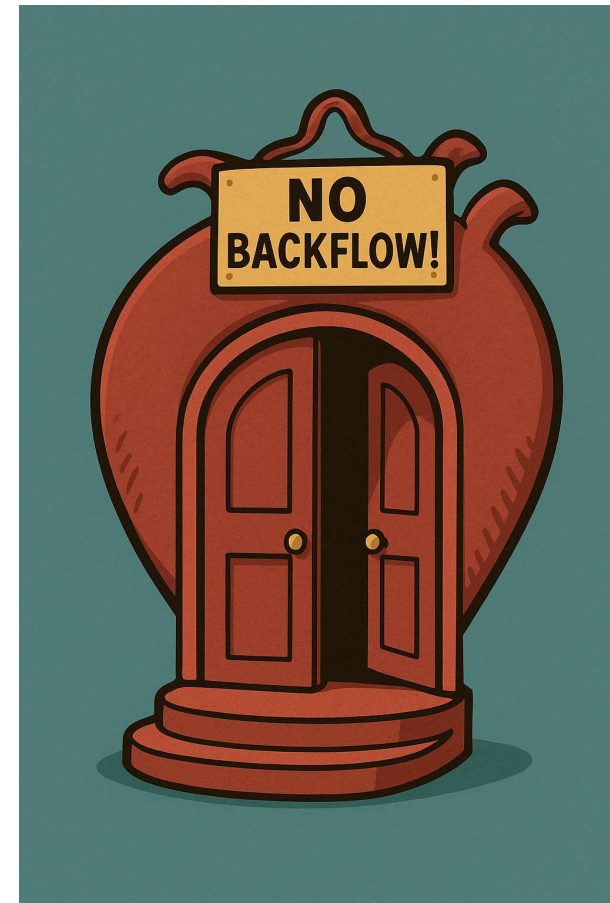
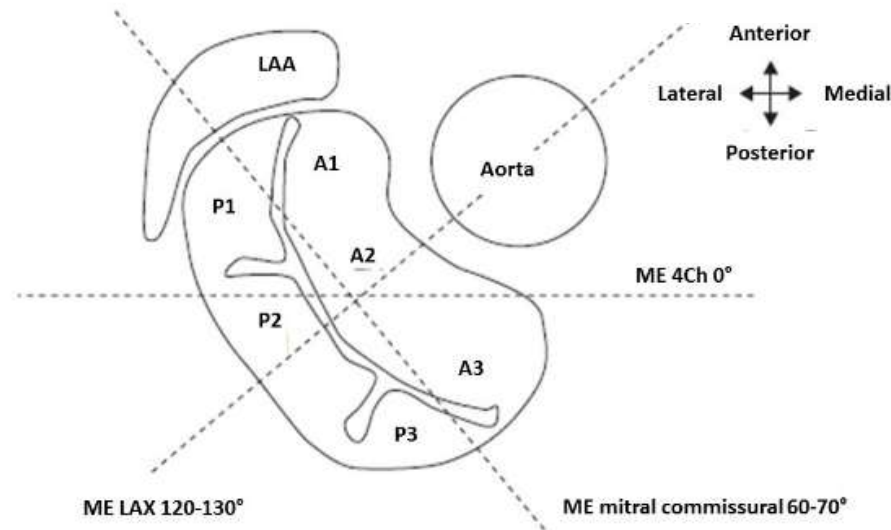
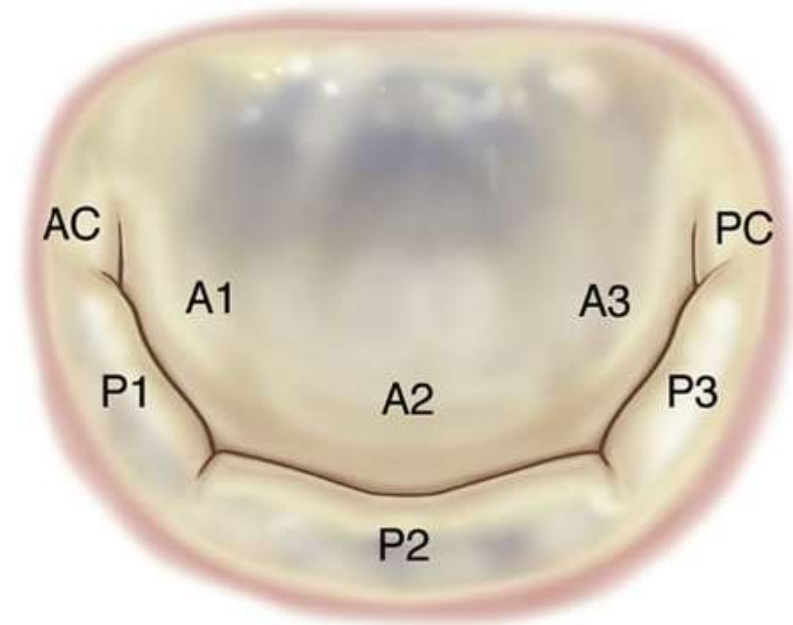
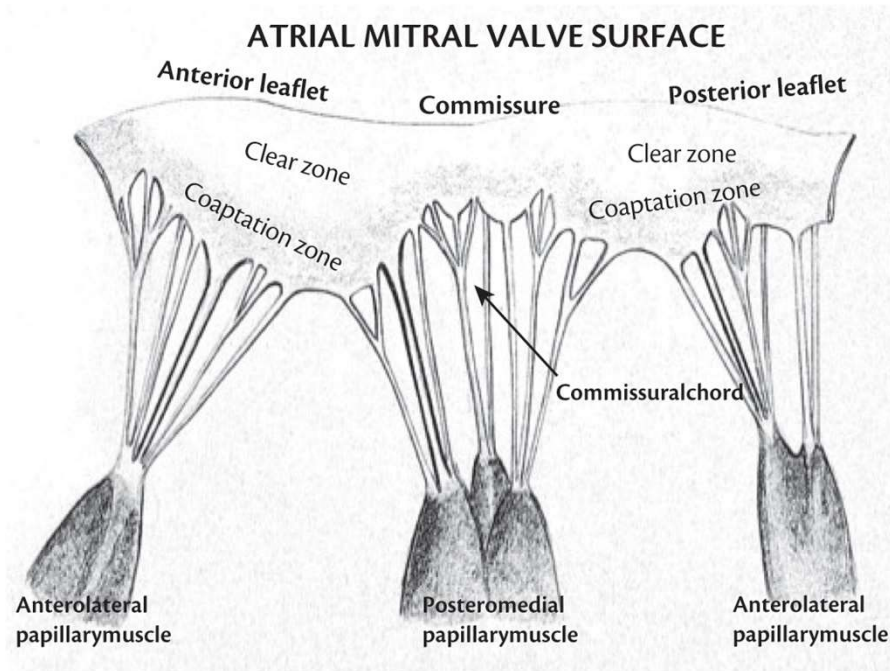


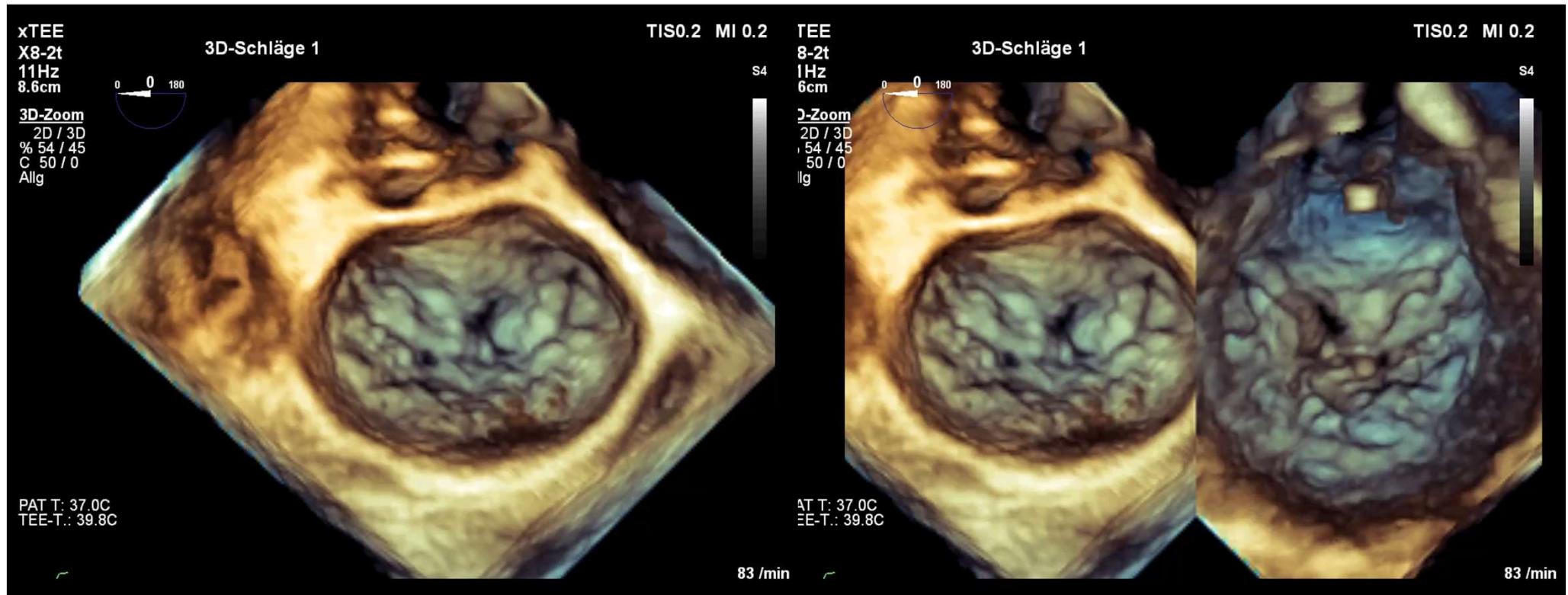
Beurteilung der Mitralklappe



Anatomie der Mitralklappe

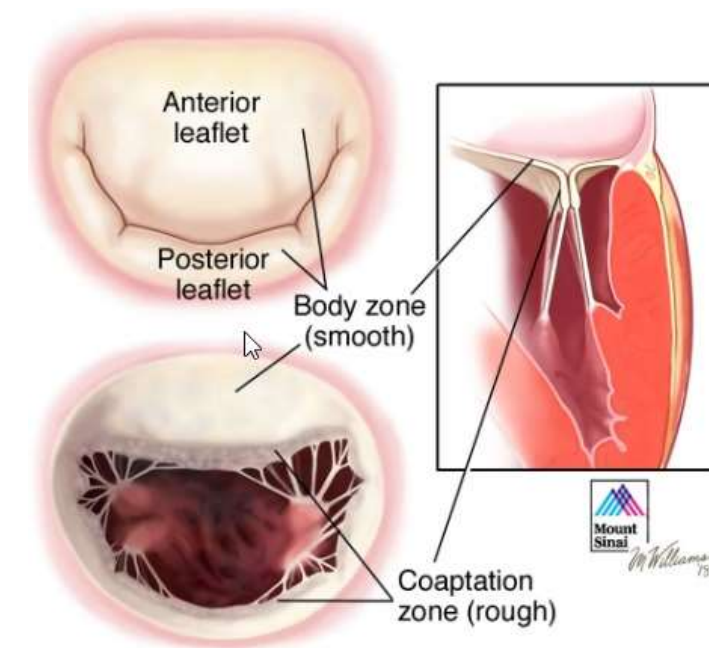


Anatomie der Mitralklappe



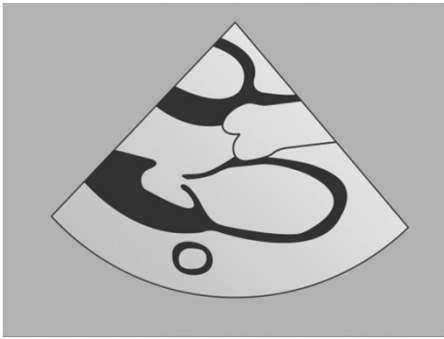
Normwert der Mitralklappe

- Mitralklappen-Oberfläche – 5-6 cm²/m²
- Mitralklappen-Öffnungsfläche – 3-4 cm²
- Mitralklappensegeldicke – 0.7-3.0 mm
- Diastolische Exkursion der Mitralklappensegel: 65-85°
- Normale Koaptation >10mm



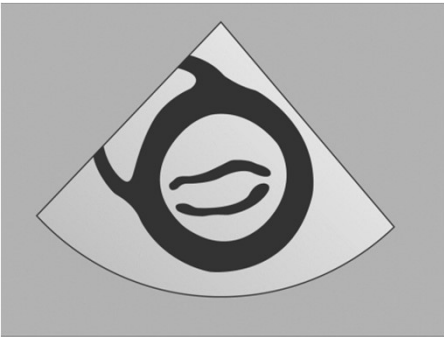
Zone of coaptation (atrial view and cross section).³

Anlotungen zur Beurteilung



PLAX

Segmente der MV A2 und P2



MV SAX

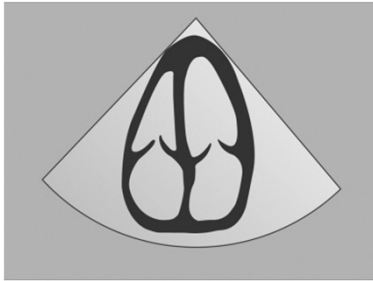
Segmente der MV anterior und posterior



S4Ch

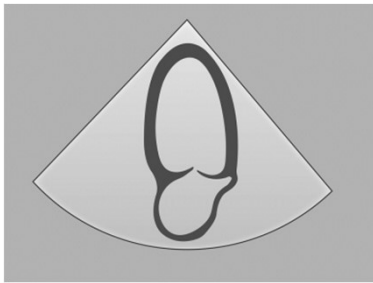
Segmente der MV A2 und P2

Anlotungen zur Beurteilung



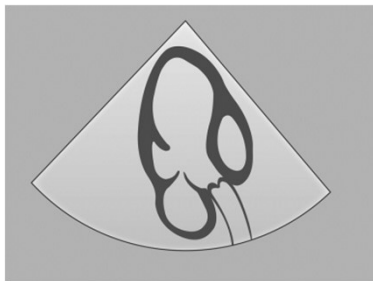
A4Ch

Segmente der MV A1A2 und P2P3



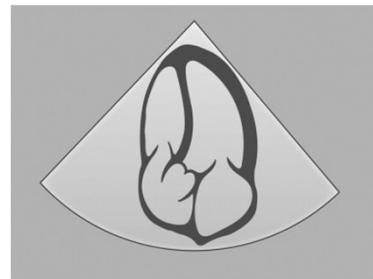
A2Ch

Segmente der MV P1, A2 und P3 Segmente



A3Ch

Segmente der MV A2 und P2



A5Ch

Segmente der MV A1 und P1

Erw. Echo

S5-1

53Hz
14cm

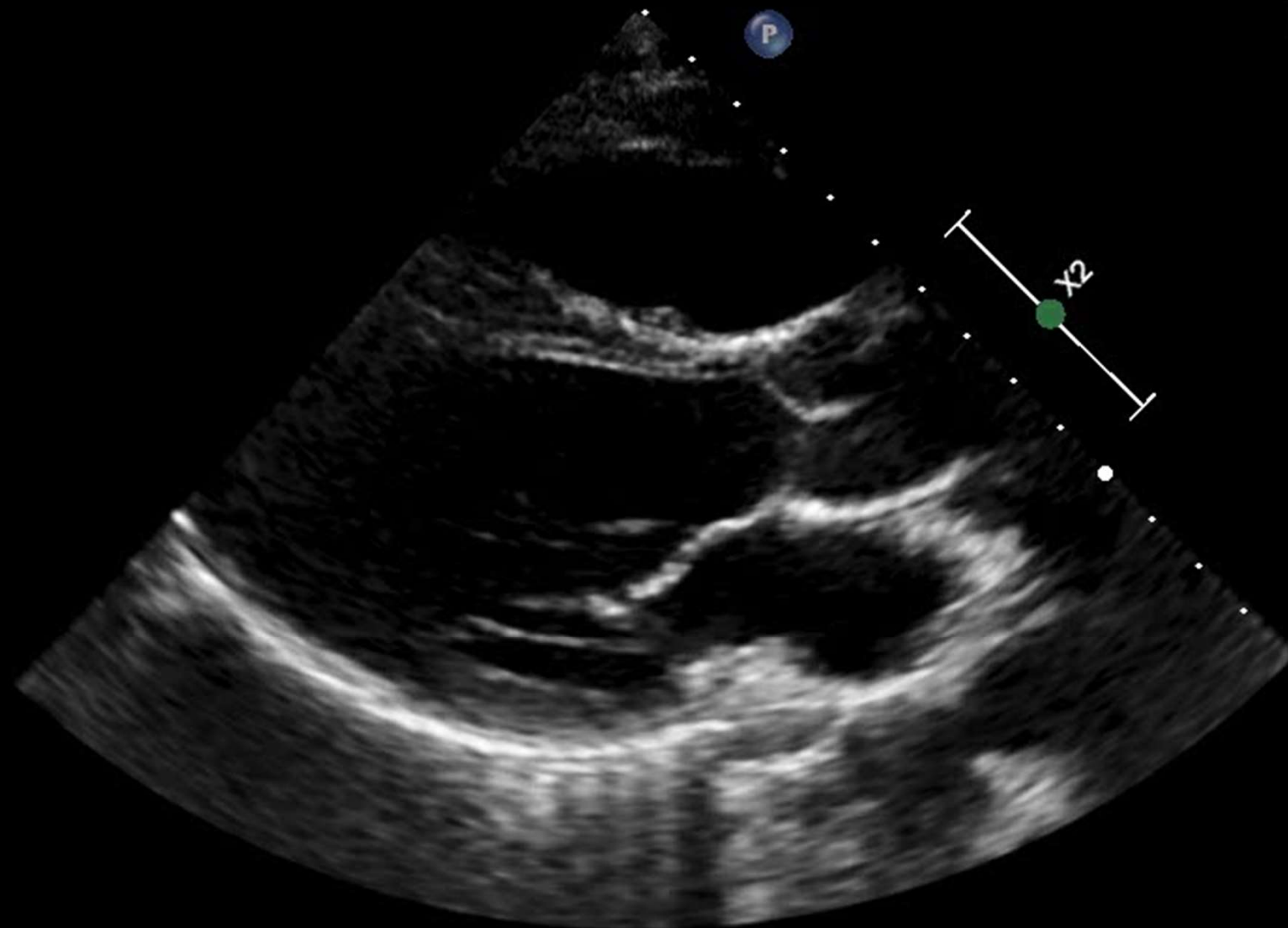
2D

70%
C 50
P Min.
HAufl

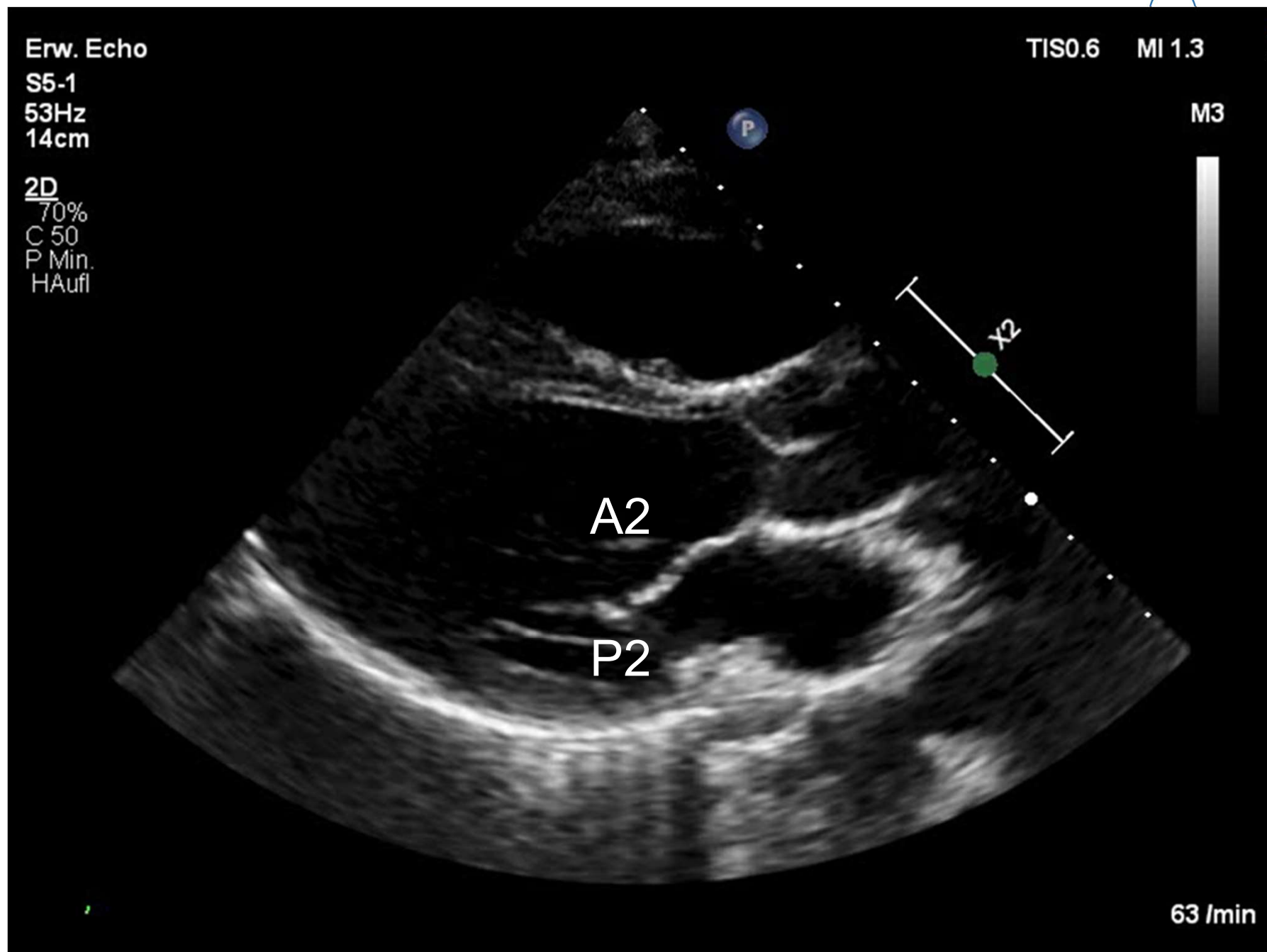
TISO.6

MI 1.3

M3

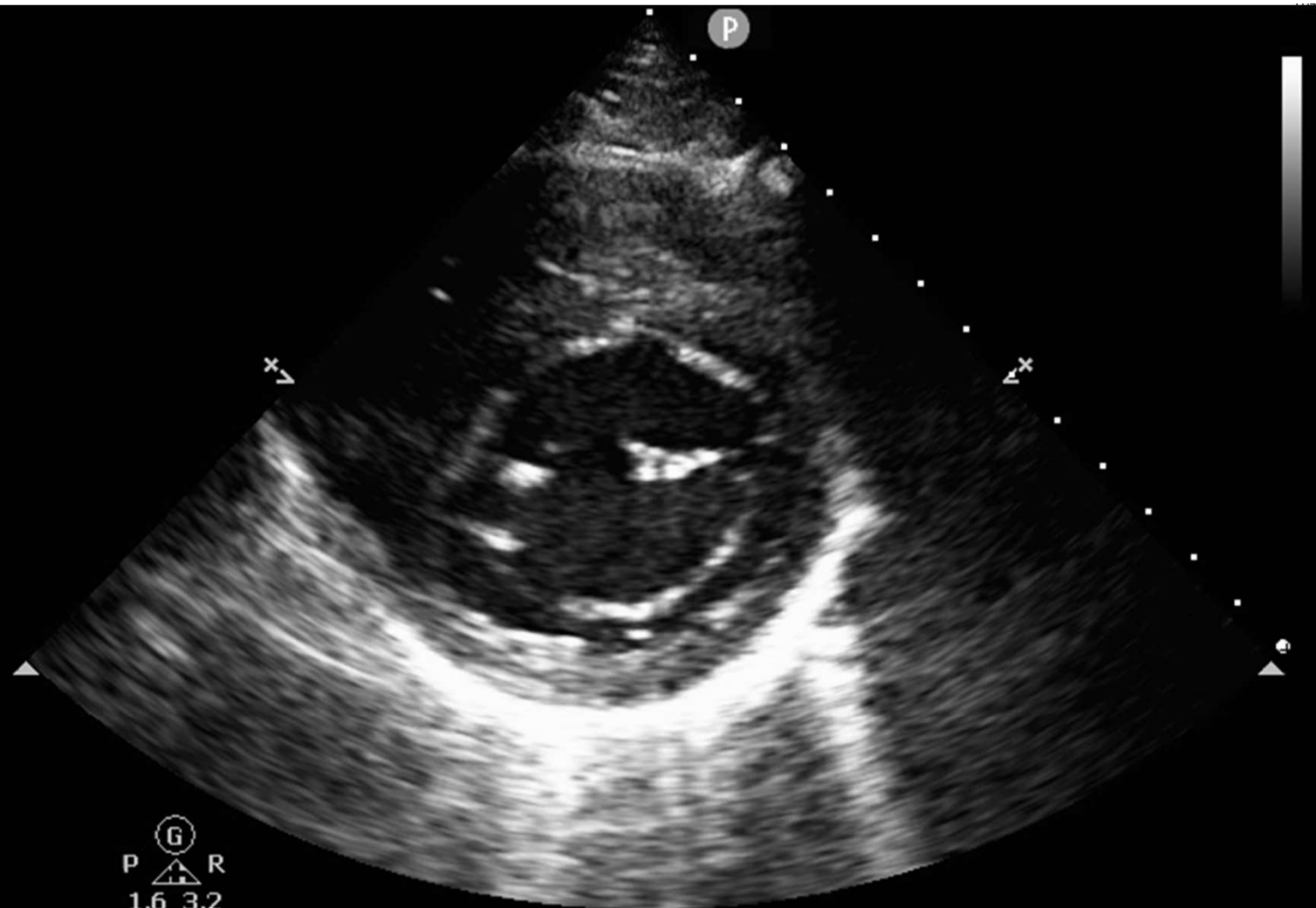


63 /min



Erw. Echo
S5-1
35Hz
14,0cm

2D
HAllg
Vst. 58
K 50
3/2/0
75 mm/s

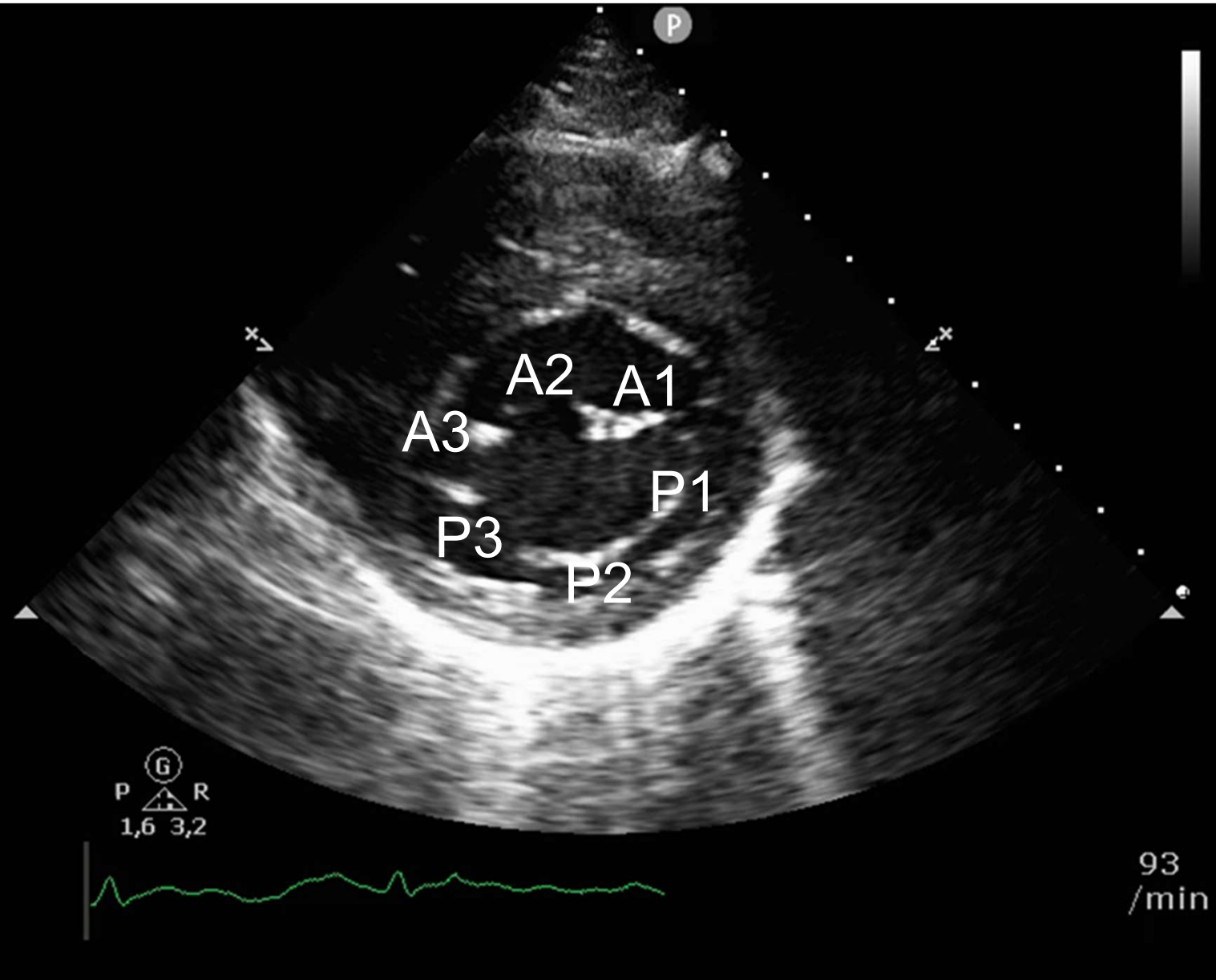


G
P R
1,6 3,2

93
/min

Erw. Echo
S5-1
35Hz
14,0cm

2D
HAllg
Vst. 58
K 50
3/2/0
75 mm/s



Erw. Echo

X5-1

50Hz

17cm

2D

62%

C 50

P Min.

HAllg



TIS0.4 MI 1.2

M3



76 /min

Erw. Echo

X5-1
50Hz
17cm

2D
62%
C 50
P Min.
HAllg

Ⓔ
P R
1.6 3.2



TIS0.4 MI 1.2

M3



A1A2

P2P3



76 /min

Erw. Echo

X5-1
50Hz
17cm

2D

62%
C 50
P Min.
HAllg



TIS0.4 MI 1.2

antonsspital
IN SURSEE WOLHUSEN

M3



P2 A2



74 /min

Erw. Echo

X5-1
50Hz
17cm

2D
62%
C 50
P Min.
HAllg



TIS0.4 MI 1.2

M3



x2

74 /min

Erw. Echo

X5-1
50Hz
17cm

2D

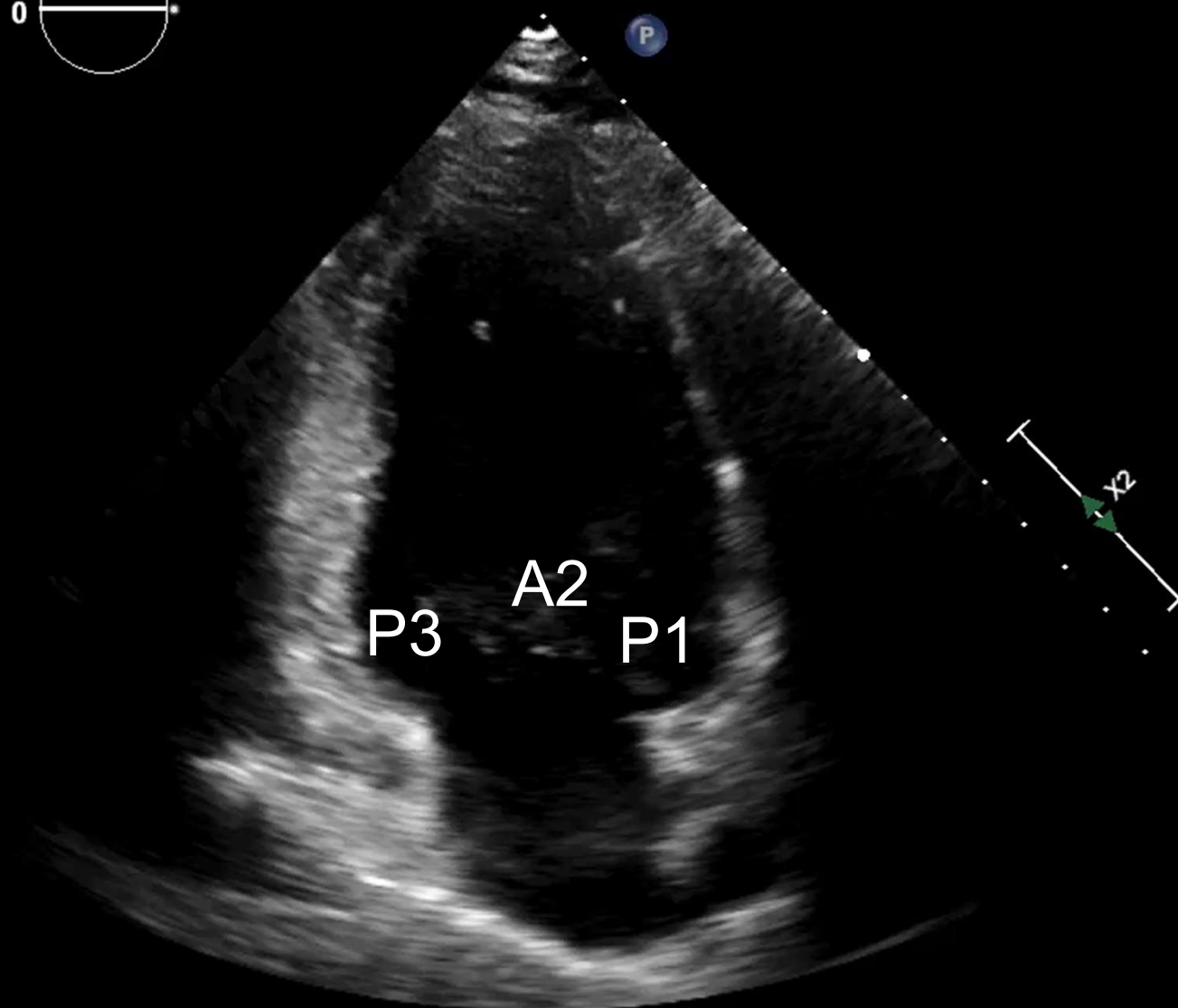
62%
C 50
P Min.
HAllg



TIS0.4 MI 1.2

antonsspital
IN SURSEE WOLHUSEN

M3



74 /min

Erw. Echo

X5-1
50Hz
17cm

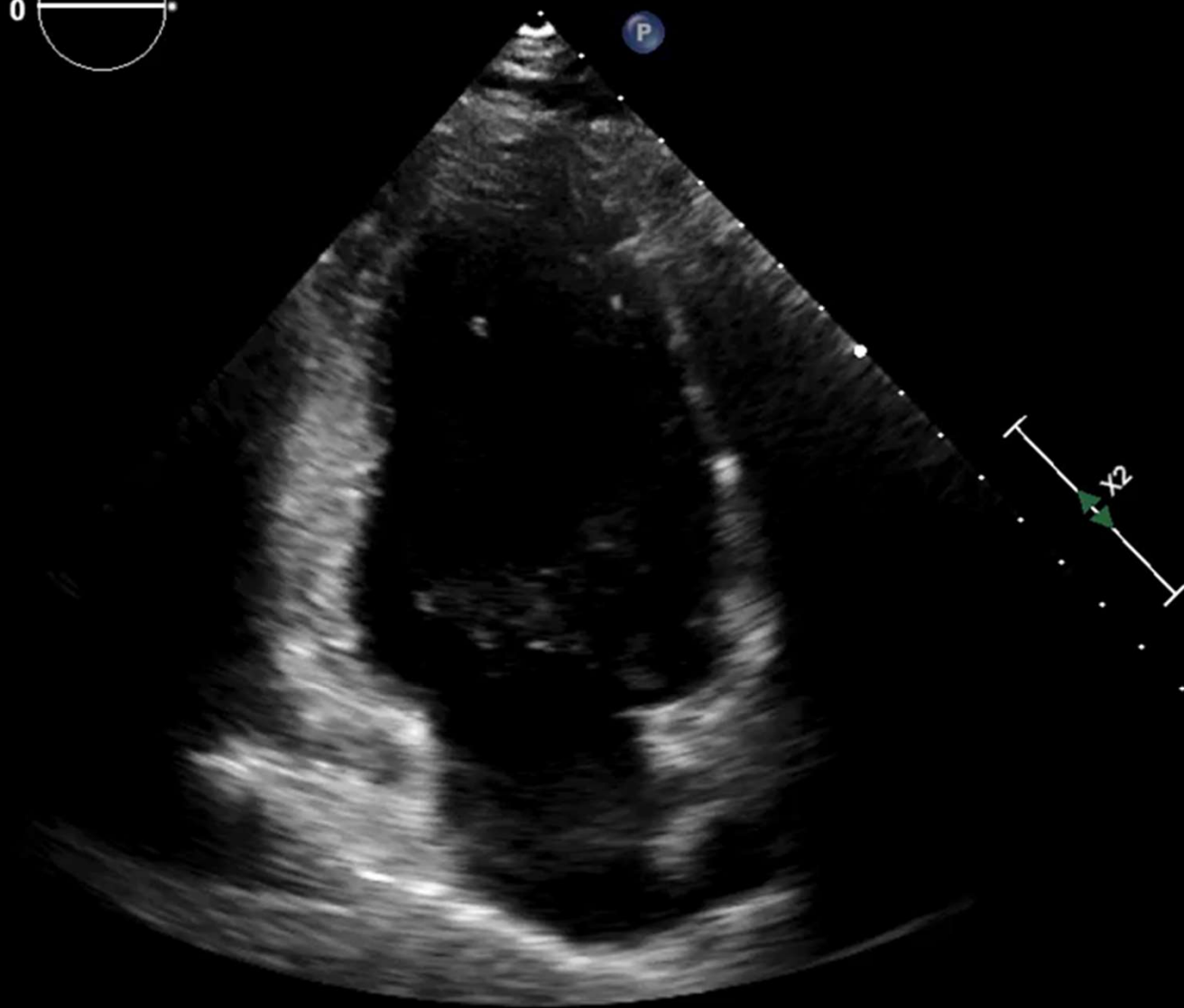
2D

62%
C 50
P Min.
HAllg



TIS0.4 MI 1.2

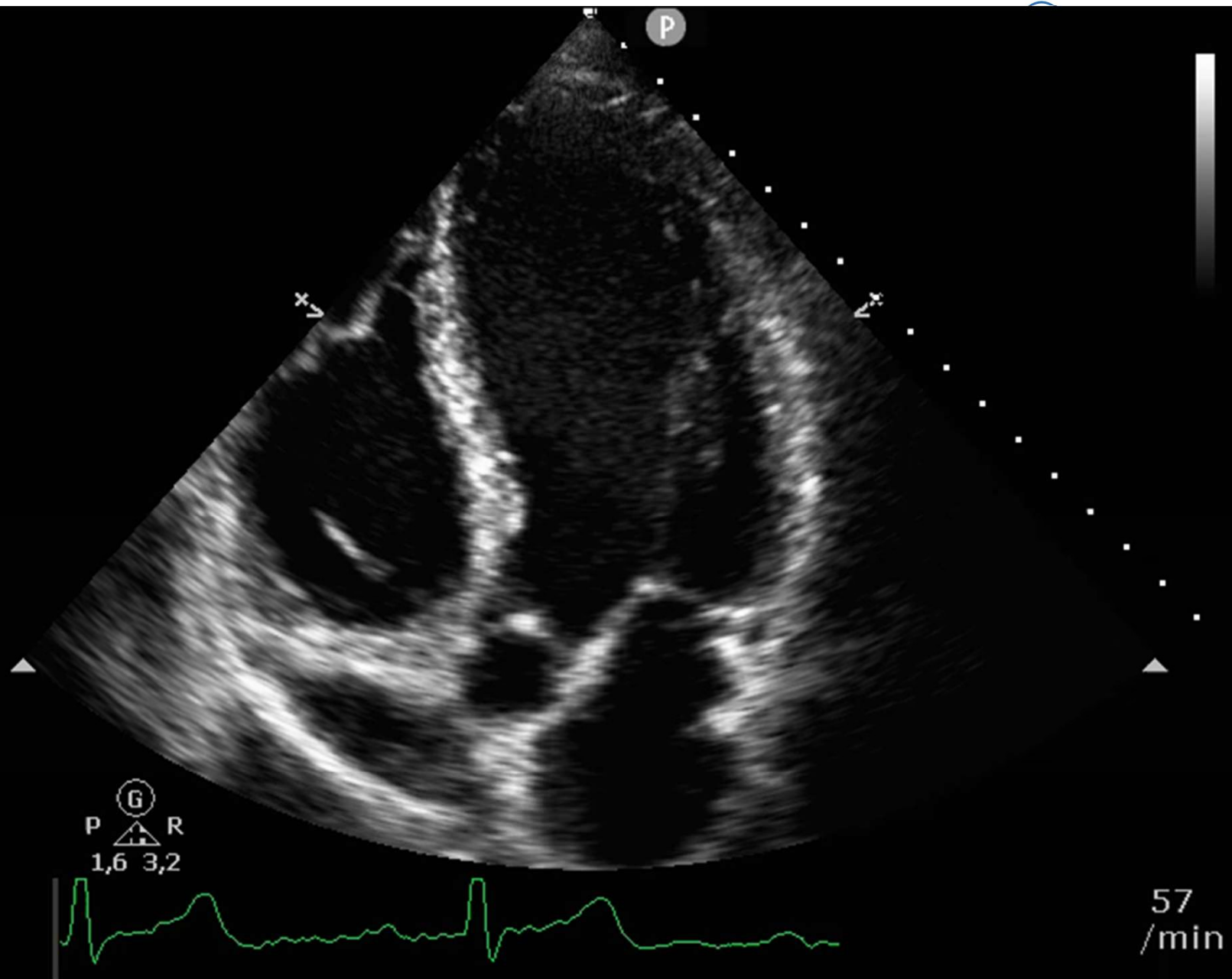
M3



74 /min

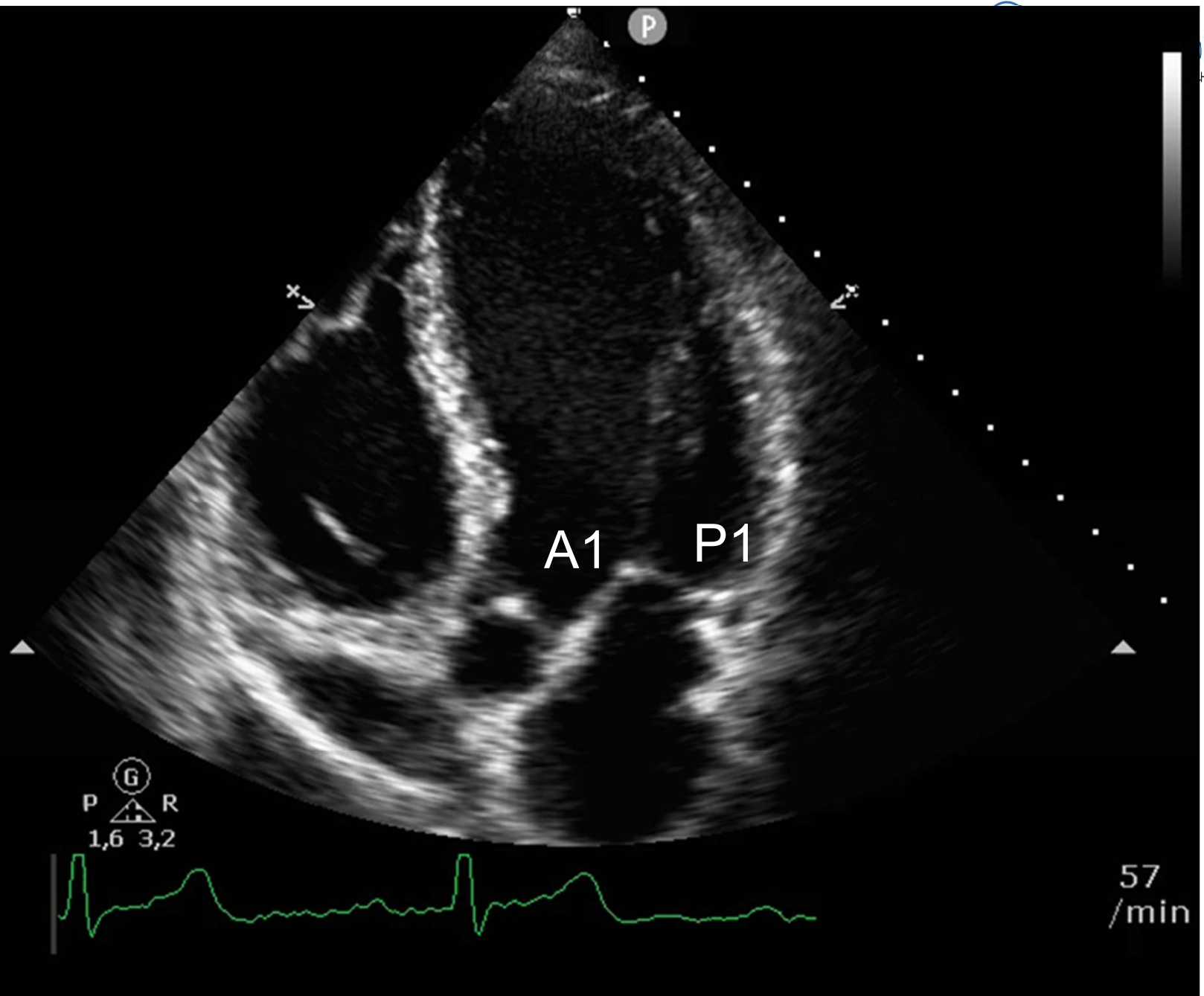
Erw. Echo
S5-1
31Hz
17,0cm

2D
HAllg
Vst. 43
K 53
3/2/0
75 mm/s

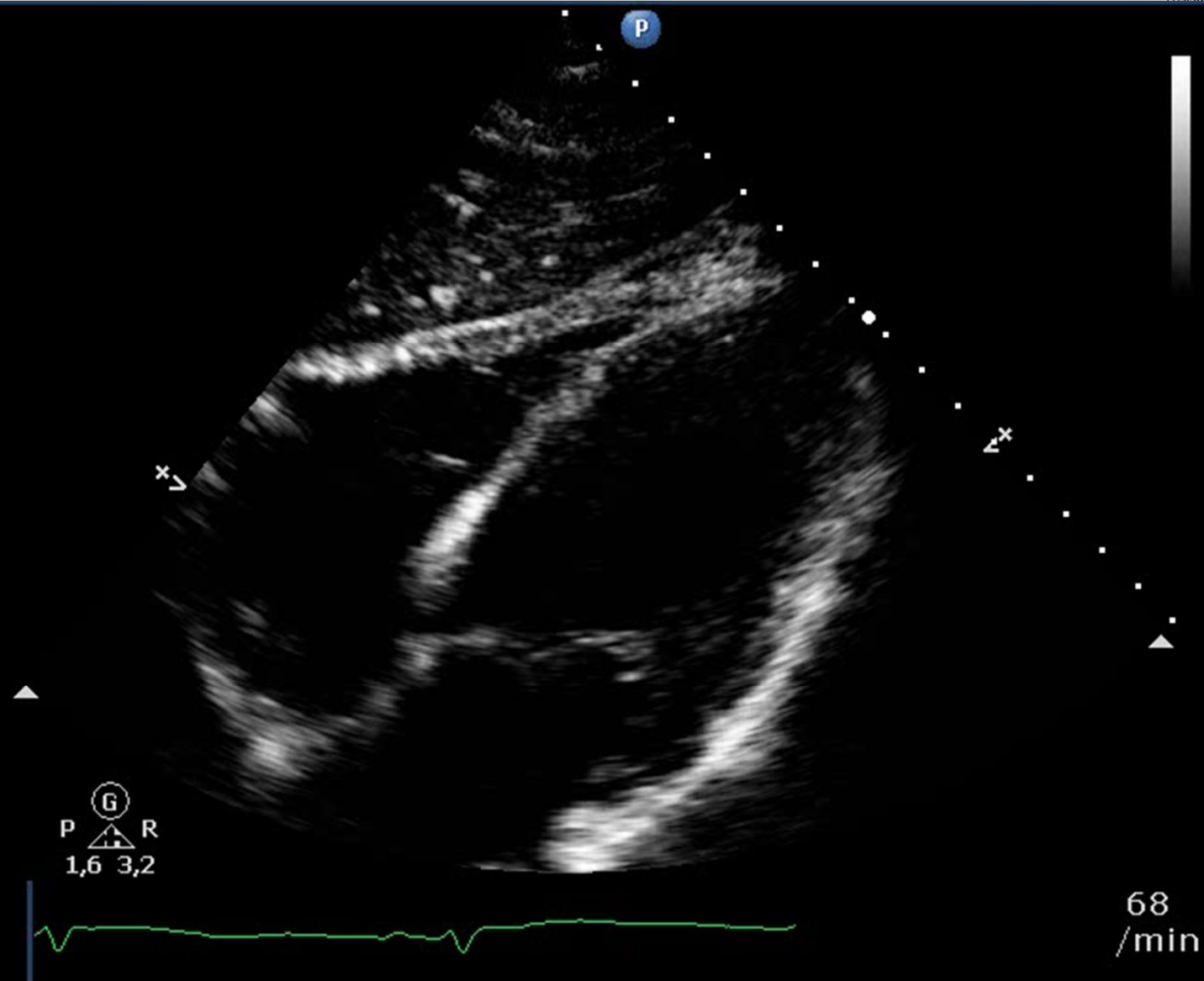


Erw. Echo
S5-1
31Hz
17,0cm

2D
HAllg
Vst. 43
K 53
3/2/0
75 mm/s



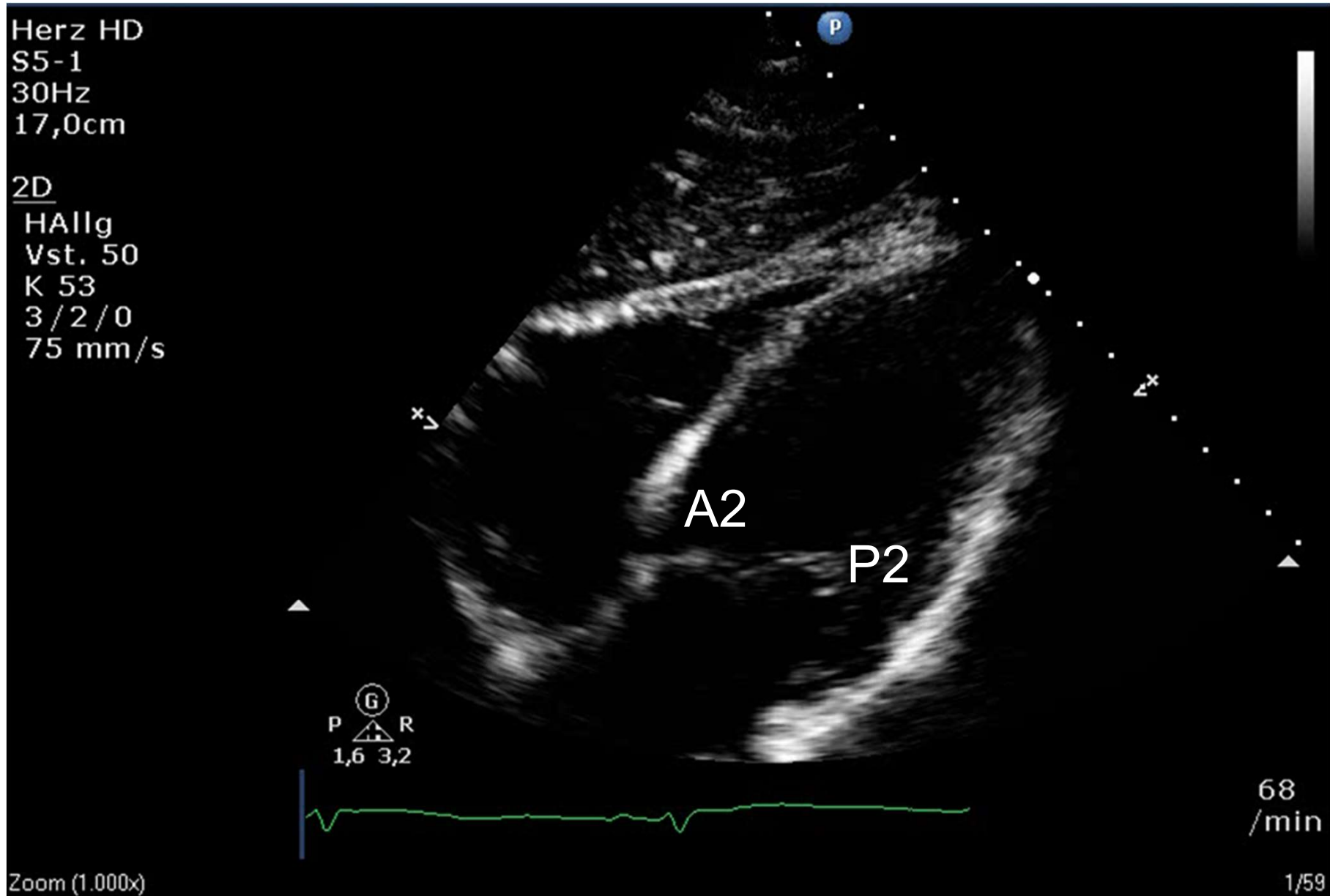
Zoom (1.000x)

68
/min

1/59

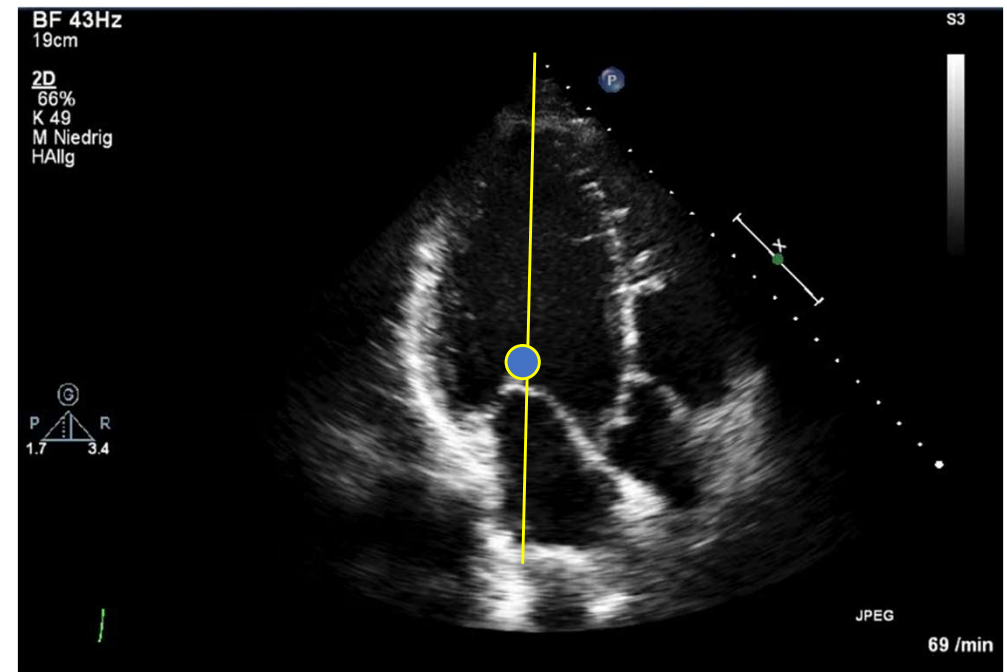
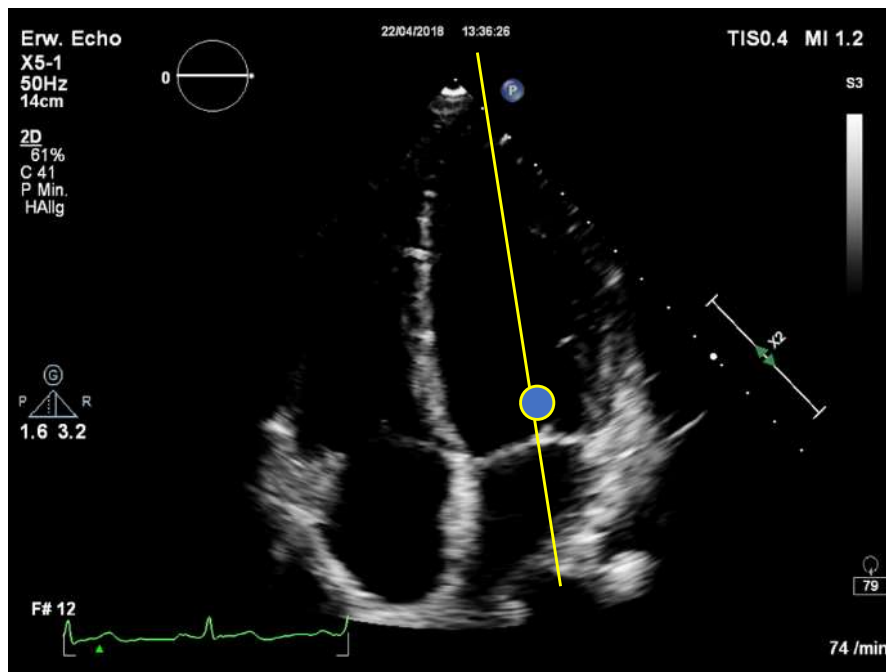
Herz HD
S5-1
30Hz
17,0cm

2D
HAllg
Vst. 50
K 53
3 / 2 / 0
75 mm/s



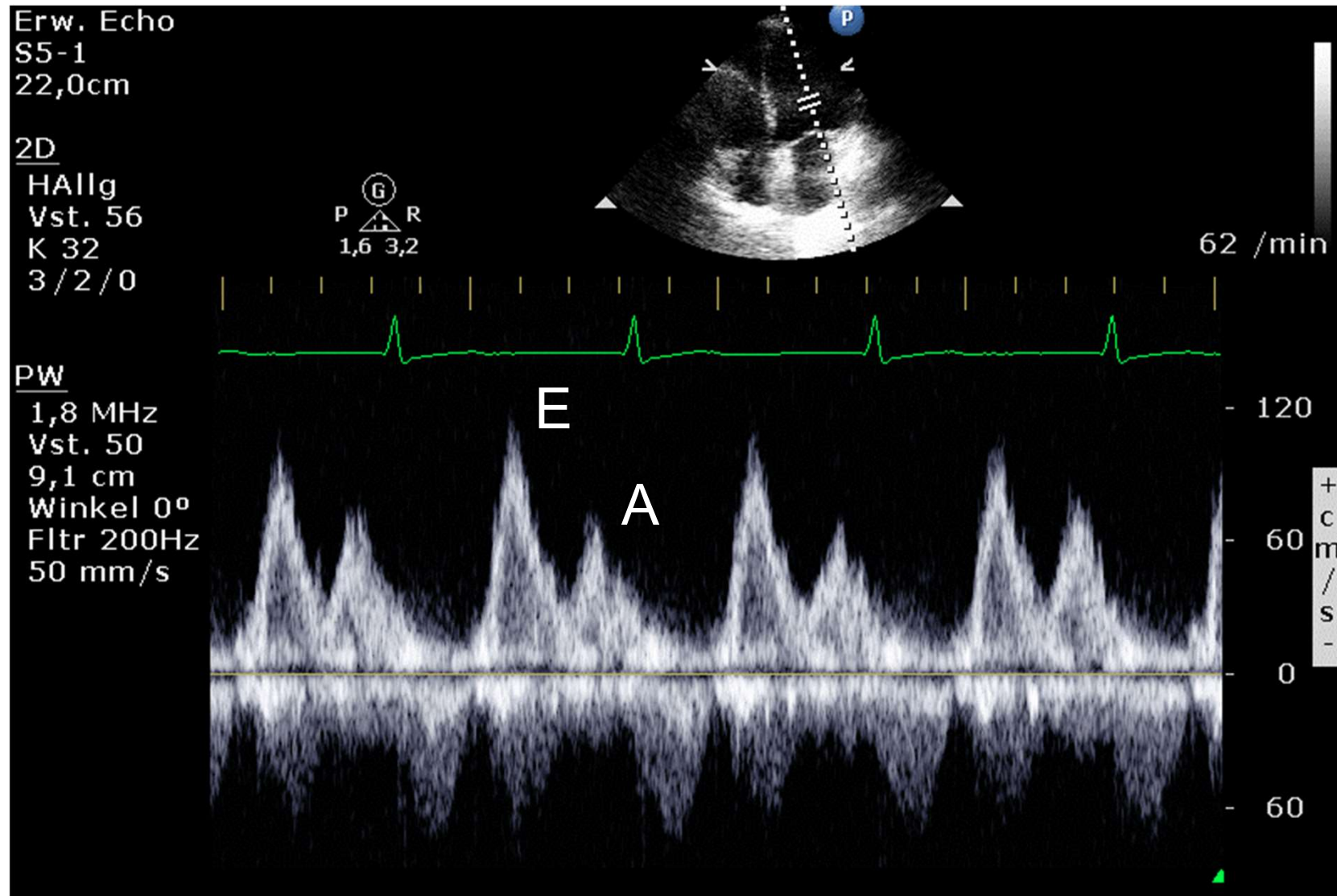
Doppler-Untersuchung der MV

- Cave! Winkel!
- PW- Doppler
 - Sample Volumen der Spitze der Mitralsegel im LV
- CW- Doppler



PW der Mitralklappe

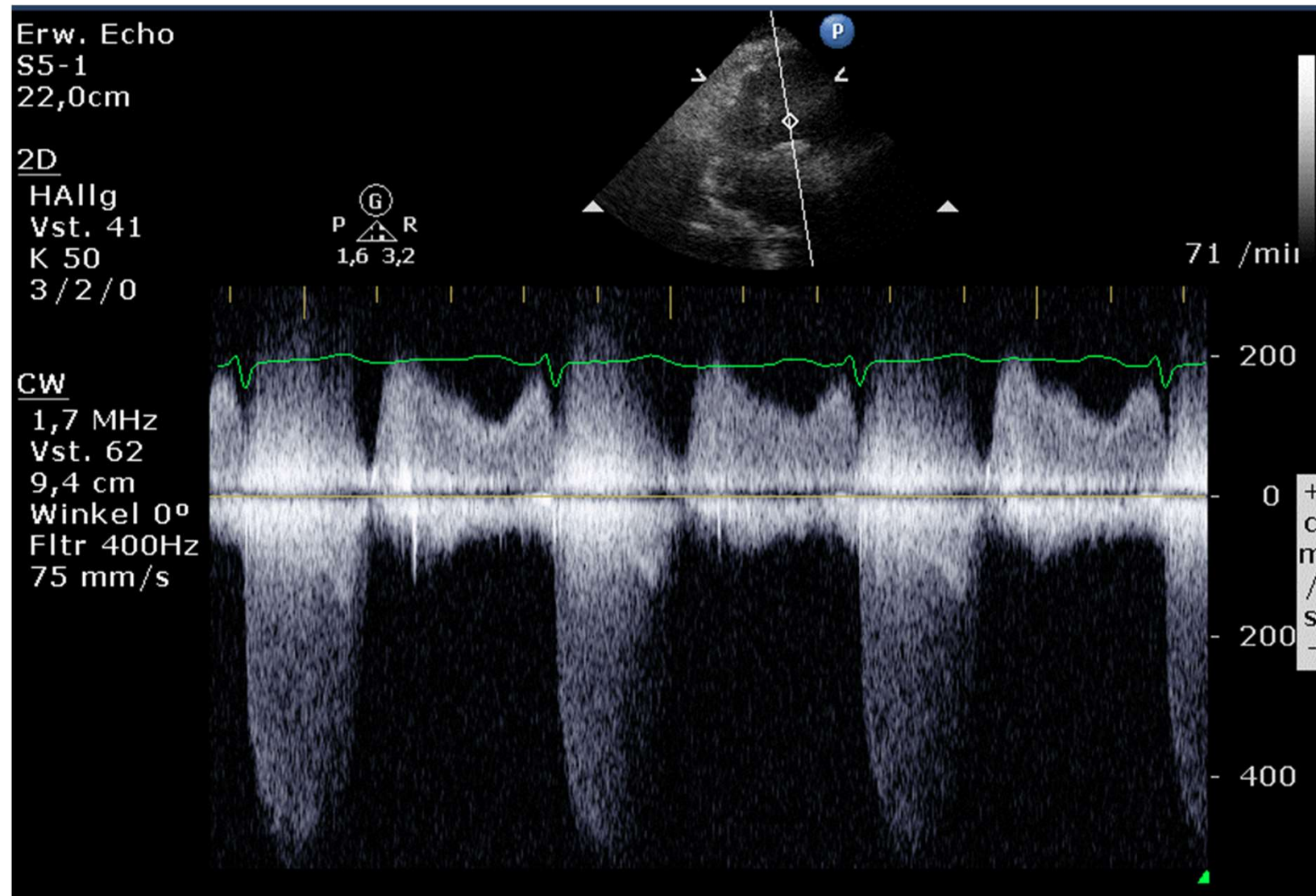
- Fluss: Anterograd
- Baseline: Oberhalb der Nulllinie
- Normale Doppler Geschwindigkeiten:
 - E Welle = 0.6-0.8 m/s
 - A Welle = 0.2 – 0.4 m/s
- Diagnostische Wertigkeit:
 - Diastolische Dysfunktion
 - Mitralstenose
 - Perikardtamponade



CW der Mitralklappe

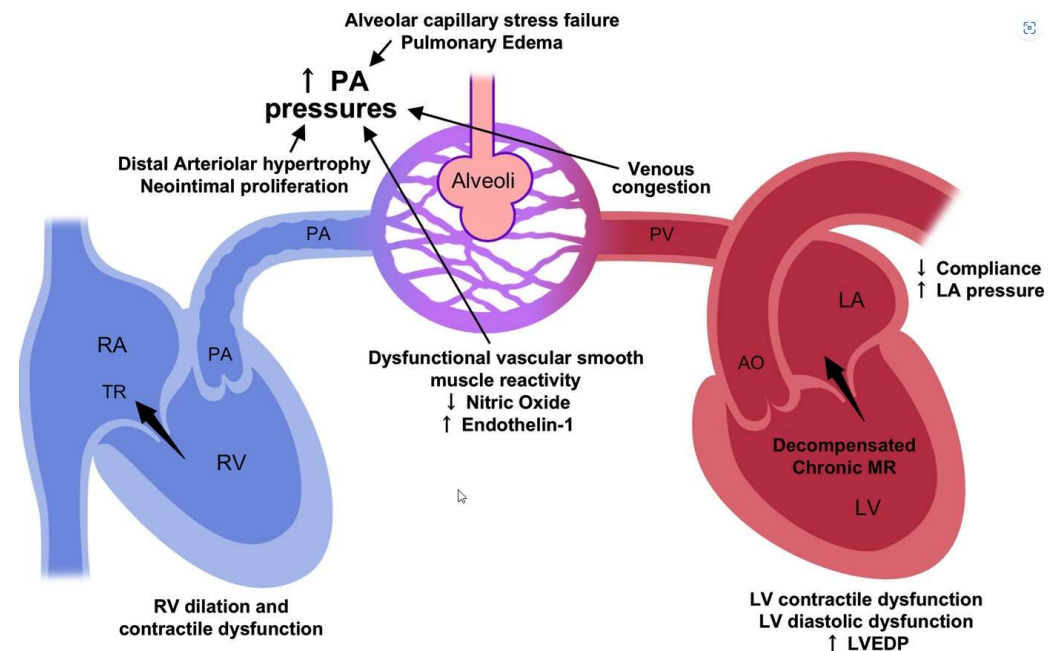
- Fluss: anterograd
- Pathologischer Fluss: Retrograd
- Herzzyklus: Systolisch, LV » LA
- Baseline: Unterhalb der Nulllinie
- Doppler Geschwindigkeiten:
4 - 6 m/s
- Diagnostische Wertigkeit
 - Mitralstenose/-insuffizienz

CW der Mitralklappe

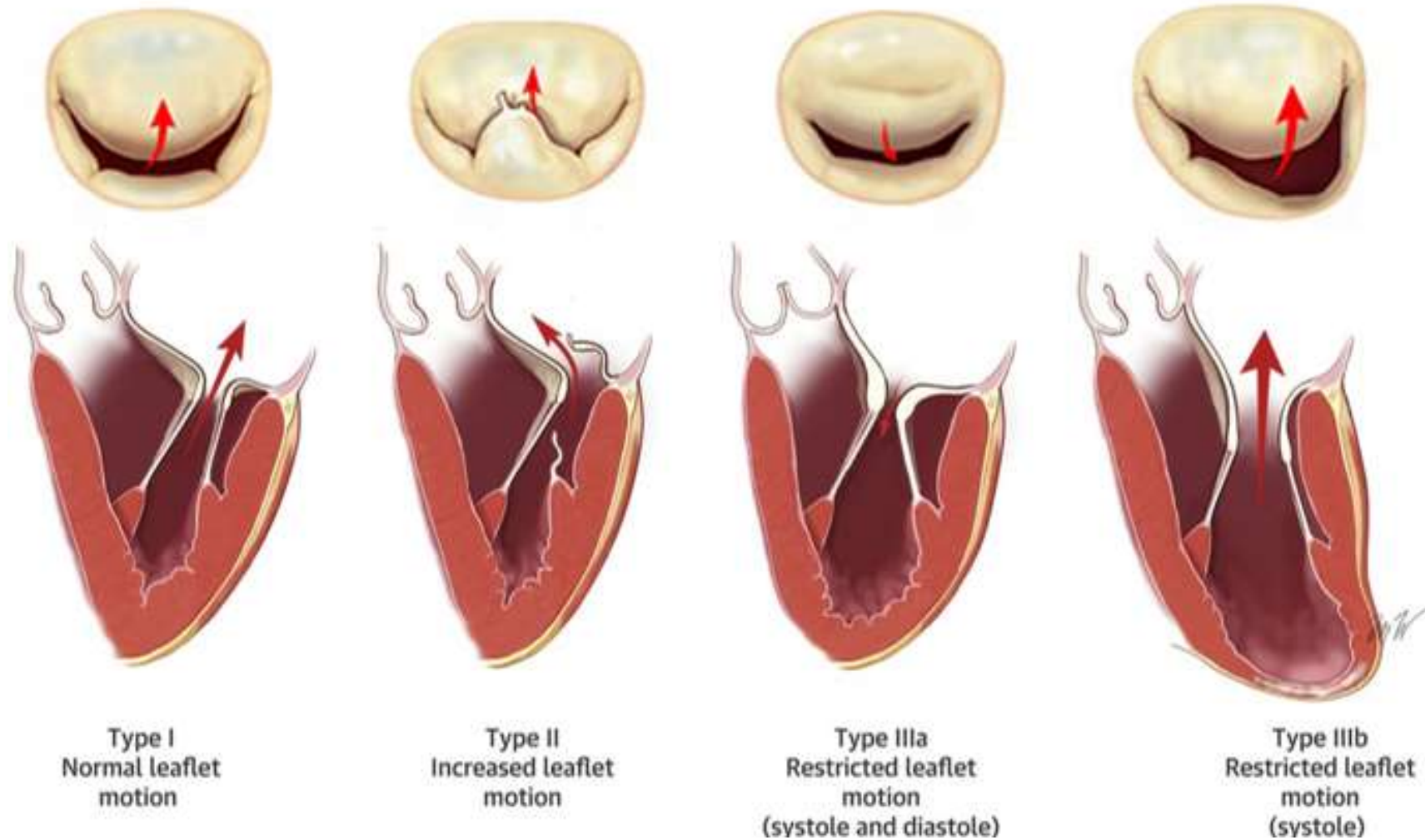


Mitralklappeninsuffizienz

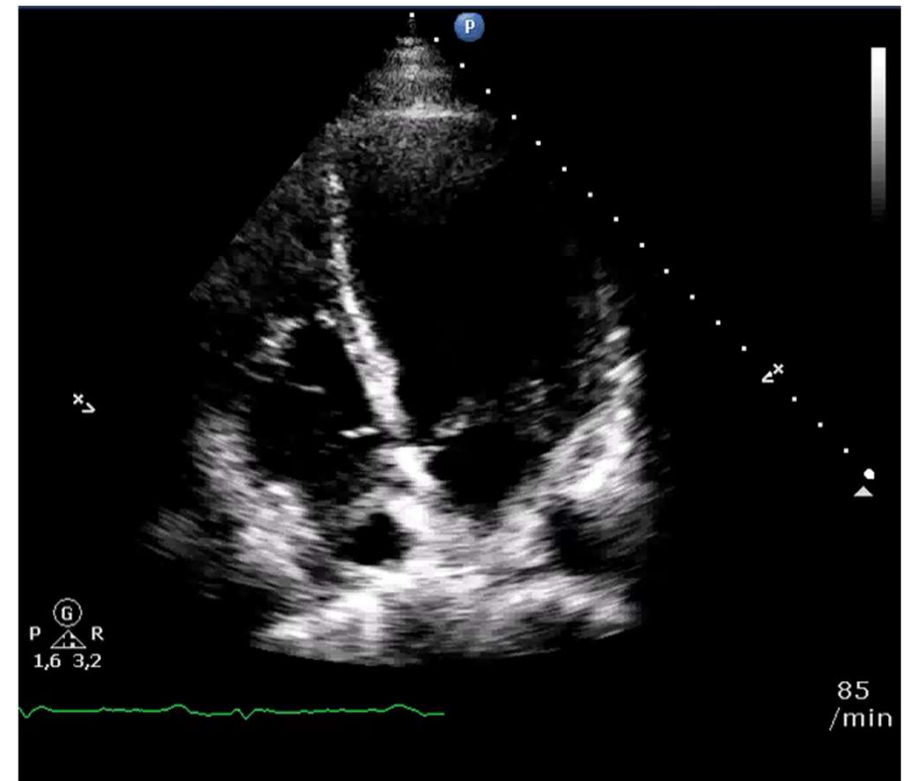
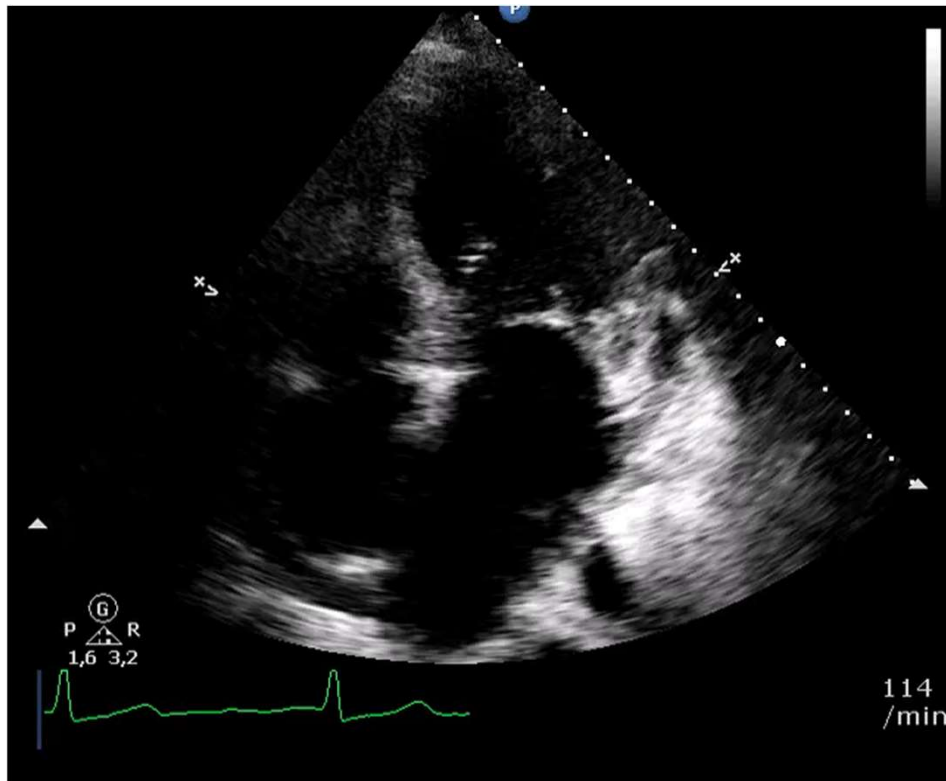
- Ätiologie
 - Primär (Strukturelle Veränderungen, Segelflail, Segelprolaps, Endokarditis, Papillarmuskelabrisse, Rheumatoide Erkrankungen, Kalzifizierte und fibrotische Veränderungen, etc.)
 - Sekundär (Dilatation des Annulus, Restriktion der Klappensegel, SAM (Systolic anterior movement), etc.)
- Pathophysiologie
 - Volumenbelastung des LV
 - Erhöhte Füllungsdrücke des LV
 - Pulmonale Hypertonie
 - Trikuspidalinsuffizienz
 - Reduzierte Nachlast



Pathophysiologie der Mitralklappeninsuffizienz

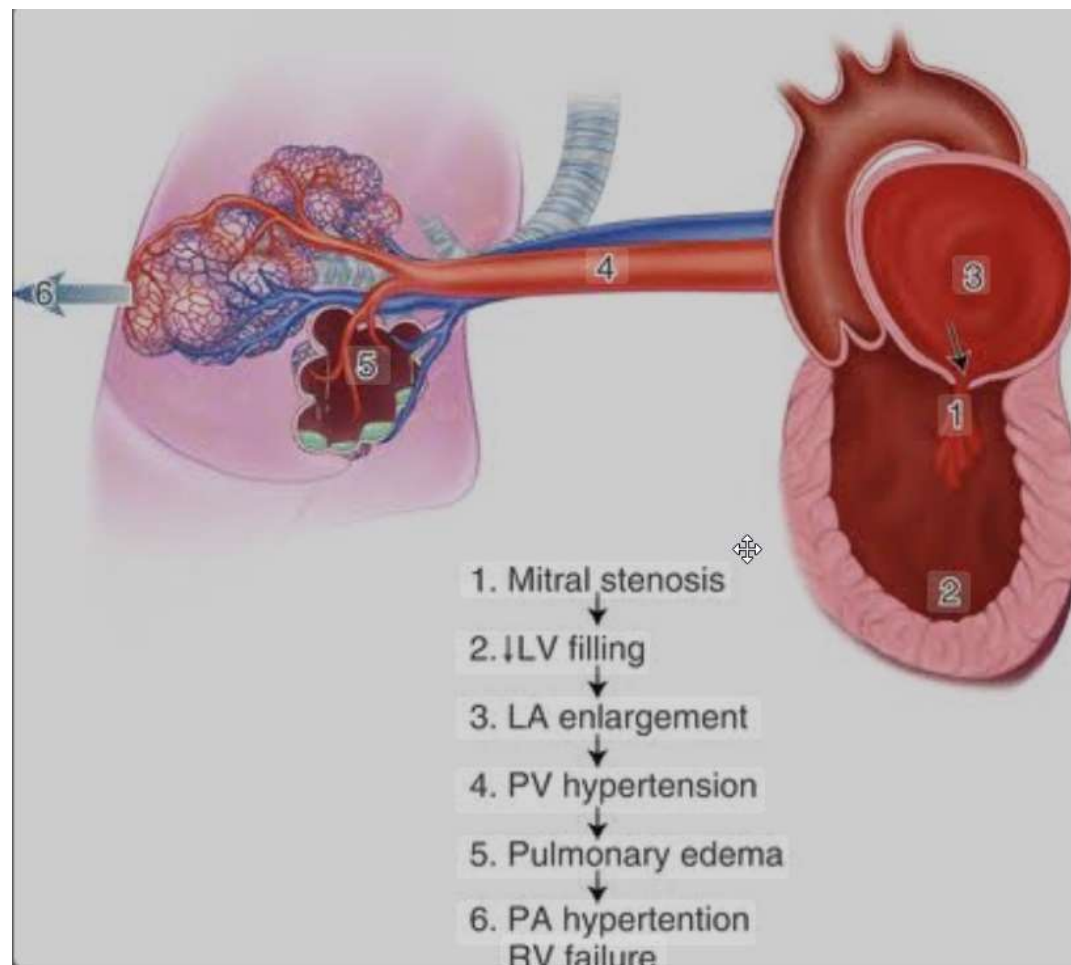


Mitralklappeninsuffizienz

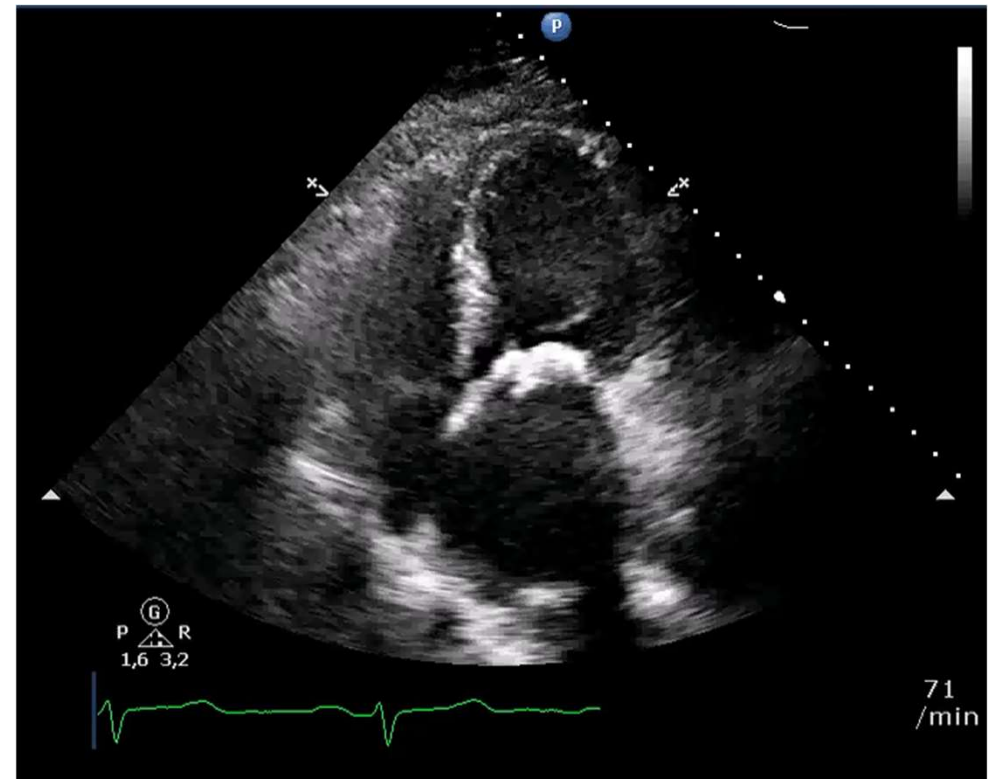
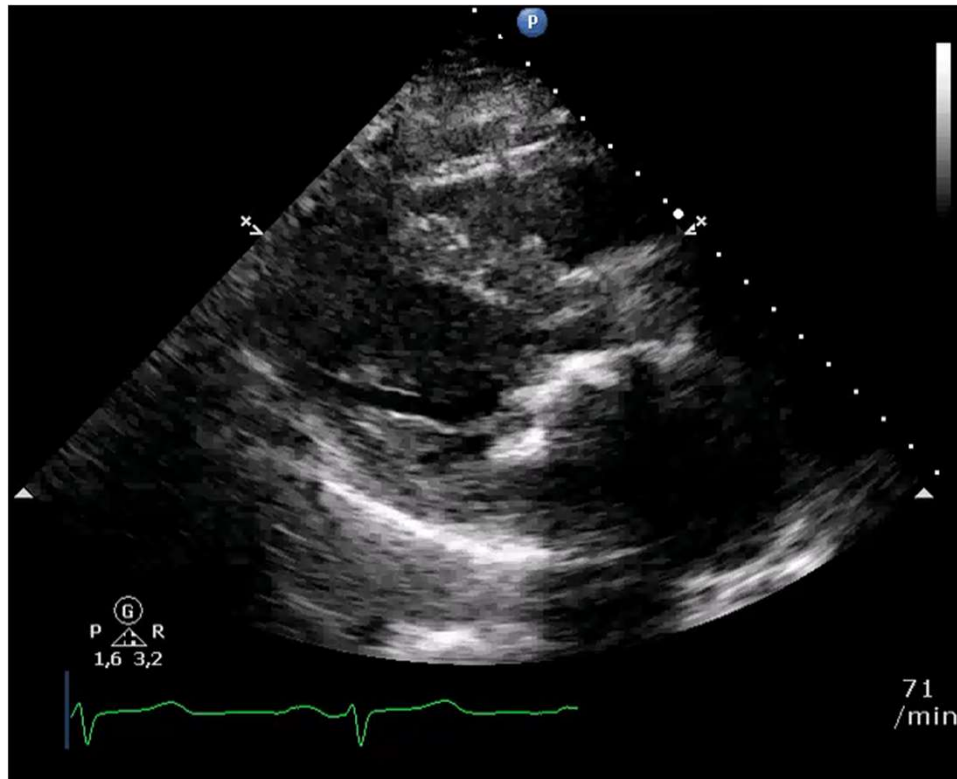


Mitralklappenstenose

- Ätiologie
 - rheumatoide Erkrankungen, Stenose durch Annuluskalifizierung, Kongenital



Mitralklappenstenose



Erw. Echo
S5-1
19Hz
20,0cm

2D
HAllg
Vst. 48
K 46
3/2/0
75 mm/s

FDop
2,5 MHz
Vst. 60
4/5/0
Filtr Hoch

+59

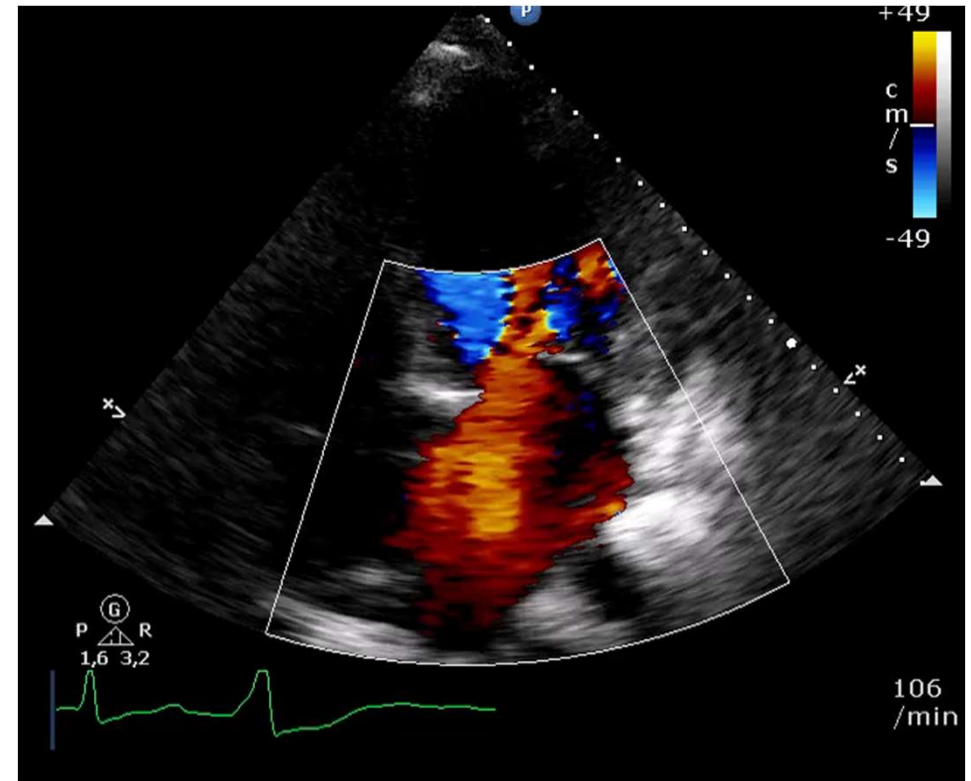
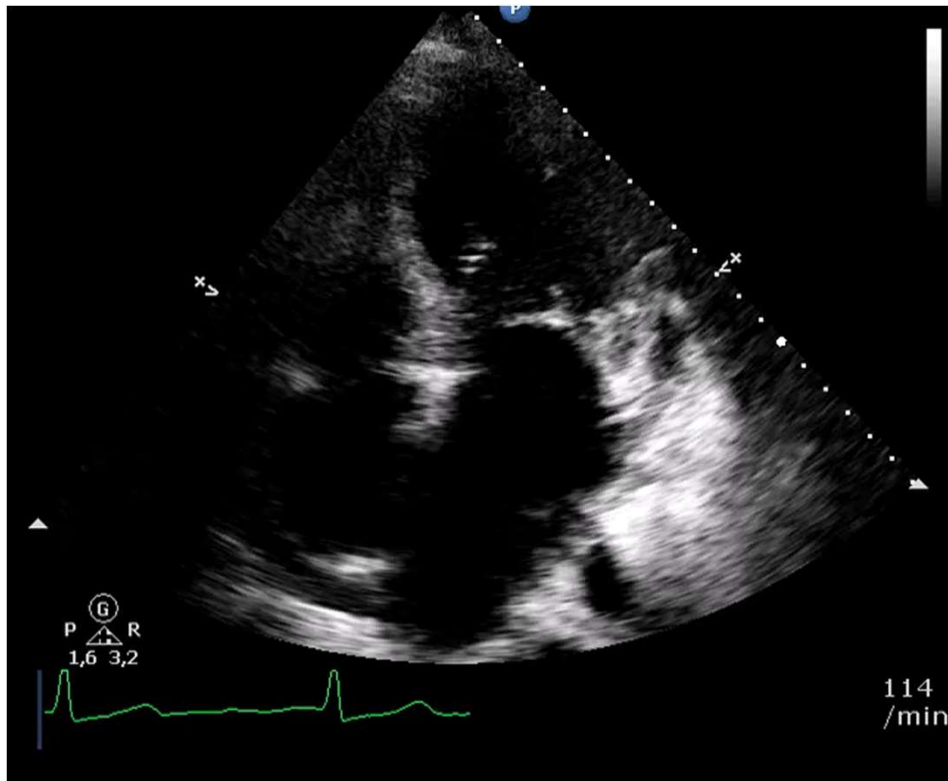
c
m
/s
-59

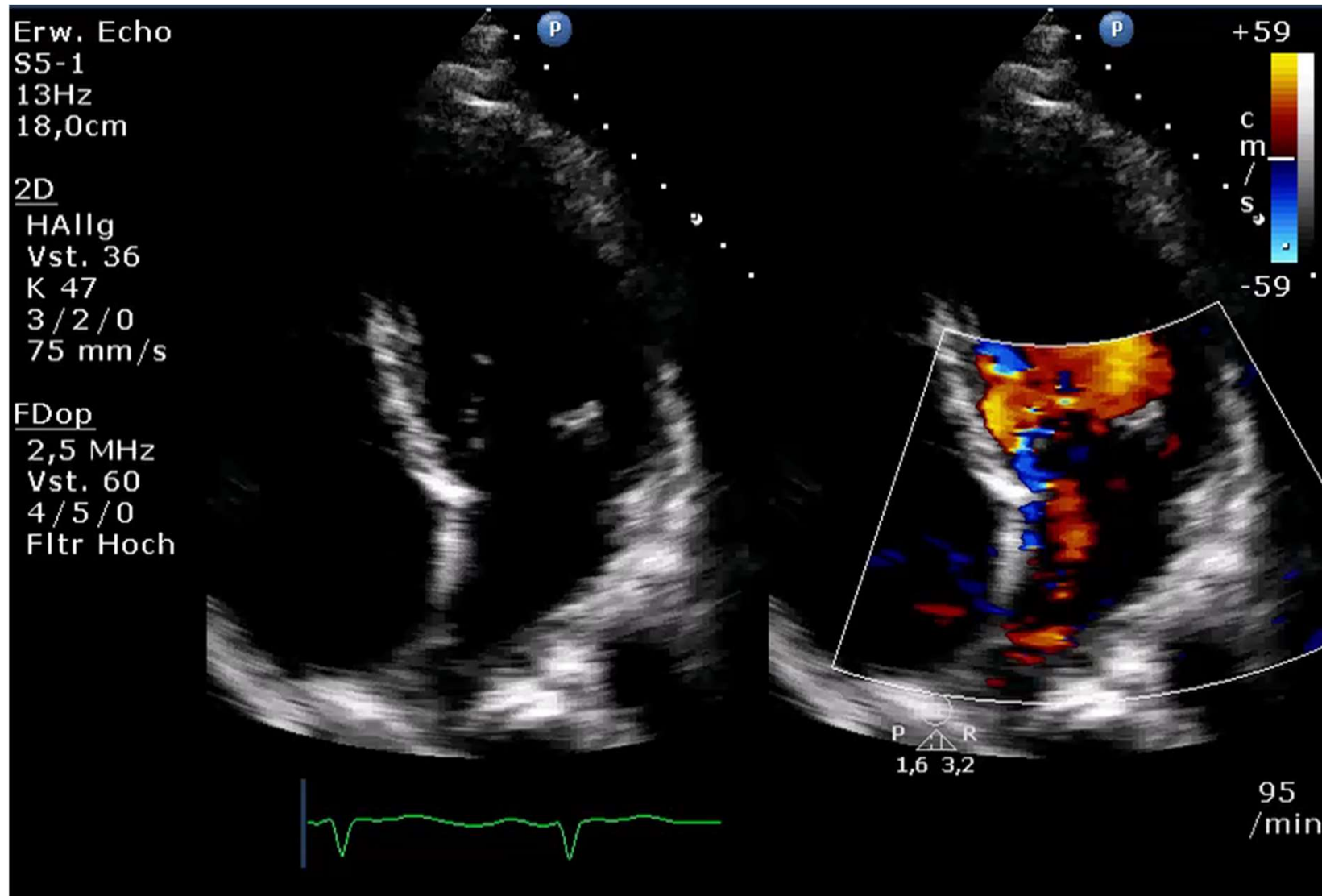
G
P R
1,6 3,2

86
/min

pital
LHUSEN

Color Doppler der Mitralklappe





Fragen?