

L'oreillette vue par le rythmologue



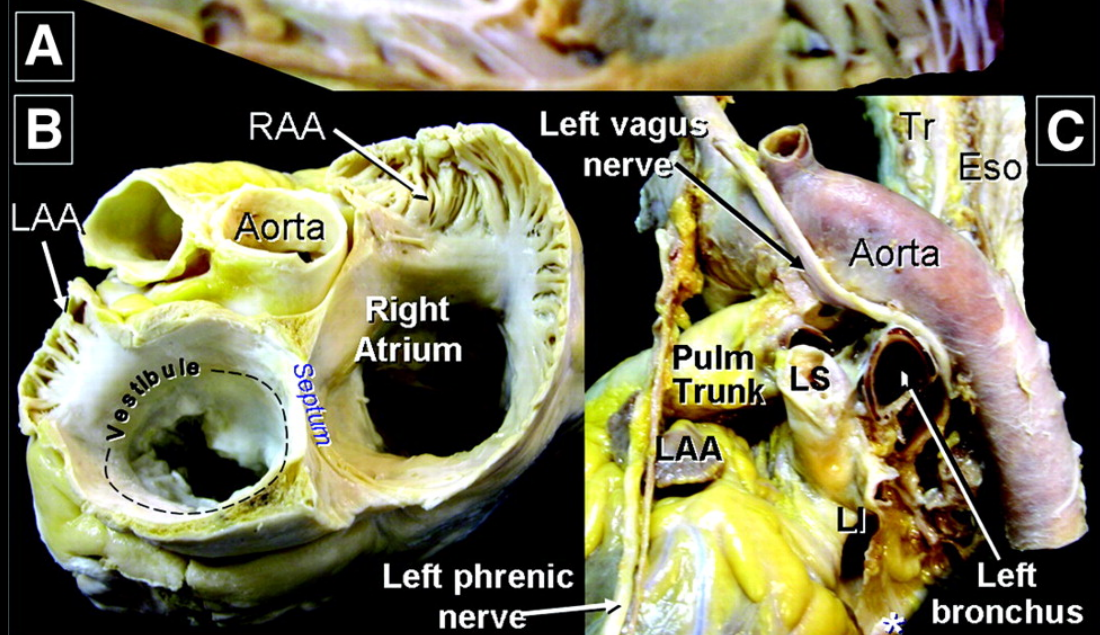
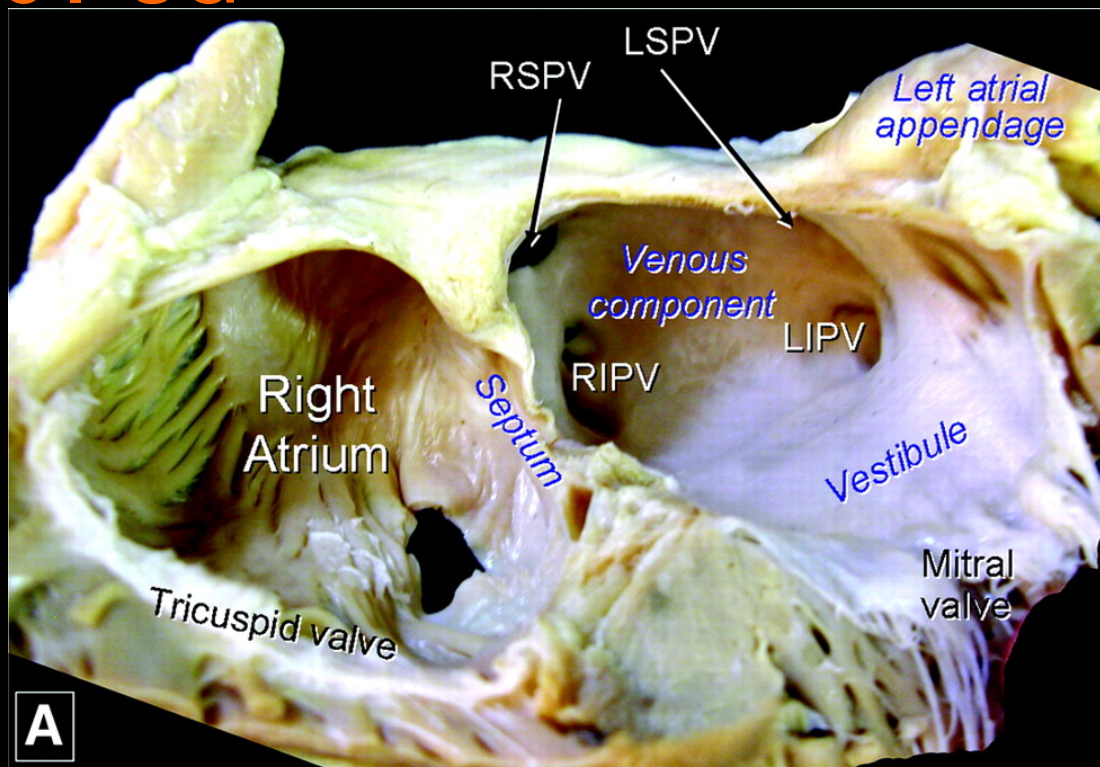
Philippe Ricard
Yacoub Habib
Renaud Vidal
Centre du coeur
Clinique Saint George
Nice

L'oreillette vue par l'électrophysiologiste

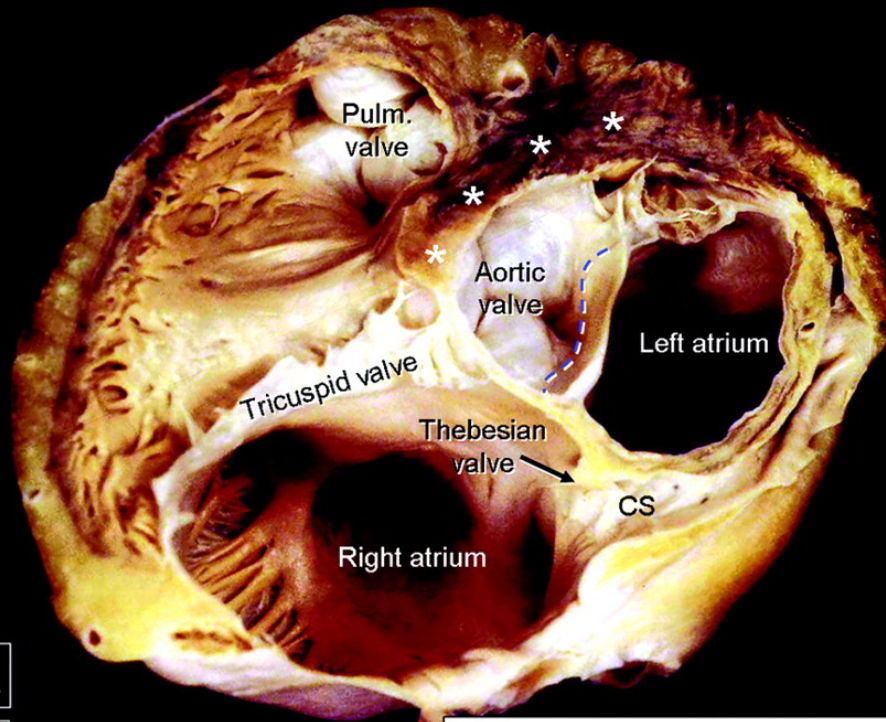
- L'anatomie
- L'électrophysiologie (signaux électriques)
- Autres (système nerveux)

Épaisseur des parois de l'OG

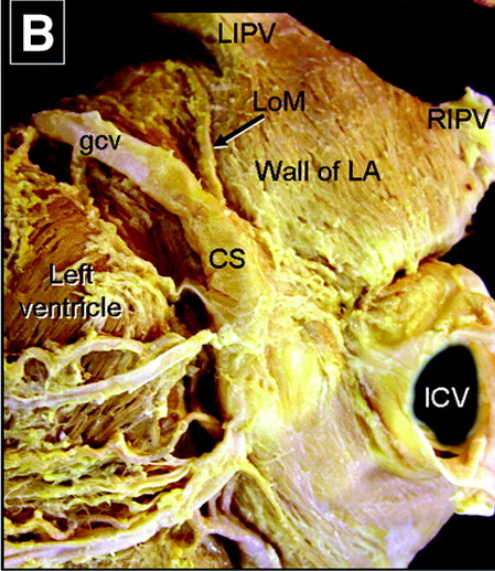
- Latéral: 2,5 – 4,9 mm
- Antérieur: 1,5-4,8 mm
- Très fin au niveau du vestibule
- Postérieur: 2,5-5,3 mm



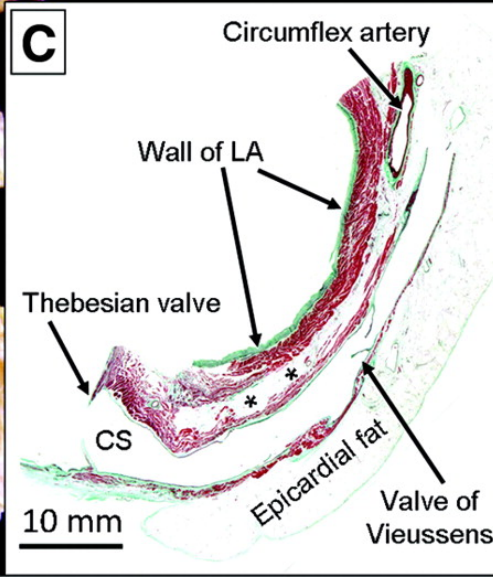
Le sinus coronaire, le ligament de Marshall



A

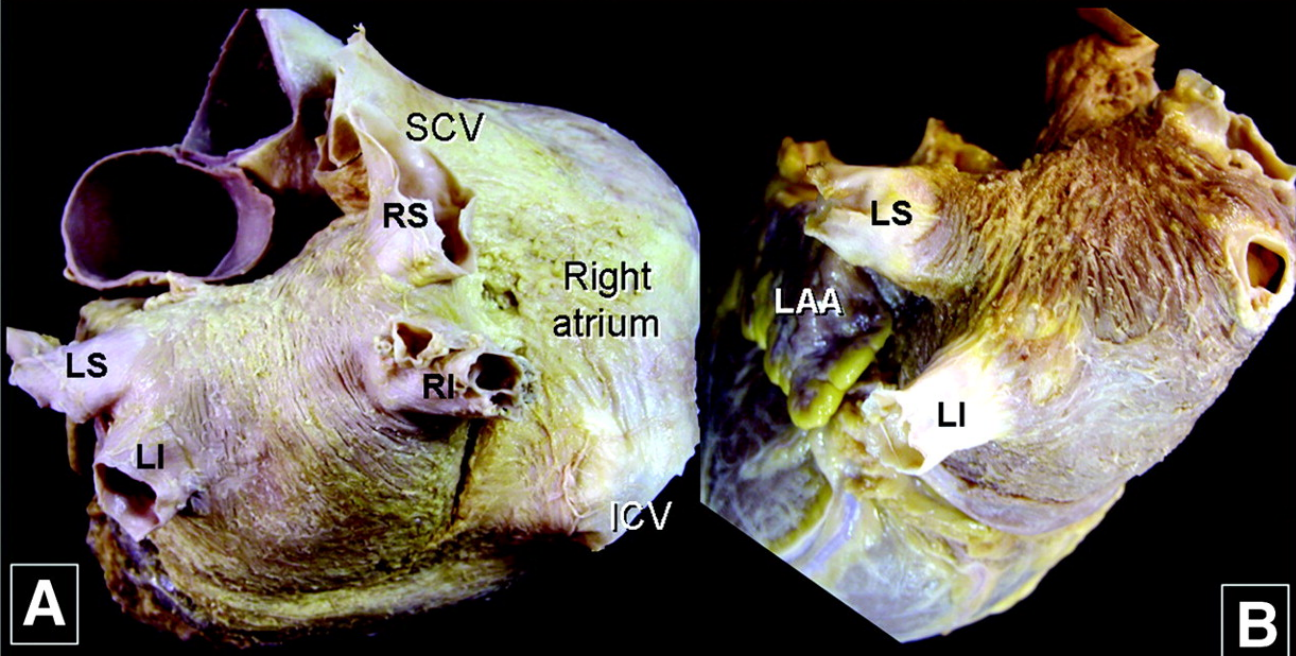


B

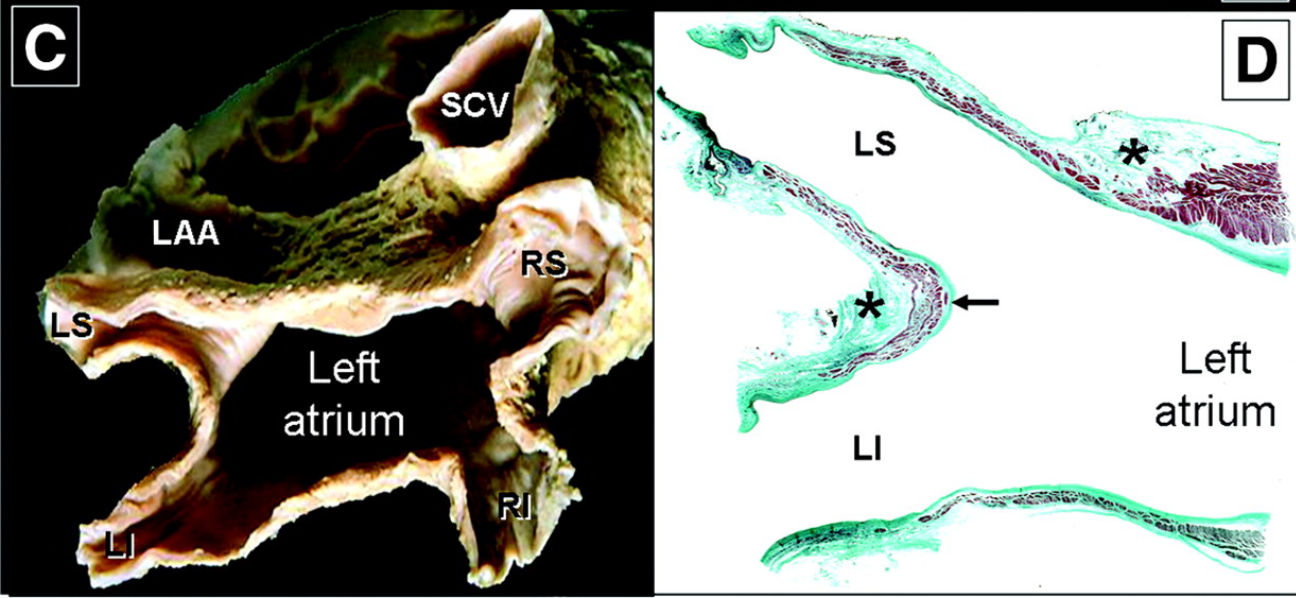


C

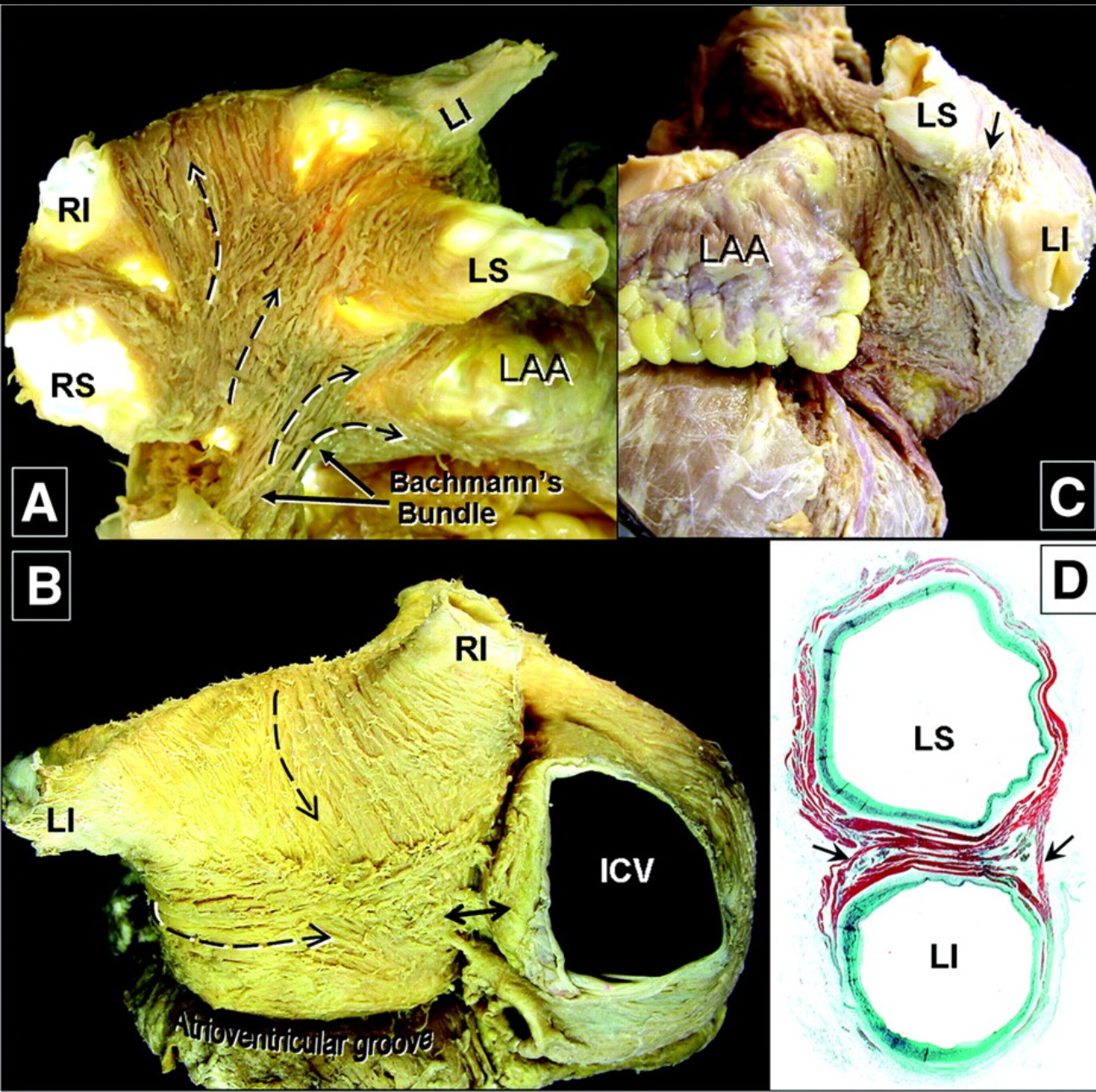
Les veines pulmonaires et la structure musculaire de l'OG (1)



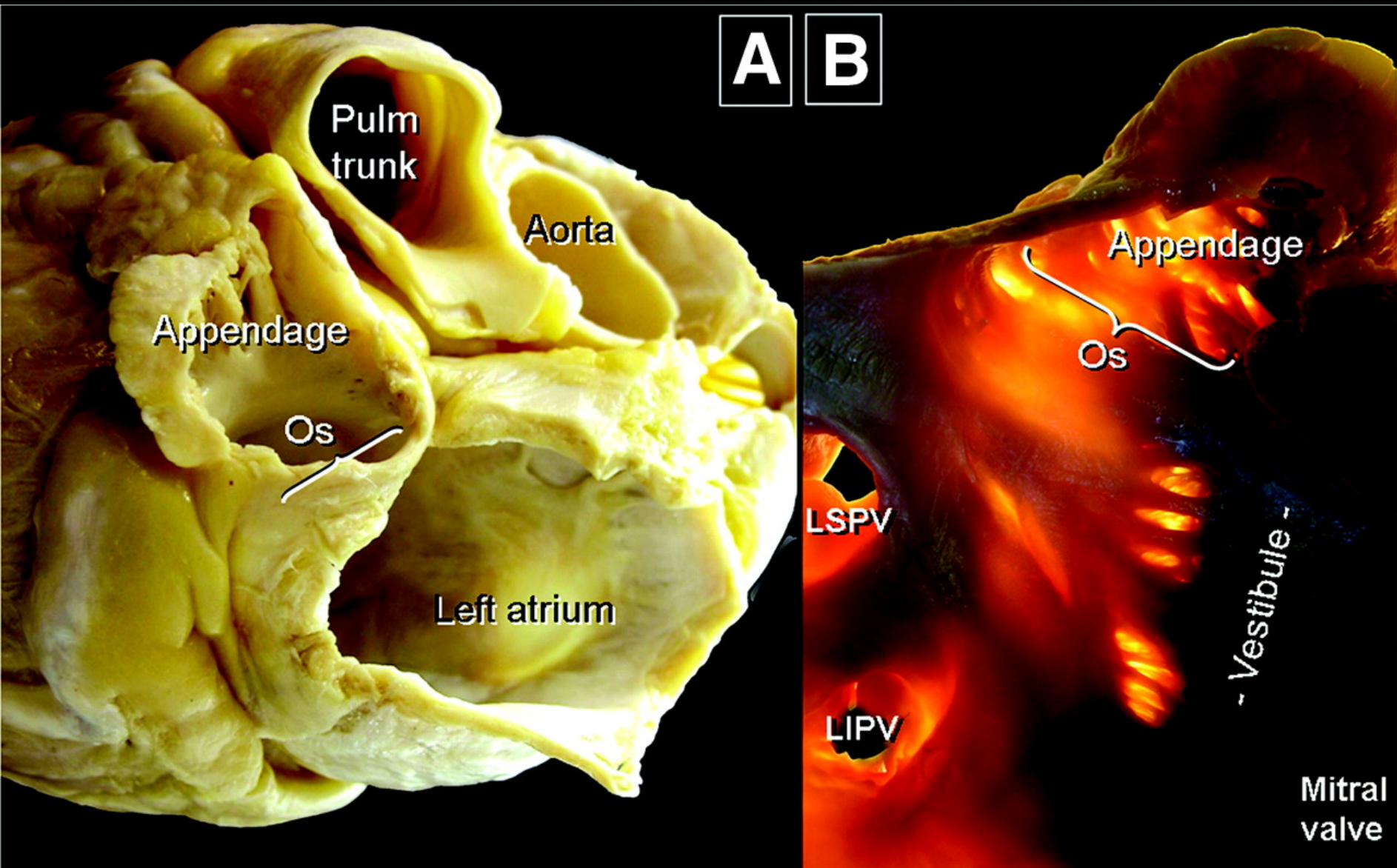
- 4 VP: 74%
- 5 VP: 17%
- 3 VP: 9%



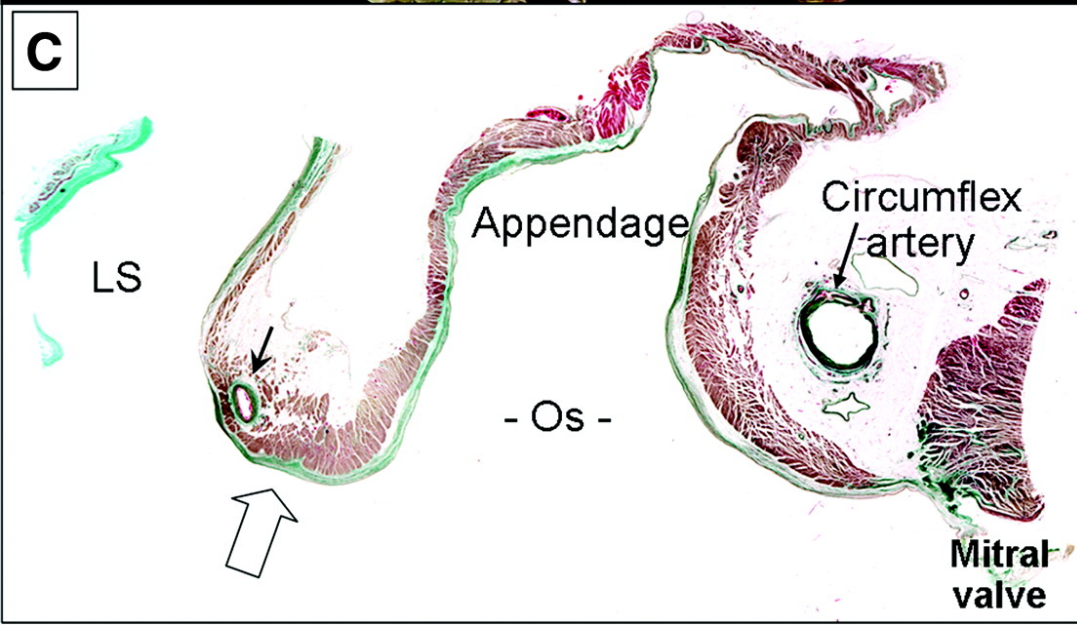
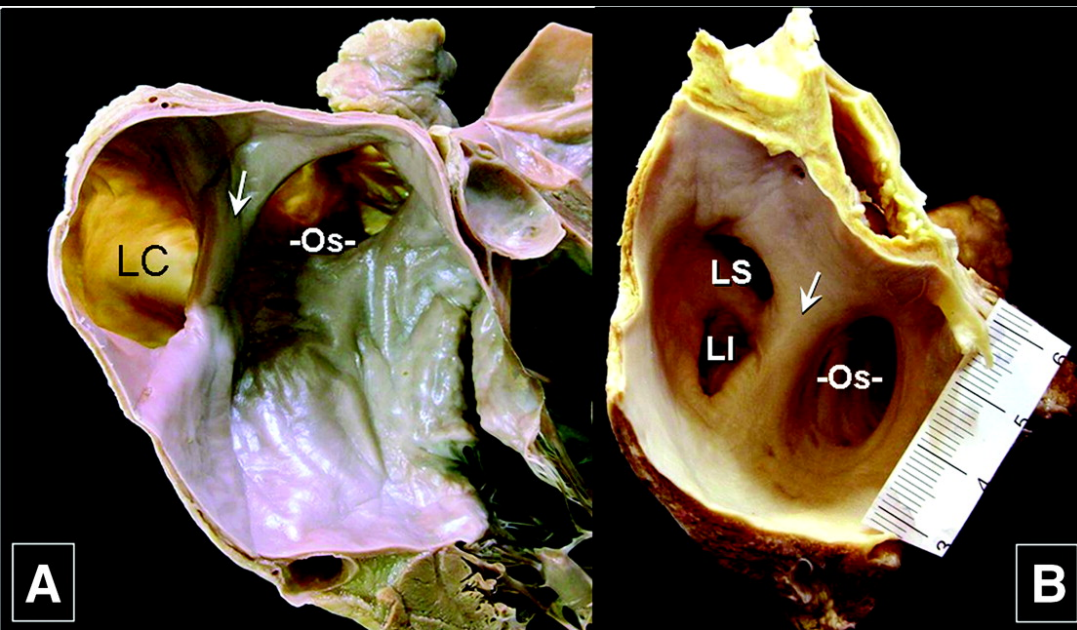
La structure musculaire de l'oreillette gauche



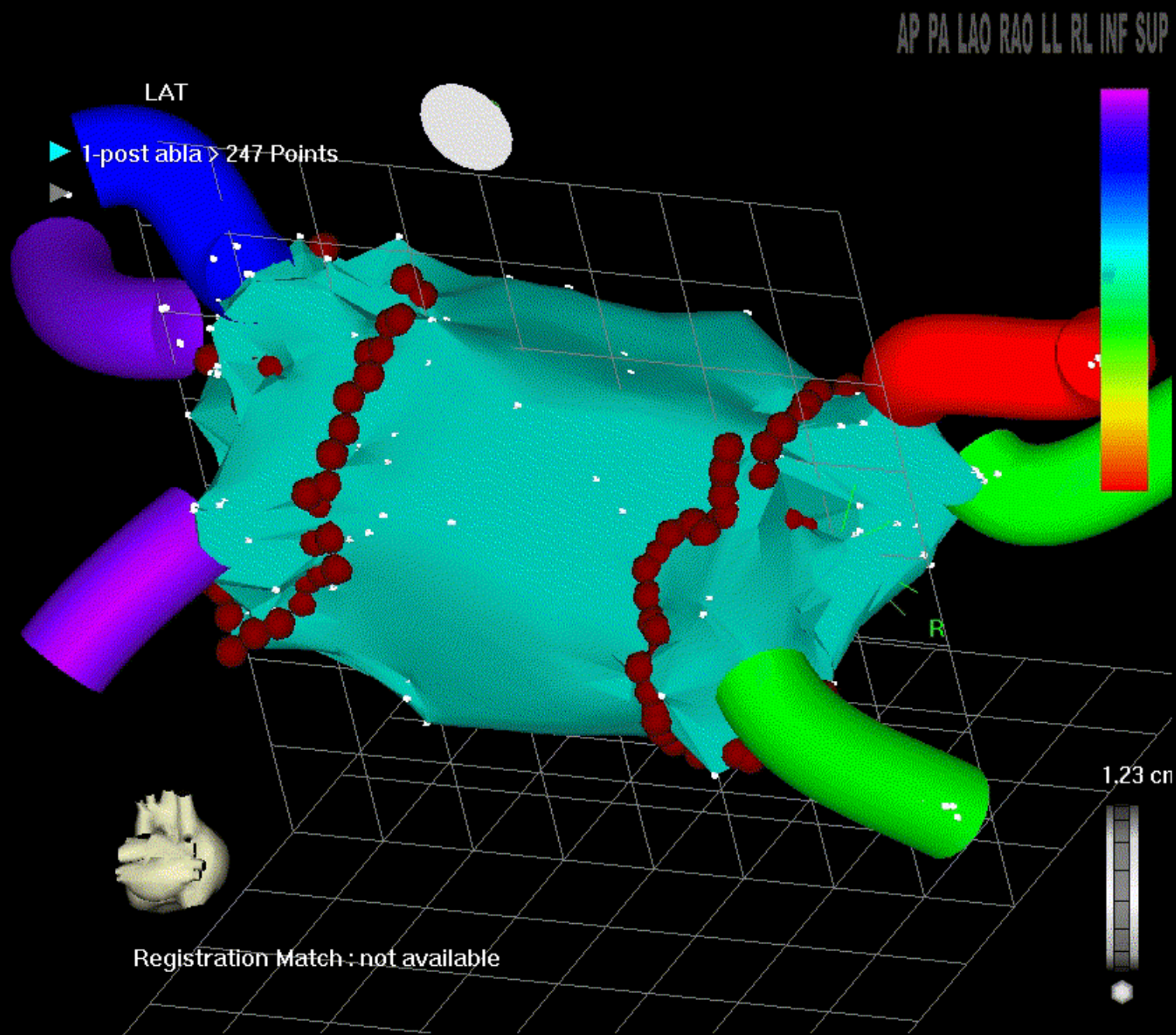
La jonction entre les veines gauches et l'auricule (1)



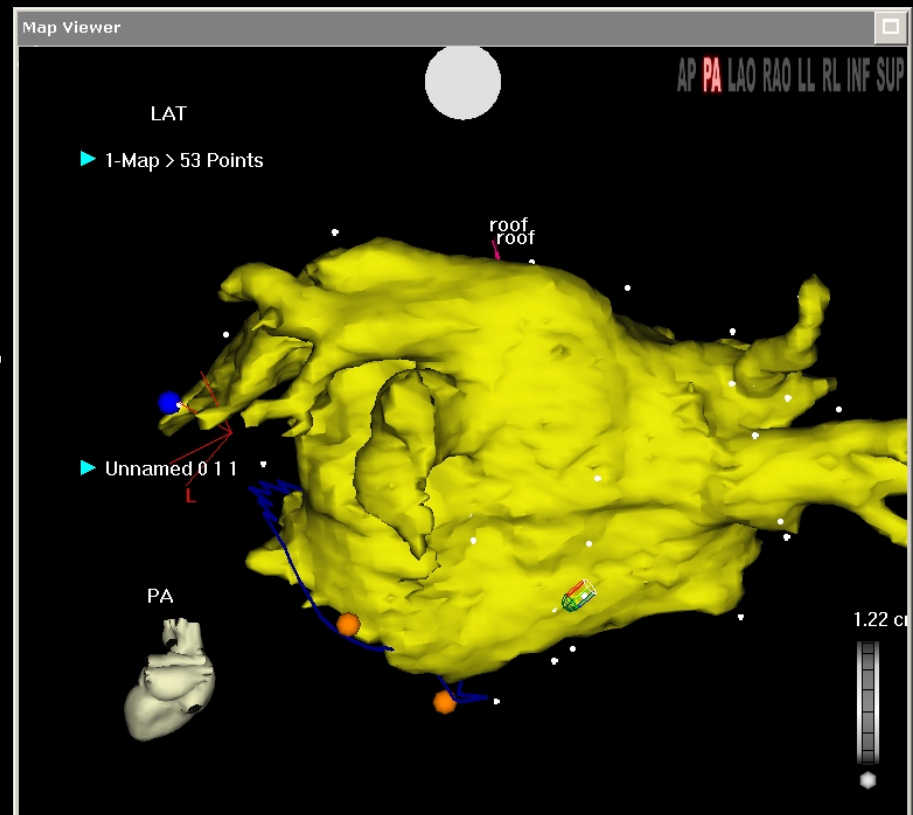
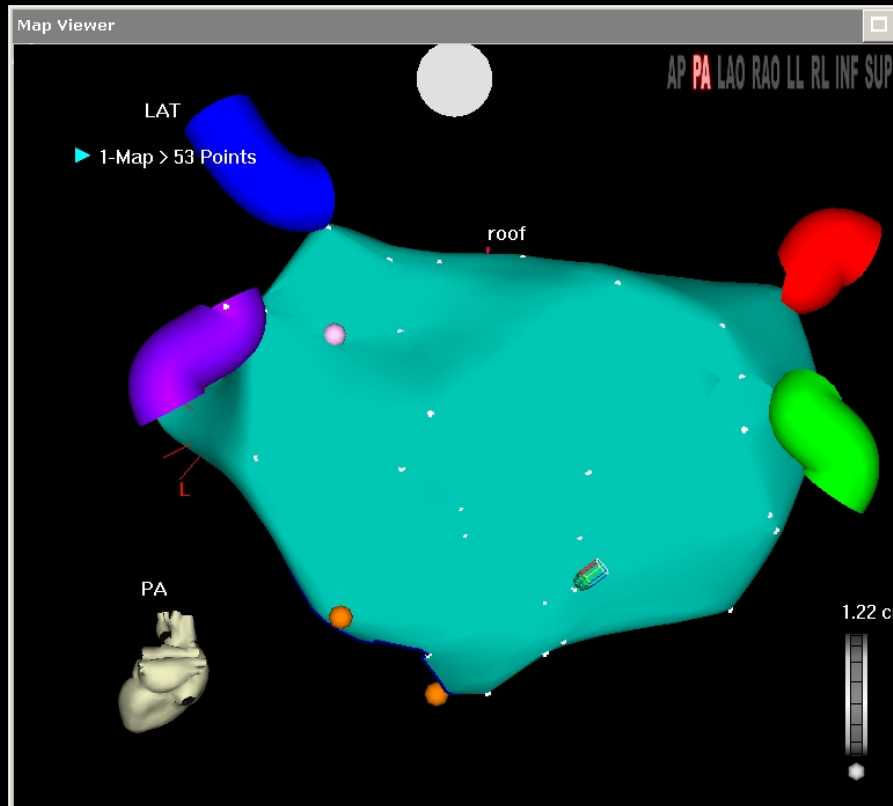
La jonction entre les veines gauches et l'auricule (2)



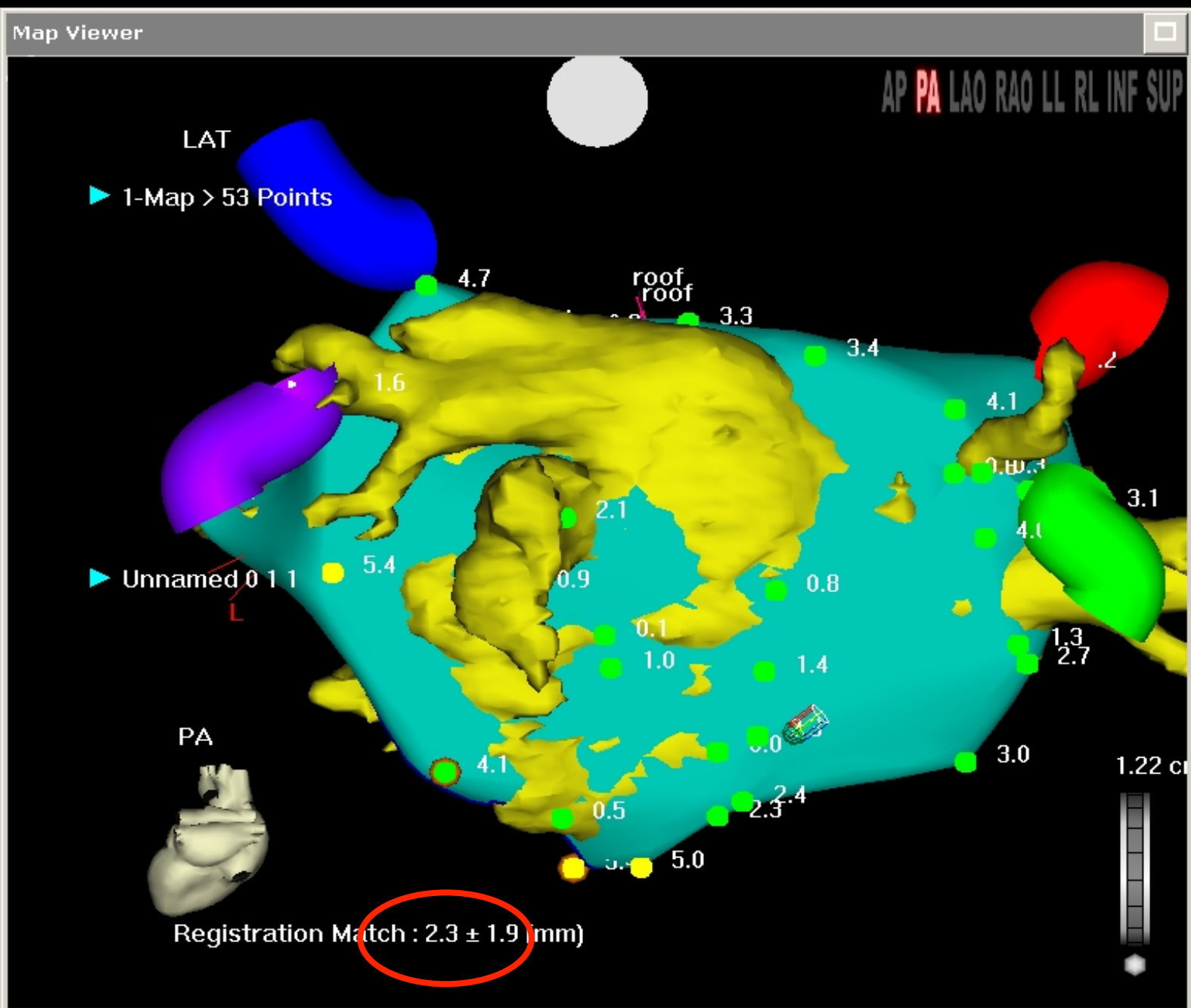
CARTO, vue postérieure de l' OG



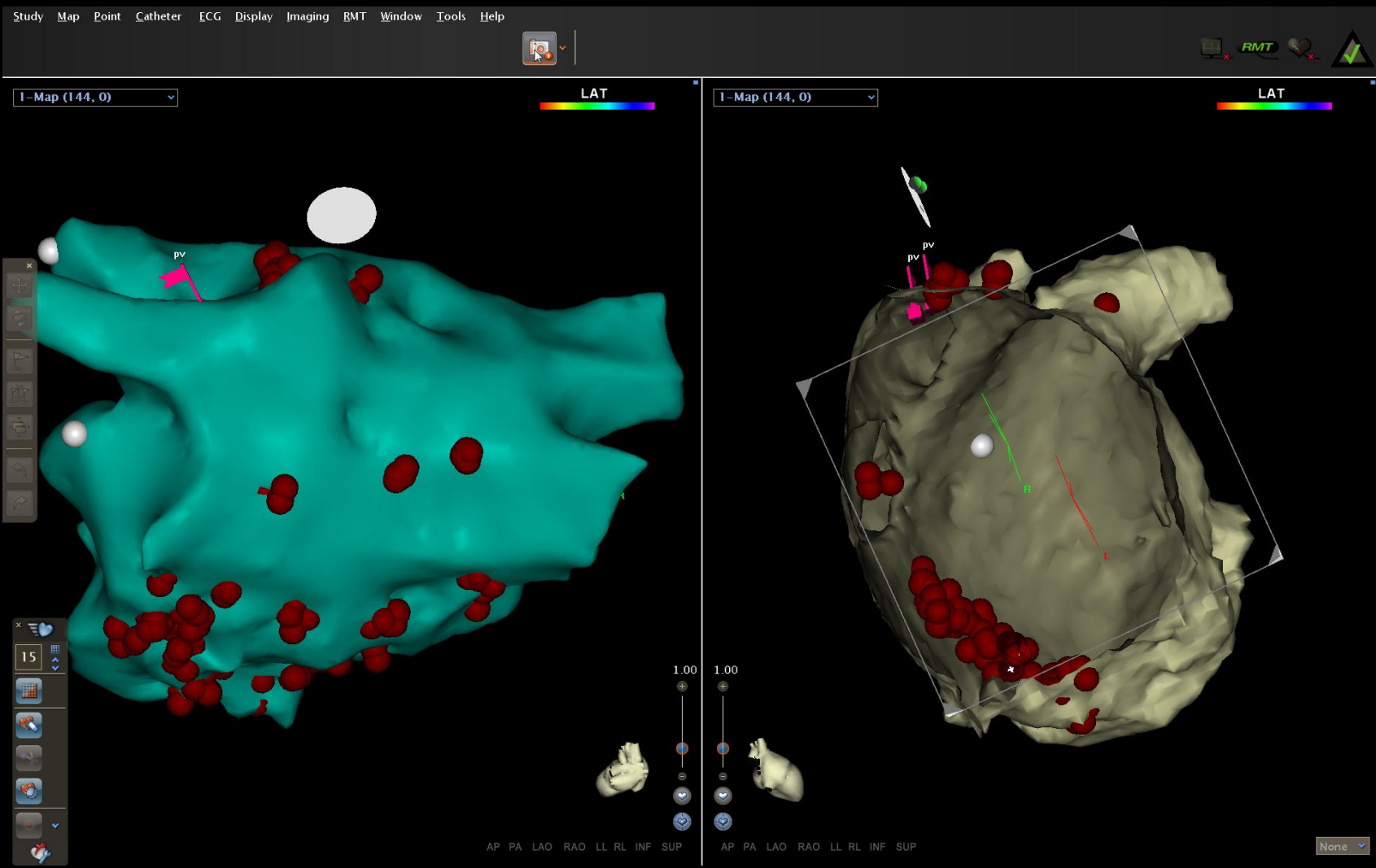
Fusion (CARTO Merge) = CARTO + Scanner (1)



Fusion (CARTO Merge) = CARTO + Scanner (2)



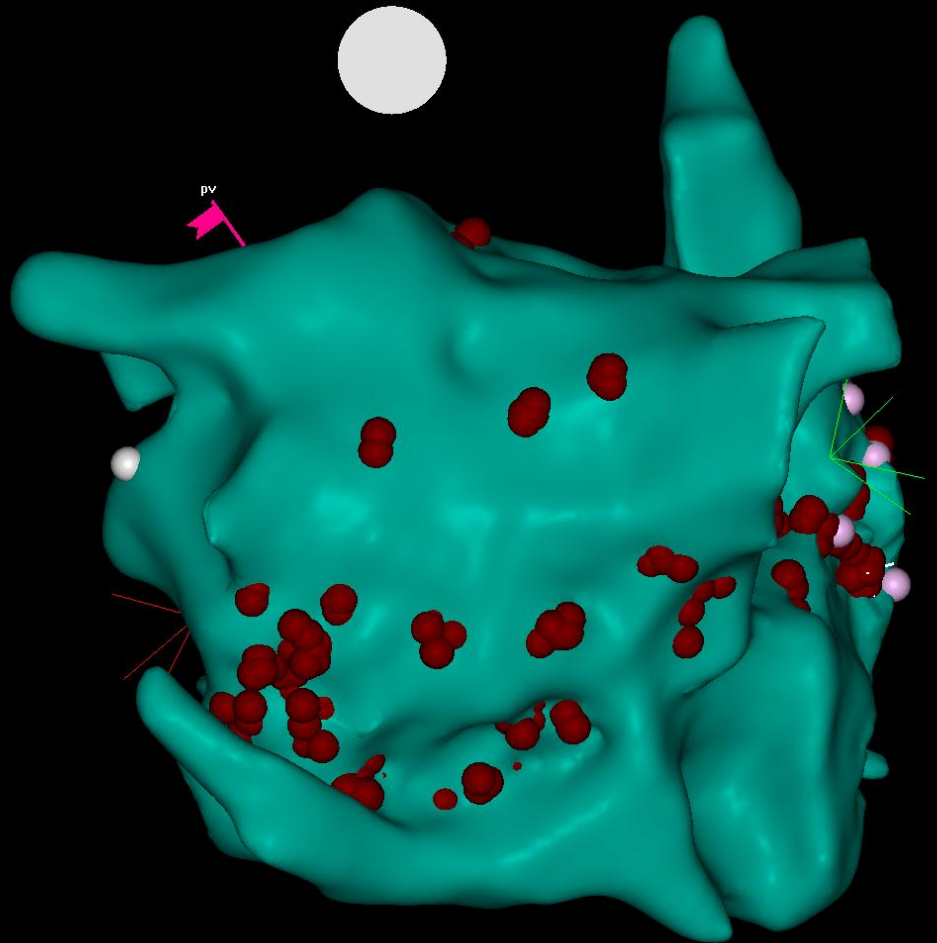
Carte et scanner avec une vue ouverte



Double carte OD – OG et sinus coronaire

2-Map (122, 0)

LAT

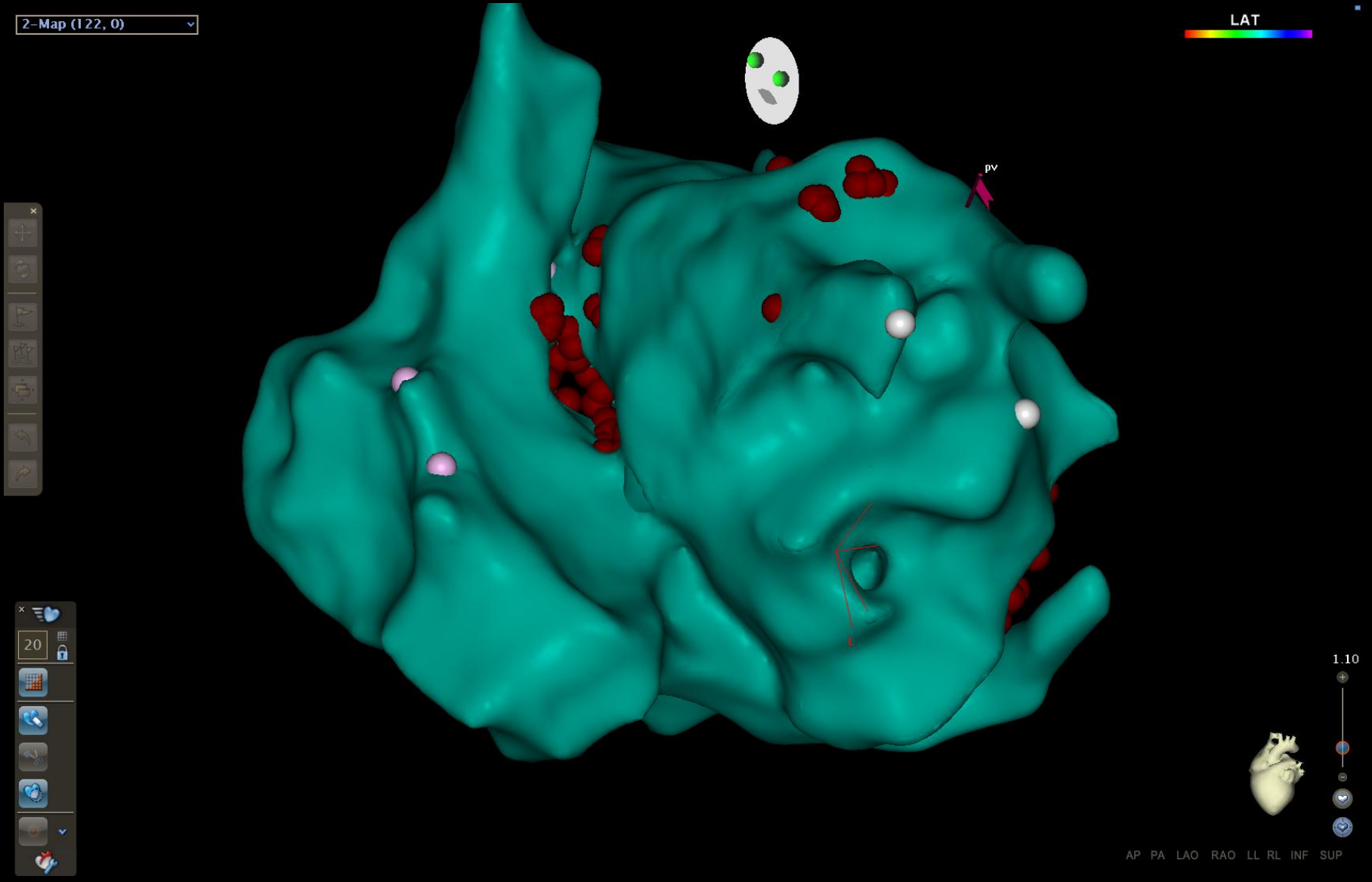


1.21

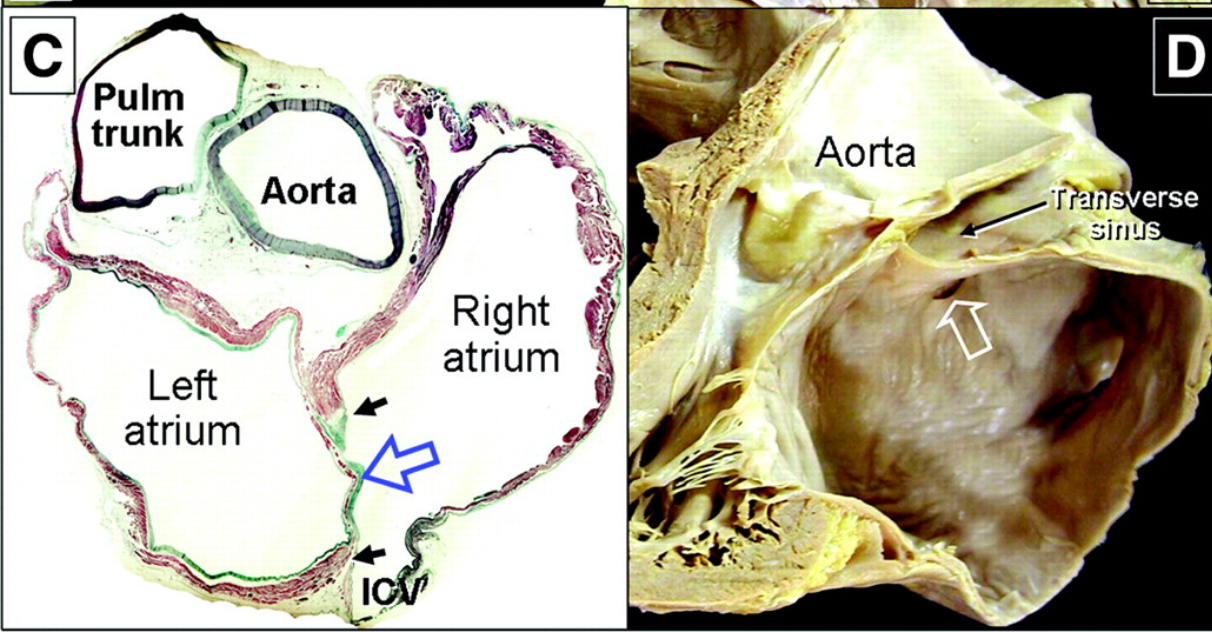
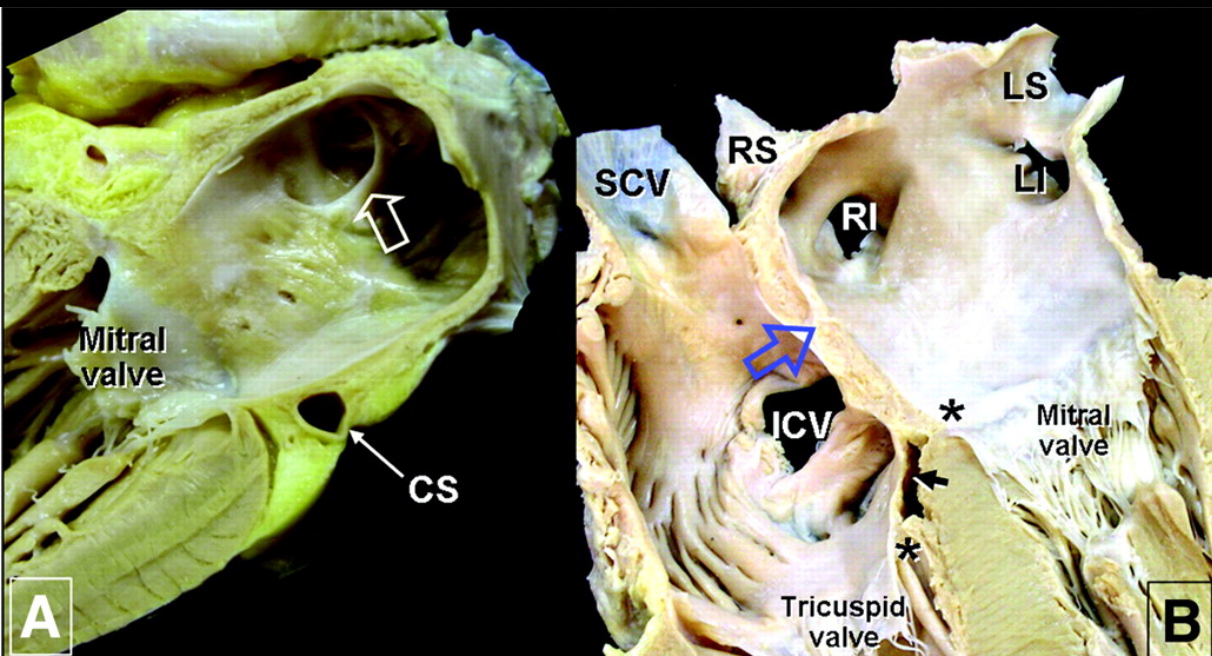
A small 3D model of the heart is shown, with a vertical scale bar above it displaying the value 1.21. Below the model are several orientation icons: AP, PA, LAO, RAO, LL, RL, INF, and SUP.

AP PA LAO RAO LL RL INF SUP

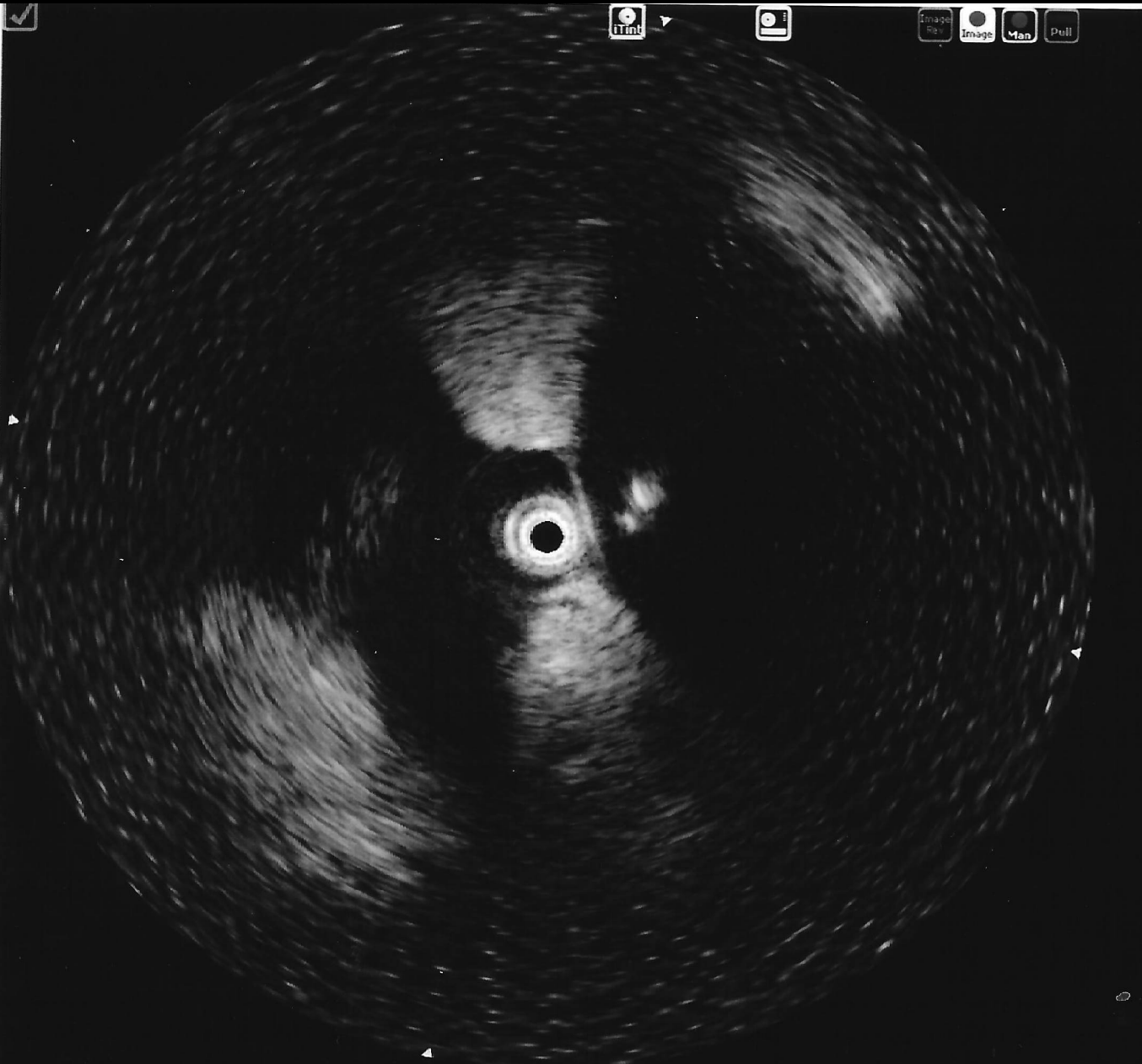
Double vue carte OD – OG. Vue du septum inter-auriculaire



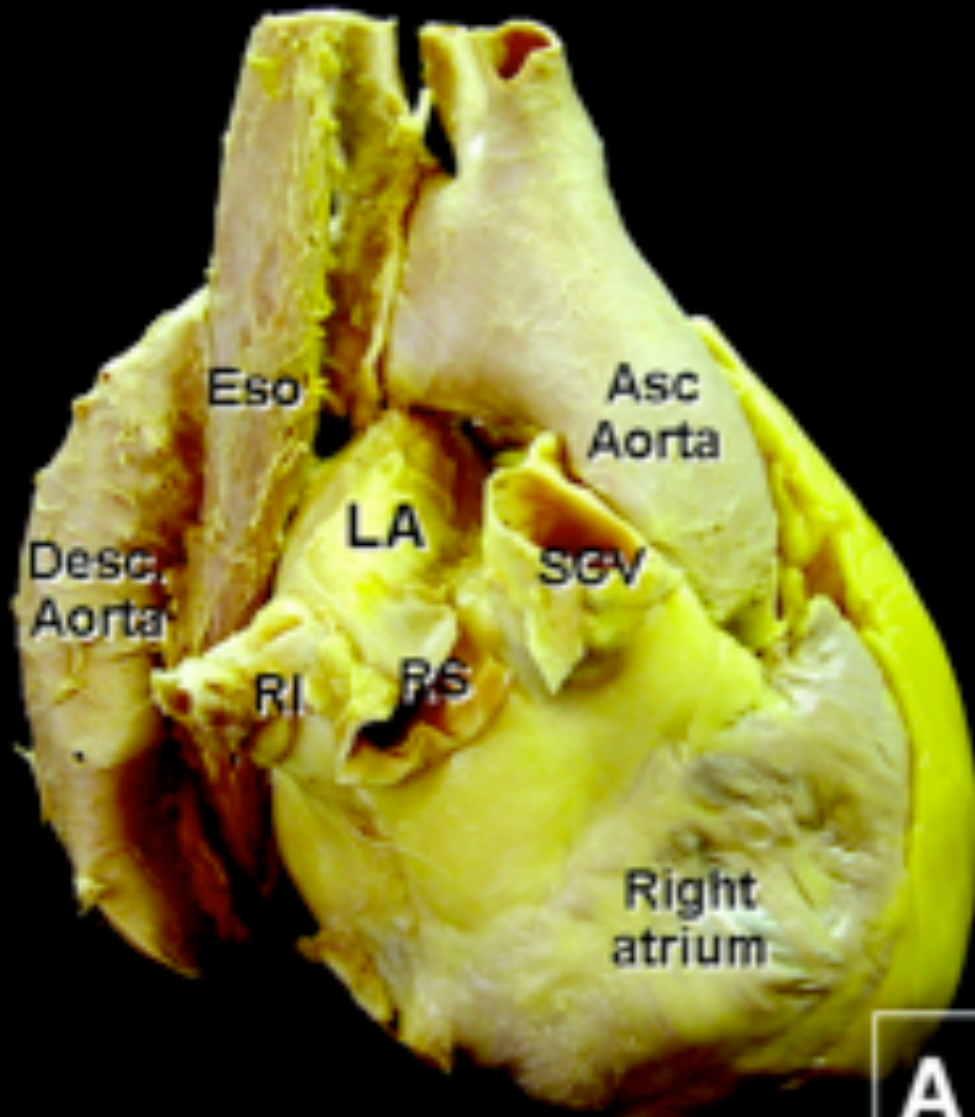
Le septum inter-auriculaire



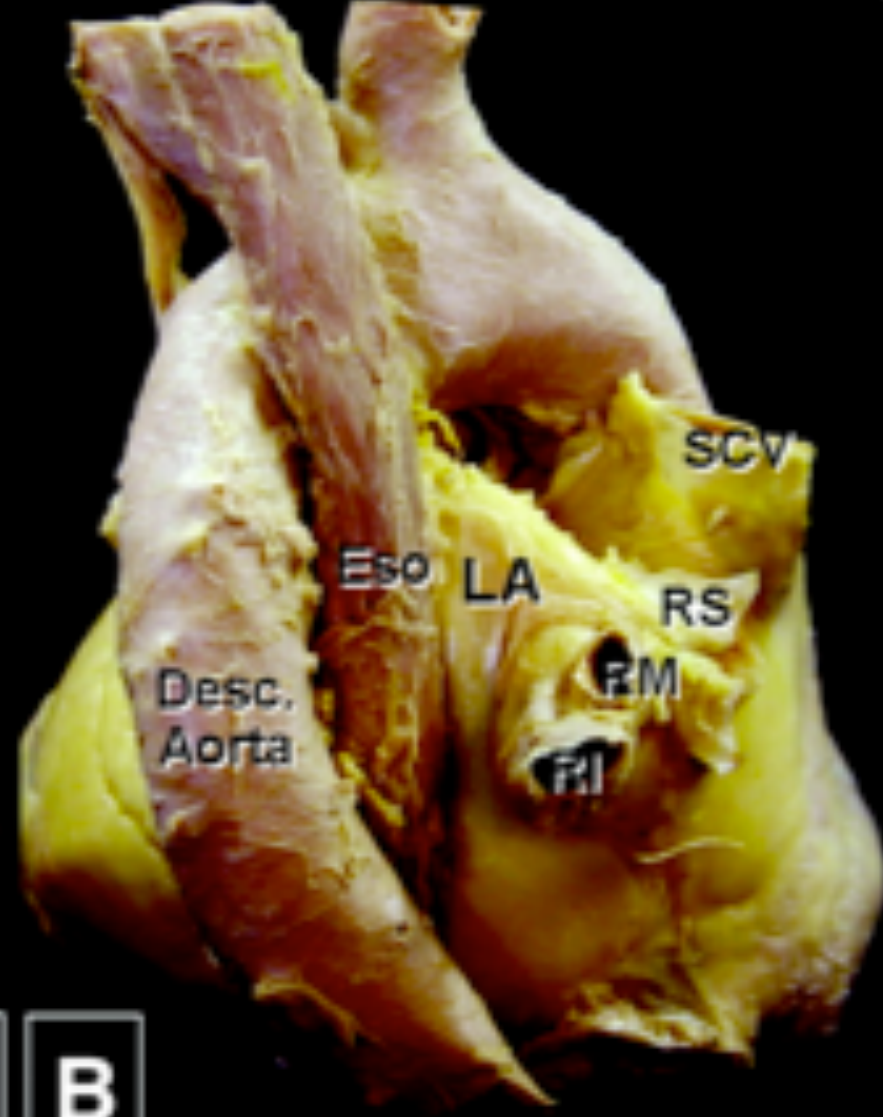
Echographie intra-cardiaque



La relation entre l'œsophage et l'OG



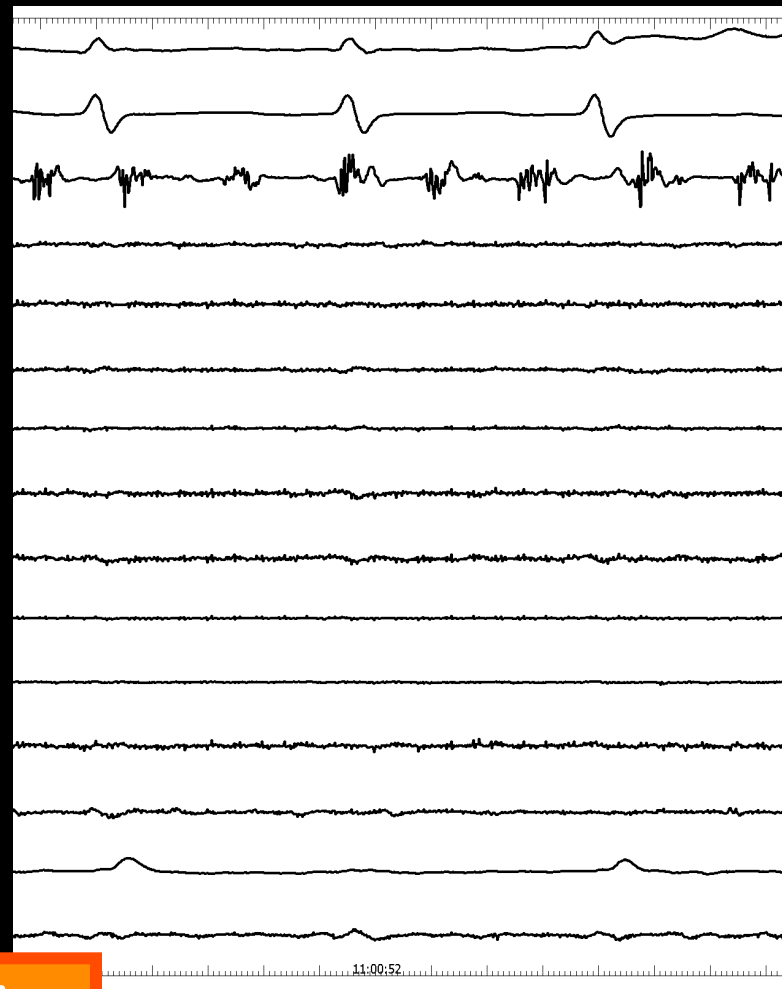
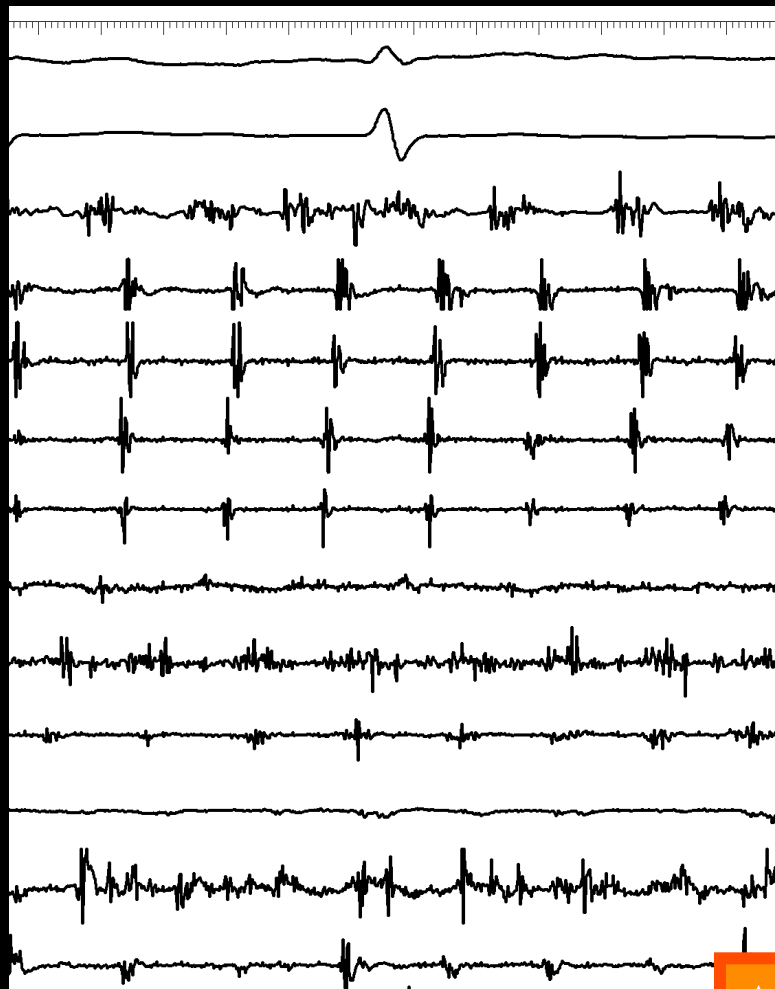
A



B

Déconnexion des veines pulmonaires

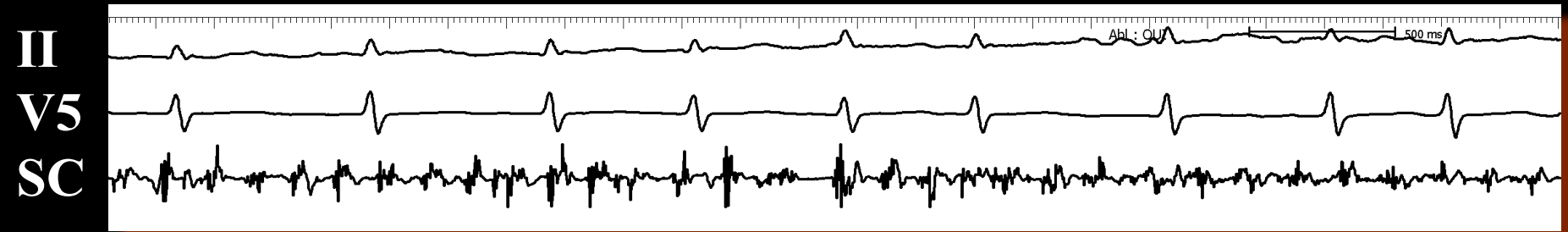
II
V1
SCP
PV19
PV17
PV15
PV13
PV11
PV9
PV7
PV5
PV3
PV1



Ablation



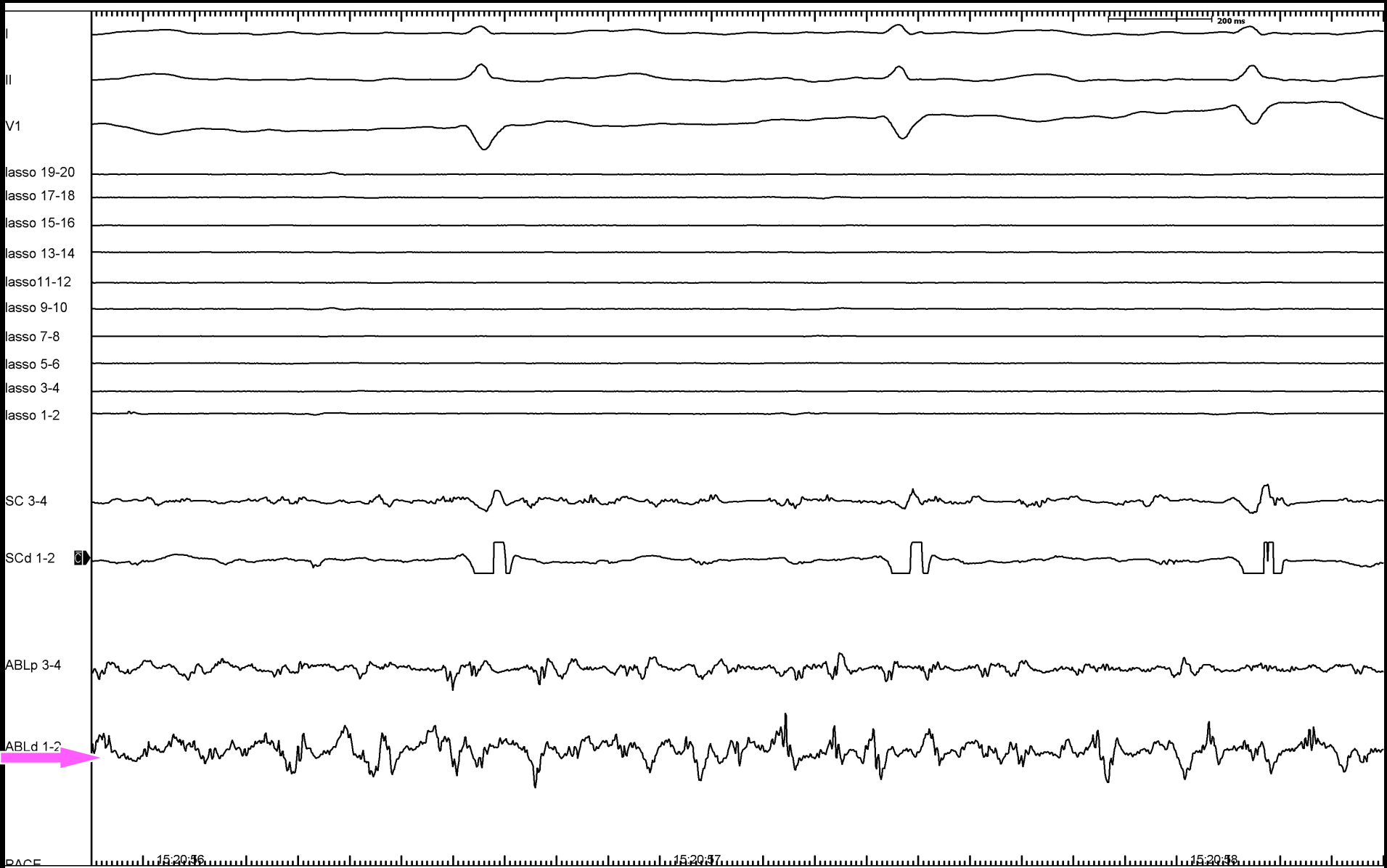
Déconnexion du sinus coronaire



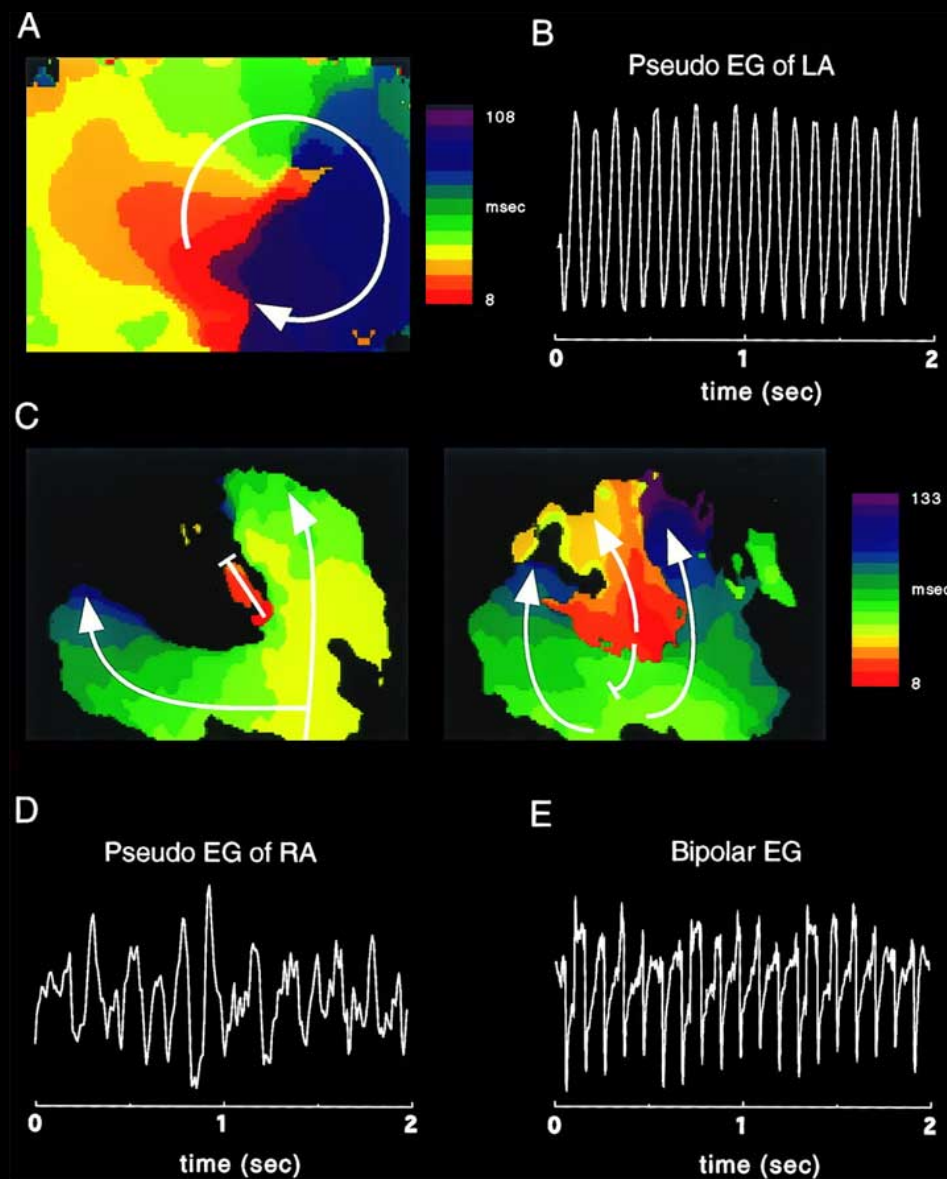
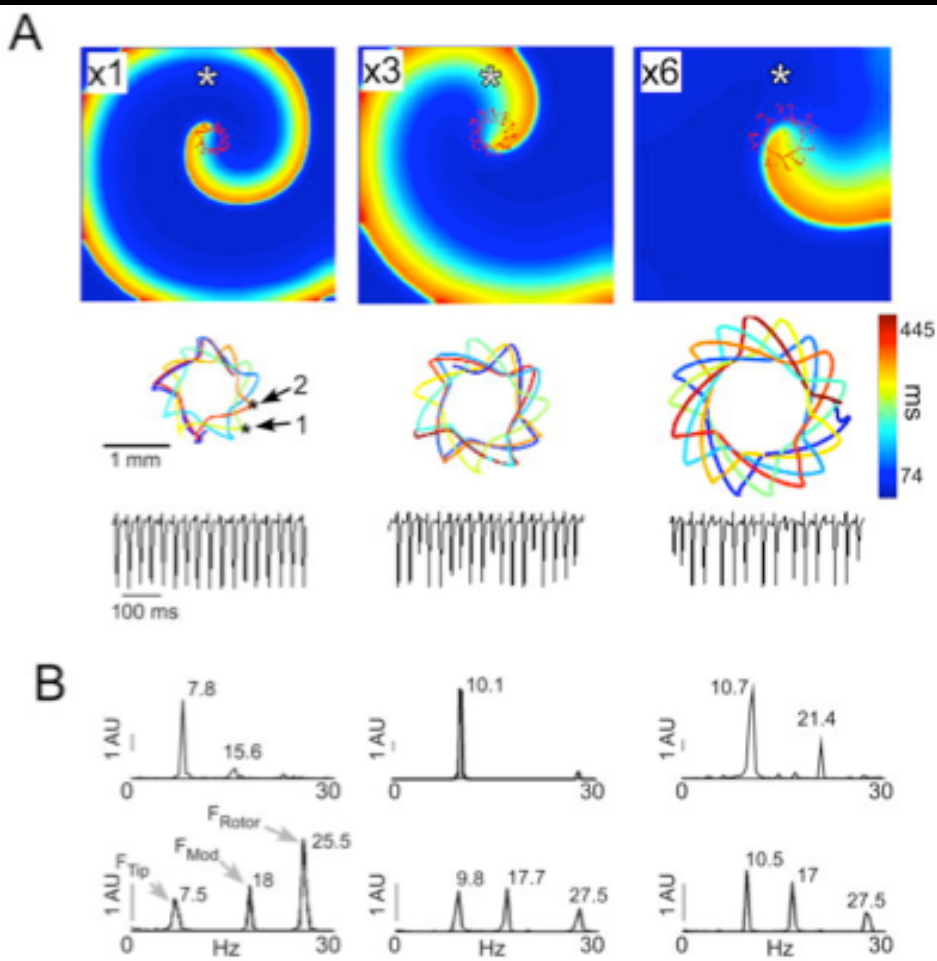
Ablation



Ablation de potentiels fragmentés



Les « rotors » : un mécanisme de la FA



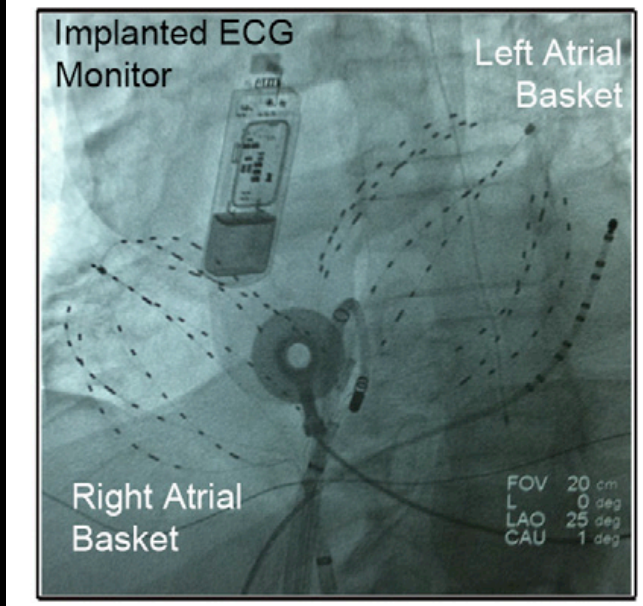
Etude CONFIRM

Deux « basket » intra-cardiaques de 64 électrodes

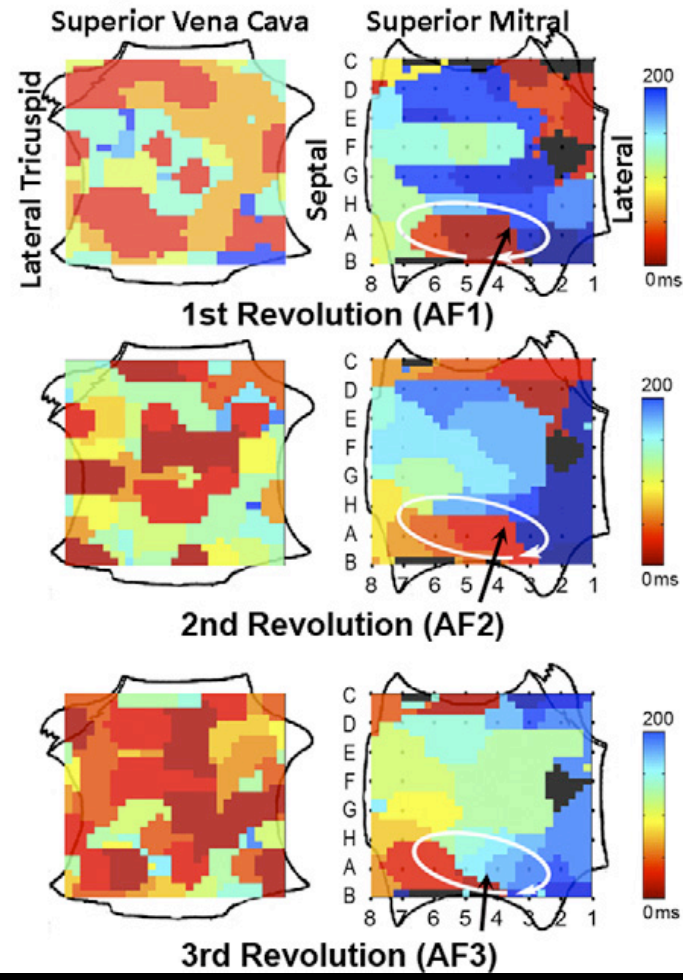
A ECG and Intracardiac Signals of AF



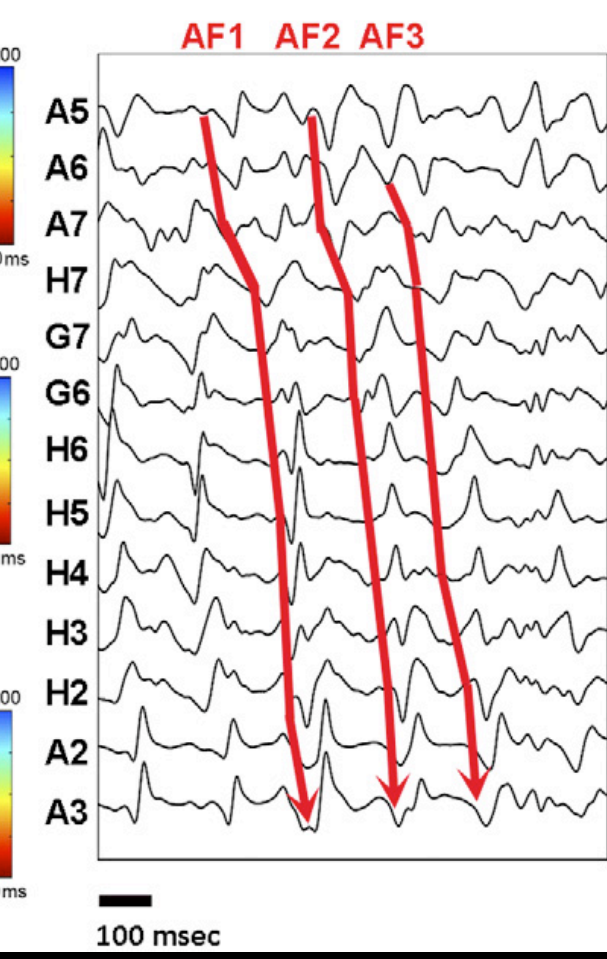
B Basket Catheters in Both Atria



C AF Rotor in Low Left Atrium



D Processed Intracardiac Signals Activation Along Rotor Path

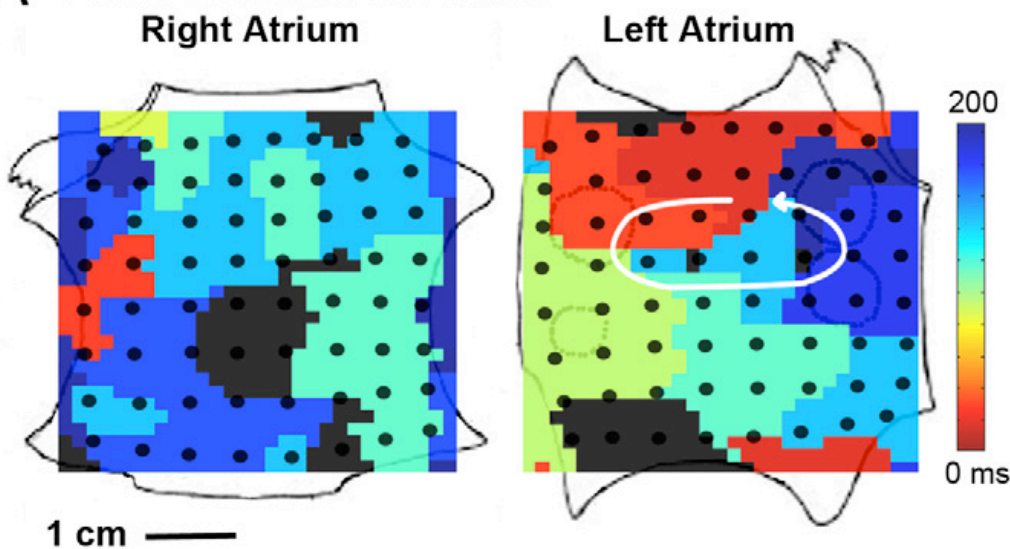


Etude CONFIRM

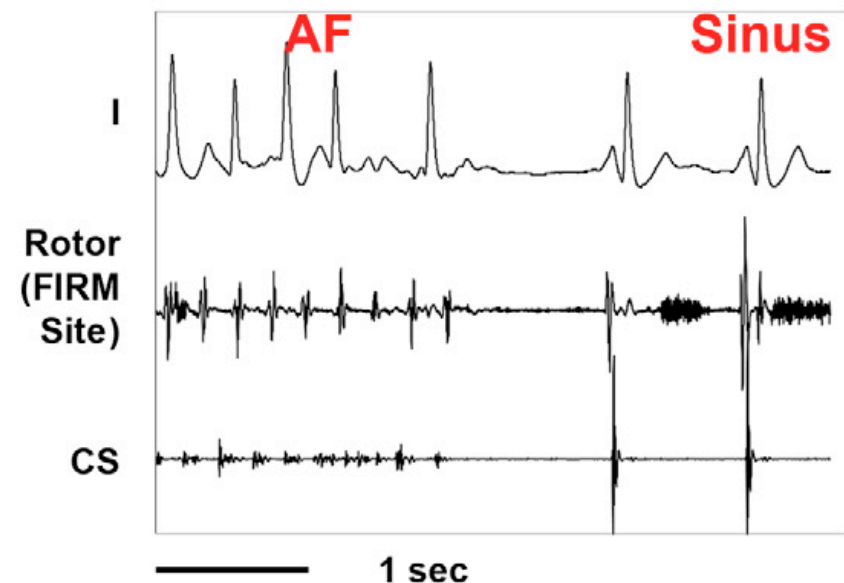
La prévalence des rotors dans le mécanisme est remis au goût du jour

- N = 92; 107 ablations de FA paroxystique ou persistante
- Rotors chez 97 % des patients ($2,1 \pm 1,0$ par patient)
- Temps moyen d'ablation pour stopper la FA: 2,5 min

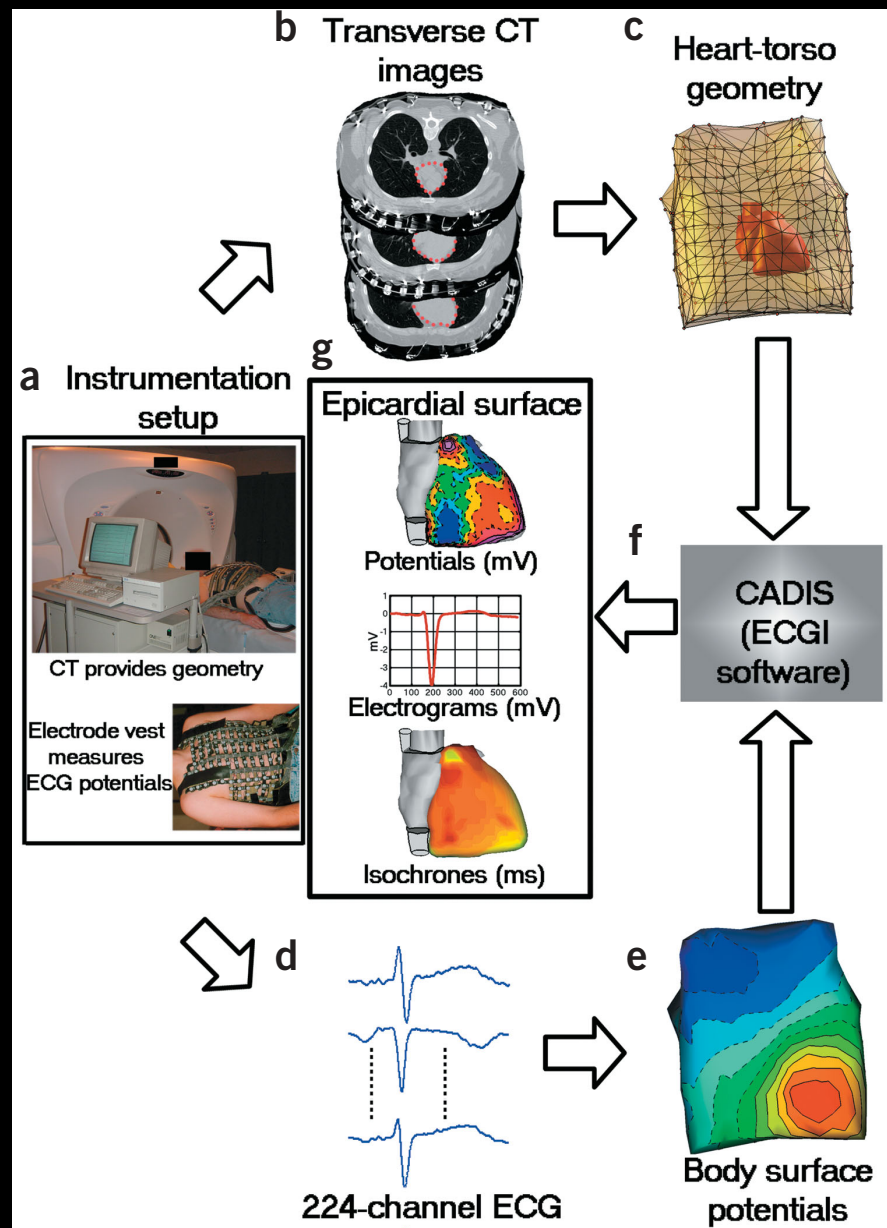
A Left Atrial Rotor in AF



B FIRM: Sinus Rhythm in < 1minute



Une veste pour cartographier de façon non invasive les arythmies



Une ablation de FA mercredi dernier (1)

Study Map Point Catheter ECG Display Imaging RMT Window Tools Help

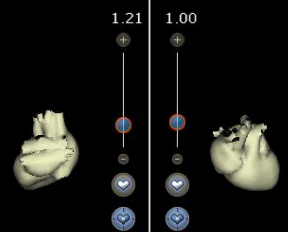
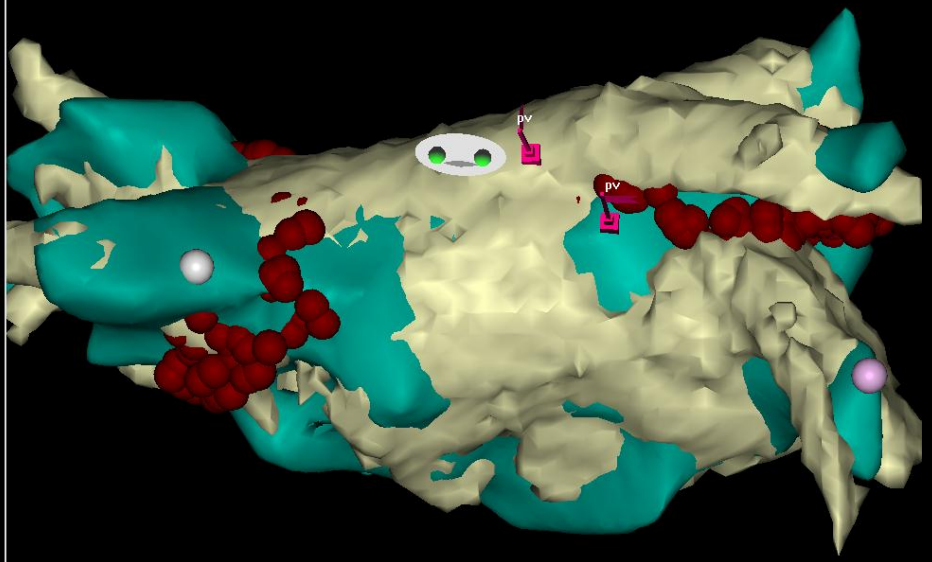
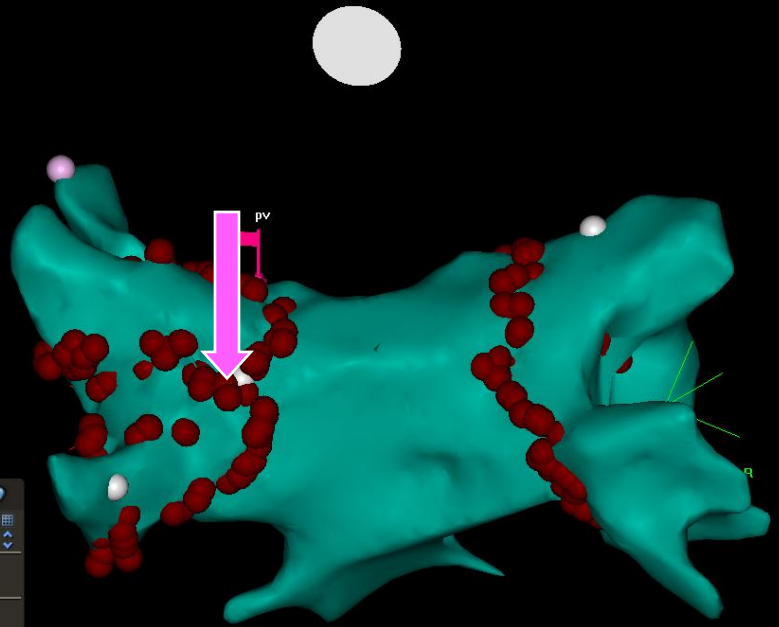


1-Map (294, 0)

LAT

1-Map (294, 0)

LAT

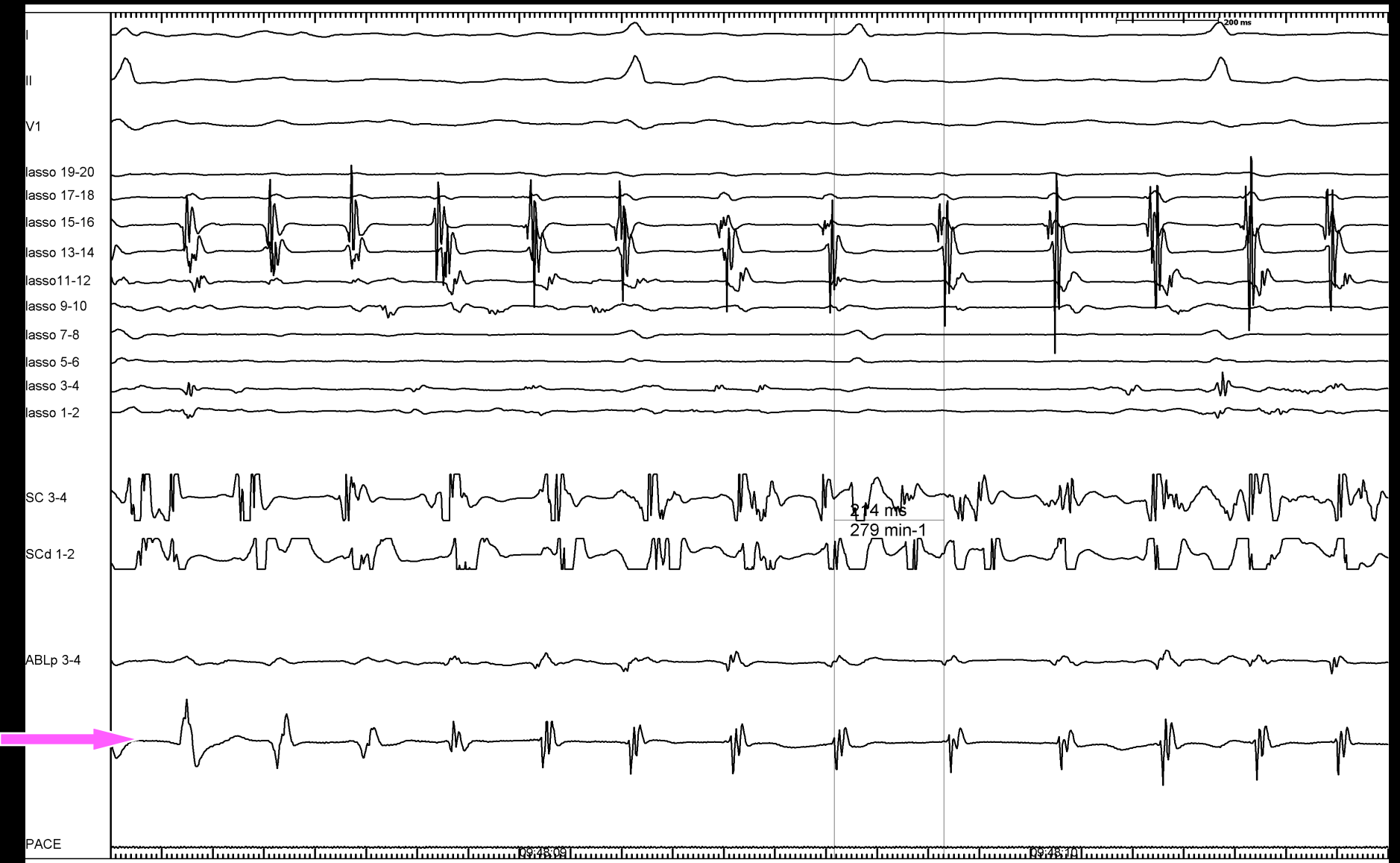


AP PA LAO RAO LL RL INF SUP

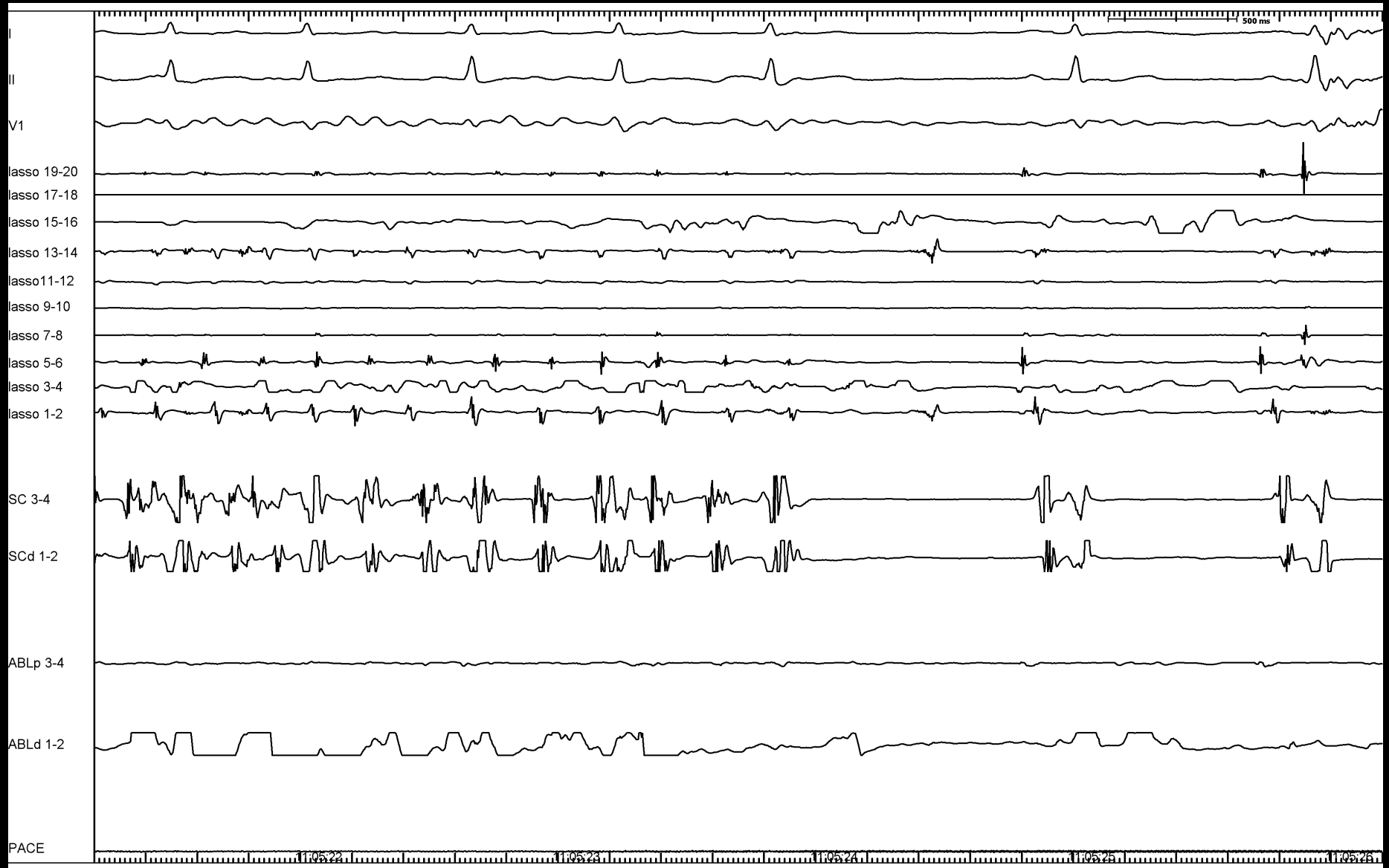
AP PA LAO RAO LL RL INF SUP

None

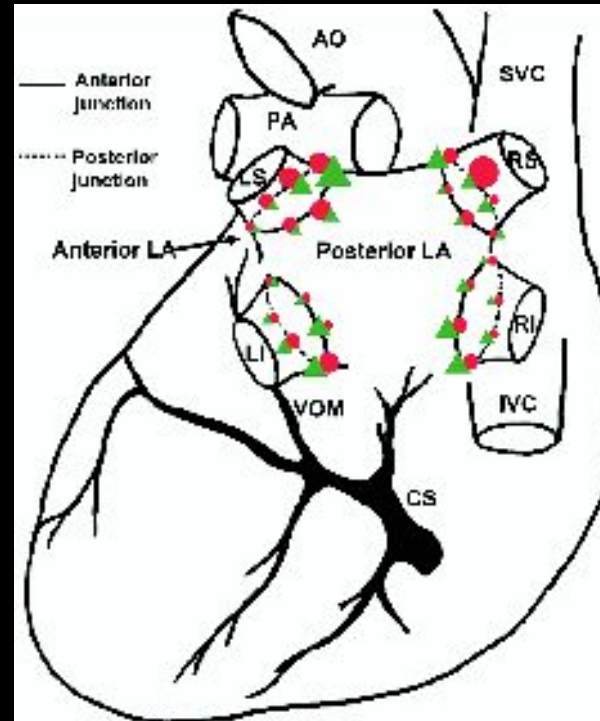
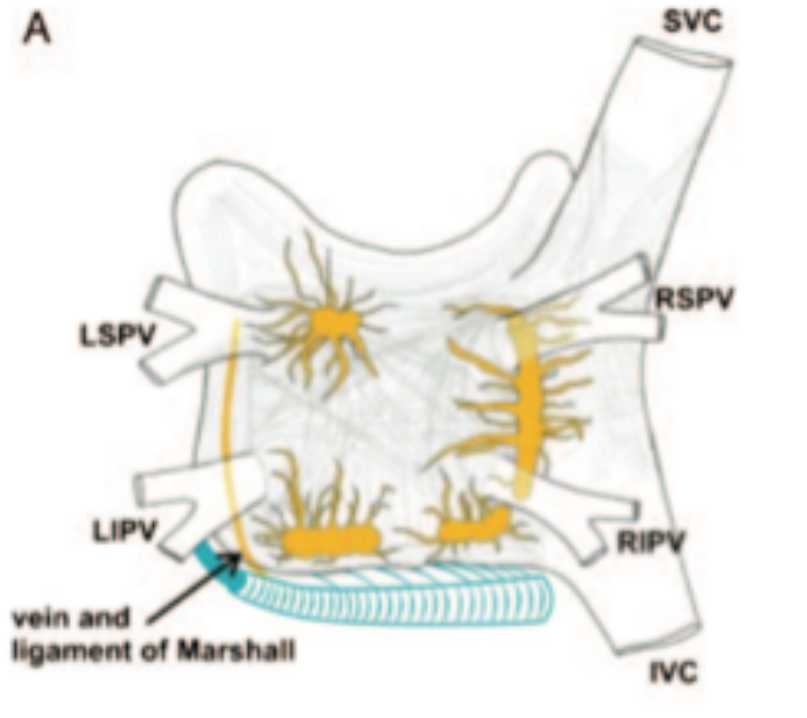
Après ablation sur ce site



Arrêt de la fibrillation auriculaire



Ablation des ganglions nerveux épicaux (1)

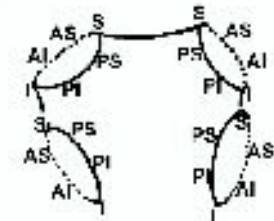


Adrenergic Nerve Density

- Grade 4: $45-50 \times 10^3 \mu\text{m}^2/\text{mm}^2$
- Grade 3: $30-45 \times 10^3 \mu\text{m}^2/\text{mm}^2$
- Grade 2: $15-30 \times 10^3 \mu\text{m}^2/\text{mm}^2$
- Grade 1: $0-15 \times 10^3 \mu\text{m}^2/\text{mm}^2$

Cholinergic Nerve Density

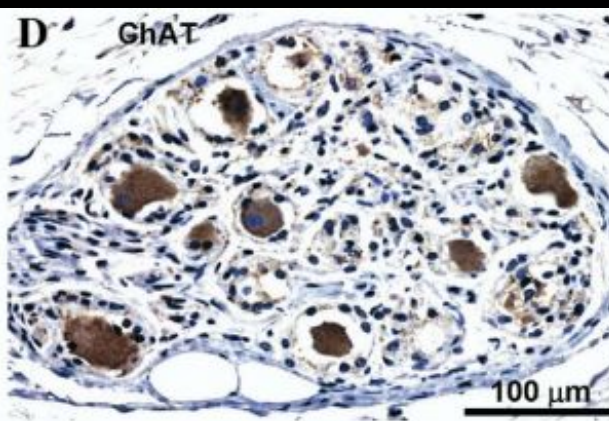
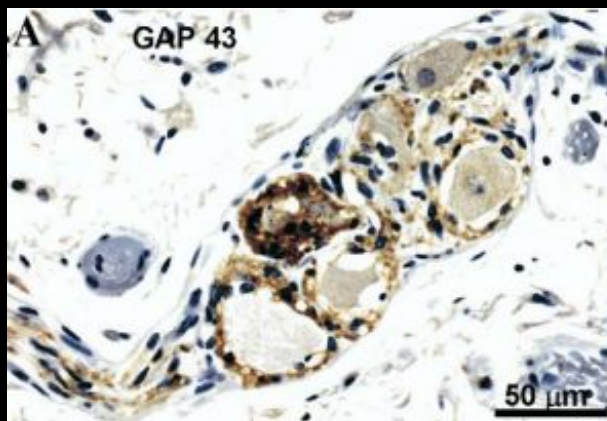
- ▲ Grade 4: $4.5-6.0 \times 10^3 \mu\text{m}^2/\text{mm}^2$
- ▲ Grade 3: $3.0-4.5 \times 10^3 \mu\text{m}^2/\text{mm}^2$
- ▲ Grade 2: $1.5-3.0 \times 10^3 \mu\text{m}^2/\text{mm}^2$
- ▲ Grade 1: $0-1.5 \times 10^3 \mu\text{m}^2/\text{mm}^2$



- | | |
|-------------------|----------------------|
| S Superior | I Inferior |
| AS Anterosuperior | PI Posteriorinferior |
| AI Anteroinferior | PS Posterosuperior |

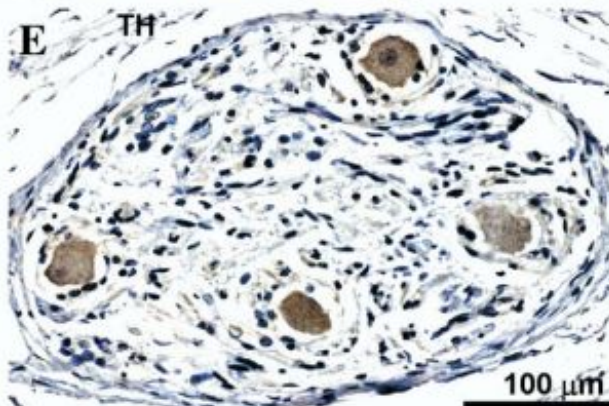
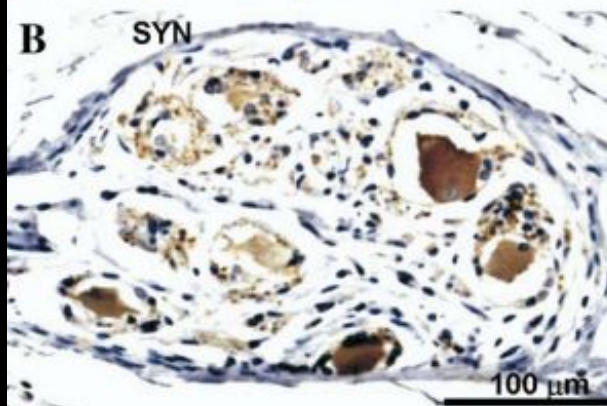
Imuno-histochimie

Axone



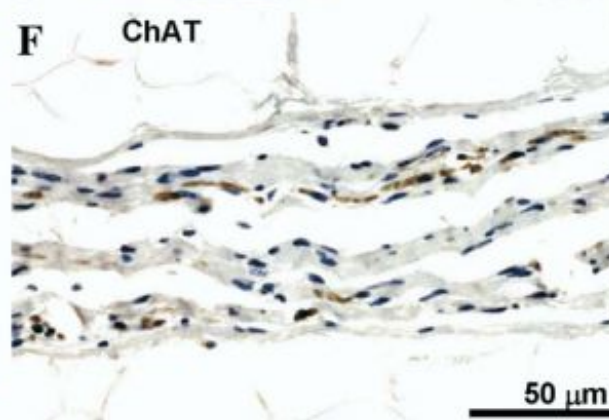
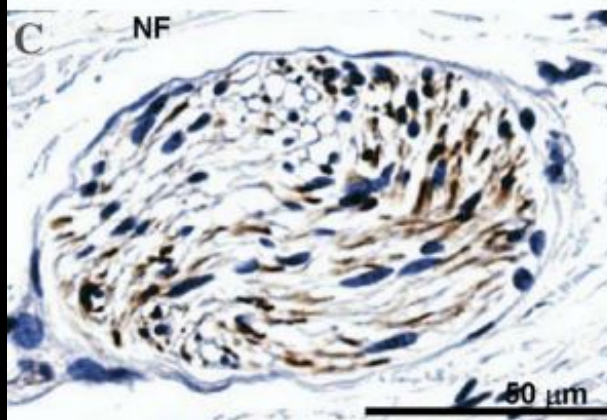
Cholinergique

Synapse

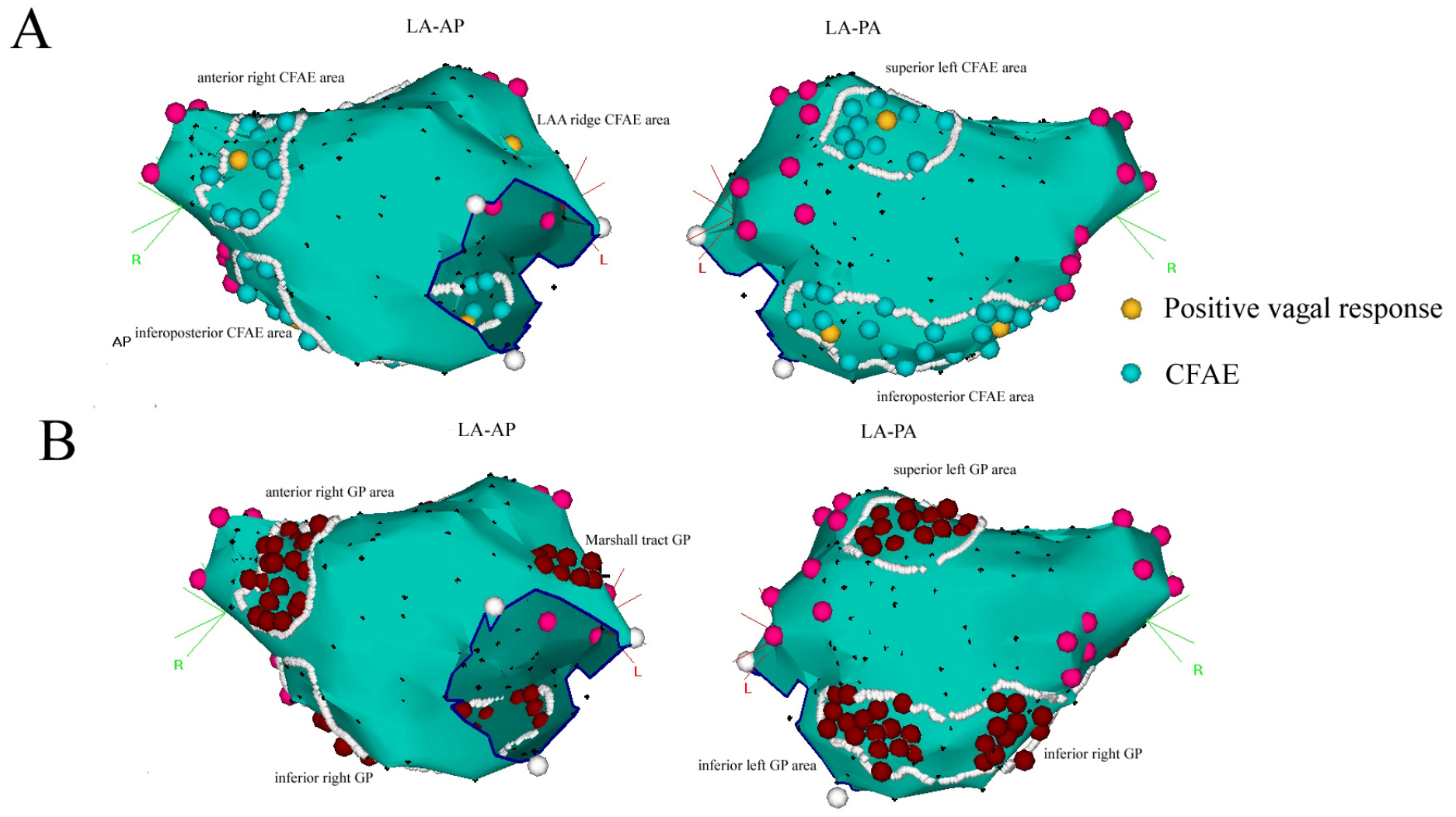


Adrénèrgique

**Neuro-
filament**



Ablation des ganglions nerveux épicaux (2)



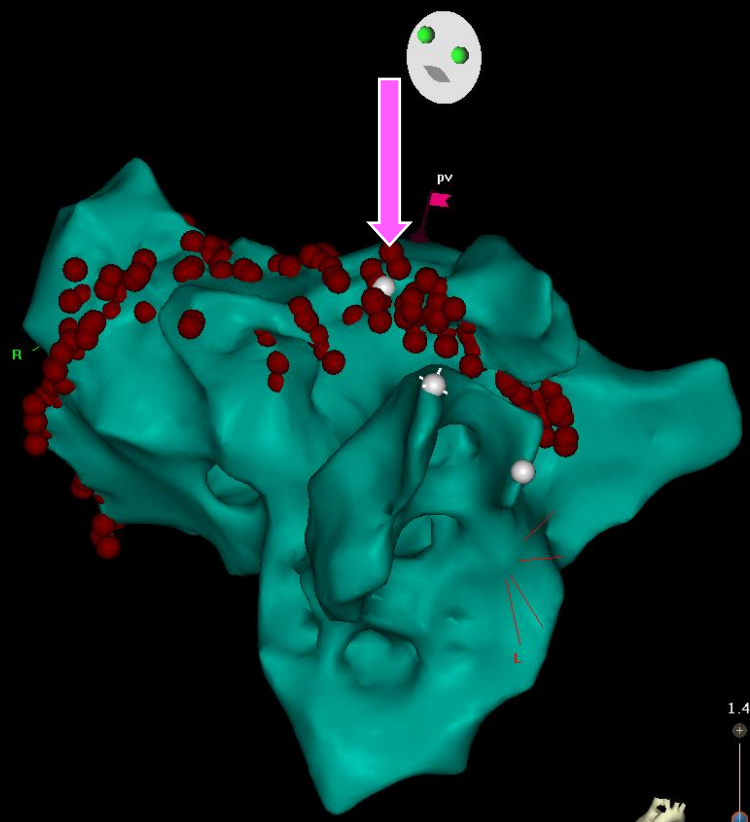
Ablation du ganglion supérieur gauche

Study Map Point Catheter ECG Display Imaging RMT Window Tools Help



1-Map (414, 0)

LAT



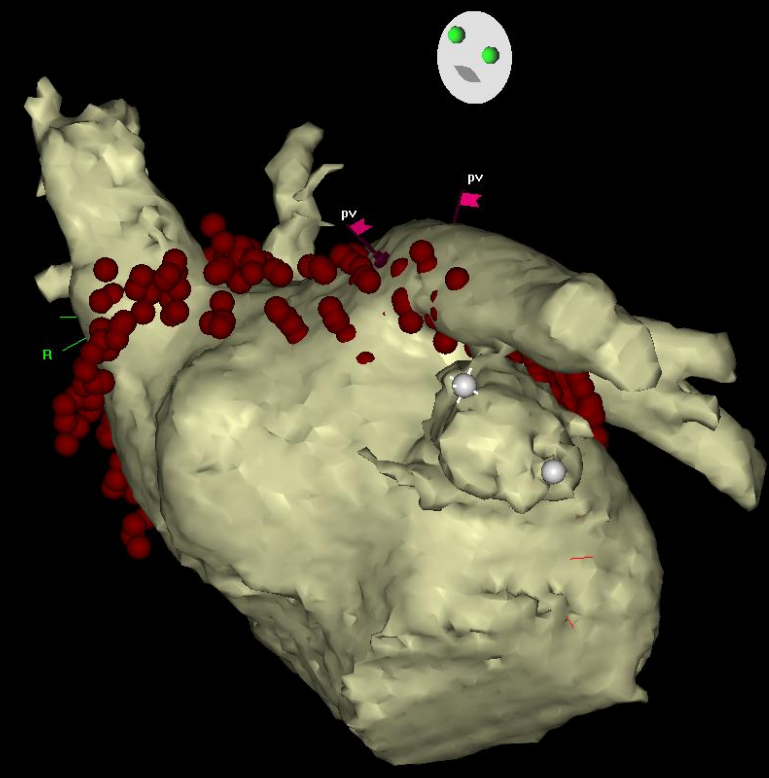
1.46



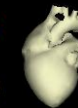
AP PA LAO RAO LL RL INF SUP

1-Map (414, 0)

LAT



1.46



AP PA LAO RAO LL RL INF SUP

Sync

Ablation du ganglion supérieur gauche

