



AUSTRALIA'S LEADING
ECHOCARDIOGRAPHY
CONFERENCE

17-19 March 2025
Marvel Stadium, Melbourne



Echo in sick pregnant patients: clinical vignettes

A Prof Sam Orde FCICM DDU FASE PhD

ICU specialist, Nepean Hospital, Sydney
Dept Medicine, University of Sydney

sam.orde@health.nsw.gov.au

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No relevant disclosures

Overview

Echo in sick pregnant patients

- Physiology in pregnancy
- Acute pathology
- Chronic pathology
- Management & communication
 - “Pregnancy Heart Team” approach



Physiology of pregnancy



Cardiovascular Physiology of Pregnancy

Monika Sanghavi, MD; John D. Rutherford, MB ChB, FRACP

Circulation September 16, 2014

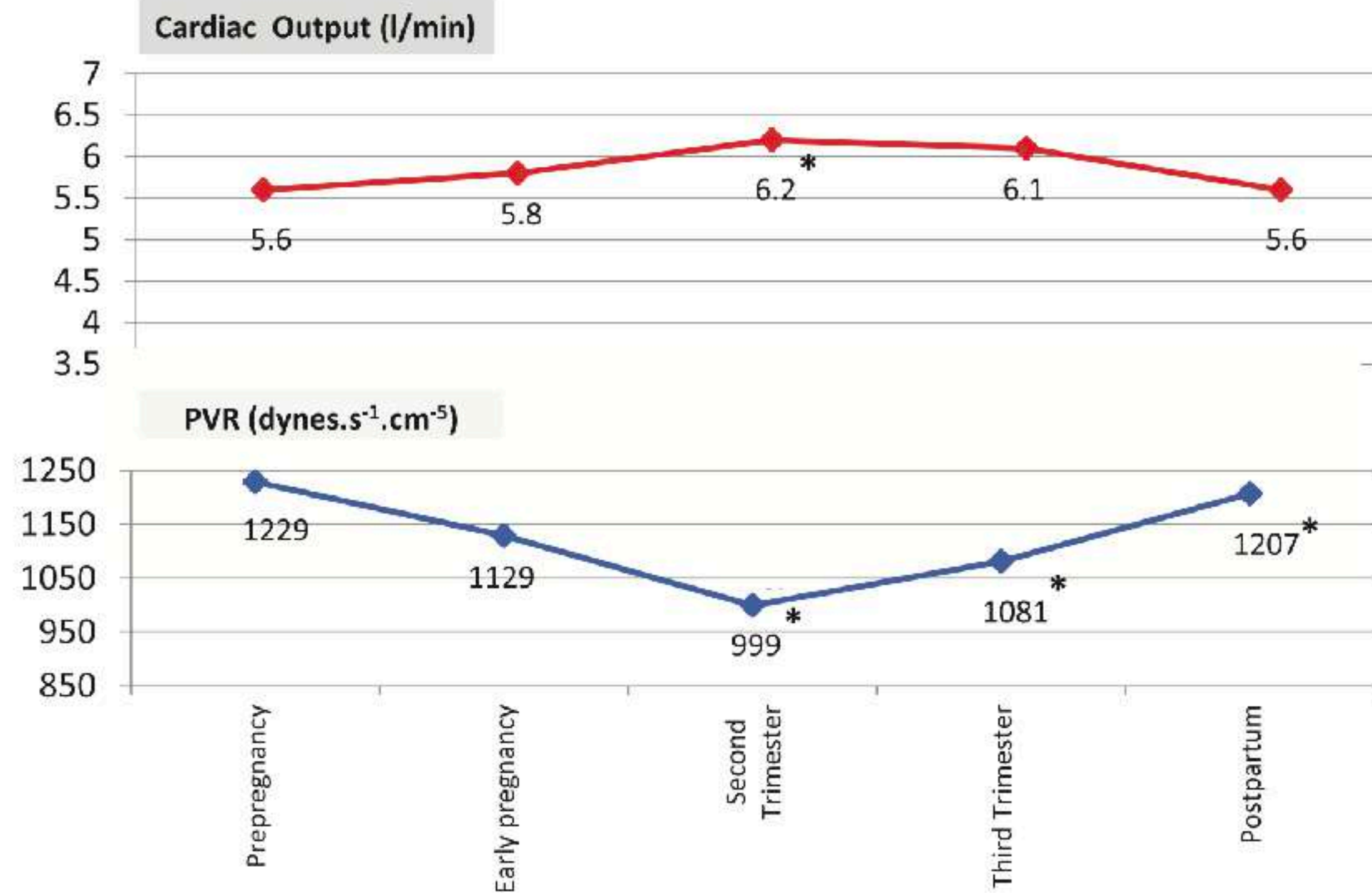


Table. Interrelationships of Changes in the Major Variables That Contribute to the Cardiovascular Changes in Pregnancy Compared With Preconception Values

Preconception		Pregnancy			
Baseline		First Trimester	Second Trimester	Third Trimester	Labor
Hemodynamic	CO	↑	↑↑	↑↑	↑↑↑↑
	SVR	↓	↓↓	↓↓	
	HR	↑	↑↑	↑↑↑	↑↑↑↑
	BP	↓	↓	↔	(Pain)
Neurohumoral		↑ Sympathetic activity			
		↑ Estrogen/progesterone/relaxin			
Renin/angiotensin	Plasma volume*	↑↑	↑↑↑	↑↑↑↑	↑↑↑↑↑
RBC changes	RBC mass	↑	↑↑	↑↑	(Autotransfusion)
Structural changes	LV wall mass	↑	↑	↑	
	Chamber sizes		4-Chamber enlargement		
	Aorta		Increased distensibility		

BP indicates blood pressure; CO, cardiac output; HR, heart rate; LV, left ventricular; RBC, red blood cell; and SVR systemic vascular resistance. ↑ and ↓ reflect relative changes in parameters from preconception values.

*The greater increase in plasma volume relative to the increase in RBC mass results in the physiological anemia of pregnancy.

Normal pregnant patient's heart

ECHO
S6-1
42Hz
20cm
2D
71%
C 48
P Low
HGen

TISO.7 MI 1.3

M3

F 1.8 R 3.6

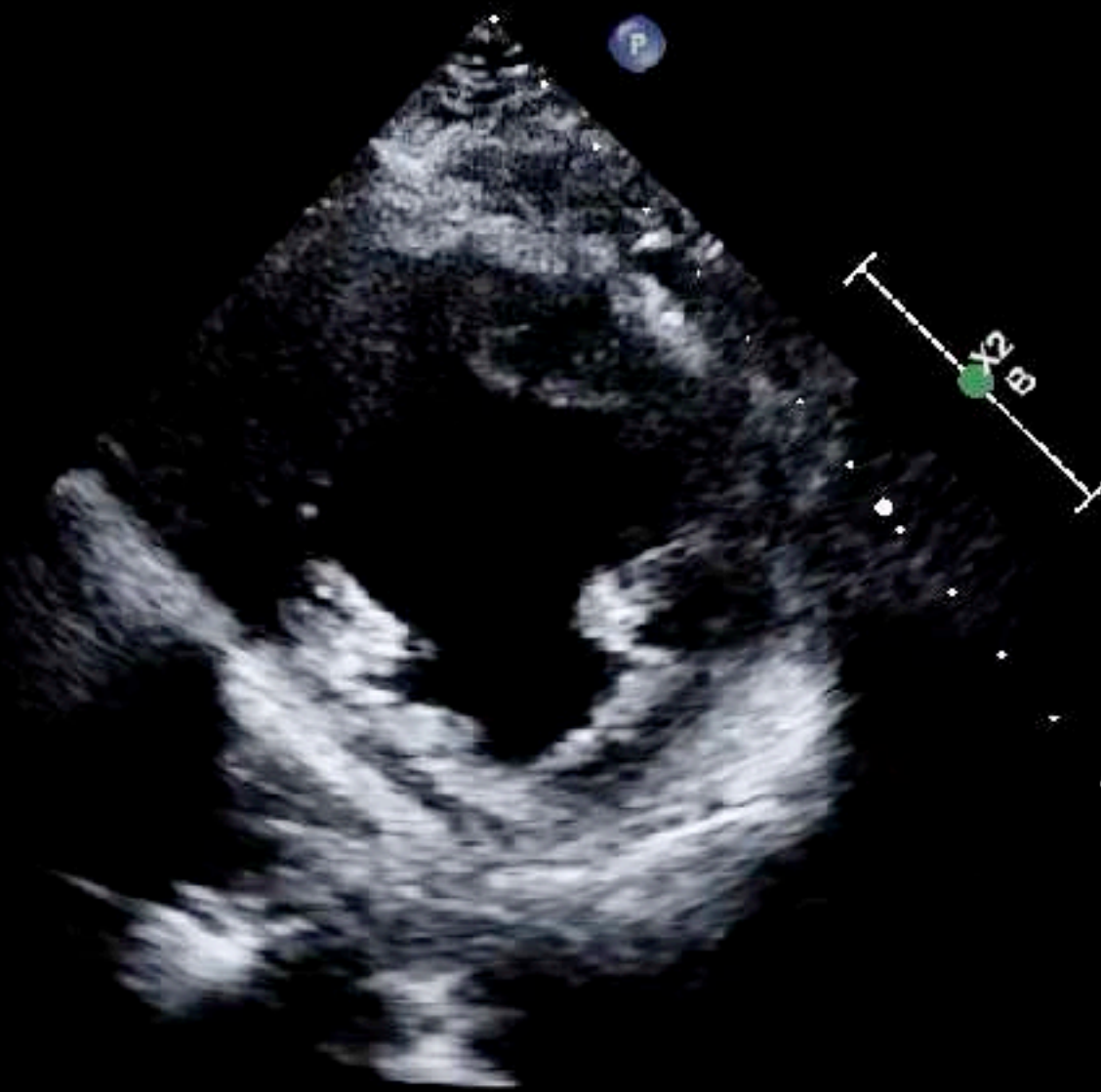


ECHO
S5-1
66Hz
13cm
2D
69%
C 48
P Low
HGen

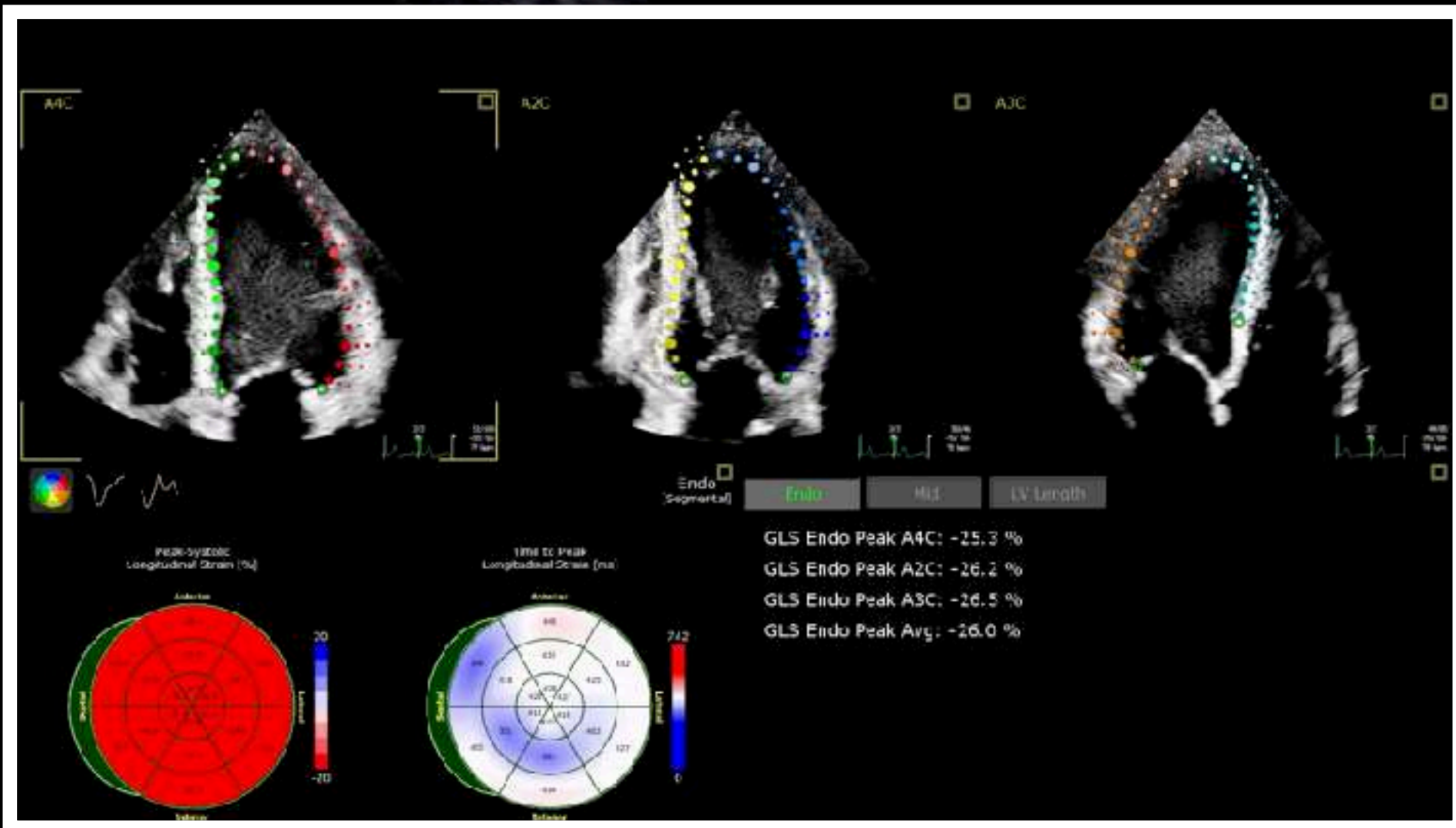
TISO.6 MI 1.3

M3

F 1.8 R 3.6



72 bpm



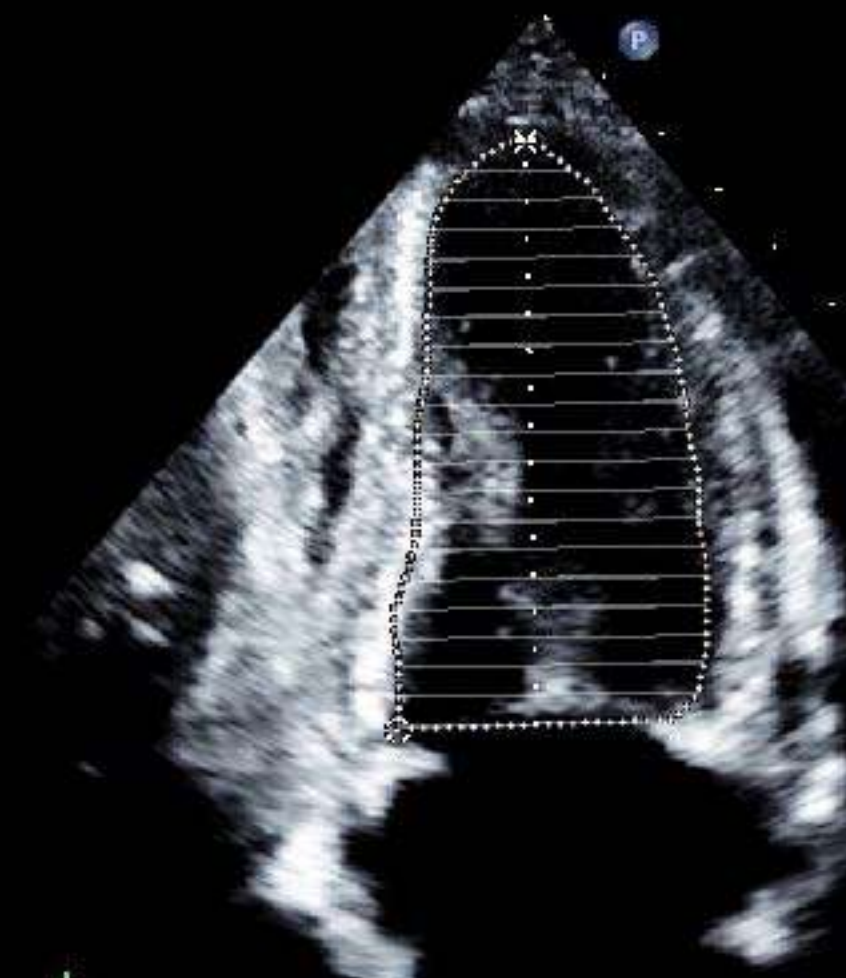
ECHO
S5-1
65Hz
12cm
2D
69%
C 48
P Low
HGen

08/03/2025 09:06:52AM

TISO.7 MI 1.3

M3

F 1.8 R 3.6



A2Cs
 LV Length 7.21 cm
 LV Area 22.1 cm²
 LV Vol 58.3 ml
 difS 4.58 %
 ESVI (A2C) 35.1 ml/m²
 ESVI (BP) 27.8 ml/m²
 ESV (A2C) 58.3 ml
 EF (A2C) 51.8 %
 ESV (BP) 46.2 ml
 EF (BP) 61.2 %
 85 bpm



Thank you for excellent imaging Nepean monographers

Normal pregnant patient's heart

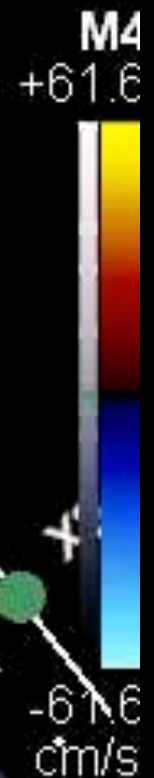
CHO
5-1
1Hz
6cm

D
72%
C 48
P Low
HGen

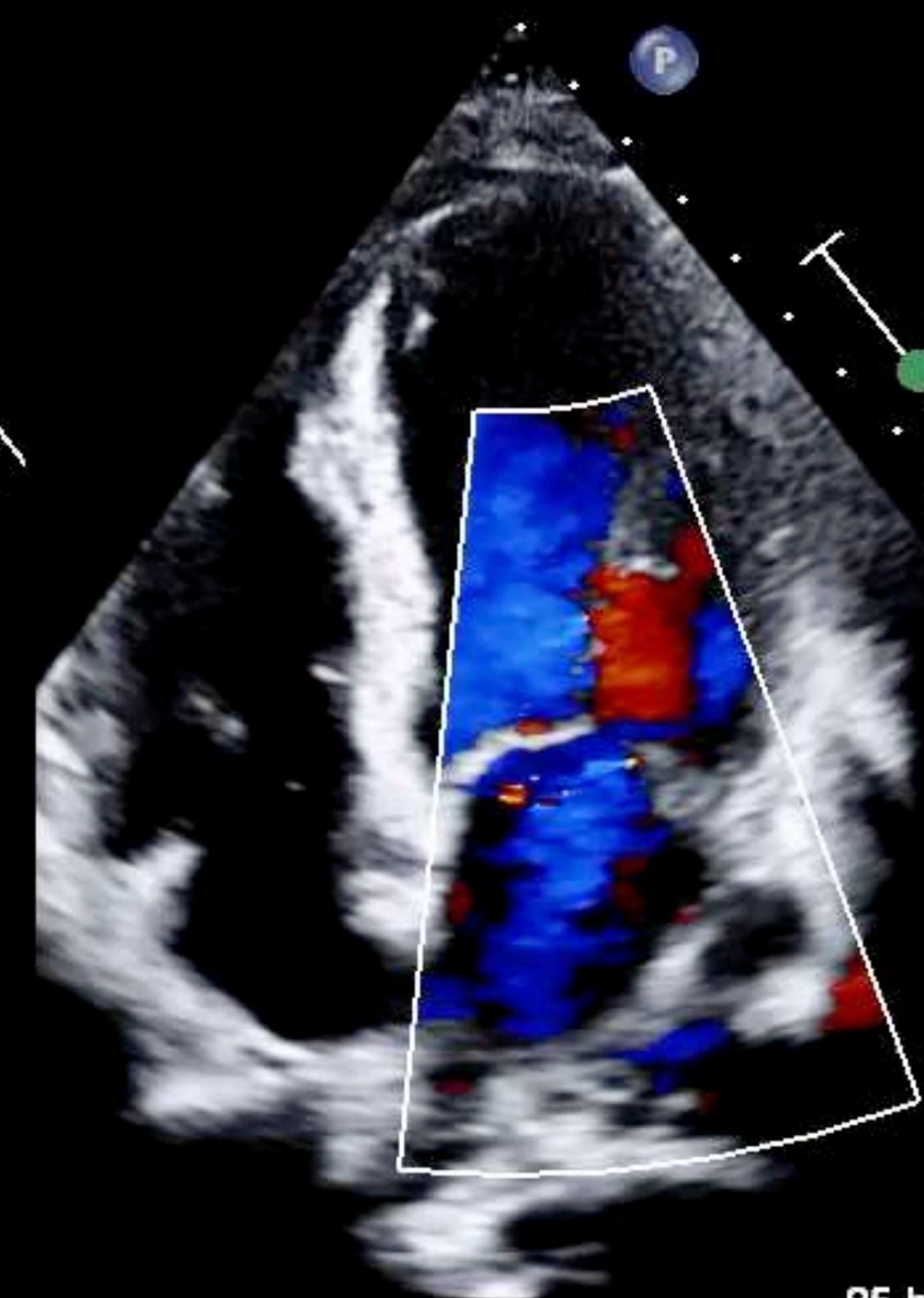
F
70%
4000Hz
WF 399Hz
2.5MHz



TIS1.0 MI 1.3

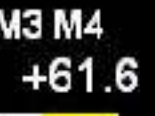


ECHO
S5-1
21Hz
15cm
2D
72%
C 48
P Low
HGen



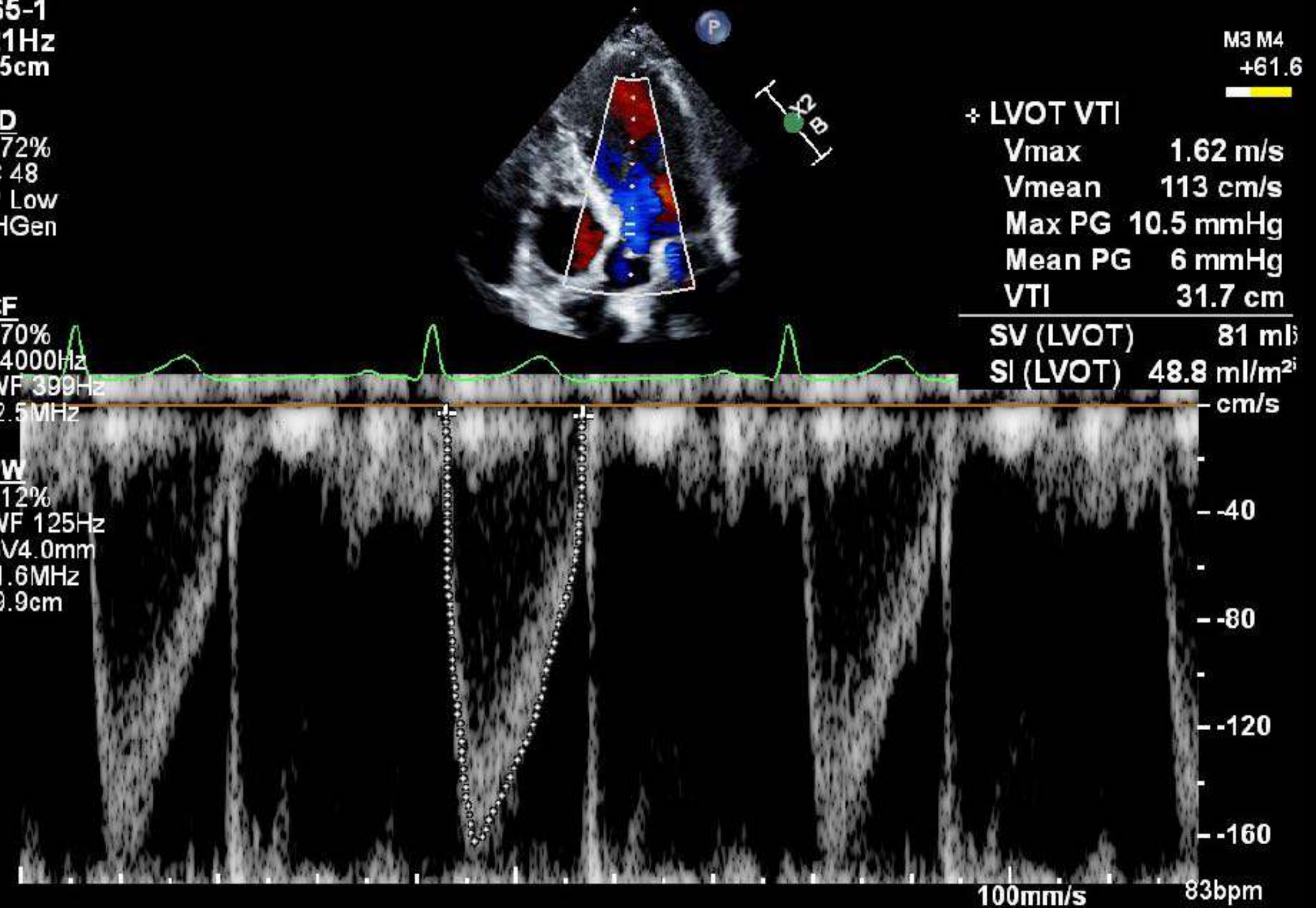
85 bpm

TIS0.8 MI 0.6



LVOT VTI
Vmax 1.62 m/s
Vmean 113 cm/s
Max PG 10.5 mmHg
Mean PG 6 mmHg
VTI 31.7 cm
SV (LVOT) 81 ml
SI (LVOT) 48.8 ml/m²

CF
70%
4000Hz
WF 399Hz
2.5MHz
PW
12%
WF 125Hz
SV4.0mm
1.6MHz
9.9cm



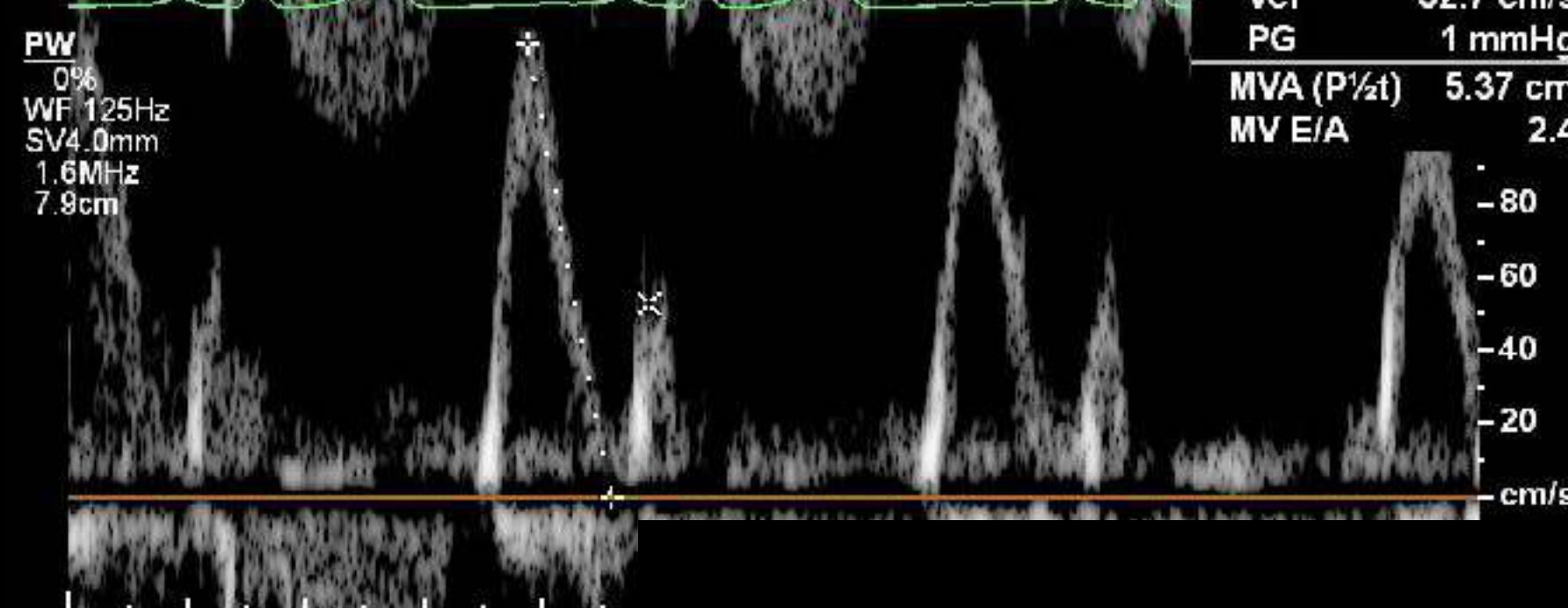
83bpm

Normal pregnant patient's heart

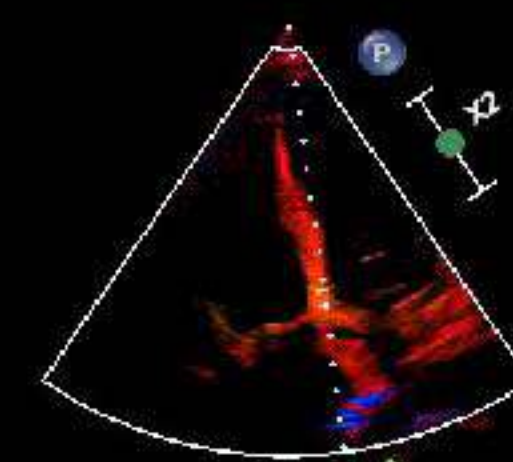
ECHO
S5-1
58Hz
16cm
2D
75%
C 48
P Low
HGen



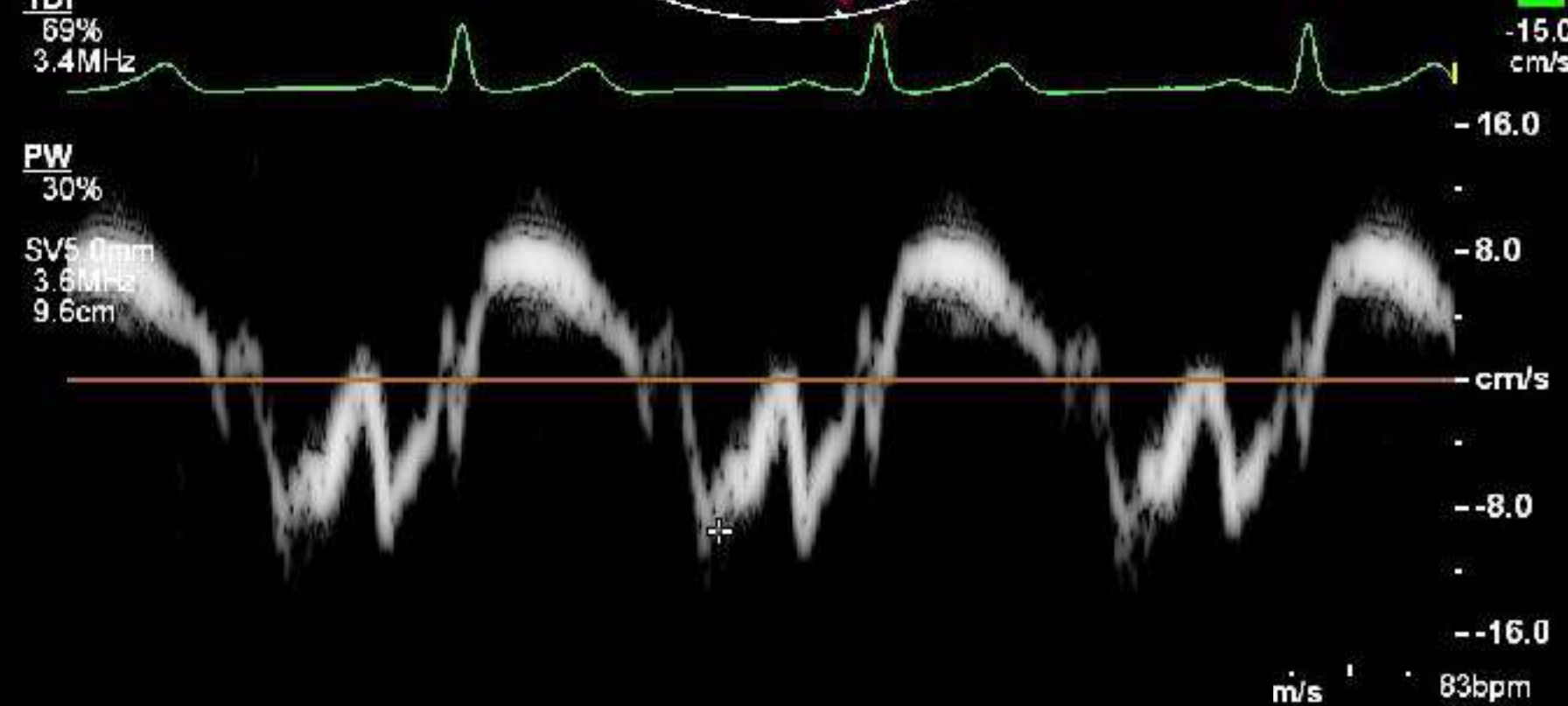
TISO.5 MI 0.7
M3
MV Peak E Vel
Vel 124 cm/s
PG 6 mmHg
Decel Time 139 ms
Slope 891 cm/s²
P1/2 41 ms
MV Peak A Vel
Vel 52.7 cm/s
PG 1 mmHg
MVA (P1/2) 5.37 cm²
MV E/A 2.4



ECHO
S5-1
63Hz
16cm
2D
74%
C 33
P Low
HGen

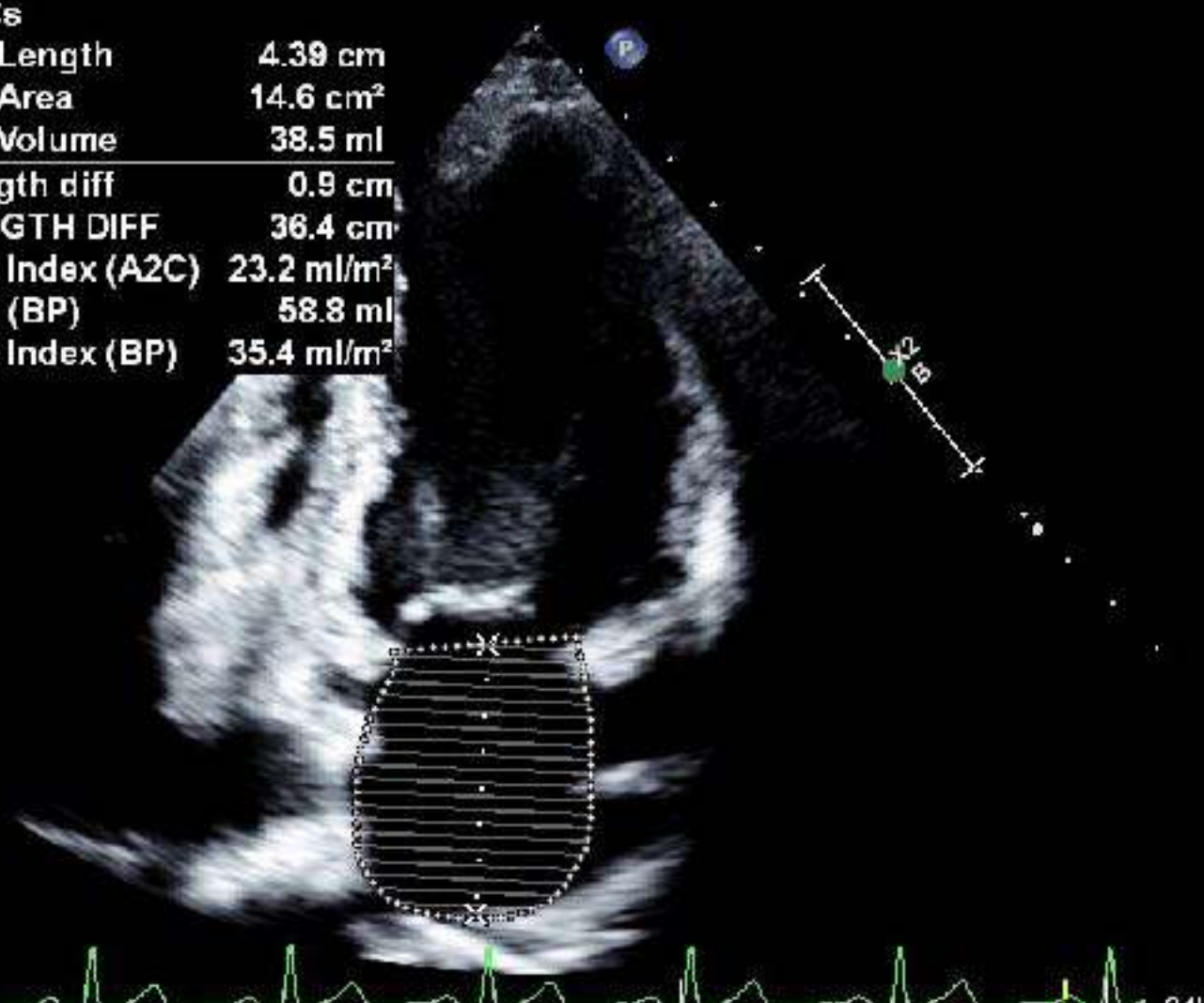


TDI
69%
3.4MHz
PW
30%
SV5.0mm
3.8MHz
9.6cm

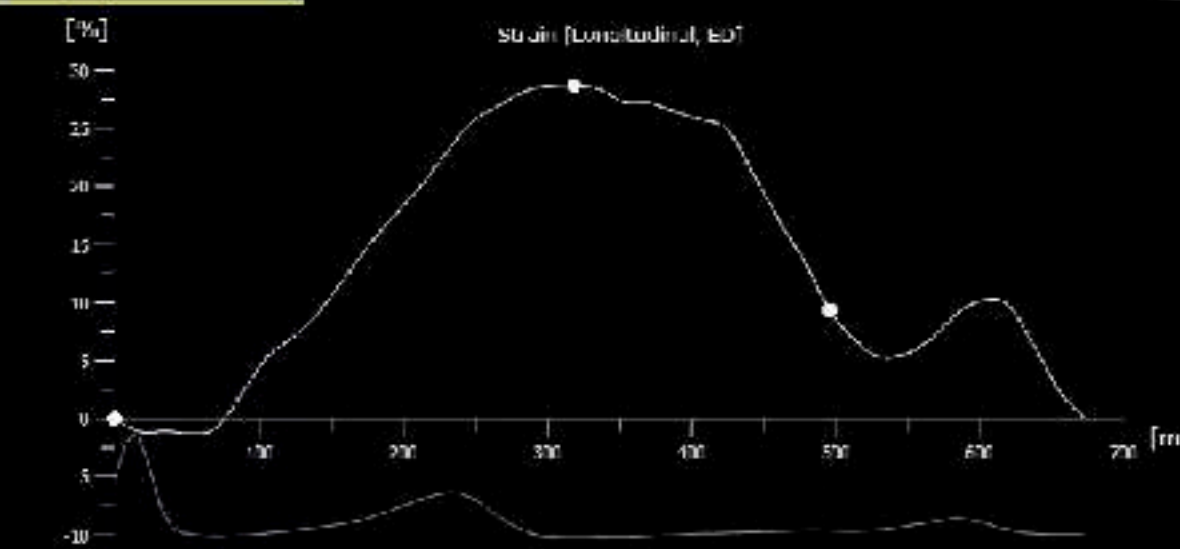


TISO.9 MI 0.6
M3 M5
+15.0
Med E' Vel 9.48 cm/s
E'/Med E' 13.1
-15.0 cm/s
-16.0
-8.0
-8.0
-16.0
m/s 83bpm

ECHO
S5-1
57H
15cr
2D
73r
C 4E
P Lo
HGr
LA A2Cs
Atrial Length 4.39 cm
Atrial Area 14.6 cm²
Atrial Volume 38.5 ml
LA Length diff 0.9 cm
LA LENGTH DIFF 36.4 cm
LA ESV Index (A2C) 23.2 ml/m²
LA ESV (BP) 58.8 ml
LA ESV Index (BP) 35.4 ml/m²



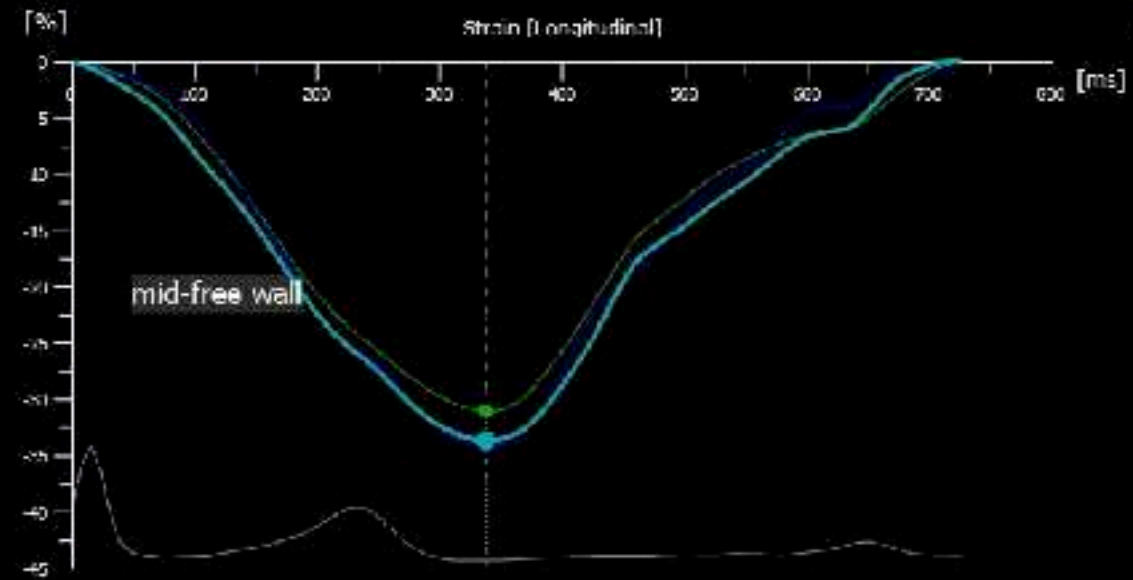
TISO.6 MI 1.3
M3



Reference LA
Reference LA
LASr ED: 28.7 %
LAScd ED: -18.6 %
LASct ED: -10.1 %

1.8 3.6

Normal pregnant patient's heart



Global

RVFW5L Endo: -33.1 %

RV4CSL Endo: -27.7 %



ECHO

S5-1

52Hz

17cm

2D

67%

C 48

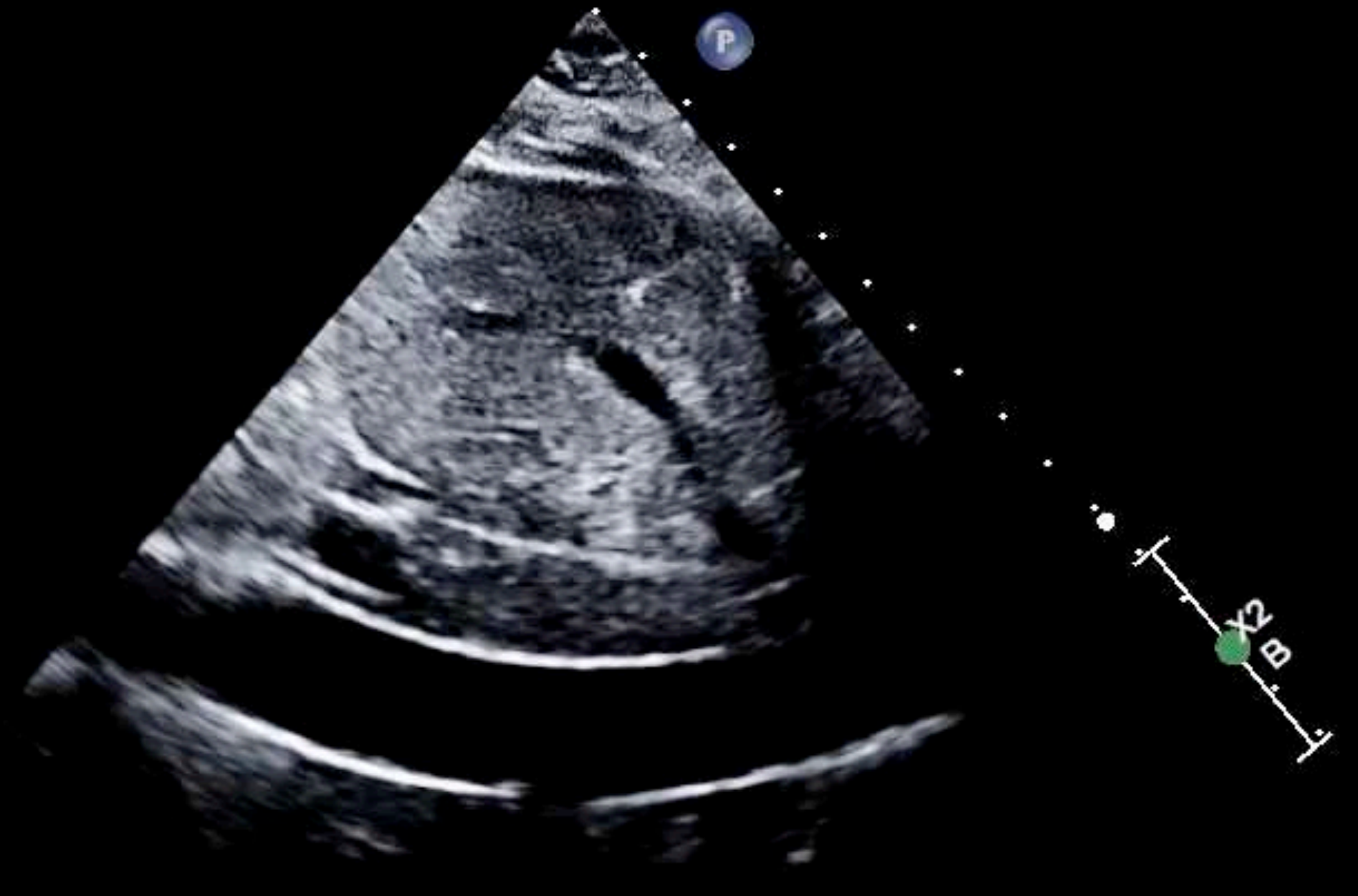
P Low

HGen



TIS0.9 MI 1.2

M3

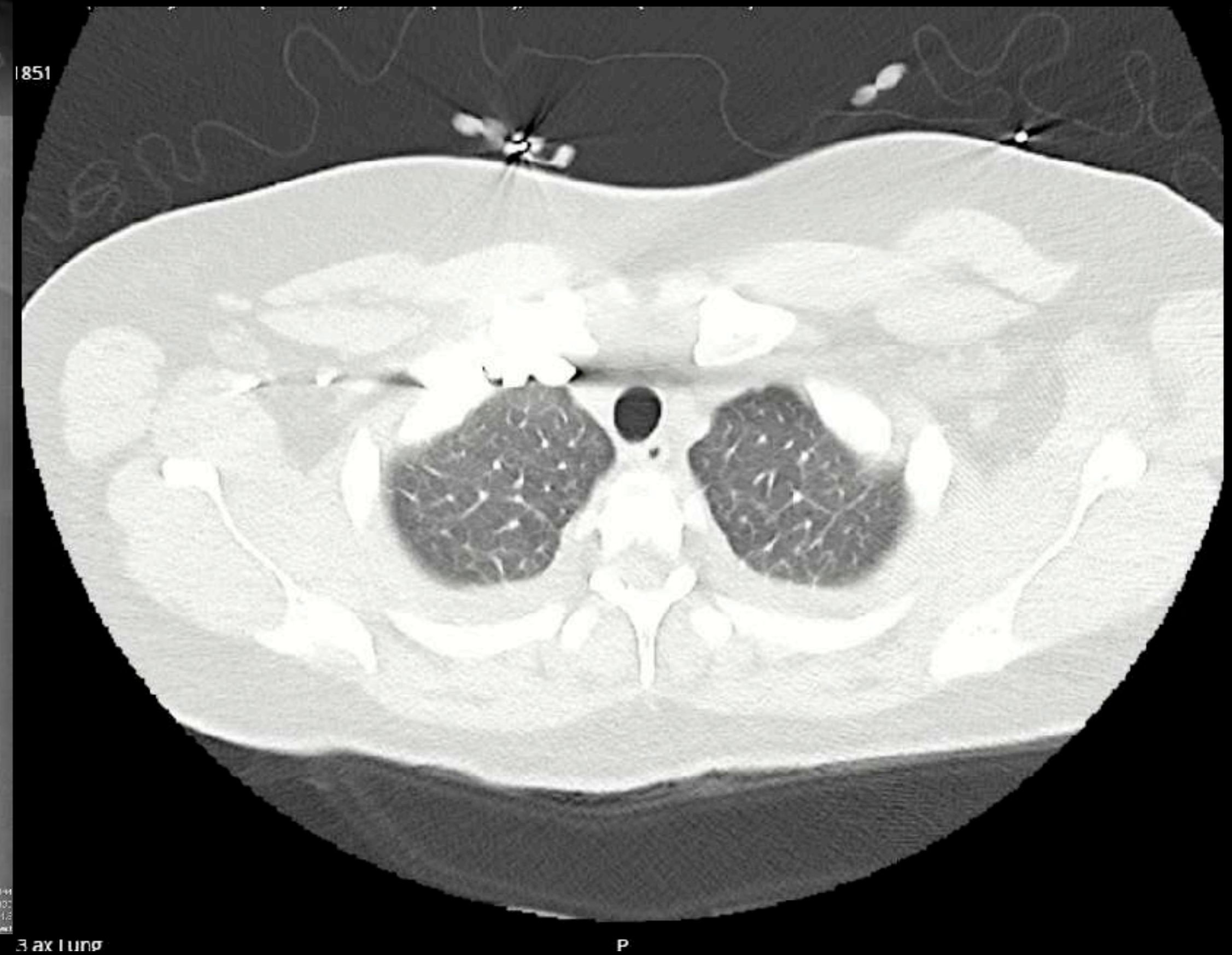
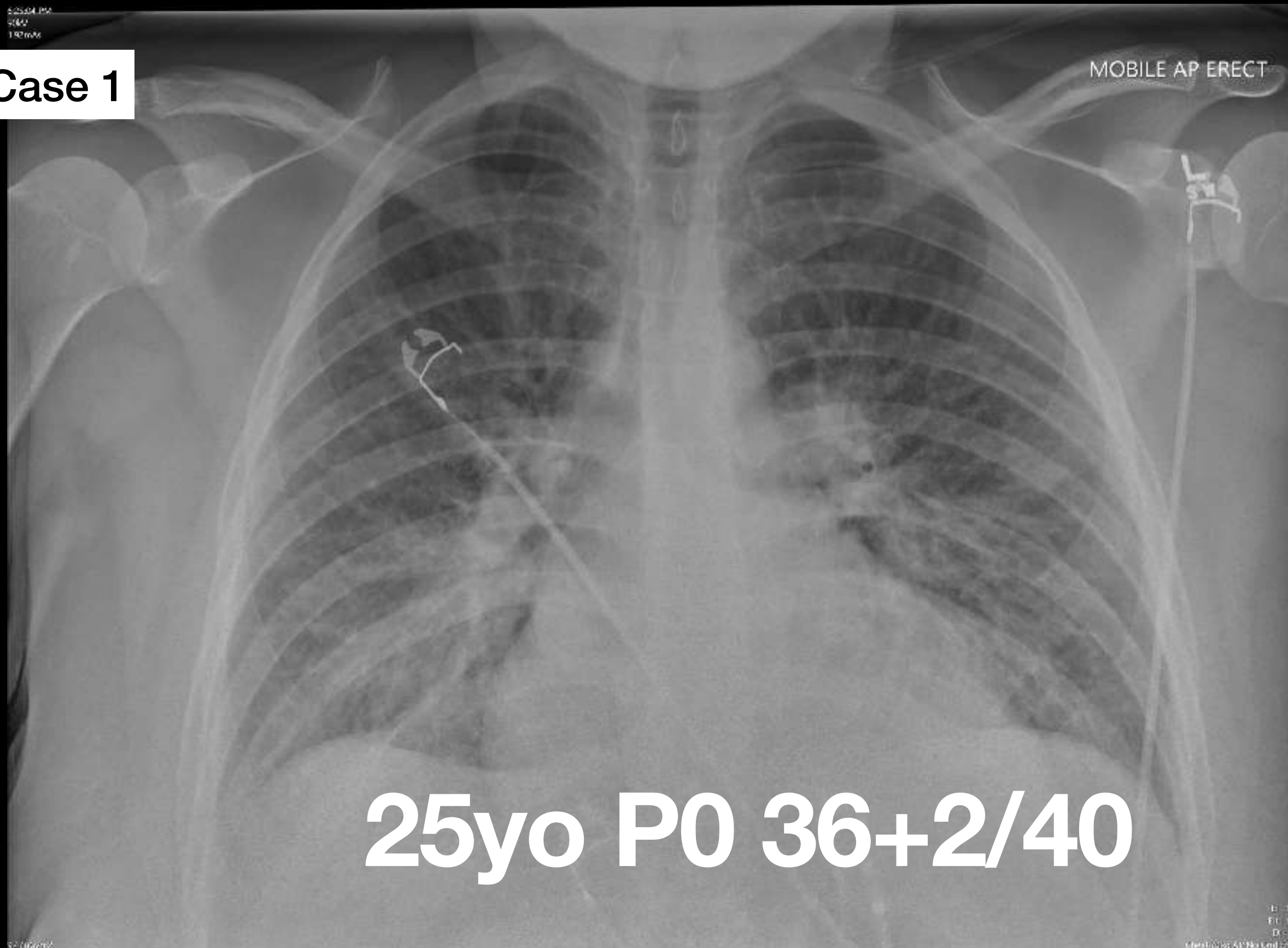


79 bpm

Pregnancy induced cardiac disease	Pregnancy with pre-existing cardiac disease
Peripartum cardiomyopathy Pulmonary embolism Aortic dissection Acute coronary syndrome Pre-eclampsia associated	Valvular heart disease Cardiomyopathies PAH Congenital heart disease



Case 1



No PMH

Normal pregnancy up until 3 days ago => SOB++

O/E: peripheral oedema, mild hypotension, normal lactate

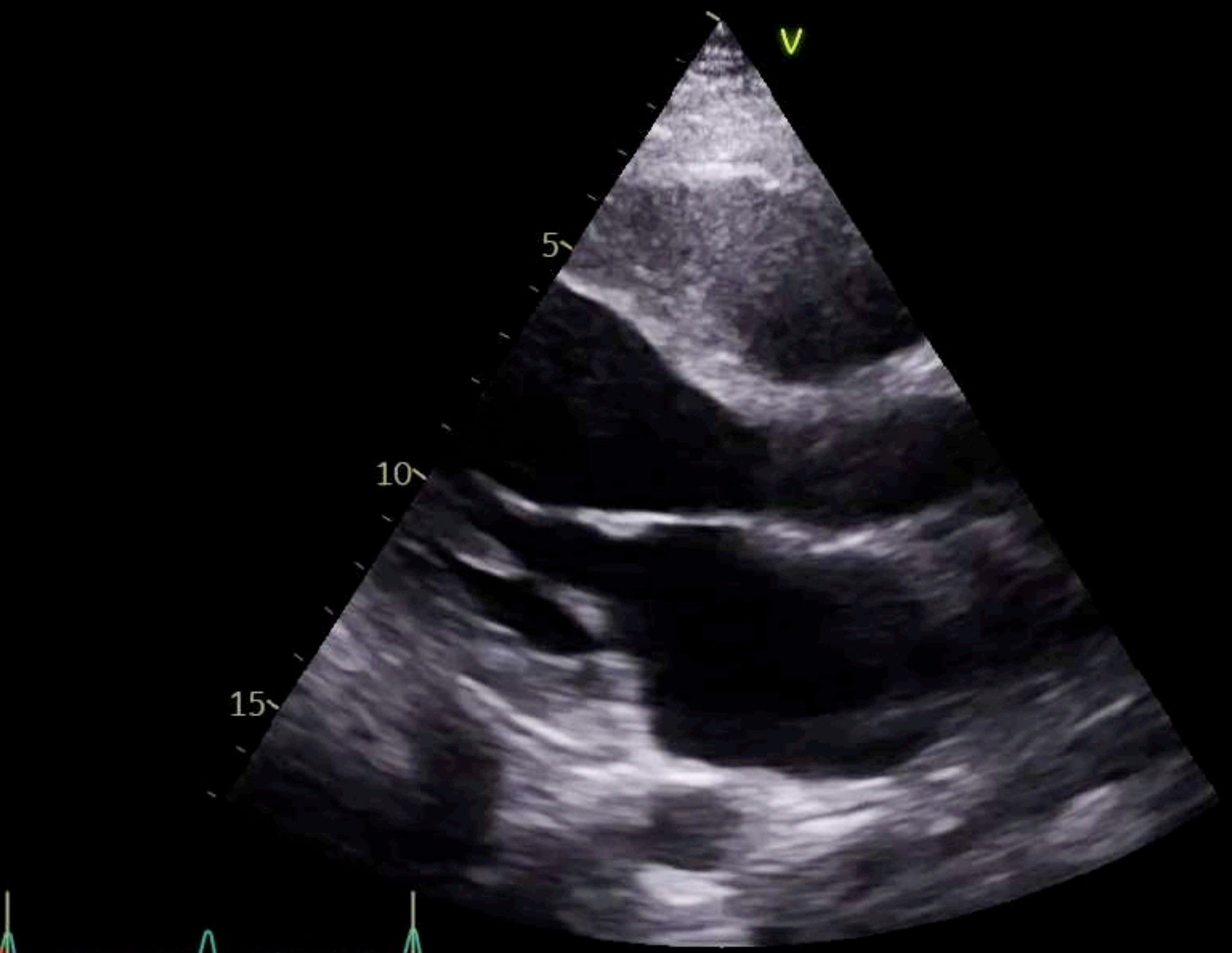


Case 1

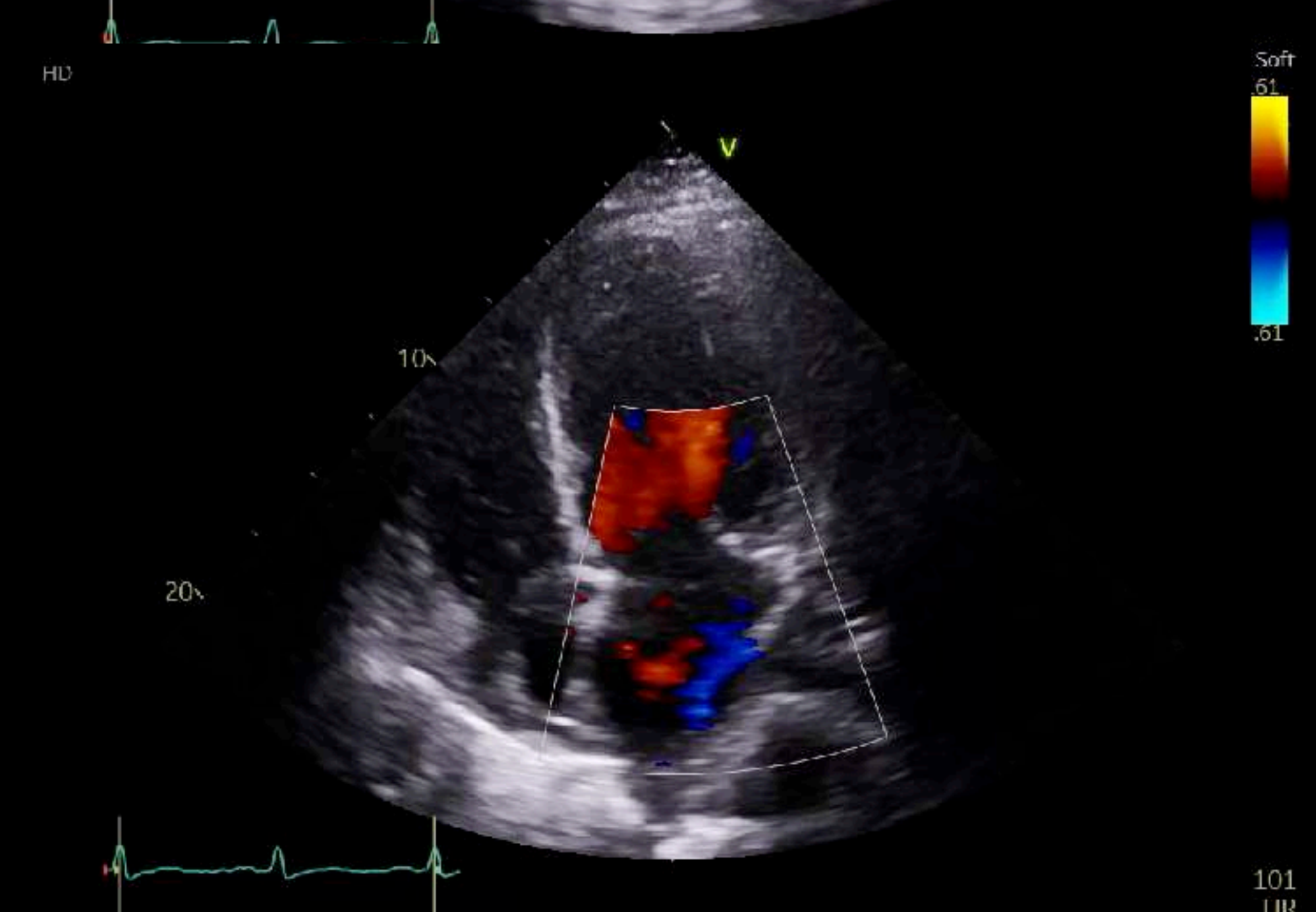
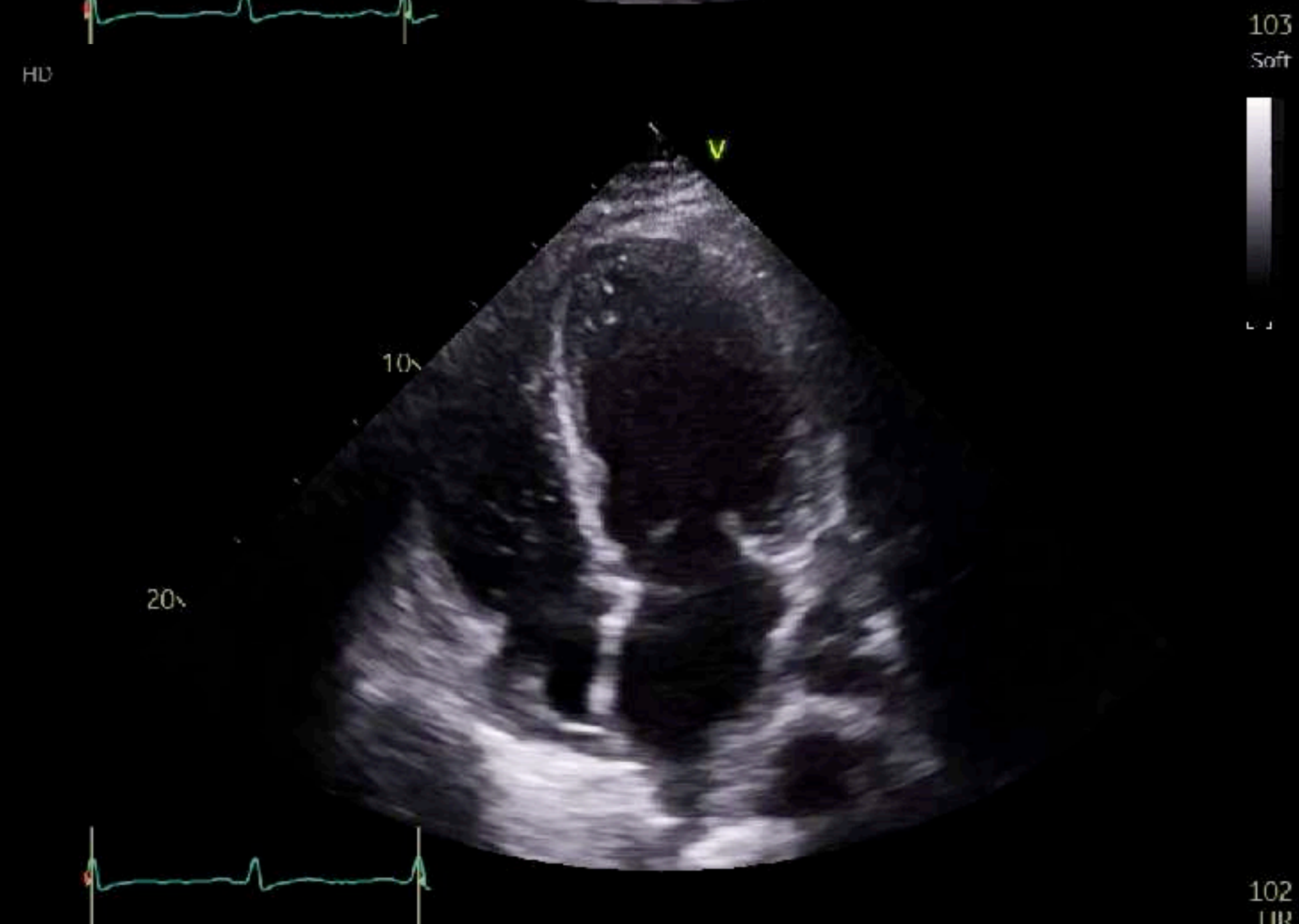
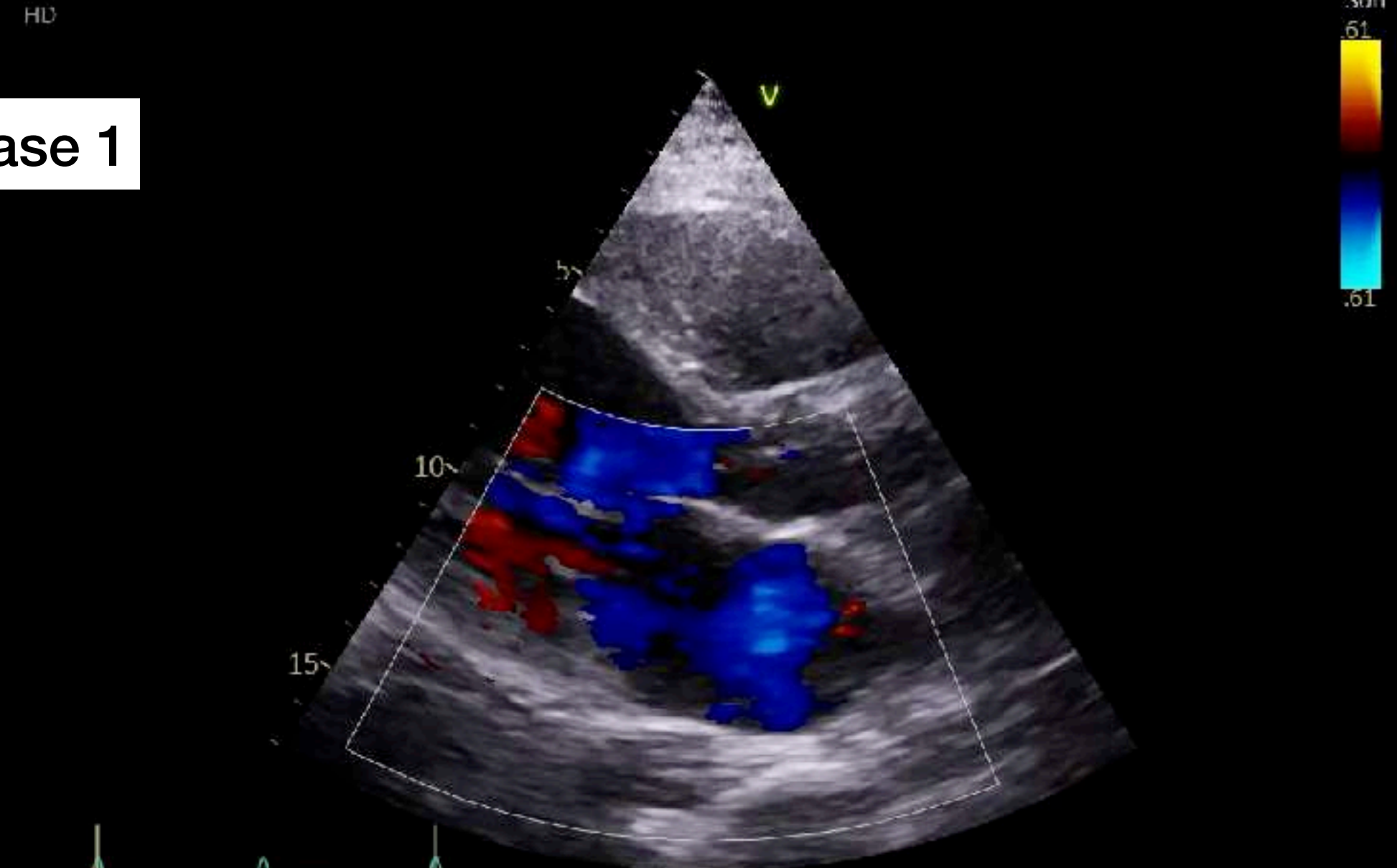
HD



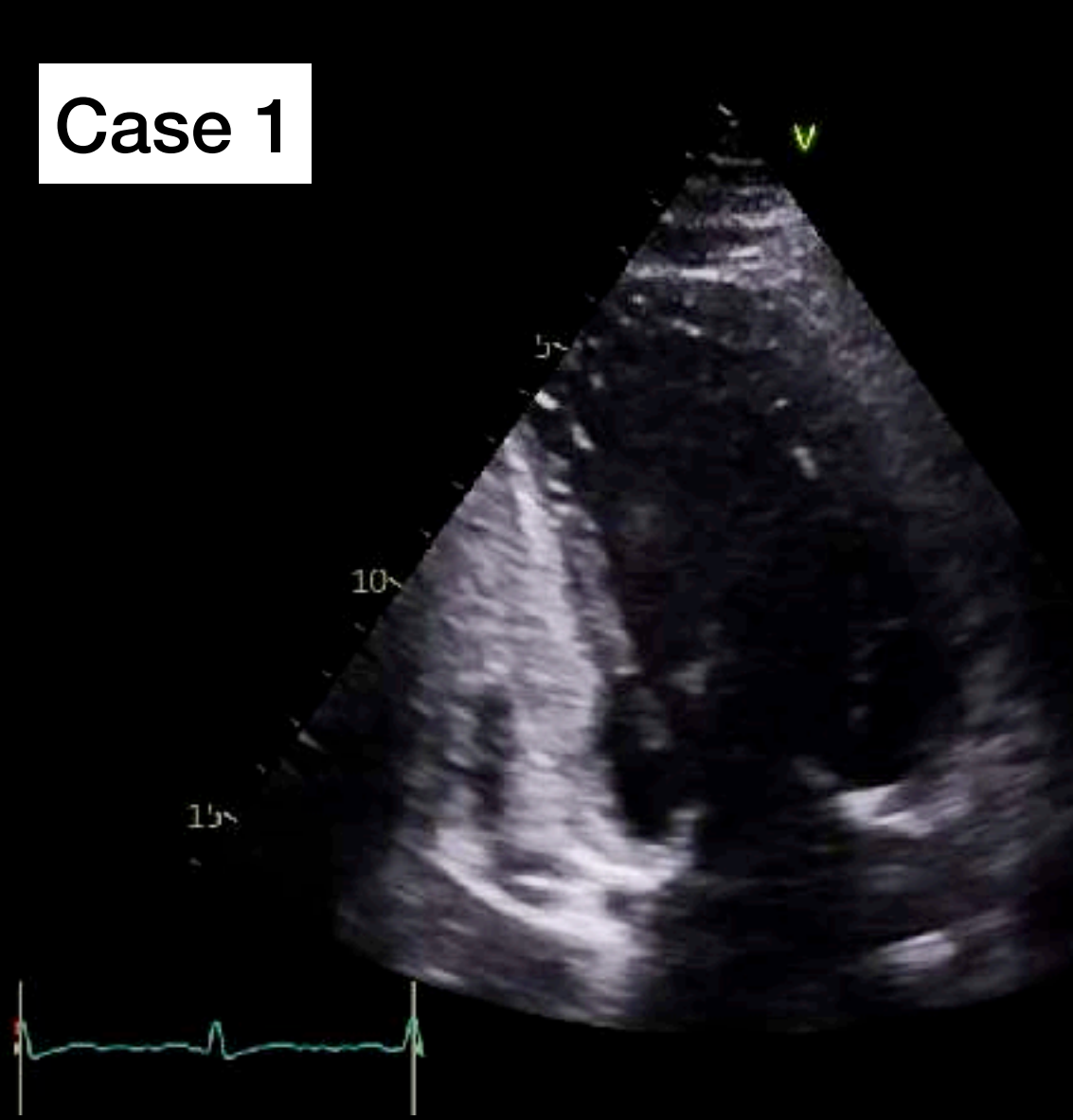
HD



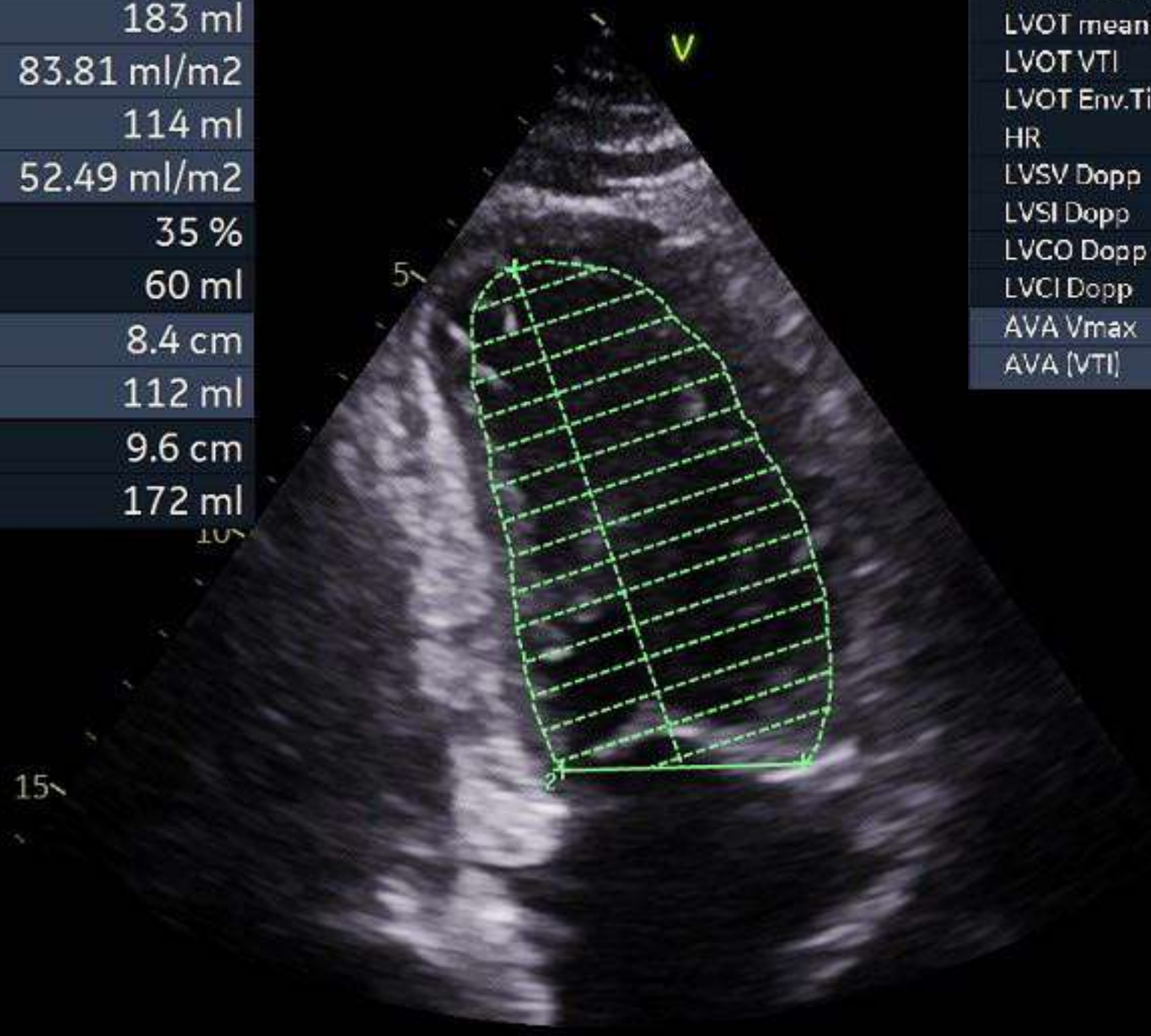
Case 1



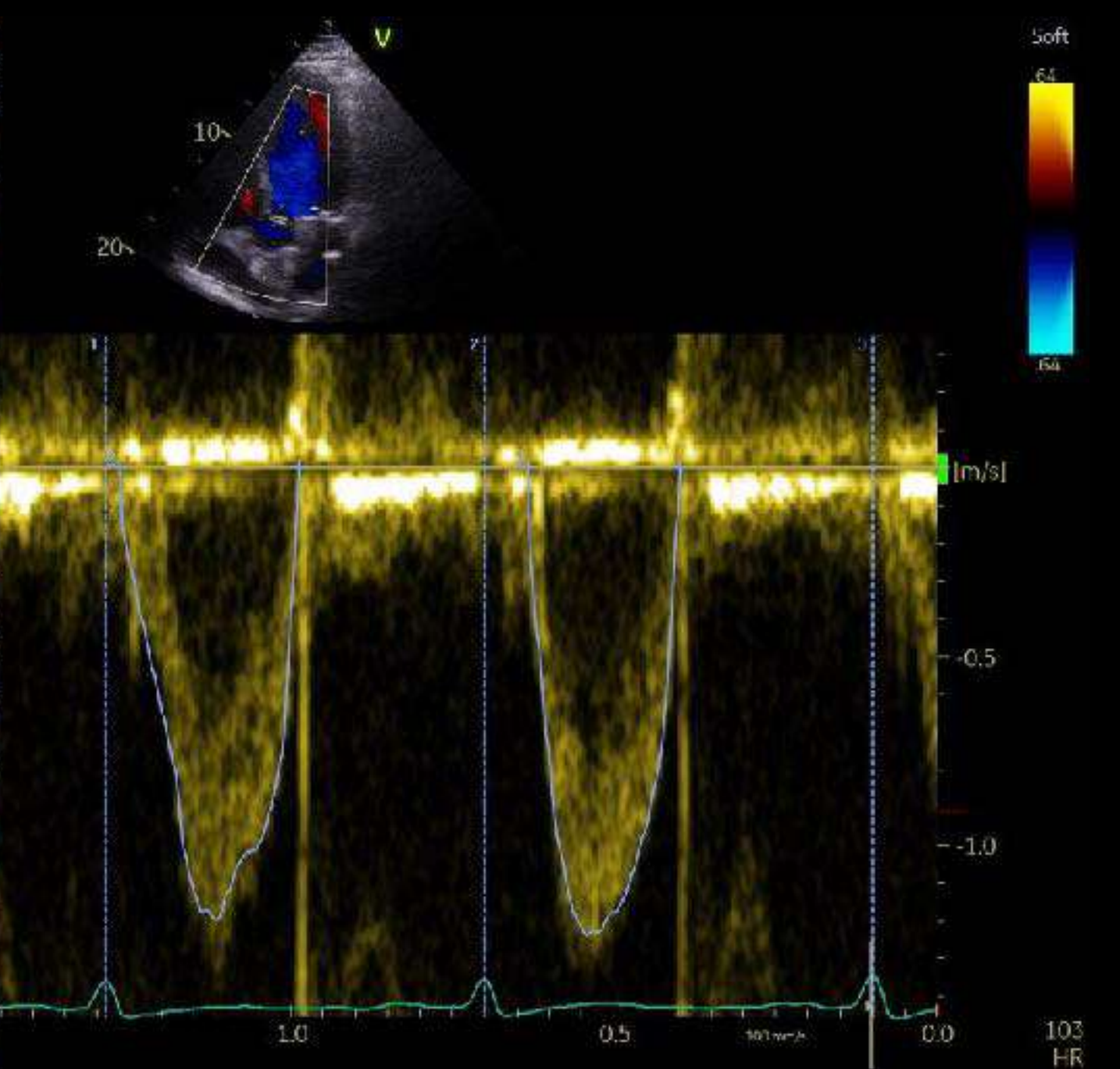
Case 1



EF Biplane	37 %
LVEDV MOD BP	183 ml
LVEDVInd MOD BP	83.81 ml/m2
LVESV MOD BP	114 ml
LVESVInd MOD BP	52.49 ml/m2
LVEF MOD A2C	35 %
SV MOD A2C	60 ml
2 LVLs A2C	8.4 cm
LVESV MOD A2C	112 ml
1 LVLd A2C	9.6 cm
LVEDV MOD A2C	172 ml



LVOT Vmean	0.81 m/s
LVOT maxPG	6.17 mmHg
LVOT meanPG	3.77 mmHg
LVOT VTI	21.5 cm
LVOT Env.Ti	236 ms
HR	100 BPM
LVSV Dopp	82 ml
LVSI Dopp	37.83 ml/m2
LVCO Dopp	8.25 l/min
LVCI Dopp	3.78 l/minm2
AVA Vmax	3.3 cm2
AVA (VTI)	3.8 cm2
AVAI (VTI)	1.734 cm2/m2
AVAI Vmax	1.512 cm2/m2
2 LVOT Vmax	1.20 m/s
LVOT Vmean	0.80 m/s
LVOT maxPG	5.75 mmHg
LVOT meanPG	3.02 mmHg
LVOT VTI	22.3 cm
LVOT Env.Ti	278 ms
HR	102 BPM
LVSV Dopp	85 ml
LVSI Dopp	39.19 ml/m2
LVCO Dopp	8.73 l/min
LVCI Dopp	4.01 l/minm2
AVA Vmax	3.2 cm2
AVA (VTI)	3.6 cm2



Impression = Possible peri-partum cardiomyopathy

? Acute (diagnosis of exclusion)




Peri-partum cardiomyopathy

- **Diagnosis** = LVEF <45% +/- LV dilation. Dx exclusion.
 - End of pregnancy / 5 months post partum (66%)
- **Management** = r/v Hx: MDT (O&G, Cardiology, ICU)
 - Fluid overload & thrombus frequent
 - Consider delivery
- **Prognosis** = 50% ongoing LVEF impaired (FU needed)
 - 30-50% recurrence with subsequent pregnancies

Curtis et al. *Echo Research & Practice* (2023) 10:7
https://doi.org/10.1186/s44156-023-00019-8


Echo Research & Practice

GUIDELINE **Open Access**




Transthoracic Echocardiographic Assessment of the Heart in Pregnancy—a position statement on behalf of the British Society of Echocardiography and the United Kingdom Maternal Cardiology Society

Stephanie L. Curtis^{1*}, Mark Belham², Sadie Bennett³, Rachael James^{4,5}, Allan Harkness⁶, Wendy Gamlin⁷, Baskaran Thilaganathan⁸, Veronica Giorgione⁸, Hannah Douglas⁹, Aisling Carroll¹⁰, Jamie Kitt¹¹, Claire Colebourn¹¹, Isabel Ribeiro¹, Sarah Fairbairn¹, Daniel X. Augustine^{12,13}, Shaun Robinson¹⁴ and Sara A. Thorne¹⁵

 European Heart Journal (2011) 32, 3147–3197
doi:10.1093/eurheartj/ehz218

ESC GUIDELINES

 **ESC Guidelines on the management of cardiovascular diseases during pregnancy**

The Task Force on the Management of Cardiovascular Diseases during Pregnancy of the European Society of Cardiology (ESC)

Endorsed by the European Society of Gynecology (ESG), the Association for European Paediatric Cardiology (AEPC), and the German Society for Gender Medicine (DGesGM)

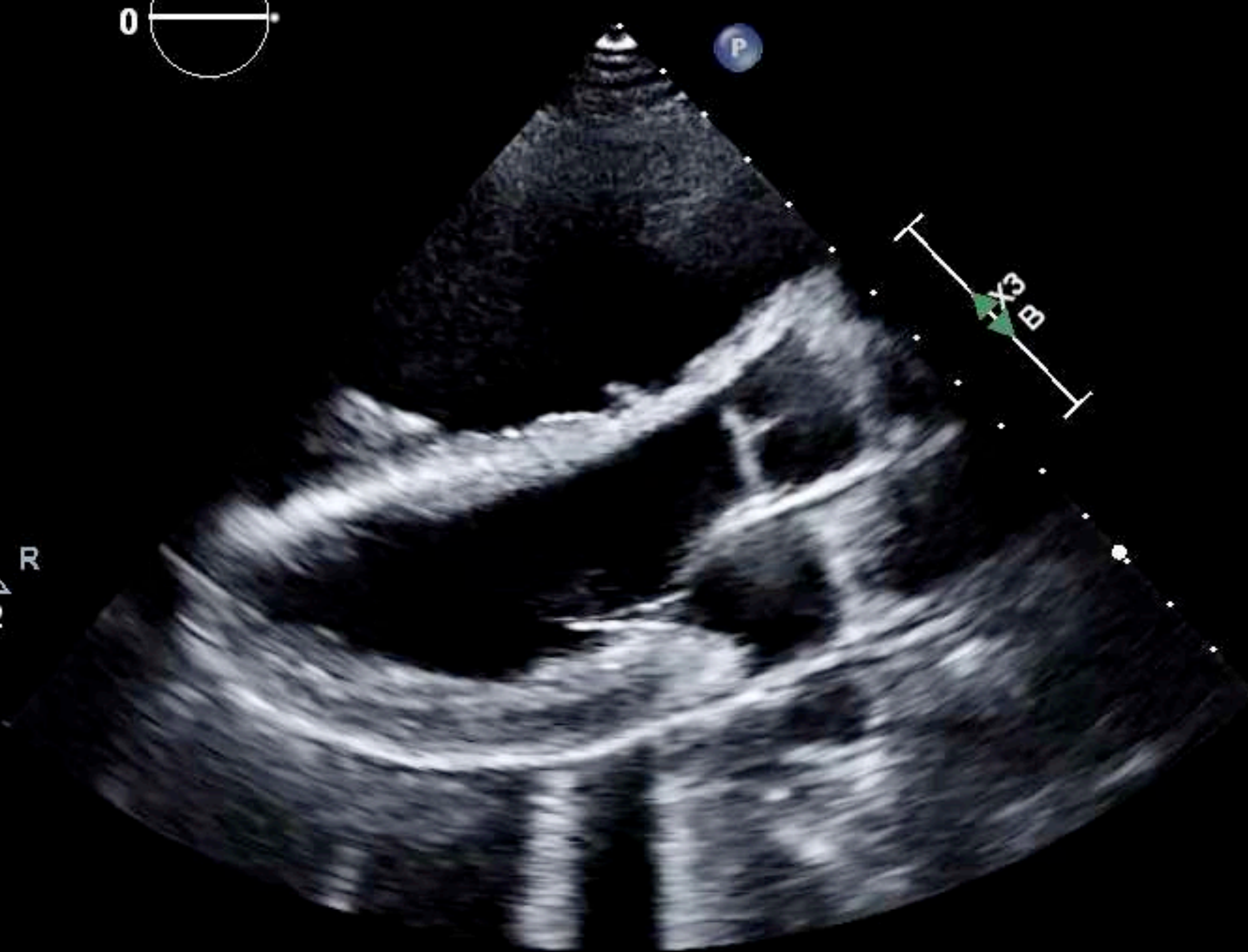
Case 2

25yo G2P0 32/40

Refugee. Poor English. No PMH
ED = Short of breath ++. No chest pain
Denies issues with pregnancy.

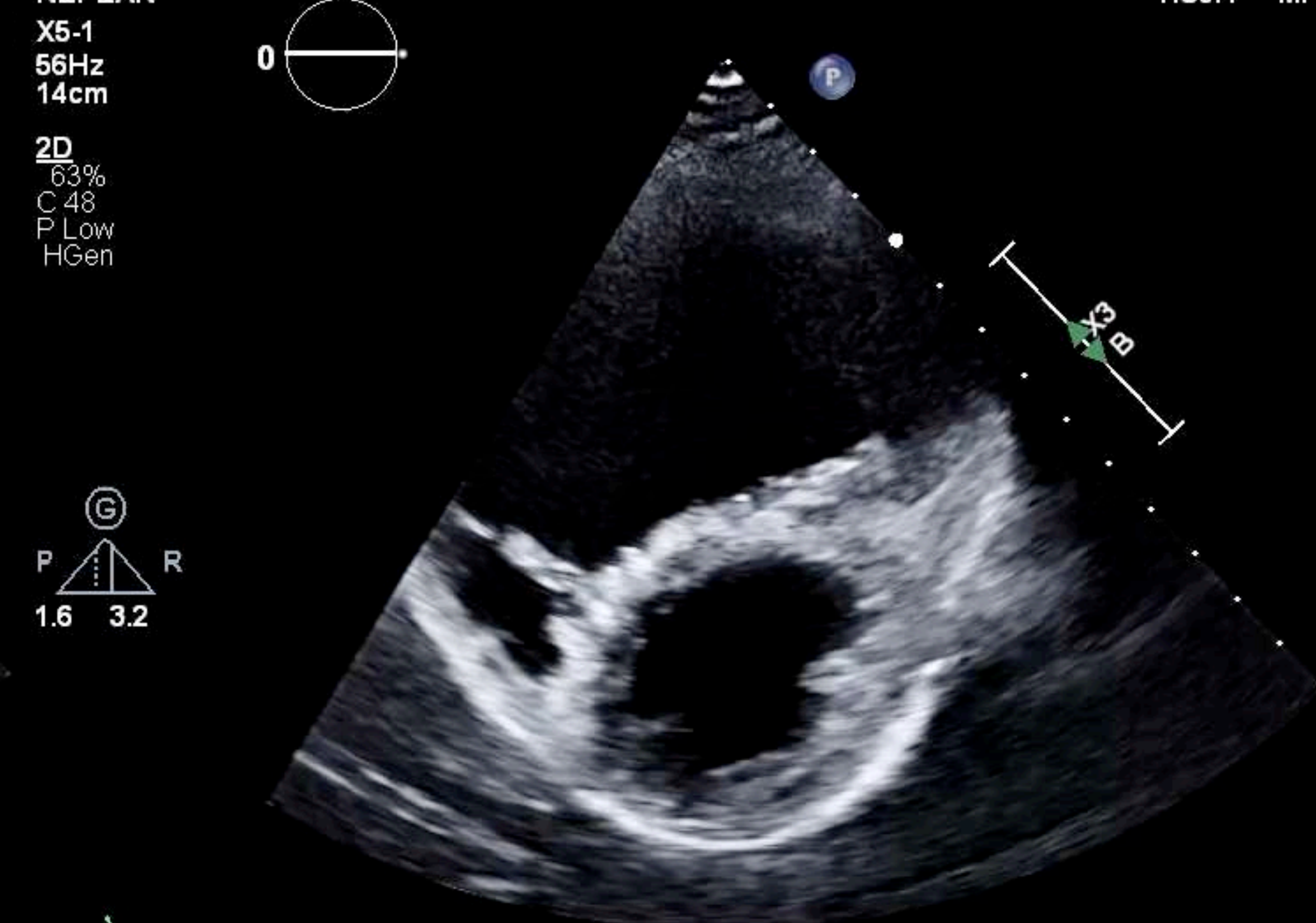
NEPEAN
X5-1
50Hz
15cm

2D
63%
C 48
P Low
HGen



NEPEAN
X5-1
56Hz
14cm

2D
63%
C 48
P Low
HGen

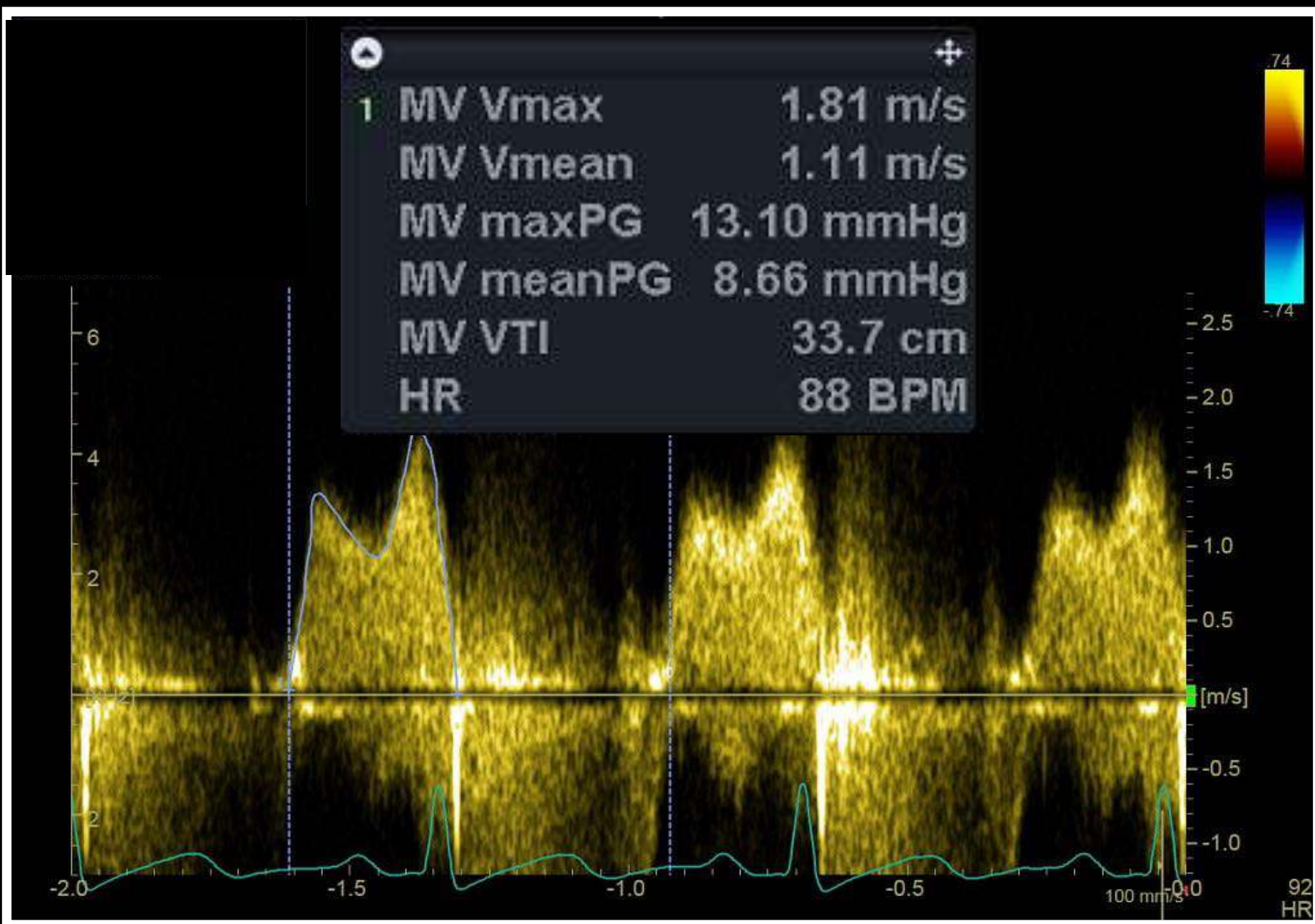


TIS0.4 MI 1.3

Case 2

NEPEAN
X5-1
50Hz
15cm

2D
63%
C 48
P Low
HGen



TISO.5 MI 0.8

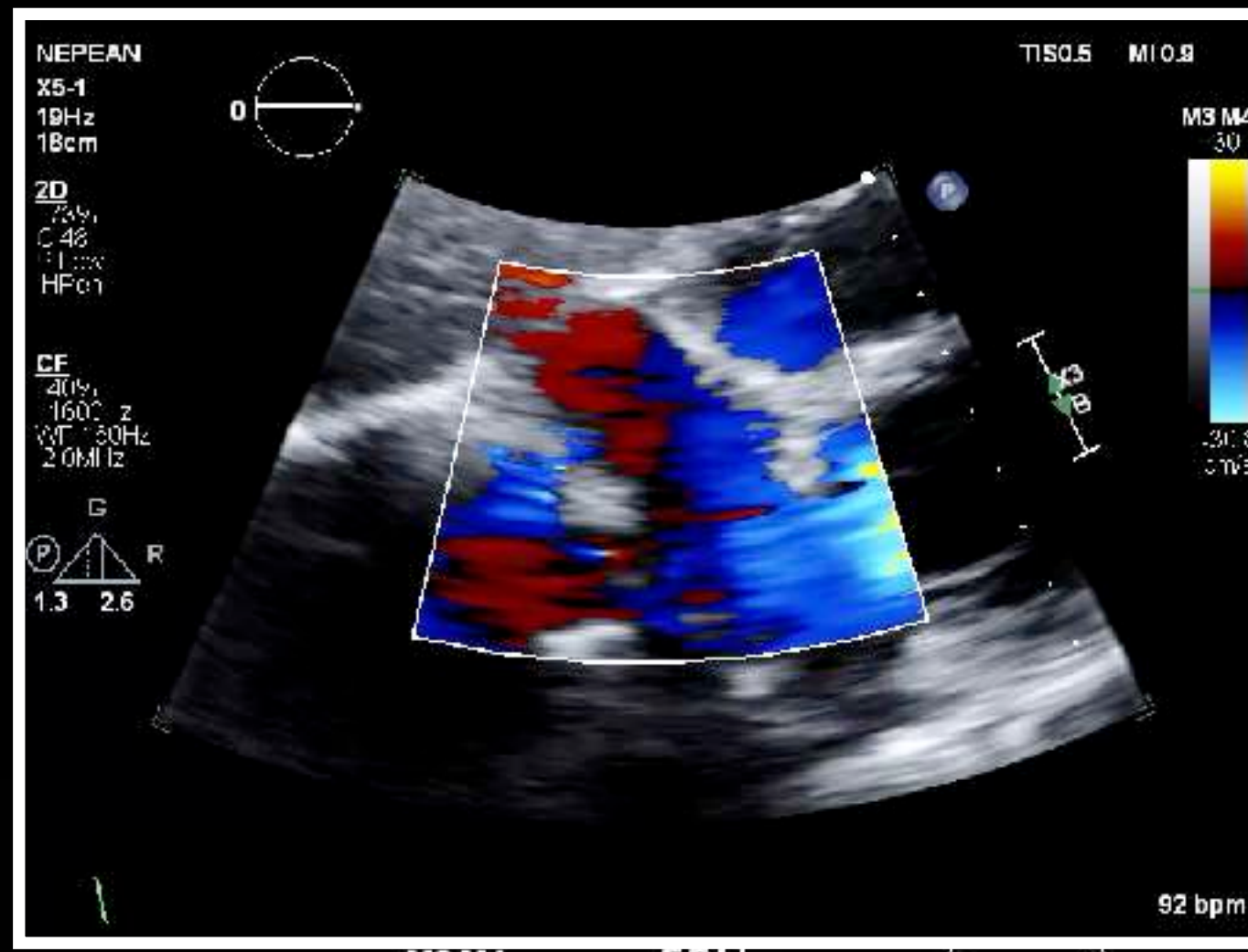
CF
20%
1600Hz
WF 160Hz
2.0MHz



95 bpm

98

Case 2



NEPEAN

X5-1
21Hz
14cm

2D
65%
C 48
P Low
HGen

CF

33%
3200Hz
WF 320Hz
2.0MHz

PW

18%
WF 150Hz
SV 3.0mm
1.6MHz
4.7cm



RVOT VTI

Vmax 90.8 cm/s
Vmean 57.4 cm/s
Max PG 3 mmHg
Mean PG 2 mmHg
VTI 13.5 cm

M3 M4
+61.6

50Hz
14cm

2D
57%
C 48
P Low
HPen

PW
38%
WF 150Hz
SV 3.0mm
1.6MHz
9.8cm

TIS 0.7 MI 0.7



LVOT VTI

Vmax 0.8 m/s
Vmean 57.8 cm/s
Max PG 3 mmHg
Mean PG 2 mmHg
VTI 12.9 cm

DSI 0.9
AV VR 0.84
AVA (VTI) 2.85 cm²
SV (LVOT) 41 ml
AVA (Vmax) 2.65 cm²
SV (LVOT) INDEX 27.2 ml/m²
AVA (VTI)/BSA 1.89

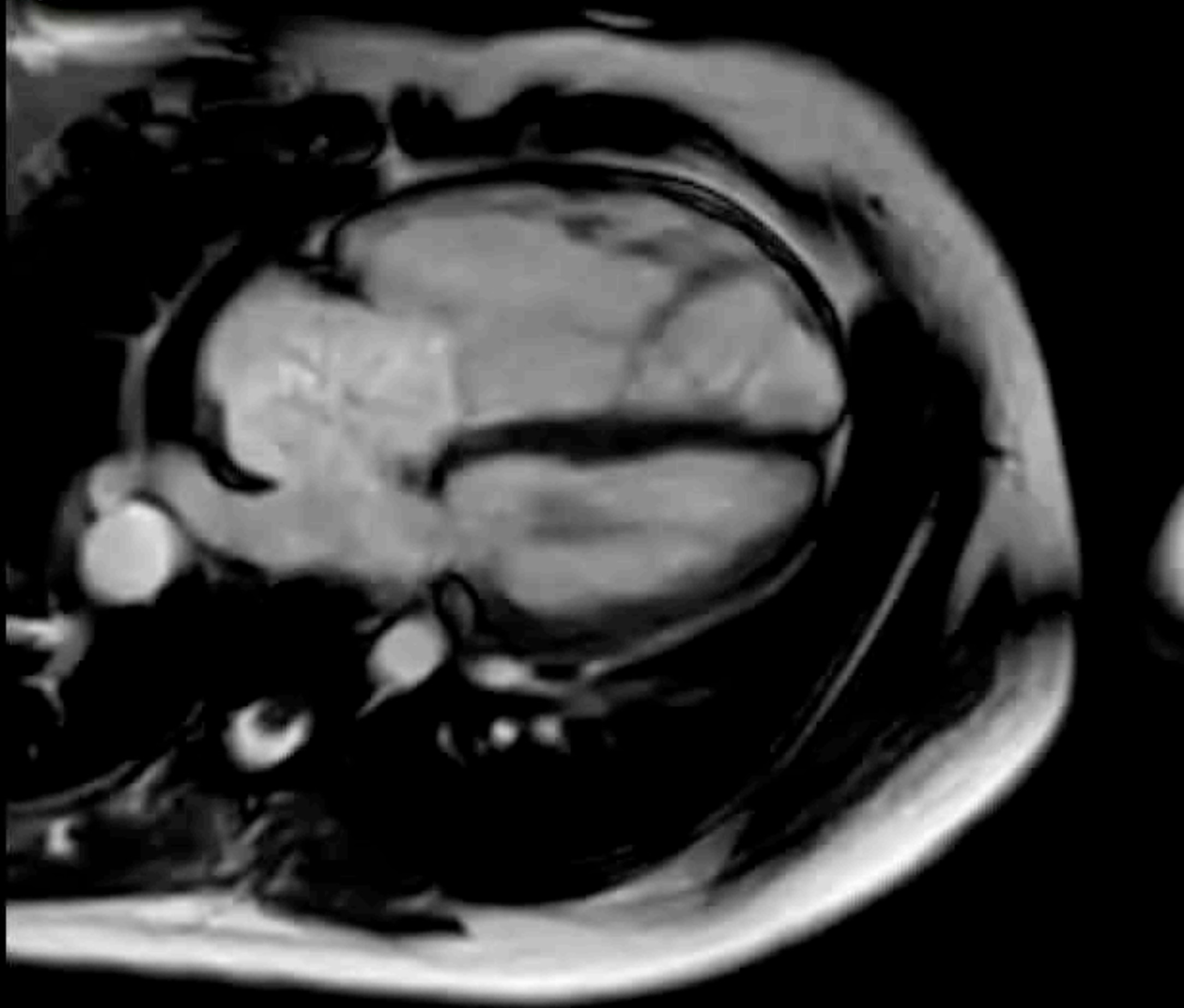
Impression = ASD with mitral stenosis
= Chronic conditions



Case 2

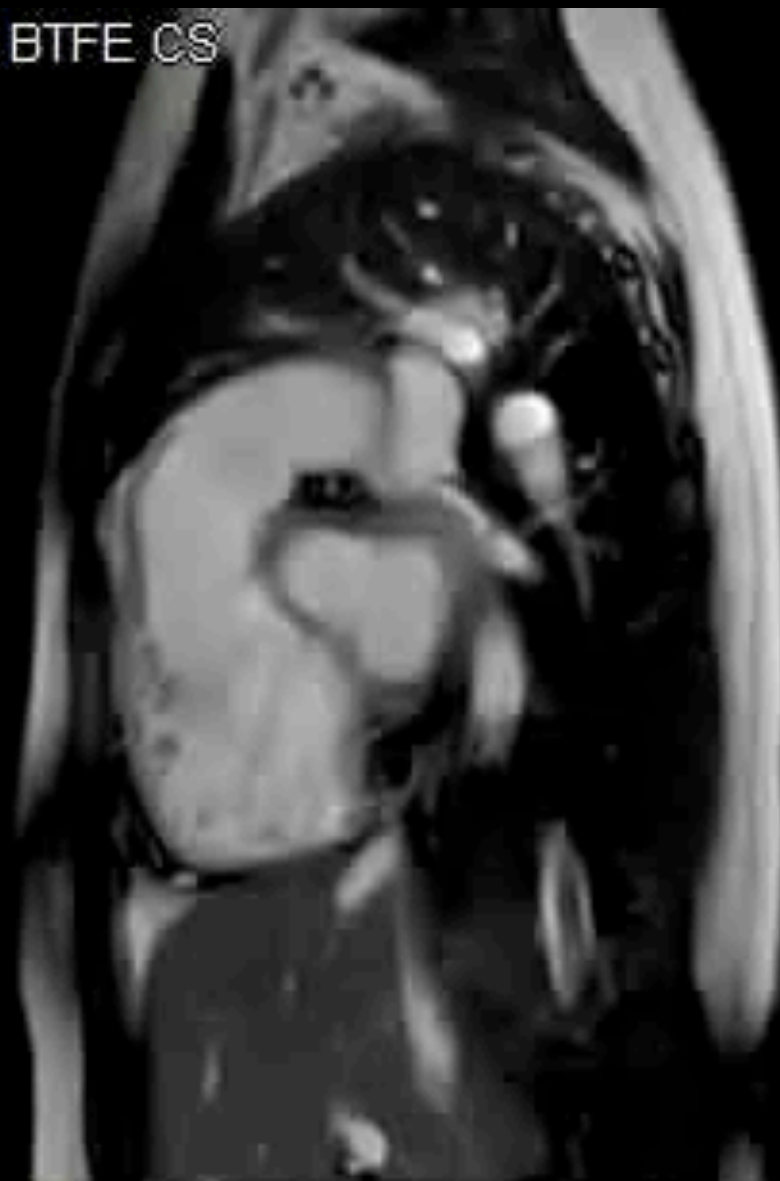
4Ch sBTFE_BH

s1p1



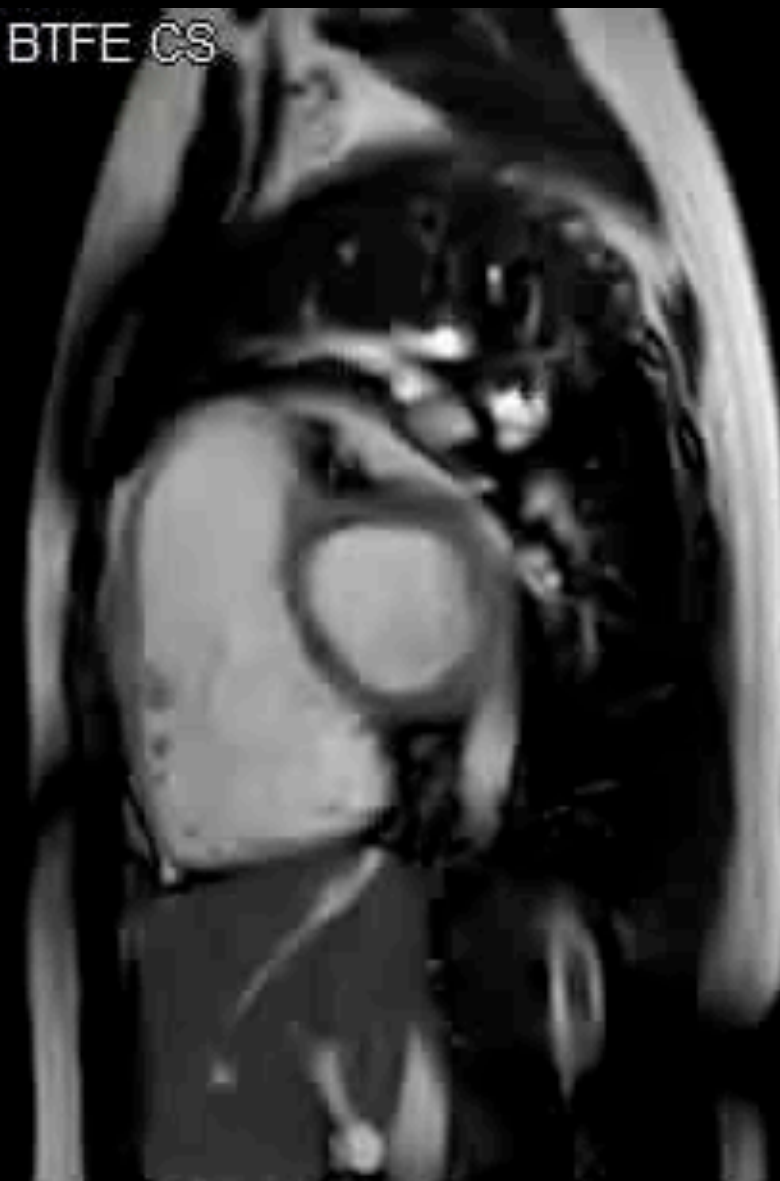
SA Stack BTFE_CS

s10p1



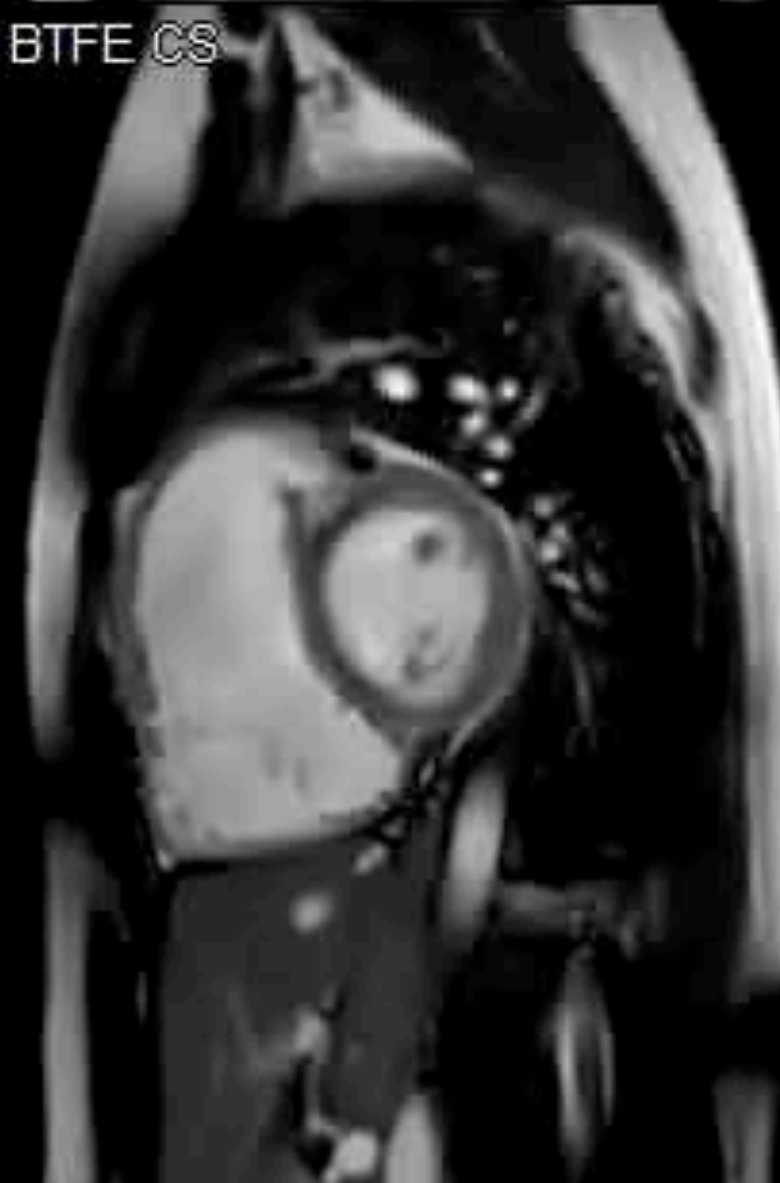
SA Stack BTFE_CS

s9p1



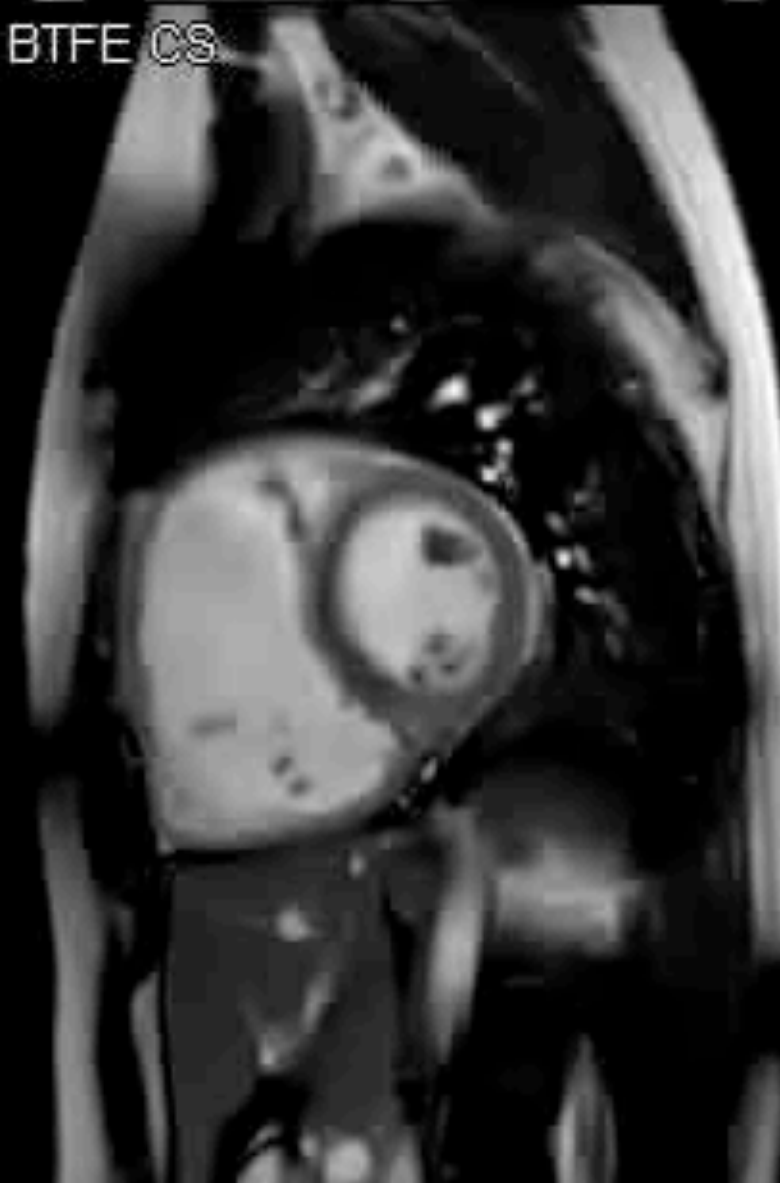
SA Stack BTFE_CS

s8p1

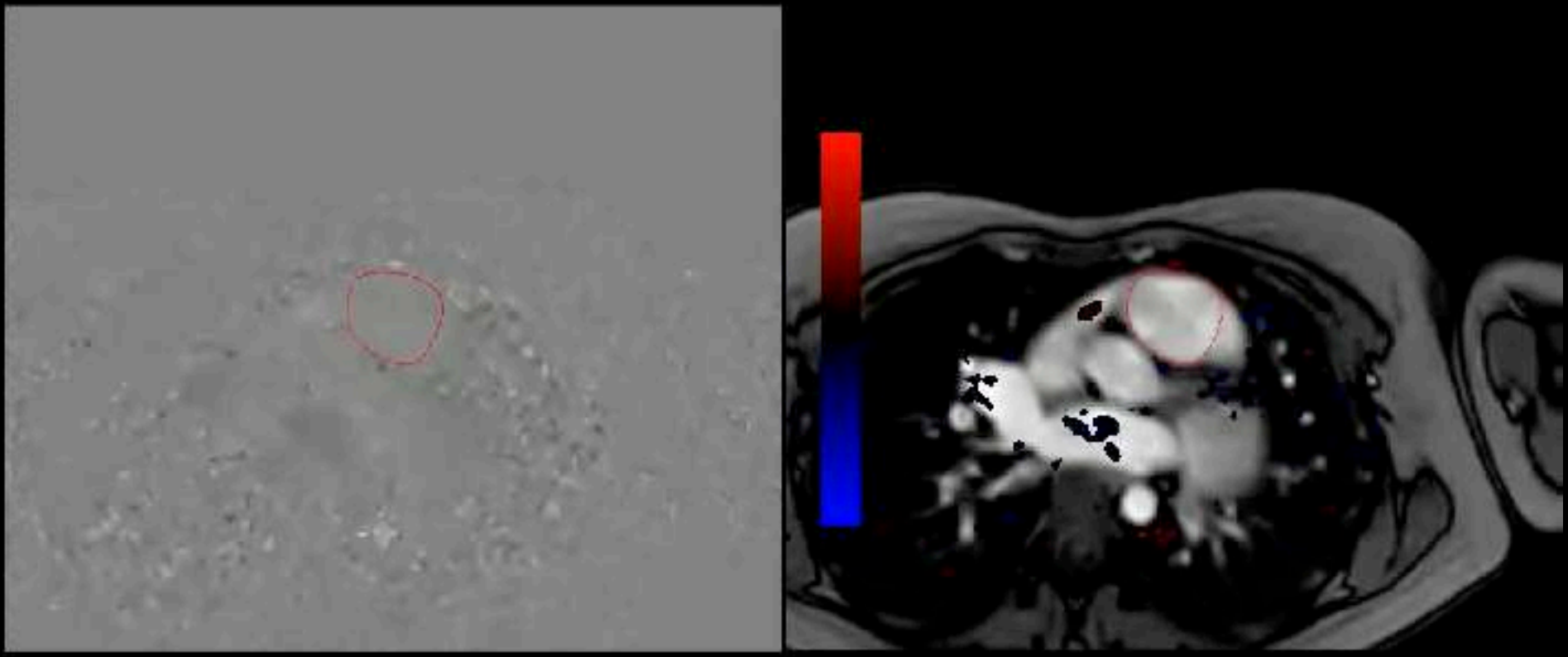


SA Stack BTFE_CS

s7p1

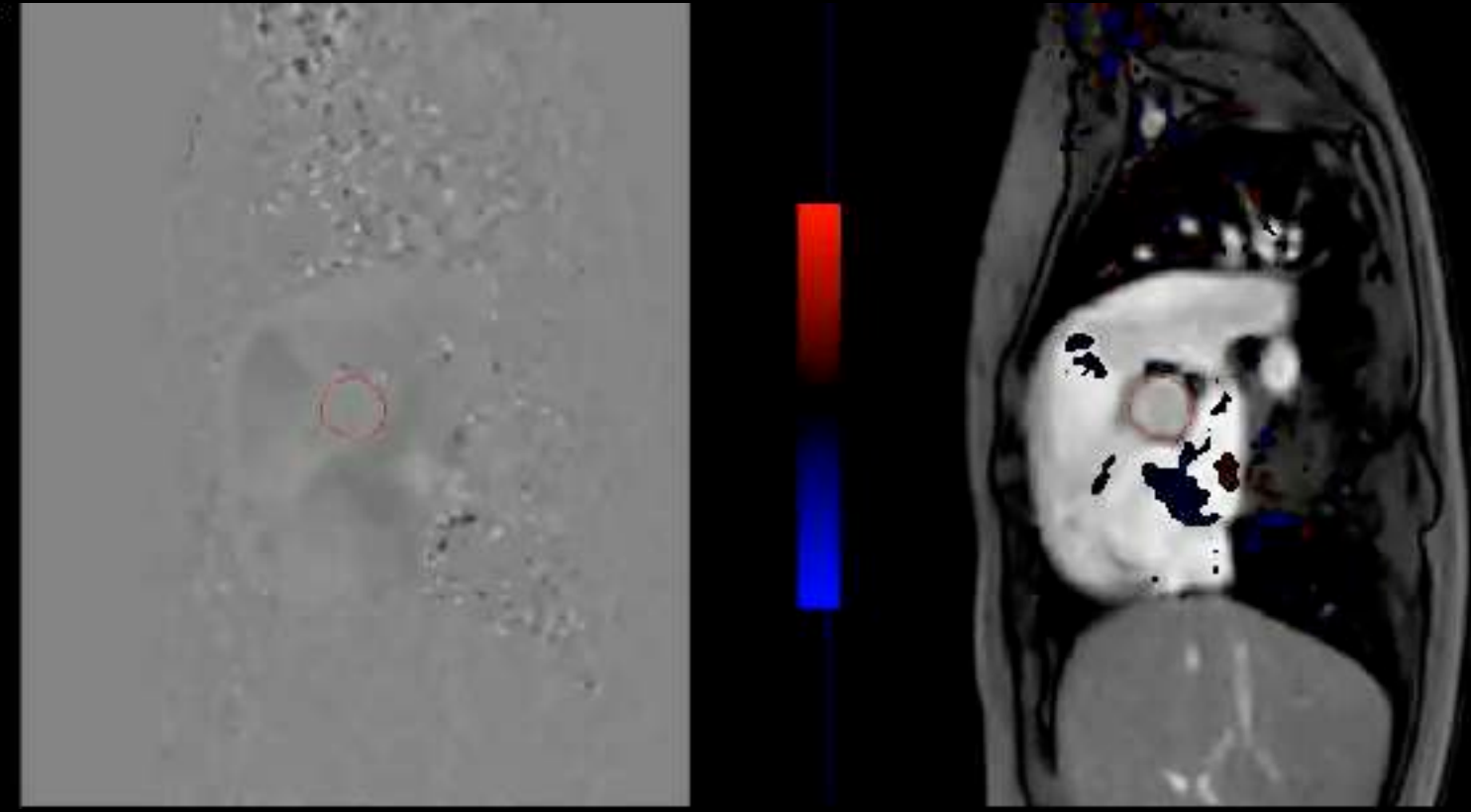


Case 2

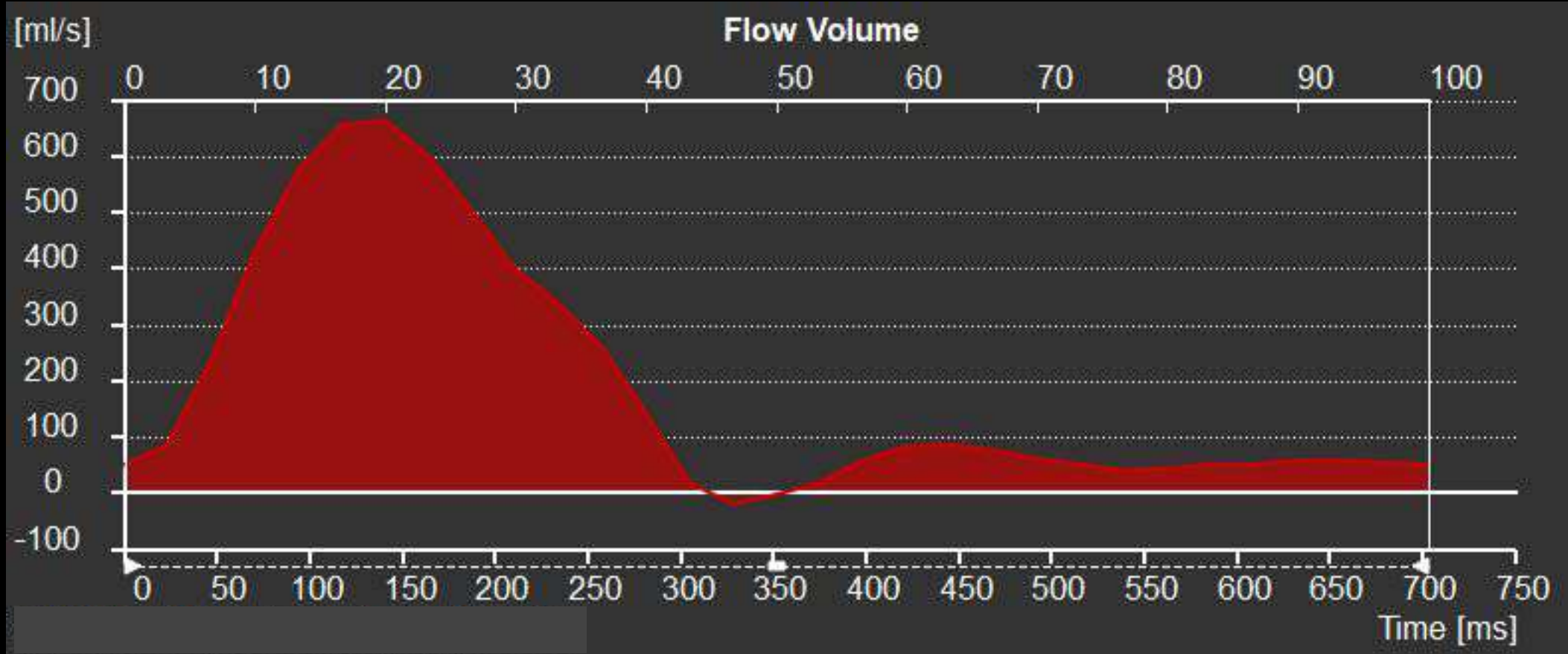


Qp

3:1

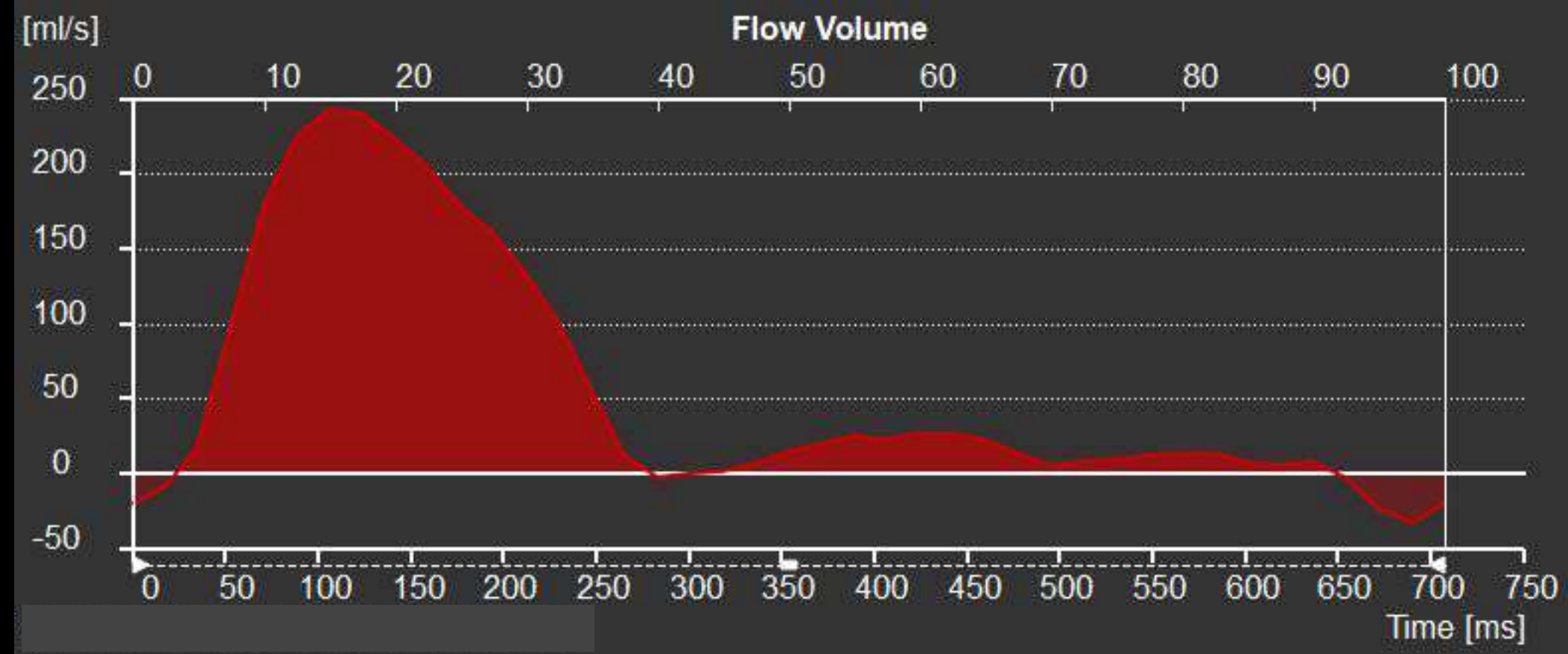


Qs



ROI 1: 133.99 ml (11.52 l/min)
Forward flow volume: 134.43 ml 11.56 l/min
 Backward flow volume: 0.44 ml 0.04 l/min
 Regurgitant fraction: 0 %

Selected interval (S.I): 133.99 ml (11.52 l/min)
 Forward flow volume (S.I): 134.43 ml 11.56 l/min
 Backward flow volume (S.I): 0.44 ml 0.04 l/min
 Regurgitant fraction (S.I): 0 %



ROI 1: 39.41 ml (3.35 l/min)
Forward flow volume: 41.02 ml 3.49 l/min
 Backward flow volume: 1.61 ml 0.14 l/min
 Regurgitant fraction: 4 %

Selected interval (S.I): 39.41 ml (3.35 l/min)
 Forward flow volume (S.I): 41.02 ml 3.49 l/min
 Backward flow volume (S.I): 1.61 ml 0.14 l/min
 Regurgitant fraction (S.I): 4 %

ASD & mitral stenosis

- **Risks** = bad mix MS (\Rightarrow PAH) + ASD; arrhythmias
- **Management** (MDT) = keep SR, diuresis, steroids, bed rest
 - Risk pre-eclampsia and small baby
 - Try to get to 34 weeks gestation (??)
 - Prophylactic anticoagulation / avoid DVT
 - ??Urgent CS / PHT worsens / monitor with echo
 - ASD closure post delivery / recovery



Case 3

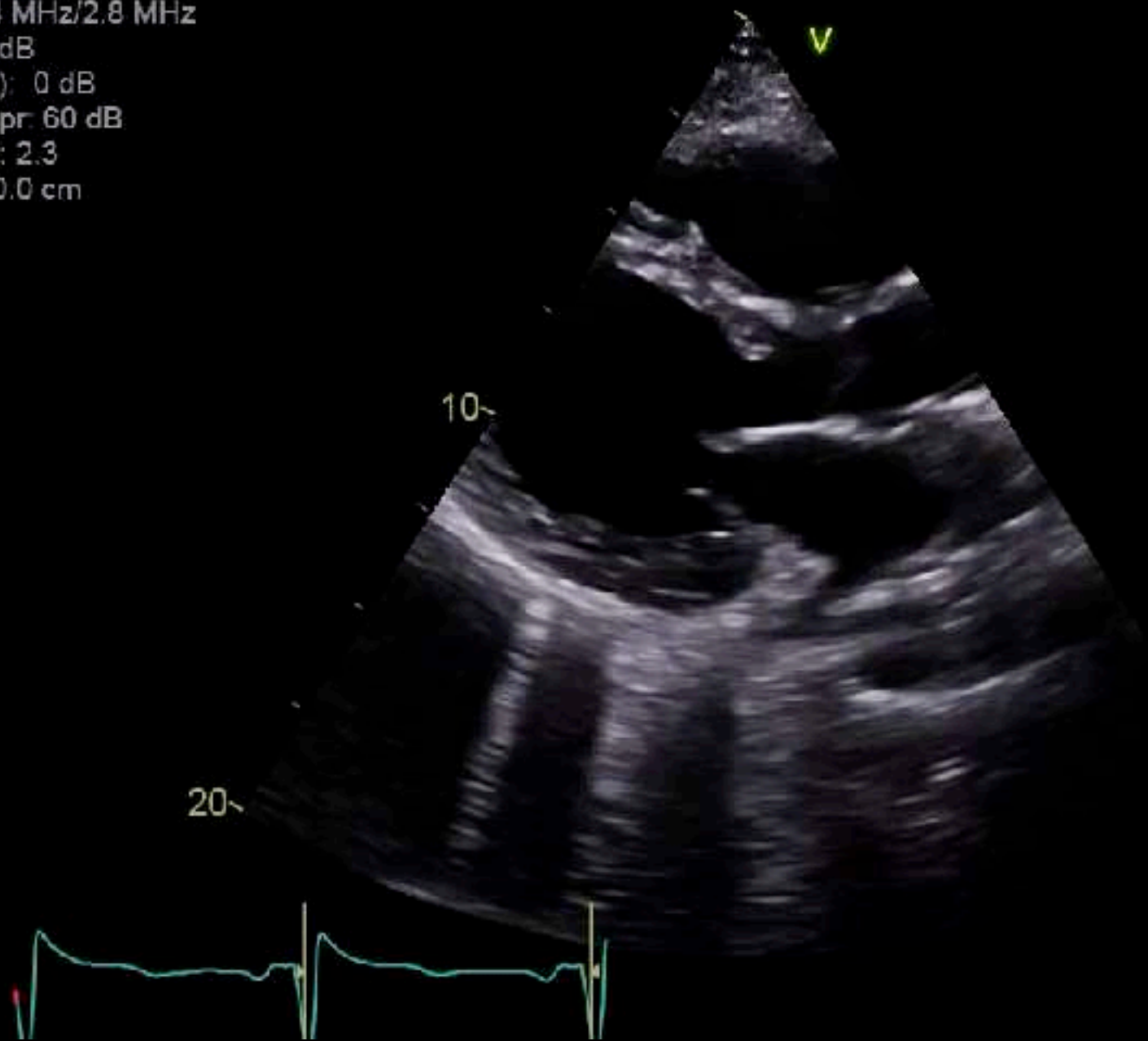
36yo G6P5

Nausea, dizzy, GCS drop on mobilising = MET call
ECG T wave inversion laterally; Trop 759

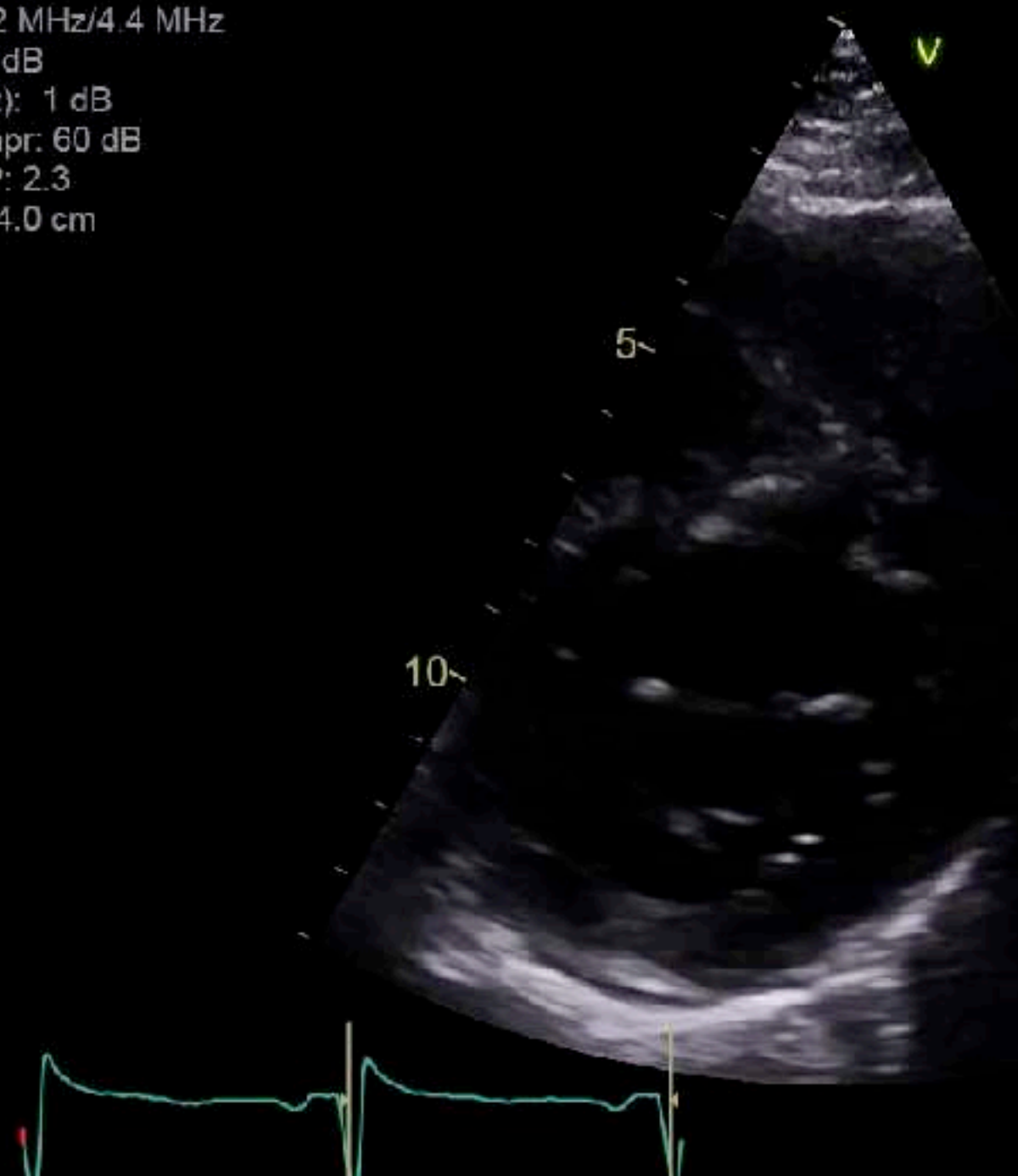
PMH = lots of babies

Imp = NSTEMI

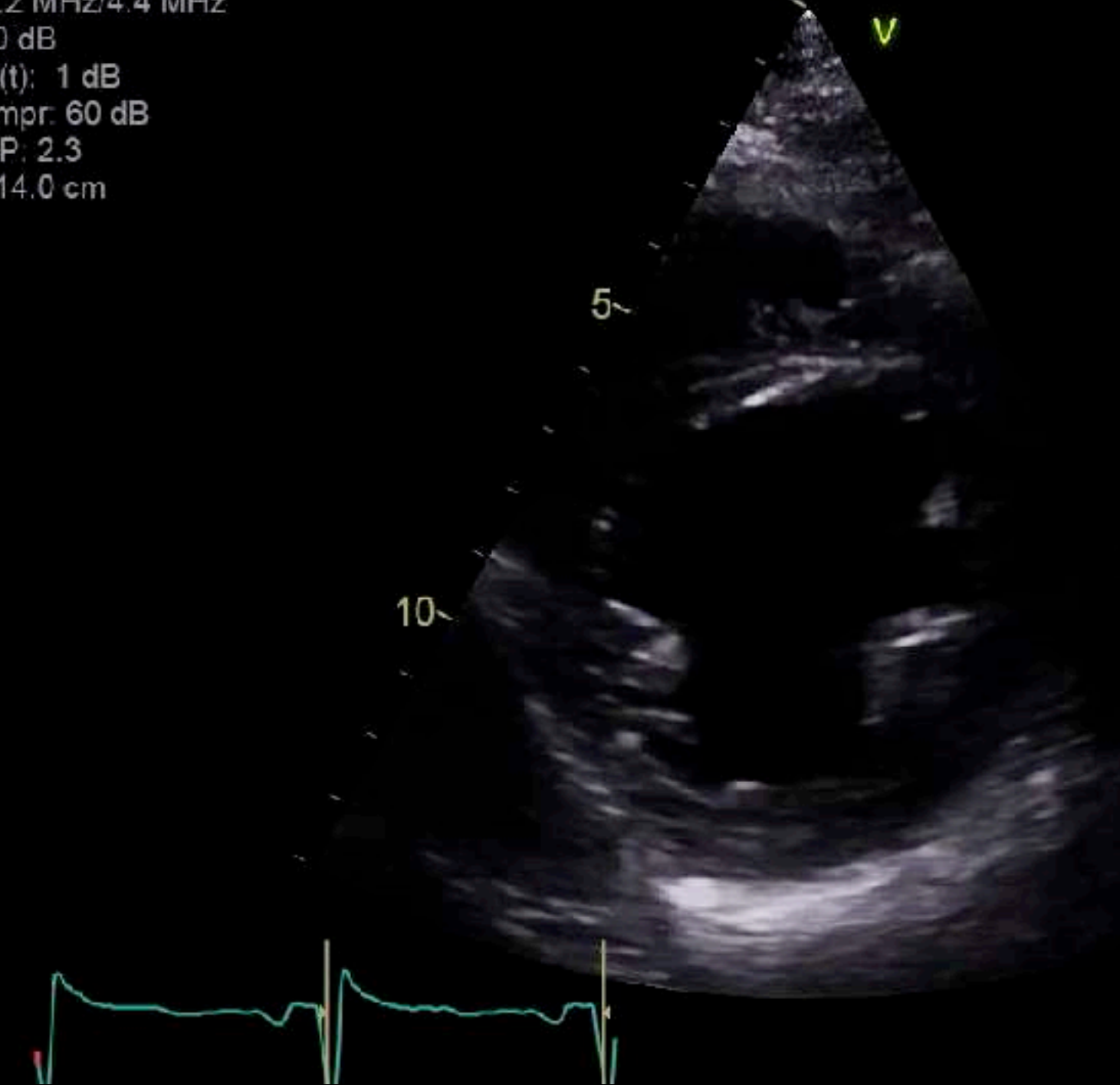
ACE
FPS: 60
f: 1.4 MHz/2.8 MHz
P: 0 dB
AG(t): 0 dB
Compr: 60 dB
DDP: 2.3
D: 20.0 cm



ACE
FPS: 65/
f: 2.2 MHz/4.4 MHz
P: 0 dB
AG(t): 1 dB
Compr: 60 dB
DDP: 2.3
D: 14.0 cm



ACE
FPS: 65/
f: 2.2 MHz/4.4 MHz
P: 0 dB
AG(t): 1 dB
Compr: 60 dB
DDP: 2.3
D: 14.0 cm

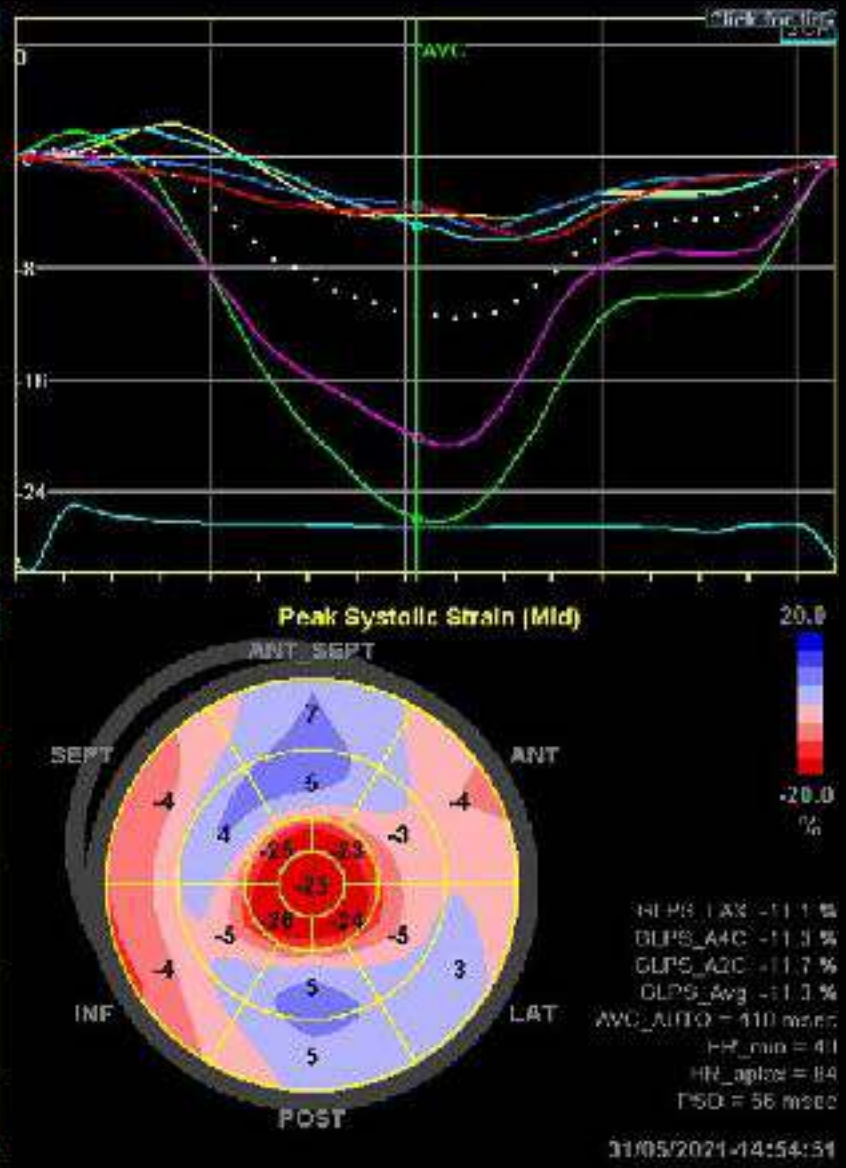
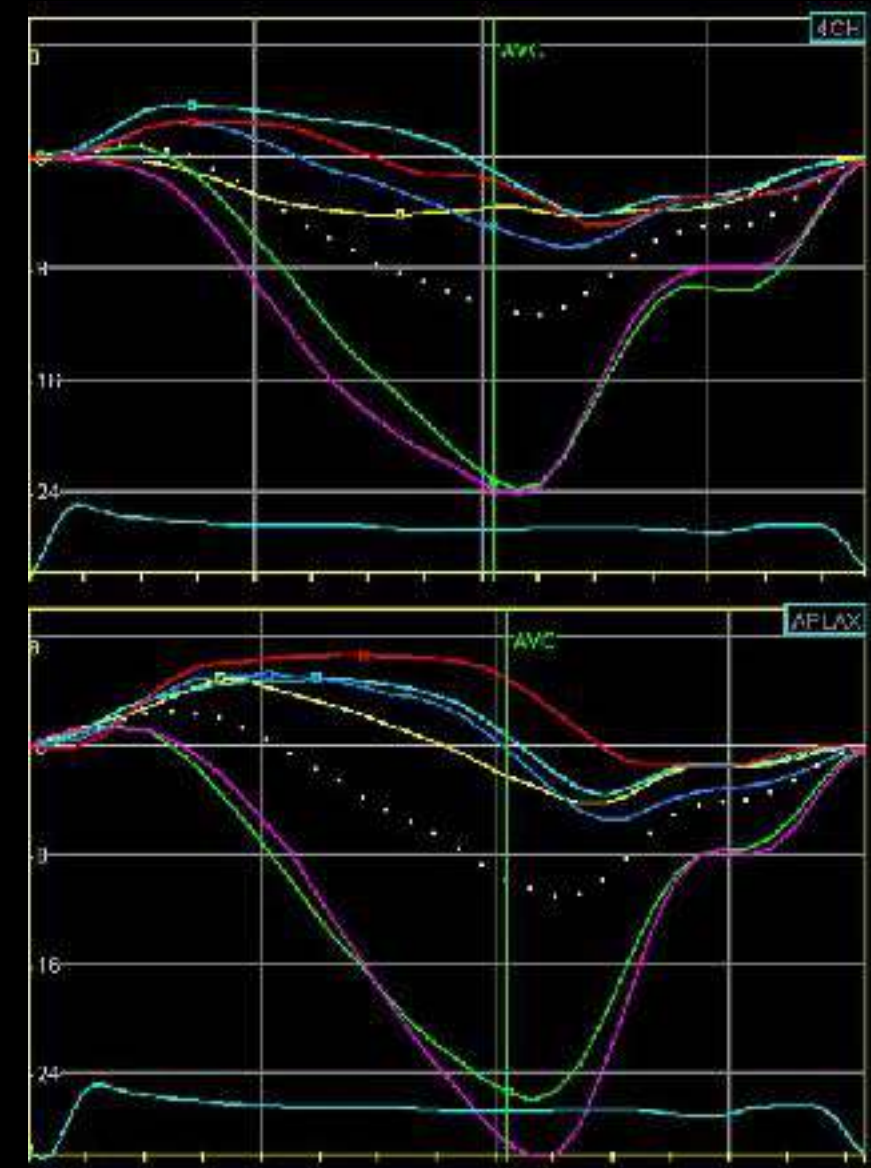
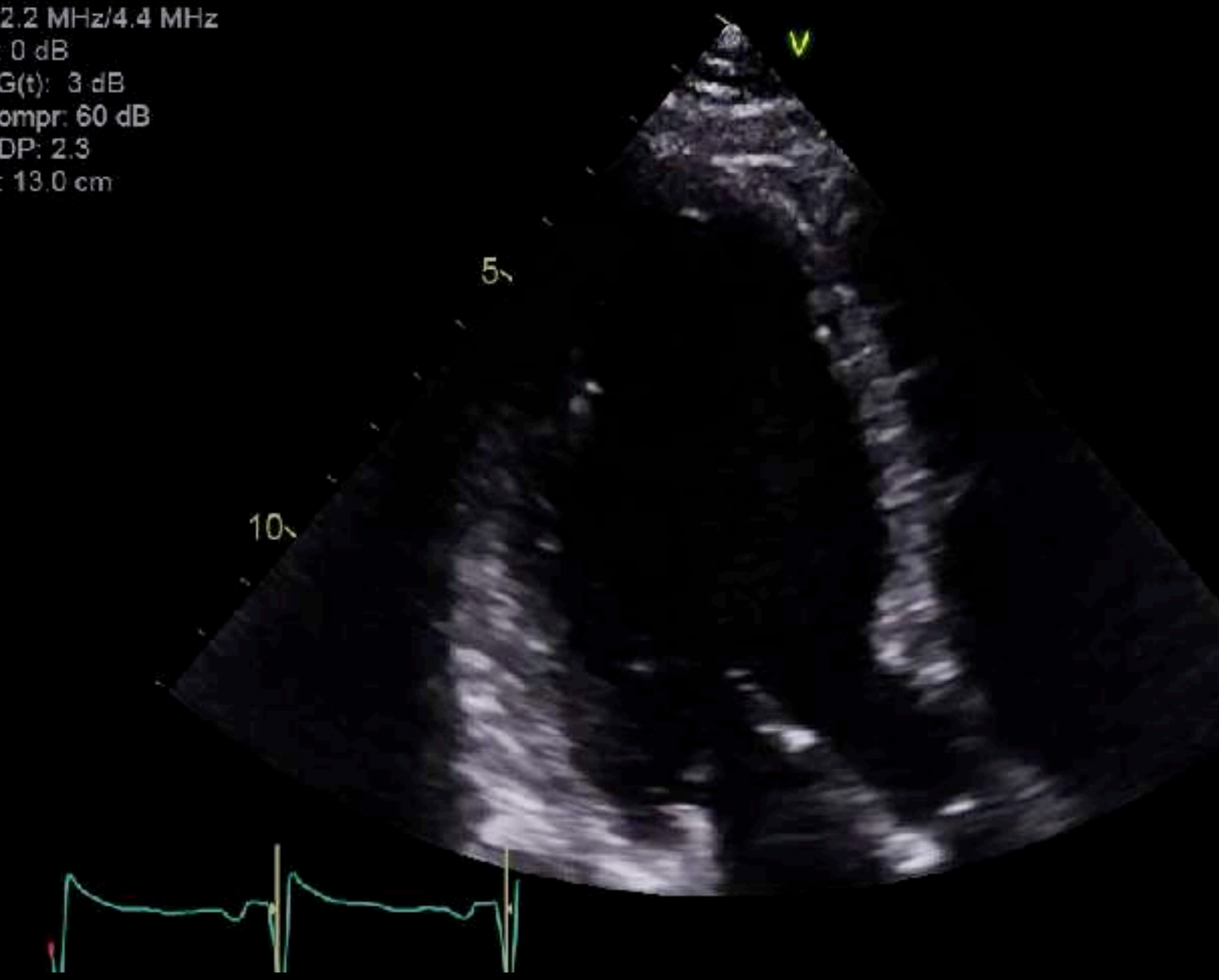
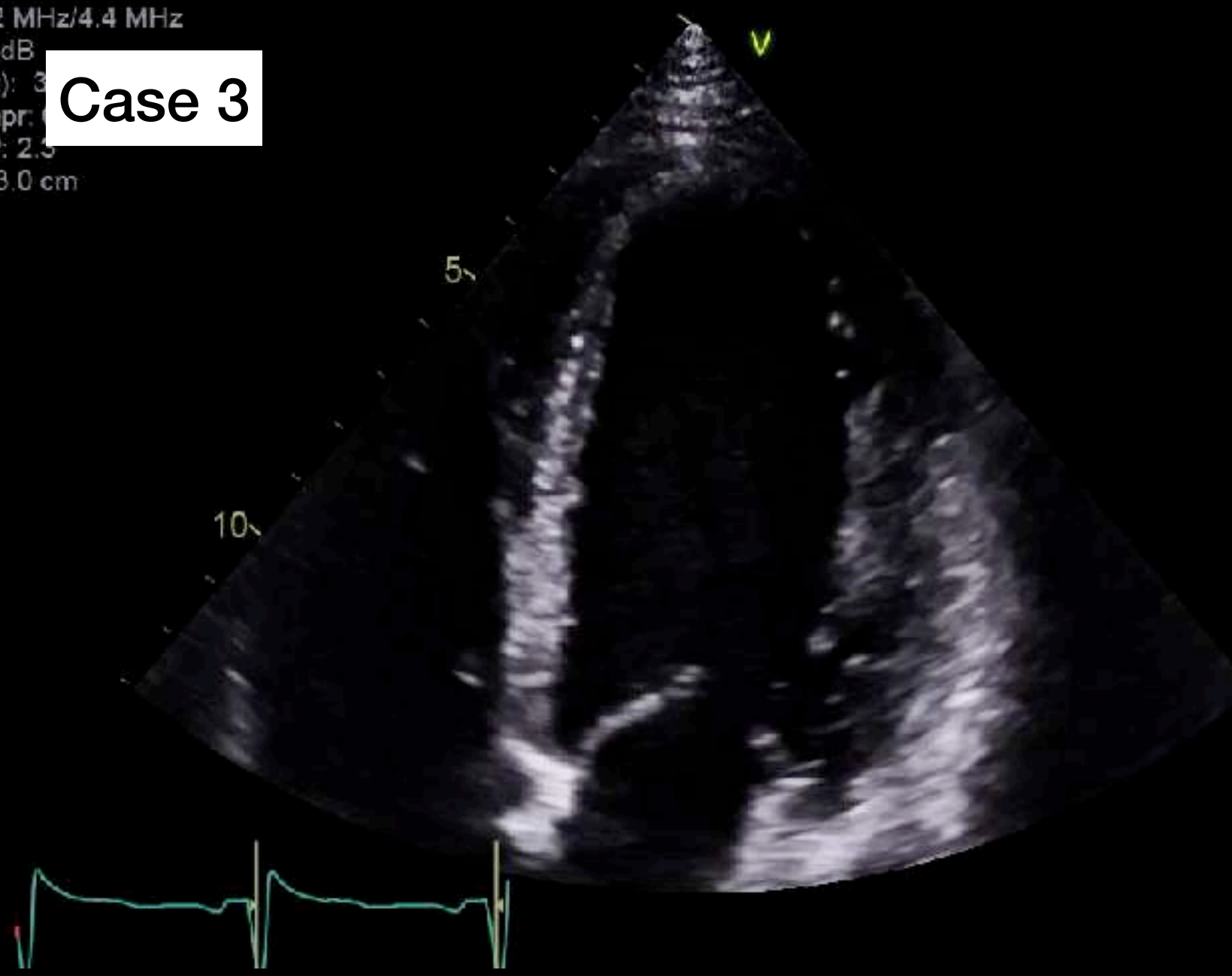


FPS: 49/
f: 2.2 MHz/4.4 MHz
P: 0 dB
AG(t): 3 dB
Compr: 60 dB
DDP: 2.3
D: 13.0 cm

Case 3

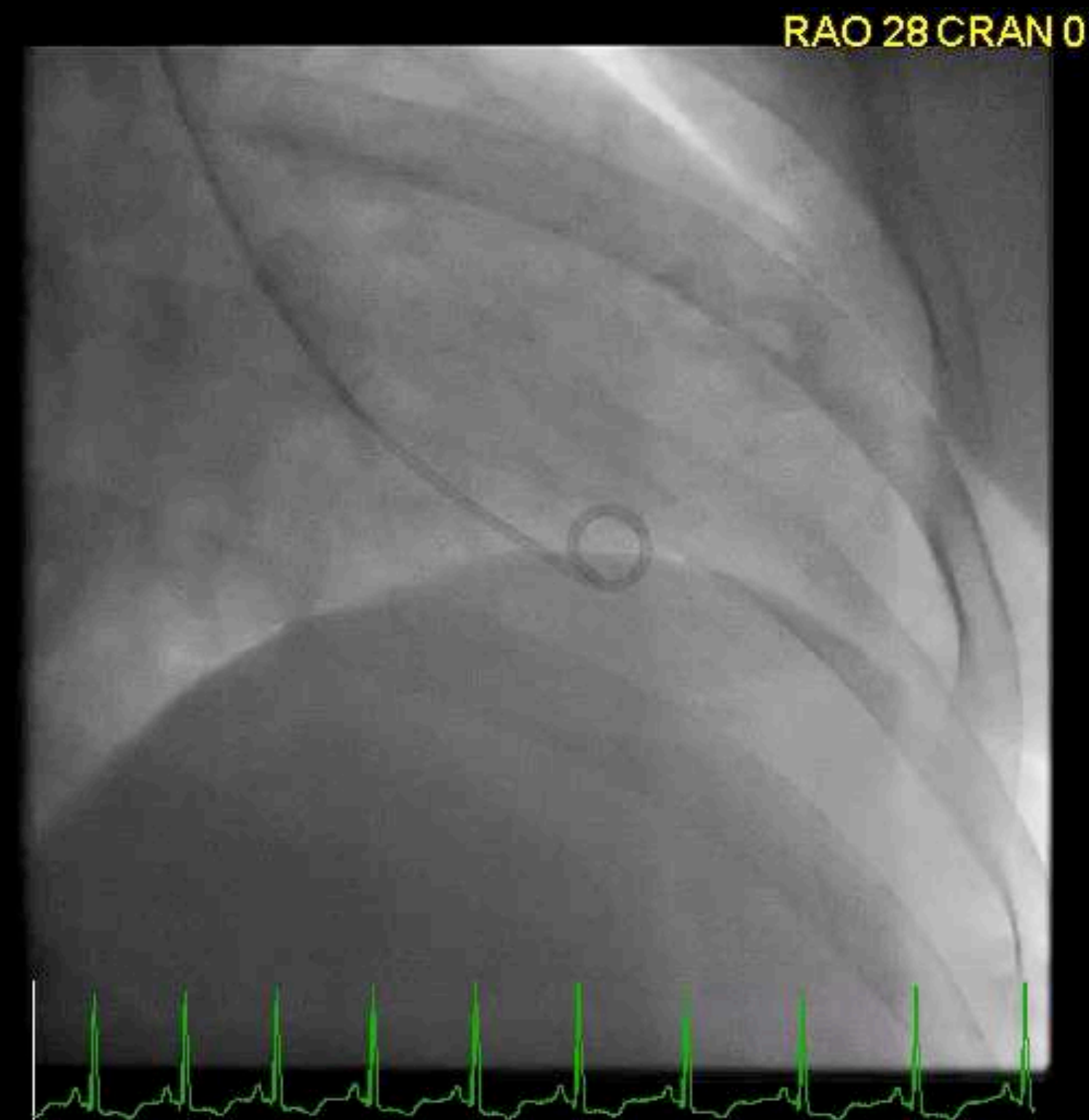
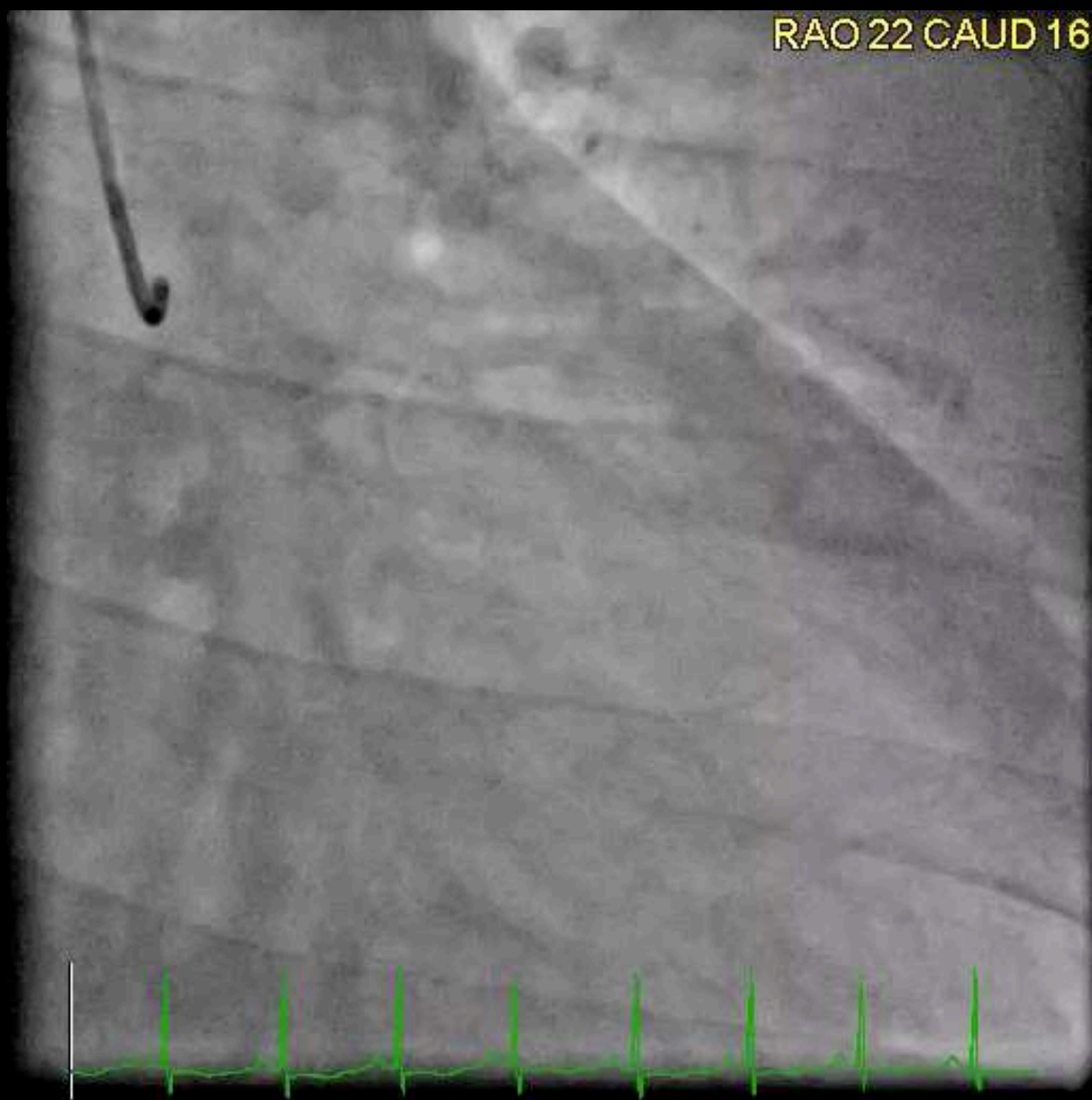
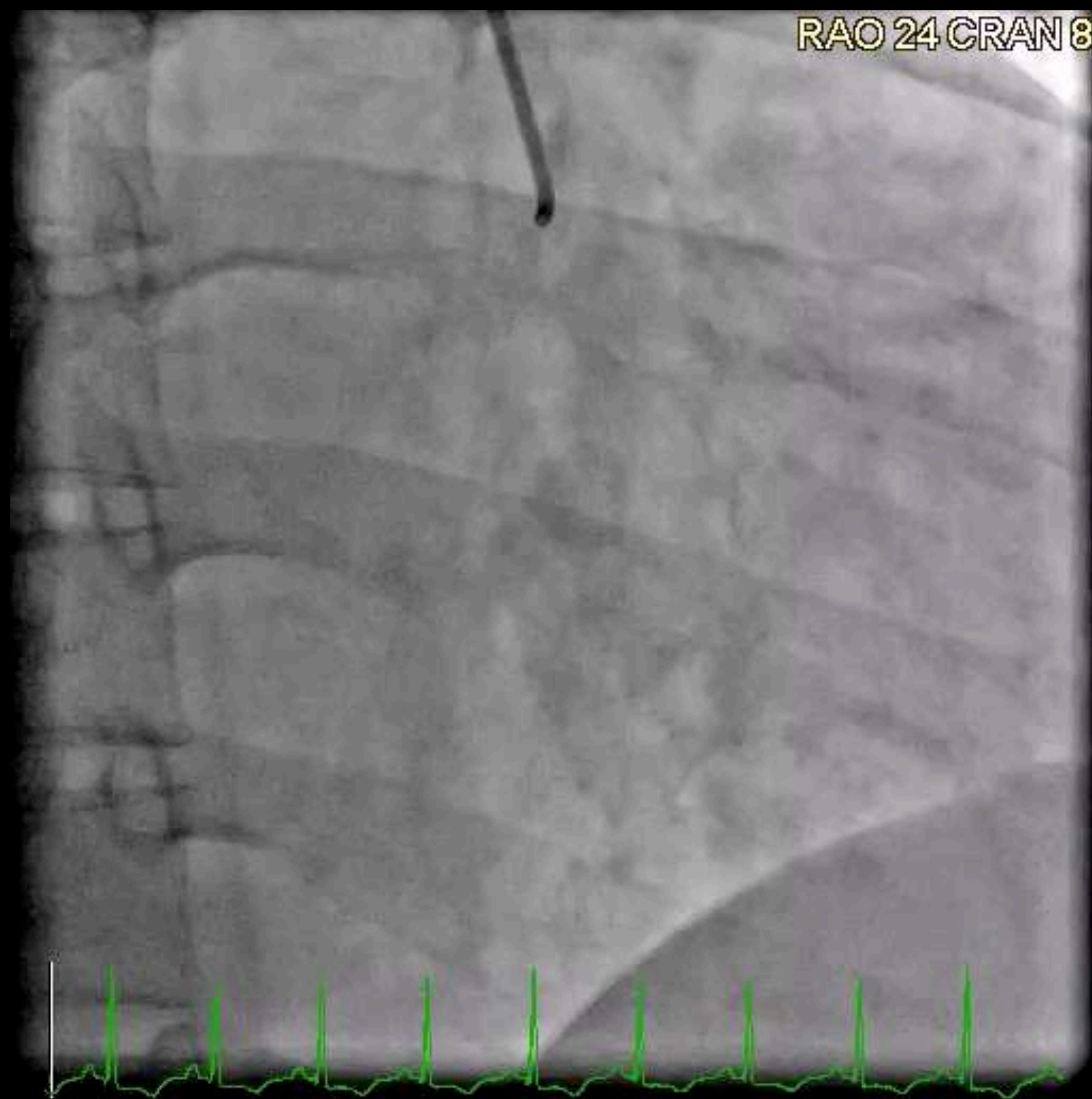
ACE
FPS: 49/
f: 2.2 MHz/4.4 MHz
P: 0 dB
AG(t): 3 dB
Compr: 60 dB
DDP: 2.3
D: 13.0 cm

ACE
FPS: 49/
f: 2.2 MHz/4.4 MHz
P: 0 dB
AG(t): 3 dB
Compr: 60 dB
DDP: 2.3
D: 13.0 cm



Case 3

Angio = normal coronaries



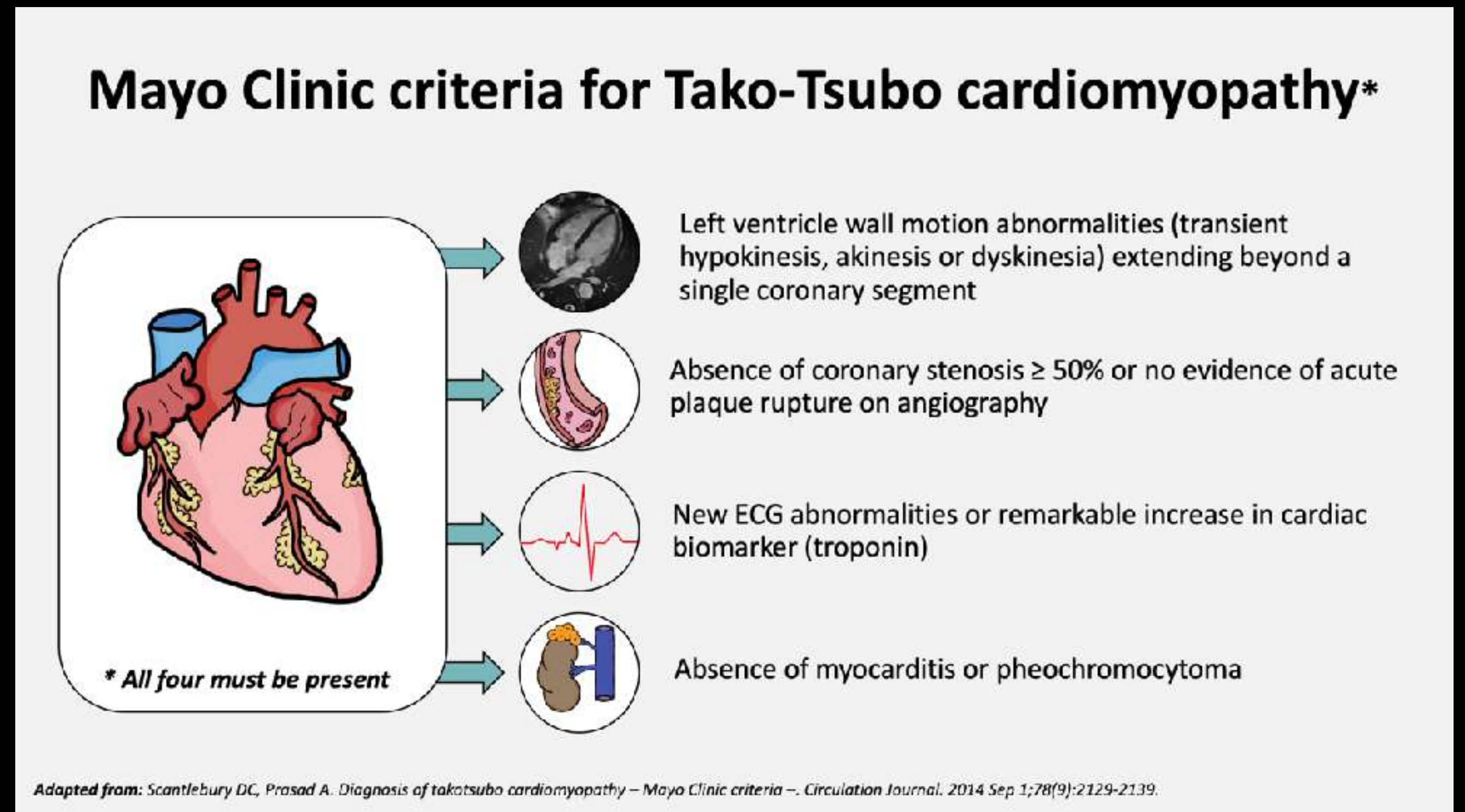
Impression = Takotsubo cardiomyopathy

? Reverse Takotsubo / mid-ventricle variant / early recovery?



Takotsubo Cardiomyopathy

- Long term MACE similar to ACS
- Prognosis worse with:
 - Physical triggers
 - Severe LV dysfunction
 - Cardiogenic shock
 - Delayed recovery
- Management = supportive.
- FU needed



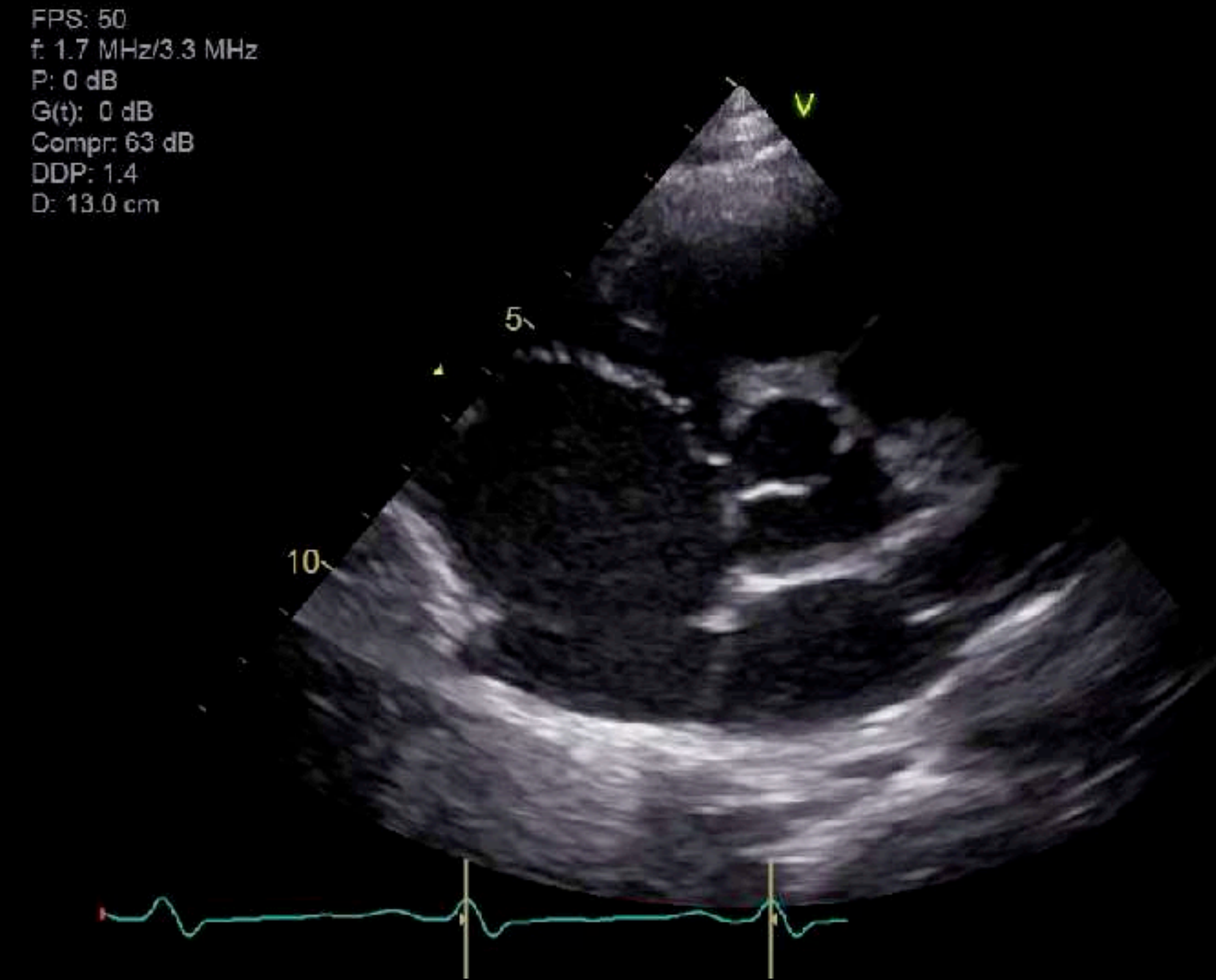
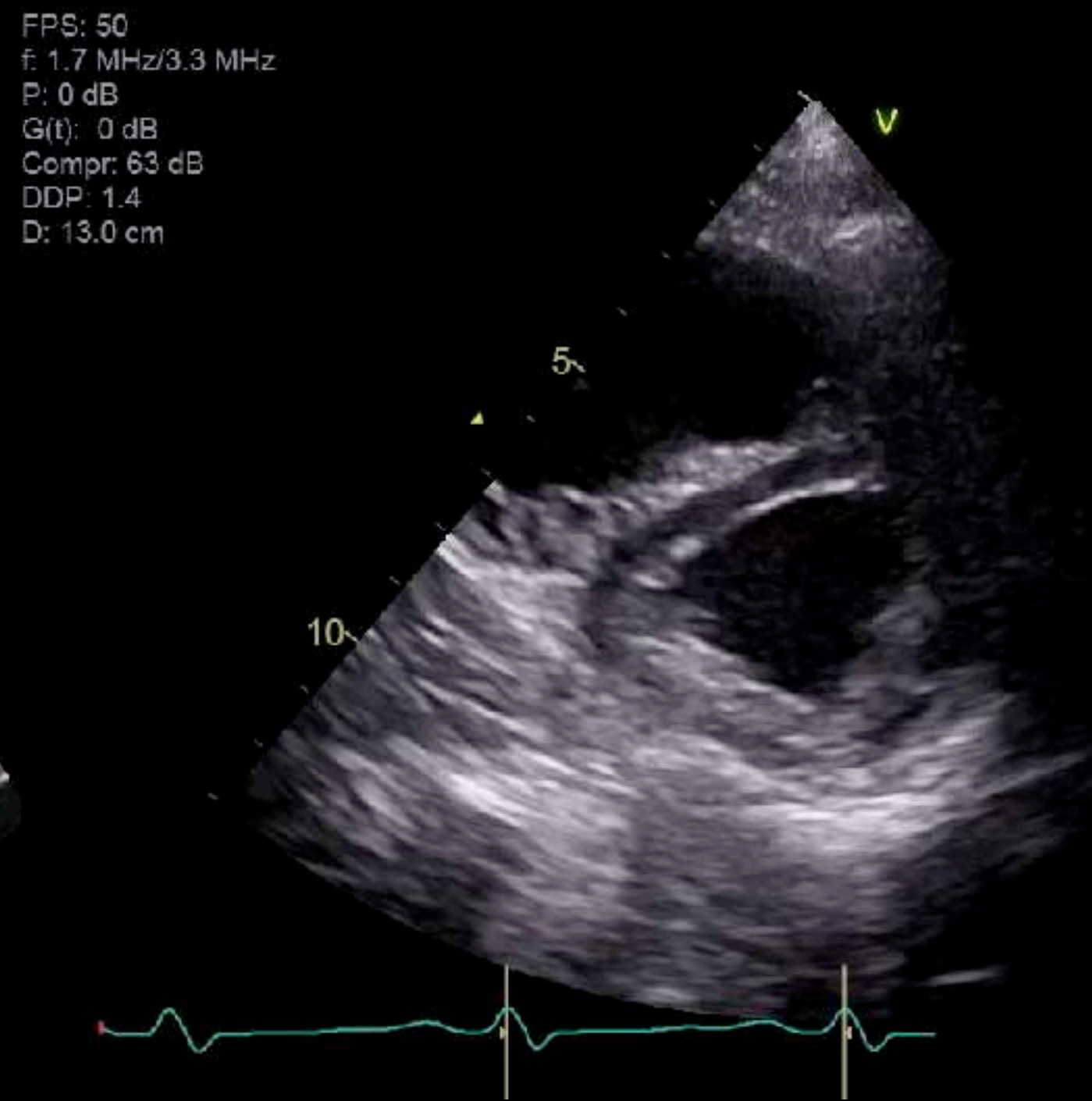
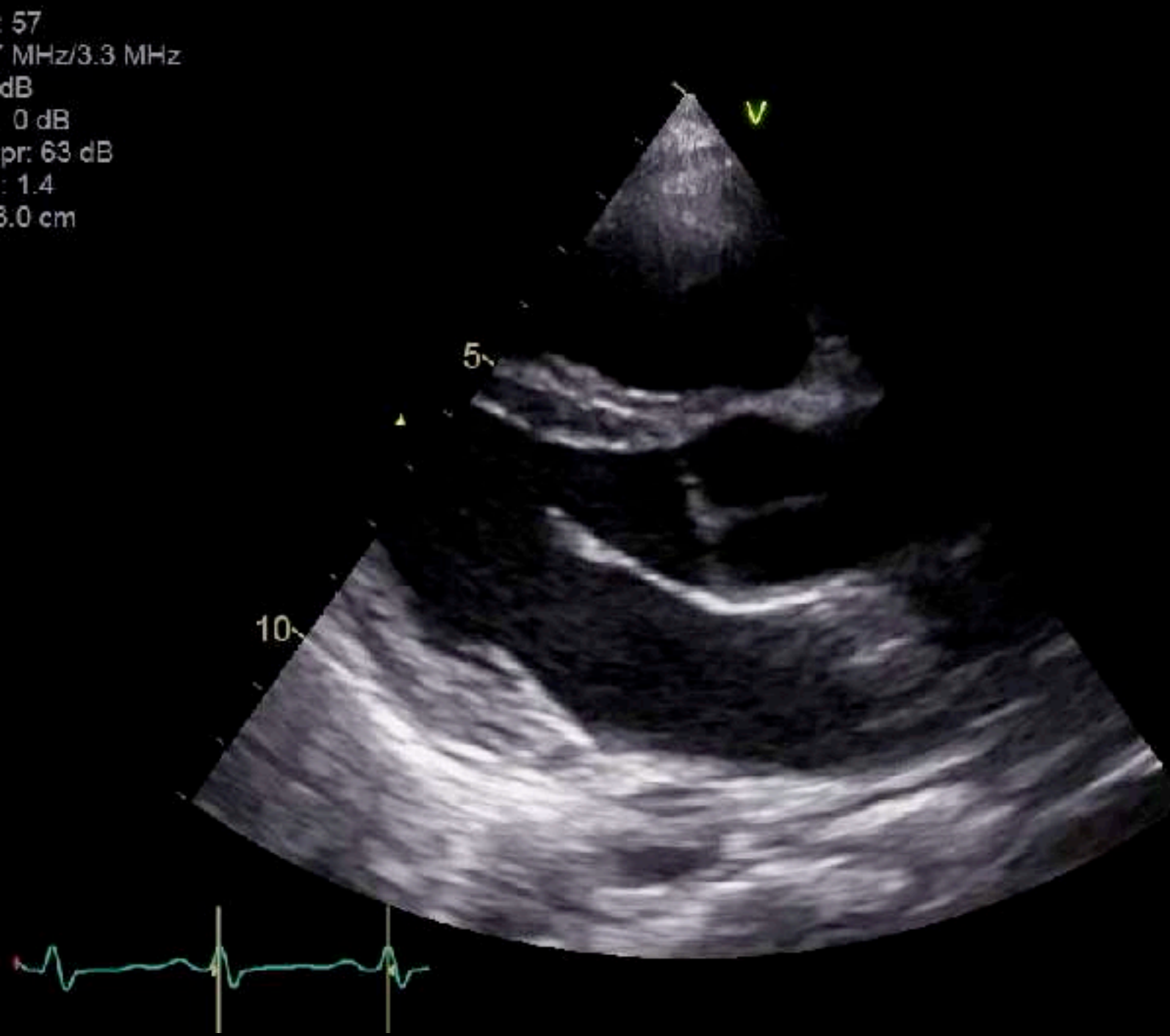
Uribarri et al (2019) = Short and long term prognosis with Takosubo CMP; JAHA
Vassiliki et al (2020) = Long term injury after Takotsubo syndrome; EHJ

Case 4

30yo G4P1 25/40

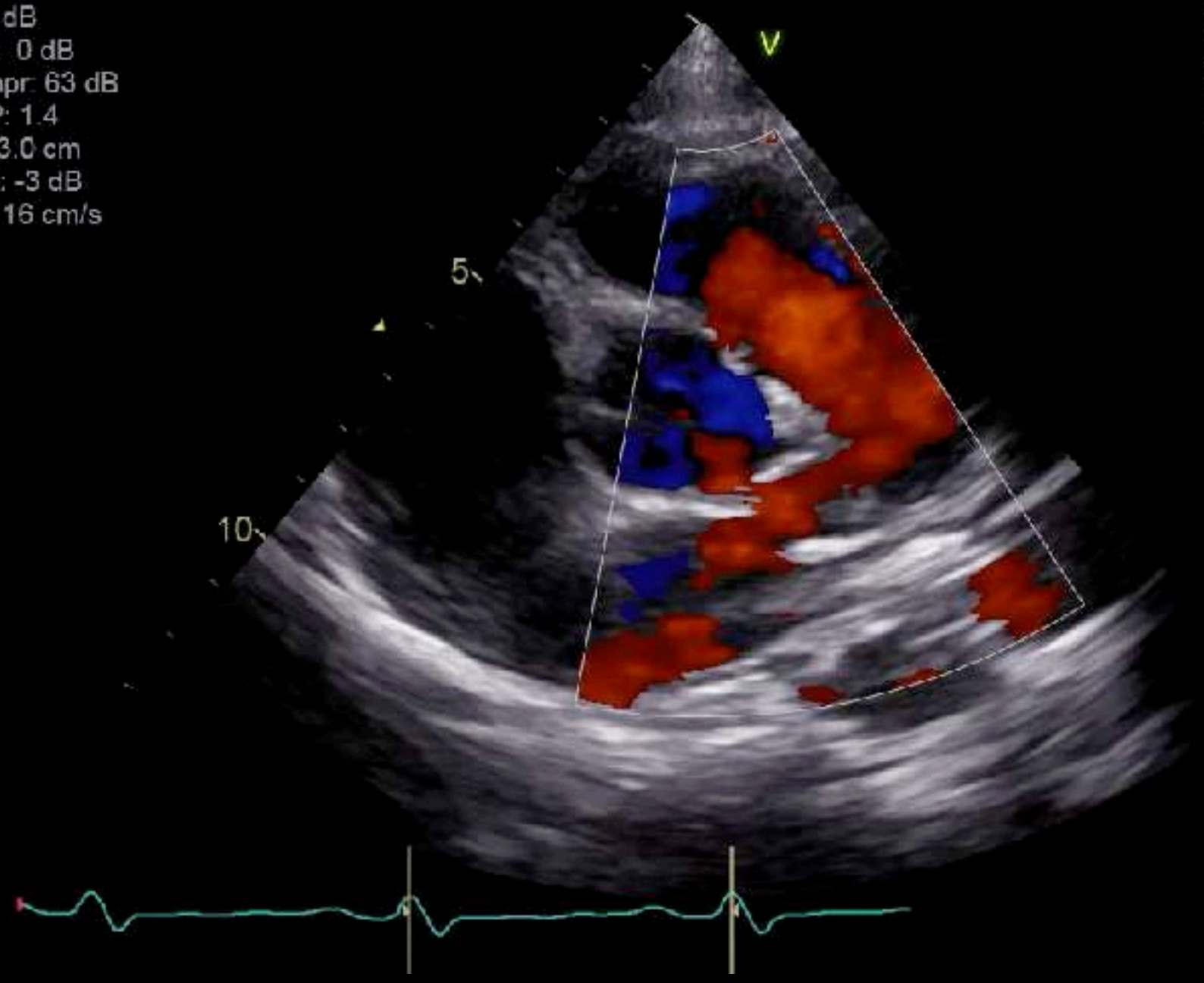
PMH: Hashimoto's disease, asthma

- SOB for 2 weeks, 20m exercise tolerance
- Worsening. No chest pain.
- Peripheral oedema
- Sats 92% on room air OA to ED

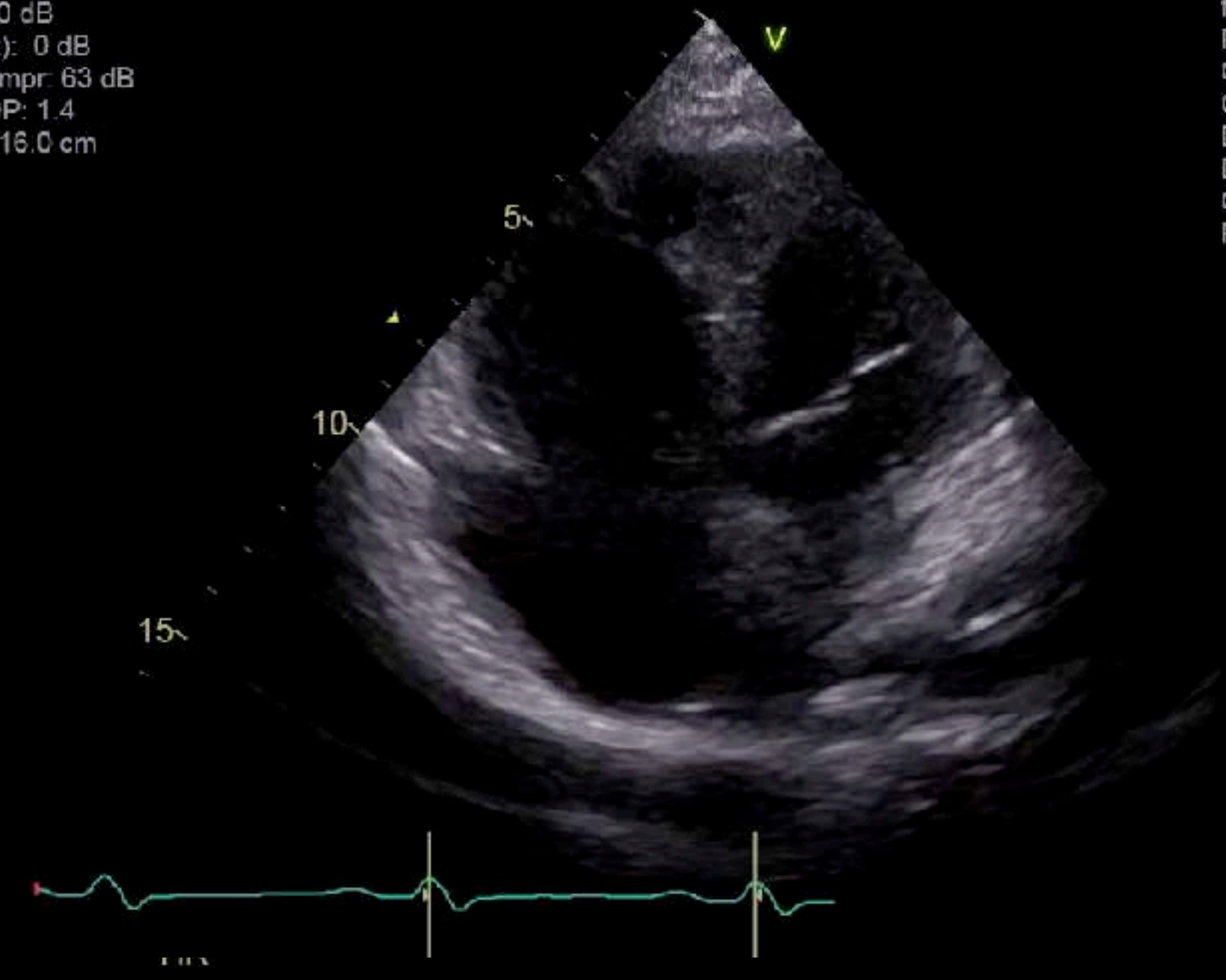


Case 4

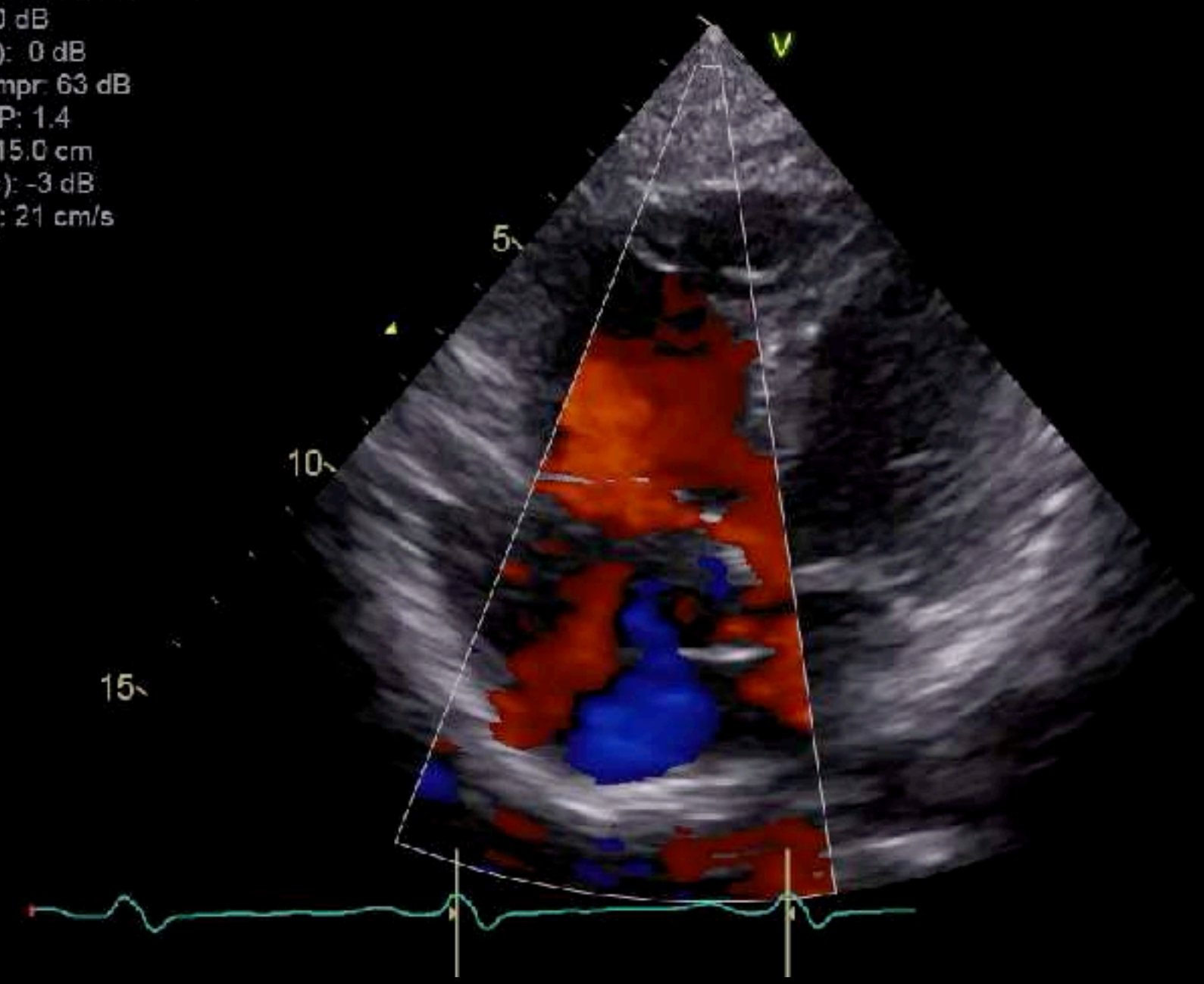
FPS: 14/14
f: 2.5 MHz/2.5 MHz
P: 0 dB
G(t): 0 dB
Compr: 63 dB
DDP: 1.4
D: 13.0 cm
G(c): -3 dB
Rej: 16 cm/s



FPS: 60
f: 1.5 MHz/3.0 MHz
P: 0 dB
G(t): 0 dB
Compr: 63 dB
DDP: 1.4
D: 16.0 cm

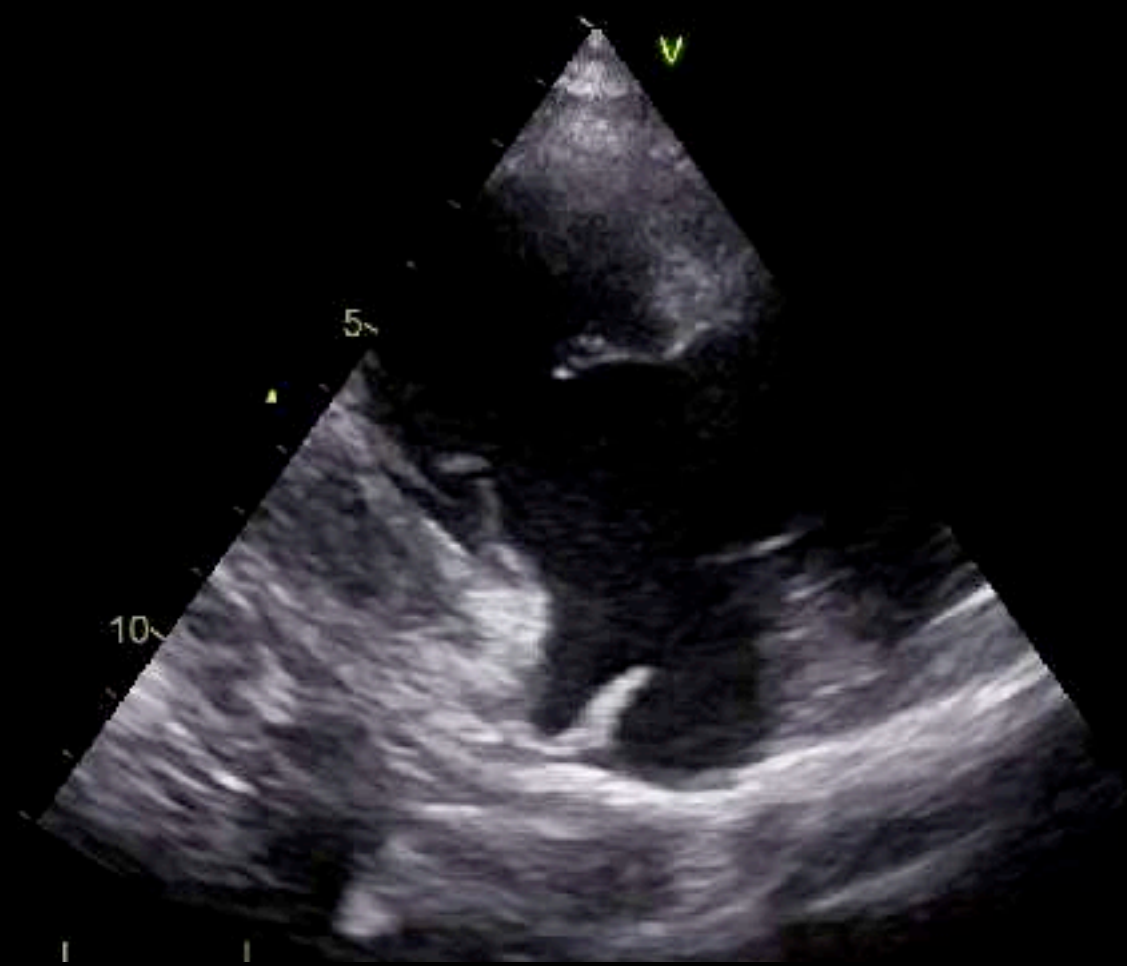


FPS: 25/25
f: 2.5 MHz/2.5 MHz
P: 0 dB
G(t): 0 dB
Compr: 63 dB
DDP: 1.4
D: 15.0 cm
G(c): -3 dB
Rej: 21 cm/s

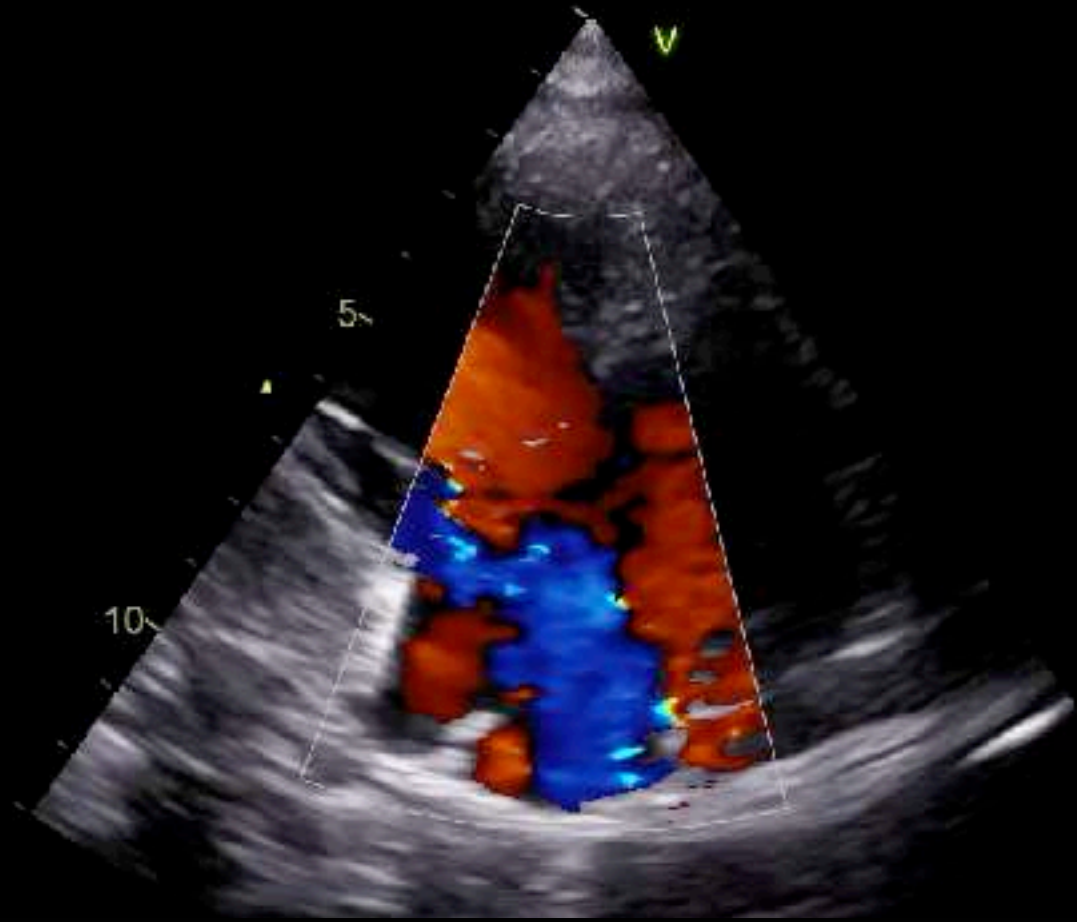


Case 4

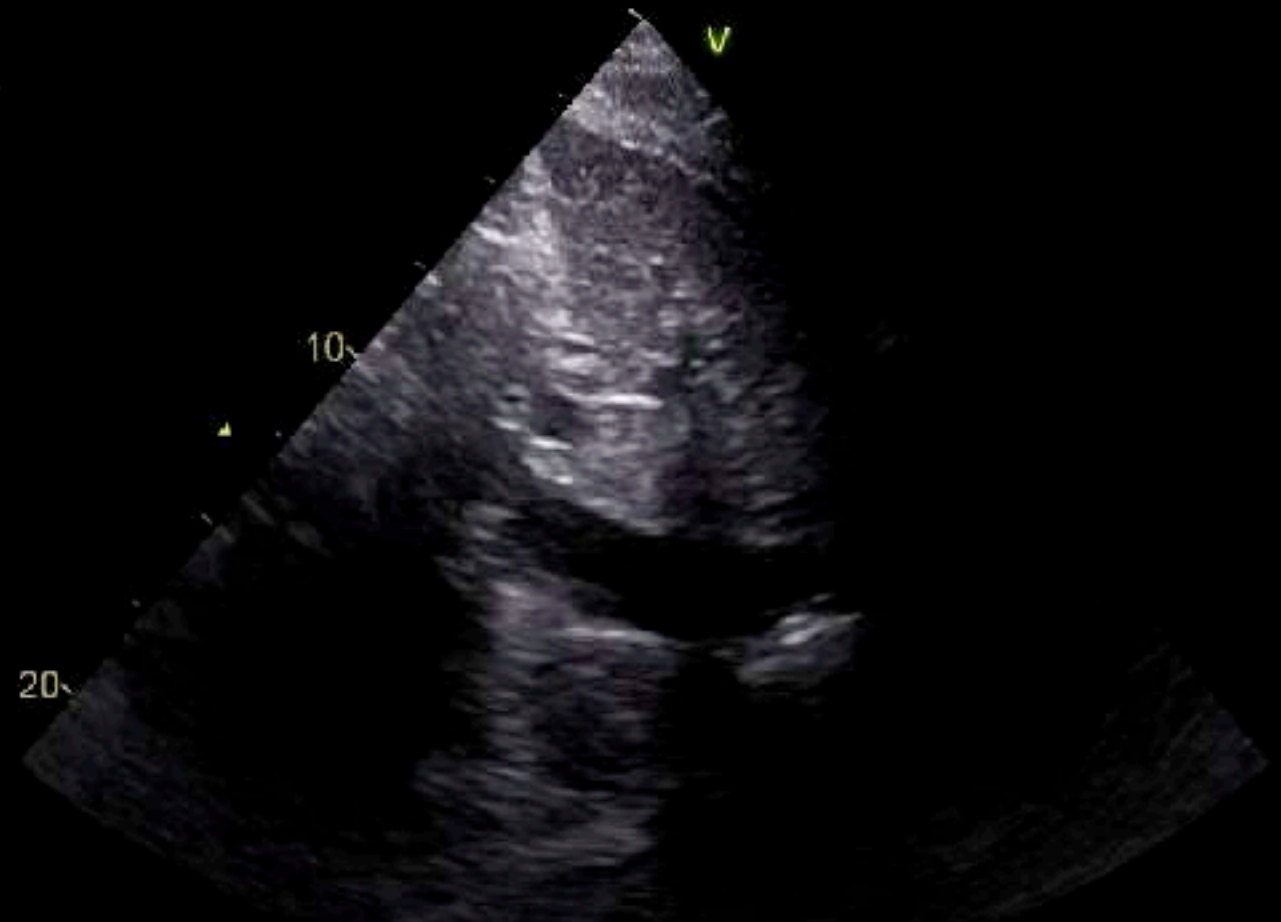
FPS: 57
f: 1.7 MHz/3.3 MHz
P: 0 dB
G(t): 0 dB
Compr: 63 dB
DDP: 1.4
D: 13.0 cm



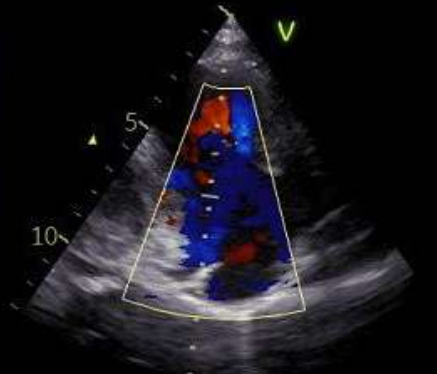
FPS: 17/17
f: 2.6 MHz/2.5 MHz
P: 0 dB
G(t): 0 dB
Compr: 63 dB
DDP: 1.4
D: 13.0 cm
G(c): -3 dB
Rej: 16 cm/s



FPS: 47
f: 1.6 MHz/3.0 MHz
P: 0 dB
G(t): 6 dB
Compr: 63 dB
DDP: 1.4
D: 22.0 cm



TR Vmax 3.36 m/s
TR maxPG 45.20 mmHg



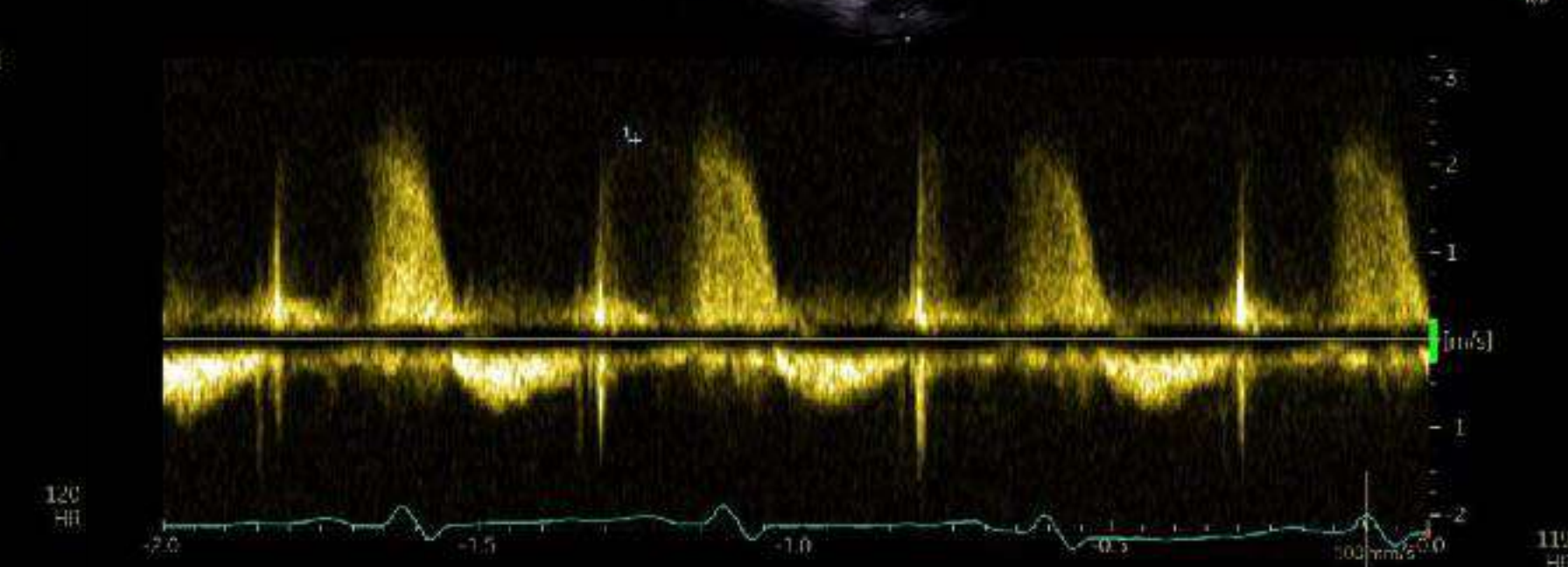
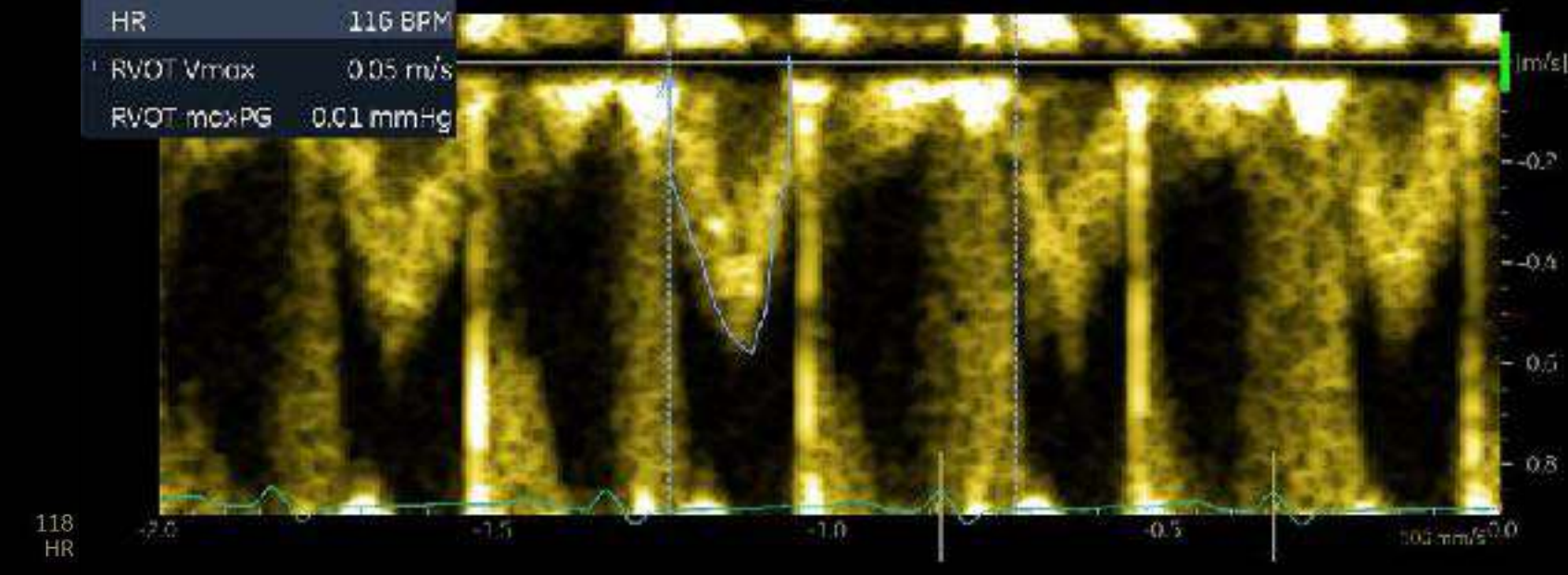
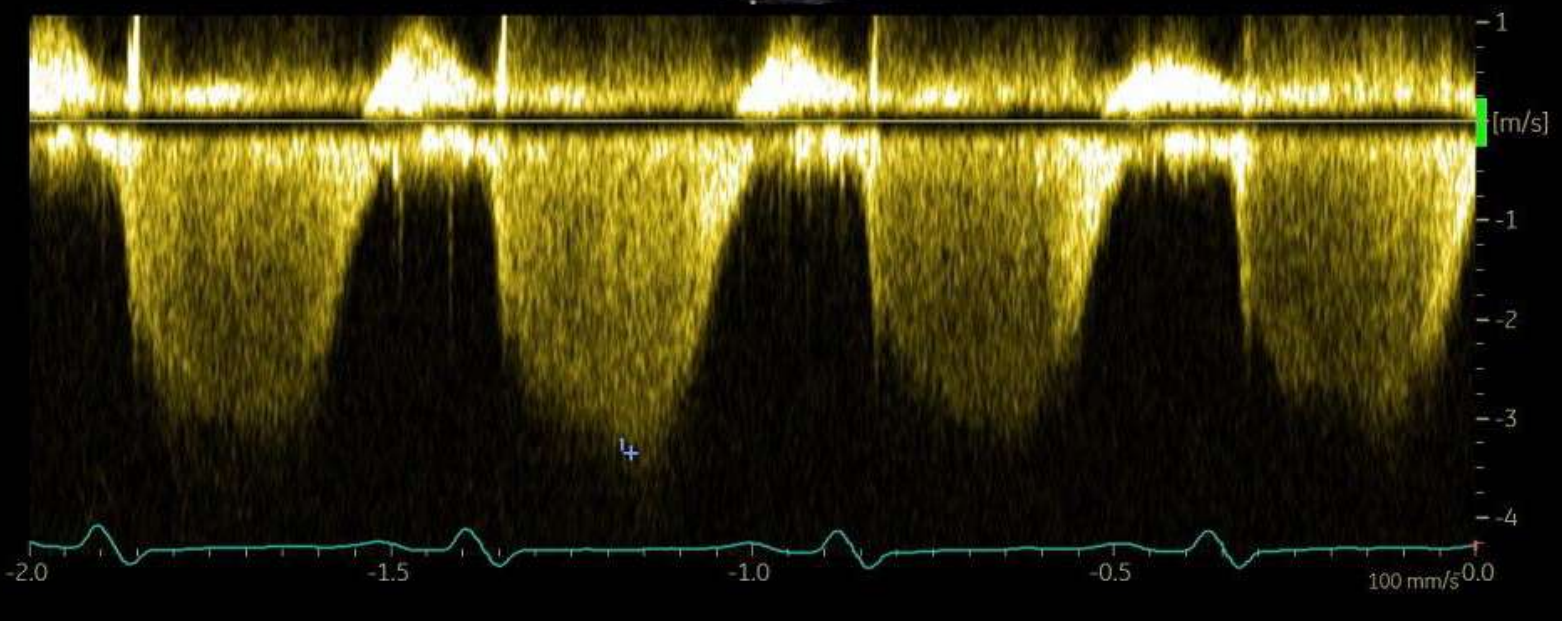
FPS: 24/19
RVOT Vmax 0.58 m/s
RVOT Vmean 0.42 m/s
RVOT maxPG 1.34 mmHg
RVOT meanPG 0.76 mmHg
RVOT VTI 7.5 cm
RVOT Env. Ti 180 ms
HR 116 BPM
RVOT Vmax 0.05 m/s
RVOT maxPG 0.01 mmHg



FPS: 24/17
Vmax 2.29 m/s
p 20.89 mmHg
Frg 5.63 kHz
G(t) 3.4 dB
Rej 16 cm/s



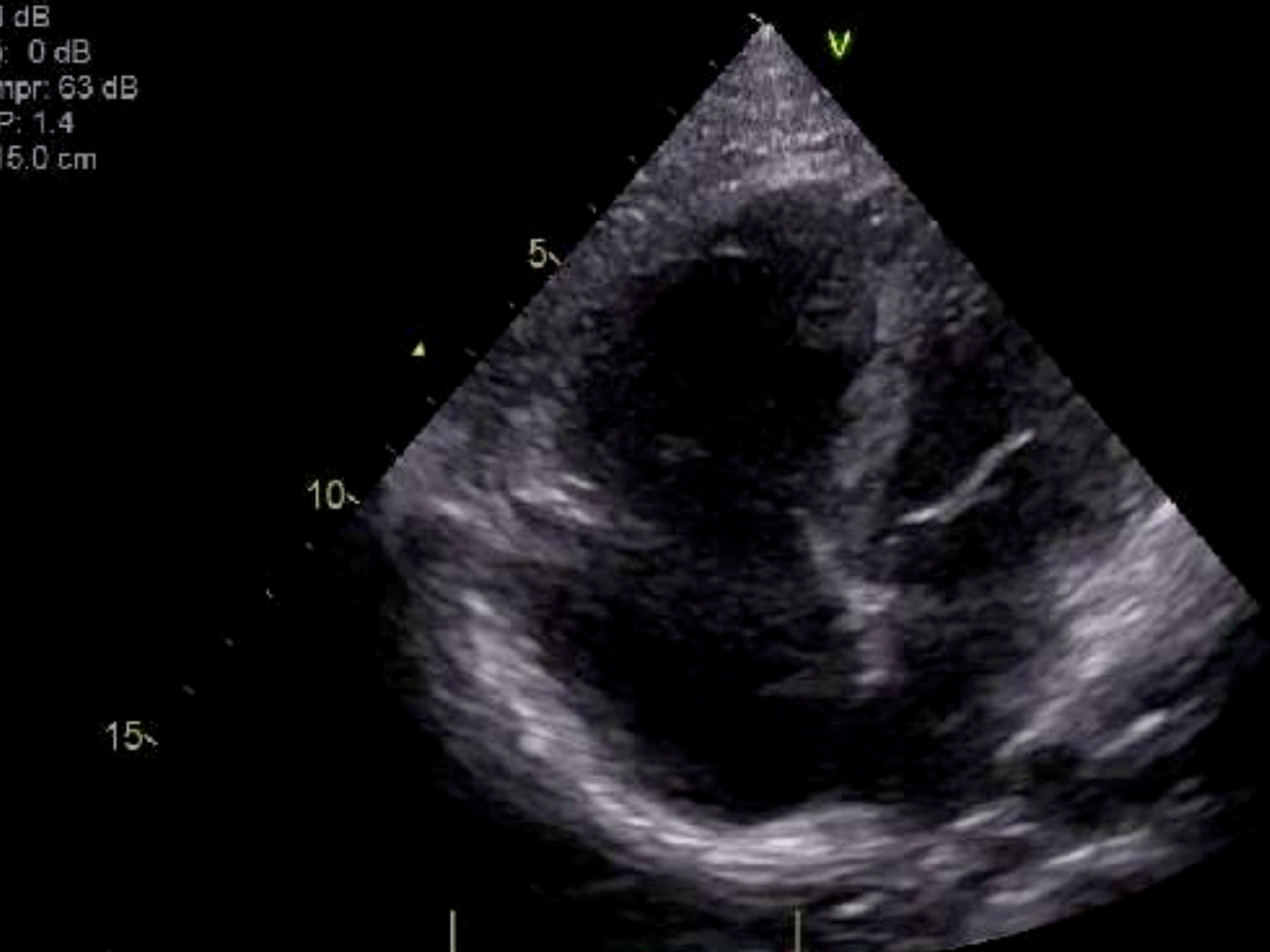
119 HR



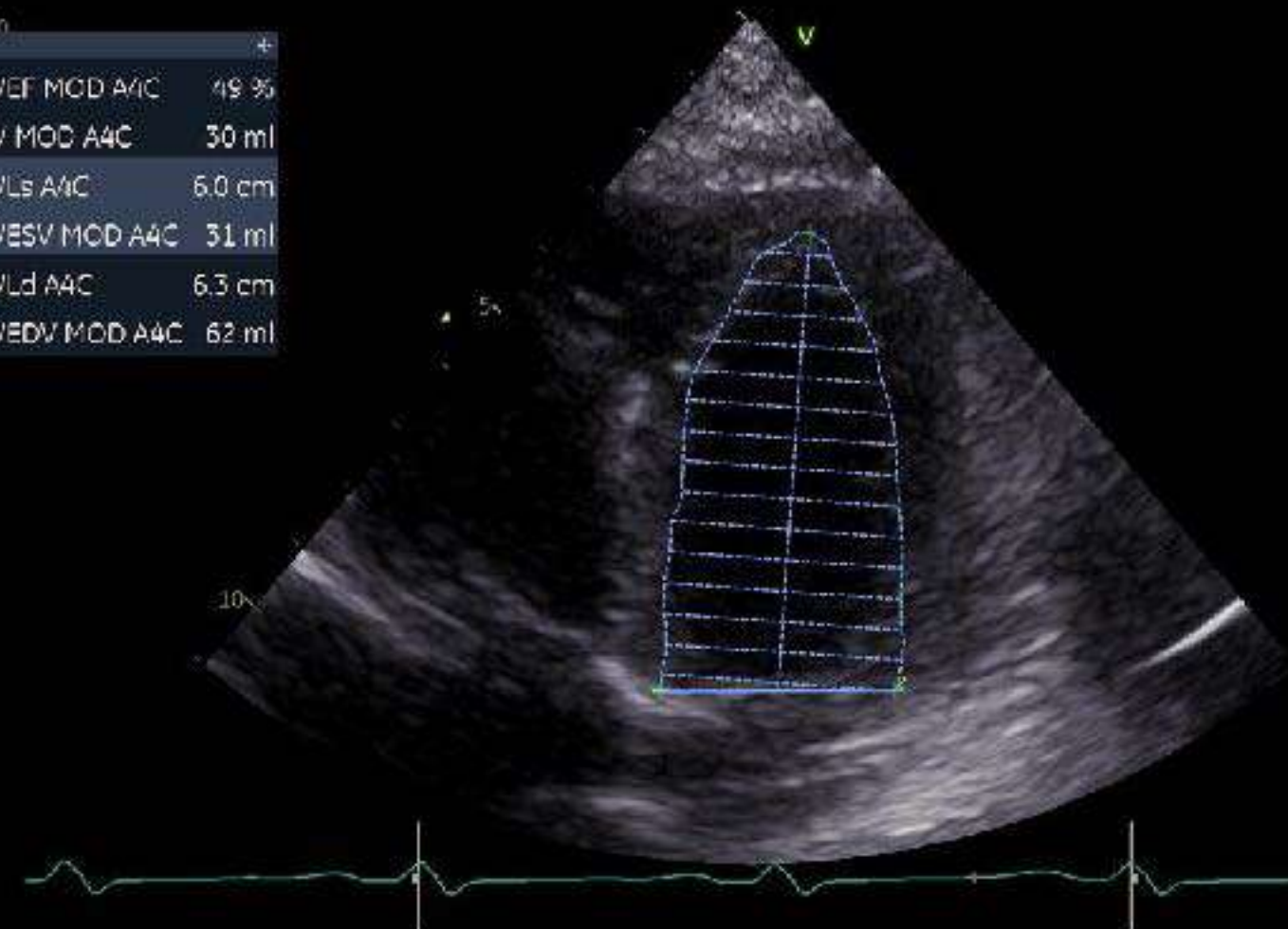
Estimated PAP = 60/25

Case 4

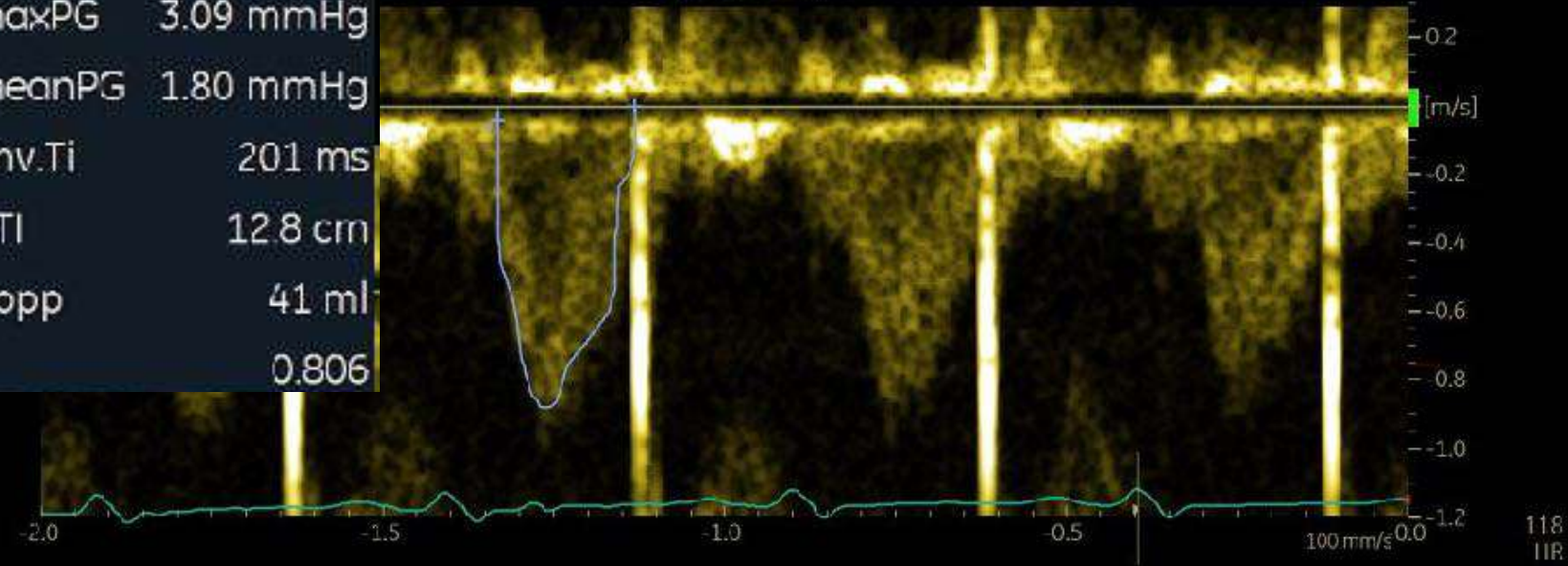
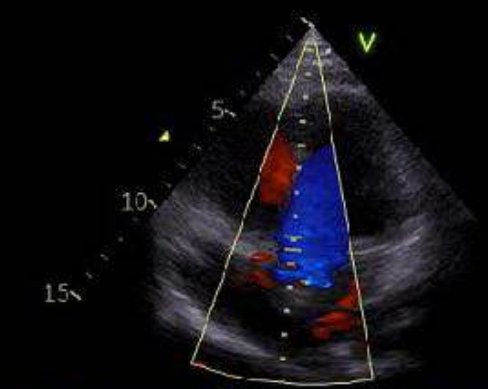
FPS: 50
 f: 1.5 MHz/3.0 MHz
 P: 0 dB
 G(t): 0 dB
 Compr: 63 dB
 DDP: 1.4
 D: 15.0 cm



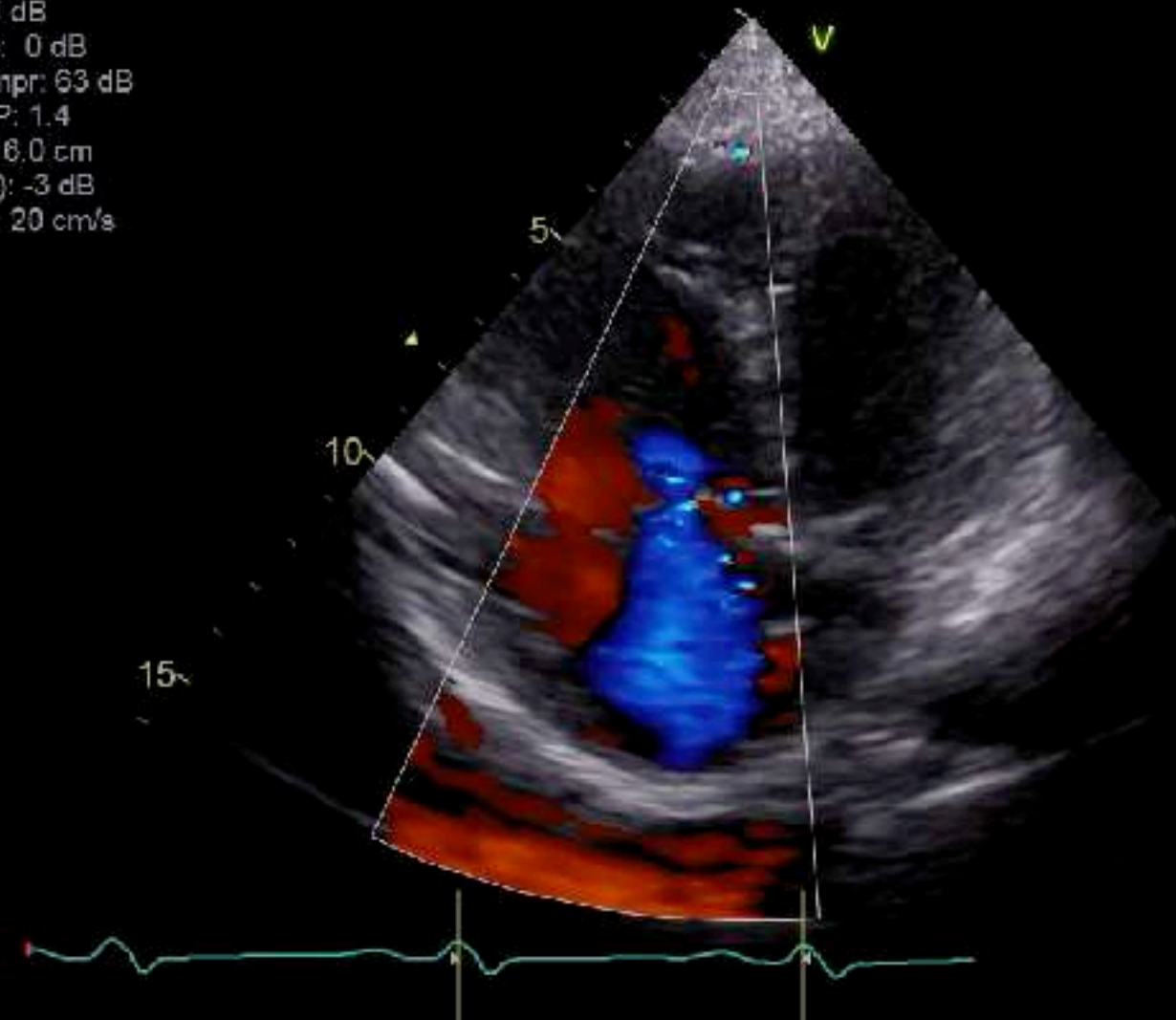
LVEF MOD AAC	49 %
Sv MOD AAC	30 ml
LVLs AAC	6.0 cm
LVESV MOD AAC	31 ml
LVLd AAC	6.3 cm
LVEDV MOD AAC	62 ml



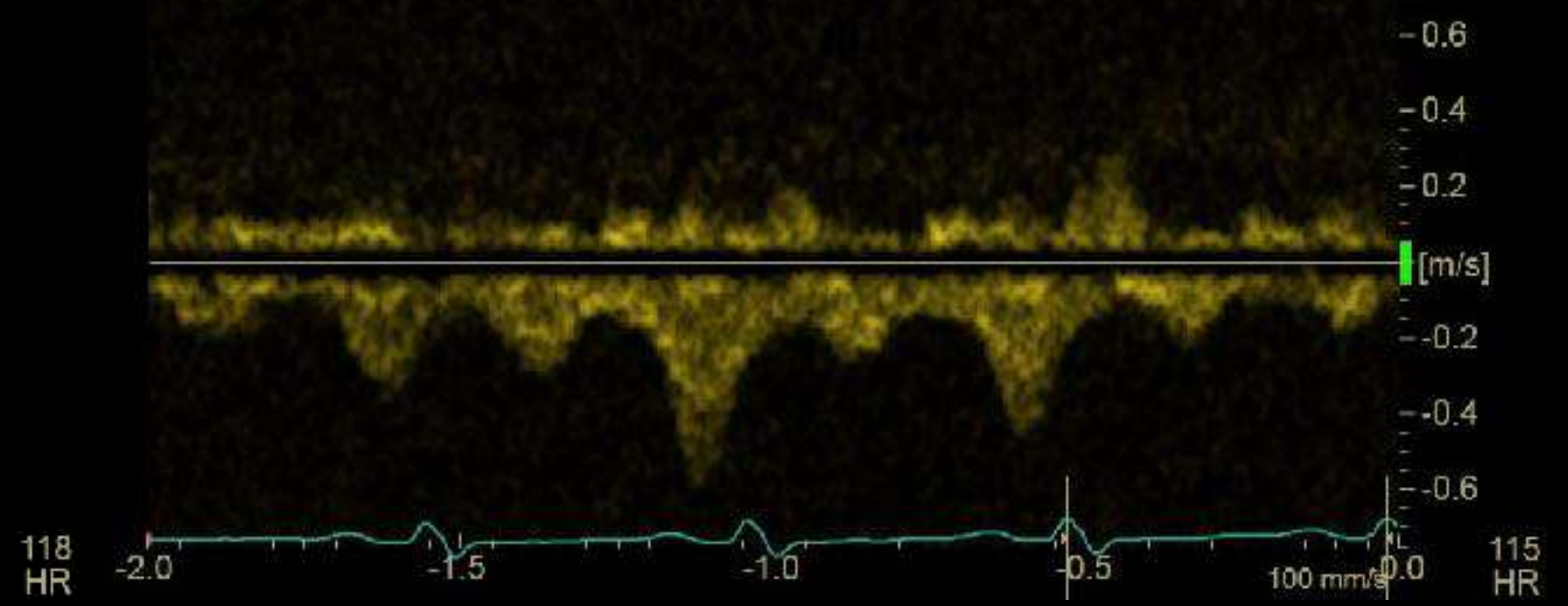
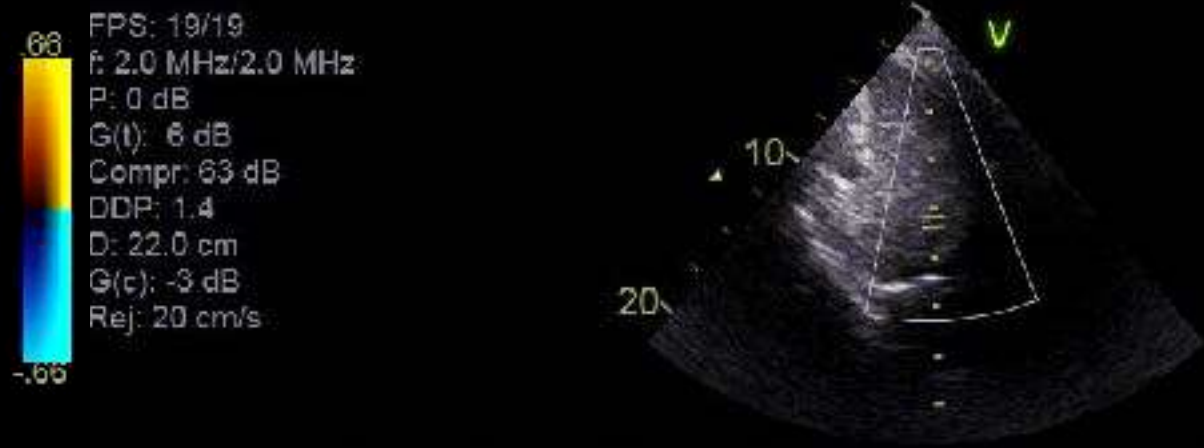
AVA Vmax	2.6 cm ²
AVA (VTI)	2.6 cm ²
LVOT Vmax	0.88 m/s
LVOT Vmean	0.64 m/s
LVOT maxPG	3.09 mmHg
LVOT meanPG	1.80 mmHg
LVOT Env.Ti	201 ms
LVOT VTI	12.8 cm
LVSV Dopp	41 ml
DSI	0.806



FPS: 25/25
 f: 2.5 MHz/2.5 MHz
 P: 0 dB
 G(t): 0 dB
 Compr: 63 dB
 DDP: 1.4
 D: 16.0 cm
 G(c): -3 dB
 Rej: 20 cm/s



FPS: 19/19
 f: 2.0 MHz/2.0 MHz
 P: 0 dB
 G(t): 6 dB
 Compr: 63 dB
 DDP: 1.4
 D: 22.0 cm
 G(c): -3 dB
 Rej: 20 cm/s



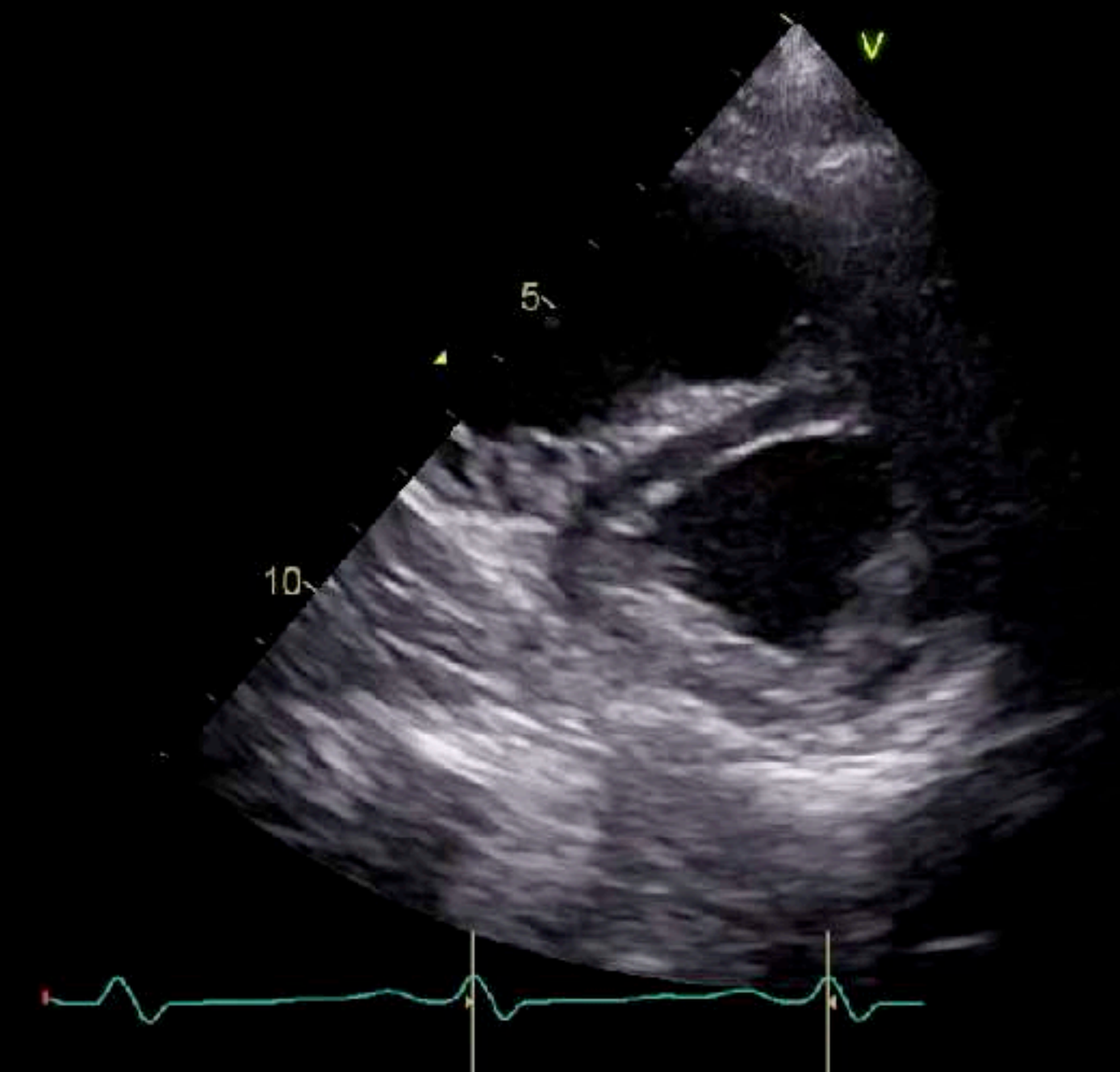
Impression = Chronic pulmonary hypertension

? Secondary to autoimmune condition



Chronic pulmonary hypertension

- Maternal death risk (reduced SVR and overloaded CVS system)
- No safe PAP cut-off
- Management plans = risky delivery!!
 - Maintain circulating volume. Prophylaxis vs DVT
 - Avoid hypotension, acidosis, hypoxia, hypercarbia
 - ?? iv prostacyclin / aerosolised iloprost
- Delivery = Avoid anaesthesia if possible (GA risk)
- FU ? Cause and long term treatment



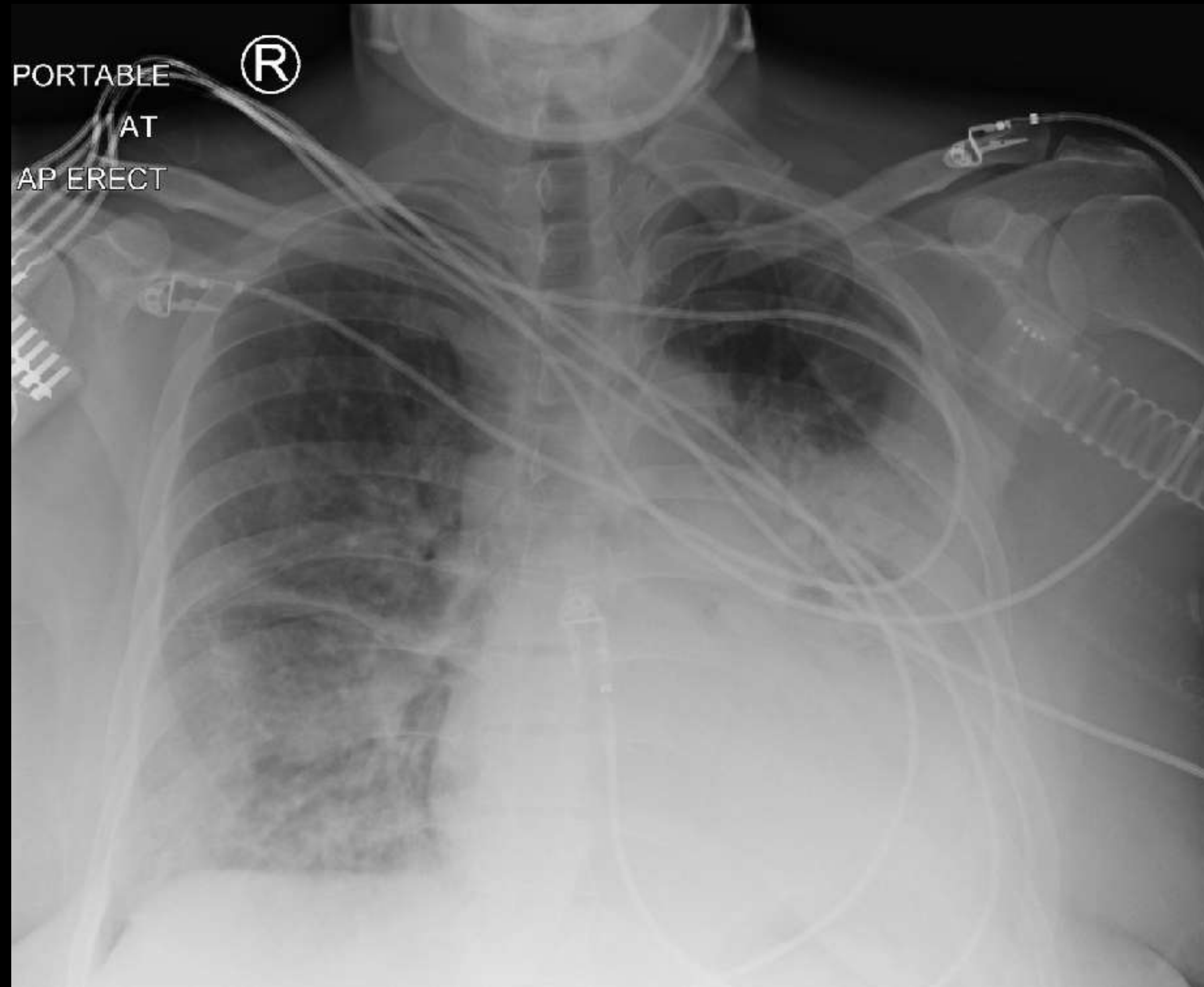
Case 5

41yo F G8/P6 29/40 COVID +ve (unvaccinated)

Hs: asthma, obesity

increasingly oxygen requirements => ICU for NIV

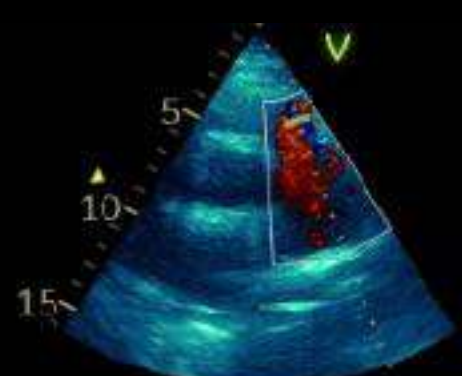
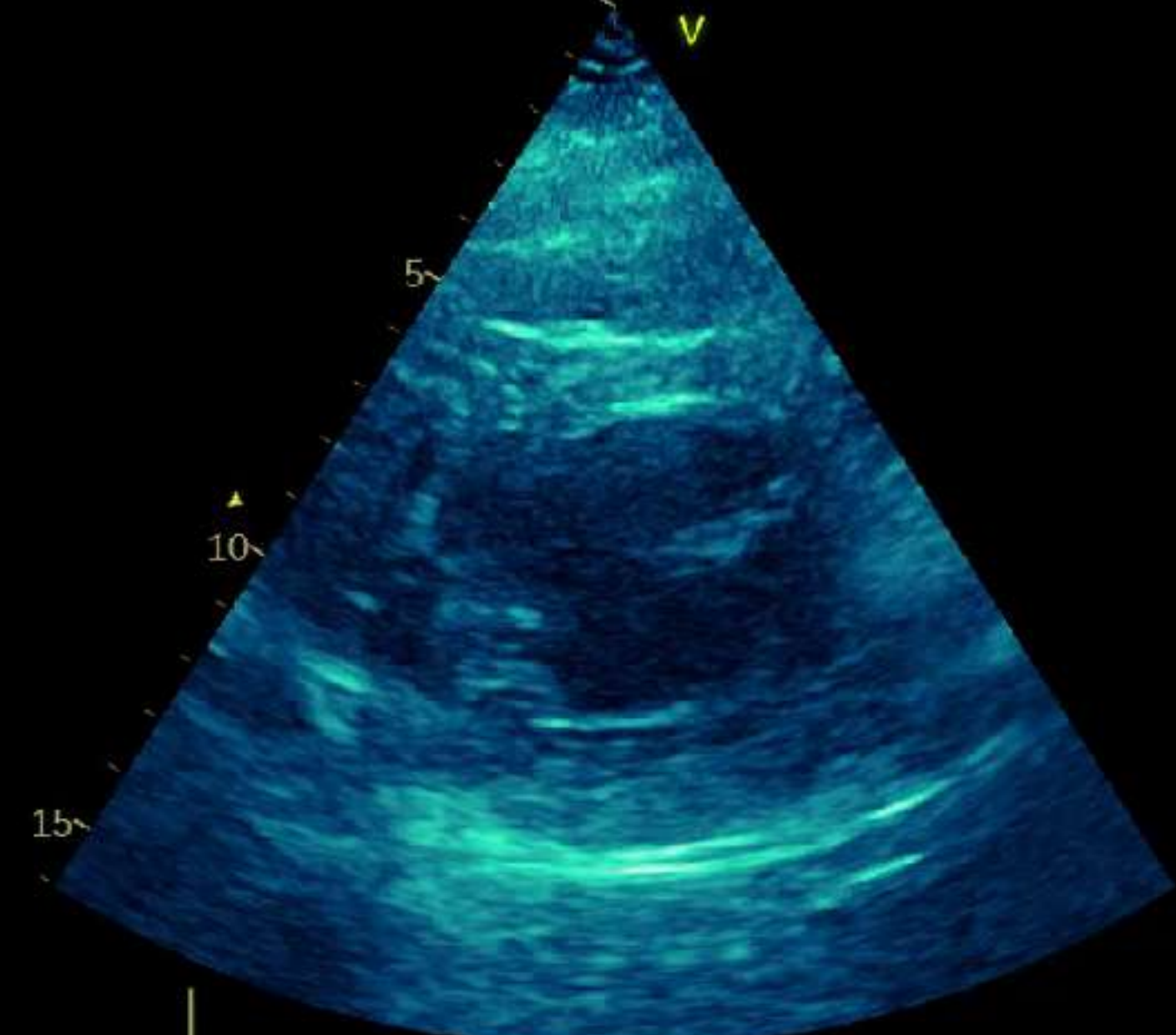
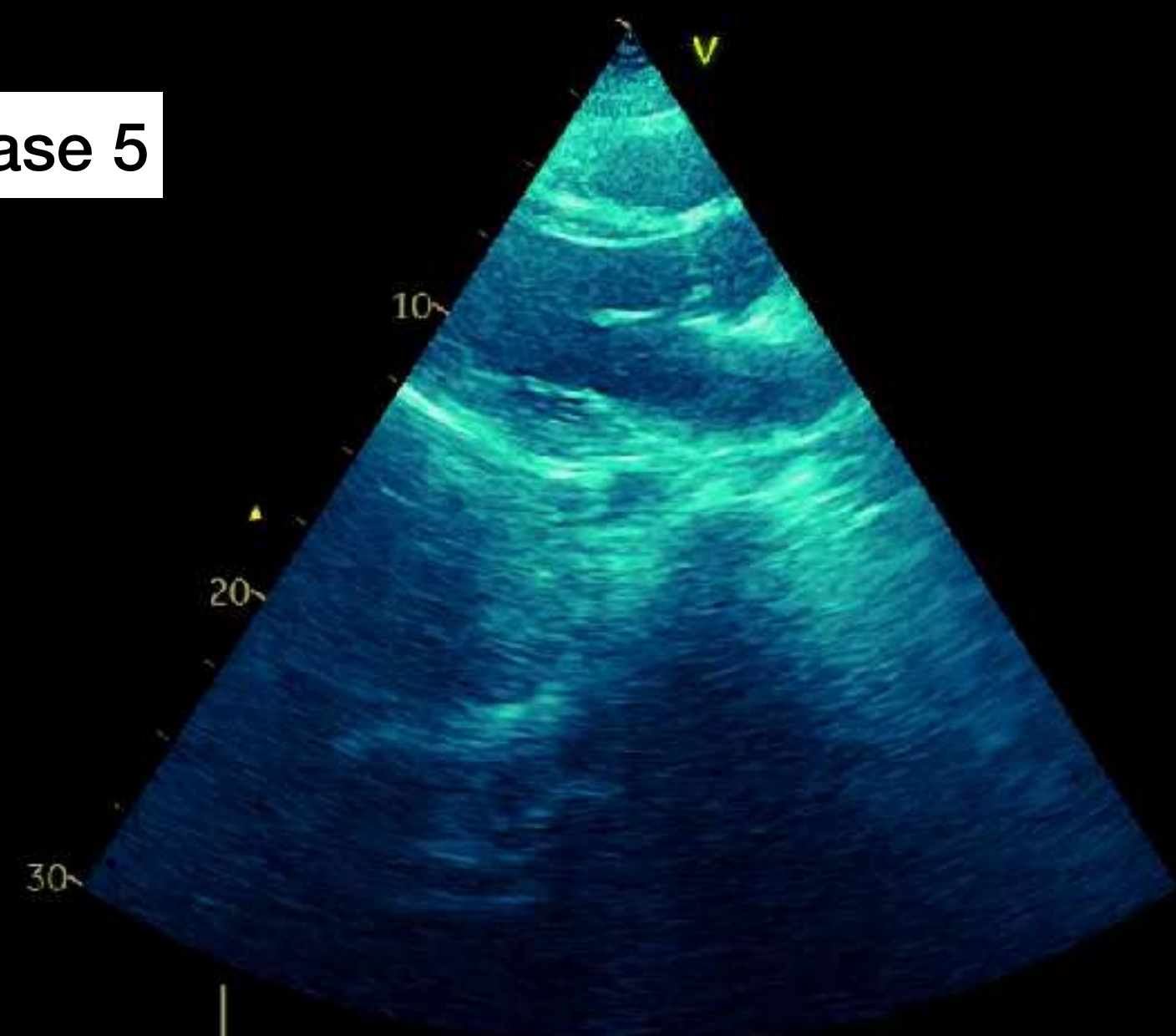
Day 1



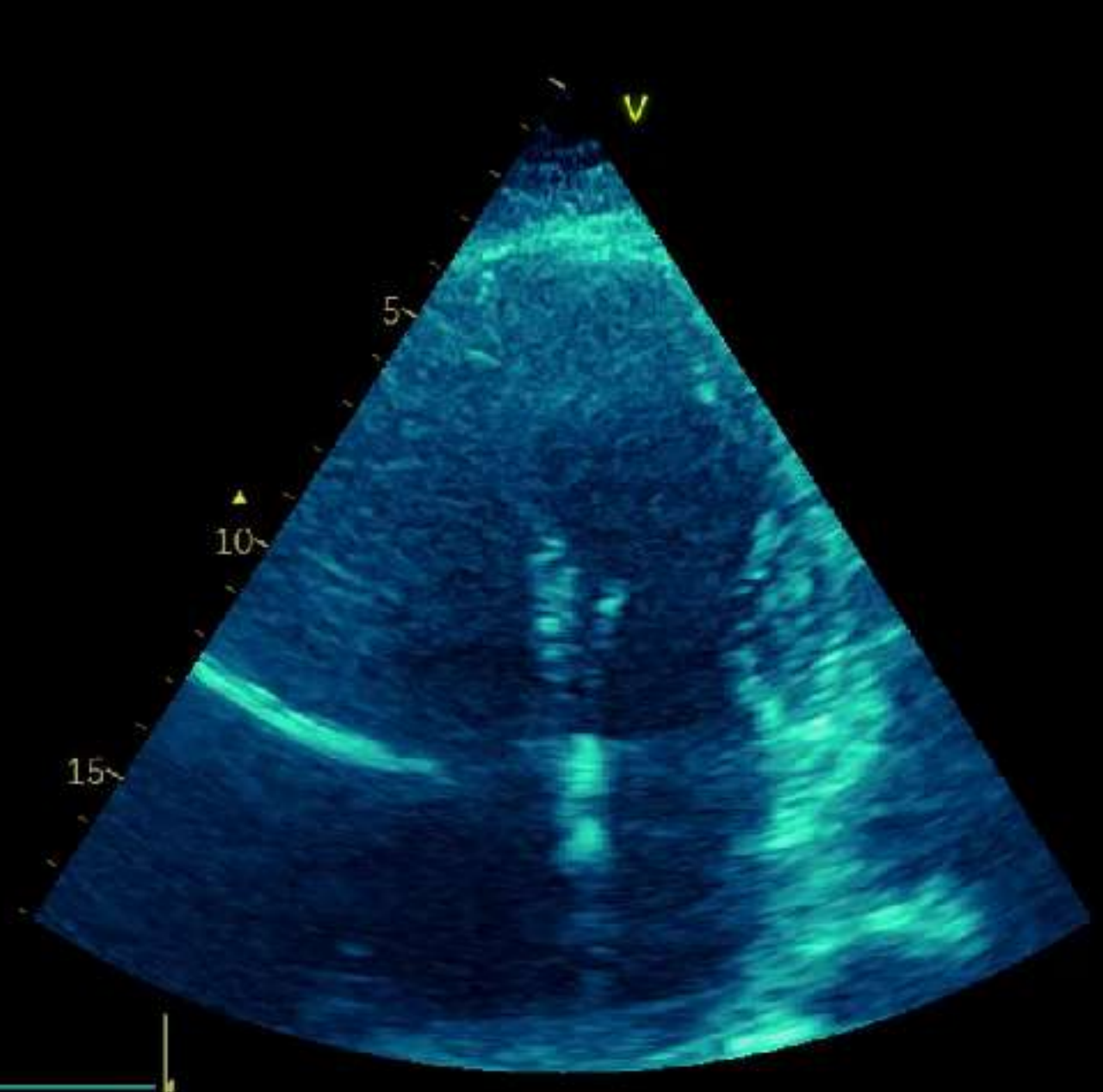
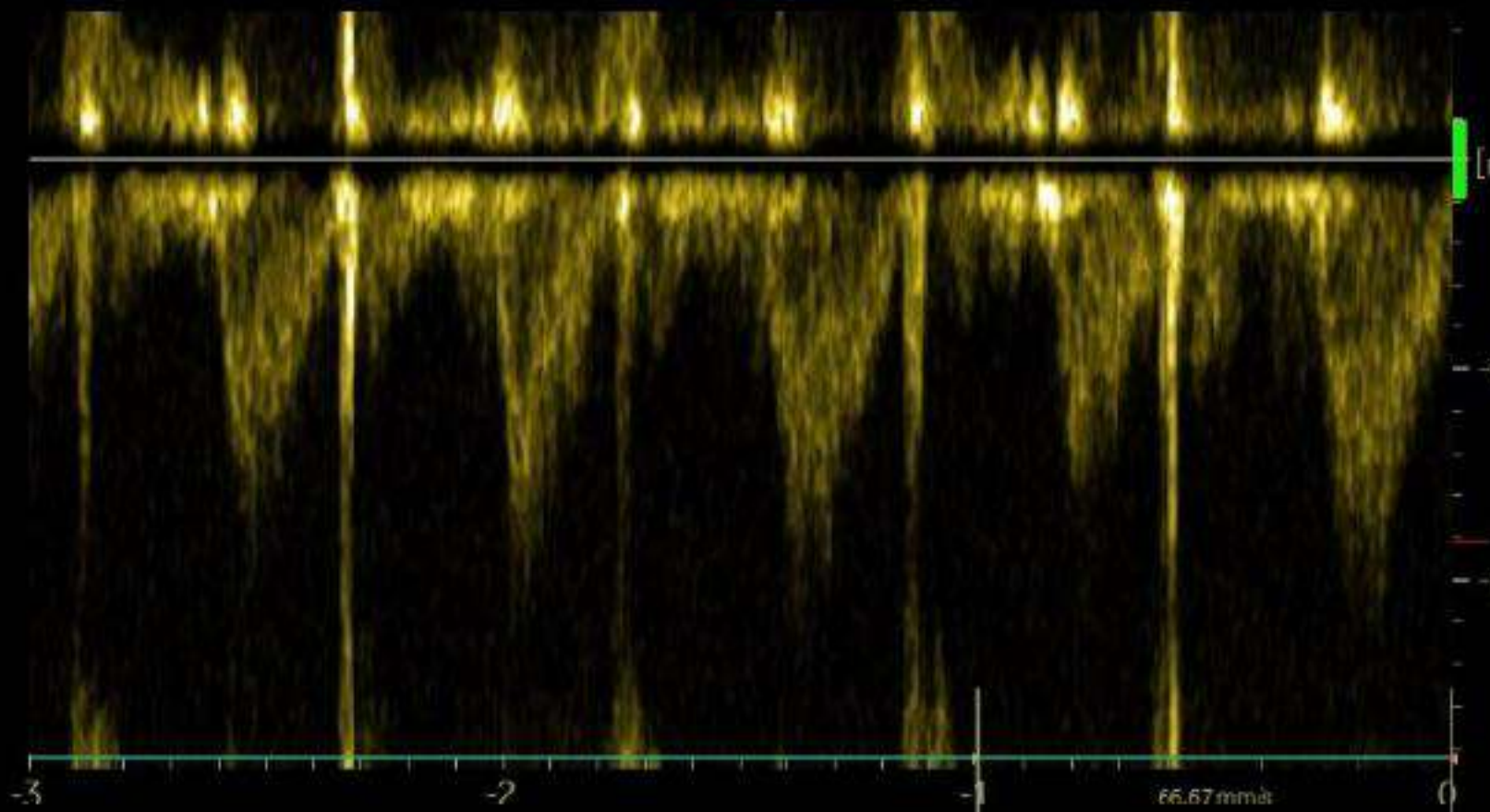
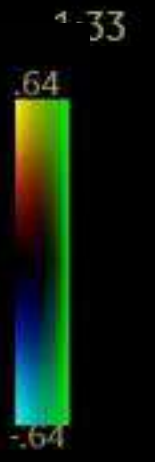
Case 5

Day 1

NB: no TR of note



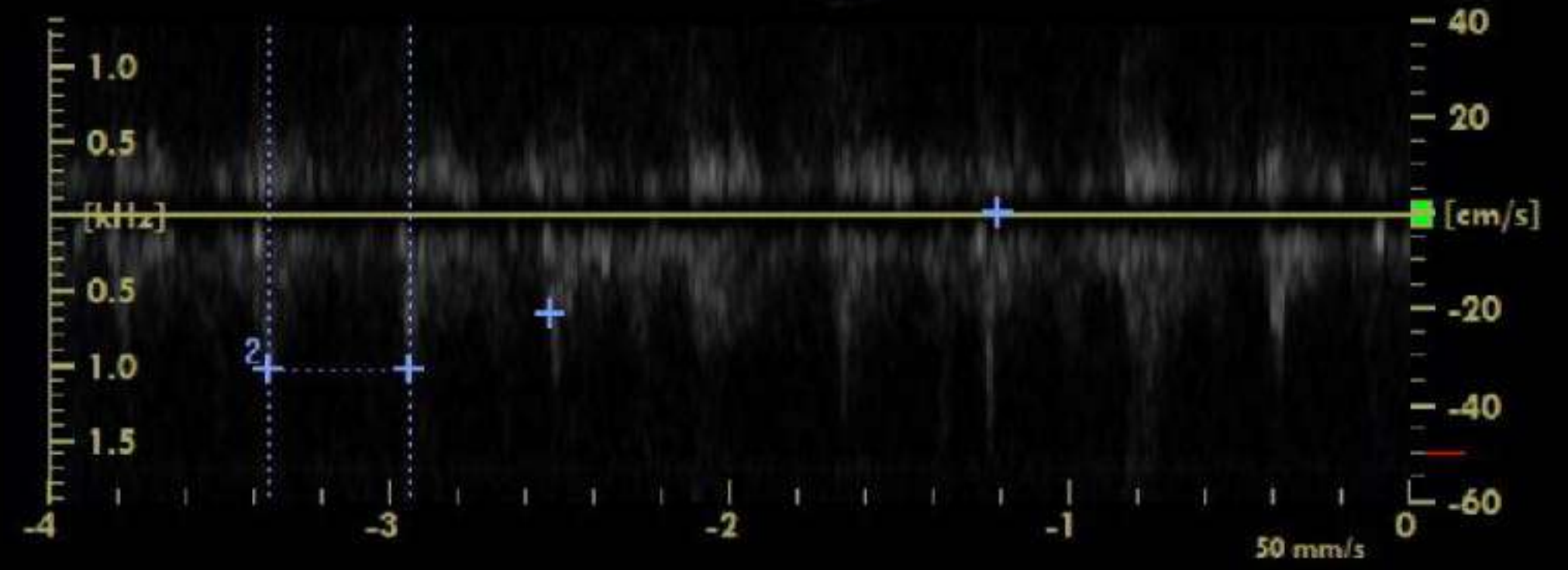
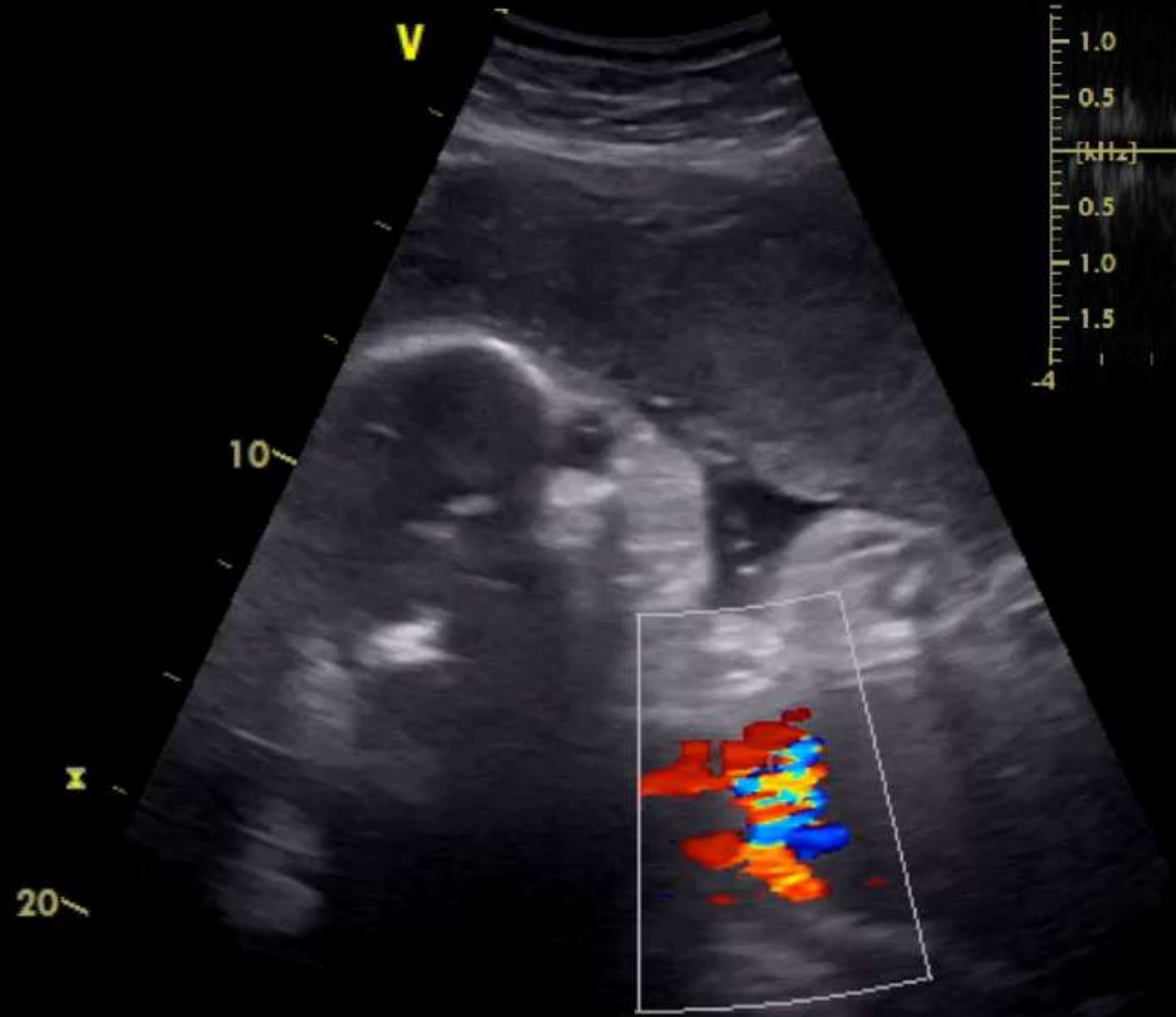
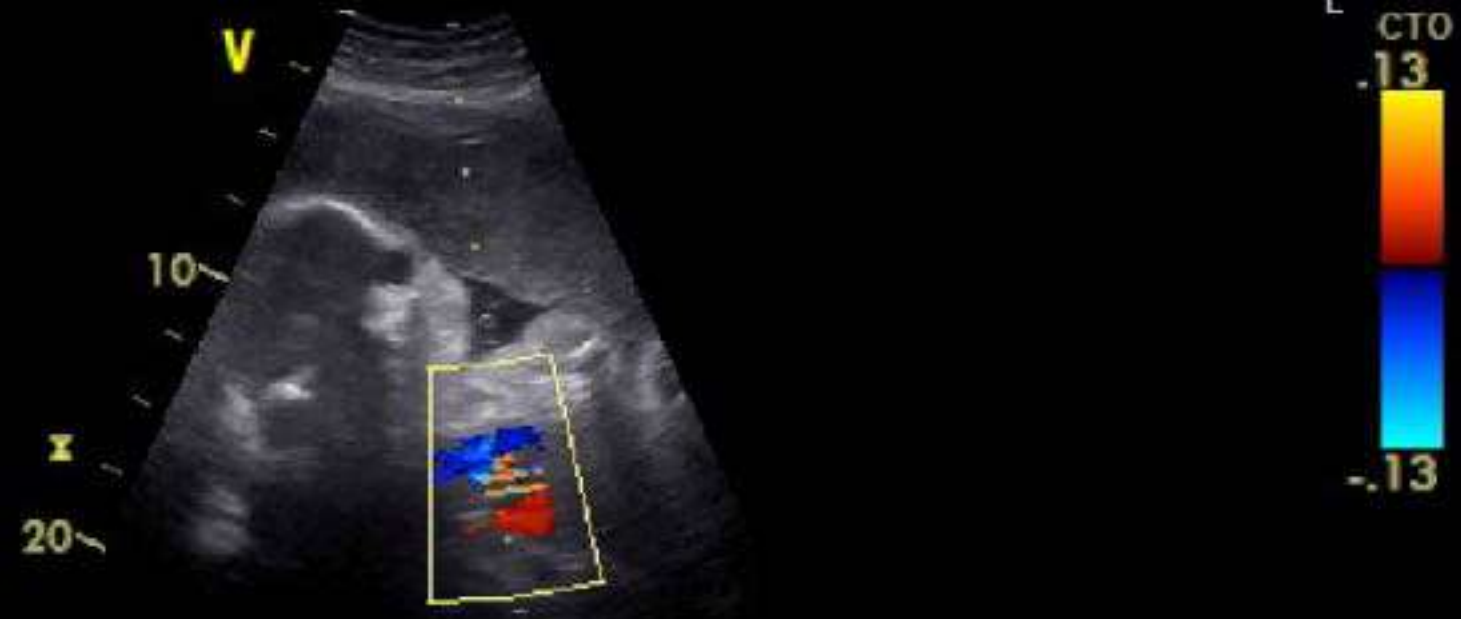
Pul AT 95msec



Case 5

Day 1

2016/07/12:15:08
1 PS 21.10 cm/s
ED 0.00 cm/s
2 Time 414.05 ms
SV: 1.44 mm
Scale: 99.2 cm/s
LVRej: 3.1 cm/s
Freq.: 2.5 MHz
SV/SVD: 5.1 mm/156.1 mm



Case 5

Strep pneumonia LLL

NIV support high

Deterioration evening D2

Work of breathing ++

Intubation

=> maxed conventional mechanical ventilation

=> ? NO / ? ECMO

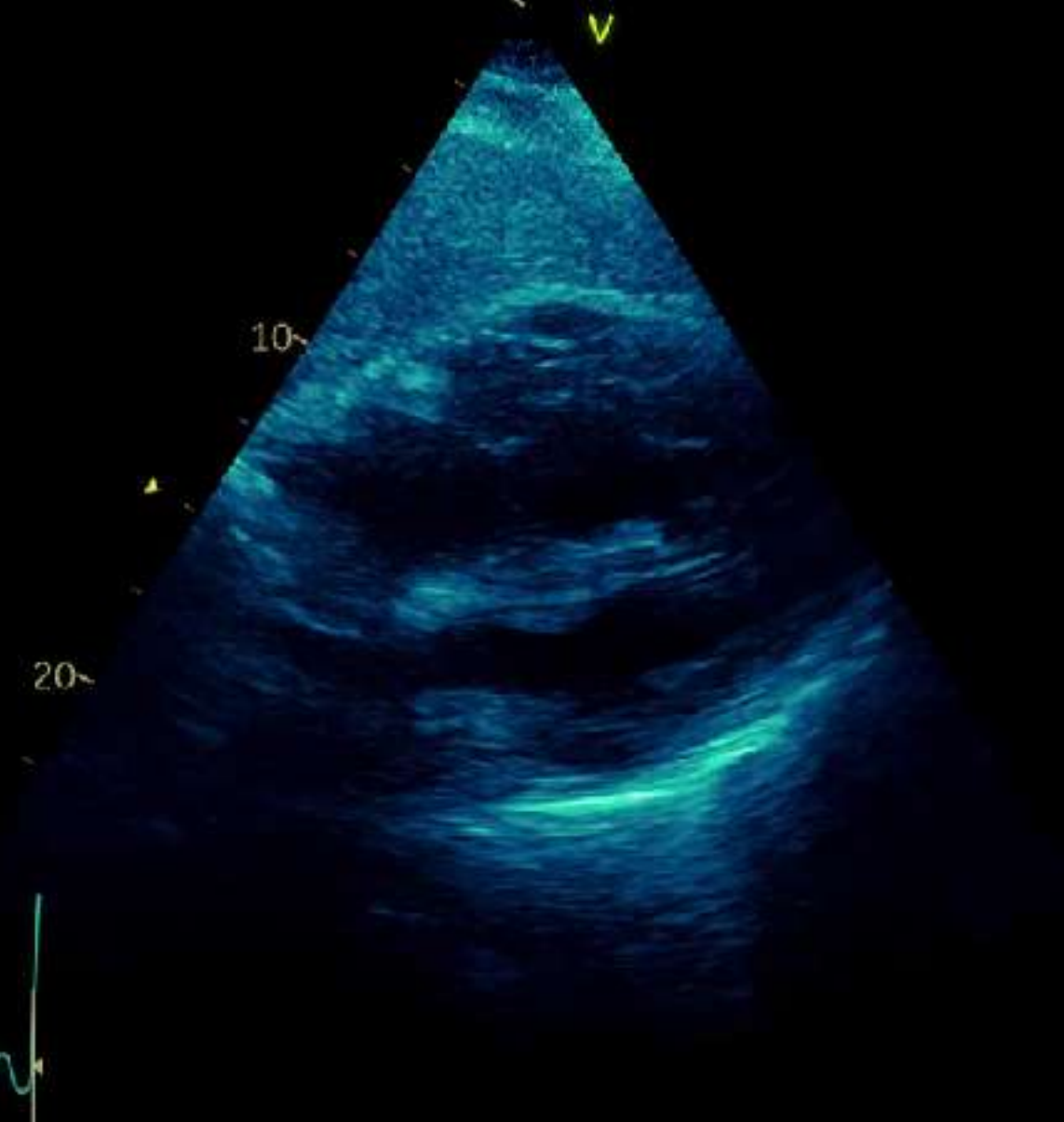
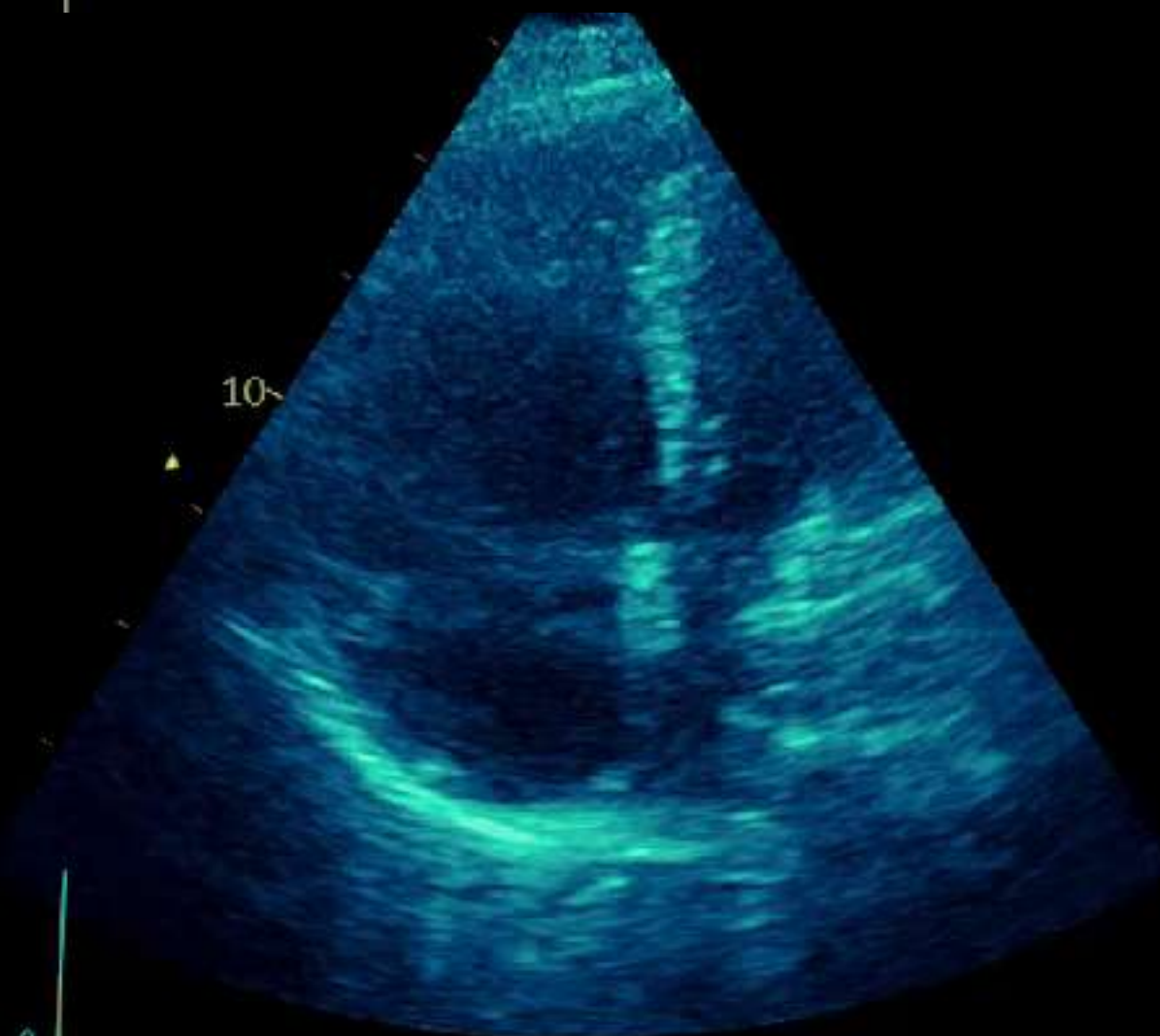
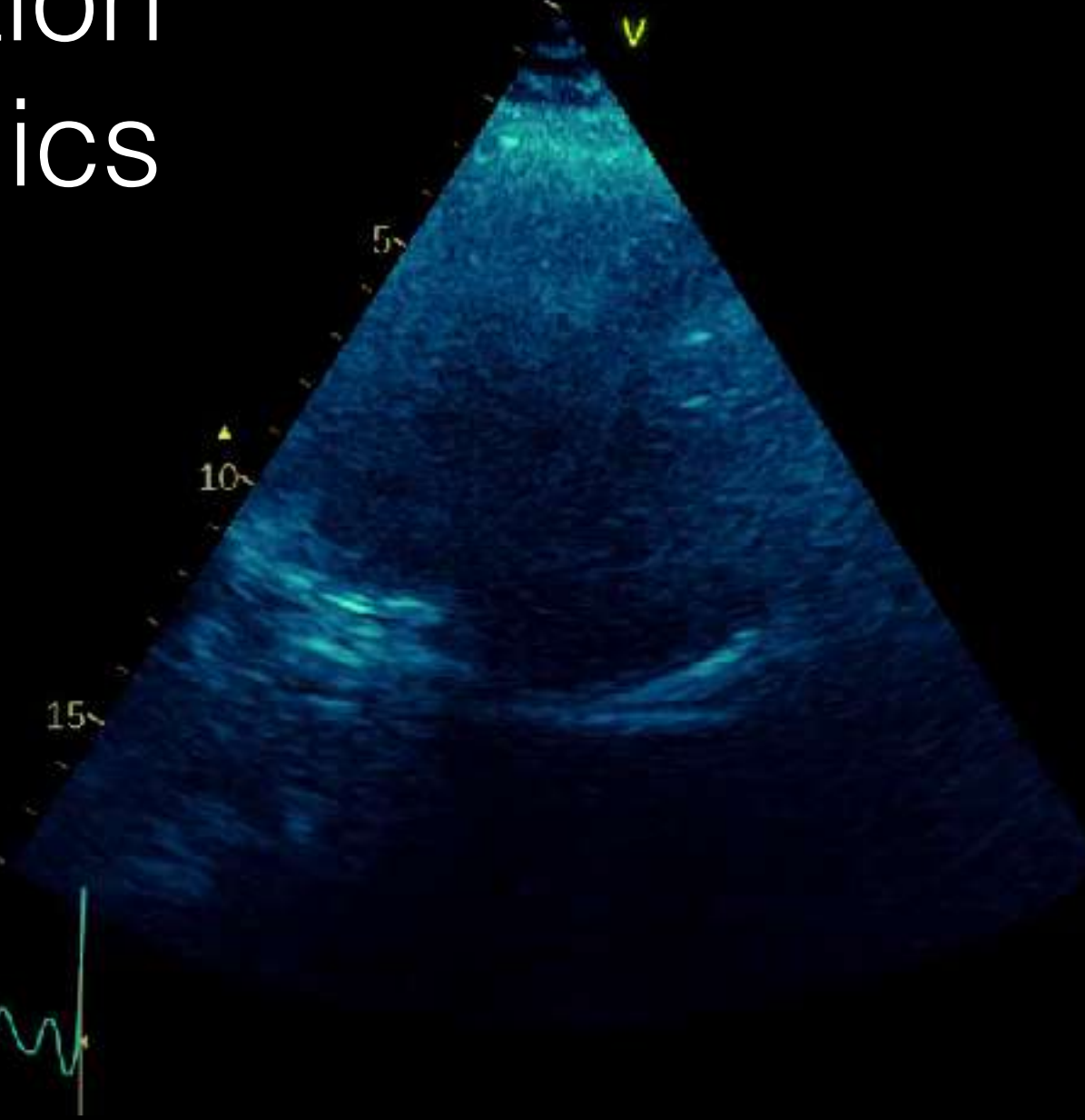
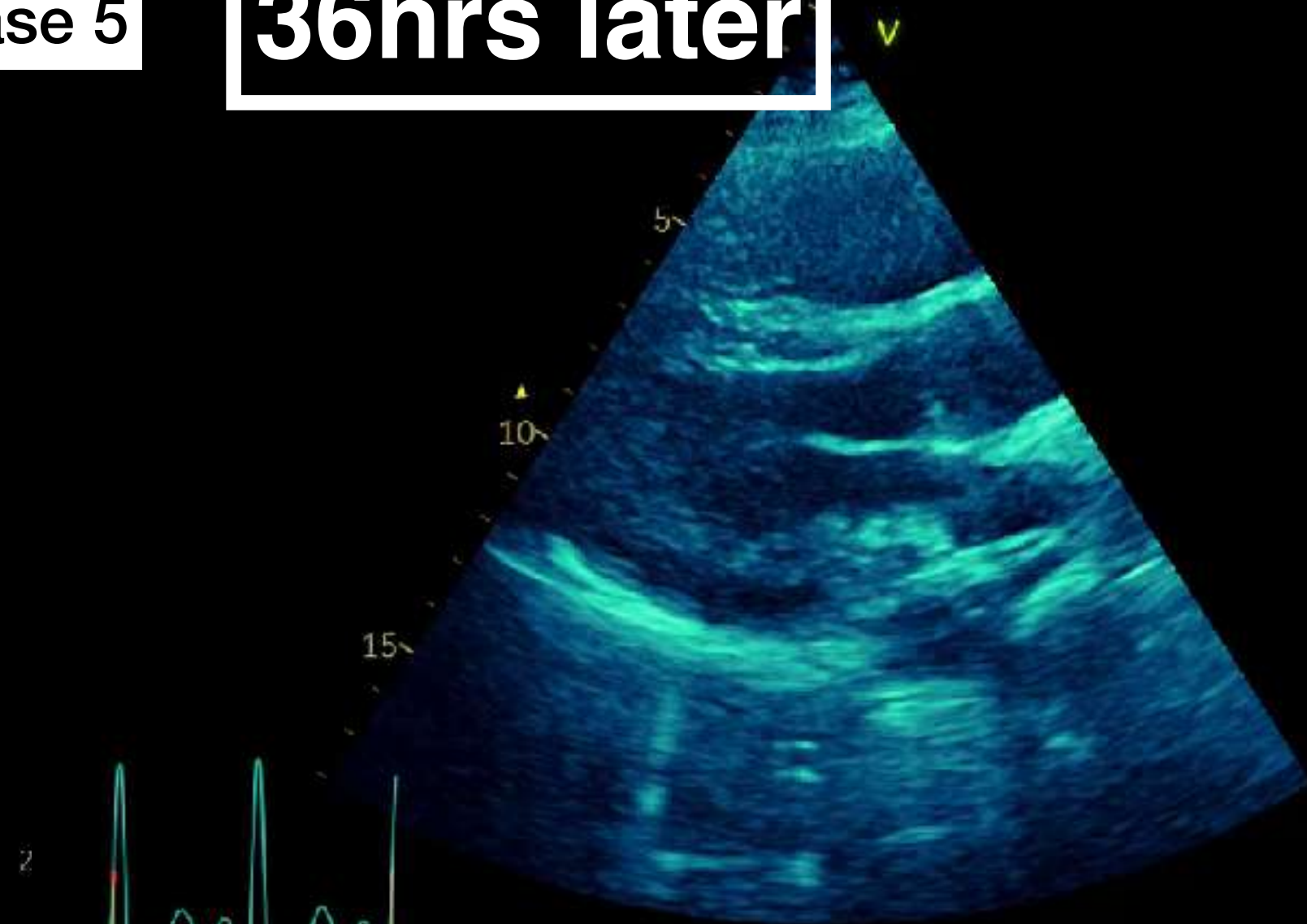
=> urgent CS in unit (baby ok)



Case 5

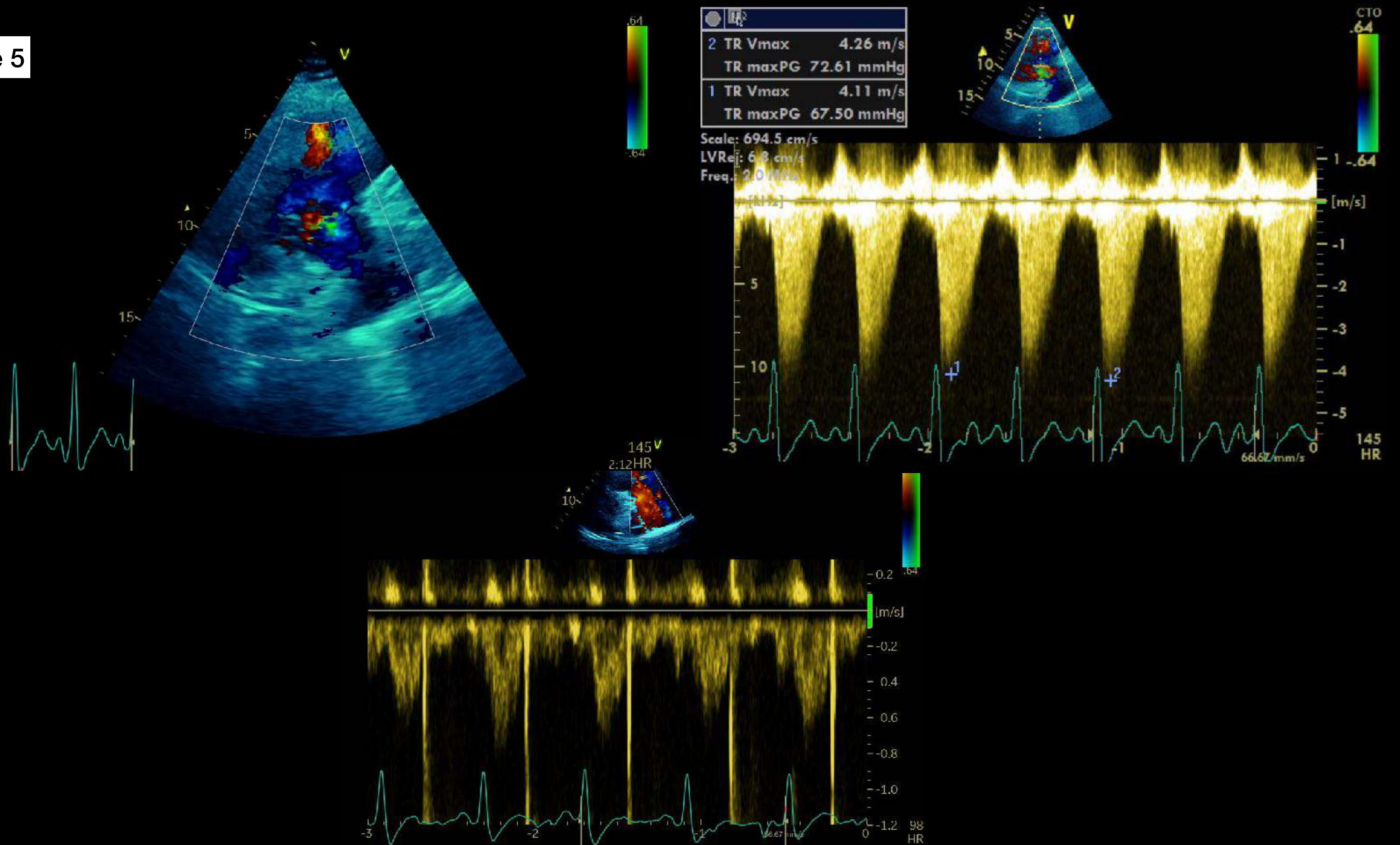
36hrs later

Acute deterioration
in haemodynamics
and resp
requirements



ECHO
AUSTRALIA

Case 5



Case 5



ECHO
AUSTRALIA

Case 5

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Hour	3	3	3	3	6	6	6	6	6	6	6	6	6	6	6
	250	50	181	100	250	20	120	170	20	20	20	20	20	10	30
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
mmHg	35	36	47	52	53	60	70	70	75	56	40	40	45	45	45
	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
ce							✓	✓			✓				
													650	✗	
														✓	
it(s)															
otals	314.4	115.4	257.4	181.4	335.4	112.4	222.4	272.4	127.4	110.4	92.4	92.4	747.4	87.4	107.4

Double strength noradrenaline and vasopressin

D/W ECMO team / O&G / ICU / anaesthetics / ID

Decision made for thrombolysis

Case 5

Help		Day Plan		Fluid Balance		Airway, Access & Drains		Procedures		Physical Assess		SAFEPL			
Neurological		Haemodynamics & Others		Inputs		Outputs		Respiratory		Medication L					
IS														Mon 30-08-2021	
09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
6	6	6	6	6	6	6	6	6	6	3	3	3	3	3	129
50	10	10	10	10	10	10	100	10	10	10	10	70	10	10	680
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	96
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	240
11	11	11	10	10	11	12	11	10	9	9	9	8	7	6	310
2.4	2.4	2.4	2.4	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0	0	43.2
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	194
															0
1.8	1.8	1.8	1.8	1.8	0						11.8	1.8	1.8	1.8	50
93.2	53.2	53.2	52.2	52.2	50.2	51.2	140.2	49.2	48.2	45.2	57	106	43.8	42.8	1742.2
10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total	

~24 hours post thrombolysis vasopressors weaned

Case 5

- 3 weeks later d/c ICU
- Weak ++
- Dialysis dependent
- Heparin infusion
- d/c from hospital ~7 weeks later
- Mum and baby did well!



Conclusion

Echo in sick pregnant patients

- Integrate history & exam with echo findings
- Determine acute vs chronic
- Management with Pregnancy Heart Failure team
 - O&G, Cardiology and Intensive Care +/- others
- Good communication with patient & family essential





AUSTRALIA'S LEADING
ECHOCARDIOGRAPHY
CONFERENCE

17-19 March 2025
Marvel Stadium, Melbourne



Thank you very much for listening

You  = Echo at Nepean

sam.orde@health.nsw.gov.au