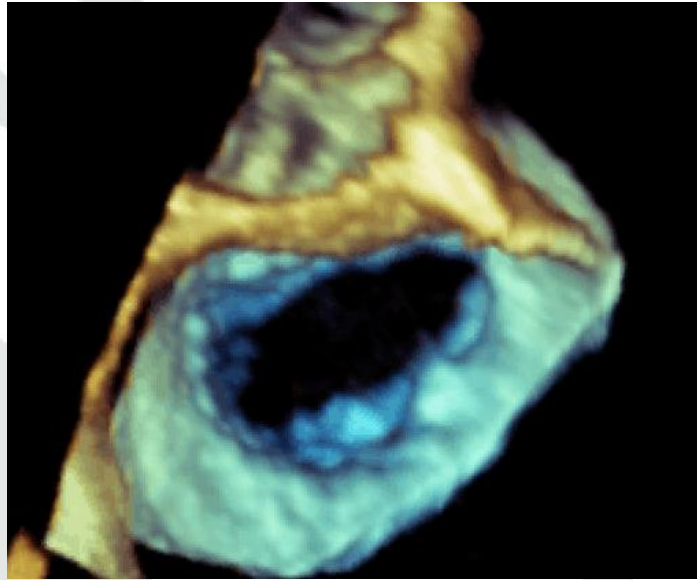
	MILD	MODERATE	SEVERE
Area color Doppler jet	<4 cm²	4-8 cm²	>8 cm²
Area color Doppler jet/LA area	<20%	20-40%	>40%
VC width	< 3 mm	3-7 mm	>7-8 mm
ROA* *Primary MR	<20mm²	20-40 mm²	> 40 mm²
Severe Functional MR: ROA > 20 mm²			

Helmcke F et al. Circulation. 1987 Jan;75(1):175-83.

Lancellotti P et al. Eur Heart J – Cardiovasc Imaging (2013) 14, 611–644

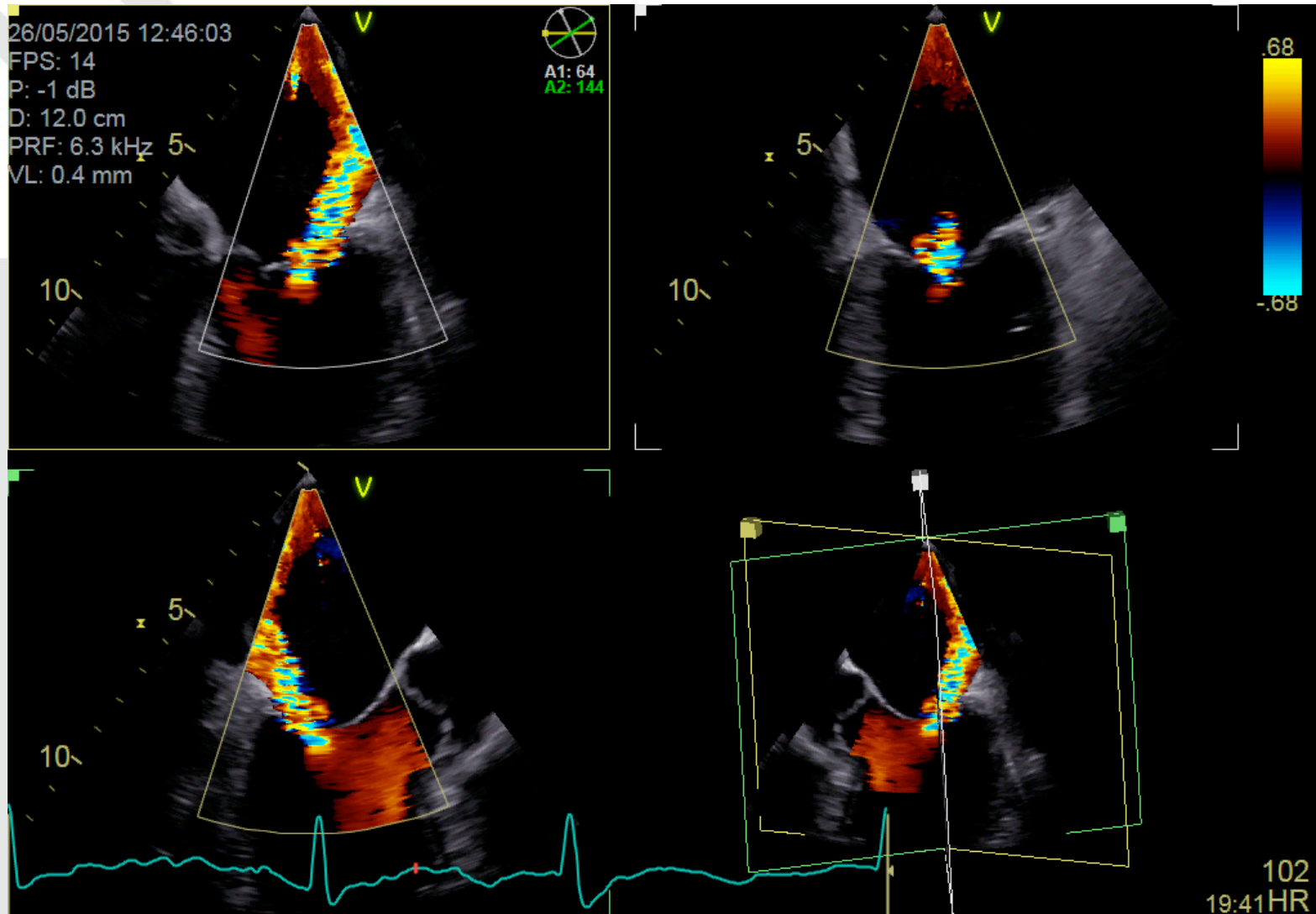


RO have different shapes



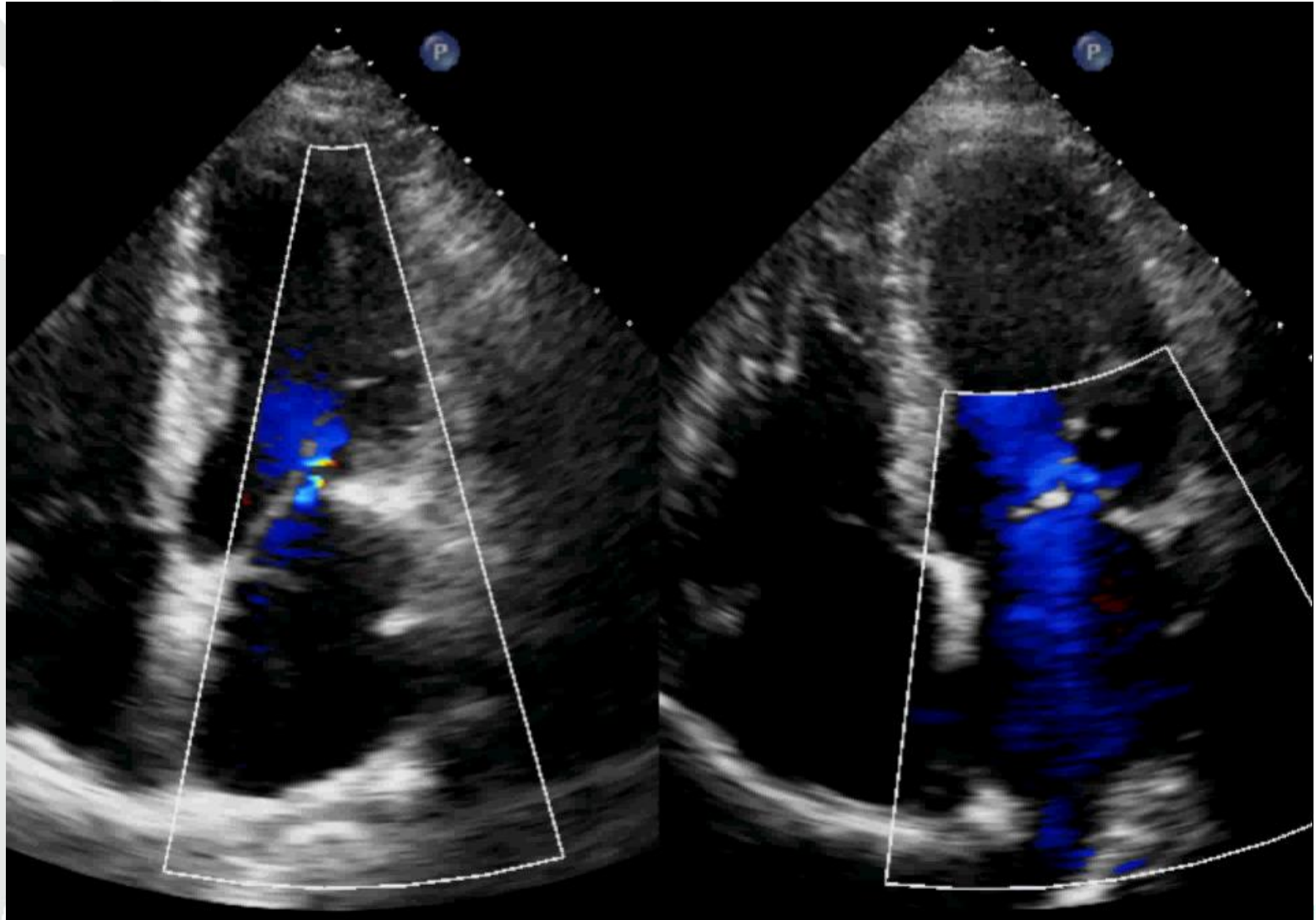


Vena Contracta





Stress echo in FMR



Baseline

Handgrip



What is a suitable anatomy?

- Enough & flexible leaflet tissue (no calcium).
- Some residual coaptation (no large gap)
- Adequate geometry (limited device maneuver)

**EXPERIENCED INTERVENTIONIST &
ECHOCARDIOGRAPHER**



„Real life“ anatomic selection criteria

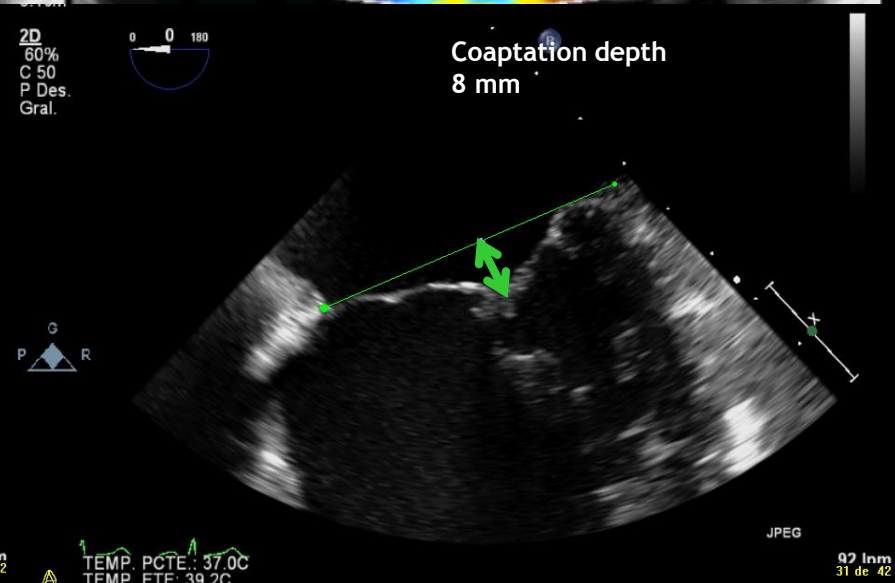
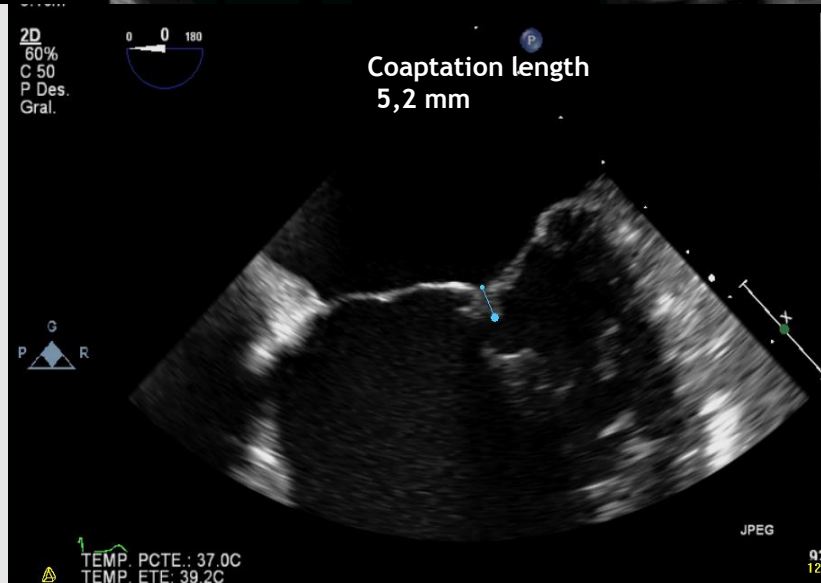
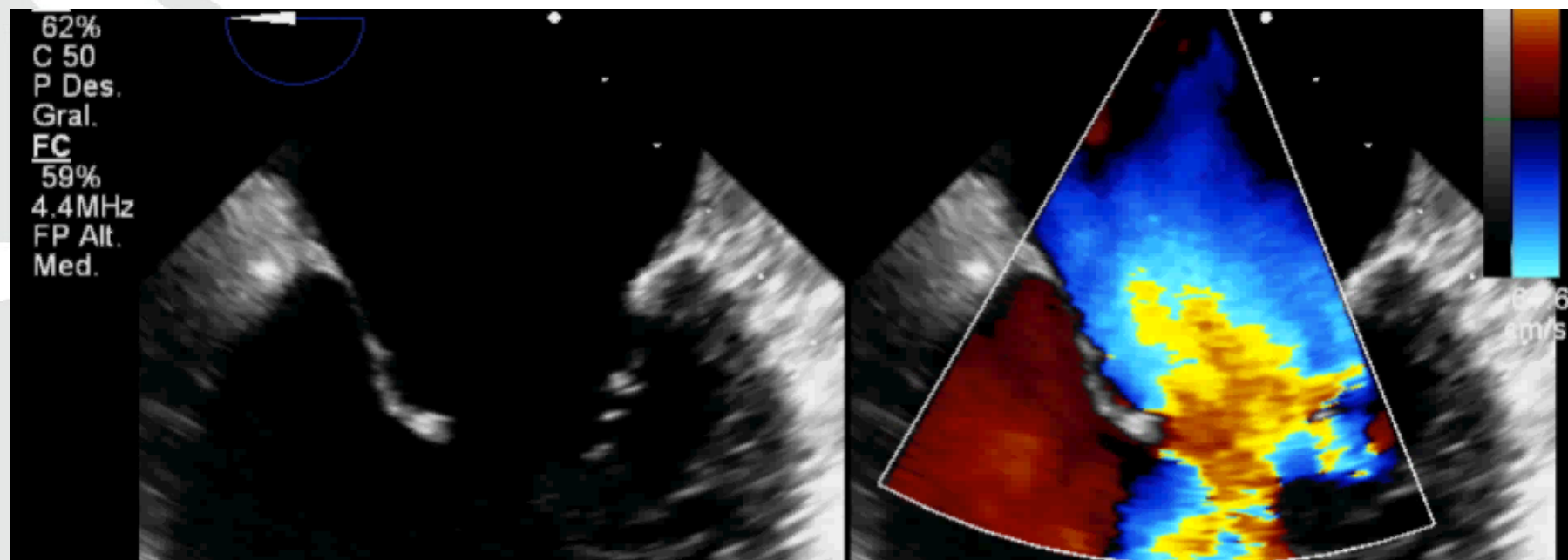
Easy to do

Doable

Hard or impossible to do

Optimal valve morphology	Conditionally suitable valve morphology	Unsuitable valve morphology
Central pathology in Segment 2	Pathology in segment 1 or 3	Perforated MV leaflet or Cleft
No leaflet calcification	Mild calcification outside of the grip-zone, ring calcification, post anuloplasty	Severe calcification in the grip-zone
MVOA > 4cm ²	MVOA > 3cm ² with good residual leaflet mobility	Hemodynamically significant mitral stenosis (MVOA < 3cm ² ; MPG ≥ 5mmHg)
Mobile length of PML ≥ 10mm	Mobile length of PML 7- <10mm	Mobile length of PML < 7mm
Coaptation depth < 11mm	Coaptation depth ≥ 11 mm	Rheumatic leaflet thickening and restriction in systole and diastole (Carpentier IIIa)
Normal leaflet strength and mobility	Leaflet restriction in systole (Carpentier IIIB)	Barlow's syndrome with multisegment flail leaflets
Flail width < 15mm	Flail width > 15mm only with large ring width and the option for multiple Clips	
Flail gap < 10mm		

Case 1: 56 y.o. Lady, QRS 90 ms, Idiopathic DCM





Case 1: 56 y.o. Lady, QRS 90 ms, Idiopathic DCM

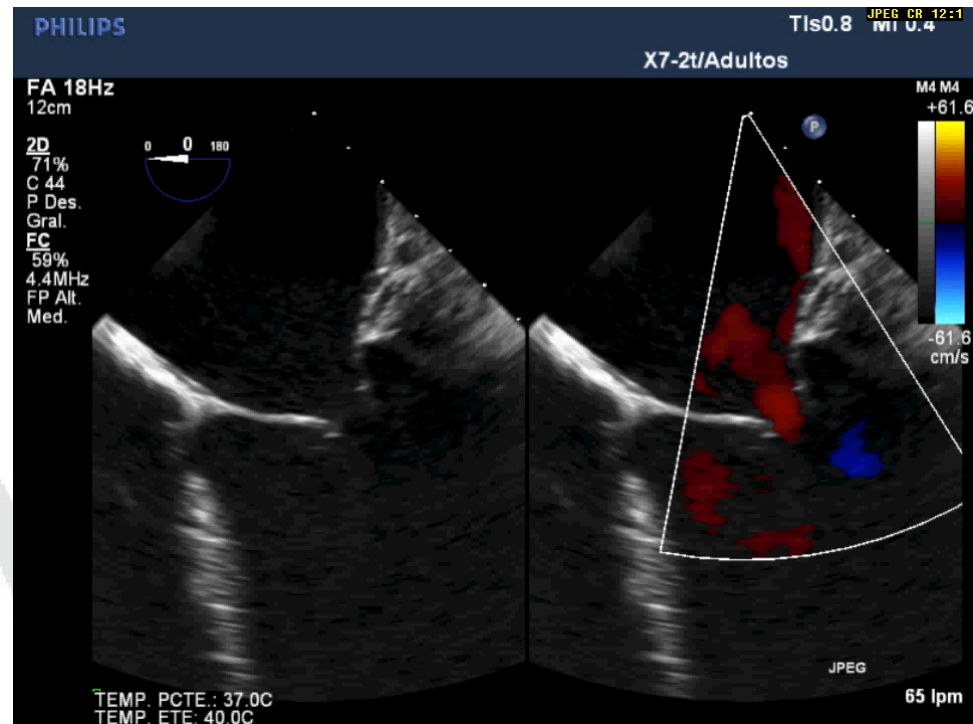
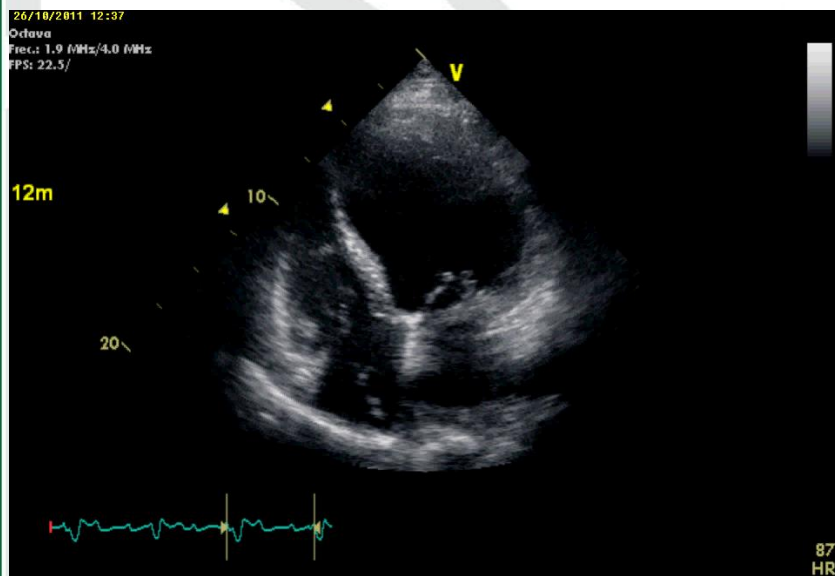


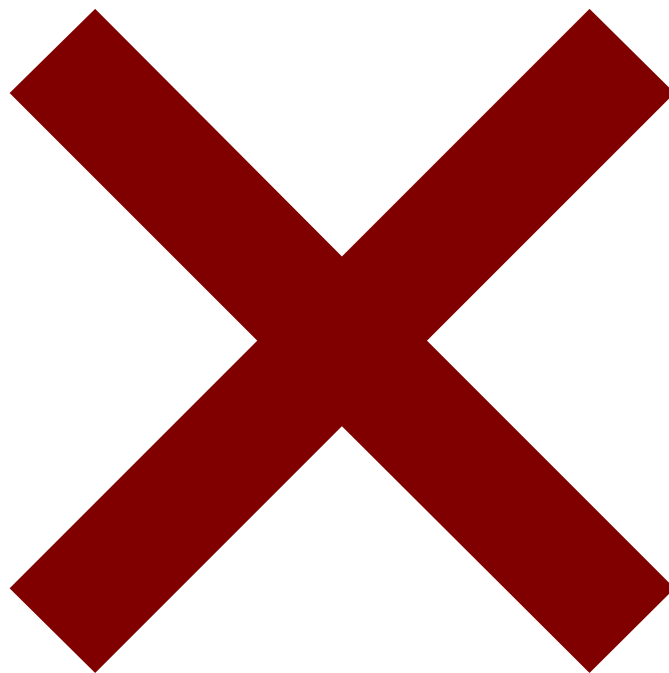


Case 2: 69 y.o. male, pneumonectomy, Afib, SOB

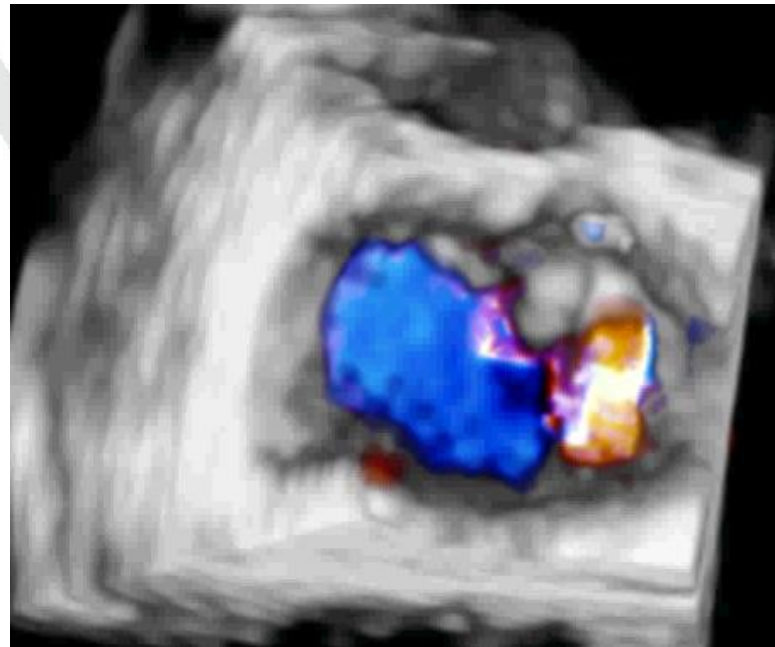
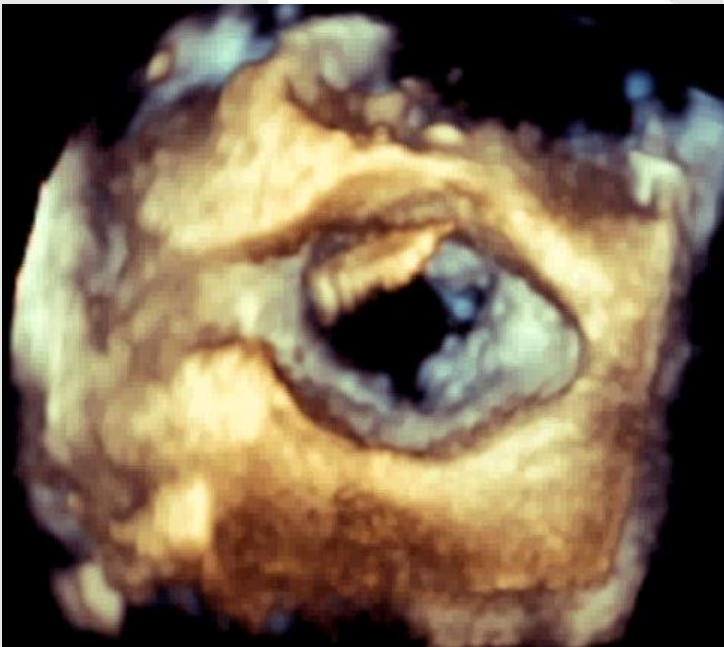
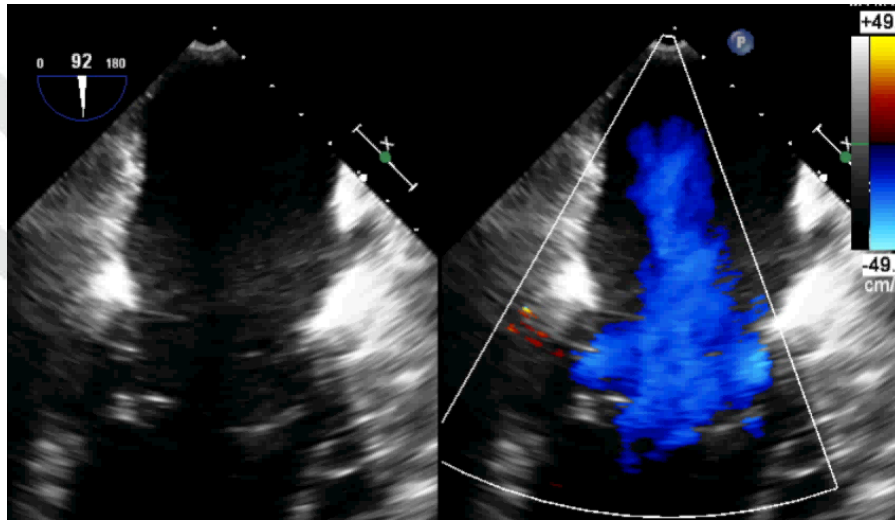


Case 3: Male 81 y.o male, IHD, CRT

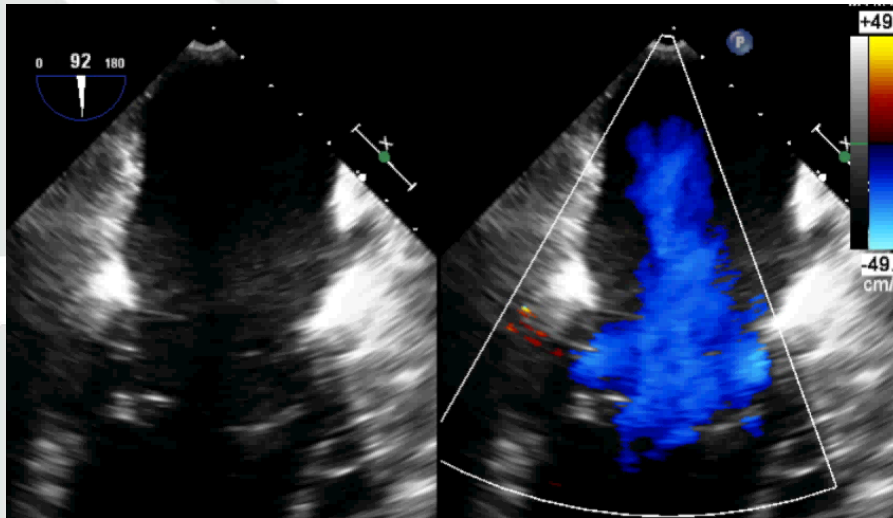




Patient 4: 62 y.o, STEAMI, acute MR, shock

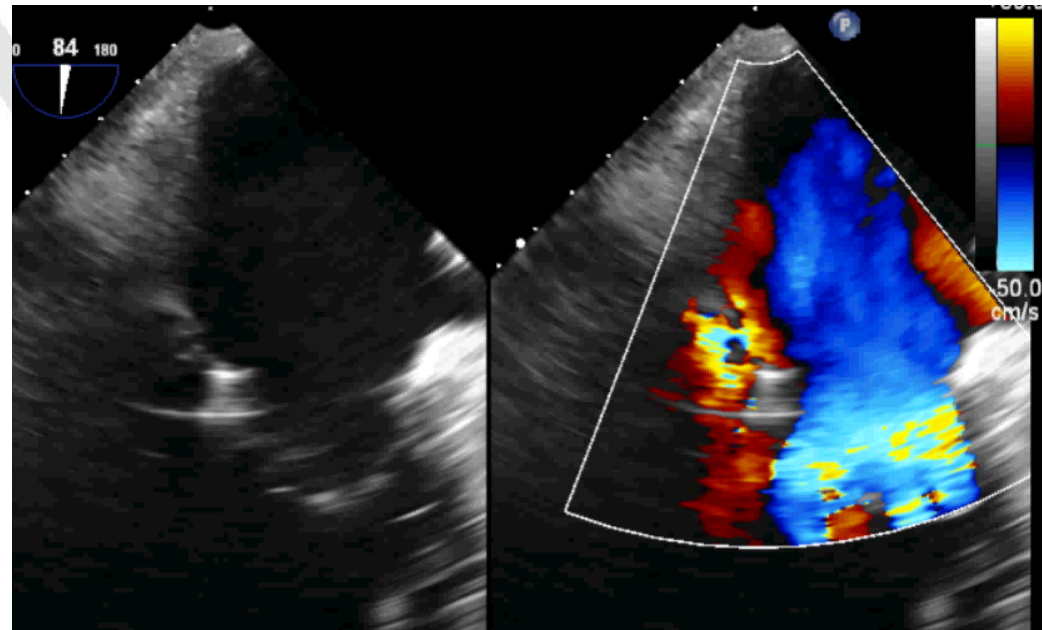


Patient selection: changing concepts?

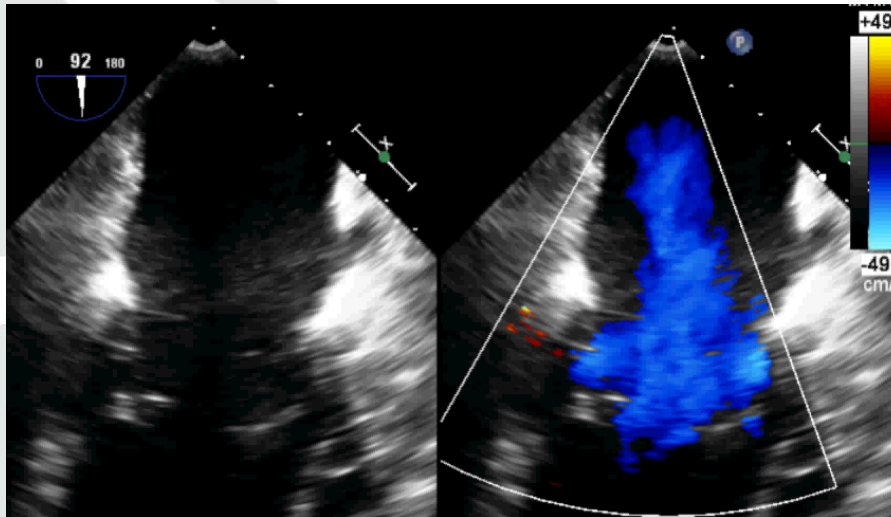


Baseline

After 1 clip

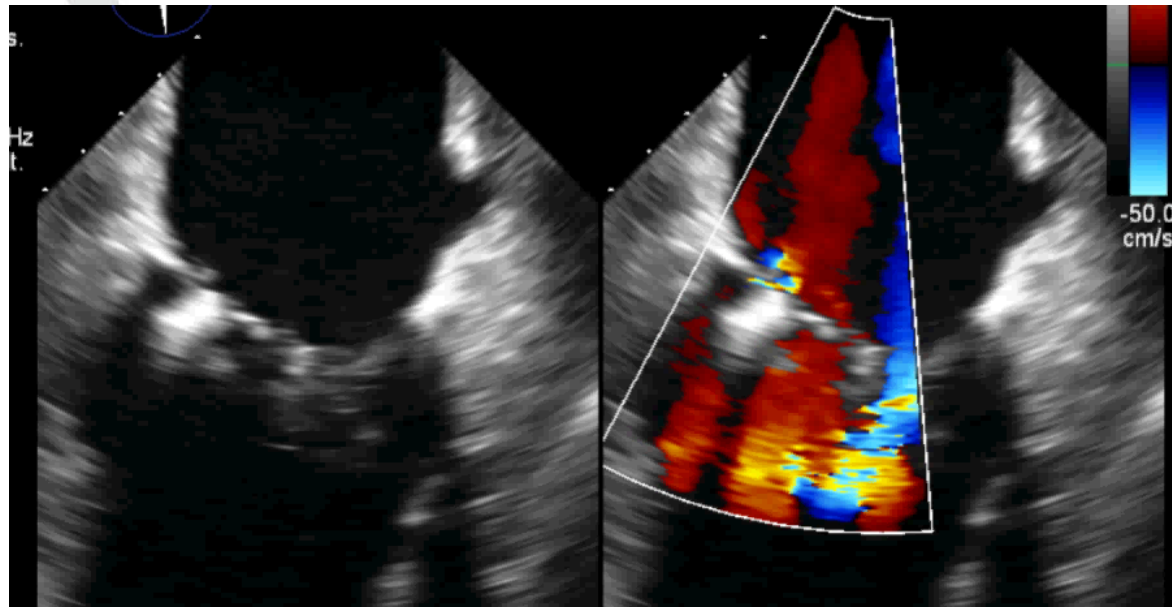


Patient selection: changing concepts?



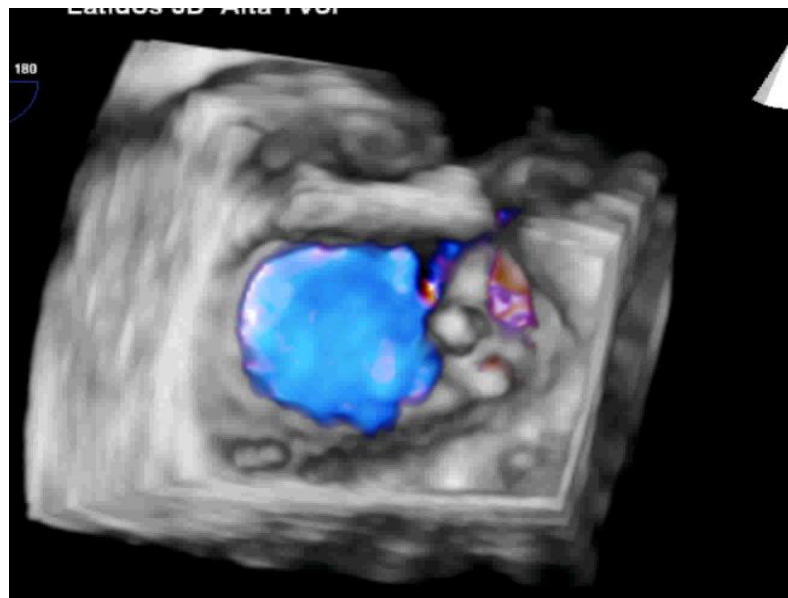
Baseline

After 2nd clip

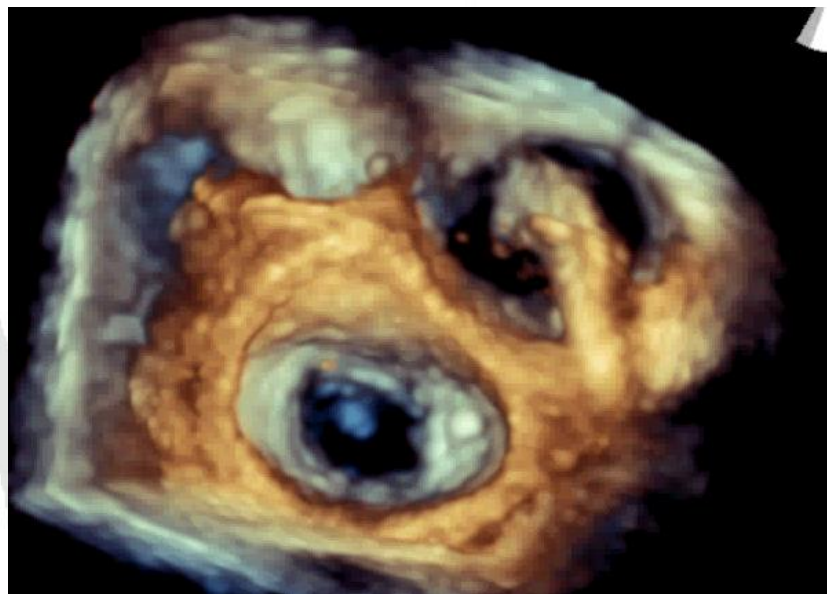




1 clip



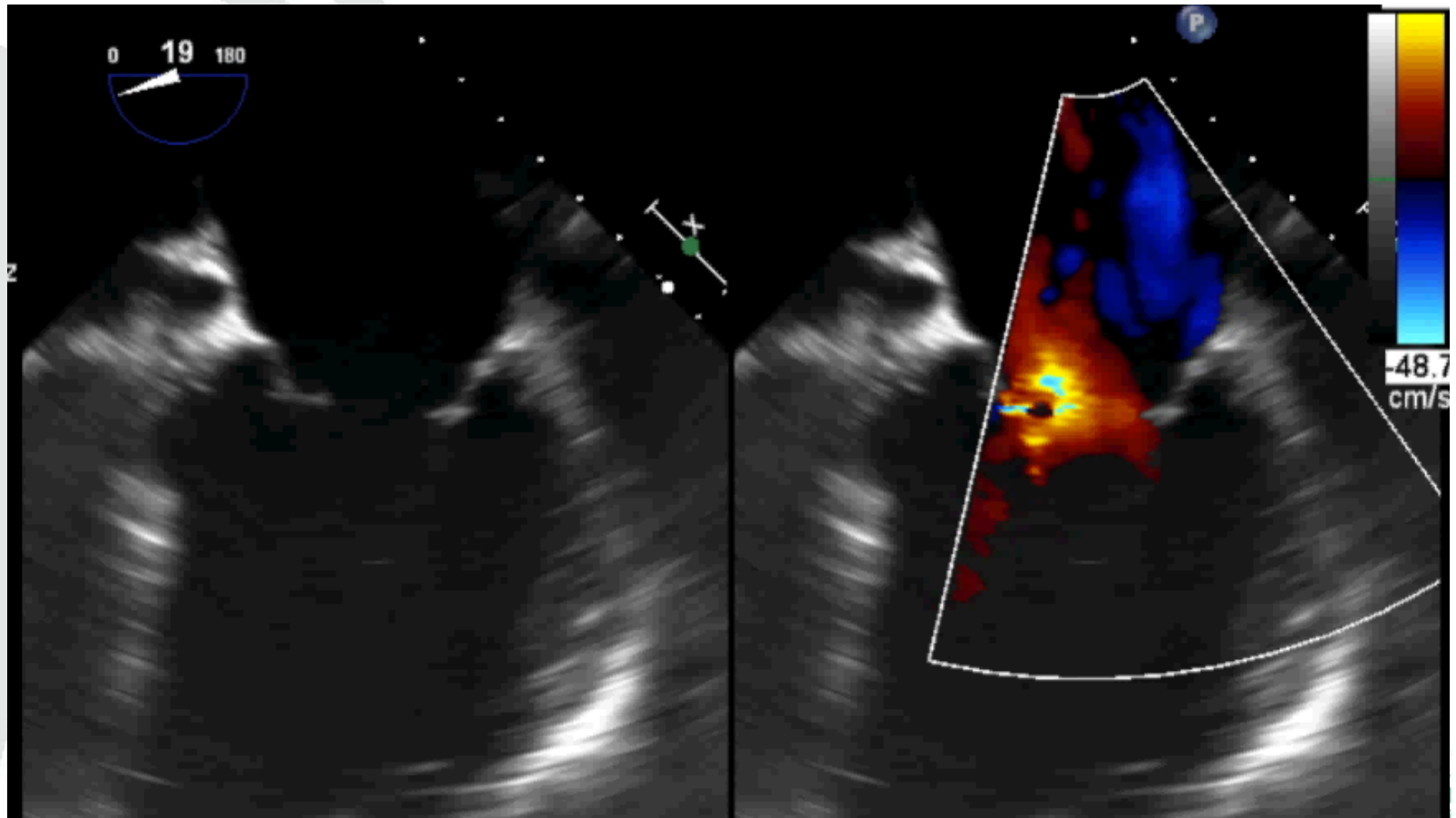
2nd clip





Patient 5.

- Male, 70 y.o. chronic ischemic cardiomyopathy, LV EF 20%, ICD, NYHA FC II, admitted with pulmonary edema and shock



PHILIPS

TIs0.2 mI 0.5

JPEG CR 15:1

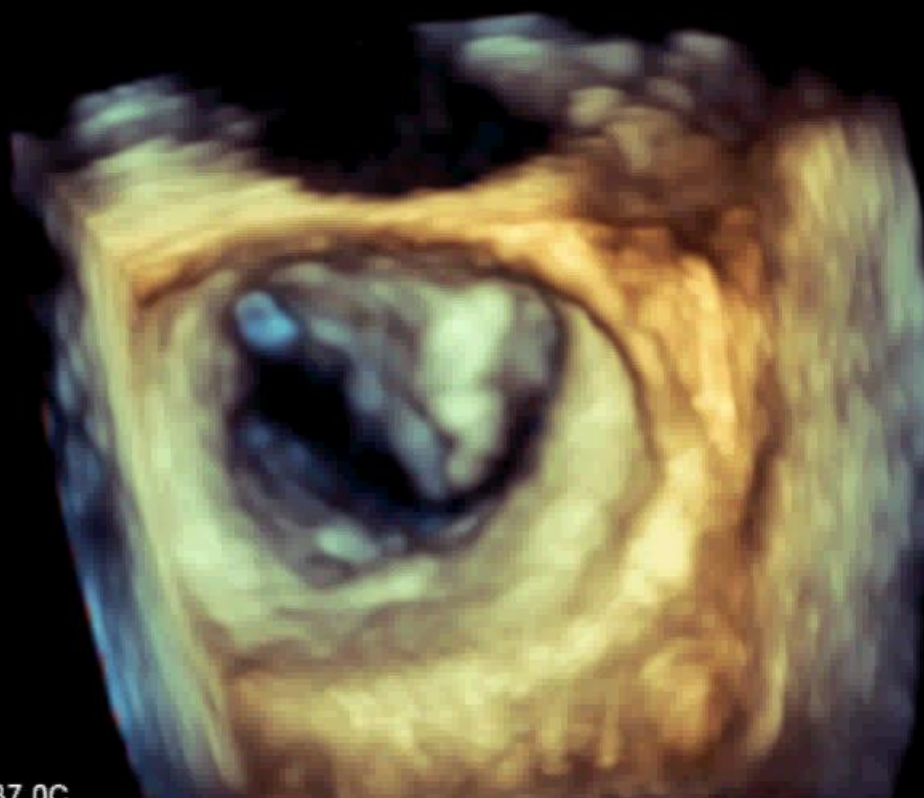
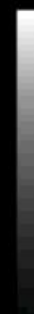
CX7-2t/Adultos

FA 11Hz
9.8cm

Latidos 3D 1

M4

3D
3D 52%
3D 40dB



JPEG

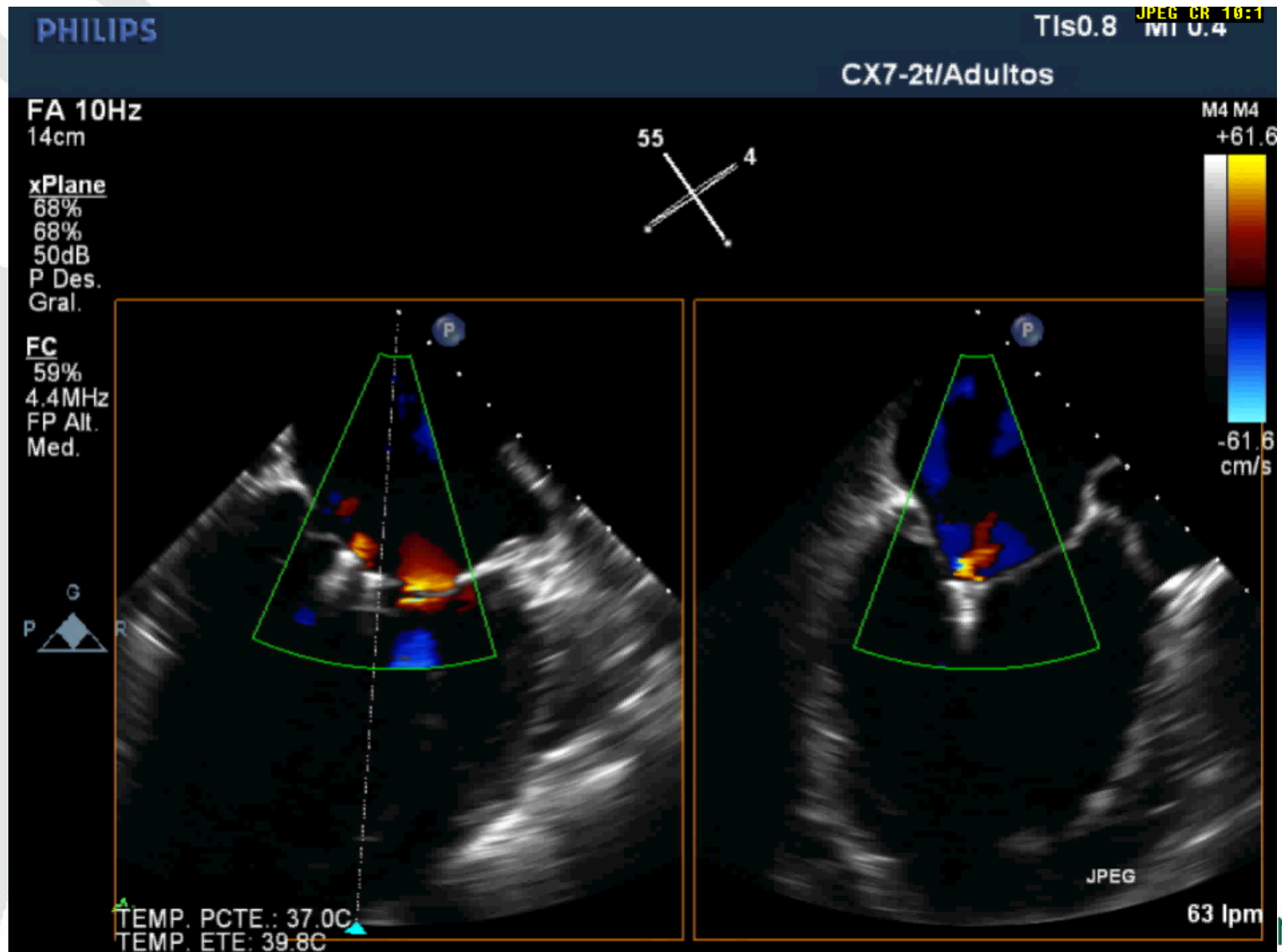


TEMP. PCTE.: 37.0C
TEMP. ETE: 39.7C

60 lpm

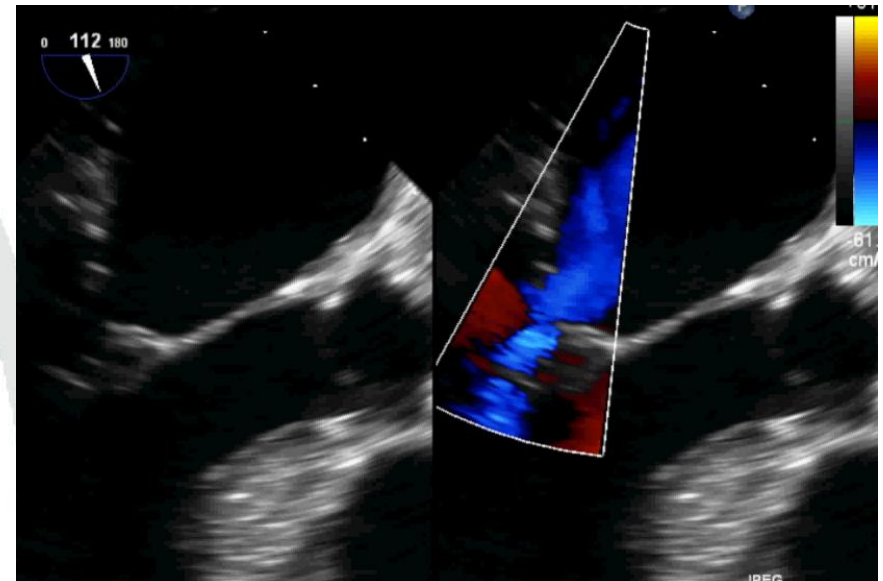
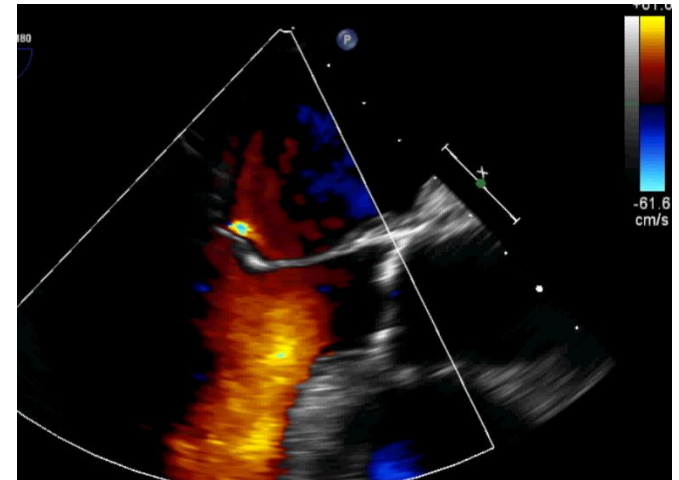
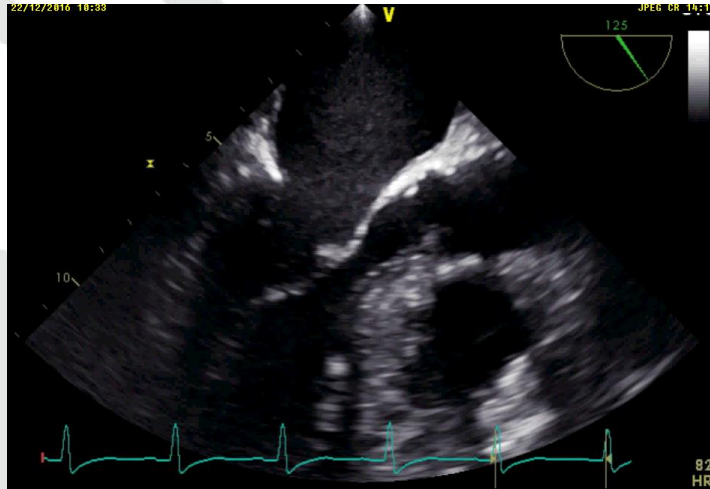
NIC
BARCELONA
Hospital Universitari

Patient 5. TEE after 2nd Mitraclip

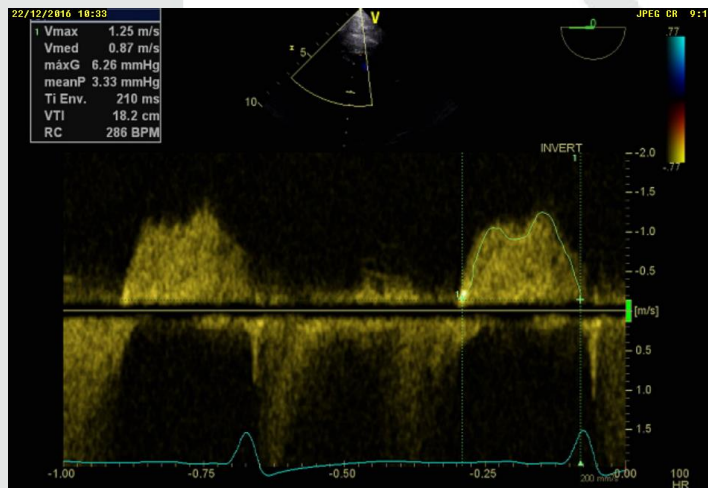
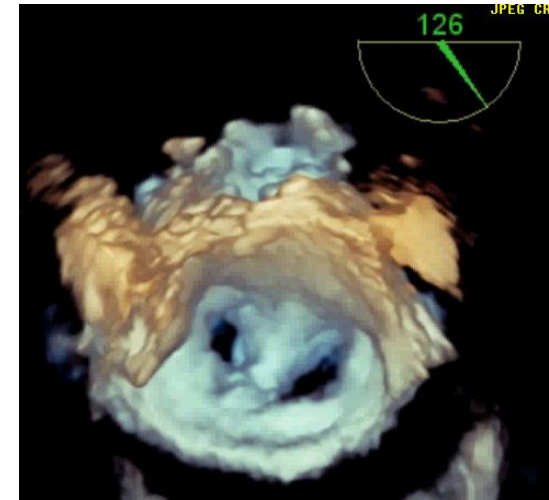
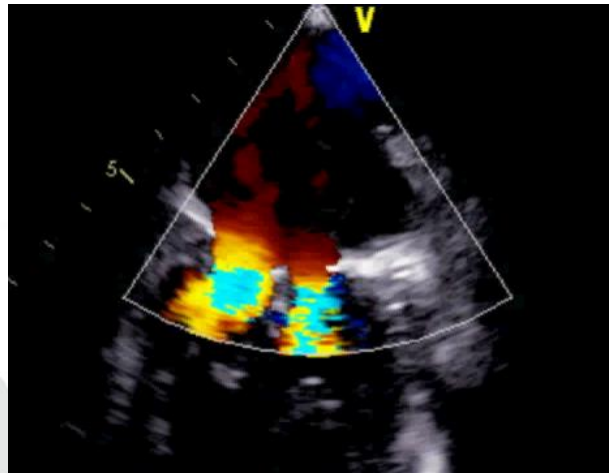
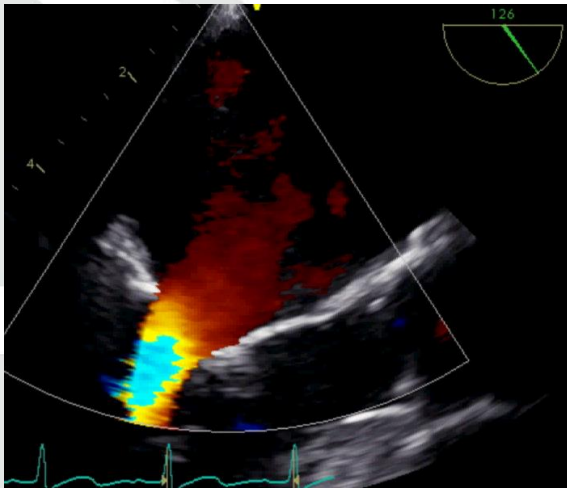




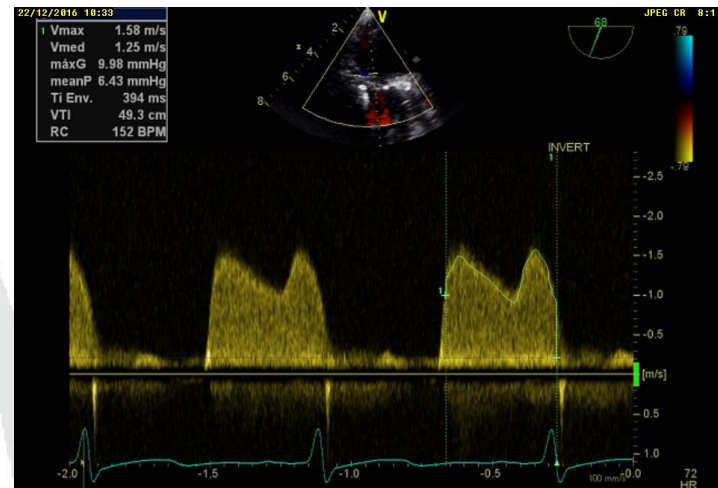
Patient 6. 65 y.o. Lady, liver cirrhosis child A , renal failure (creat 2.8 mg/dL) NYHA FC III, heart failure
Severe MR, very mild MS, thickened and restricted leaflets



Patient 6. Echo after 1 Mitraclip



Pre-Mitraclip TMV gradient
6/3 mmHg



Post-Mitraclip TMV gradient
9/6 mmHg MV area 2.4 cm²



Extended anatomic criteria for Mitraclip

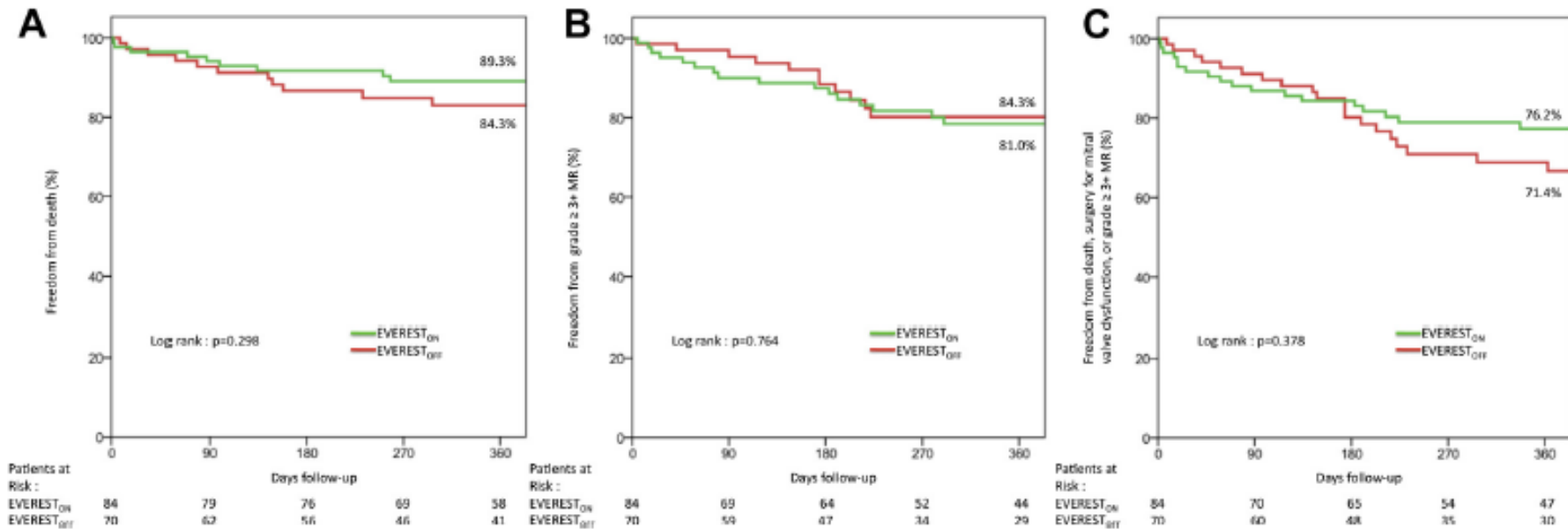
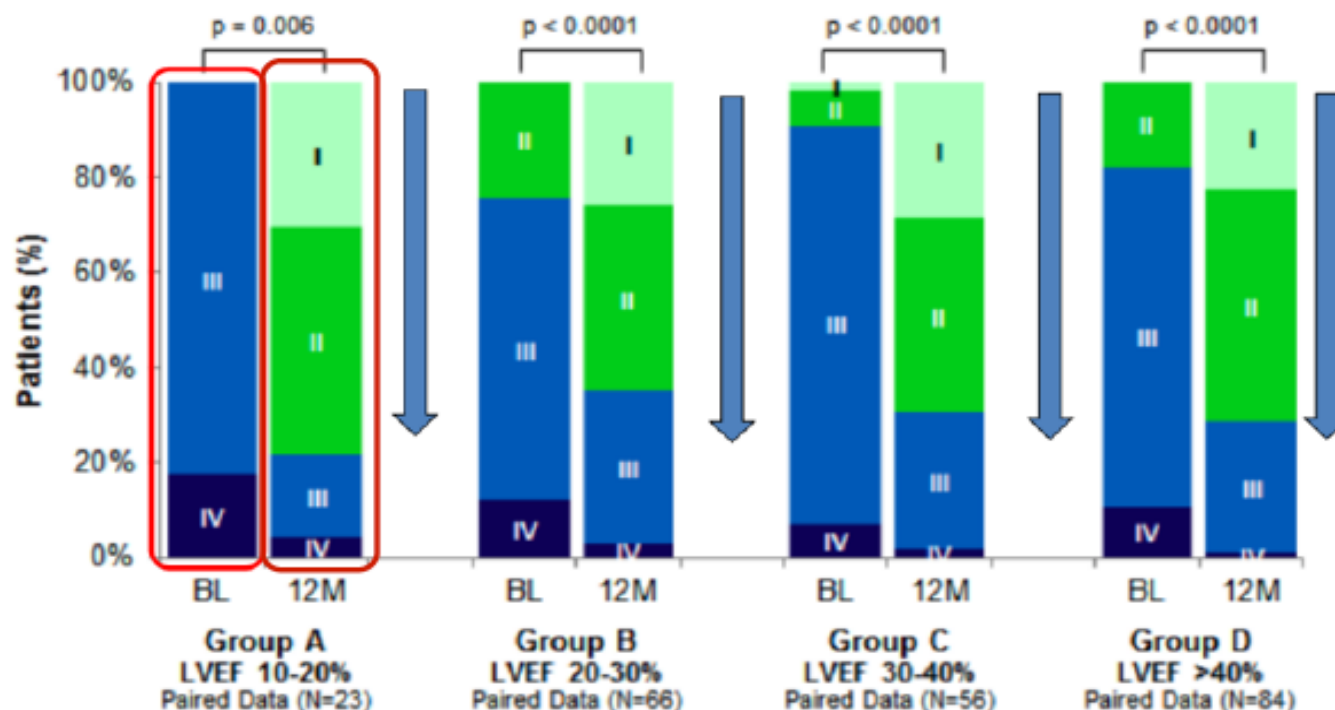


FIGURE 3 Kaplan-Meier Estimates at 12-Month Follow-Up

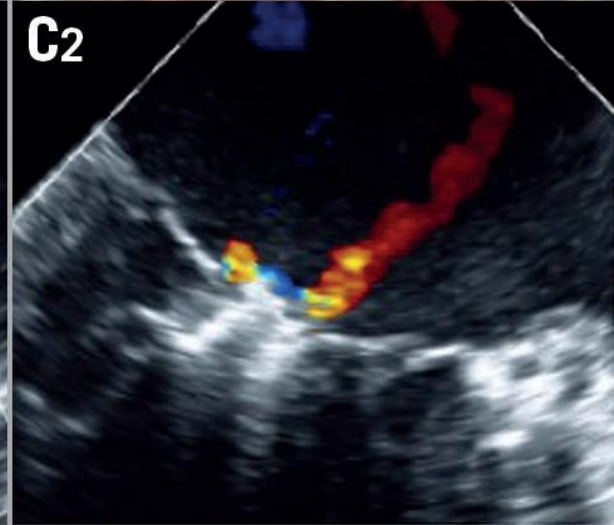
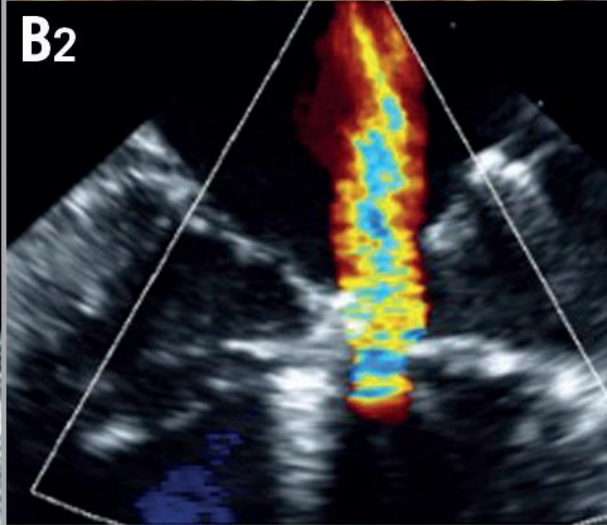
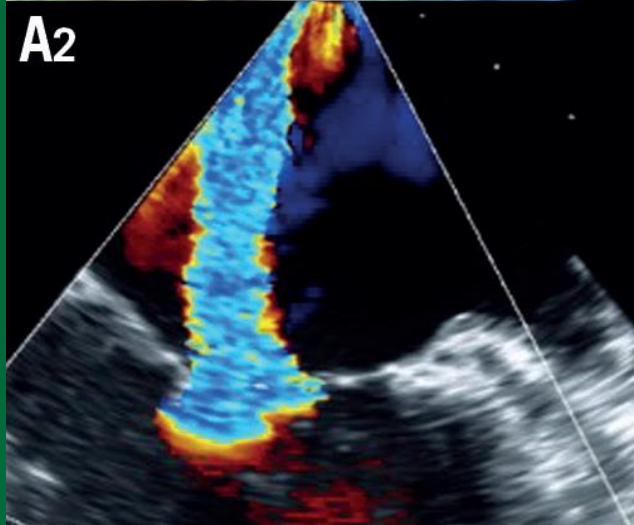
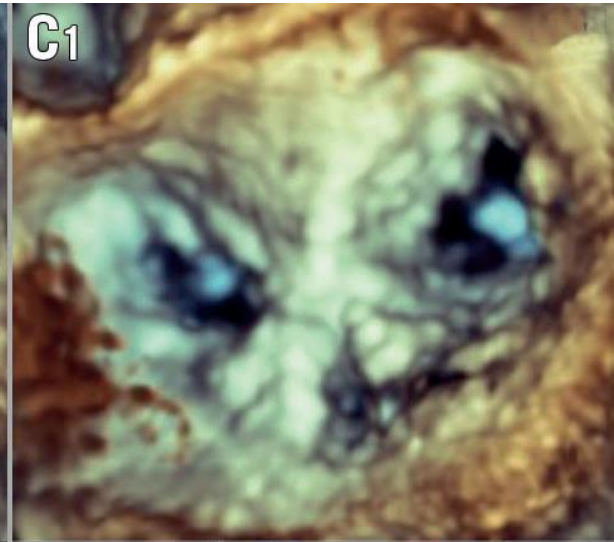
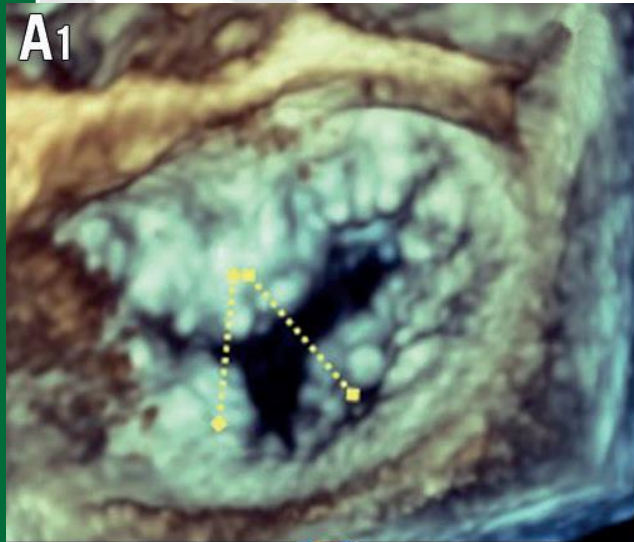
Below LVEF 25%

ACCESS-EU phase I prospective, multicenter, non-randomised post-approval study of the MitraClip therapy in Europe (n=567; 69.3%= FMR)

Changes in NYHA Functional Class from baseline to 12 mo



Overcoming conventional limits





Who can benefit now from the TMVR Therapy?

Echo/anatomical perspective

- **Severe MR**
- **Functional , Degenerative or Mixed etiologies**
- **Adequate anatomy:**
 - **Enough flexible tissue**
 - **Some residual coaptation**
 - **Space to maneuver the device**
- **Experienced echocardiographer in MITRAL valve**
- **Experienced and talented interventionist**



THANKS FOR YOUR ATTENTION

