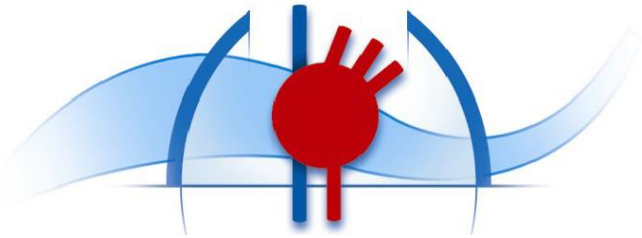
ETO bidimensionnelle normale



l'institut du thorax

Docteur Nicolas Piriou

Instituts thématiques Inserm CENTRE HOSPITALIER UNIVERSITAIRE DE NANTES UNIVERSITÉ DE NANTES

Matériel utilisé

- **Manche : molettes et boutons de modification du plan de coupe**
- **Tube flexible (9 mm - 1 m) – 5 MHz**
- **Extrémité : 10 à 15 mm**
- **Echo 2D et TM, doppler couleur, pulsé et continu, DTI**

Séquence de l ’examen

- Préparation
- Introduction
- Plans de coupe

Préparation du patient

- Recherche des contre-indications :
  - pathologie oesophagienne
  - irradiation médiastinale
  - pathologie cervicale sévère
  - instabilité hémodynamique ou respiratoire
- A jeun depuis > 4 heures
- Explication +++ de l'examen
- Anesthésie locale :
  - Gel de xylocaïne puis gargarisme au spray

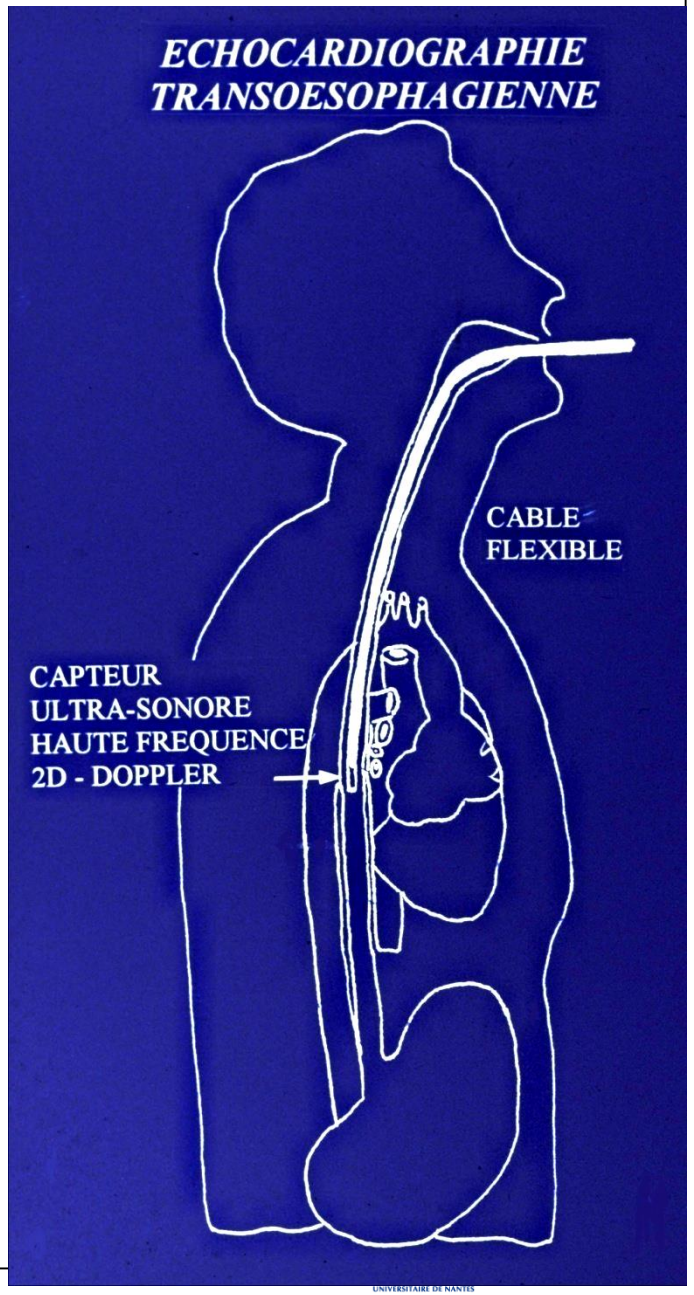
Introduction

- Décubitis latéral gauche, tête fléchie
- Cale-dents, courbure antérieure de l'endoscope
- Introduction dans l'axe central, un doigt dans la bouche pour abaisser la langue
- Passage du voile du palais
- Résistance de la bouche oesophagienne
- Maintenir une légère pression en attendant un mouvement actif de déglutition
- Durée 10 minutes

Introduction

- Echec : 1 à 2 %
- Incidents :
  - Décès < 0,01 %
  - Troubles digestifs, dysphagie transitoire
  - Troubles du rythme, HTA, malaise vagal
  - Perforation de l'œsophage, médiastinite

Introduction



Plans de coupe

- Hauteur de la sonde :
  - Repère aorte/pulmonaire 0°
  - Repère valve aortique 0°
  - Repère 4 cavités 0°
  - Repère trans-gastrique
- Changement de plan de coupe par rotation électronique du capteur (0-180°)
- Rotation manuelle du manche (ajustements)
- Flexions antéro-postérieures (grosse molette) : trans-gastrique

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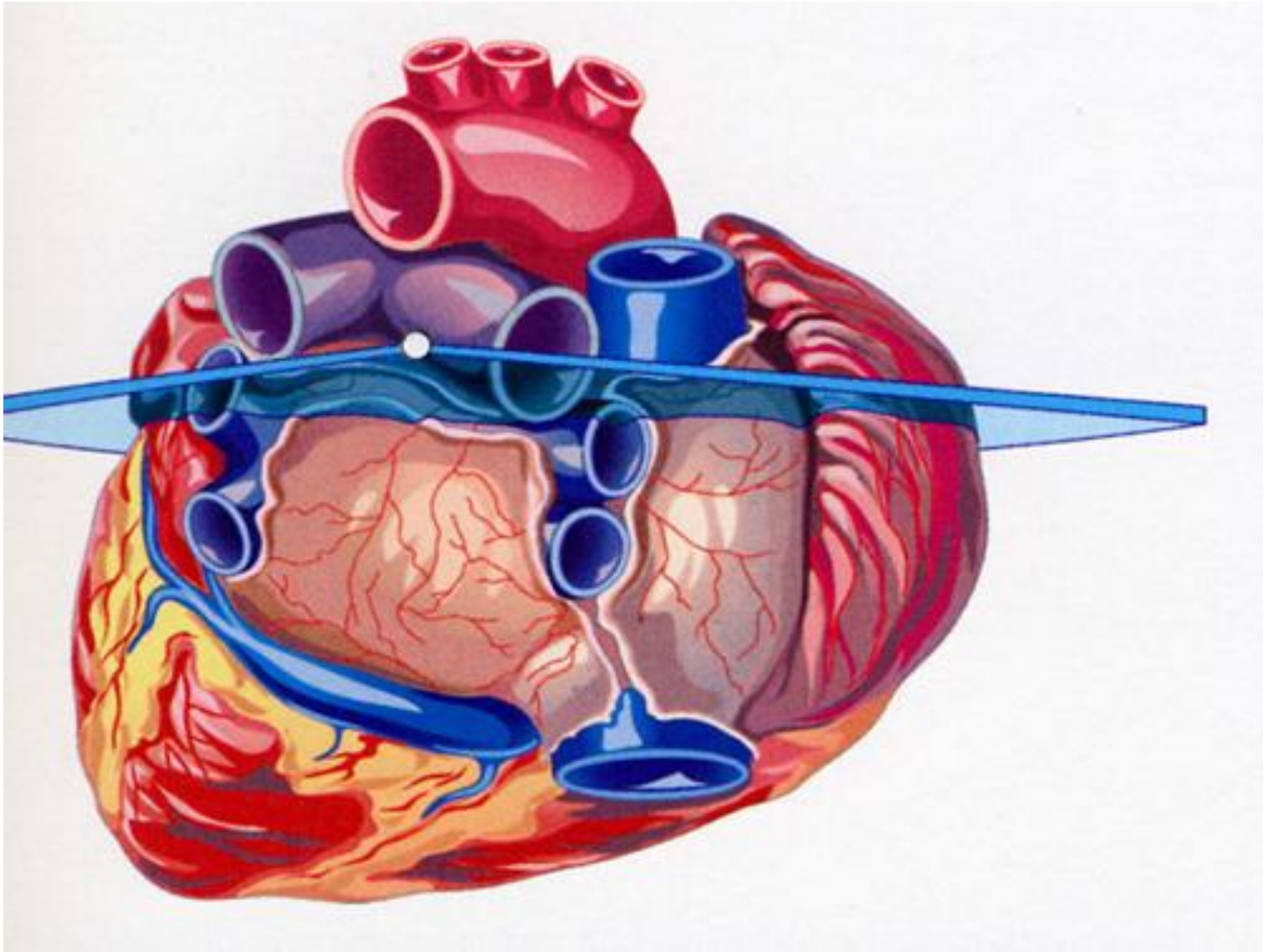
Plans de coupe



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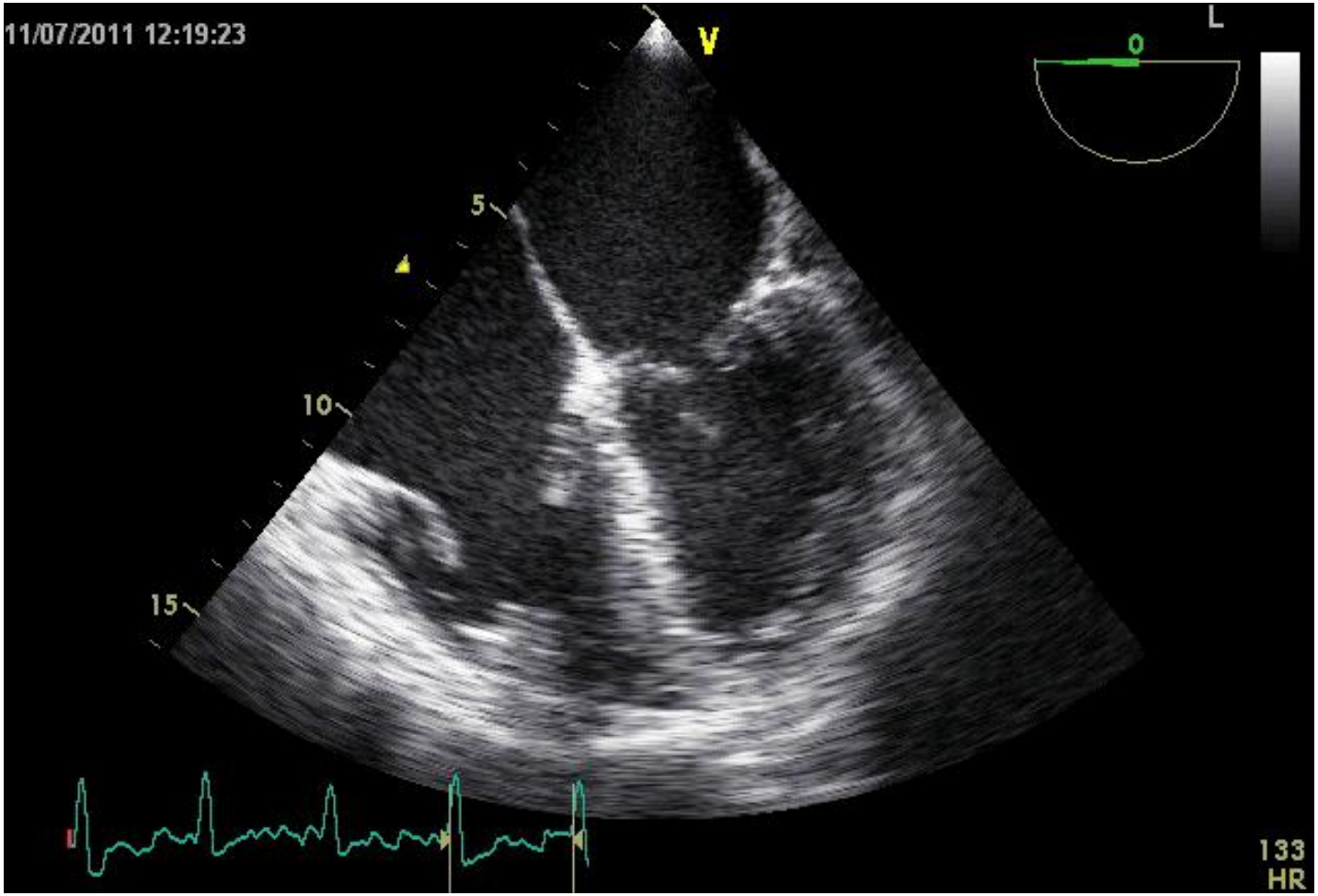
0° : « 4 cavités »



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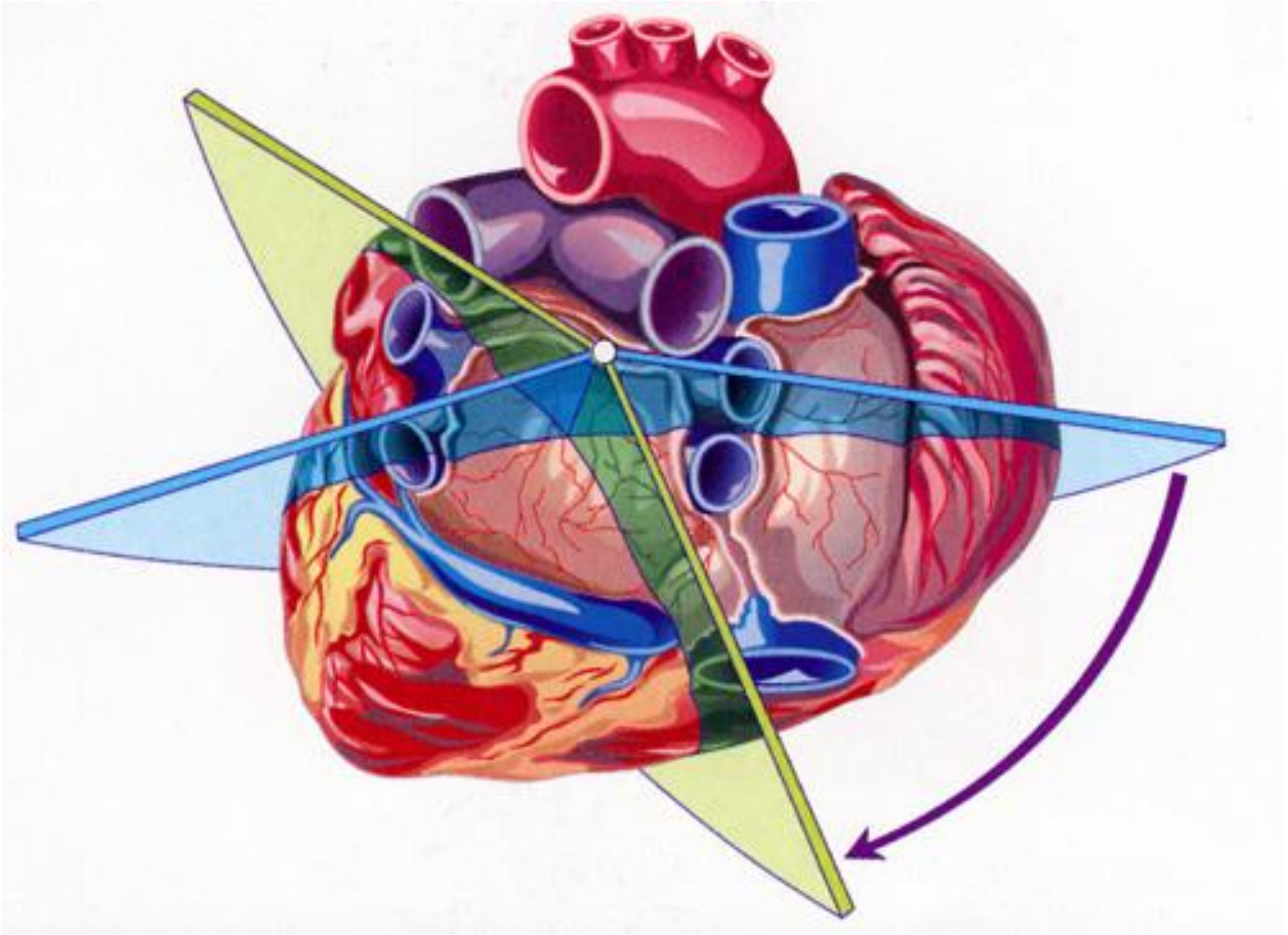
Plans de coupe



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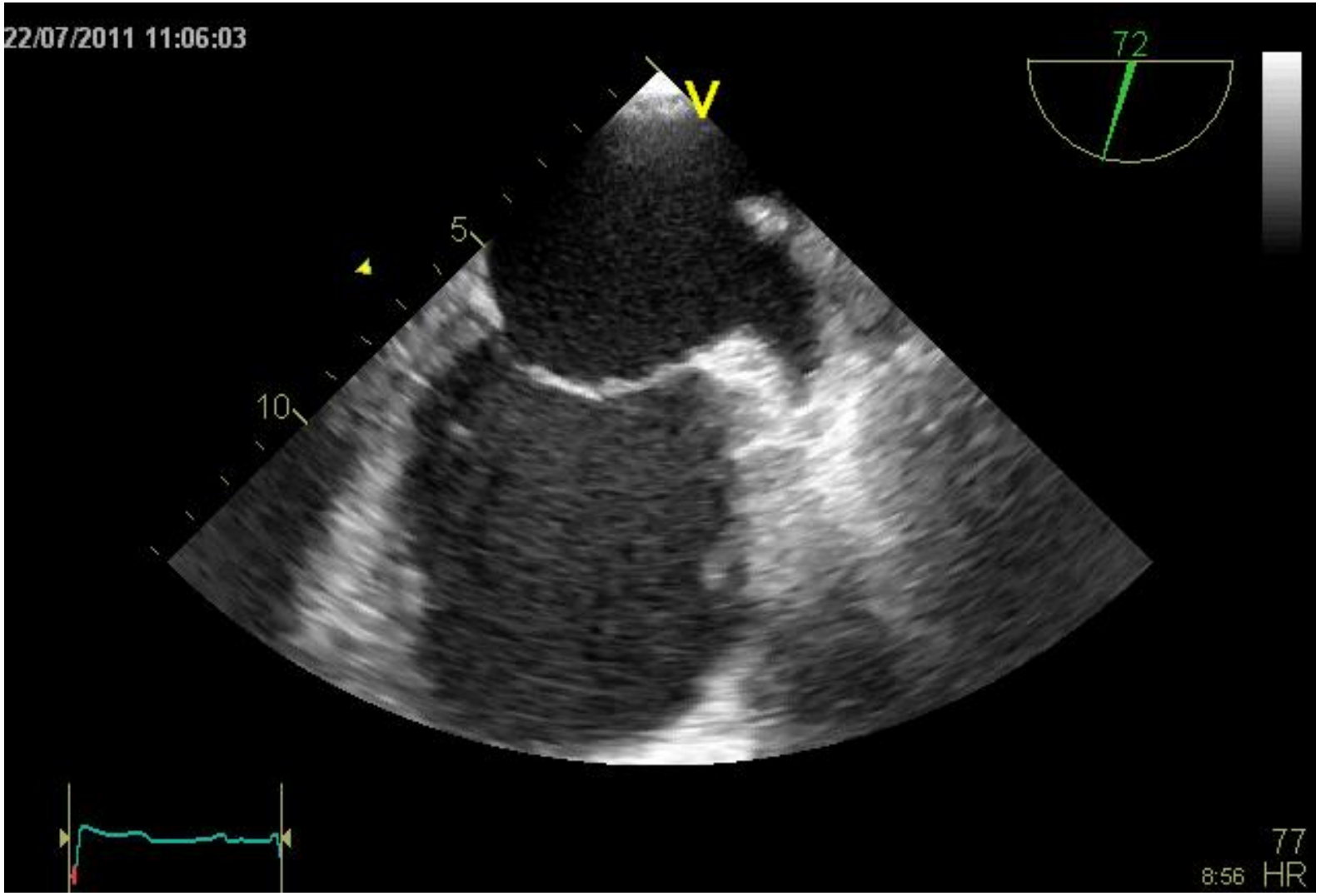
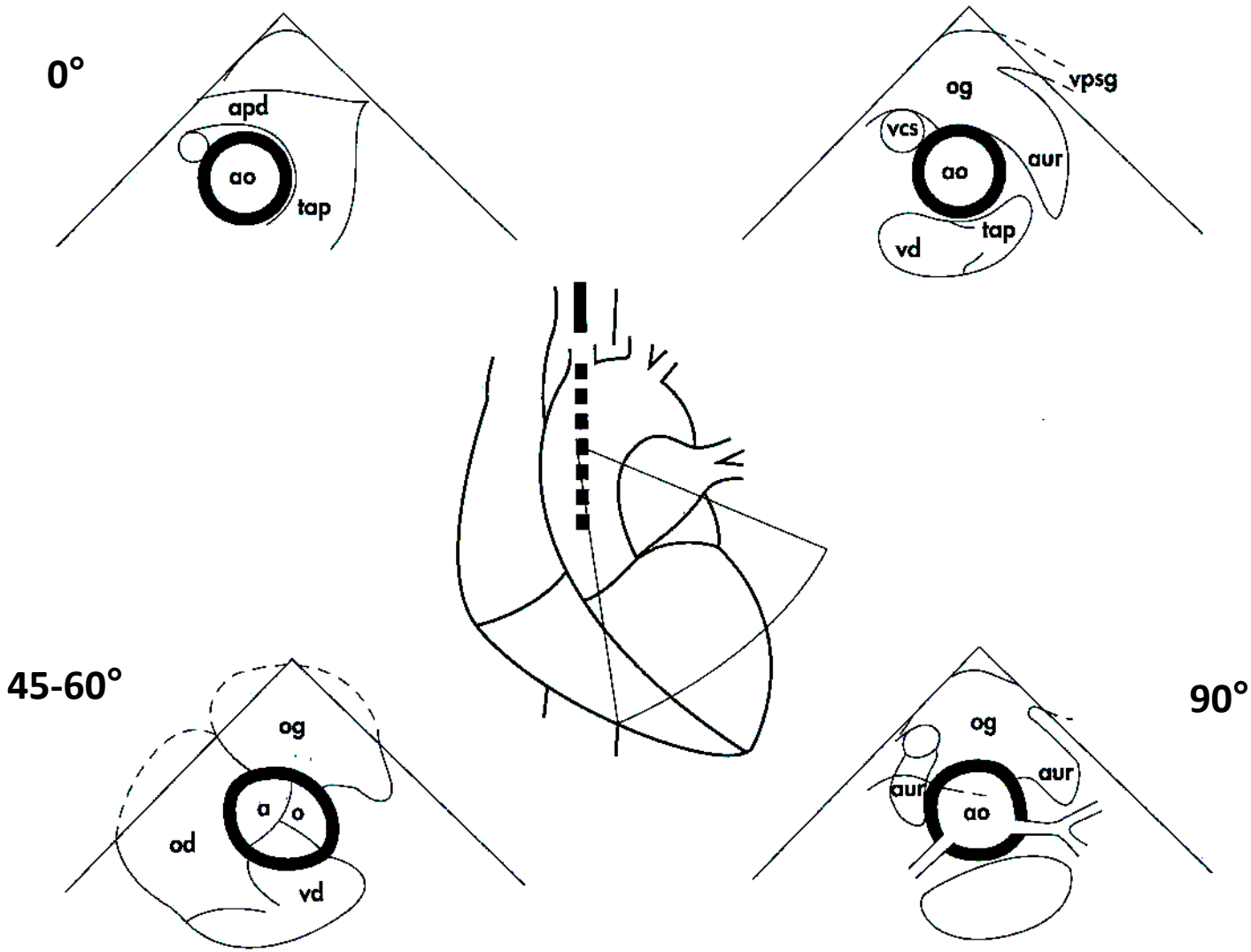
60°-90° : « 2 cavités »

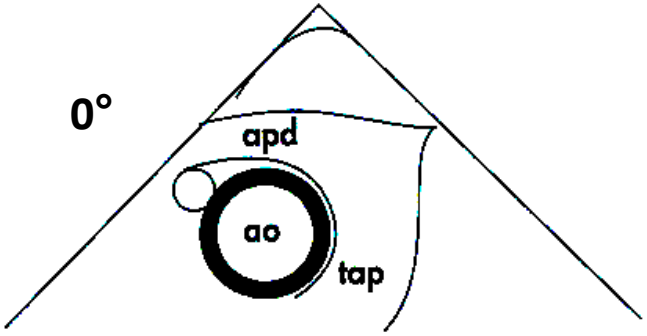


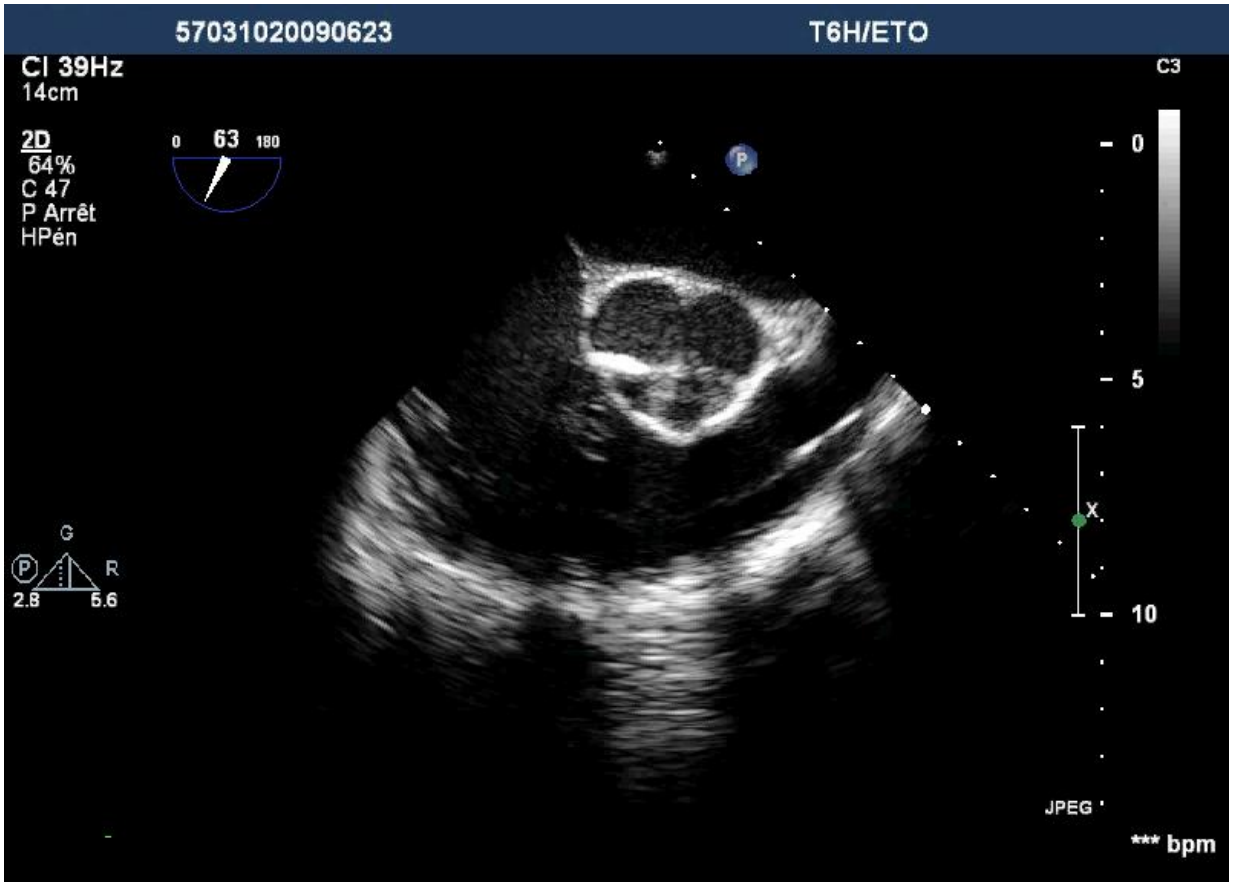
Coupes anatomiques normales

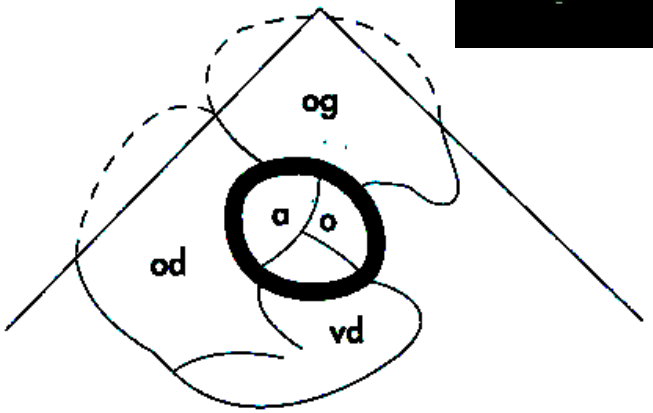
- Repère aorte/tronc pulmonaire 0°
- Repère 4 cavités/valve aortique 0°
- Repère trans-gastrique 0°

Repère aorte/ tronc pulmonaire

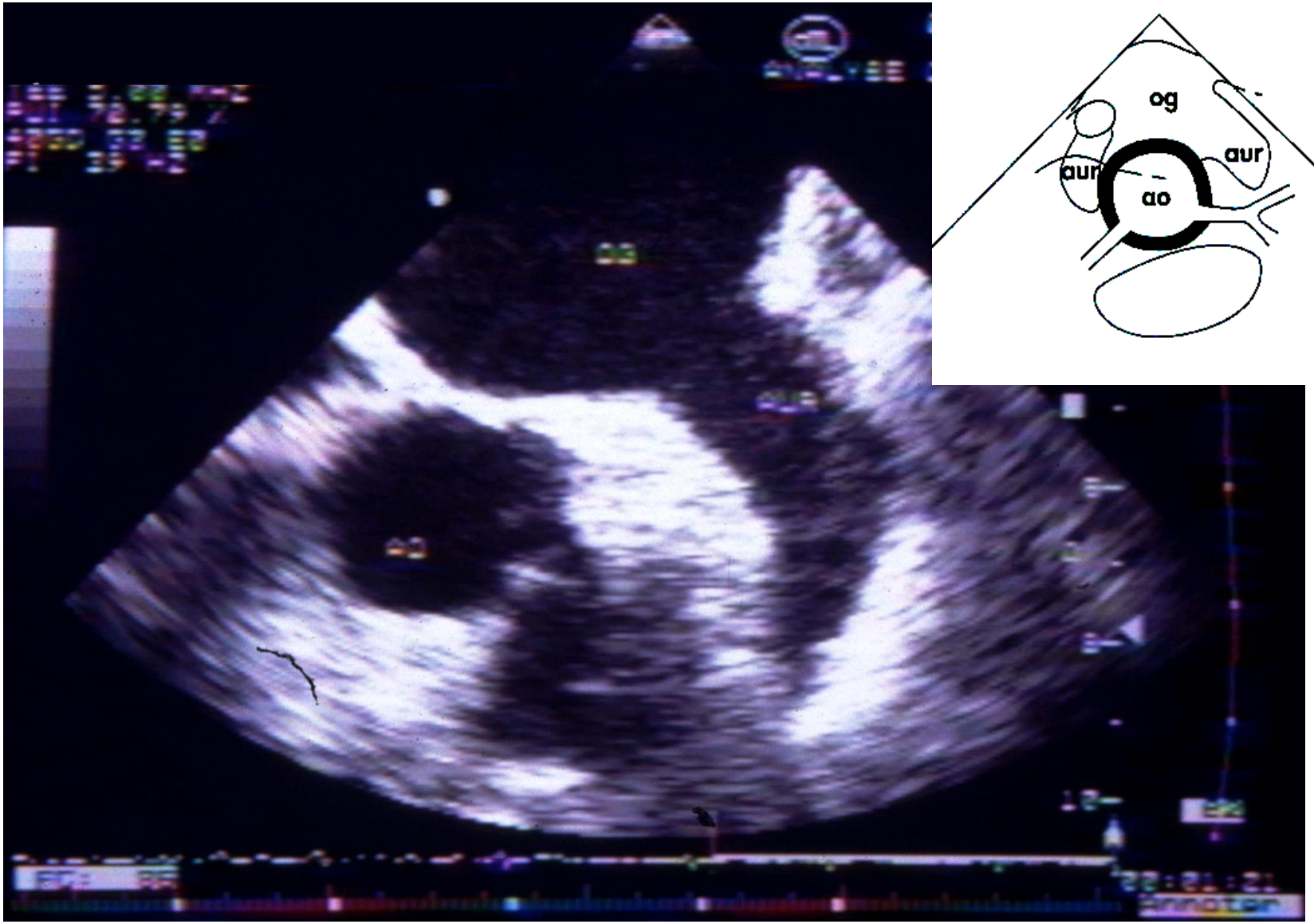



0°
apd
ao
tap

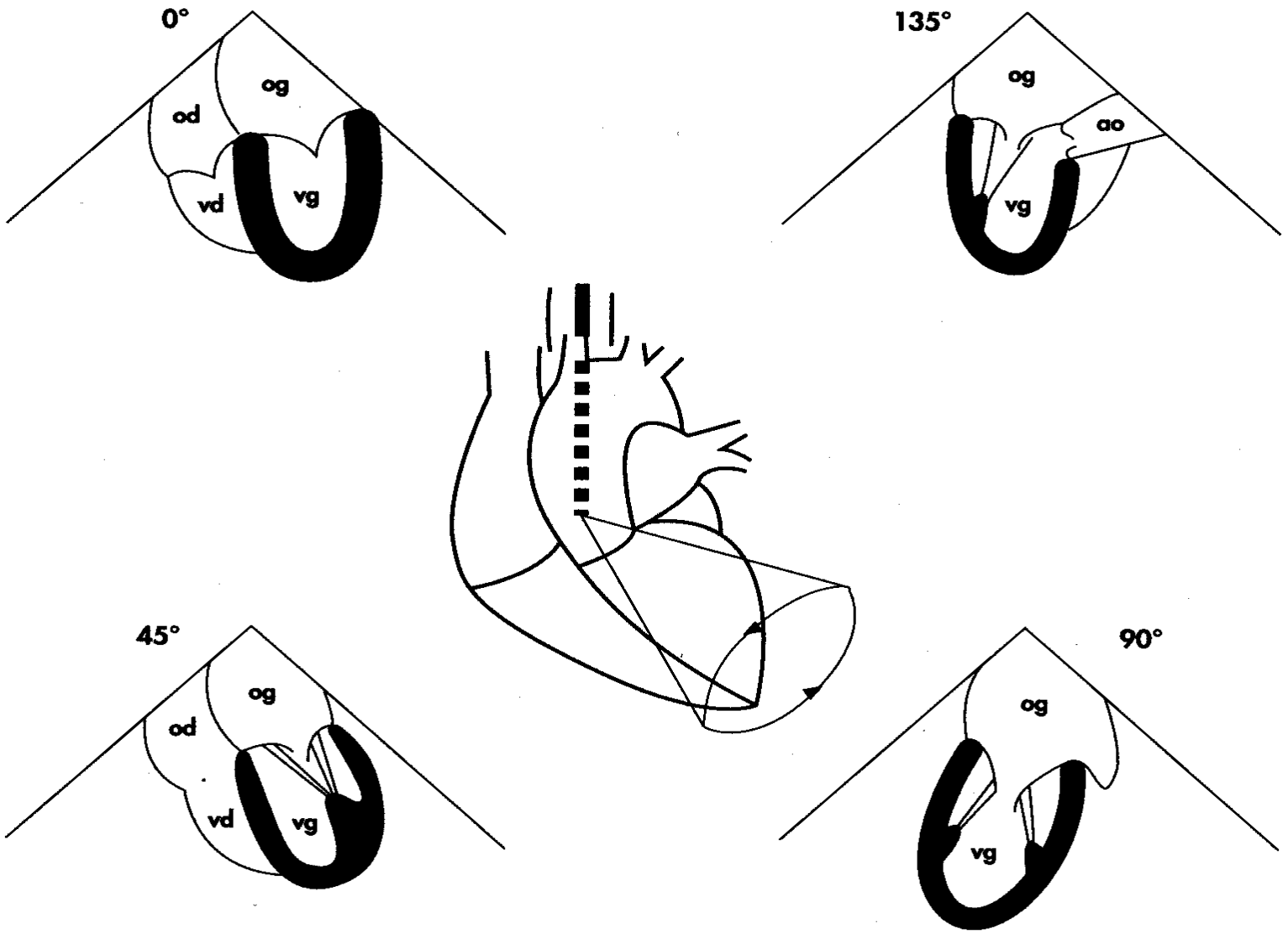

57031020090623
T6H/ETO
CI 39Hz
14cm
2D
64%
C 47
P Arrêt
HPén
0
63
180
C3
0
5
10
G
P
R
2.8
5.6
JPEG
*** bpm

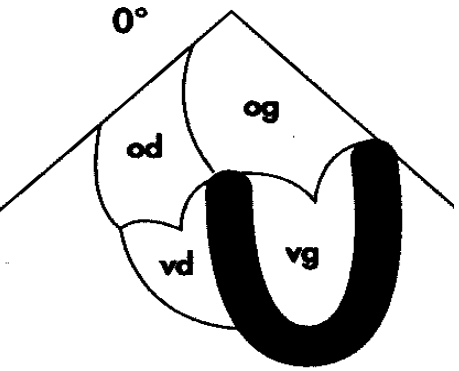

og
a
o
od
vd

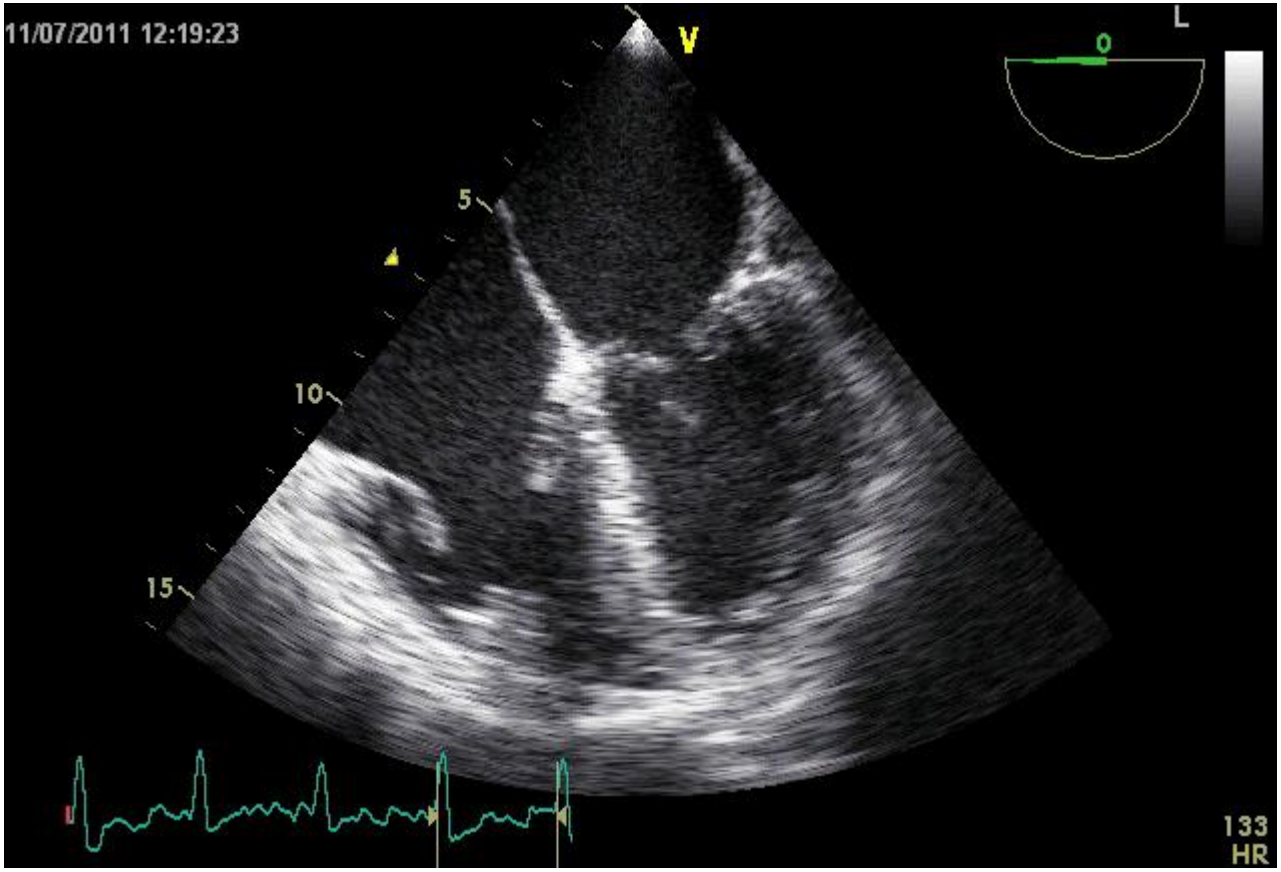
45-60 °

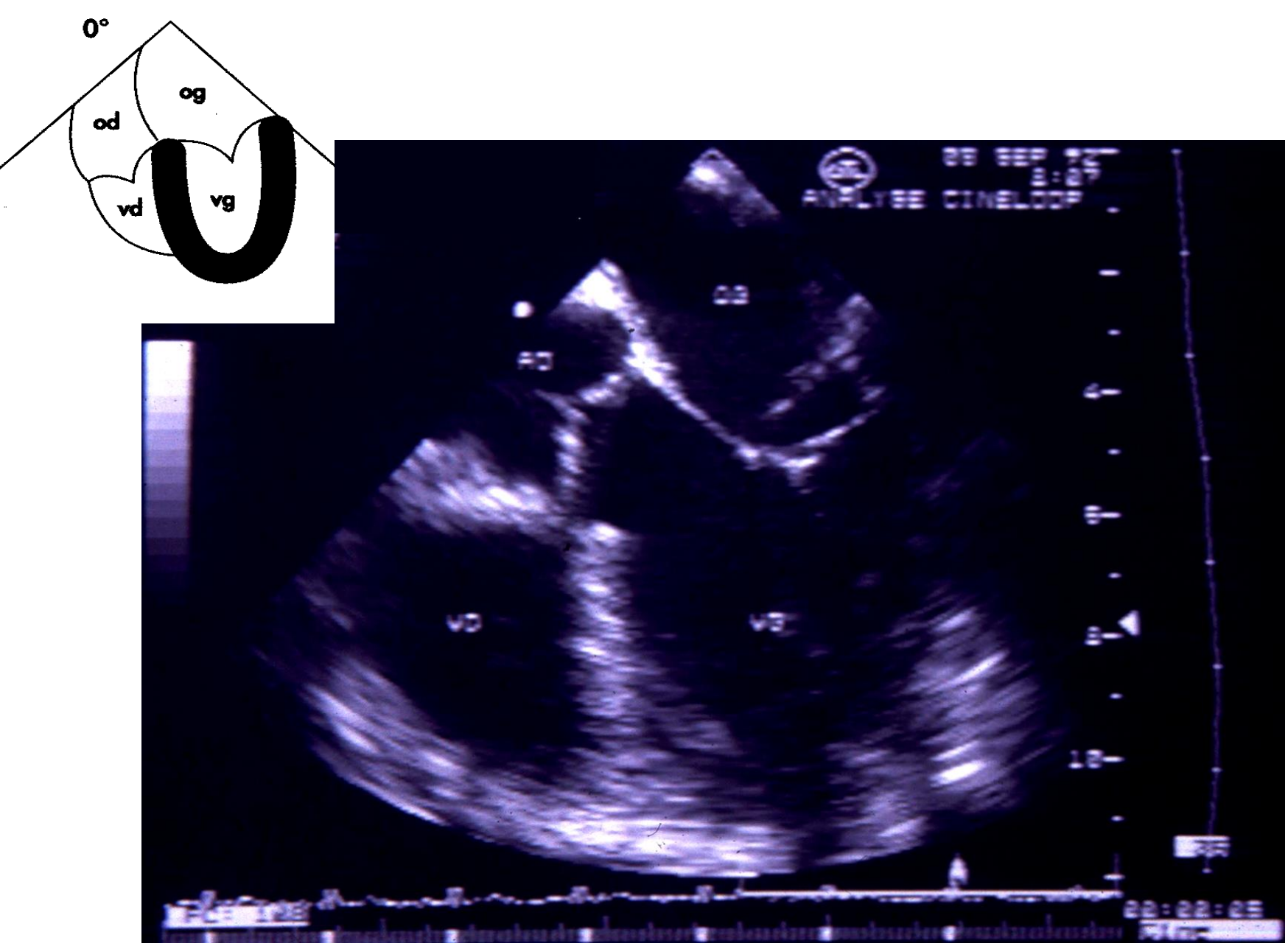

og
aur
aur
ao
90 °

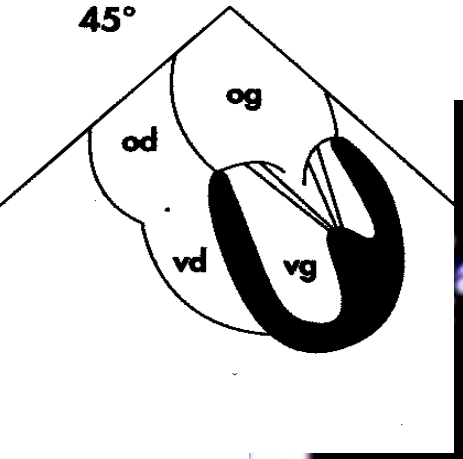
Repère valve aortique/4 cavités 0°

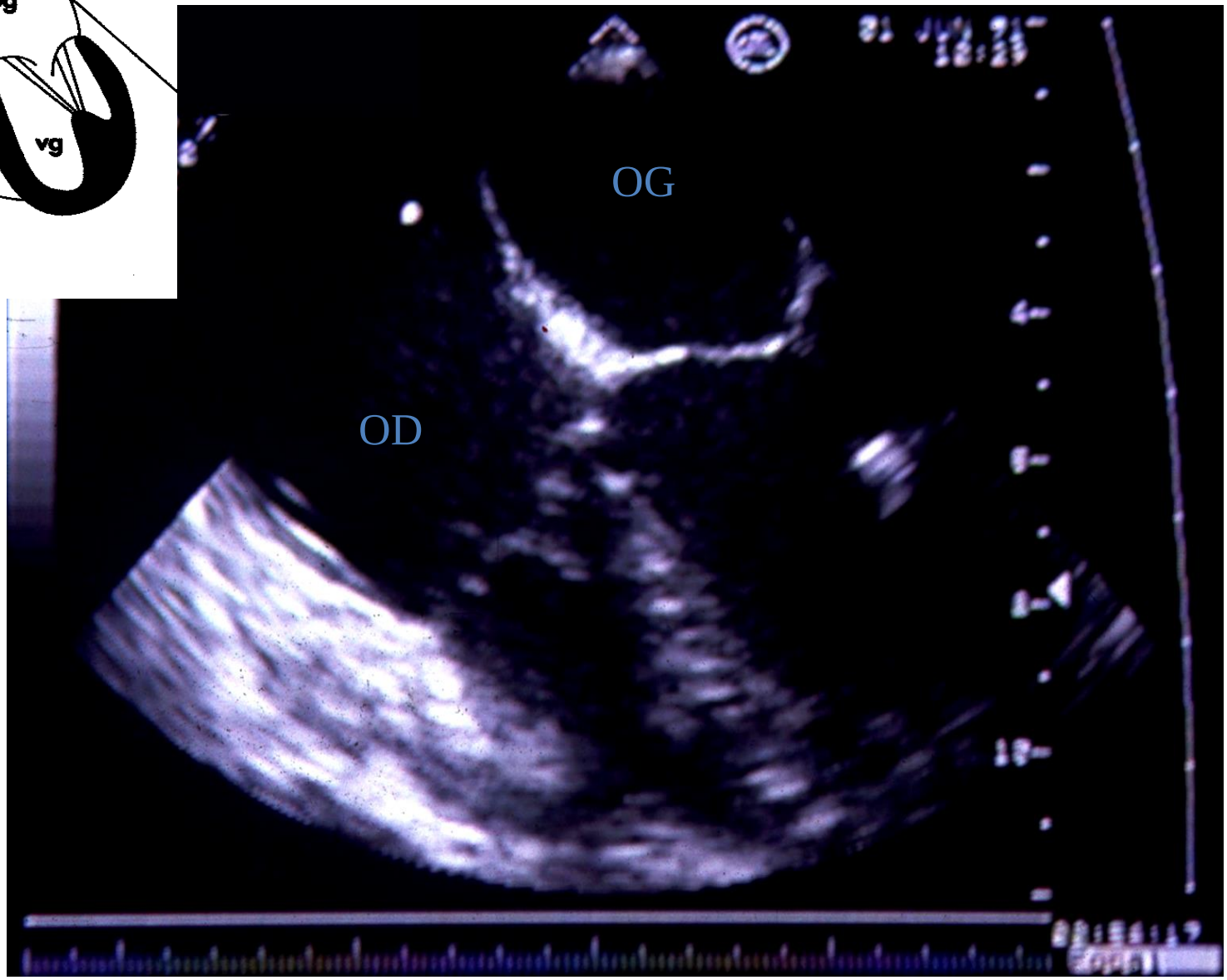


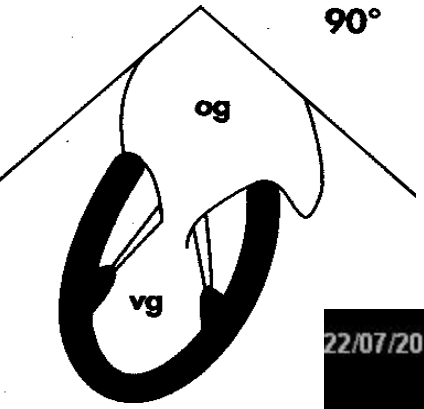

0°
od
og
vd
vg

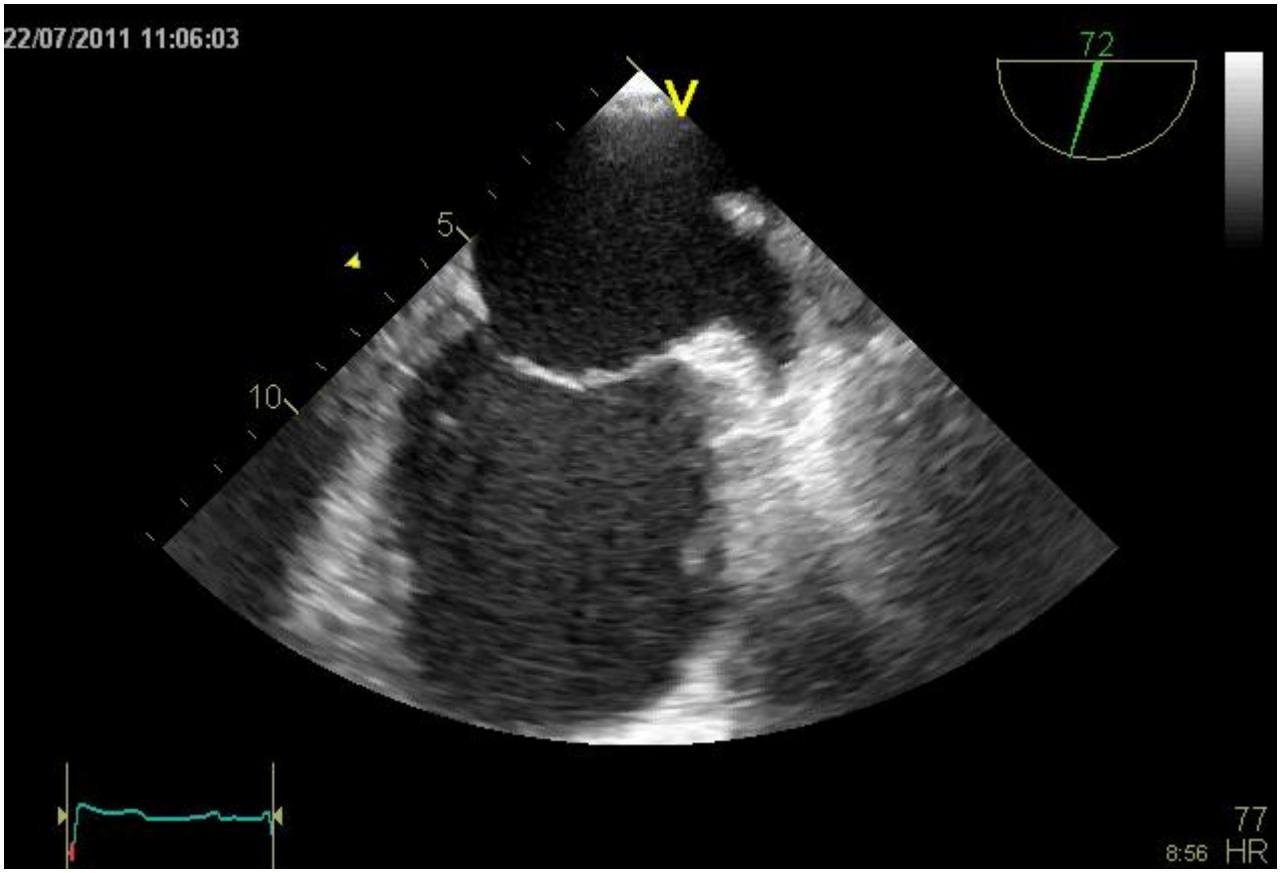

11/07/2011 12:19:23
V
L
0
5
10
15
133
HR

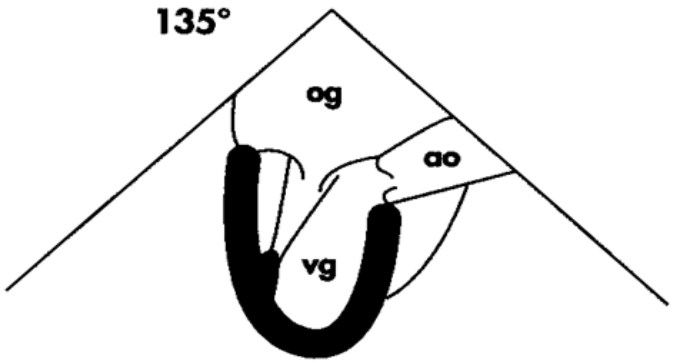

0°
od
og
vd
vg

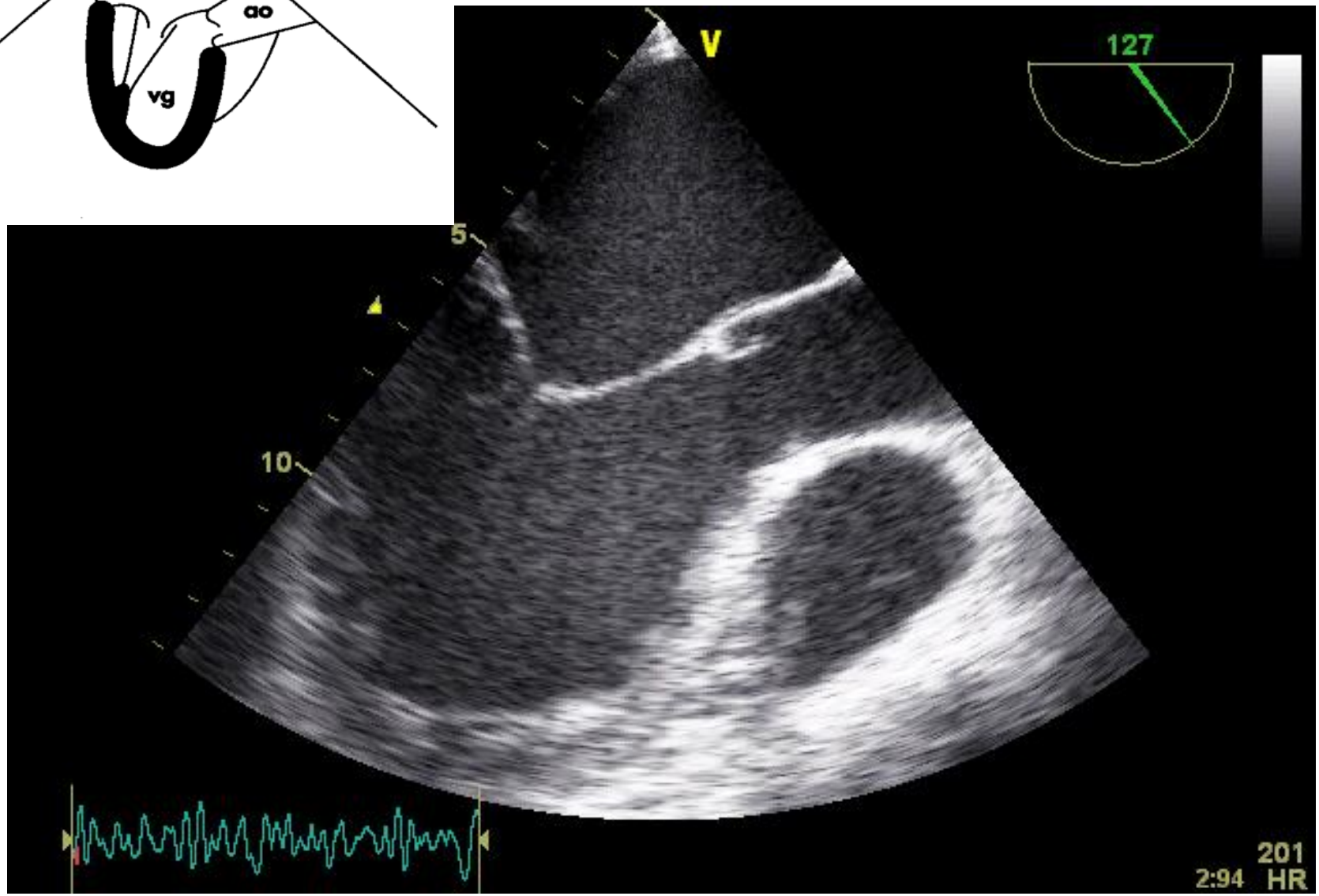

45°
og
od
vd
vg


OG
OD

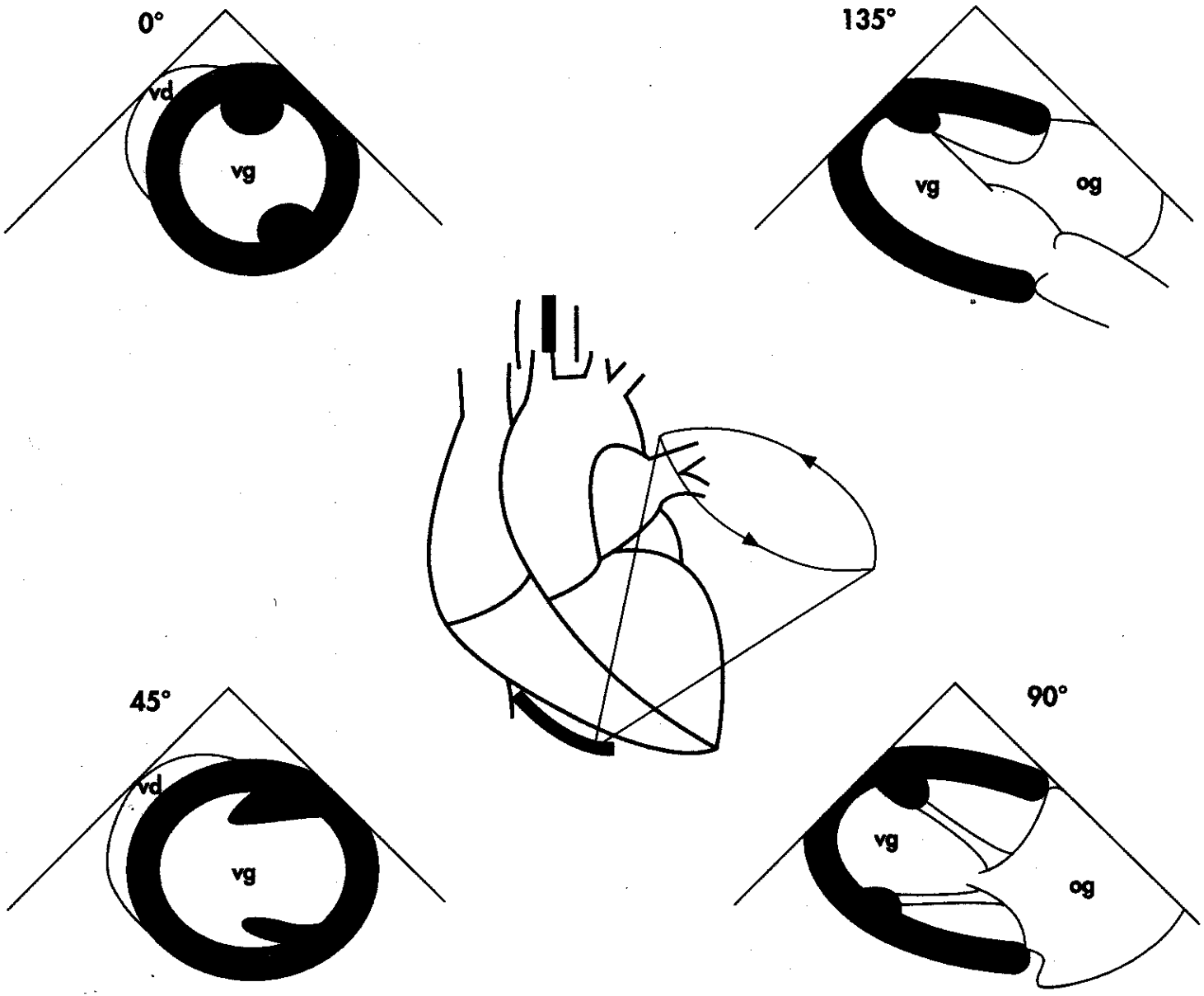

90°
og
vg

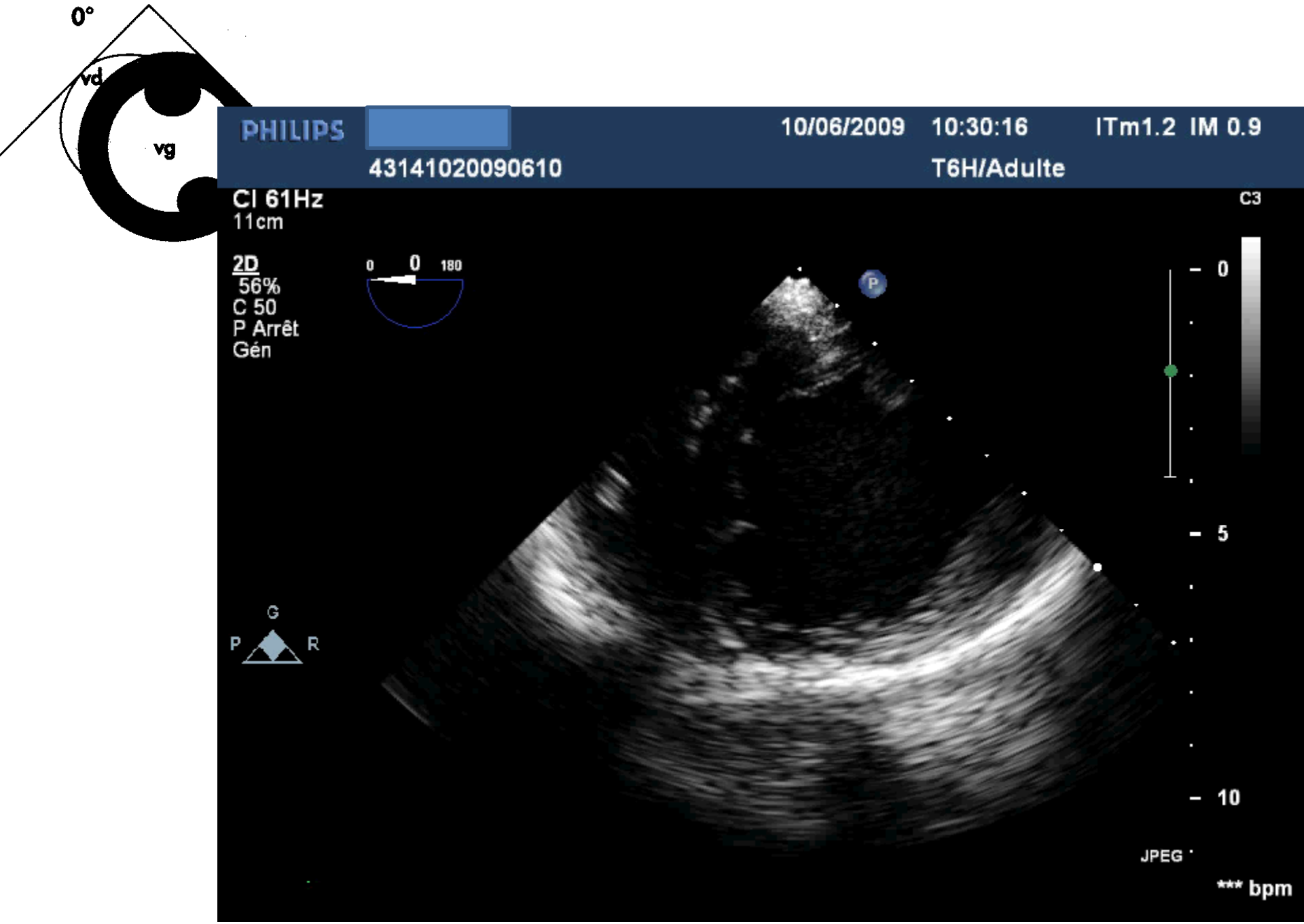

22/07/2011 11:06:03
72
5
10
77
8:56 HR

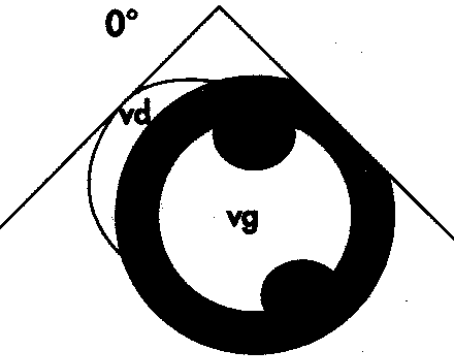

135°
og
ao
vg

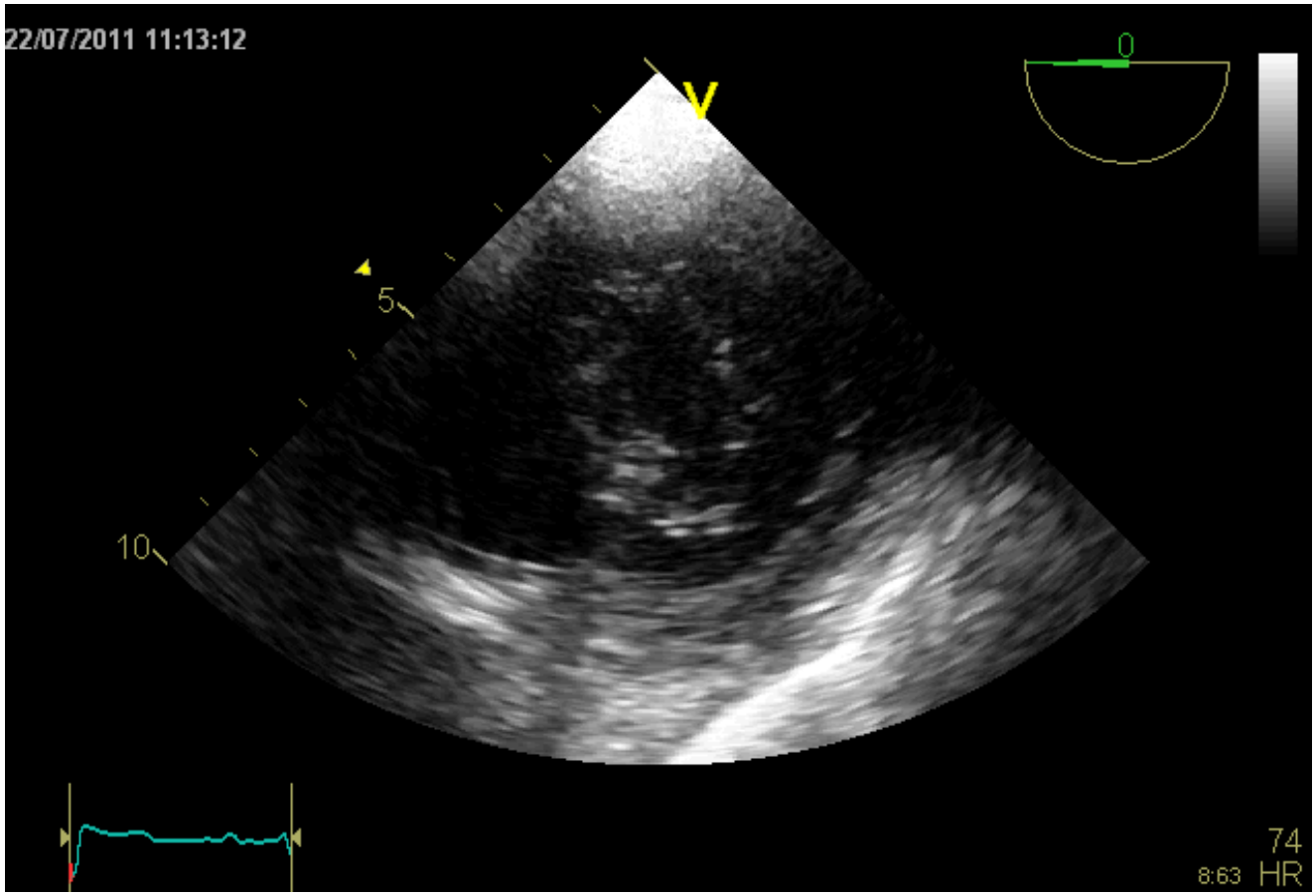

V
127
5
10
201
2:94 HR

Repère trans-gastrique 0°

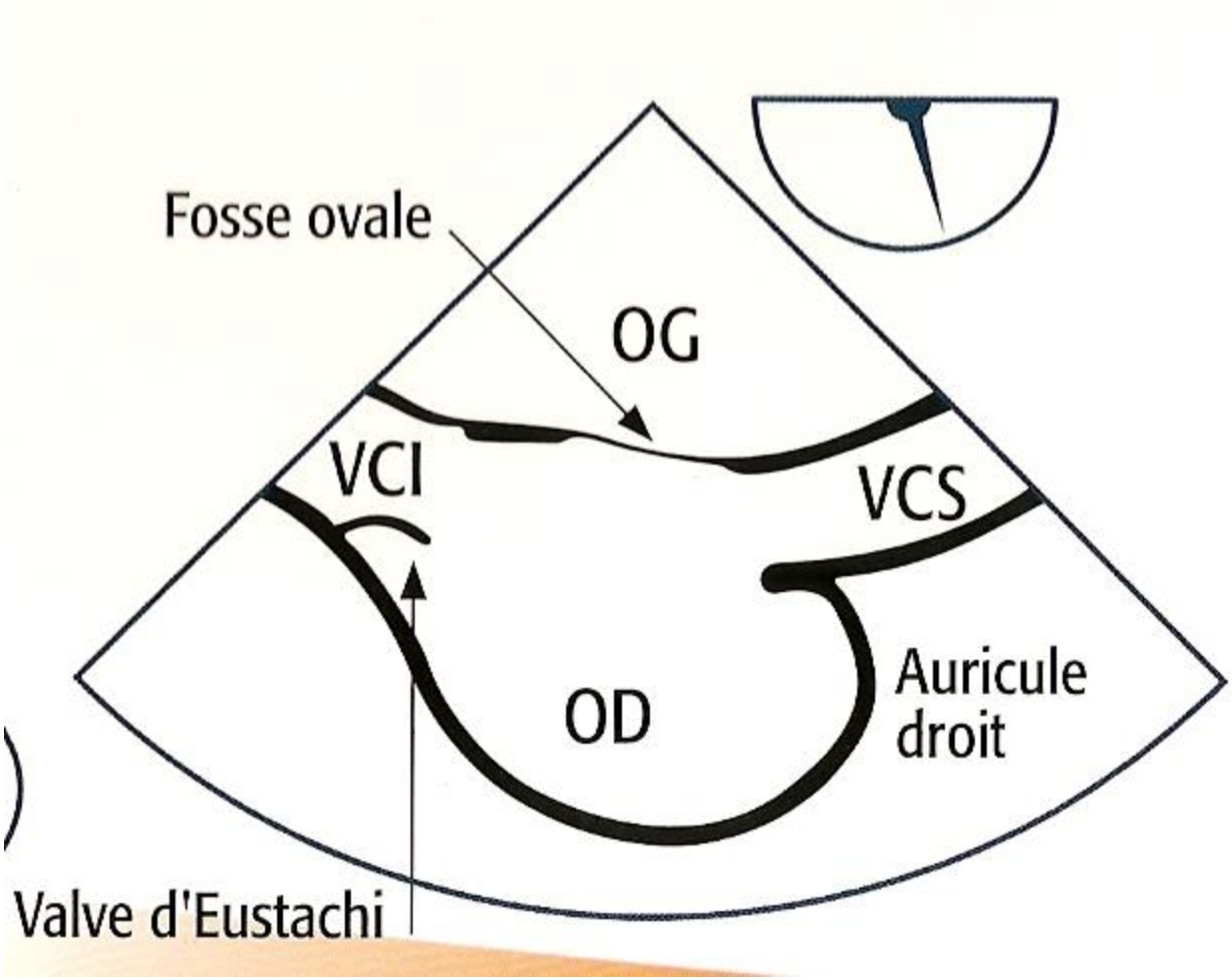


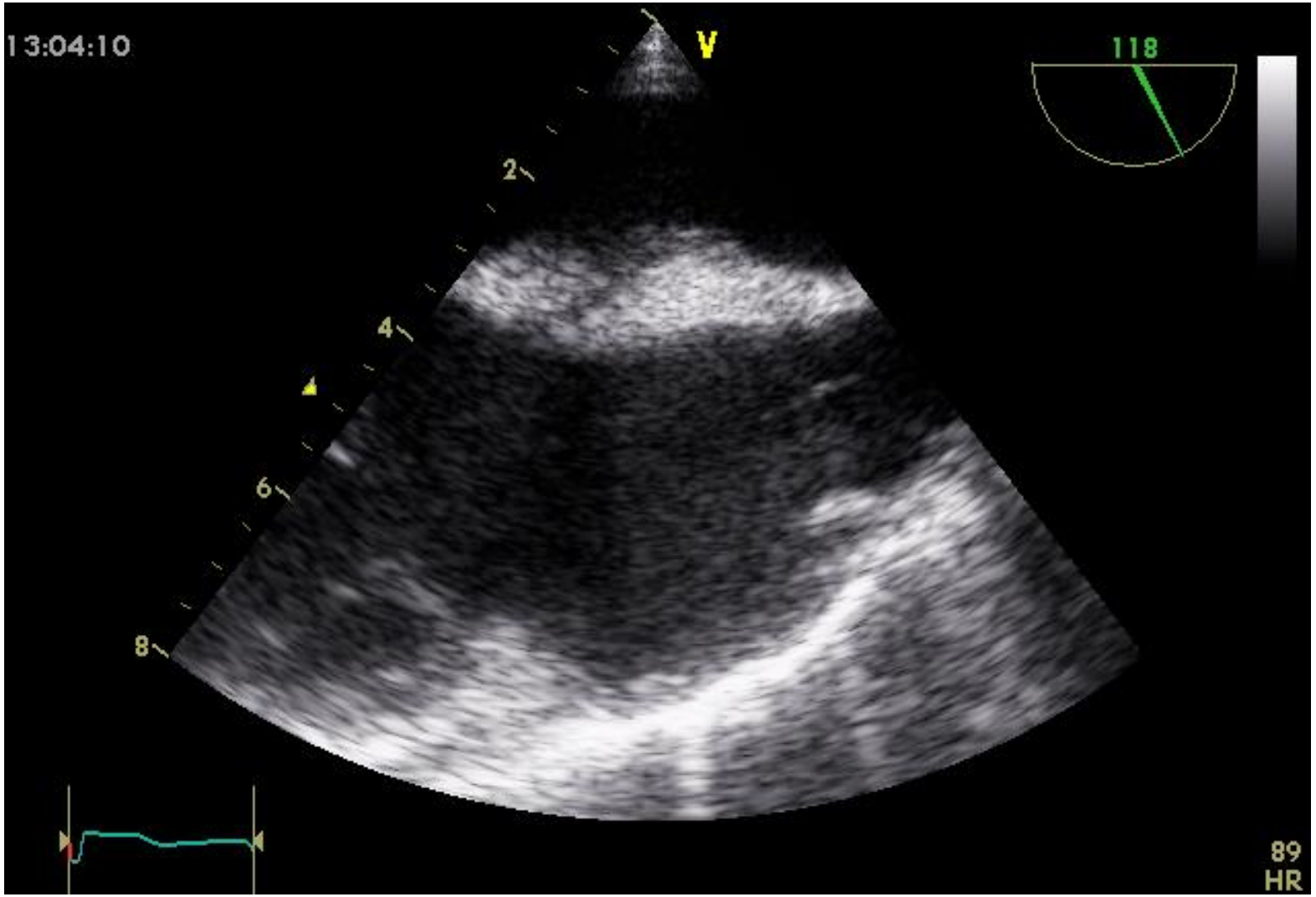

0°
vd
vg
PHILIPS
10/06/2009 10:30:16 ITm1.2 IM 0.9
43141020090610
T6H/Adulte
CI 61Hz
11cm
C3
2D
56%
C 50
P Arrêt
Gén
0 0 180
P
0
5
10
G
P
R
JPEG
*** bpm


0°
vd
vg

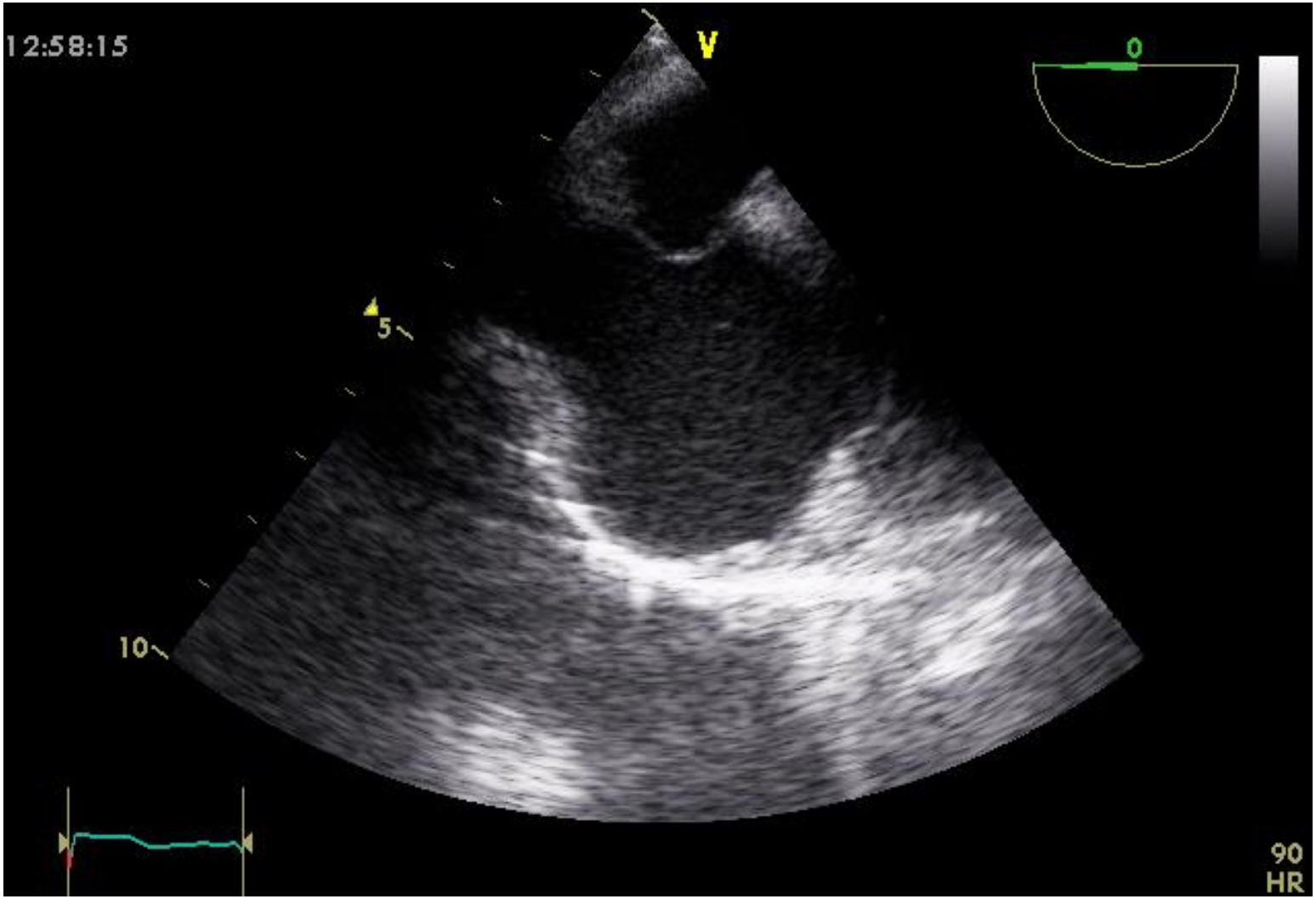

22/07/2011 11:13:12
0
5
10
74
8:63
HR

Coupe des 2 veines caves



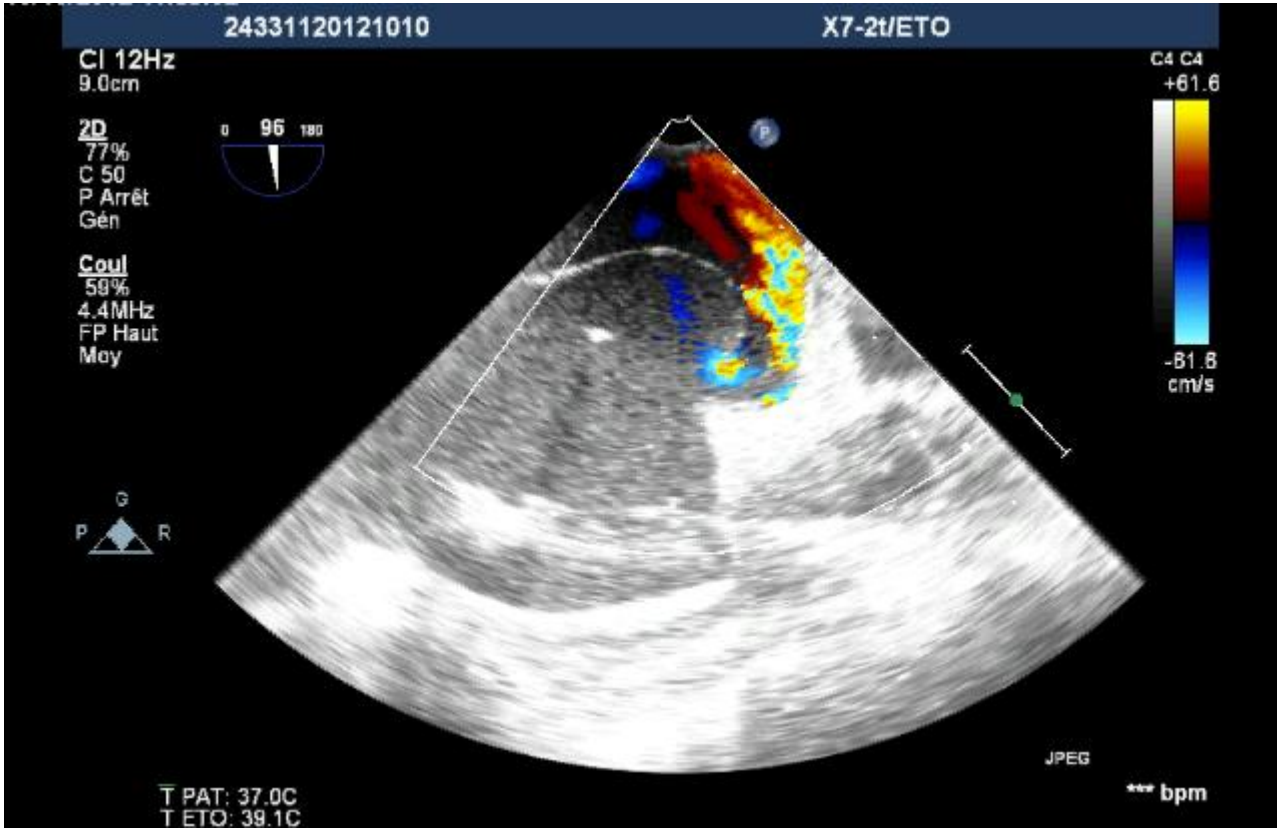

13:04:10
V
118
2
4
6
8
89
HR

Coupe du septum inter-auriculaire



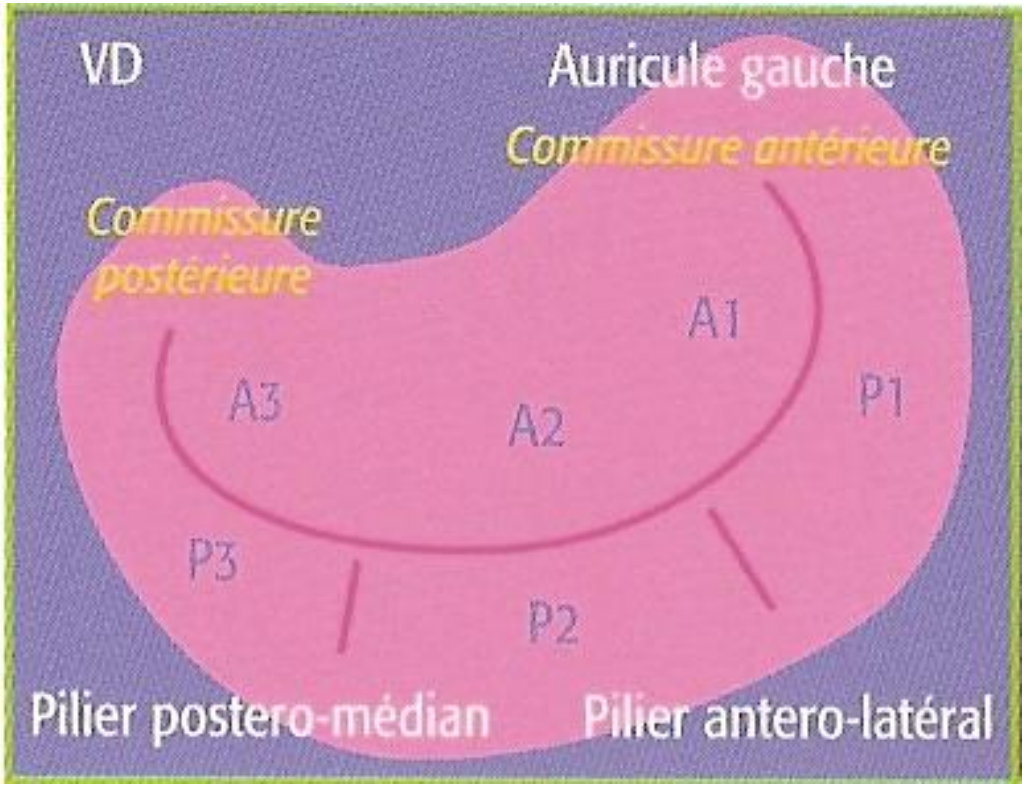

24331120121010
X7-2t/ETO
CI 50Hz
13cm
C4
2D
81%
C 50
P Arrêt
Gén
0
0
180
G
P
R
JPEG
*** bpm
T PAT: 37.0C
T ETO: 39.0C


24331120121010
X7-2t/ETO
CI 50Hz
10cm
C4
2D
76%
C 50
P Arrêt
Gén
0
94
180
G
P
R
JPEG
*** bpm
T PAT: 37.0C
T ETO: 38.9C


24331120121010
X7-2t/ETO
CI 12Hz
9.0cm
2D
77%
C 50
P Arrêt
Gén
Coul
59%
4.4MHz
FP Haut
Moy
0
96
180
C4 C4
+61.6
-81.8
cm/s
G
P
R
JPEG
*** bpm
T PAT: 37.0C
T ETO: 39.1C

ETO bi-dimensionnelle valve mitrale

- SEGMENTATION MITRALE



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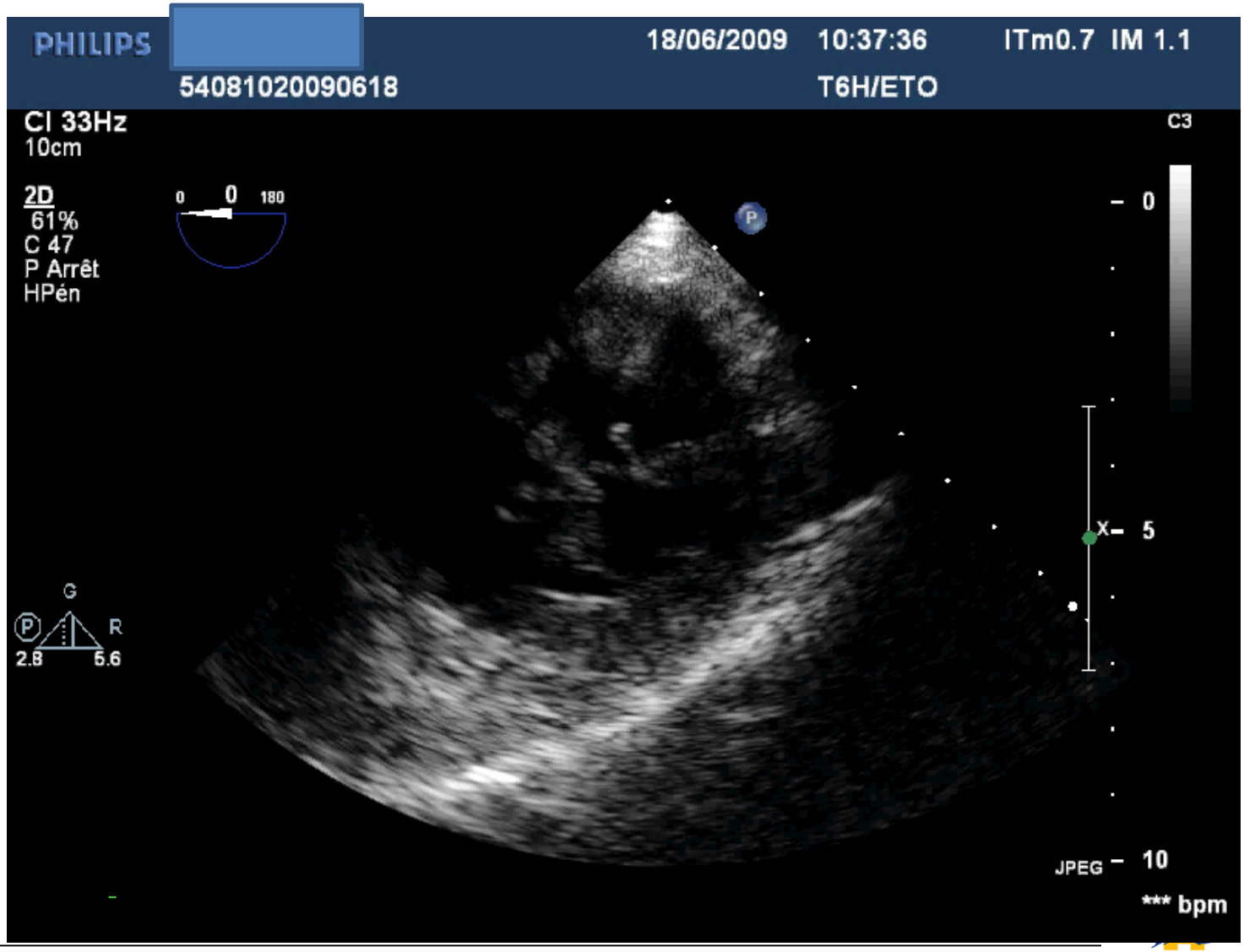
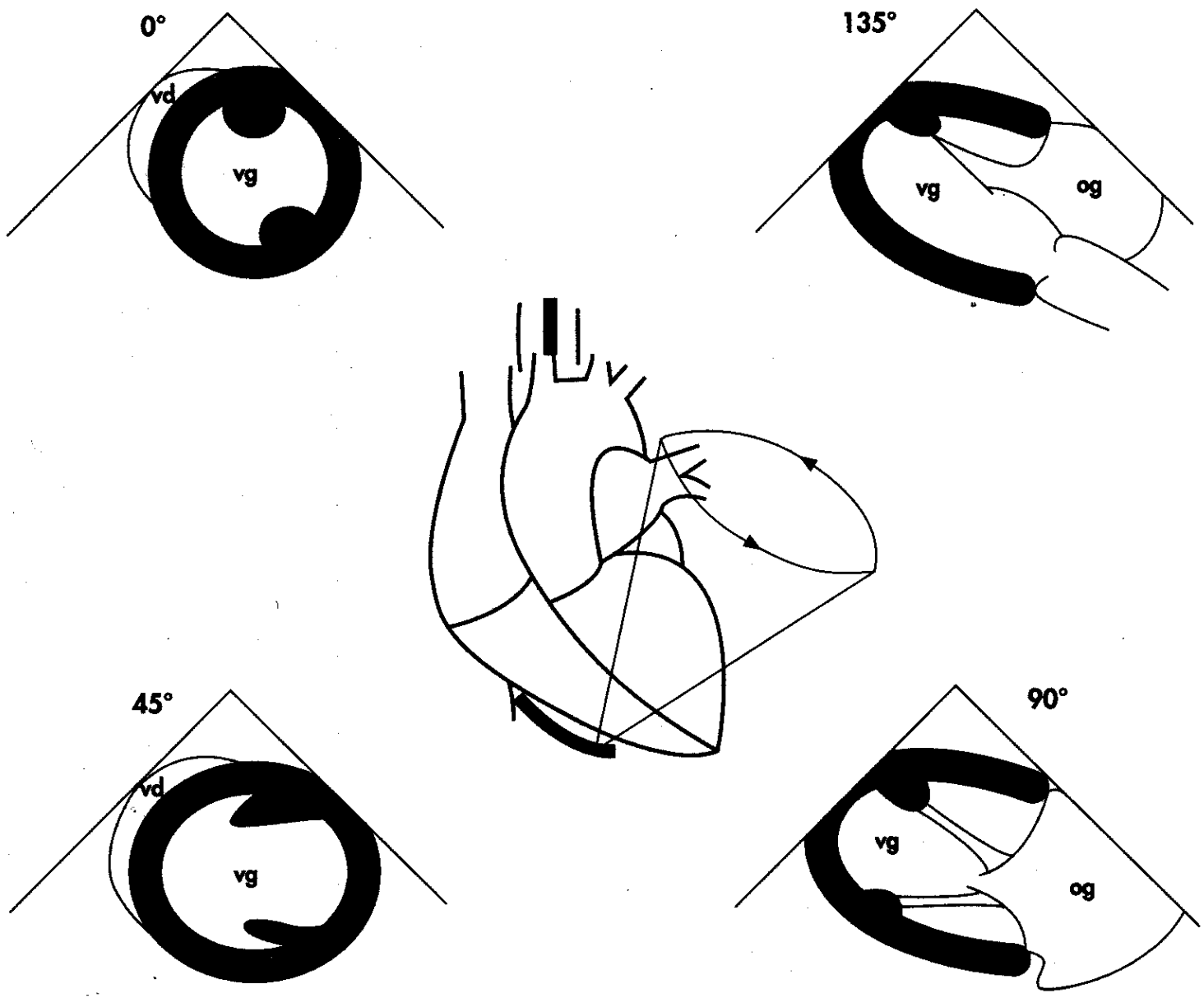
Coupe trans-gastrique




0°
vd
vg
135°
vg
og
45°
vd
vg
90°
vg
og

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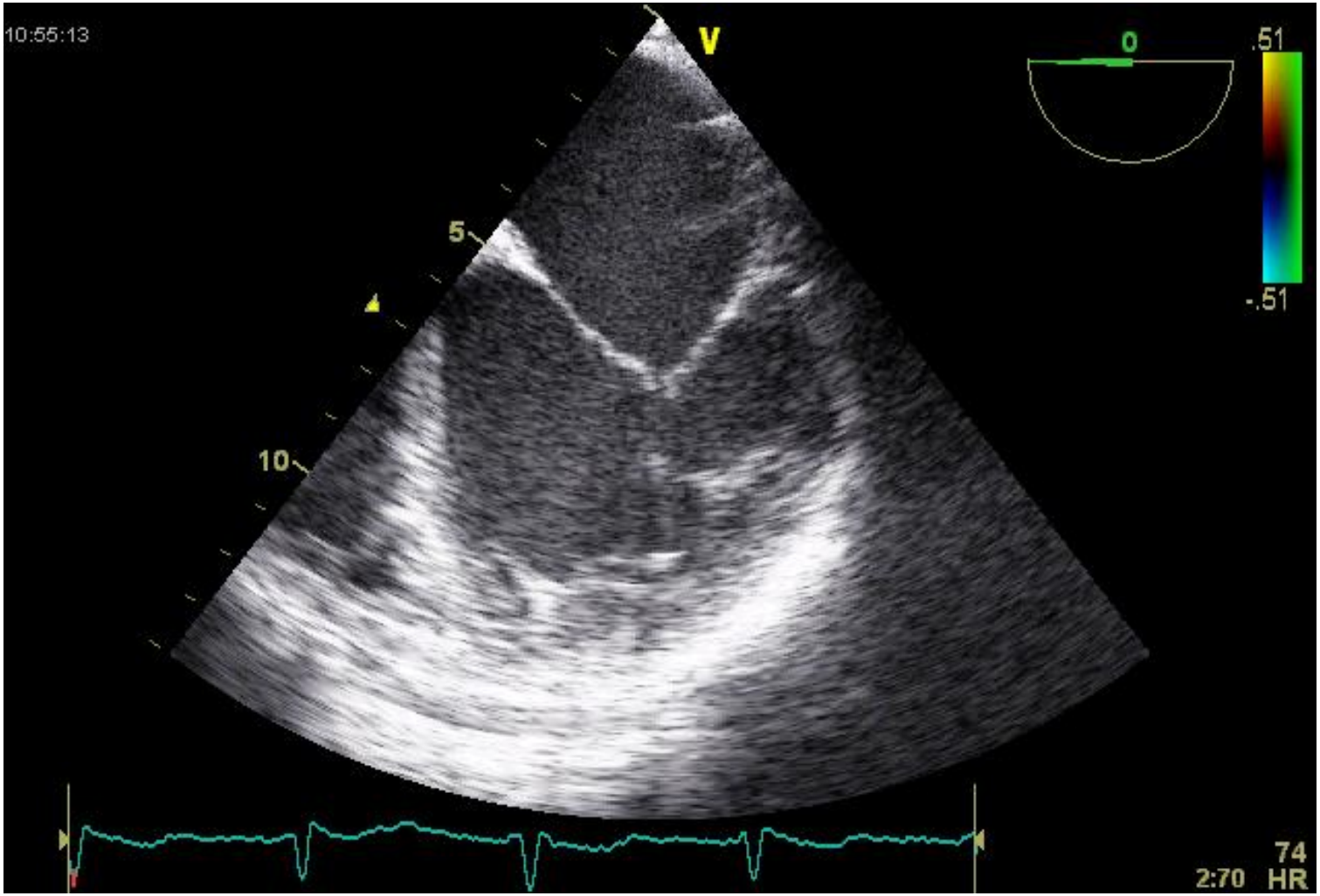
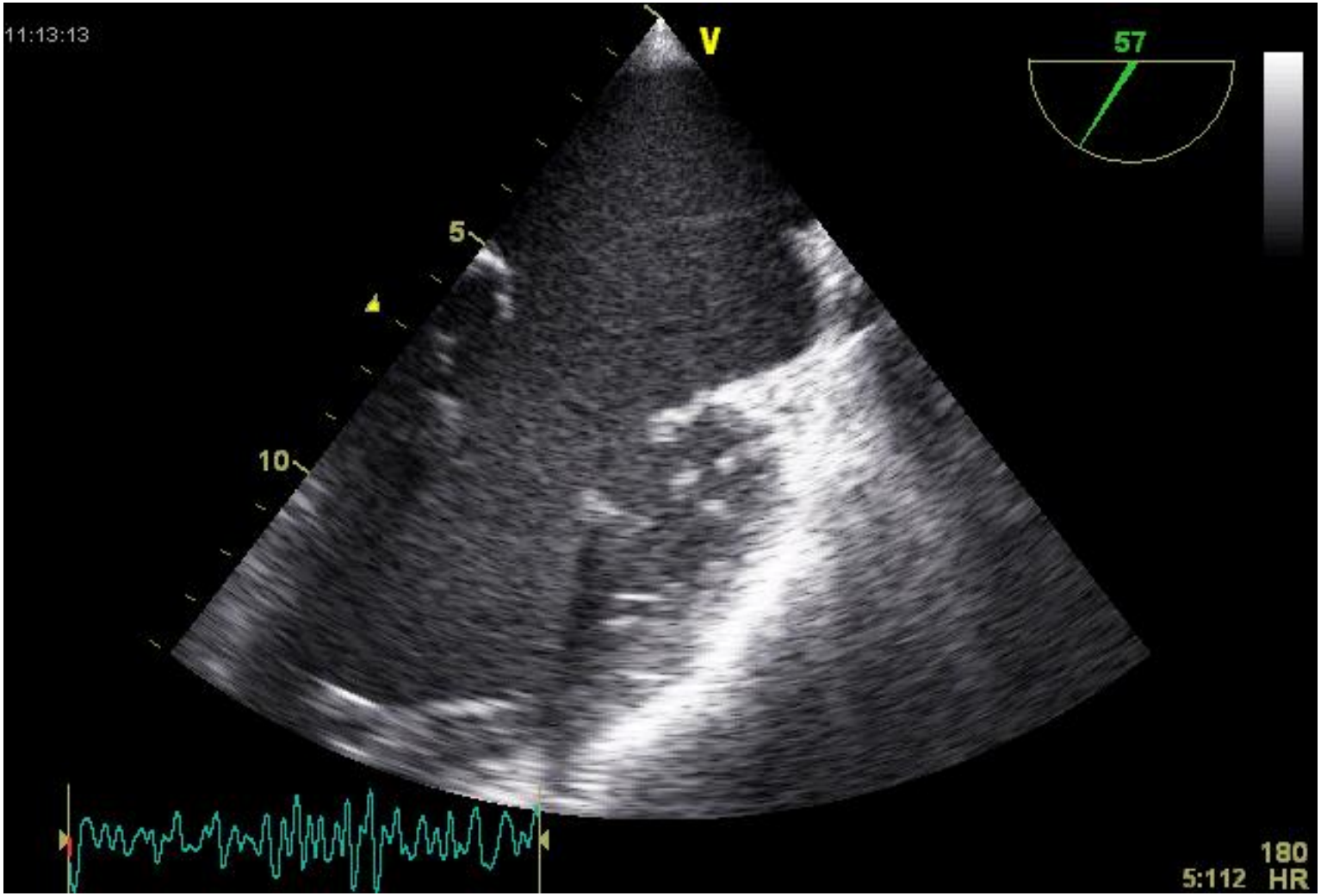
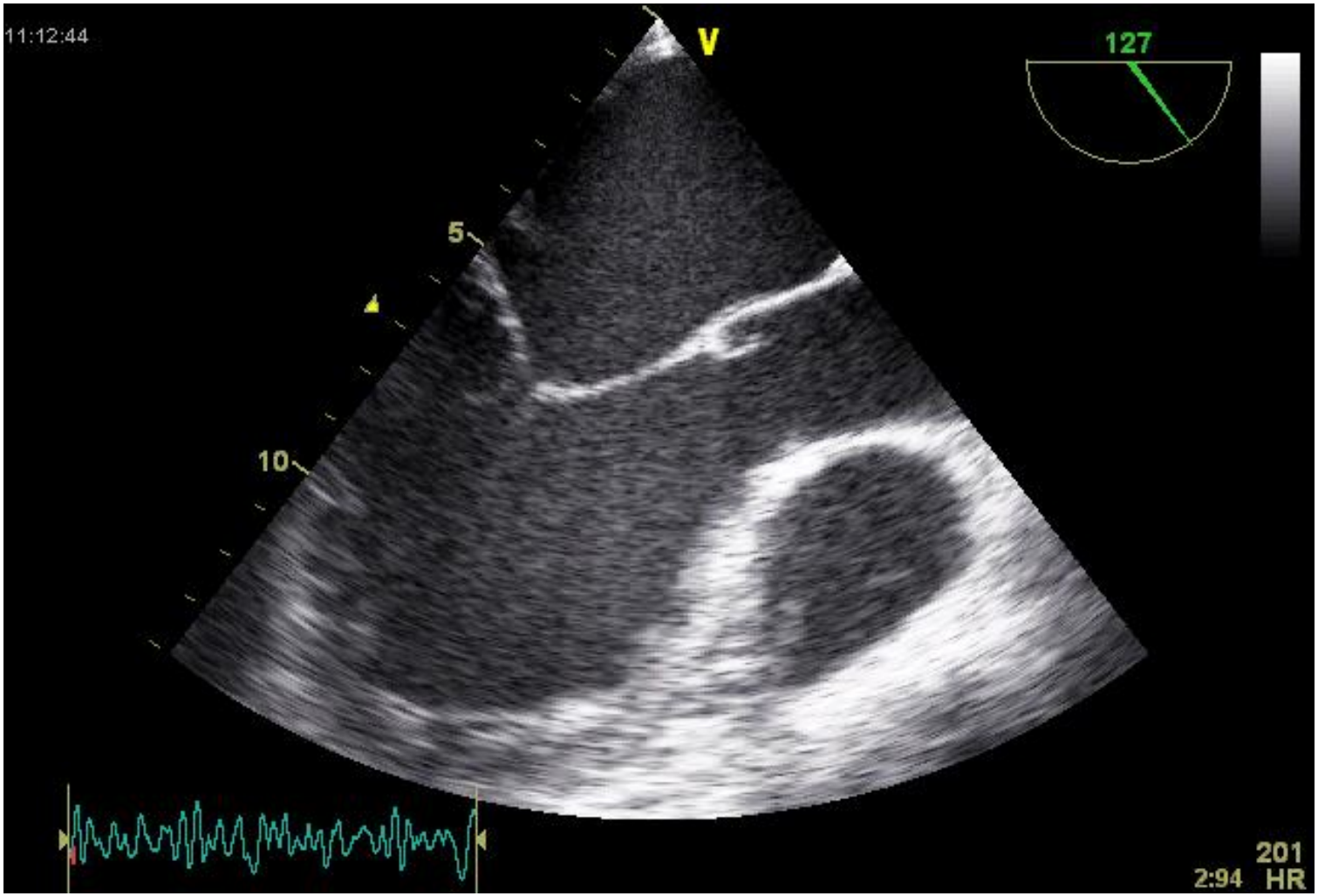
0°



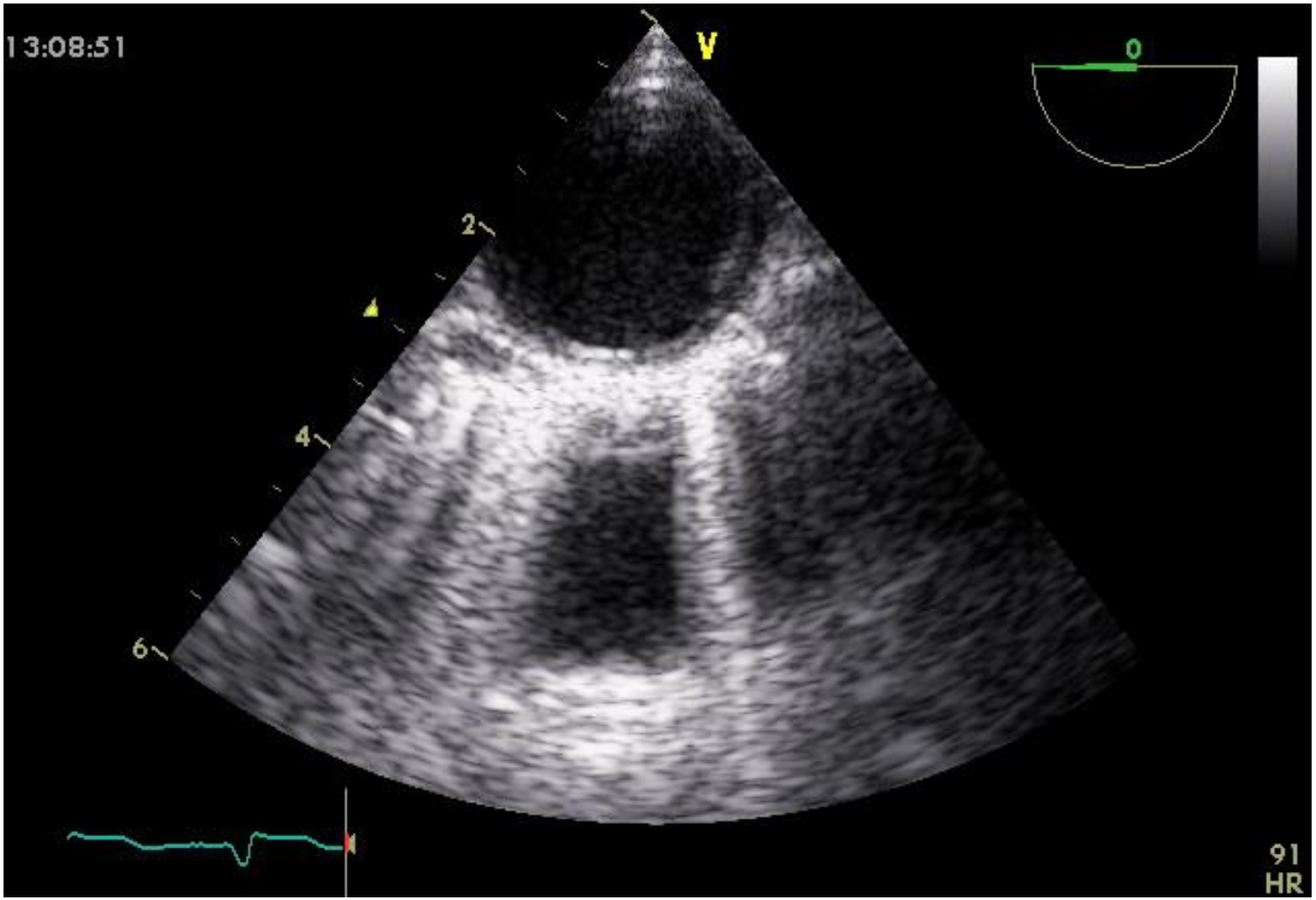
60-90° : commissures



120° : A2 – P2



Aorte thoracique descendante



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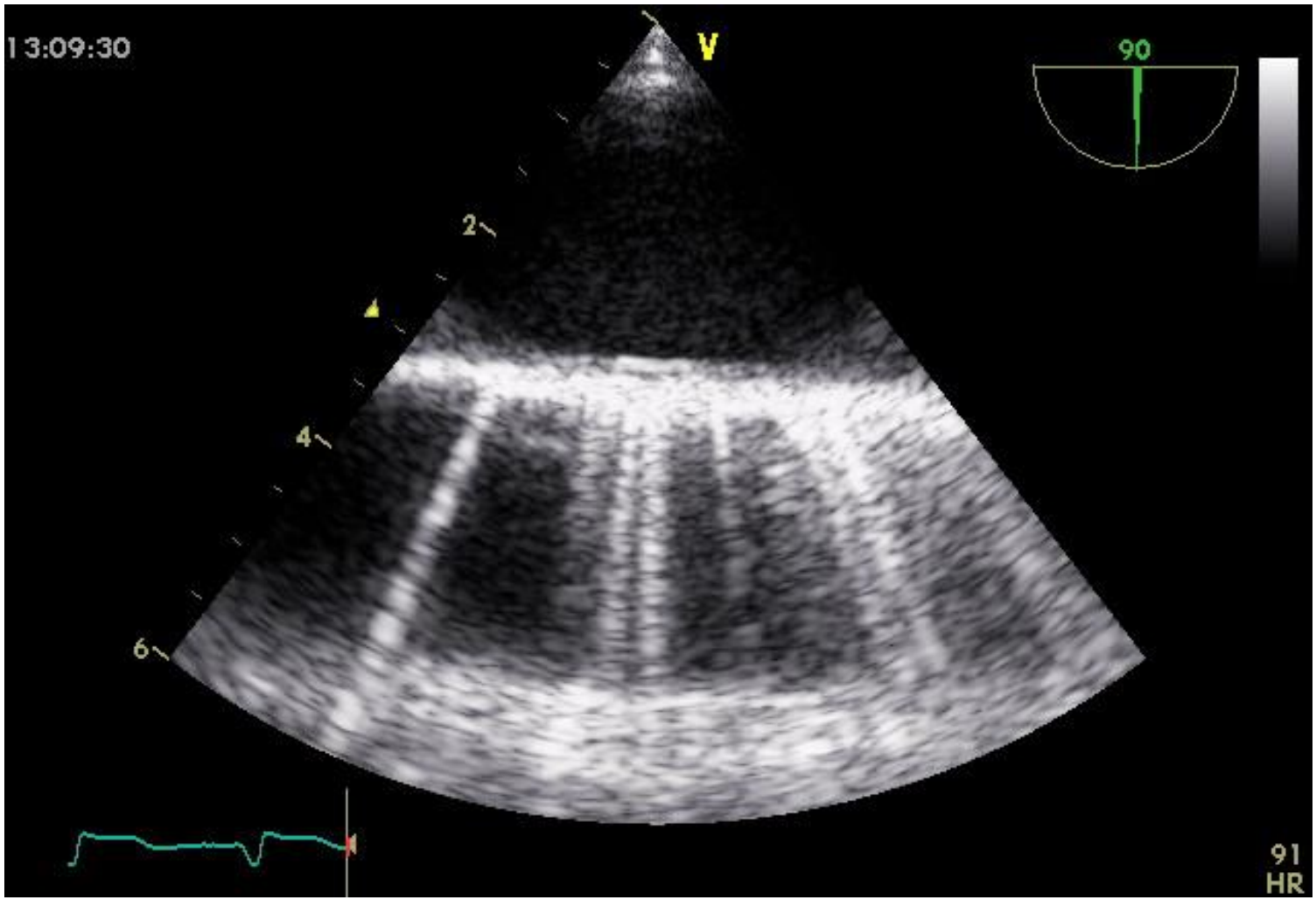
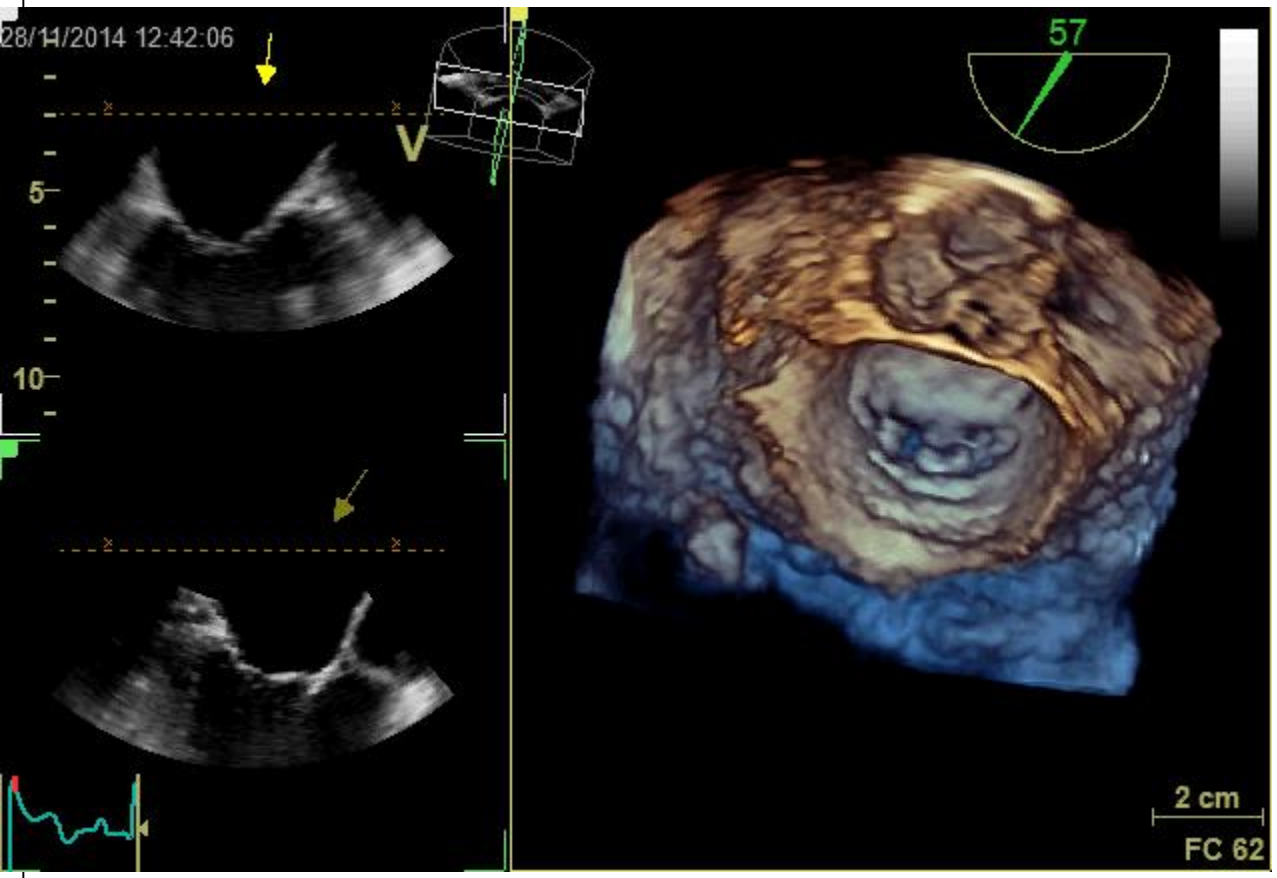
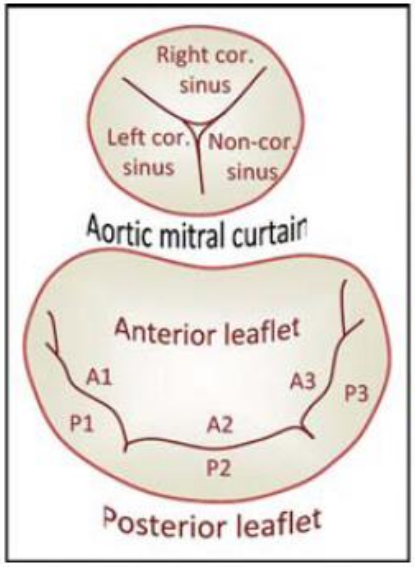
Aorte horizontale

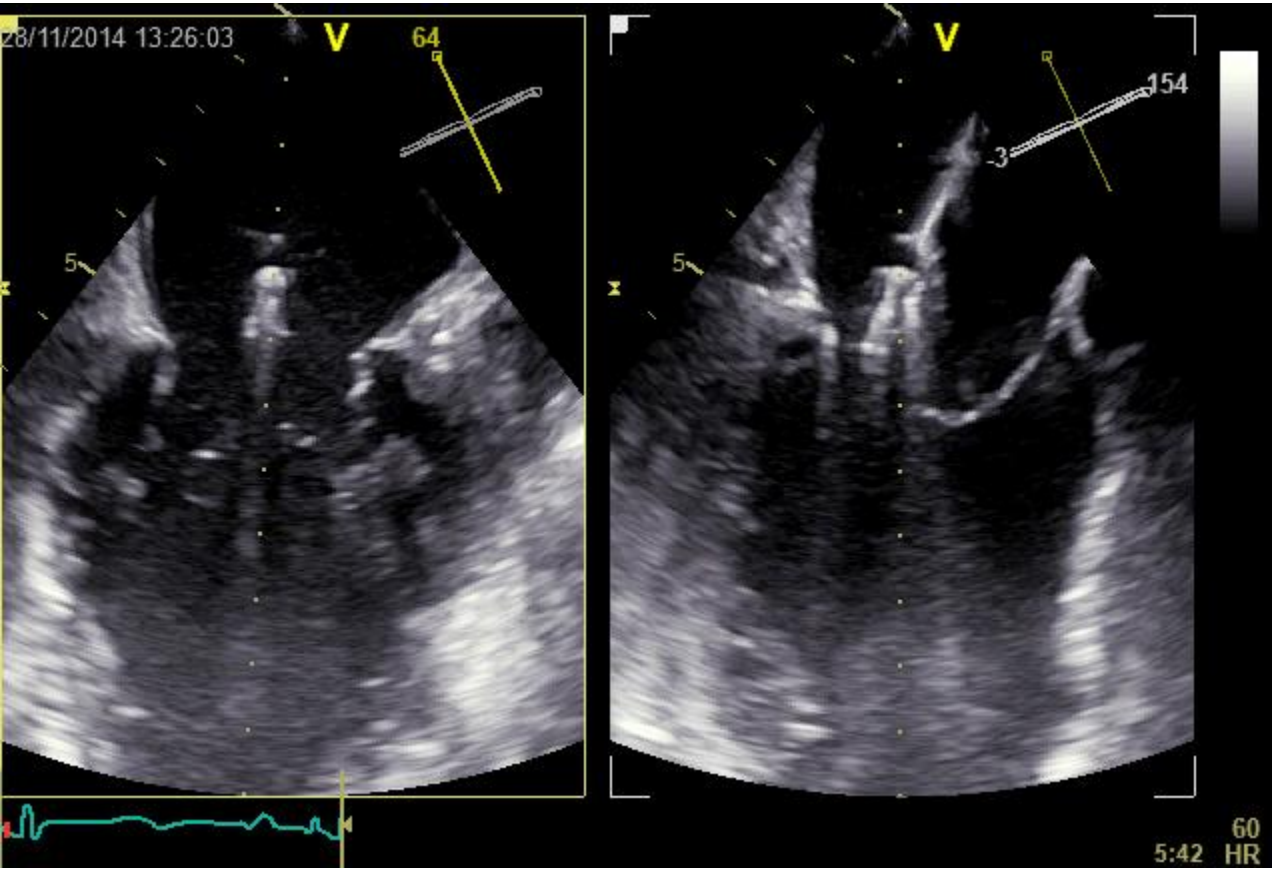


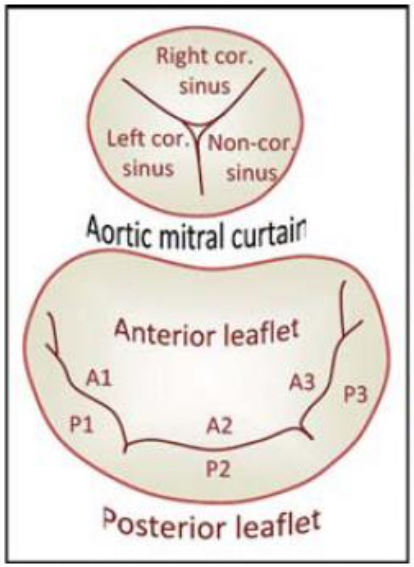
APPORT DE L'ETO 3D


28/11/2014 12:42:06
57
5
10
2 cm
FC 62


Right cor. sinus
Left cor. sinus
Non-cor. sinus
Aortic mitral curtain
Anterior leaflet
A1
A2
A3
P1
P2
P3
Posterior leaflet

Importance de l'ETO tri-dimensionnelle





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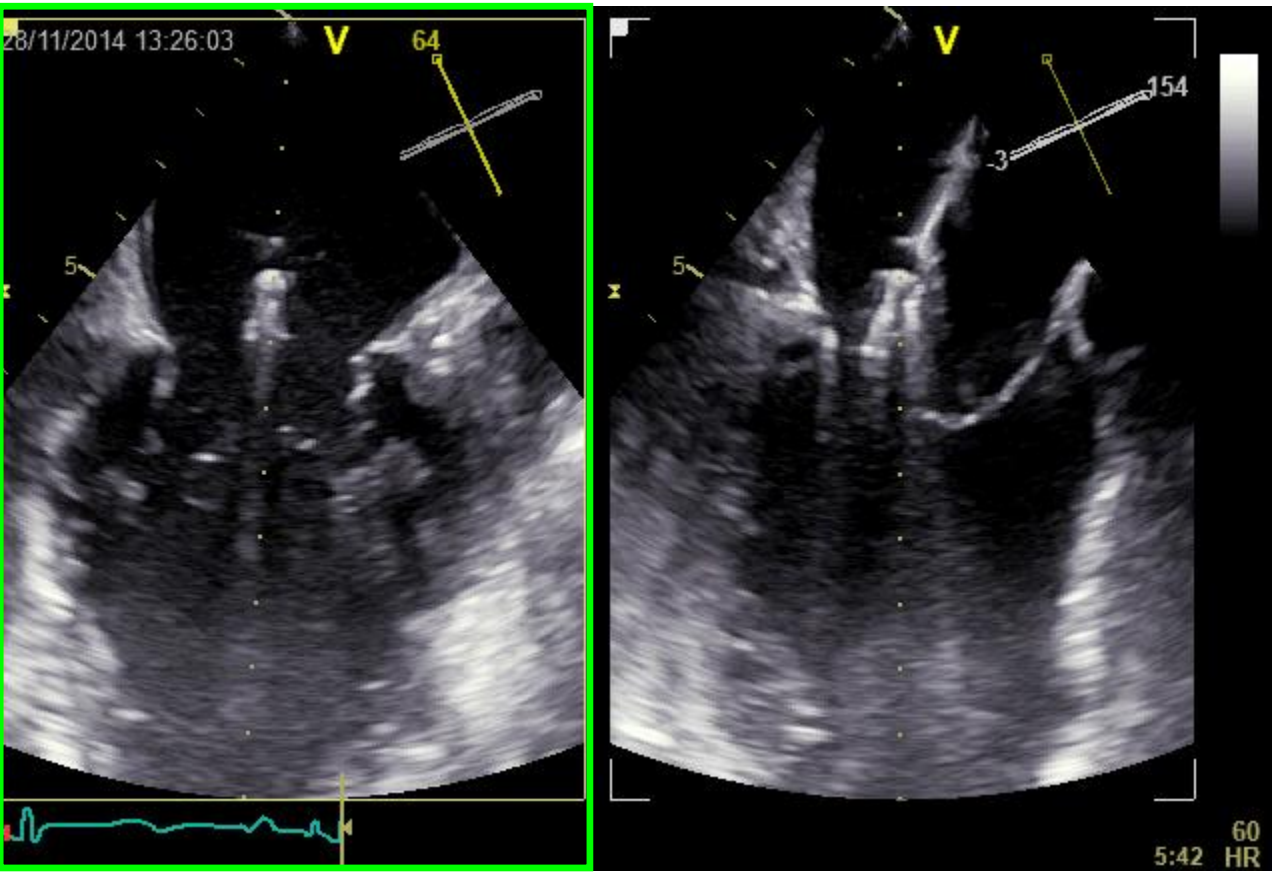

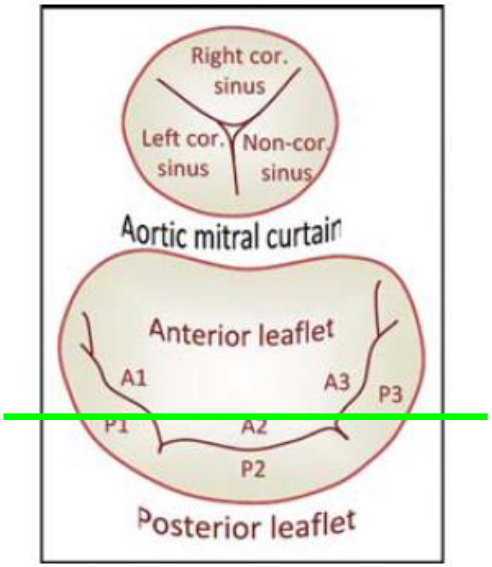

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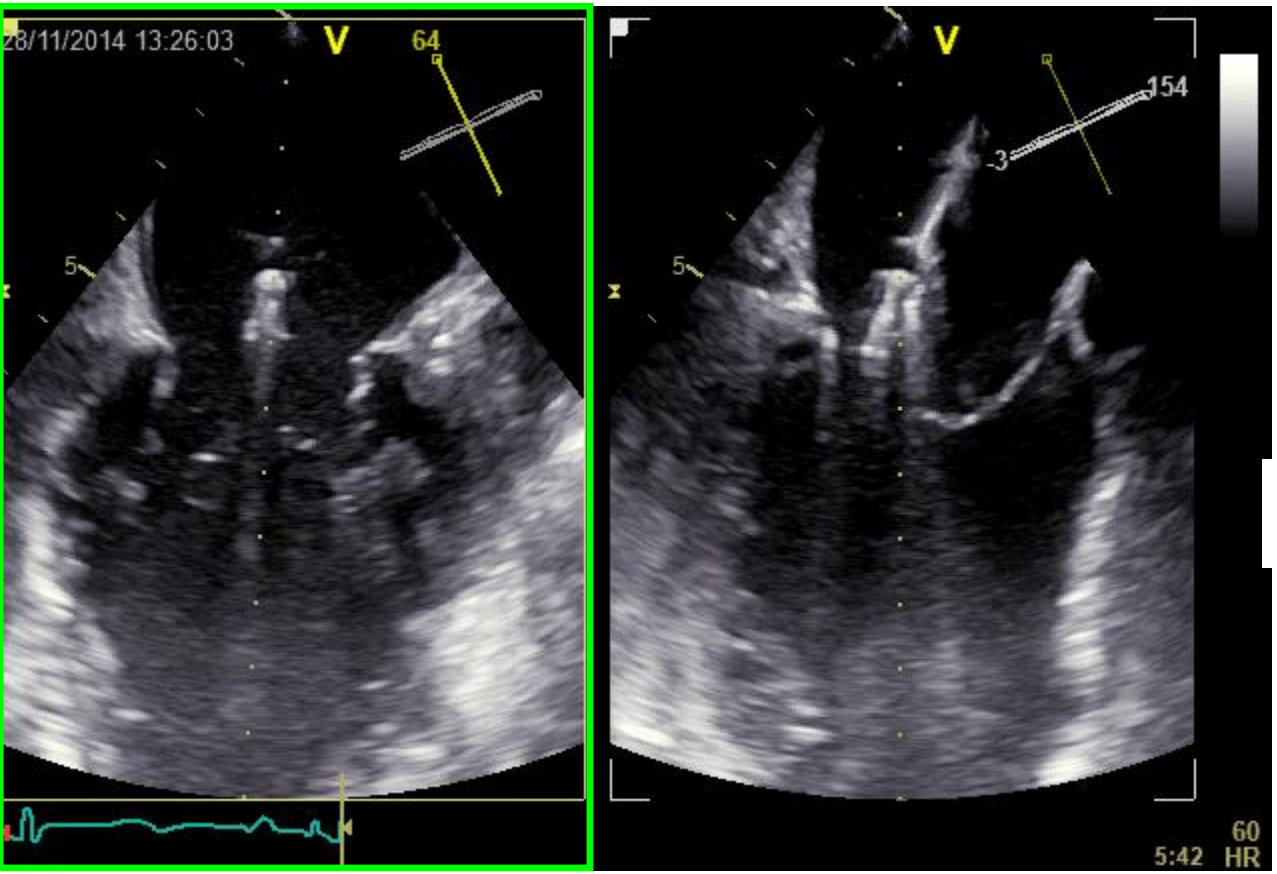
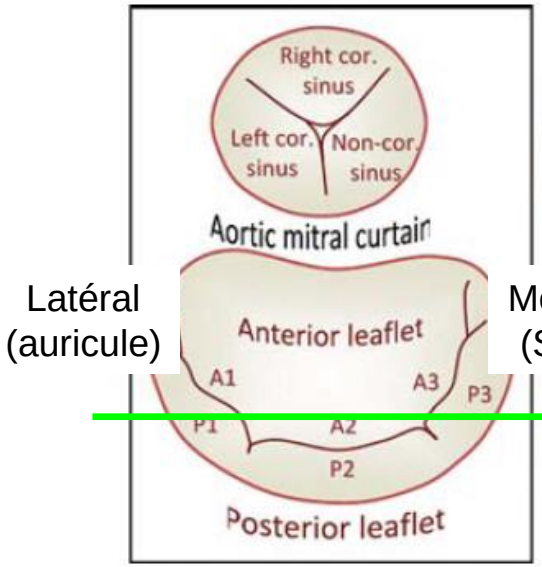
60°

Deux cavités

Vue bi-commissurale

Déplacements médio-latéraux





Latéral (auricule)

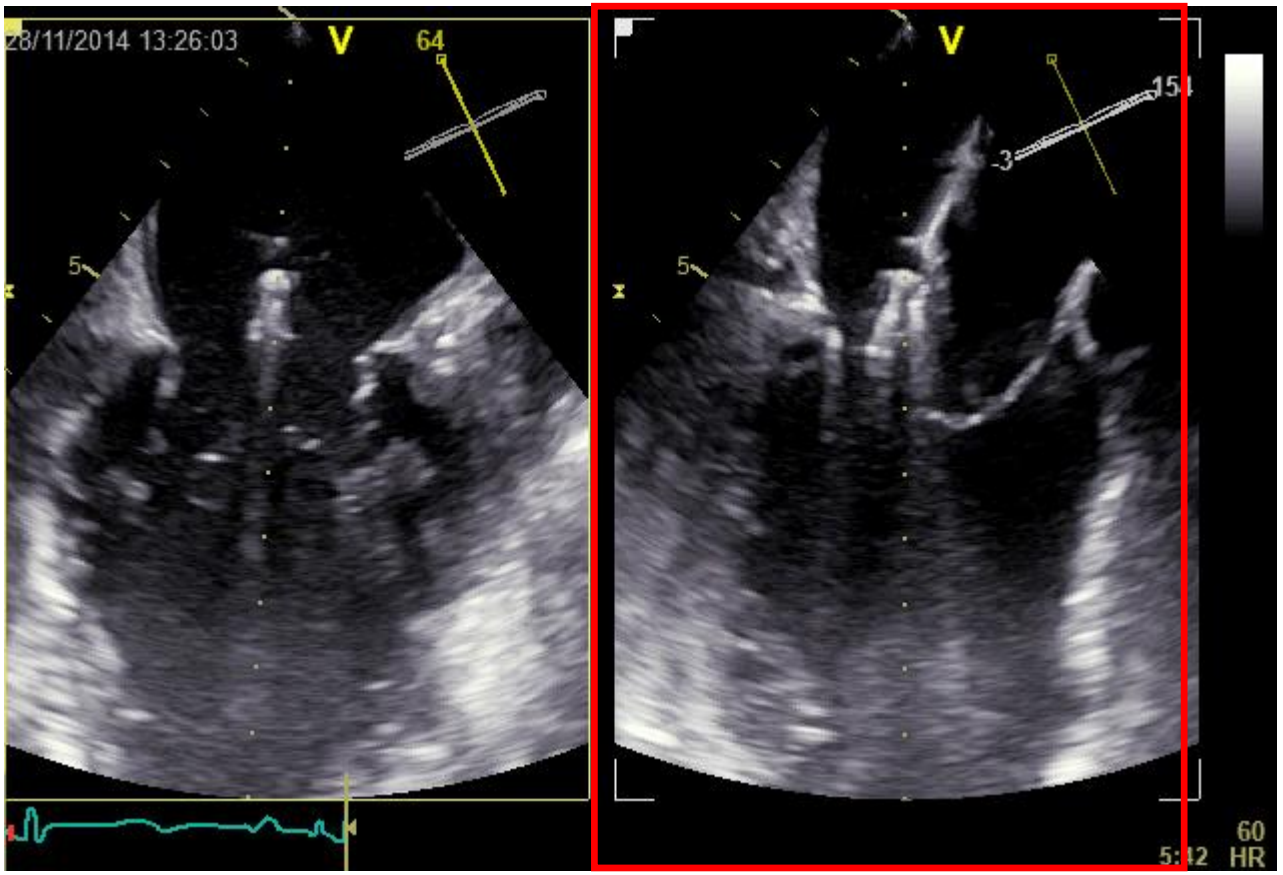
Médial (SIA)

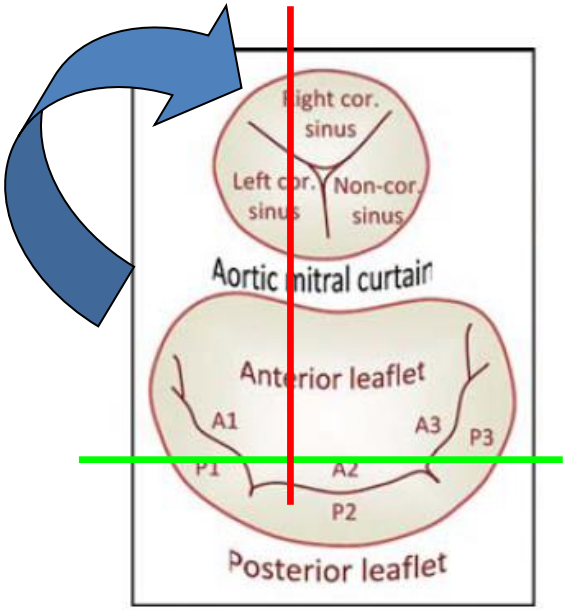
60° + 90 ° = 150 °

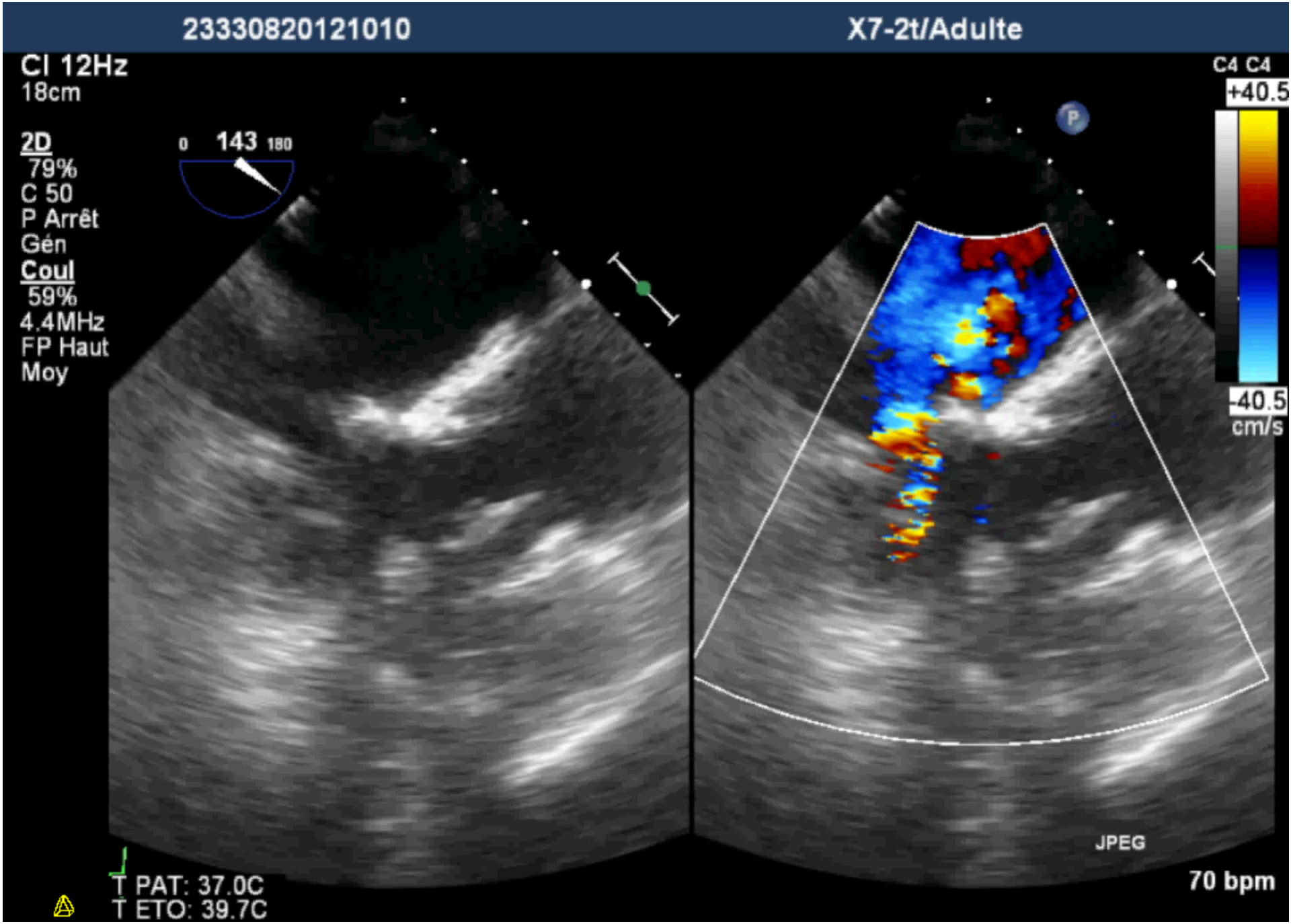
LVOT

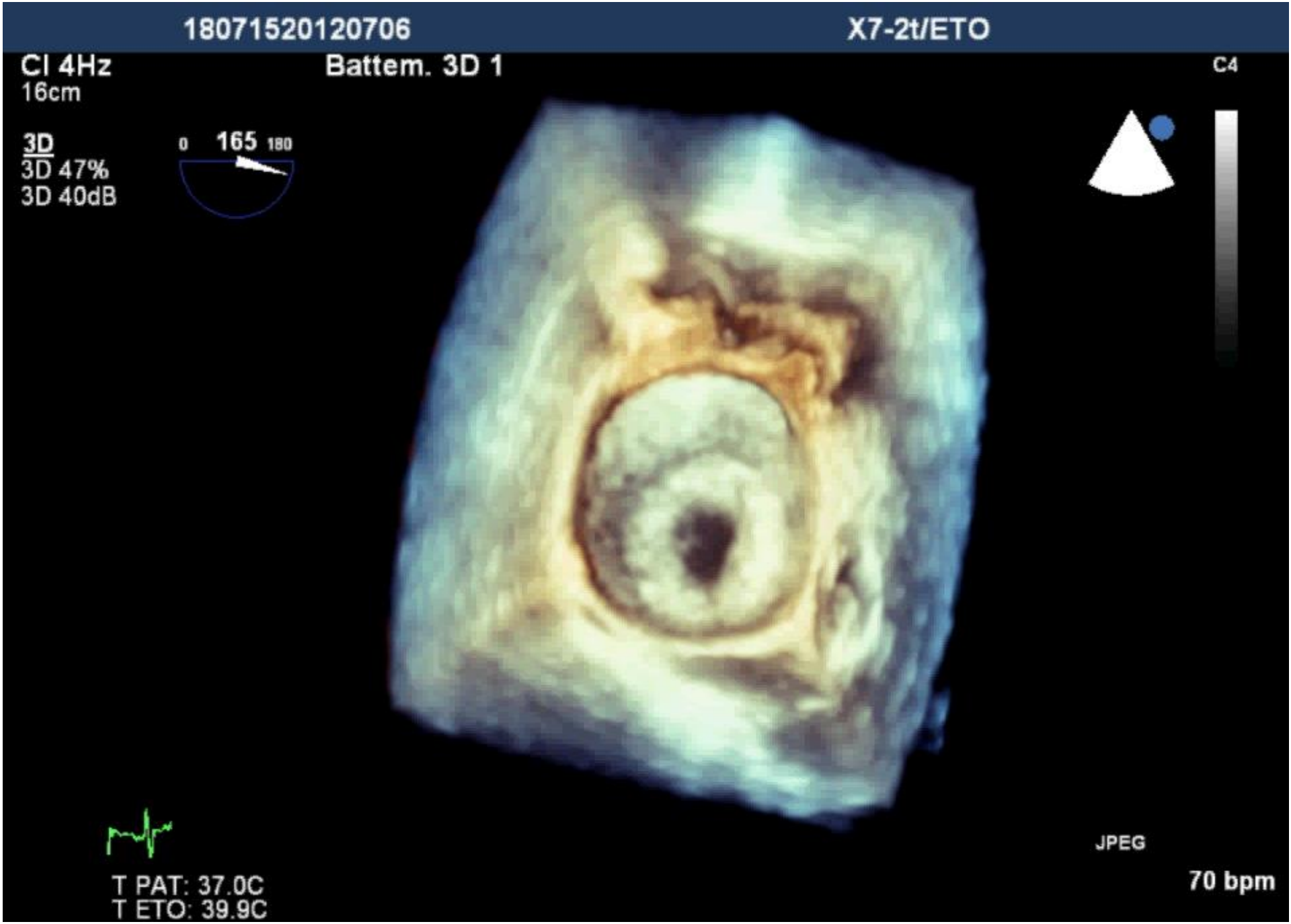
A2-P2

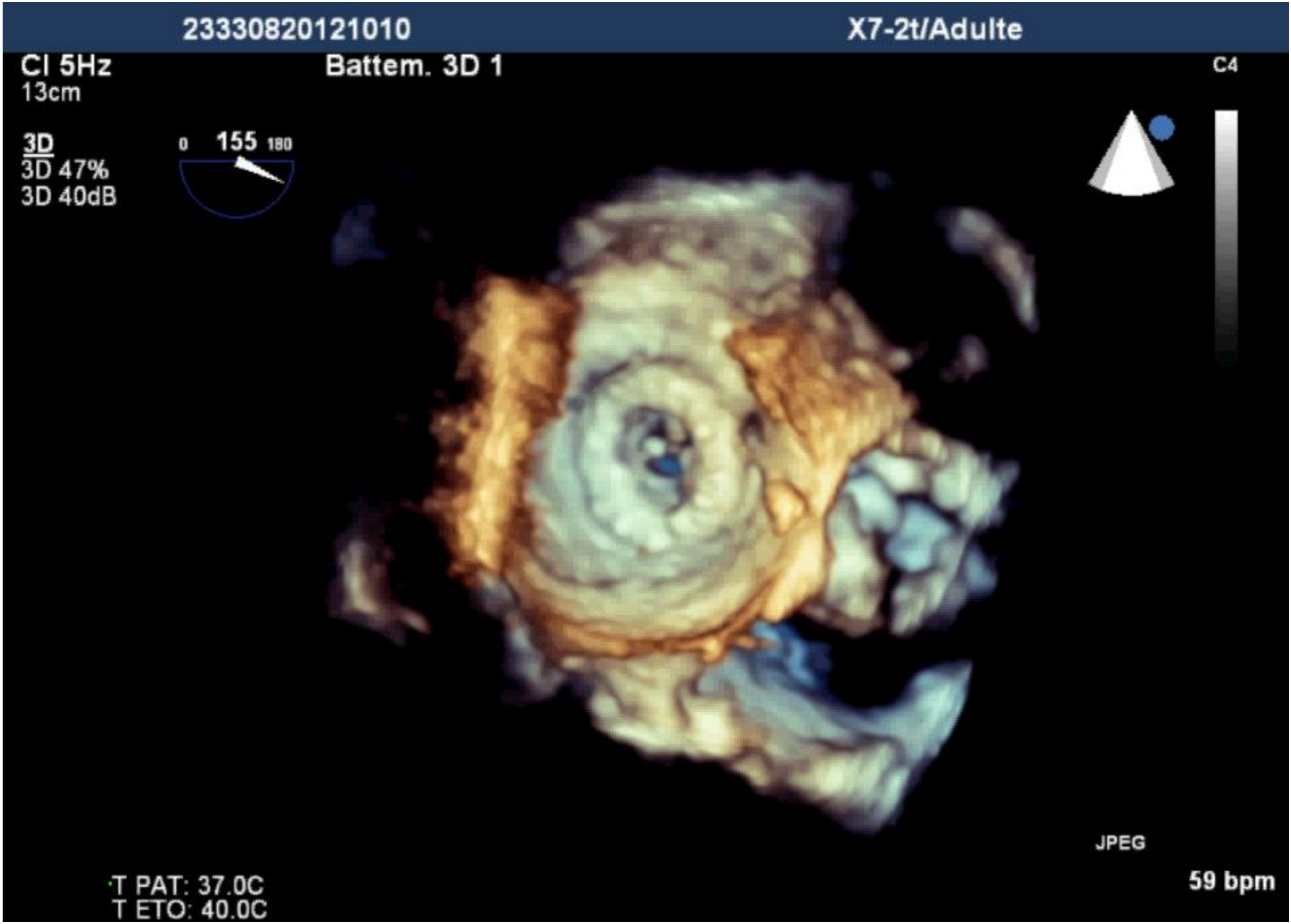
Déplacements antéro-postérieurs



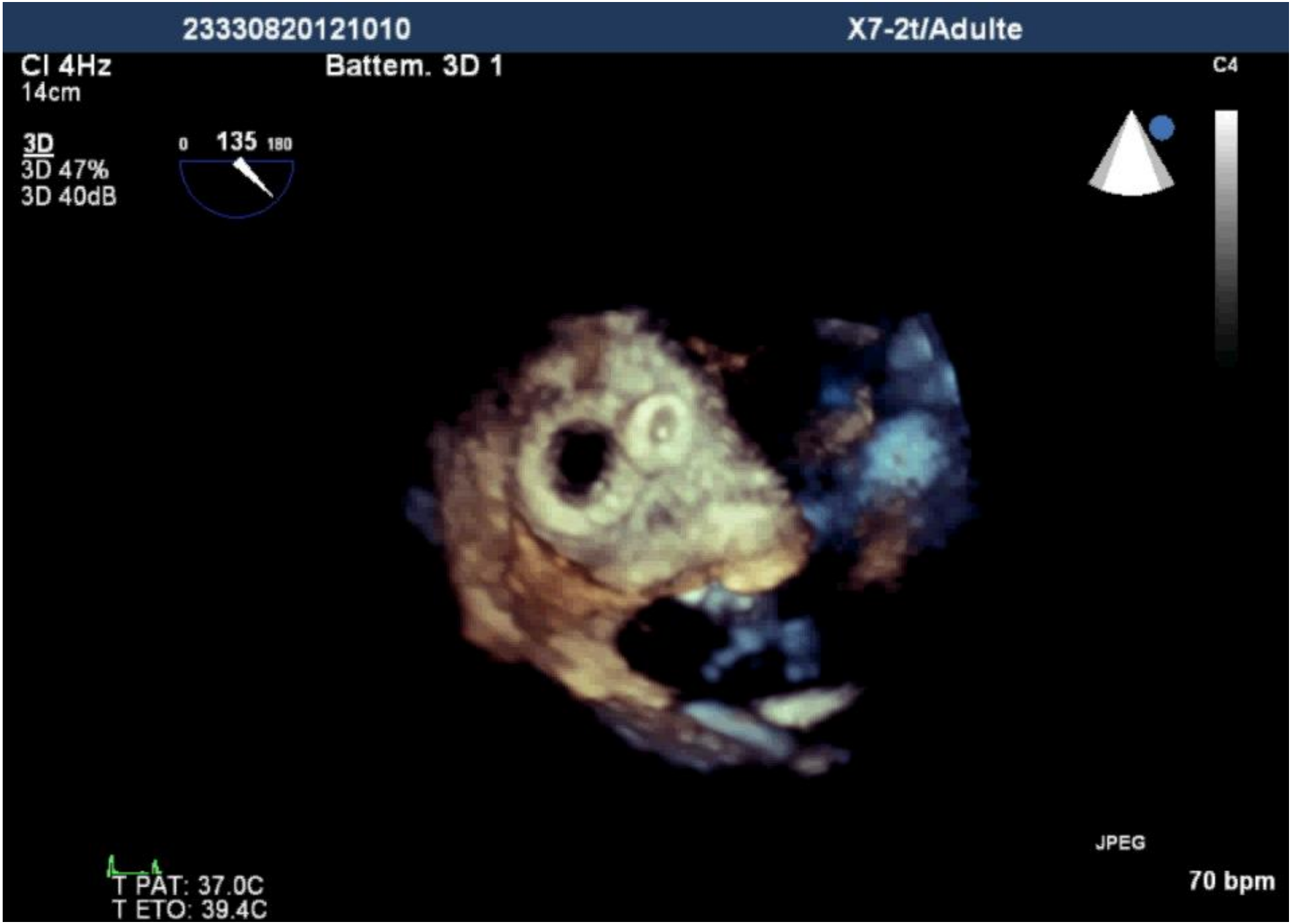


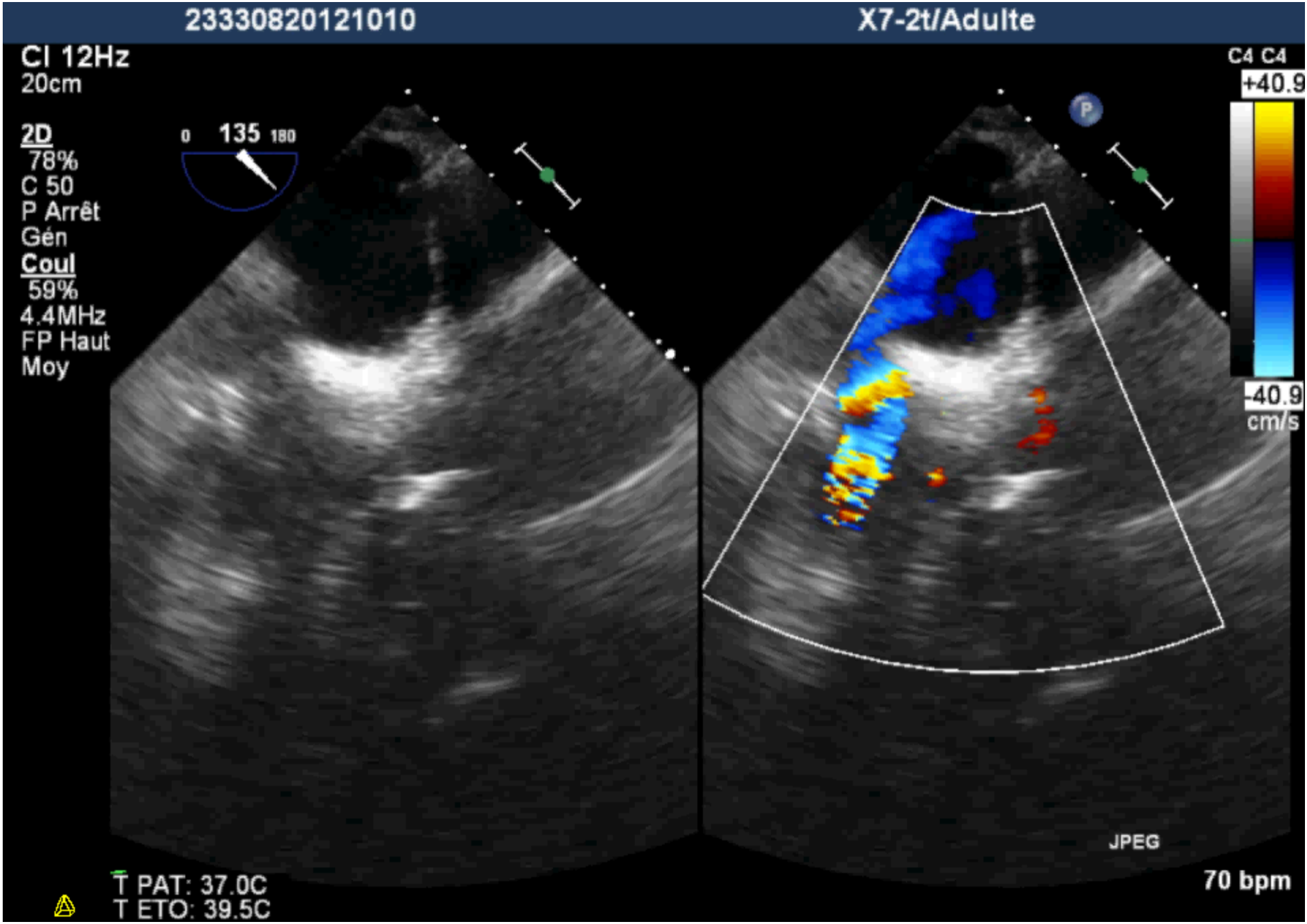

23330820121010
X7-2t/Adulte
CI 12Hz
18cm
2D
79%
C 50
P Arrêt
Gén
Coul
59%
4.4MHz
FP Haut
Moy
0
143
180
C4 C4
+40.5
-40.5
cm/s
JPEG
70 bpm
T PAT: 37.0C
T ETO: 39.7C

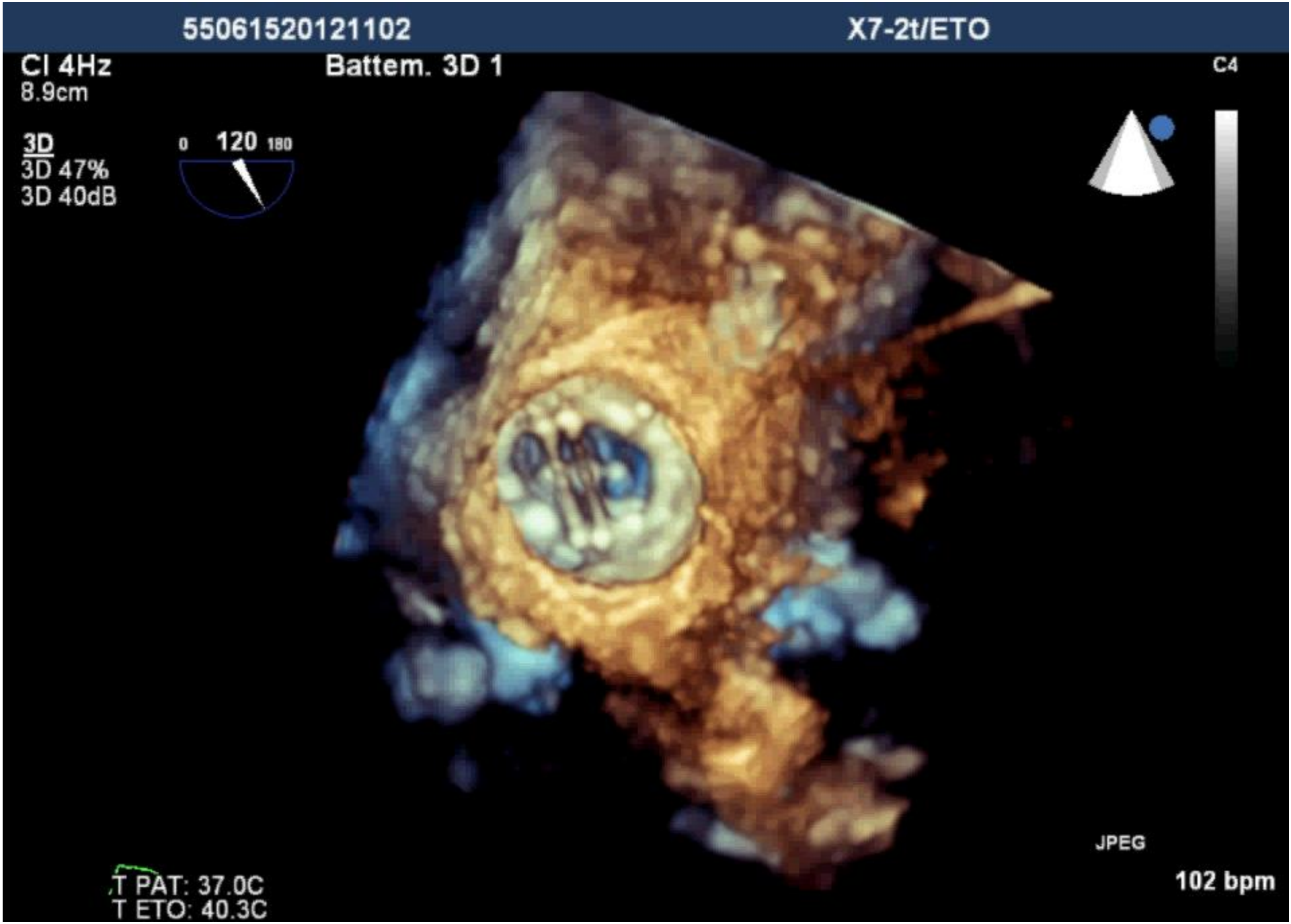

18071520120706
X7-2t/ETO
CI 4Hz
16cm
Battem. 3D 1
C4
3D
3D 47%
3D 40dB
0
165
180
JPEG
T PAT: 37.0C
T ETO: 39.9C
70 bpm

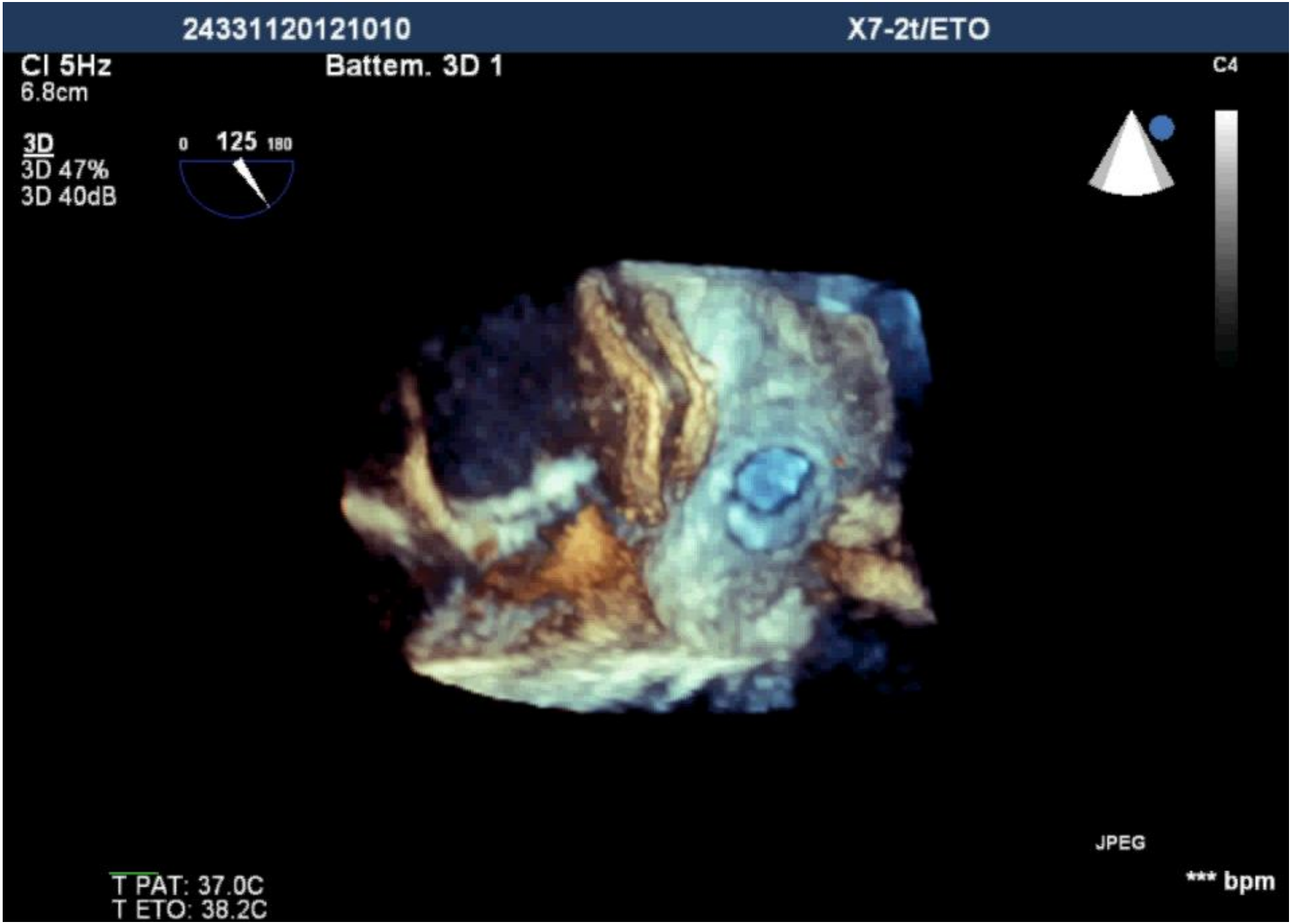

23330820121010
X7-2t/Adulte
CI 5Hz
13cm
Battem. 3D 1
C4
3D
3D 47%
3D 40dB
0
155
180
JPEG
T PAT: 37.0C
T ETO: 40.0C
59 bpm


23330820121010
X7-2t/Adulte
CI 4Hz
14cm
Battem. 3D 1
C4
3D
3D 47%
3D 40dB
0
135
180
JPEG
T PAT: 37.0C
T ETO: 39.6C
70 bpm


23330820121010
X7-2t/Adulte
CI 4Hz
14cm
Battem. 3D 1
C4
3D
3D 47%
3D 40dB
0
135
180
JPEG
T PAT: 37.0C
T ETO: 39.4C
70 bpm


23330820121010
X7-2t/Adulte
Cl 12Hz
20cm
2D
78%
C 50
P Arrêt
Gén
Coul
59%
4.4MHz
FP Haut
Moy
0
135
180
C4 C4
+40.9
-40.9
cm/s
JPEG
70 bpm
T PAT: 37.0C
T ETO: 39.5C


55061520121102
X7-2t/ETO
CI 4Hz
8.9cm
Battem. 3D 1
C4
3D
3D 47%
3D 40dB
0
120
180
JPEG
102 bpm
T PAT: 37.0C
T ETO: 40.3C


24331120121010
X7-2t/ETO
CI 5Hz
6.8cm
Battem. 3D 1
C4
3D
3D 47%
3D 40dB
0
125
180
JPEG
*** bpm
T PAT: 37.0C
T ETO: 38.2C