



ATYPICAL ATRIAL FLUTTER AGAINST HUMANS

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The background is a blue gradient with decorative white circuit-like lines in the corners. These lines consist of straight segments and small circles, resembling a stylized electronic circuit board.

NO CONFLICTS OF INTEREST

MRS R.W.P

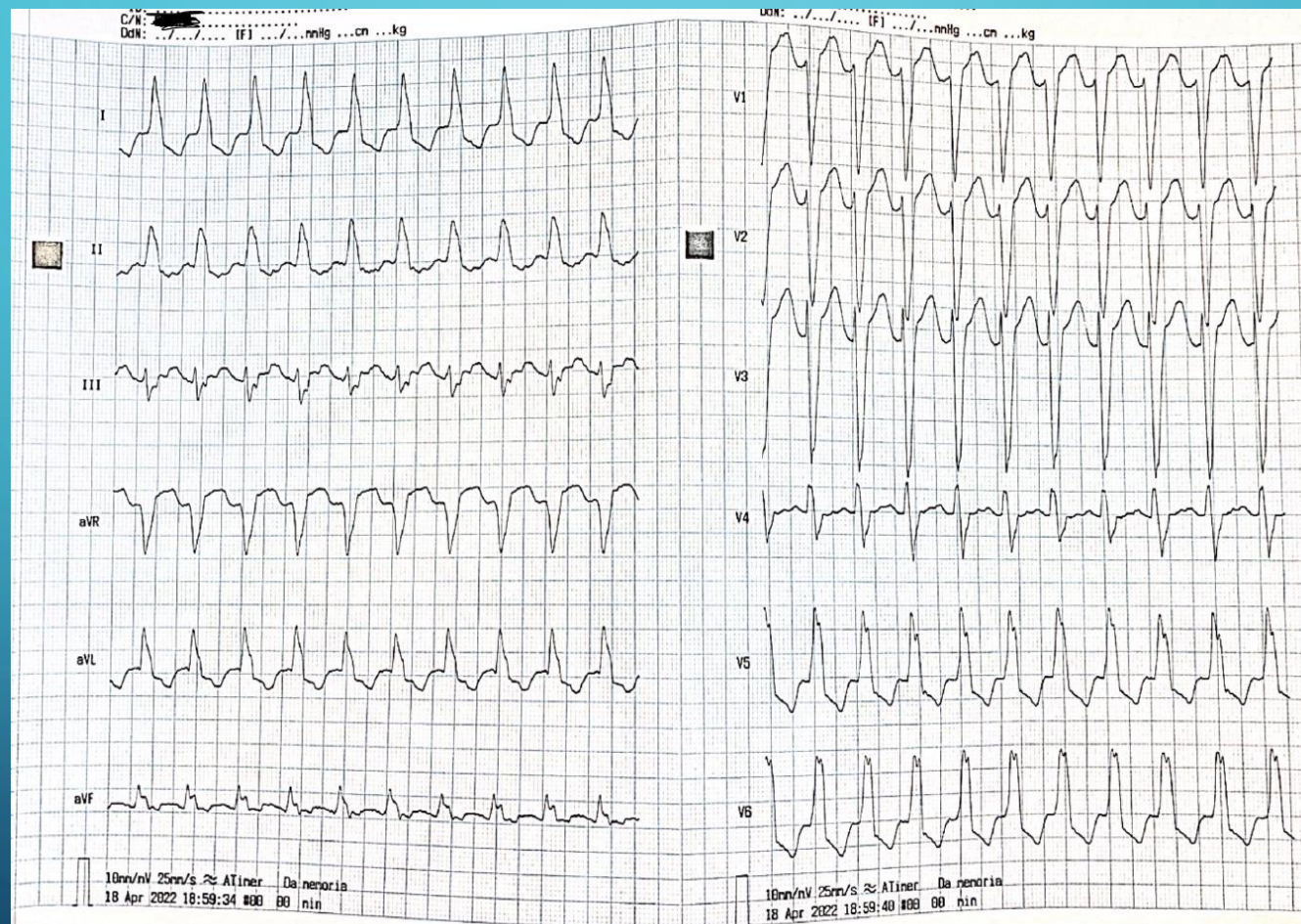
71 YO

ADMITTED FOR ACUTE DECOMPENSATION OF CHRONIC HF AND ATYPICAL ATRIAL FLUTTER

Clinical History:

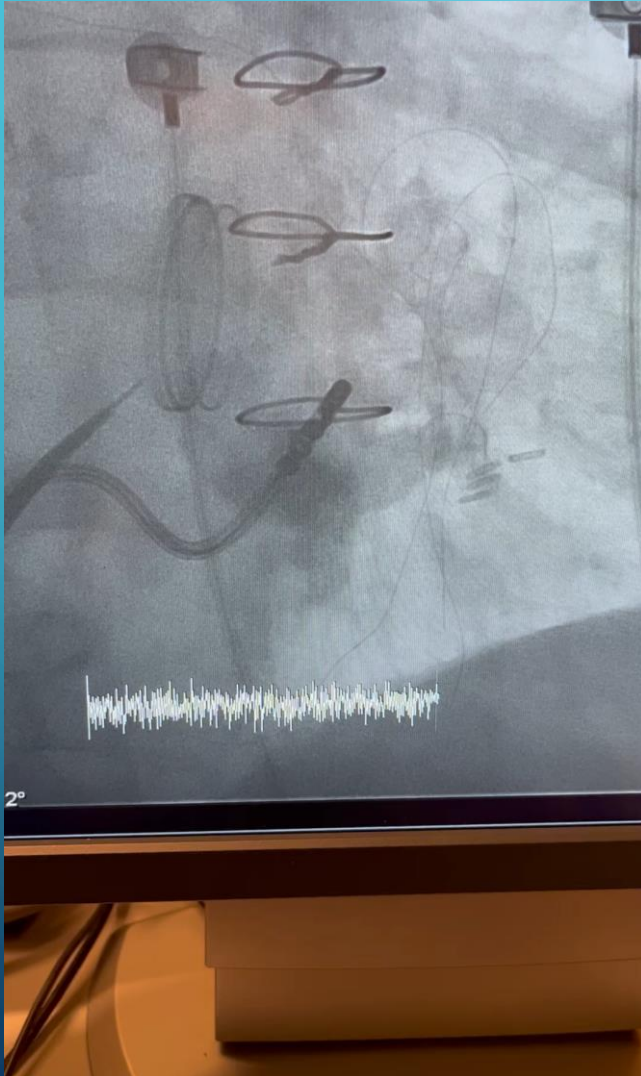
- Obstructive Hypertrophic Cardiomyopathy
- Mitral valve replacement (mechanical prosthetic valve) + CABG + septal myectomy in 2014
- Secondary Hypothyroidism following amiodarone treatment
- 2019 persistent atrial fibrillation treated with electric cardioversion
- 2020 atrial flutter 2:1
- 2021 SCA-NSTEMI
- Echo: LVEF 55%, severe left atrial dilatation (area 40cm²), IVS 15 mm, normal function of the mechanical valve

SURFACE ECG

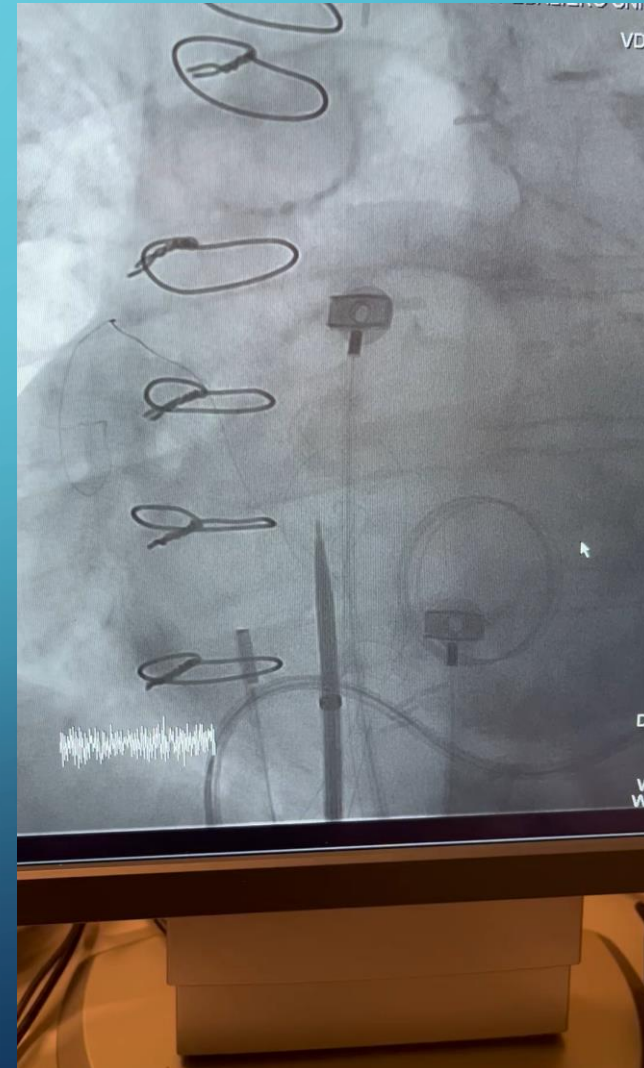


A TOUGH TRANSSEPTAL PUNCTURE

RAO 45°

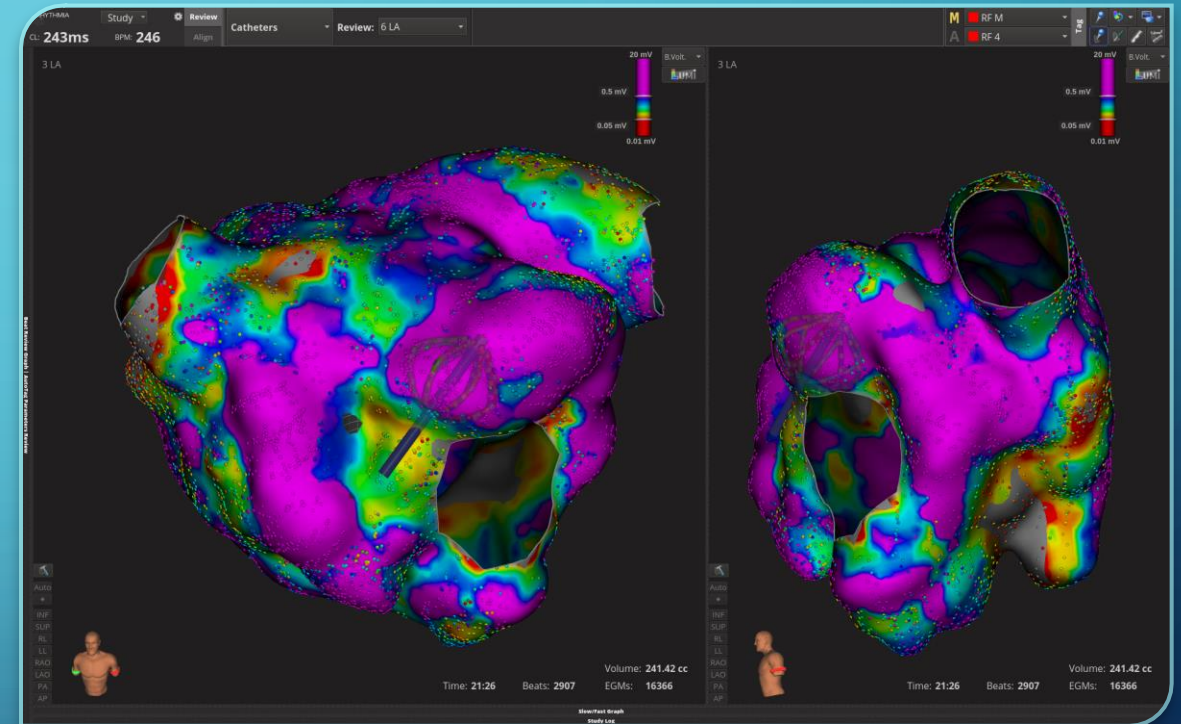


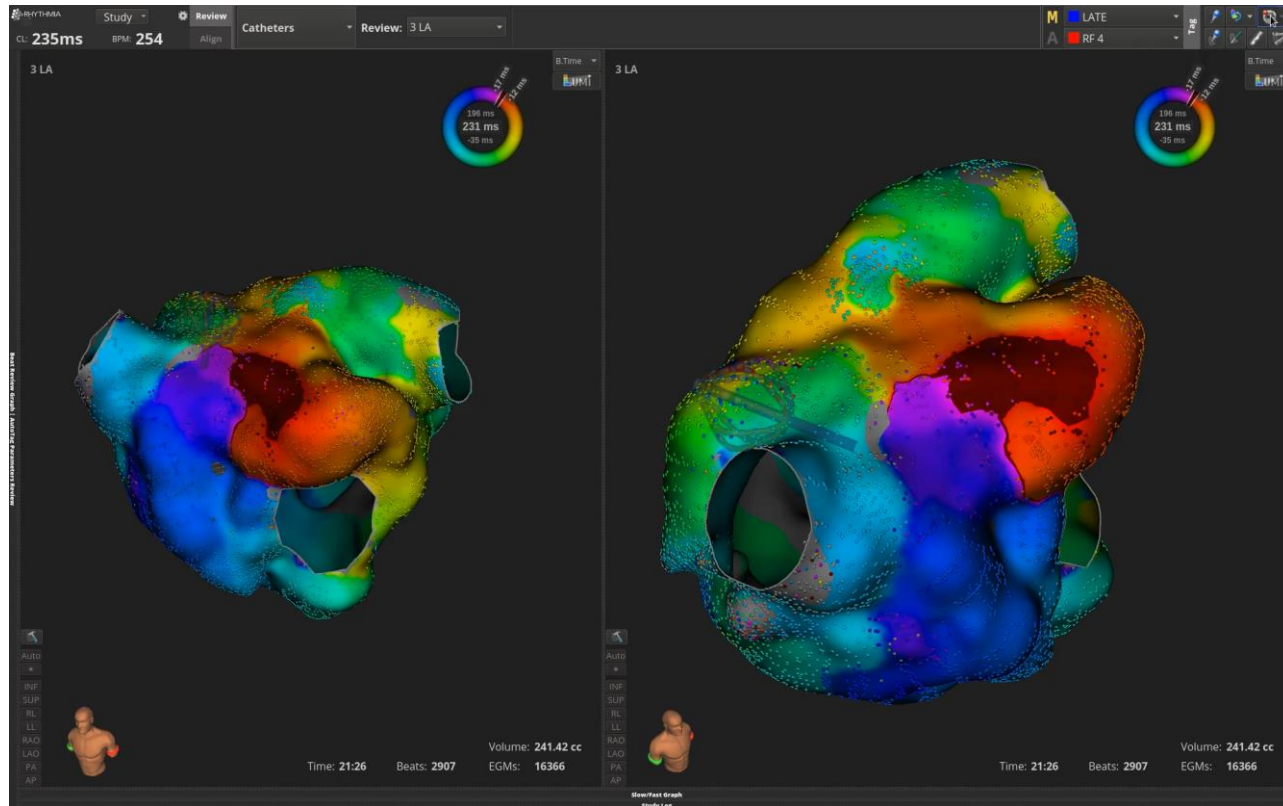
LAO 30°



ELECTROANATOMIC MAP

- We performed electroanatomic map with the Rhythmia HDX mapping system (Boston Scientific), using the ORION catheter.



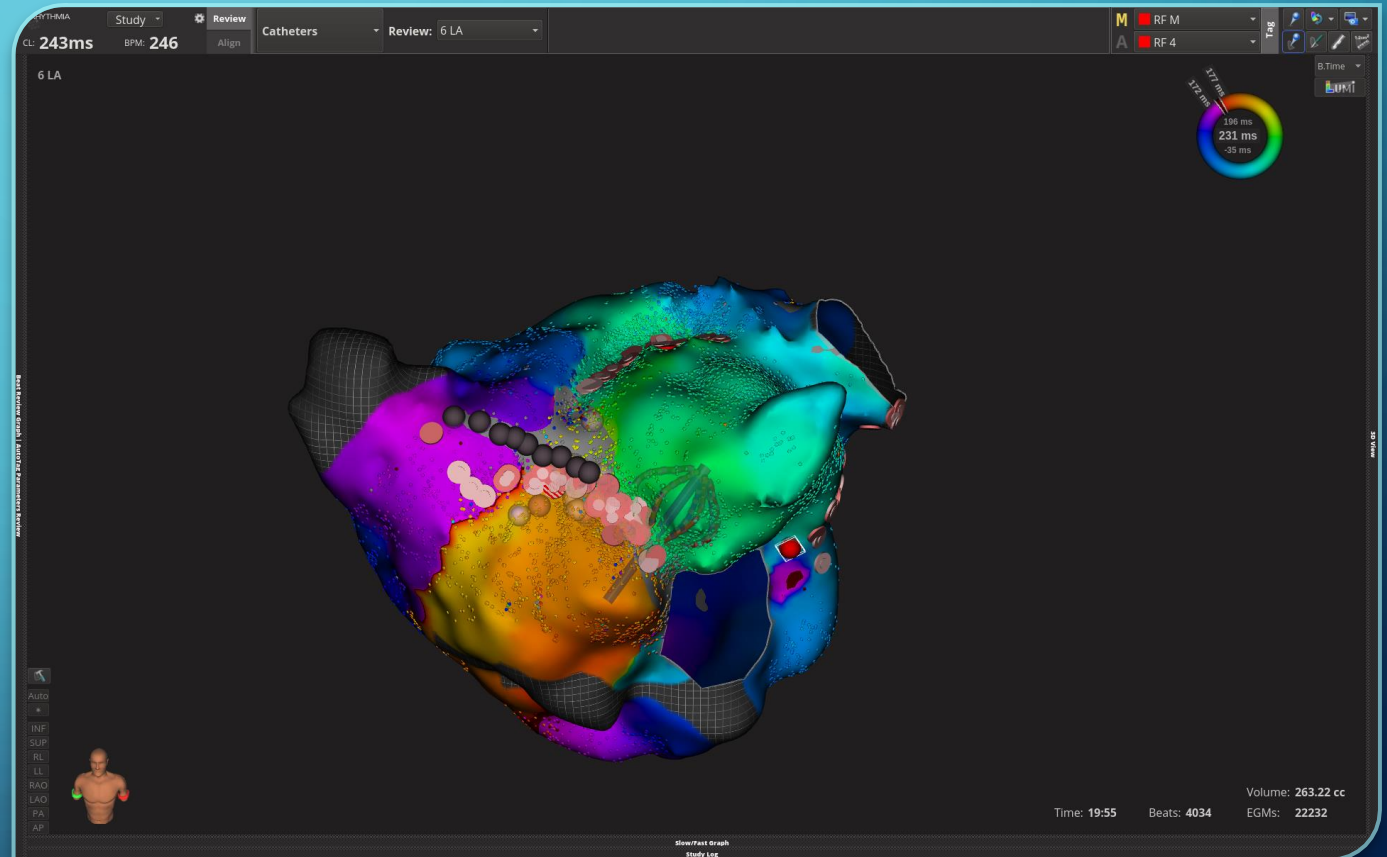


ACTIVATION MAP

- We found a LA MRAT with a dual-loop reentry (figure of eight):
 - One loop around the mitral valve anulus
 - The other loop around right pulmonary veins
 - Critical isthmus → anterior part of interatrial septum

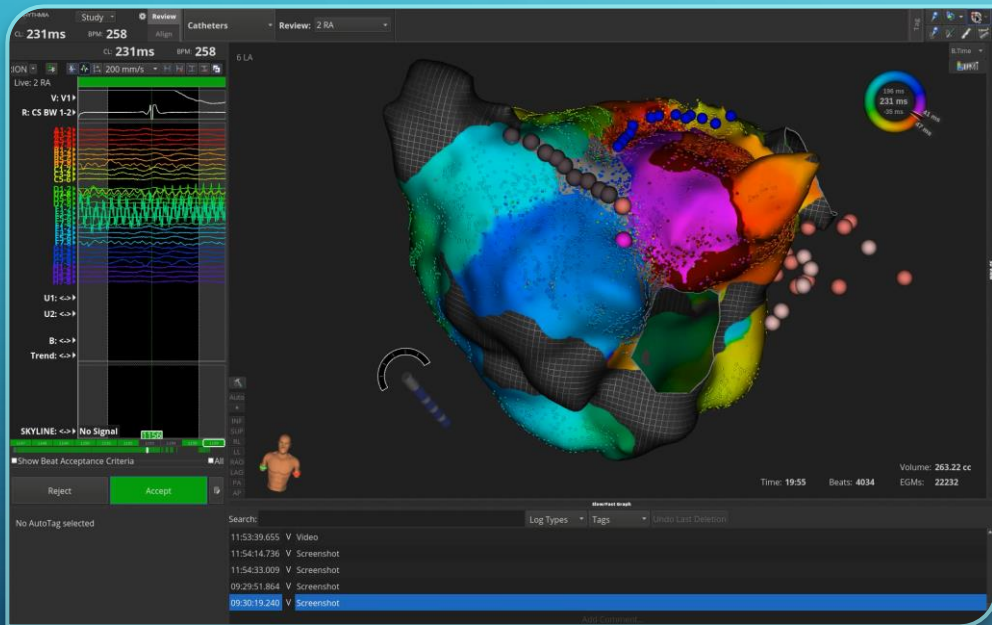
ABLATION STRATEGY

WE MADE A LINE BETWEEN THE RSPV
AND THE MITRAL VALVE ANULUS
BUT WE DID NOT OBTAIN SINUS
RHYTHM

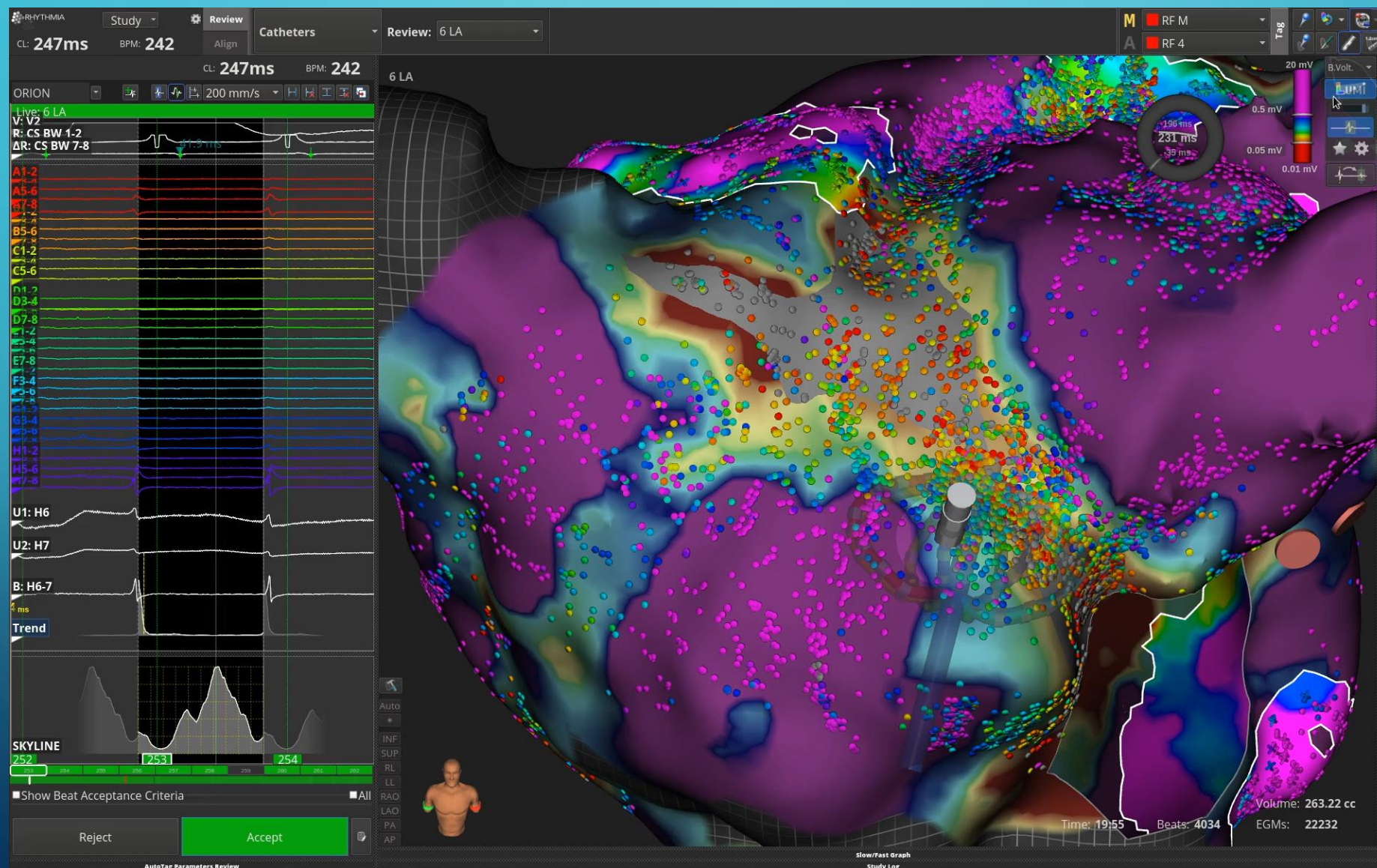


ABLATION STRATEGY

- During re-mapping we still found the dual-loop reentry.



POSSIBLE EPICARIAL CONNECTION?



Auto
+
INF
SUP
RL
LL
RAO
LAO
PA



A 3D anatomical model of the heart, specifically the left atrium, is shown. The model is color-coded: blue for the posterior wall, green for the anterior wall, yellow for the floor, and purple for the roof. A series of black dots represents ablation points along the LA roof. A red line indicates the ablation strategy. The model is viewed from a perspective that shows the roof and the anterior wall.

Time: 19:55 Beats: 4034 Volume: 263.22 cc
EGMs: 22232

Auto
+
INF
SUP
RL
LL
RAO
LAO
PA
AP



A 3D anatomical model of the heart, specifically the left atrium, is shown. The model is color-coded: blue for the posterior wall, green for the anterior wall, yellow for the floor, and purple for the roof. A series of red dots represents ablation points along the Mitral Isthmus. A red line indicates the ablation strategy. The model is viewed from a perspective that shows the roof and the anterior wall.

Time: 19:55 Beats: 4034 Volume: 263.22 cc
EGMs: 22232

ABLATION STRATEGY

- Line on the LA roof → to block the upper loop reentry
- Line on the Mitral Isthmus → to block lower loop reentry.



ABLATION STRATEGY

DURING LATERAL MITRAL VALVE ISTHMUS ABLATION SOMETHING HAPPENED...

CONCLUSIONS

- Probably we failed the ablation at the first attempt because of epicardial connection → we changed our strategy.
- After one month the patient is still on sinus rhythm

THANKS FOR YOUR ATTENTION

