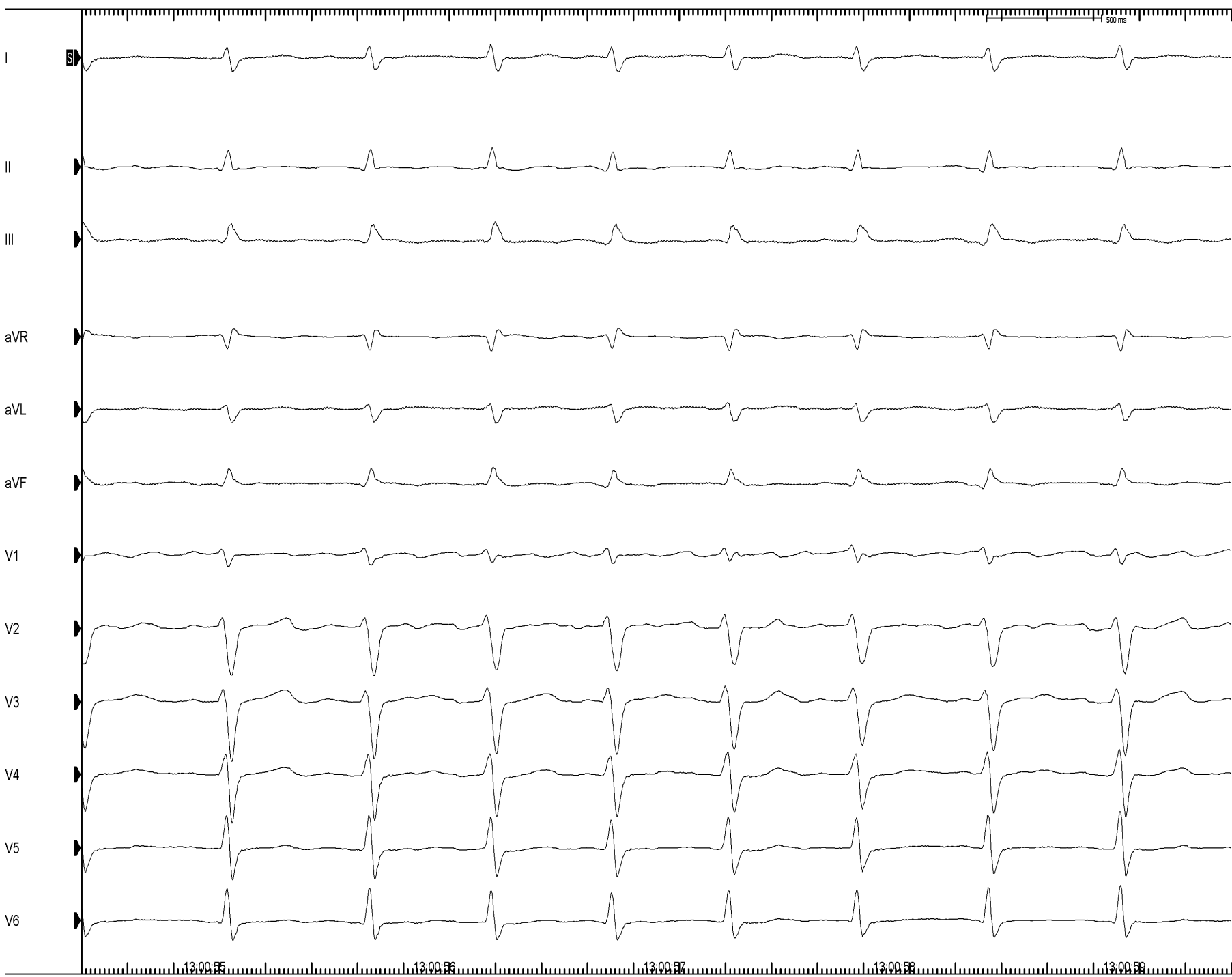
VT, Presyncope, and Epicardial Scar in CMR

Is it idiopathic?

Introduction:

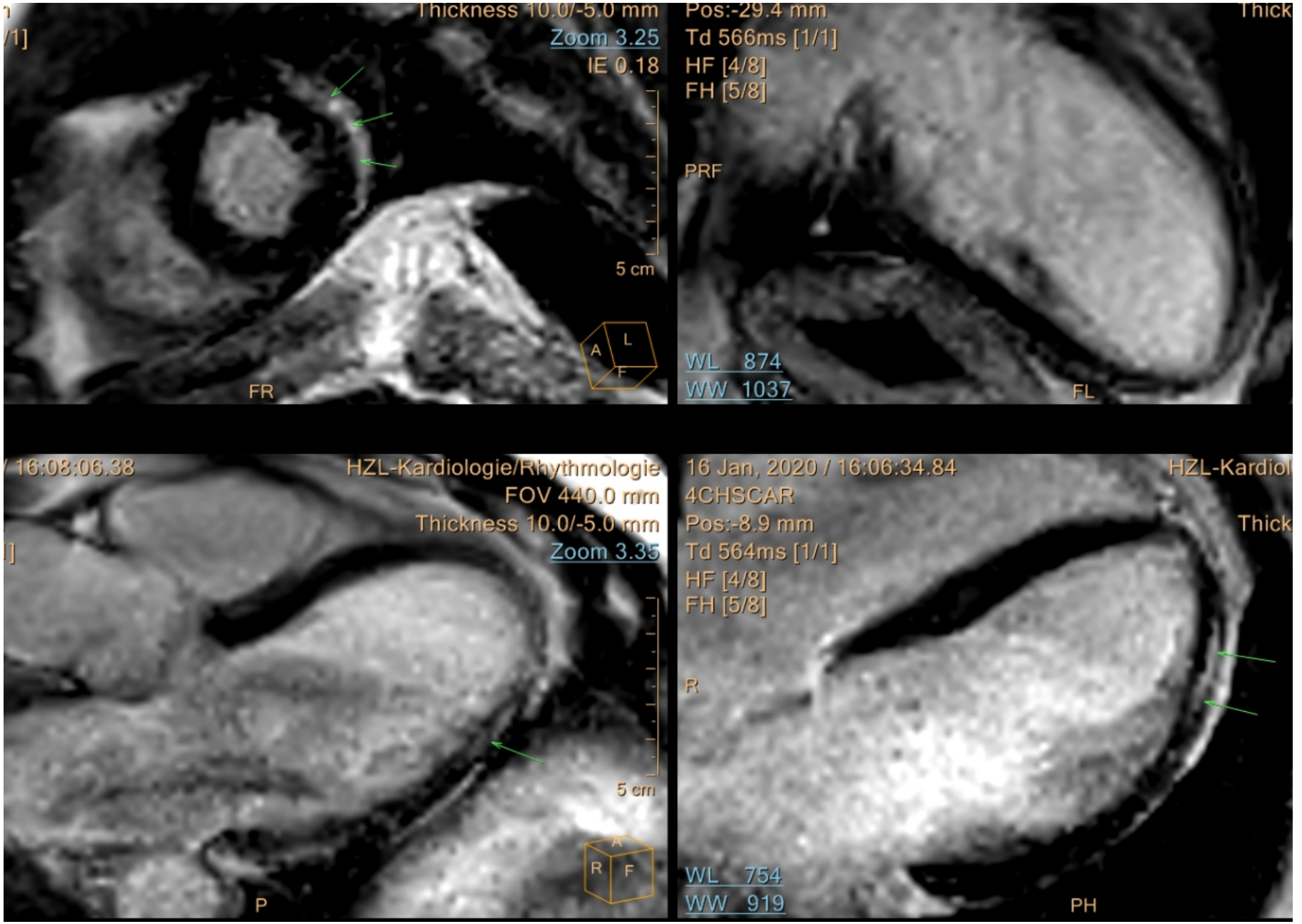
- 61-year-old male patient
- History of exercise induced palpitation and frequent PVCs.
- Her received diagnosis of myocarditis during early adulthood
- Presyncope and palpitation (12/2019)
- Referred to our centre with documented VT and presyncope during cycling for further diagnosis.
- External evaluation including TTE (LVEF: 66%) and coronary angiography were normal (/012020)
- Persistent atrial fibrillation

Baseline ECG: AF



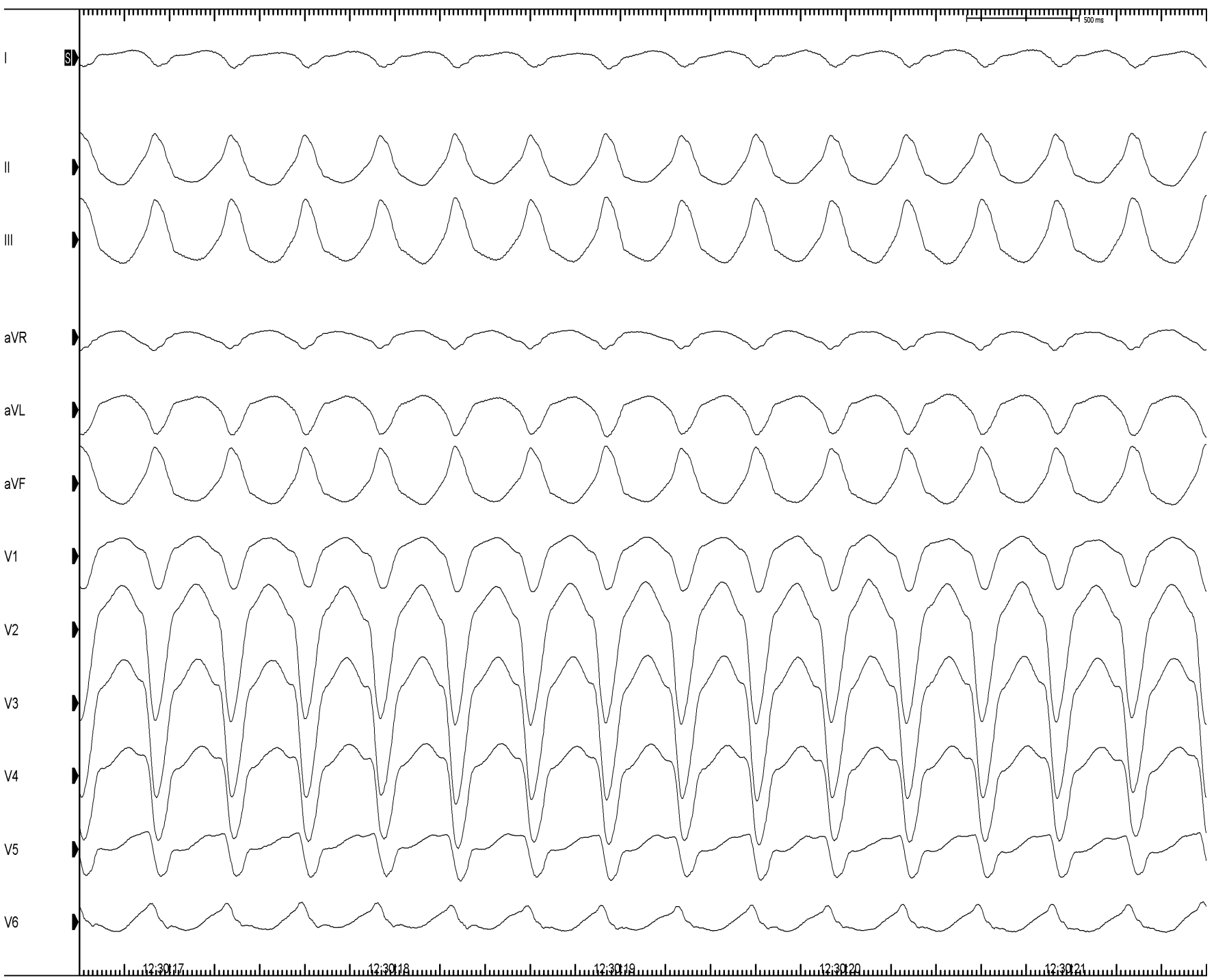
Cardiac CMR:

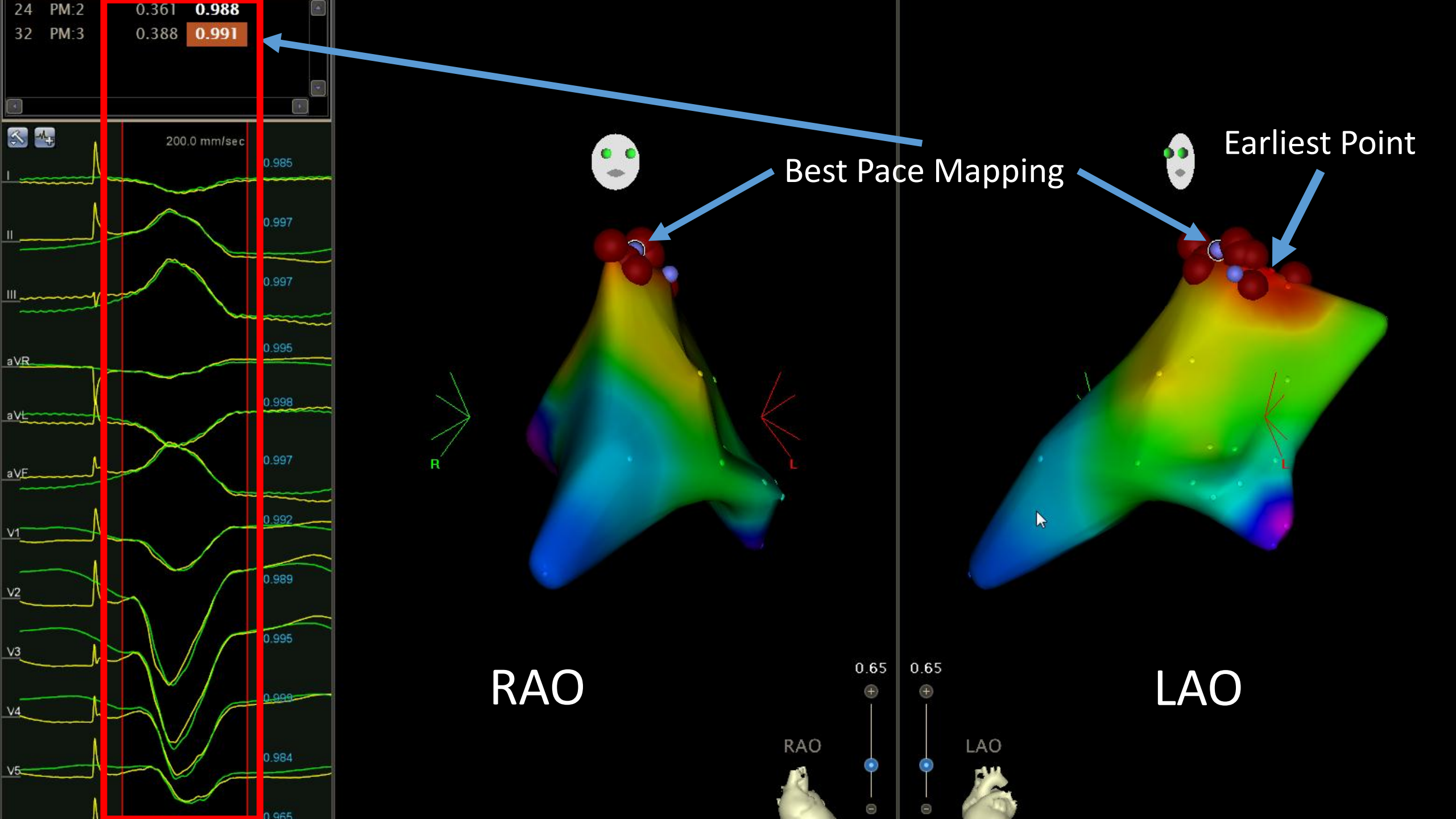
Epicardial scar
LVEF: 47%,
LVEDV: 225 ml

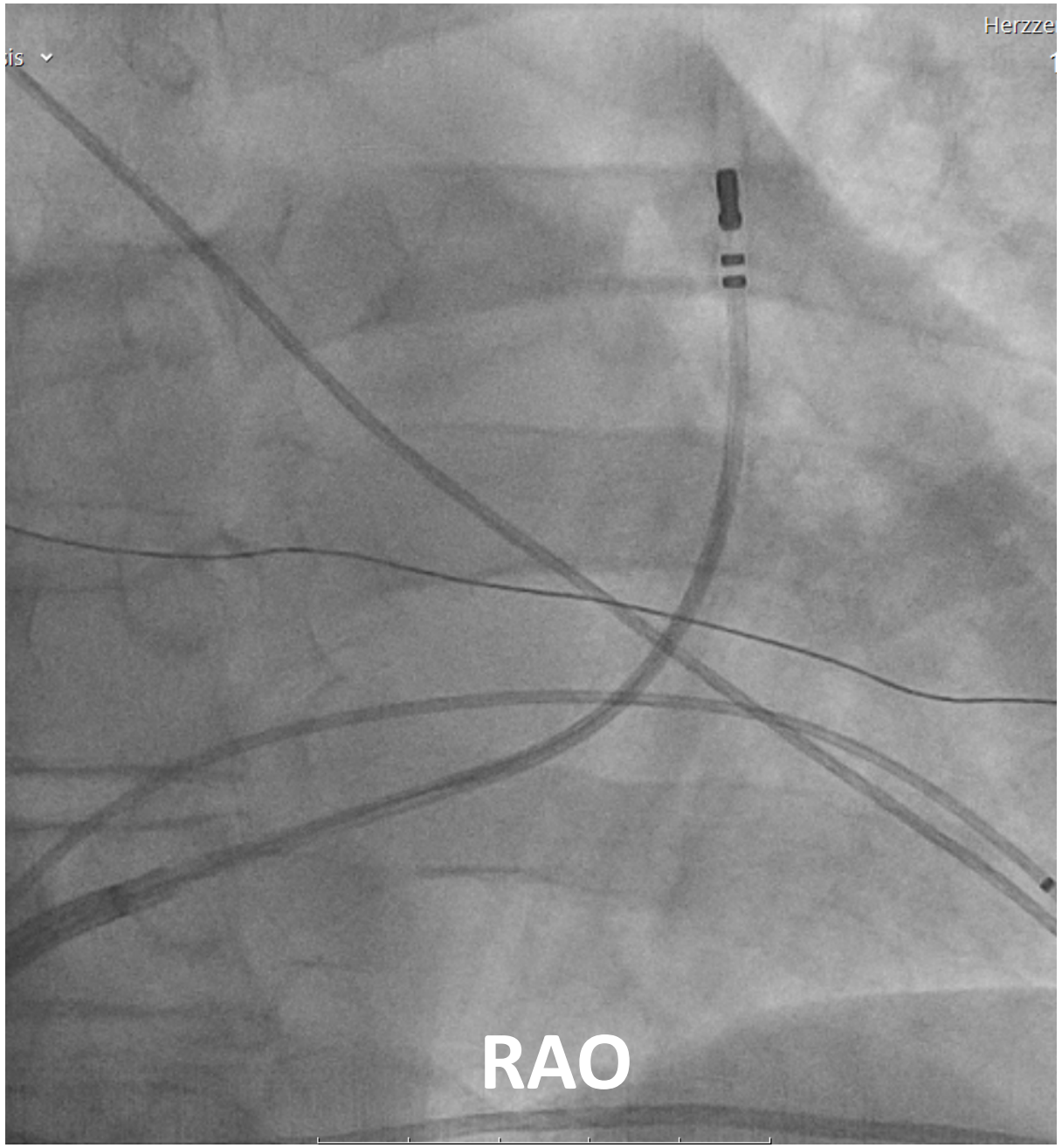


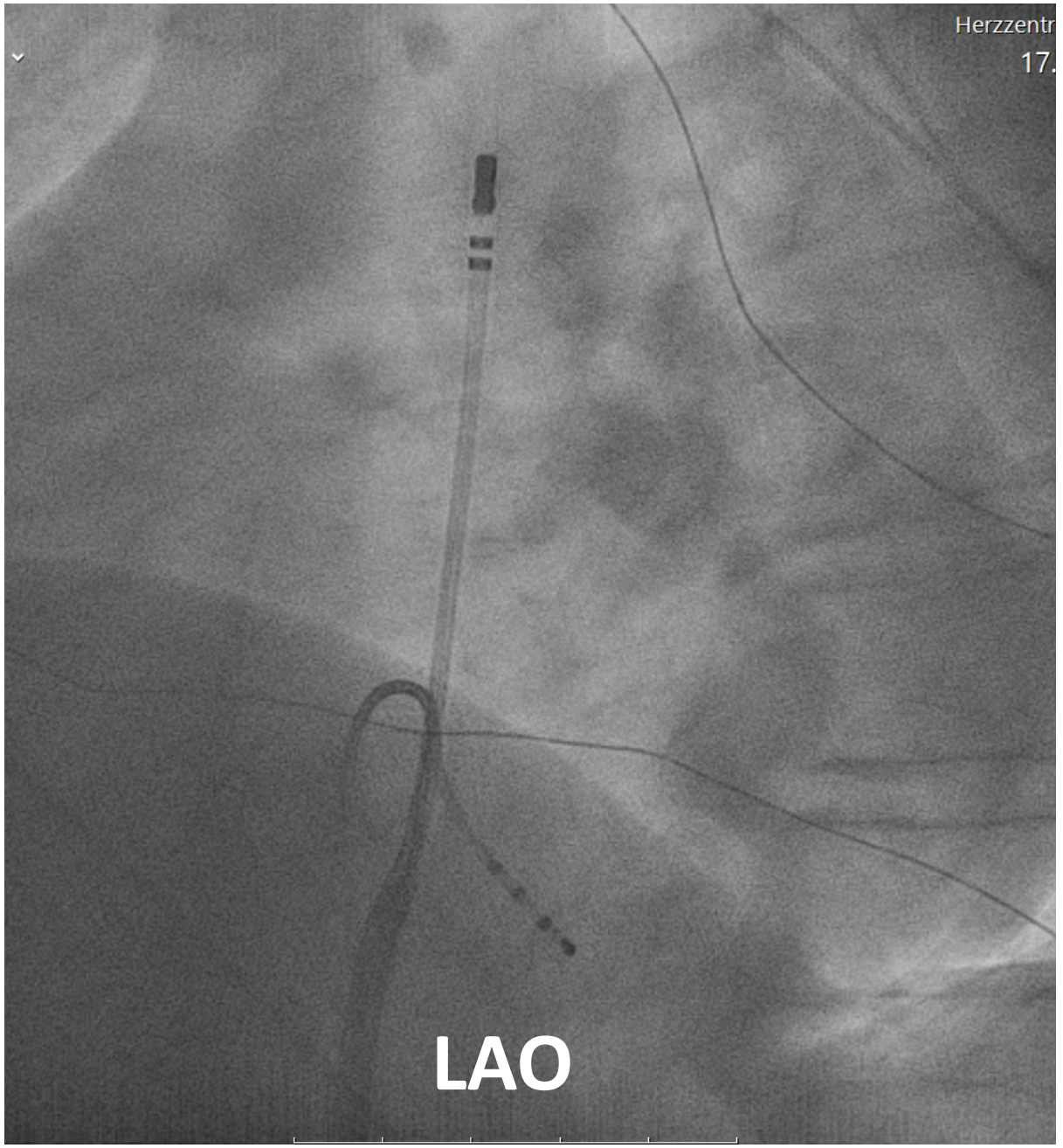
Clinical VT

CL: 330 ms
QRSd: 155 ms

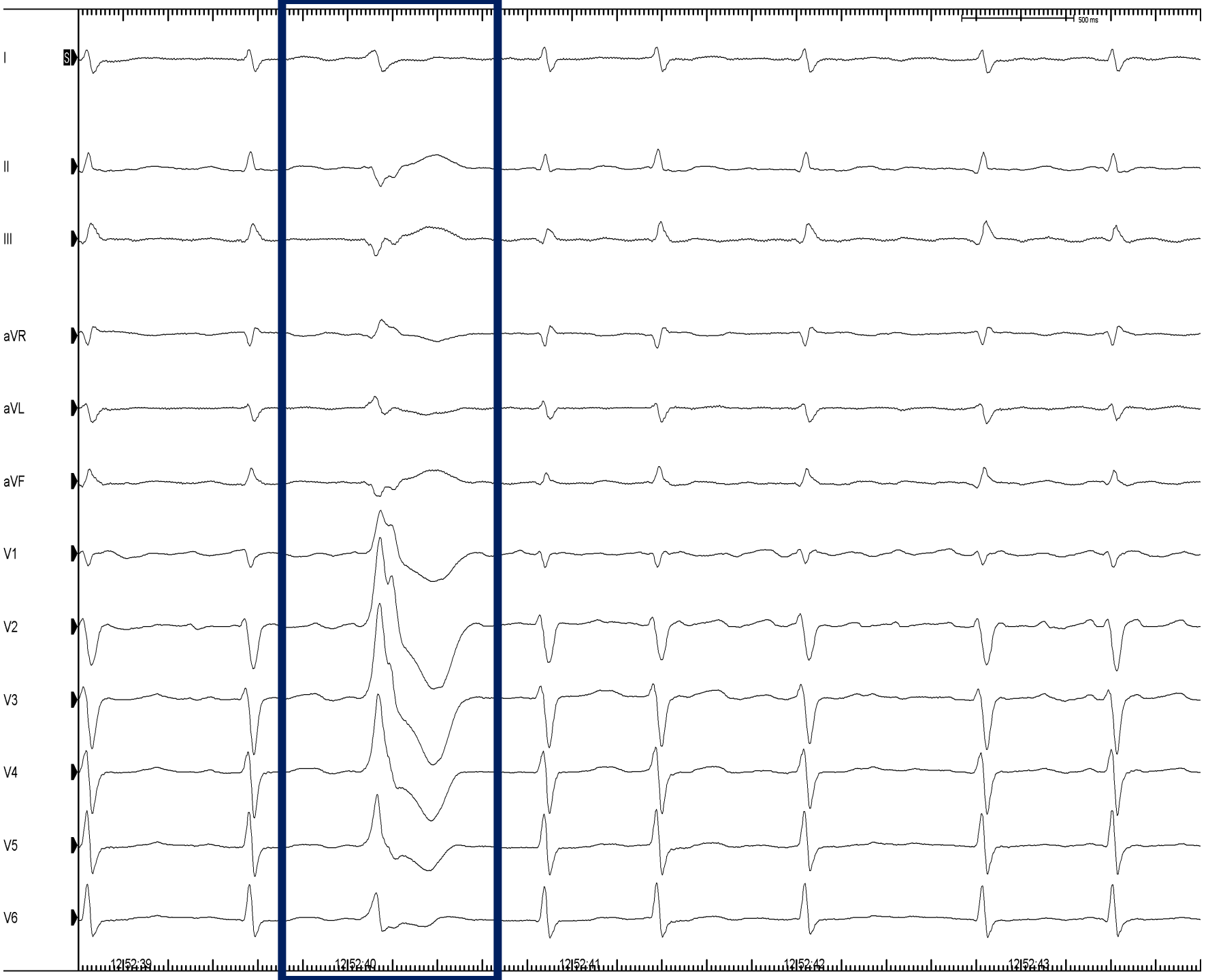



24 PM:2 0.361 0.988
32 PM:3 0.388 0.991
200.0 mm/sec
I
II
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
0.985
0.997
0.997
0.995
0.998
0.997
0.992
0.989
0.995
0.984
Best Pace Mapping
Earliest Point
R
L
RAO
LAO
0.65
0.65
RAO
LAO


RAO


LAO

Spontaneous PVC: scar associated



Conclusion:

- VT was induced spontaneously after Orciprenaline or high rate RV pacing
- VT localized and successfully ablated in RVOT
- No Low-Voltage-Area in RV/RVOT
- During programmed RV/RVOT Stimulation up to 400-S5 no further sustained and/or non sustained VT was inducible
- The patient discharged without ICD
- A catheter ablation of AF is planed

Suggested Reading

Deepak Padmanabhan · Alan Sugrue · Prakriti Gaba · Samuel J Asirvatham

Department of Cardiovascular Sciences, Mayo Clinic, Rochester, USA

Outflow tract ventricular arrhythmias

Electrocardiographic features in relation to mapping and ablation

Herzschrittmacherther Elektrophysiol. 2017 Jun;28(2):177-186