



ECOCARDIOCHIRURGIA®
ECO-RM-TC CHIRURGIA-INTERVENTISTICA

9 e 10 aprile 2015
MILANO

LA STENOSI VALVOLARE AORTICA E L'INSUFFICIENZA MITRALICA

Diagnosi, indicazione ad
interventismo o cardiocirurgia



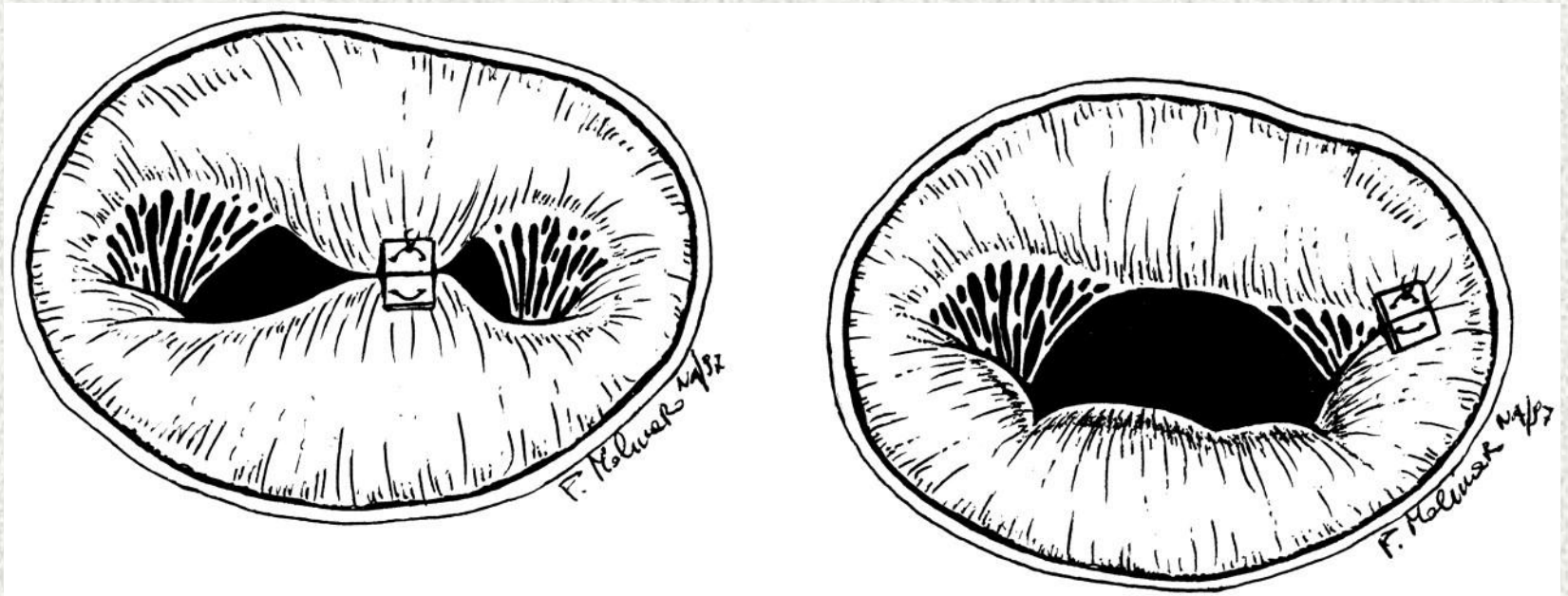


Quando è più appropriata la correzione cardiocirurgica. Le tecniche complesse di plastica della mitrale. Anatomia complessa: il doppio orifizio è ancora una alternativa valida in casi selezionati?

Dr. Diego ORNAGHI
UO di Cardiocirurgia
Istituto Clinico Humanitas
Rozzano

The E-to-E technique.

The apposition of the failing mitral leaflet portion to the opposing edge represents the basic concept of such a technique, which usually leads to fixed central leaflet coaptation and to the creatThe 'double-orifice' (DO)



Maisano F et al. Eur J Cardiothorac Surg 1998;13:240-246

A black and white close-up portrait of Albert Einstein, showing his characteristic wild hair and mustache. He is looking directly at the camera with a serious expression. The background is dark, making his face the central focus.

EVERYTHING SHOULD BE MADE AS SIMPLE AS POSSIBLE ...
BUT NOT SIMPLER.

ALBERT EINSTEIN

NFM

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Long-Term Results (≤ 18 Years) of the Edge-to-Edge Mitral Valve Repair Without Annuloplasty in Degenerative Mitral Regurgitation

Michele De Bonis, MD; Elisabetta Lapenna, MD; Francesco Maisano, MD; Fabio Barili, MD, PhD; Giovanni La Canna, MD; Nicola Buzzatti, MD; Federico Pappalardo, MD; Mariachiara Calabrese, MD; Teodora Nisi, MD; Ottavio Alfieri, *Circulation*. 2014; 130: S19-S24

Conclusions—In degenerative MR, the overall long-term results of the surgical edge-to-edge technique without annuloplasty are not satisfactory. Early optimal competence (residual MR $\leq 1+$) was associated with higher freedom from recurrent severe regurgitation

Residual MR $>1+$ at hospital discharge was identified as a risk factor for recurrence of MR $\geq 3+$ (hazard ratio, 3.8; 95% confidence interval, 1.7–8.2; $P=0.001$). **In patients with residual MR $\leq 1+$ immediately after surgery, freedom from MR $\geq 3+$ at 5 and 10 years was $80\pm 6\%$ and $64\pm 7.58\%$, respectively**



unfavorable lesions

**prolapse of the posterior leaflet
with calcified posterior annulus**

prolapse of both leaflet

prolapse in the commissural area



Ecocardio

X5-1

50Hz

16cm



TIS0.4 MI 1.2

M3

2D

63%

C 50

P Basso

AGen



74 bpm

Ecocardio

X5-1

50Hz

15cm



TIS0.4 MI 1.2

M3

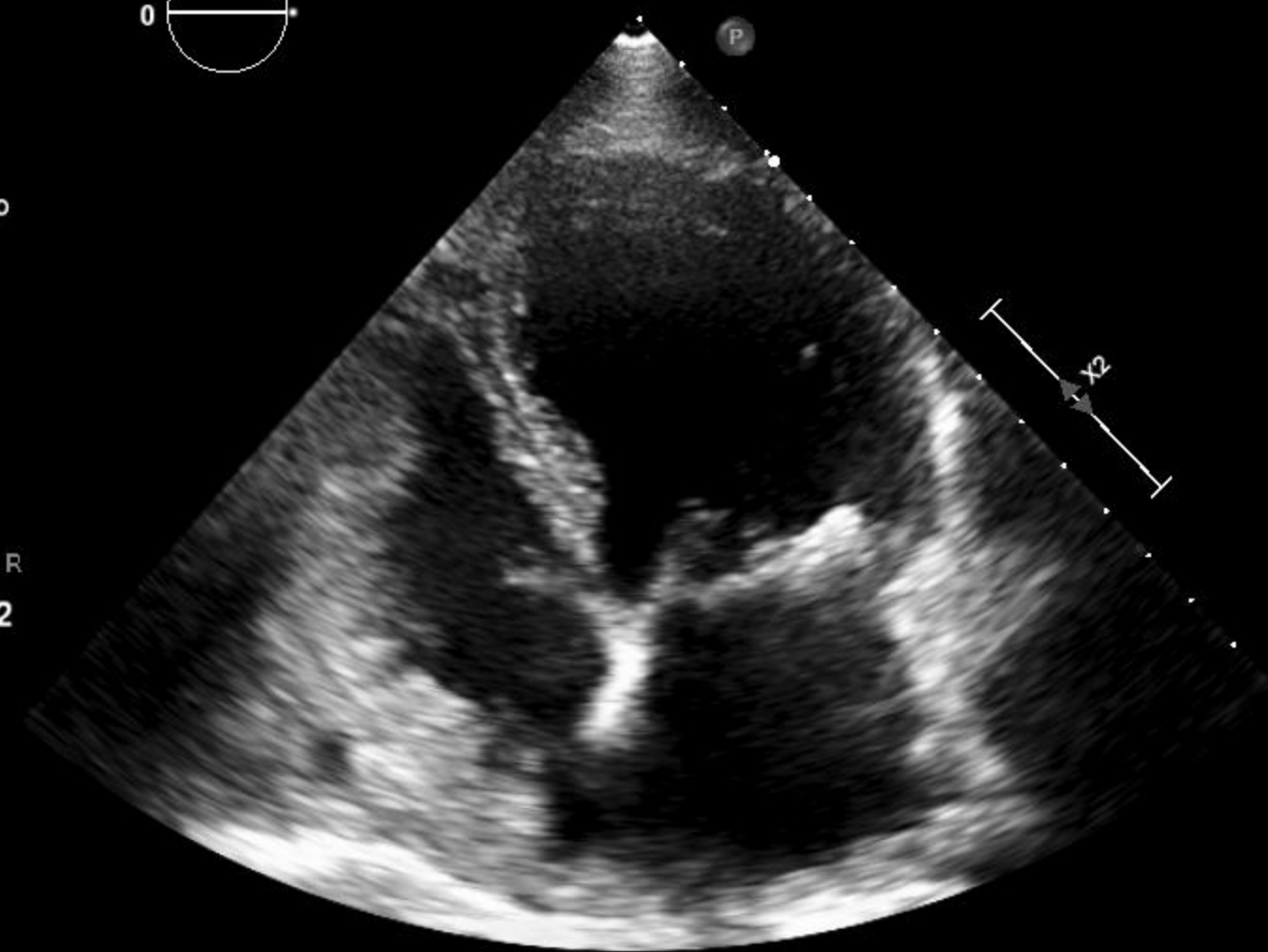
2D

66%

C 50

P Basso

AGen



70 bpm

Ecocardio

X5-1
17Hz
17cm



TISO.8 MI 0.9

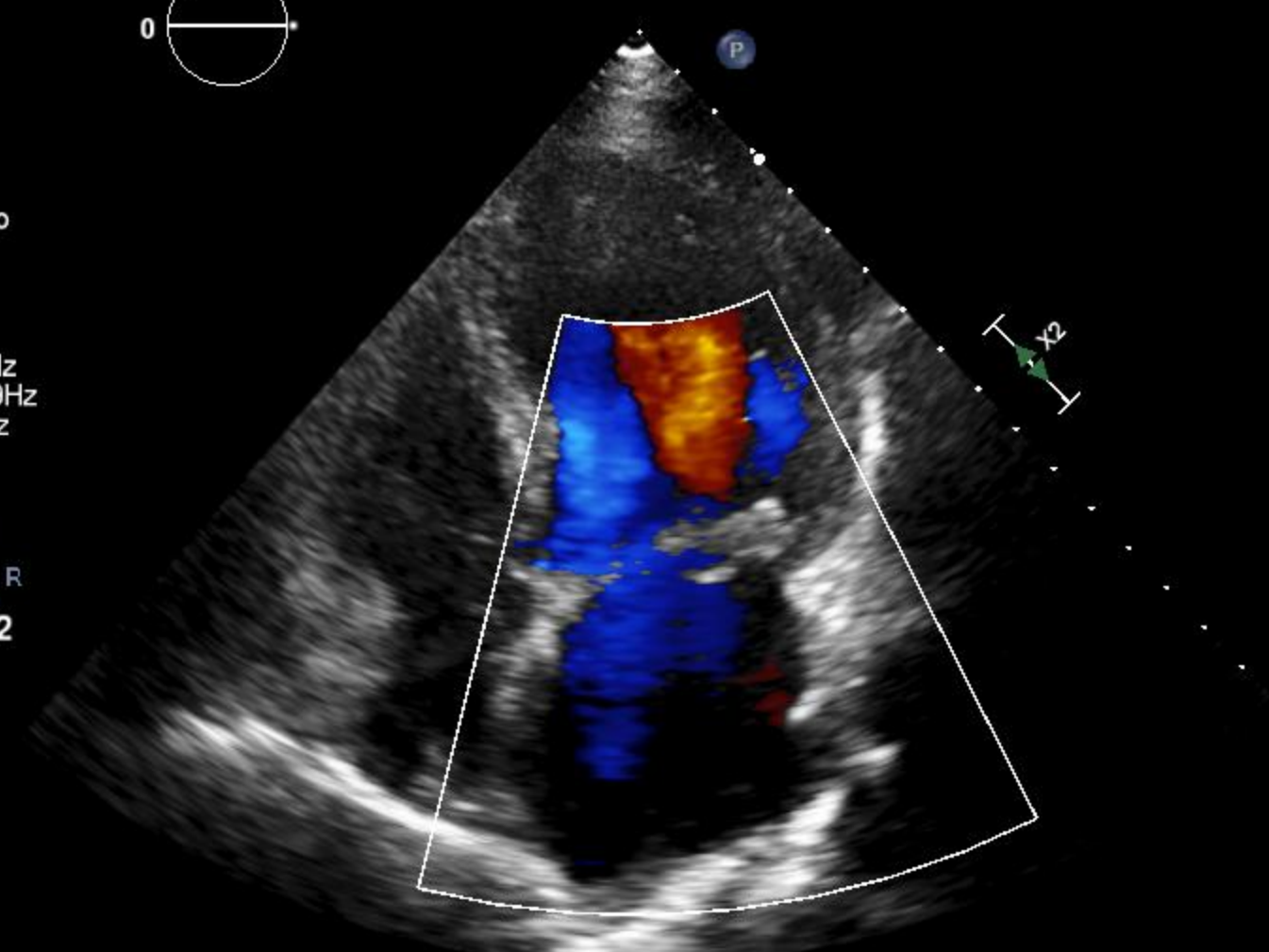
2D

65%
C 50
P Basso
AGen

CF

50%
4000Hz
WF 399Hz
2.5MHz

M3 M4
+61.6



75 bpm

Ecocardio

X5-1

50Hz

16cm

Z 2.0

2D

65%

C 50

P Basso

AGen



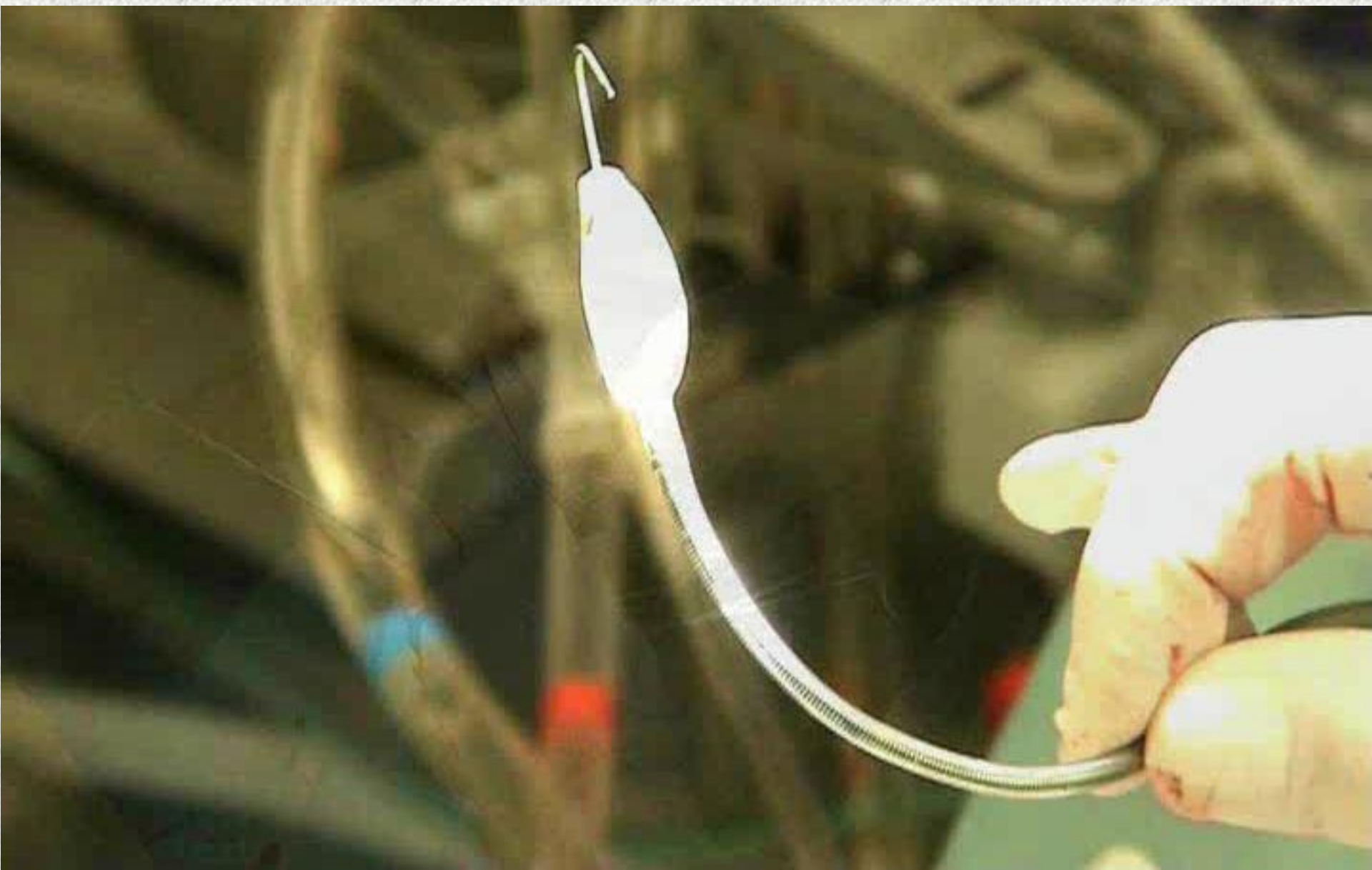
TIS0.4 MI 1.2

P

M3



71 bpm



Ecocardio

X5-1
50Hz
16cm



TIS0.4 MI 1.3

M3

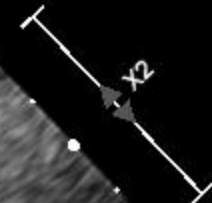
2D

67%

C 50

P Basso

AGen



168 bpm

Ecocardio

X5-1
20Hz
16cm



TIS0.8 MI 0.9

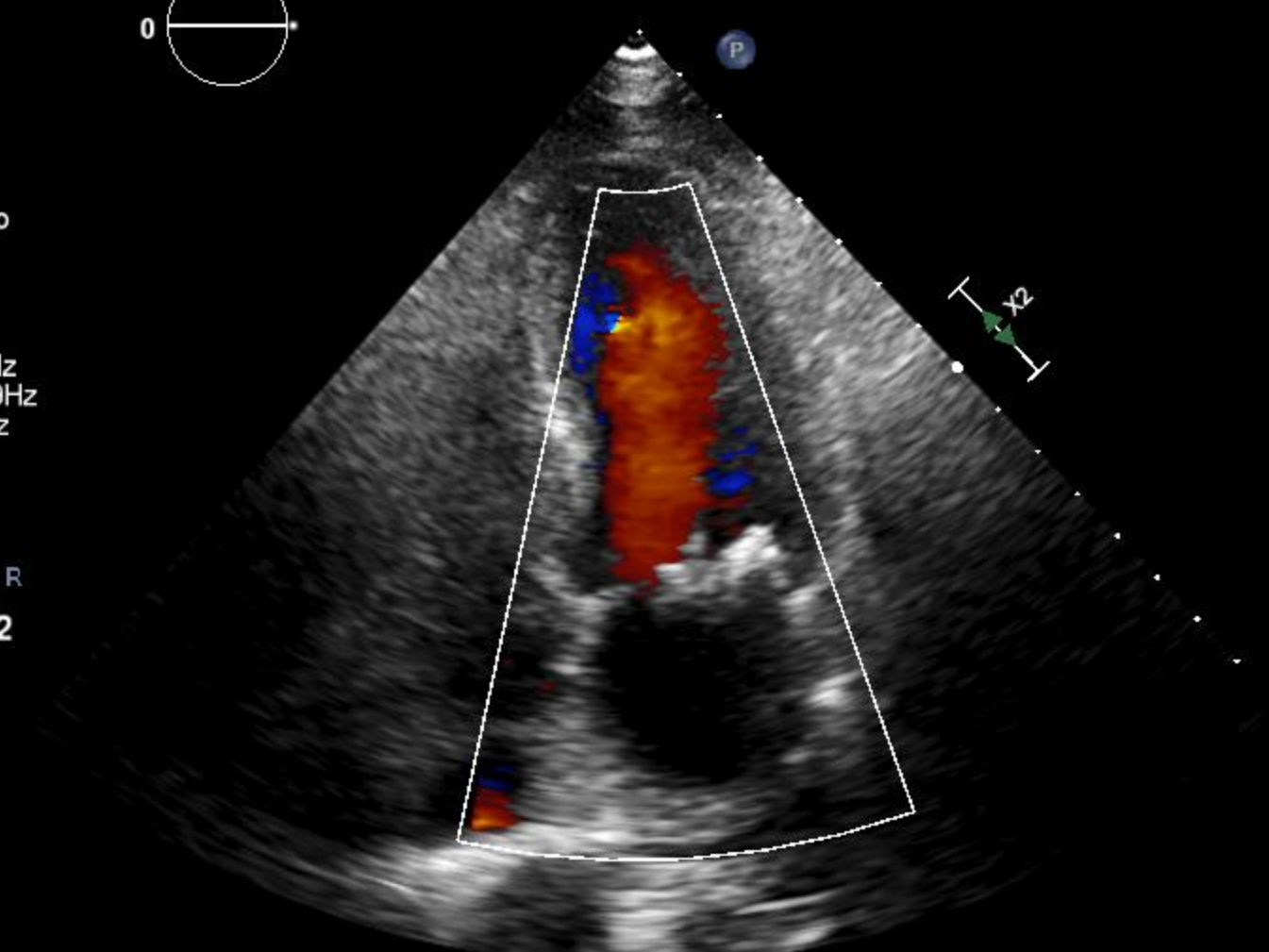
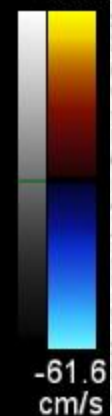
2D

66%
C 50
P Basso
AGen

CF

50%
4000Hz
WF 399Hz
2.5MHz

M3 M4
+61.6

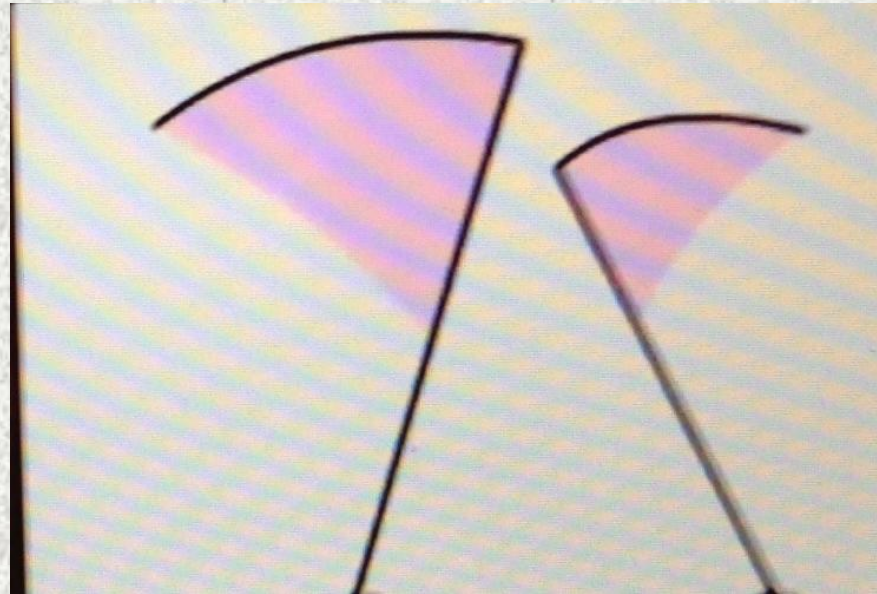


87 bpm

prolapse of both leaflet

Excessive leaflet motion

Free edge of leaflets override the plane of anulus



Quality and Quantity of leaflet tissue

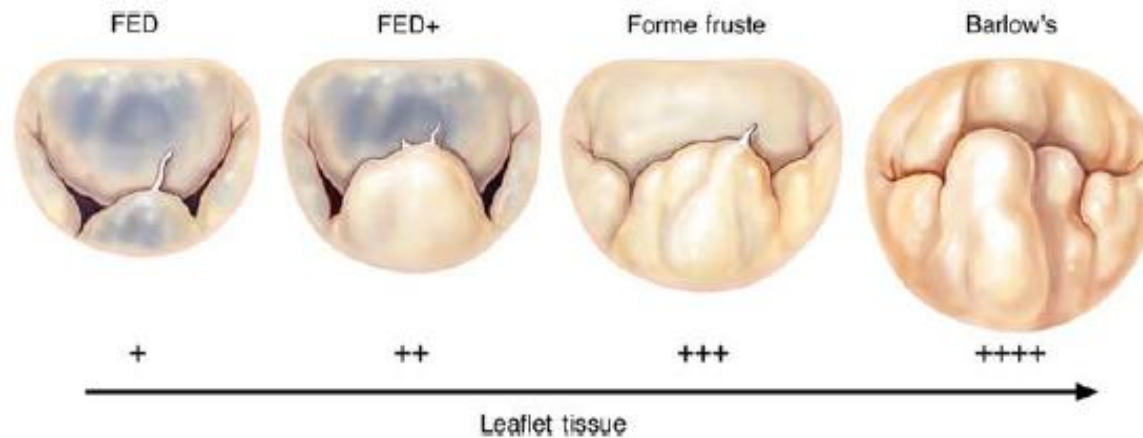
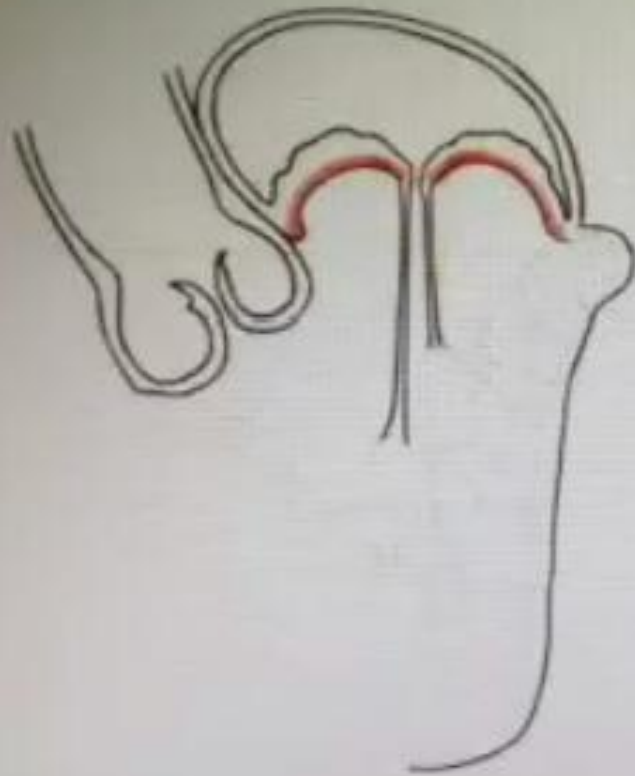


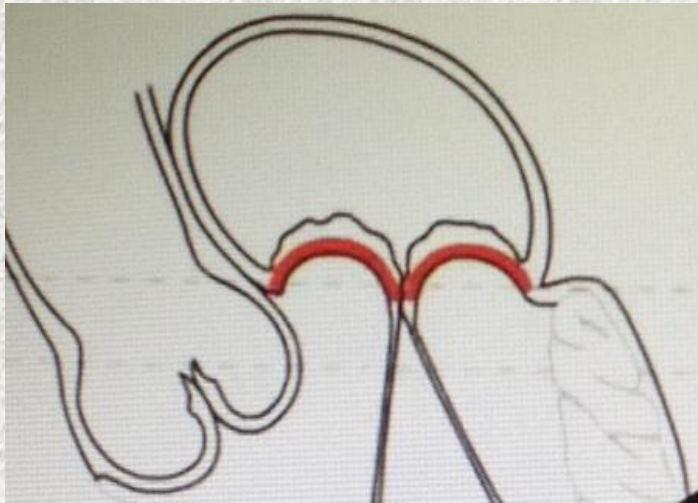
Figure 1 Spectrum of degenerative mitral disease. There is a spectrum of degenerative disease ranging from fibroelastic deficiency (FED) to Barlow's disease. In isolated FED there is a deficiency of collagen, with thin transparent leaflets and typically a ruptured thin chord. In long-standing prolapse, secondary myxomatous pathologic changes may occur in the prolapsing segment, resulting in leaflet thickening and expansion (FED+). Forme fruste designates degenerative disease with excess tissue with myxomatous changes in usually more than one leaflet segment, but usually does not involve a large valve size, distinguishing it from Barlow's disease. In the later, the hallmarks are large valve size, with diffuse myxomatous changes and excess leaflet tissue, with thickened, elongated, and often ruptured chordae.



Systole late

Diastole

FUNCTIONAL BILEAFLET PROLAPSE



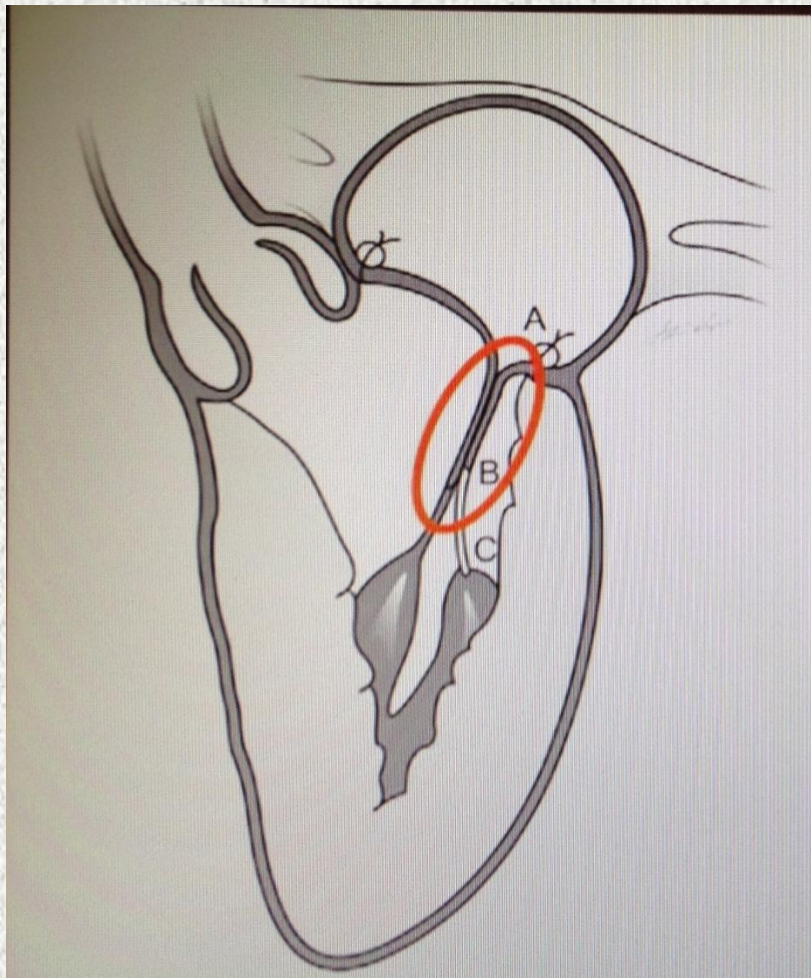
Excess tissue of PL

There is an outward
move of the
posterior annulus

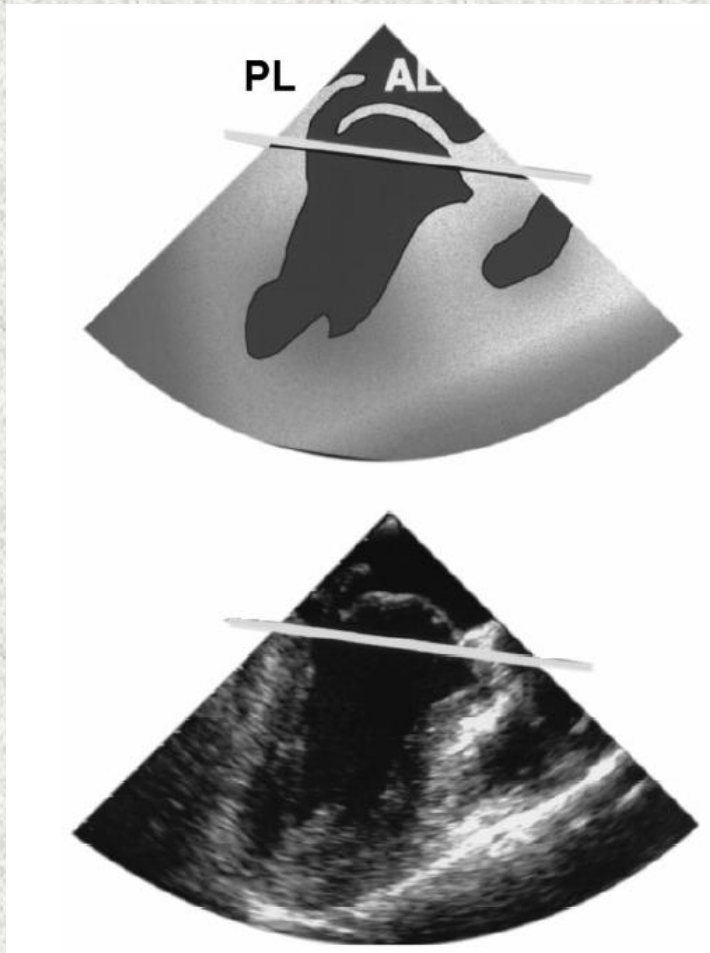
High surface of coaptation

Early in Systole

Located in the inflow



Functional Prolapse Bileaflet



**Ringing is vital as
it blocks the
outward move of
the Posterior
Anulus**

**Address the organic
issue of PL Resect
than Respect**

**Addressing the Anterior
Leaflet became
unnecessary**

FR 52Hz

12cm

M4

2D

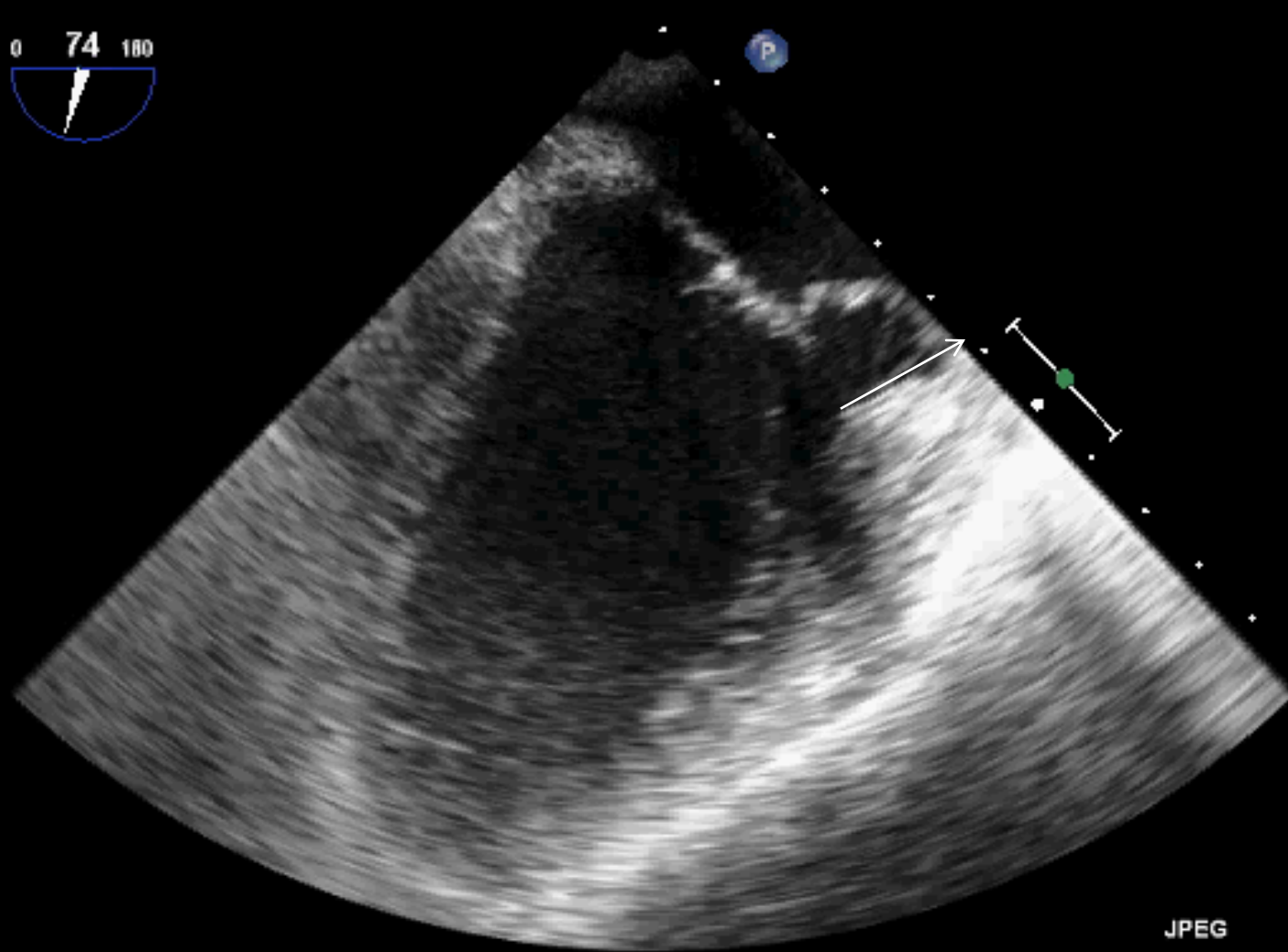
72%

C 50

P Off

Gen

0 74 100



JPEG

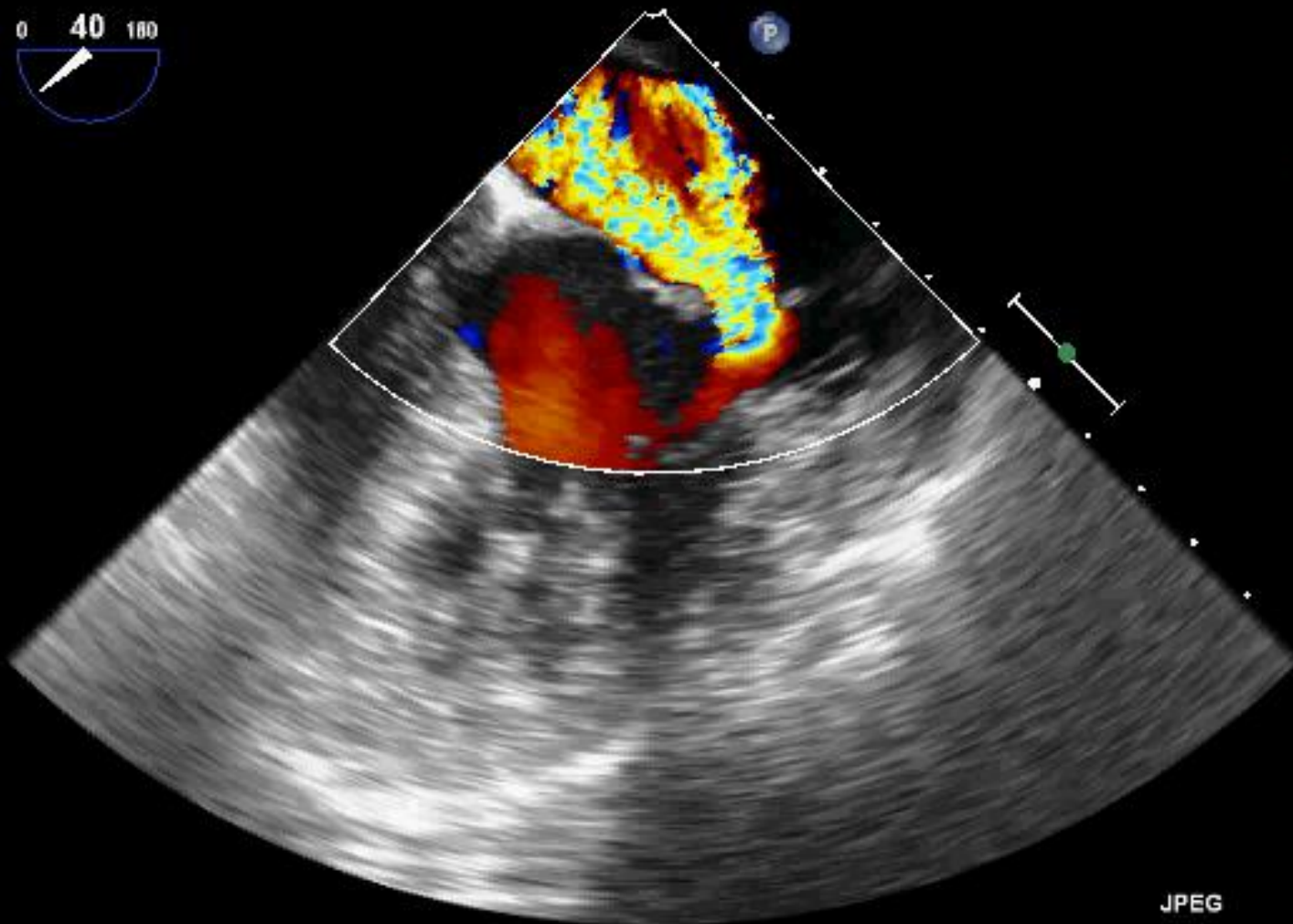
Temp. PAZ : 37.0C
Temp. TEE : 38.8C

*** bpm

FR 10Hz
12cm

2D
74%
C 50
P Off
Gen

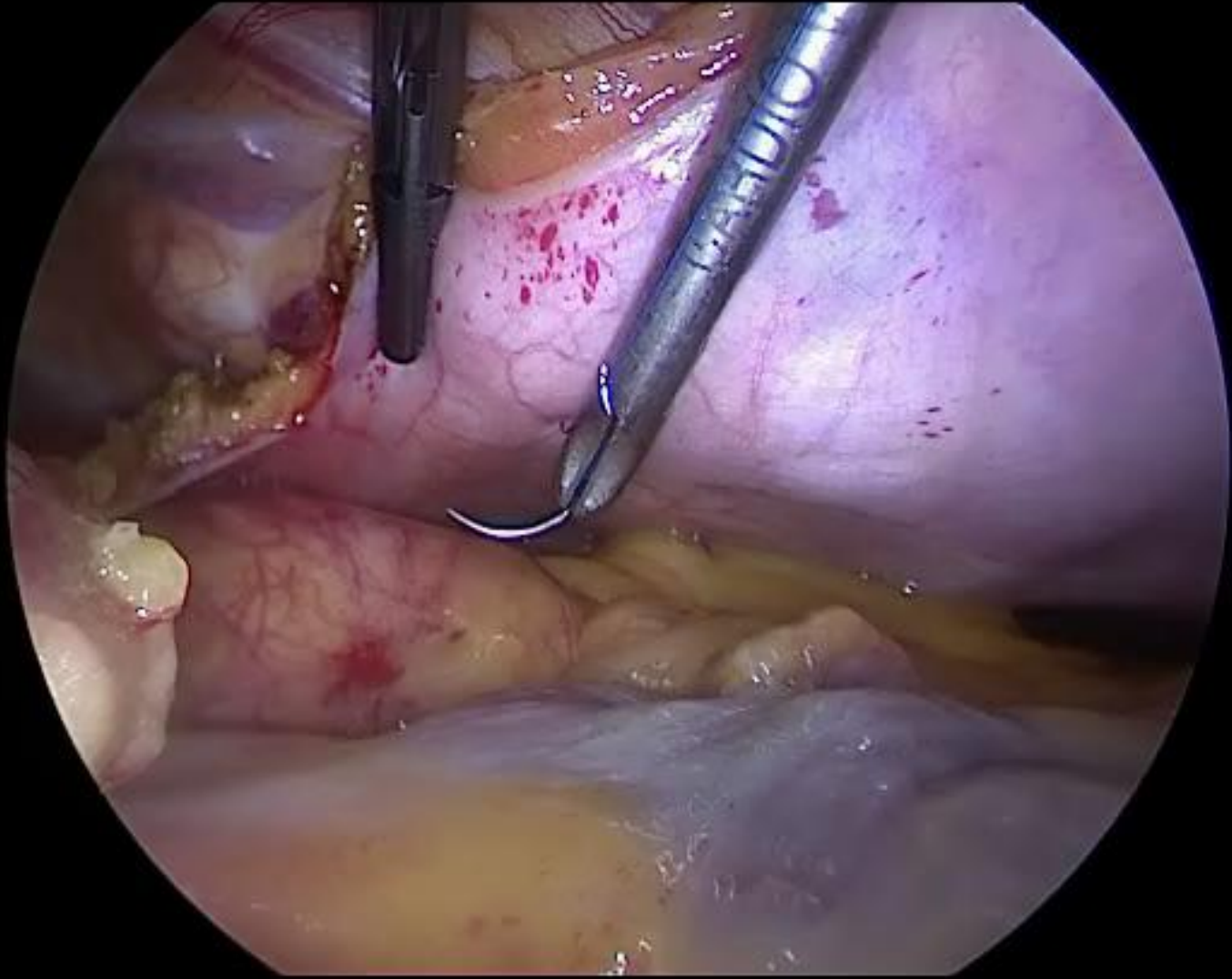
CF
59%
4.4MHz
WF Alto
Med.



Temp. PAZ : 37.0C
Temp. TEE : 38.8C

JPEG

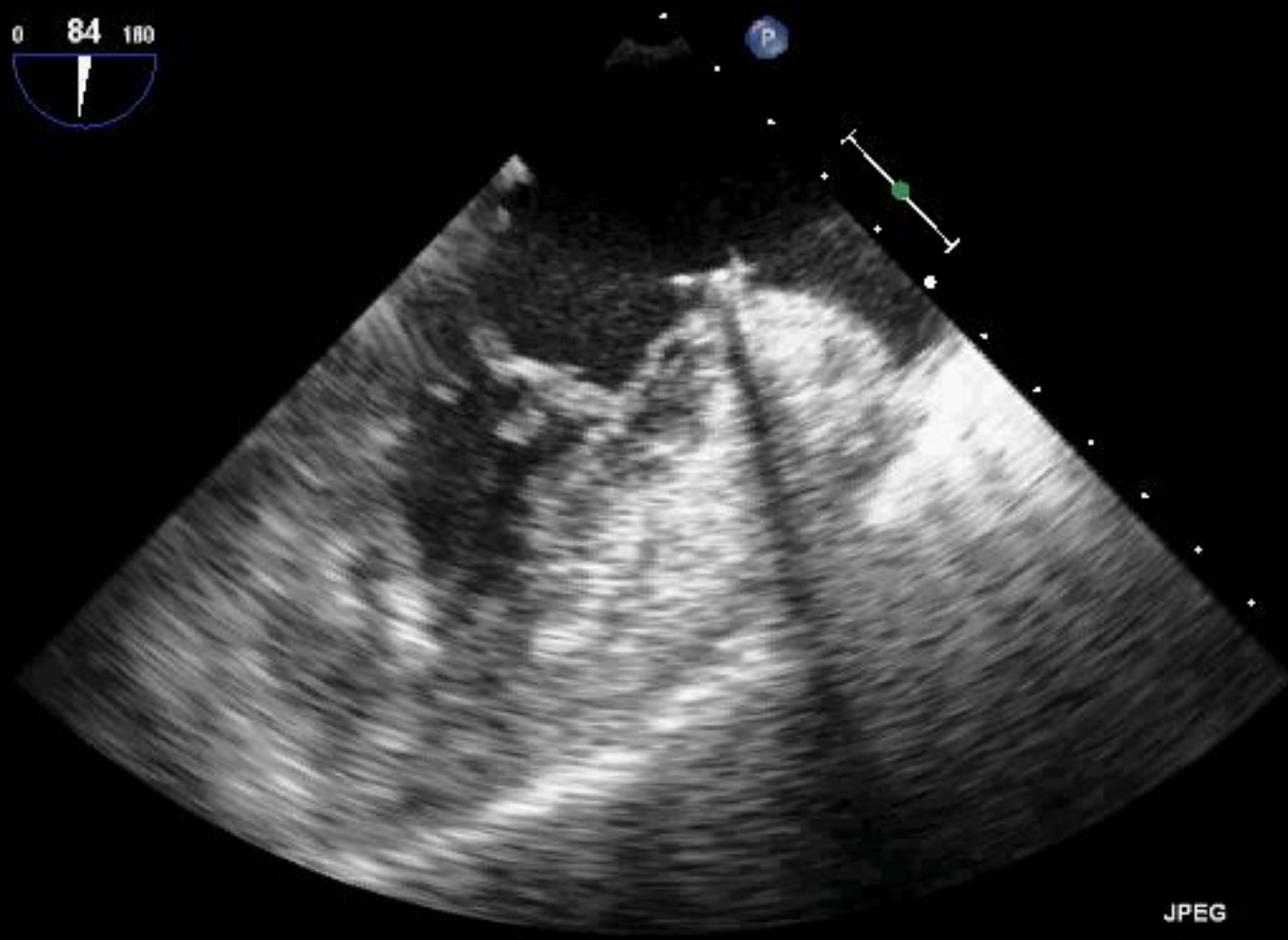
*** bpm



FR 52Hz
12cm

M4

2D
66%
C 50
P Off
Gen



JPEG

Temp. PAZ.: 37.0C
Temp. TEE: 38.5C

*** bpm

FR 15Hz

12cm

2D

69%
C 50
P Off
Gen

CF

59%
4.4MHz
WF Alto
Med.

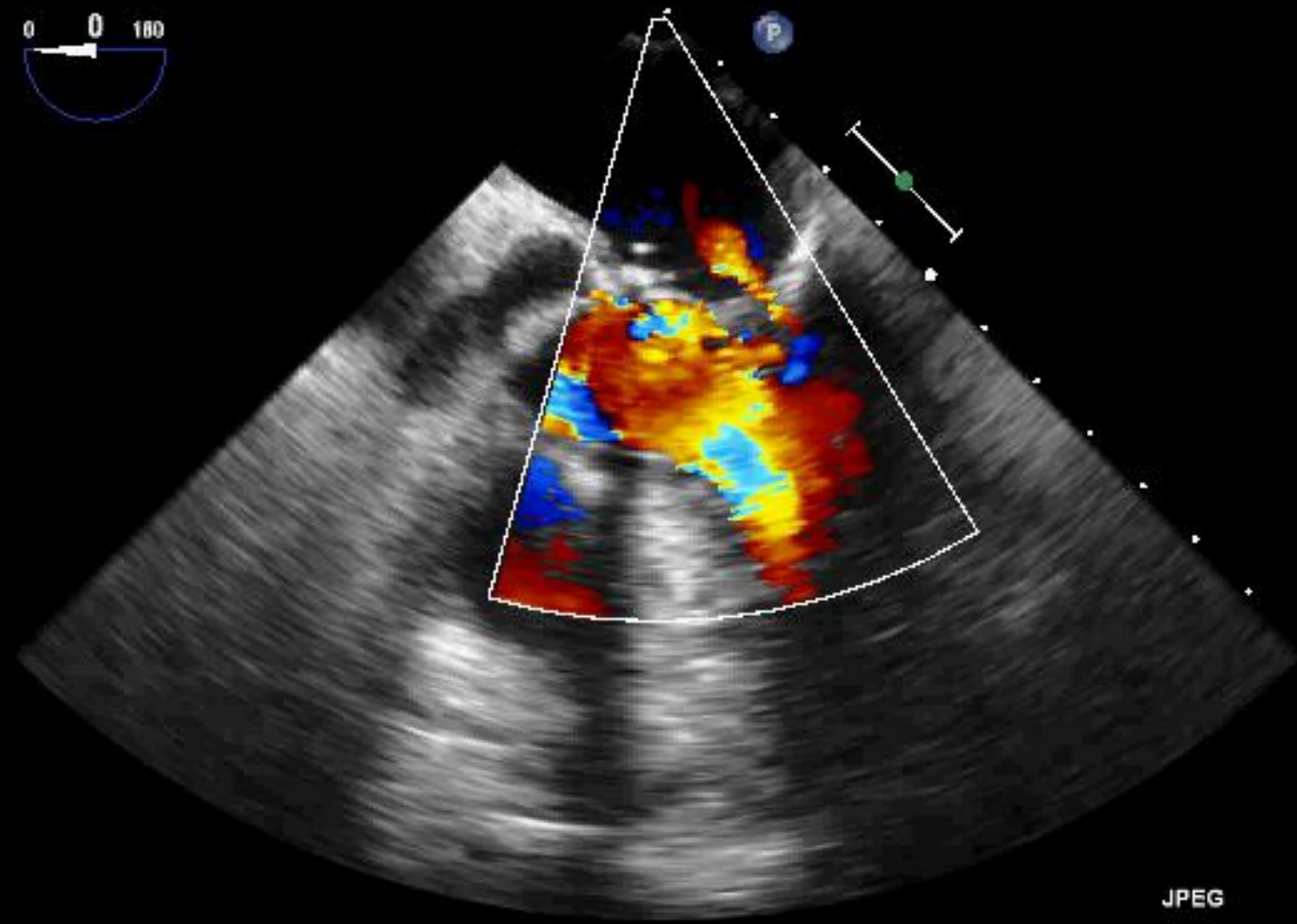


M4 M4

+61.6



-61.6
cm/s



JPEG

Temp. PAZ.: 37.0C
Temp. TEE: 38.8C

*** bpm



CLASSICAL
BILEAFLET
PROLAPSE









conclusions

Minimally invasive surgery

More knowledge.... more and better valve repair

The Edge-to-Edge technique is not a valid option

**Concept of functional bileaflets prolapse
Addressing the Anterior Leaflet became unnecessary**