Clinical case

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Division of Cardiology

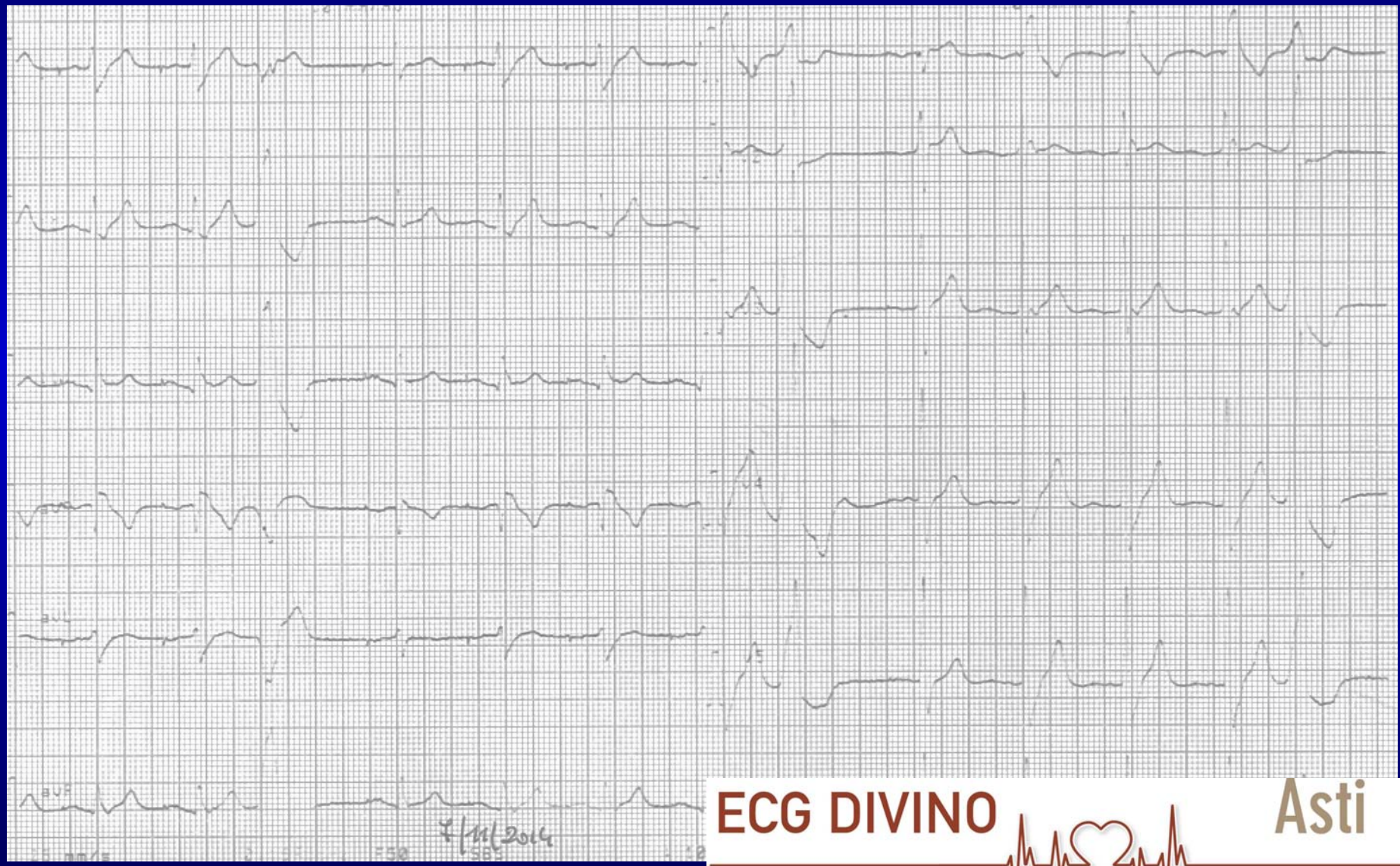
S. Andrea Hos

ECG DIVINO Asti

T.I

- 63 years old, male
- Previous duodenal ulcer, hiatus hernia, and chronic alcoholic liver disease (Child-Pugh score < 5).
- Active and chain smoker (20-40 sig/d), HTN, hypercholesterolemia, peripheral artery disease.
- In November 2014, ED access because of syncope.

Admission ECG (2014)



What's the matter here?

1) Ashman phenomenon

2) Rate-dependent aberrant conduction

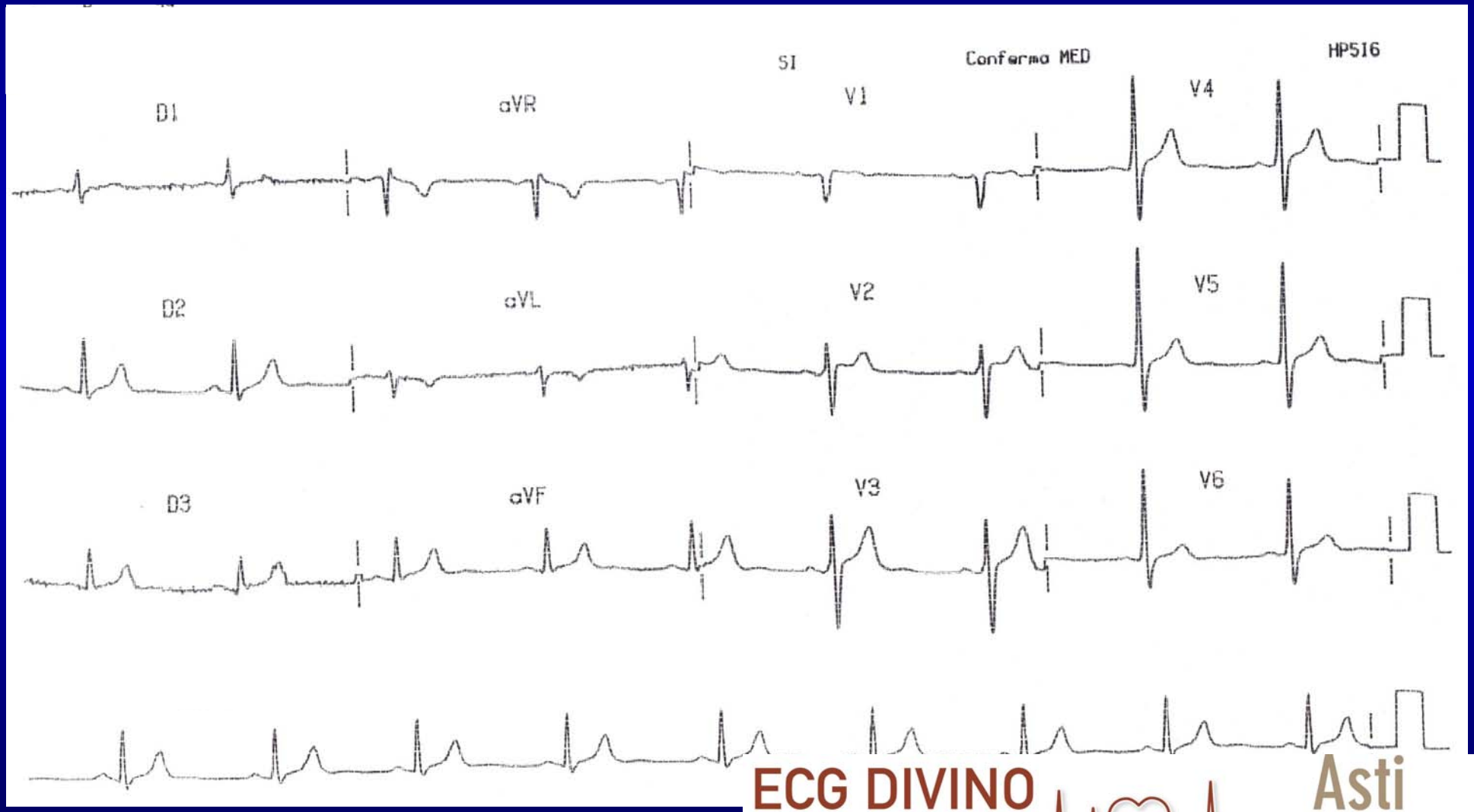
3) ARVC

4) Myocarditis

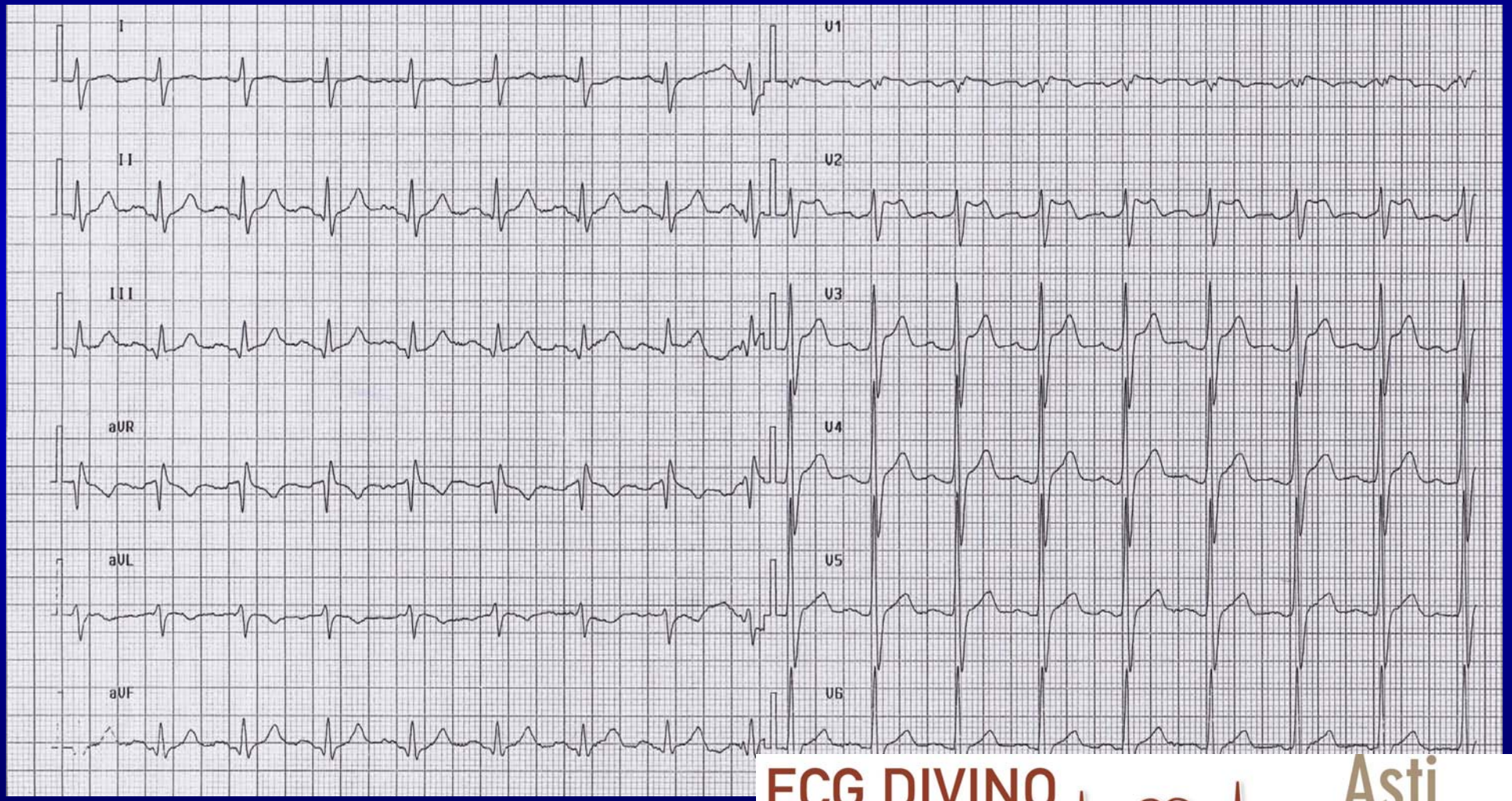
5) Paced rhythm

6) Give me more.

Previous routine ECG (1998)



Admission ECG (2006)



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NOW, do you still think the same?

1) Ashman phenomenon

2) Rate-dependent aberrant conduction

3) ARVC

4) Myocarditis

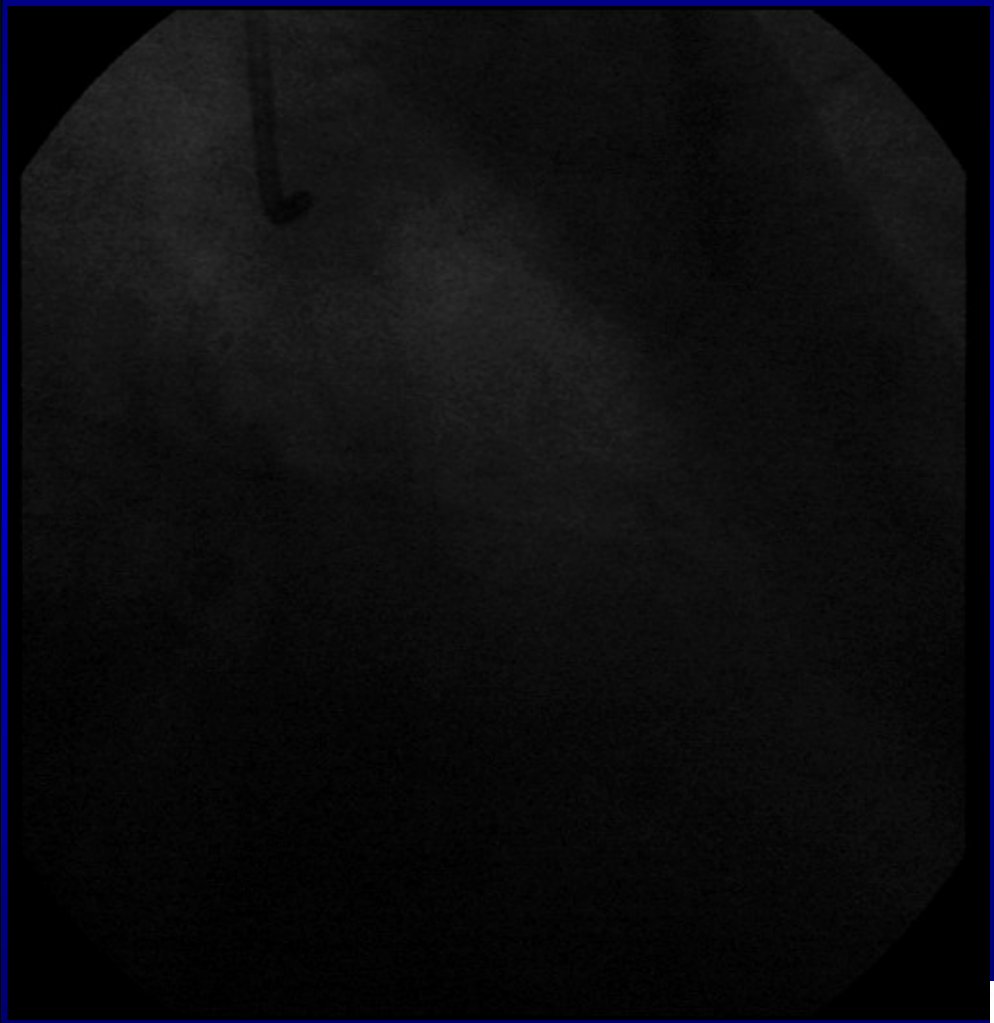
5) Paced rhythm

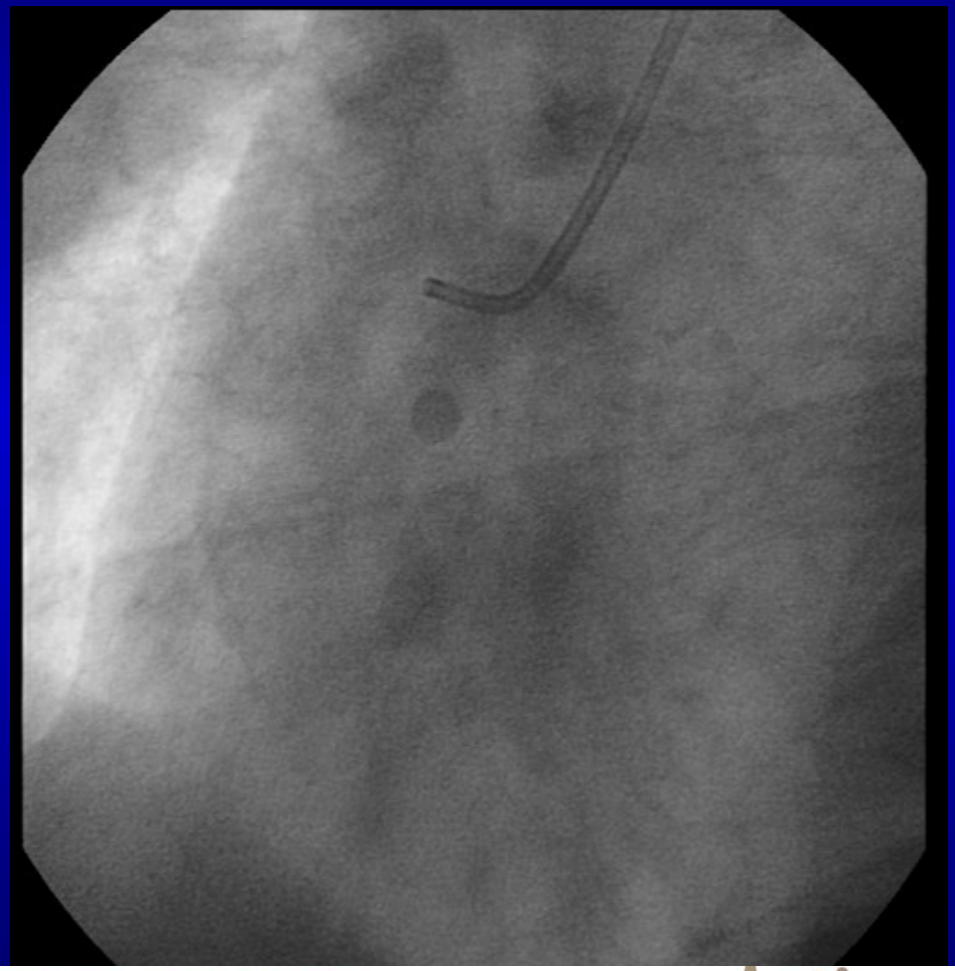
6) Brugada syndrome

Diagnostic path

- In April 2006, ED access because of recurrent oppressive chest pain episodes, not totally related to physical effort.
- TTE: no clear wall motion abnormalities.
- Trop I: 0.10 (0.26 – 0.12 µg/l)
- Urgent coronary artery angiogram.

Coronary angiogram (2006)





Diagnostic path

- In April 2006, ED access because of recurrent oppressive chest pain episodes, not totally related to physical effort.
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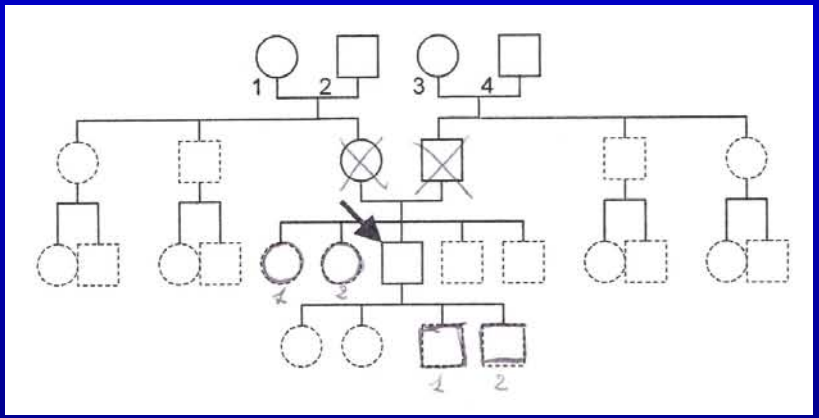
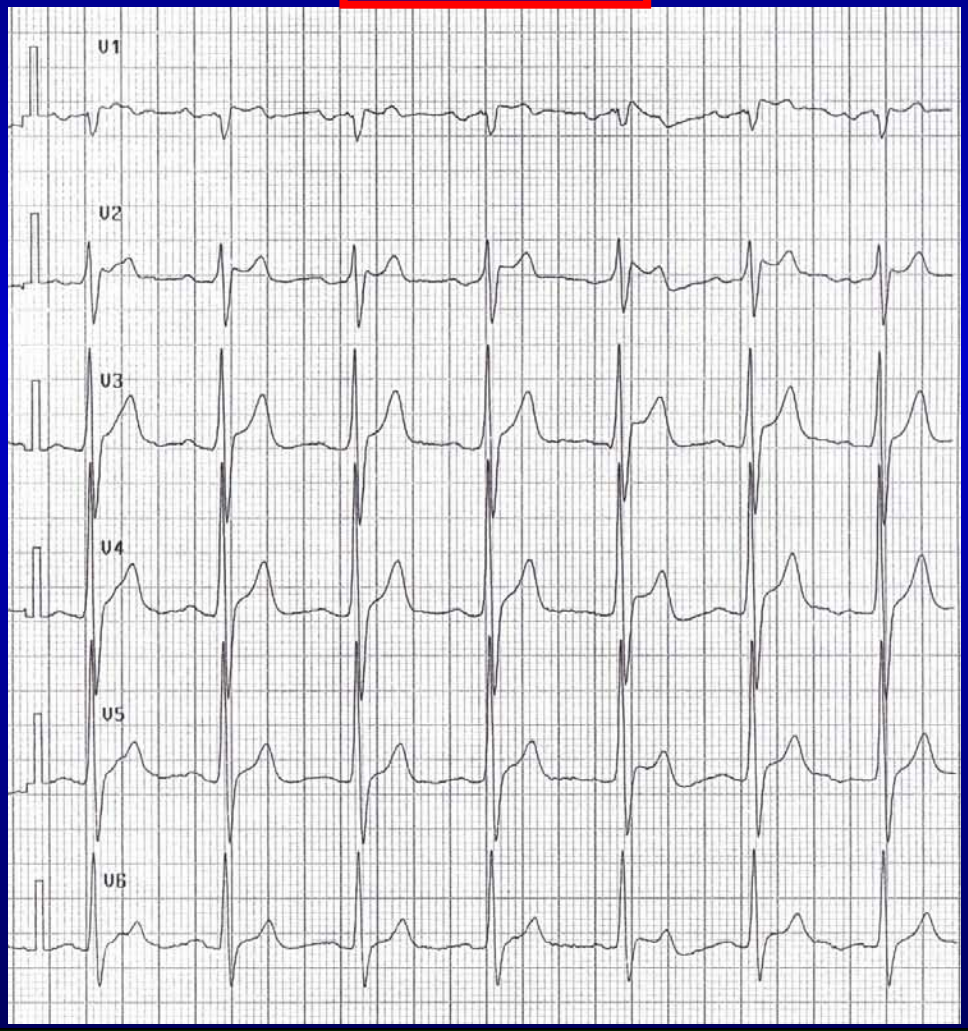


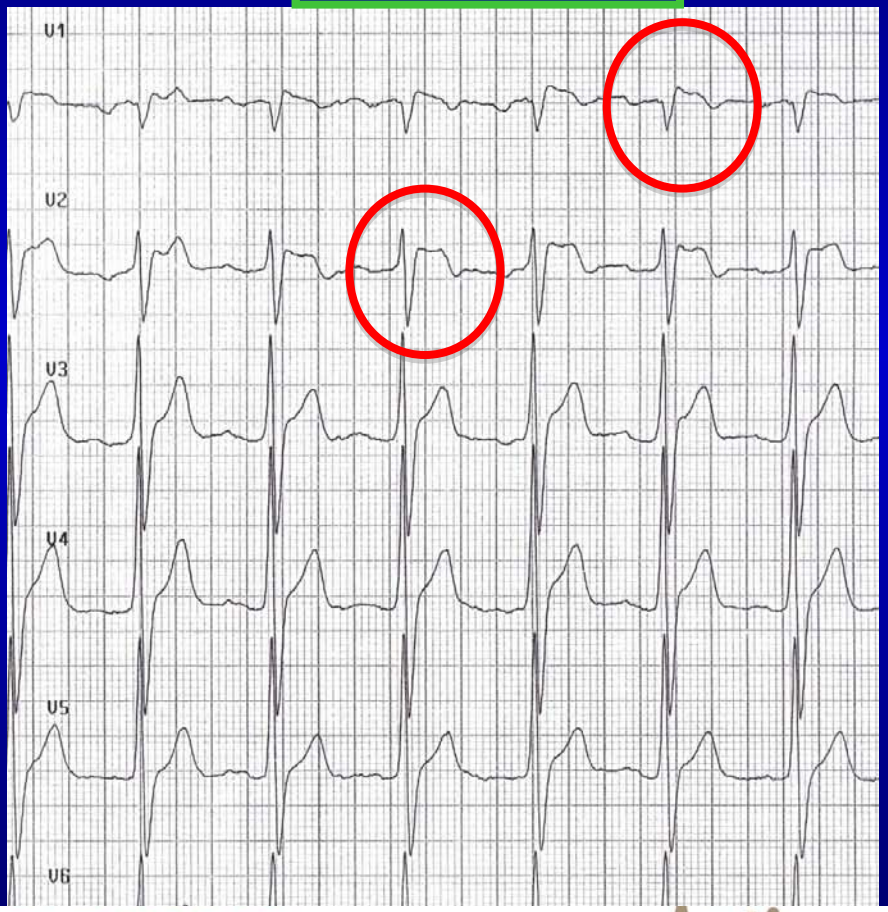
- Uncertain family history of sudden cardiac death
- <u>Flecainide challenge</u>.

Flecainide challenge

Baseline



6th minute



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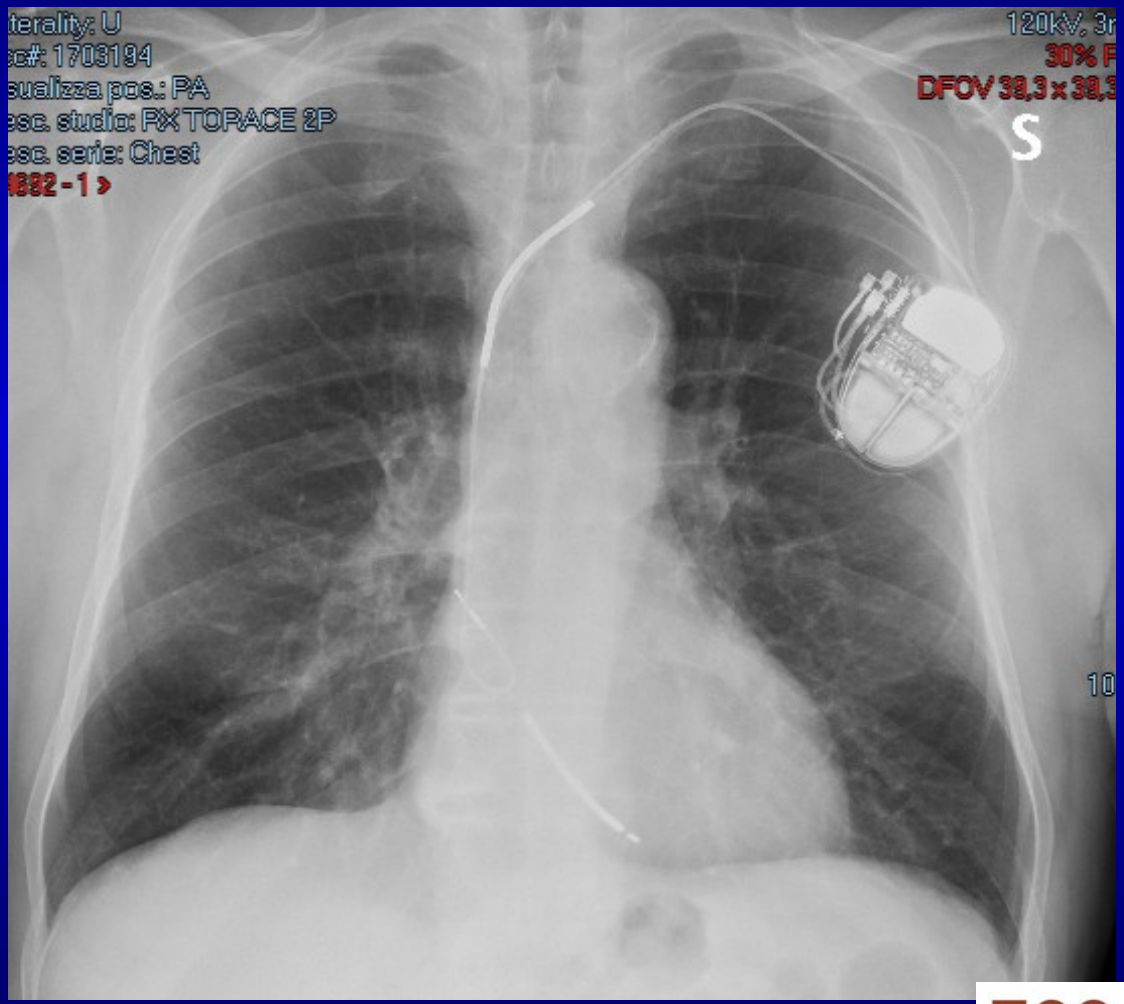
- Trop I evolution: 0.10 – 0.26 – 0.12 µg/l
- Uncertain family history of sudden cardiac death
- Flecainide challenge: Type 2 Brugada pattern induced
- EP testing (RVA/RVOT, 400/600 mms drive, up to ERP and 3 extra stimuli): FV induced (R

ICD implant



ICD programming:

1)<u>TV1 (150-185 bpm)</u>

4 burst - 4 ramp

2) <u>TV2 (185-230 bpm)</u>

2 burst – 6 x 42 J

3) <u>FV (>230 bpm)</u>

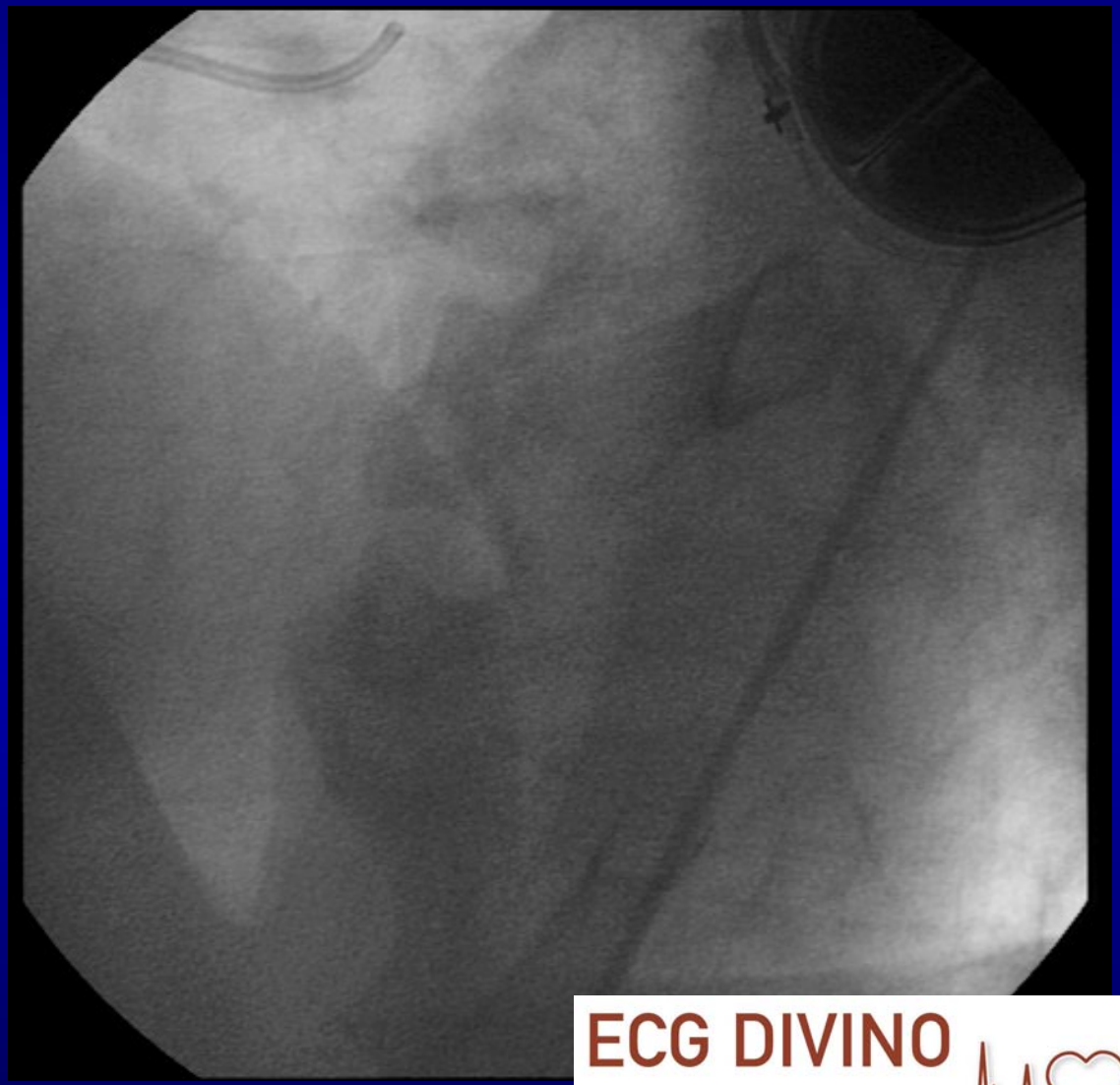
1 burst – 6 x 42 J

TD: ASA 100, venitrin TD 10, rosuvastatine 10,

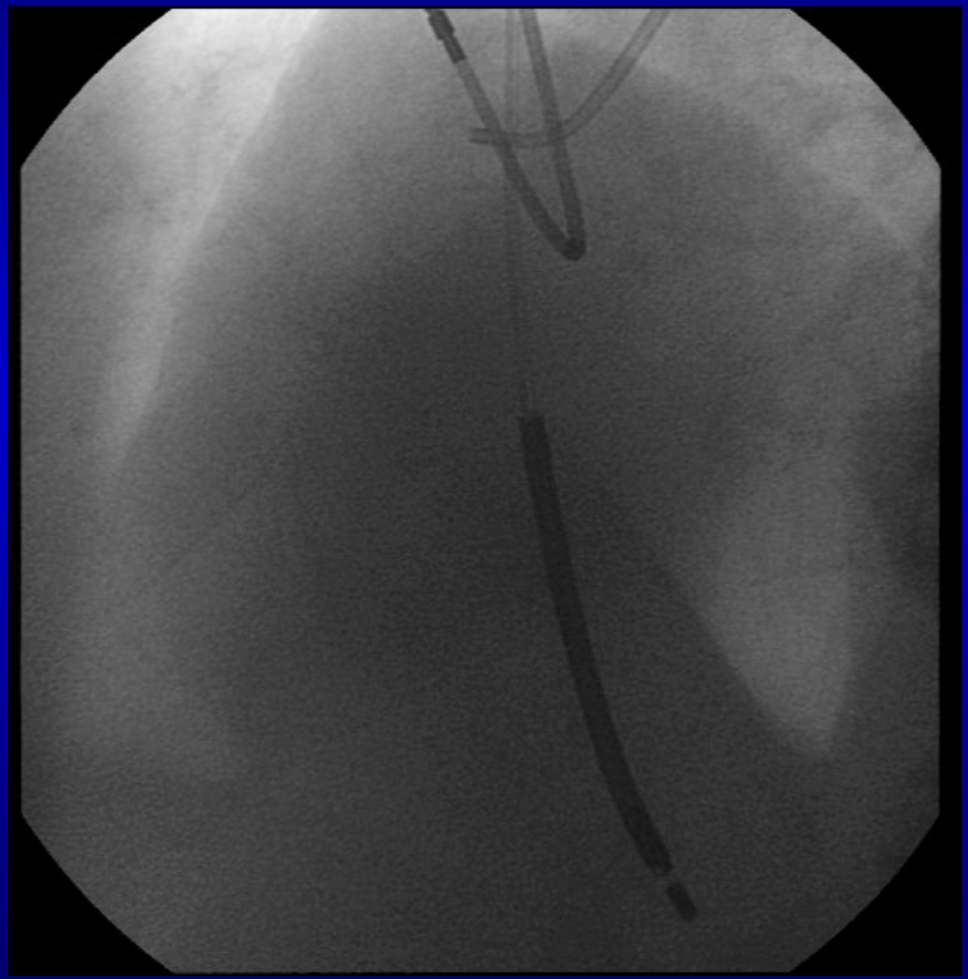
…fine until November 2014…

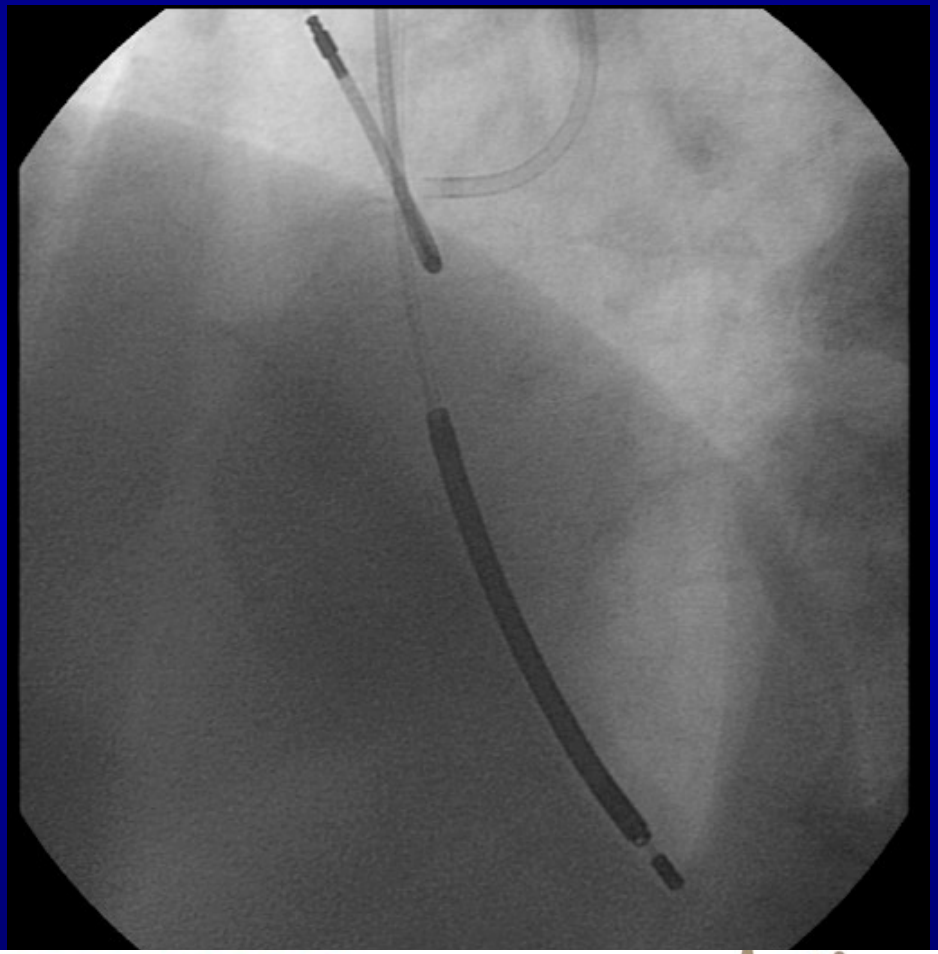
- ED admission because of multiple ICD shocks in the last 24 hours (electrical storm).
- ICD interrogation: 4 appropriate shocks on FV.
- Urgent coronary angiogram.

Coronary angiogram (2014-LCA)

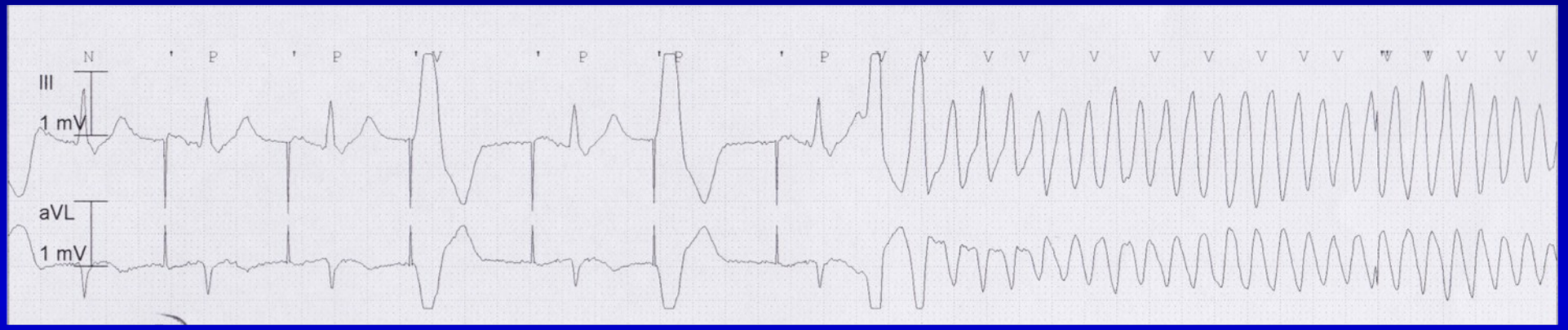


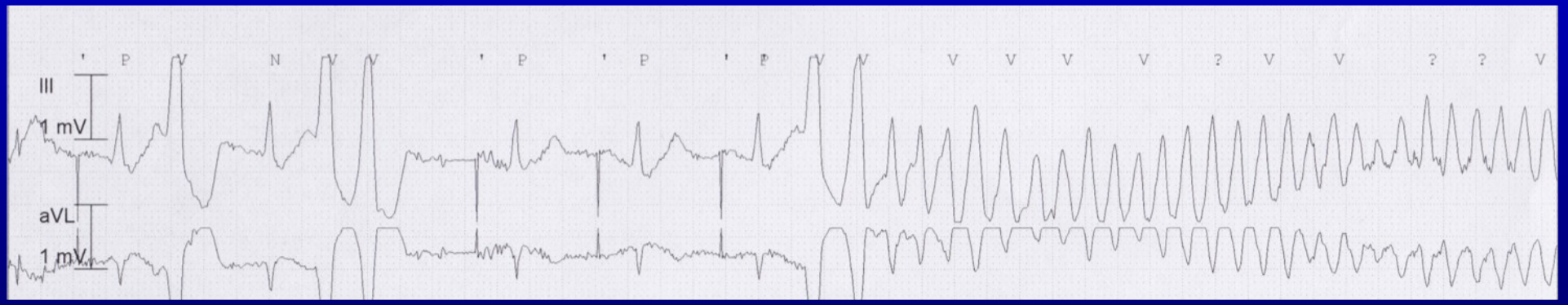
Coronary angiogram (2014-RCA)





Cardiology Ward ECG monitoring





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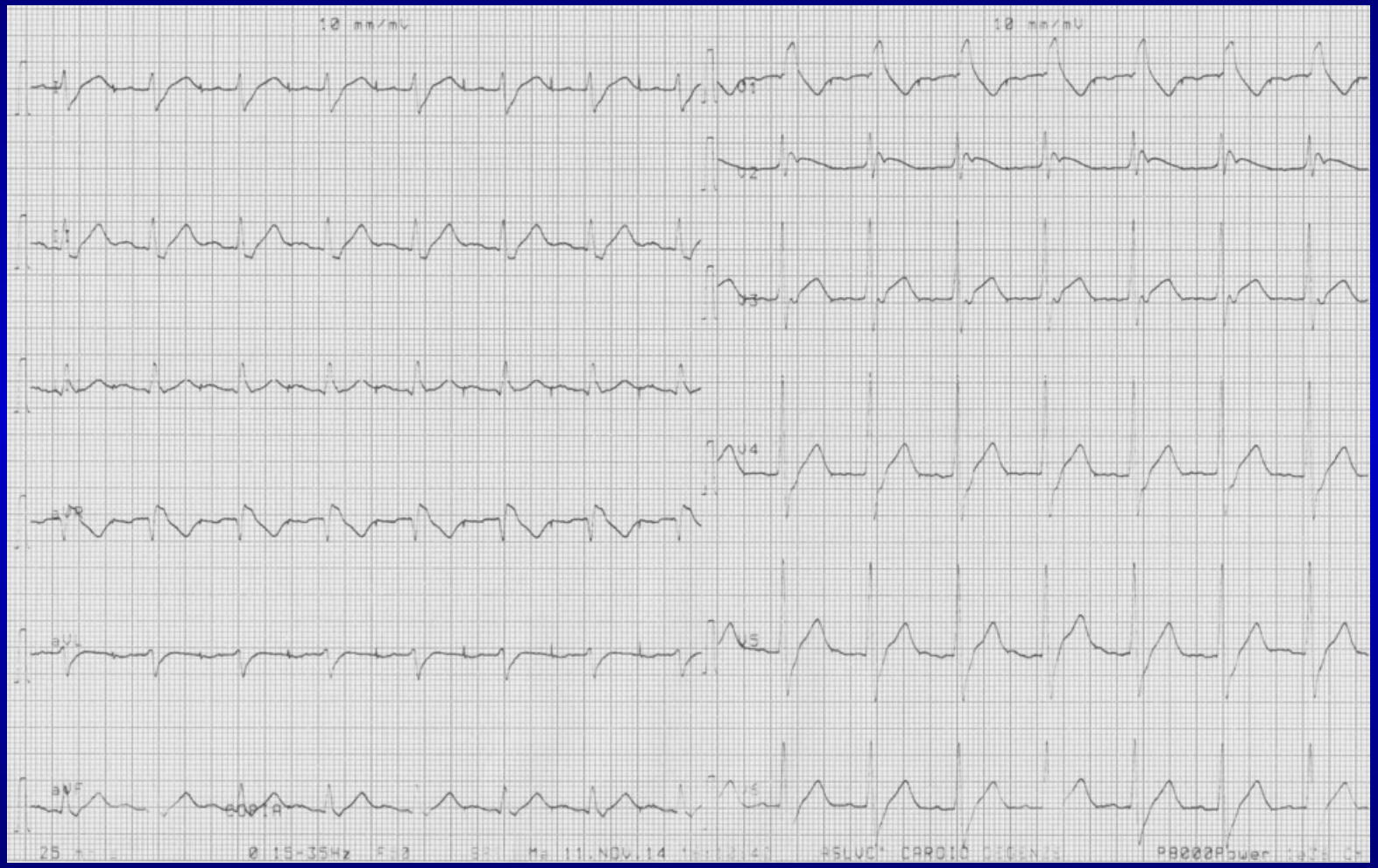
How do you think to get by?

1) Amiodarone
2) Beta-blocker
3) Lidocaine
4) Isoprenaline
5) Hydroquinidine
6) Fast temporary pacing

ECG at discharge



TD: ASA 100, venitrin TD 10, rosu[illegible]

20, ranitidine 300, hydroquinidine 2[illegible]

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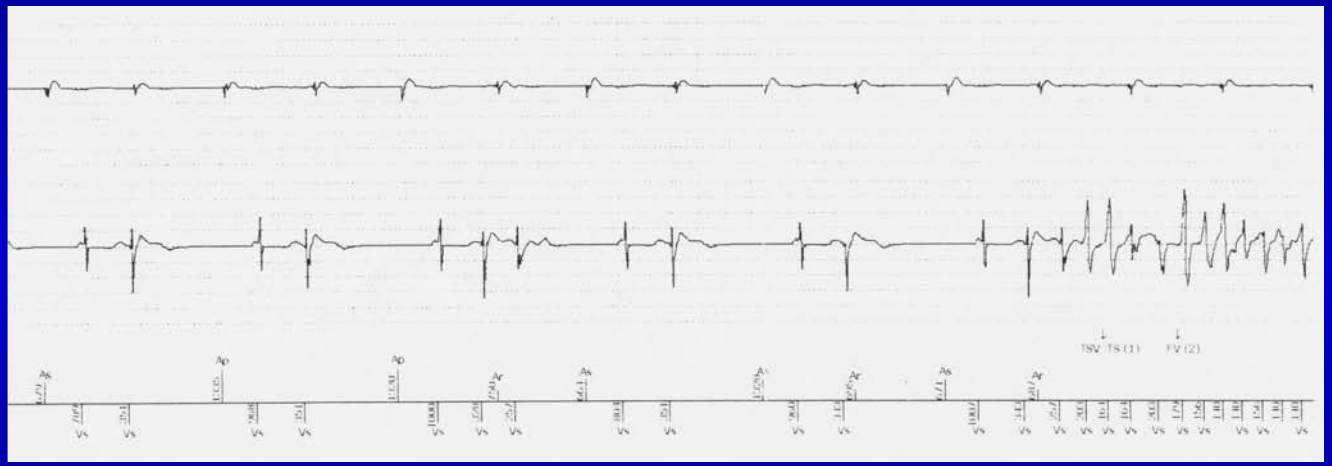
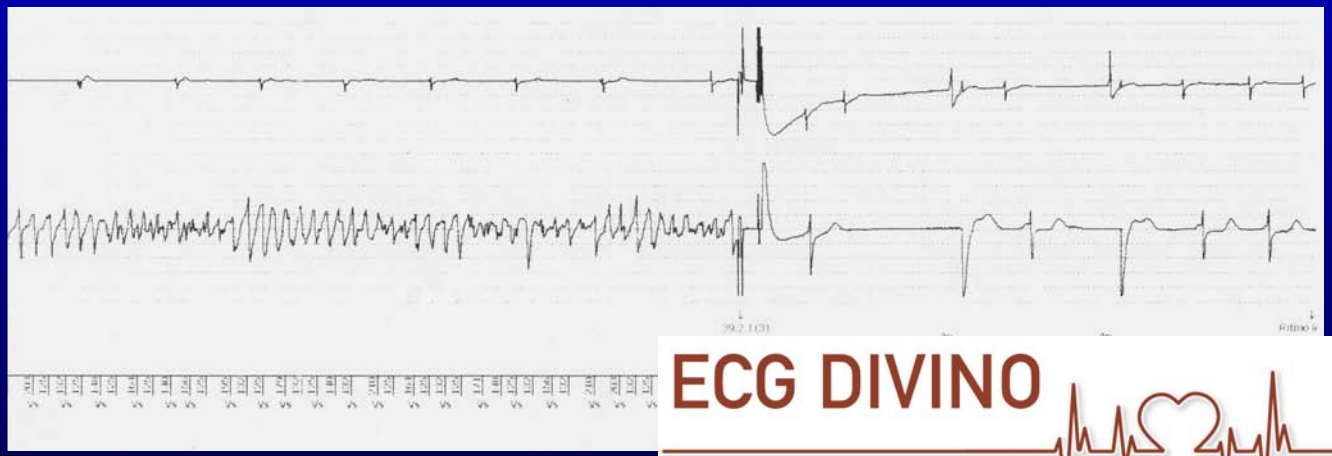
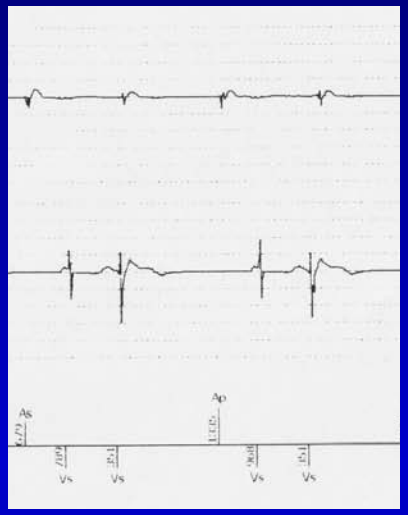
In May 2016: stop HQ due to diarrhoea

- In June 2016 unexplained syncope.
- At ICD check:

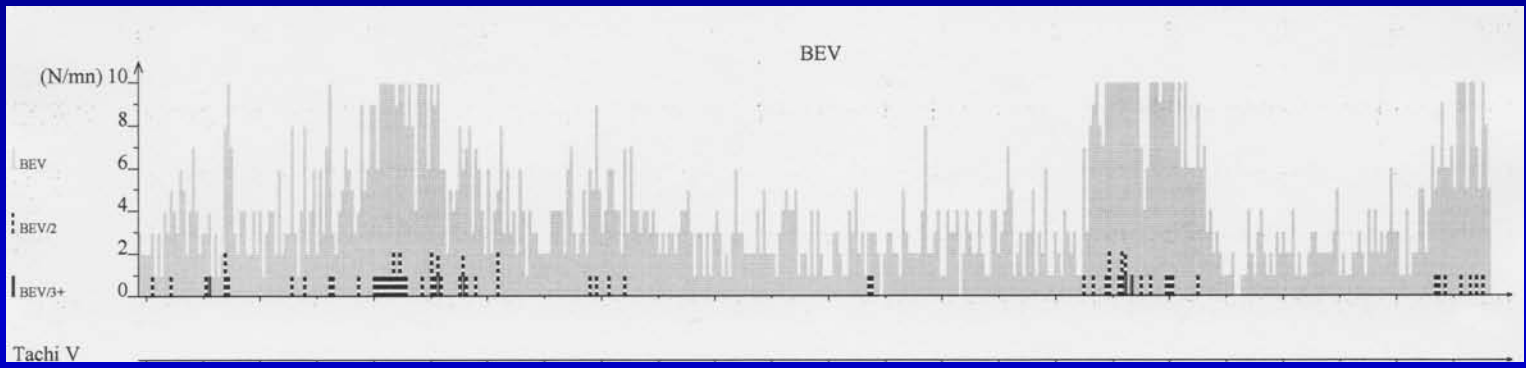


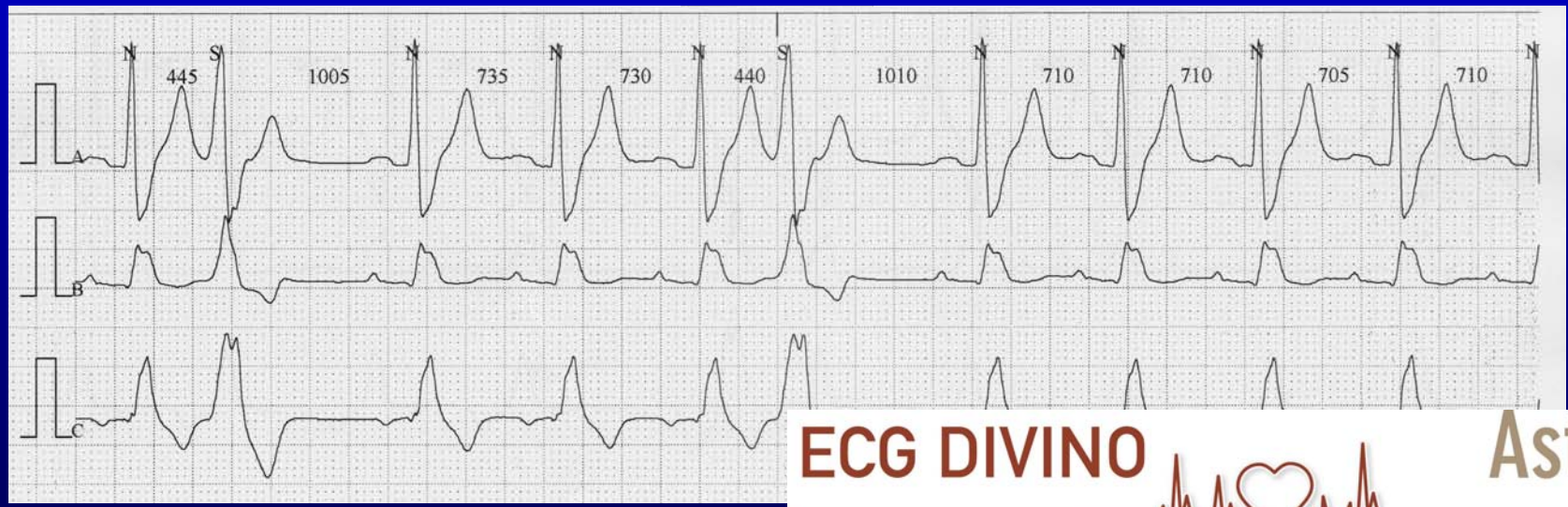


Holter ECG and monitoring



3828 monomorphic VEBs (OT), isolated, not early.





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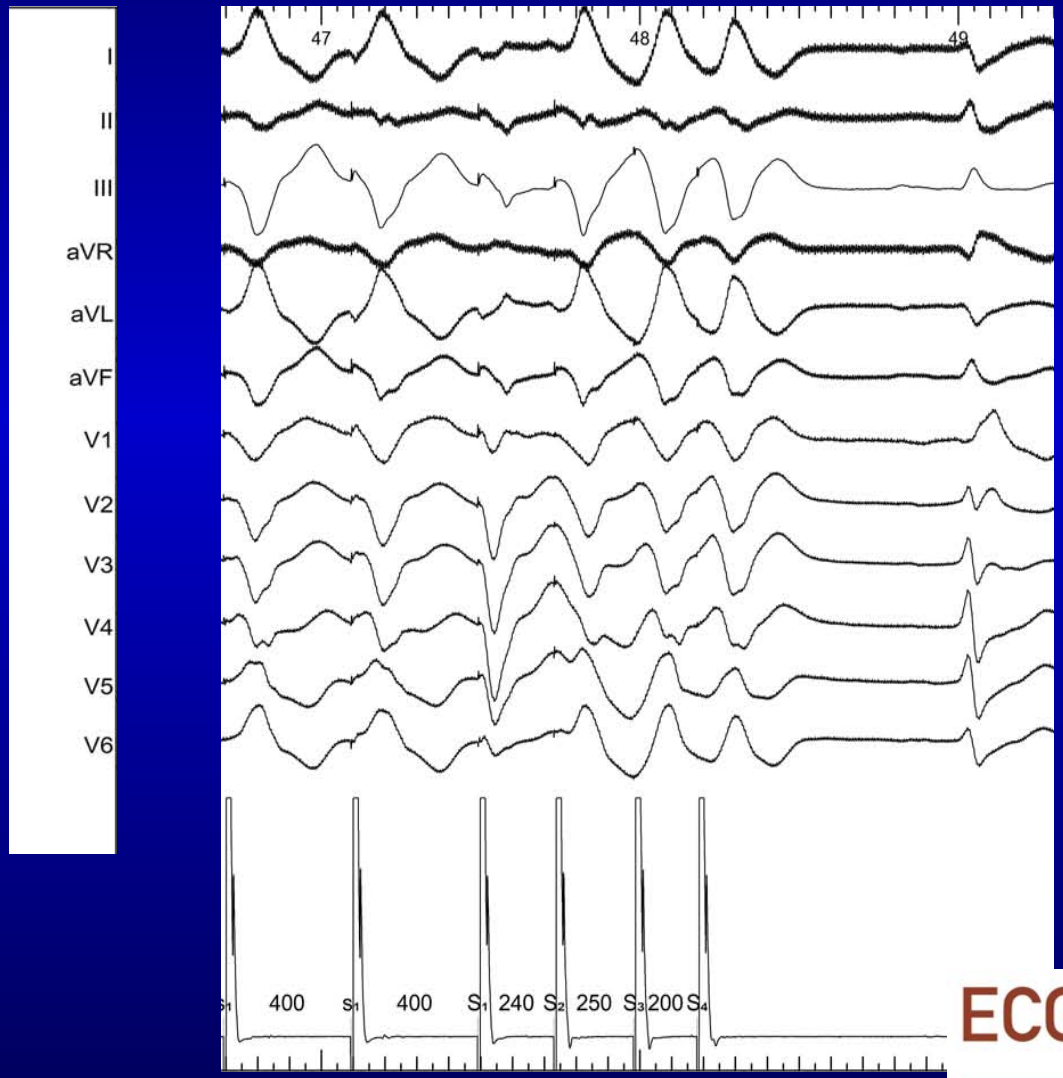
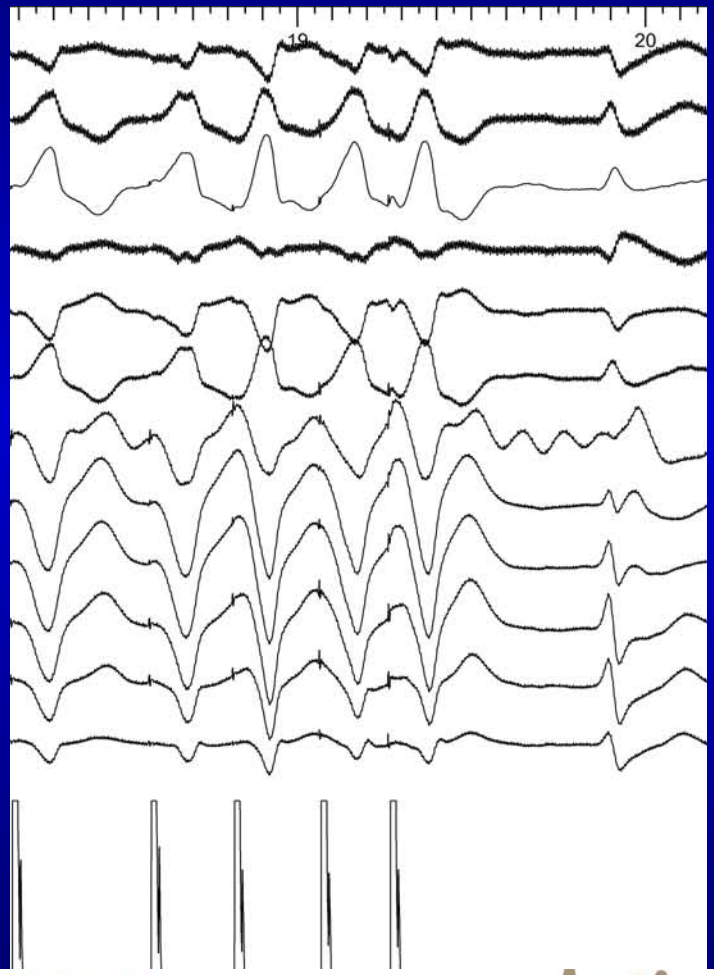
EP testing (2016)





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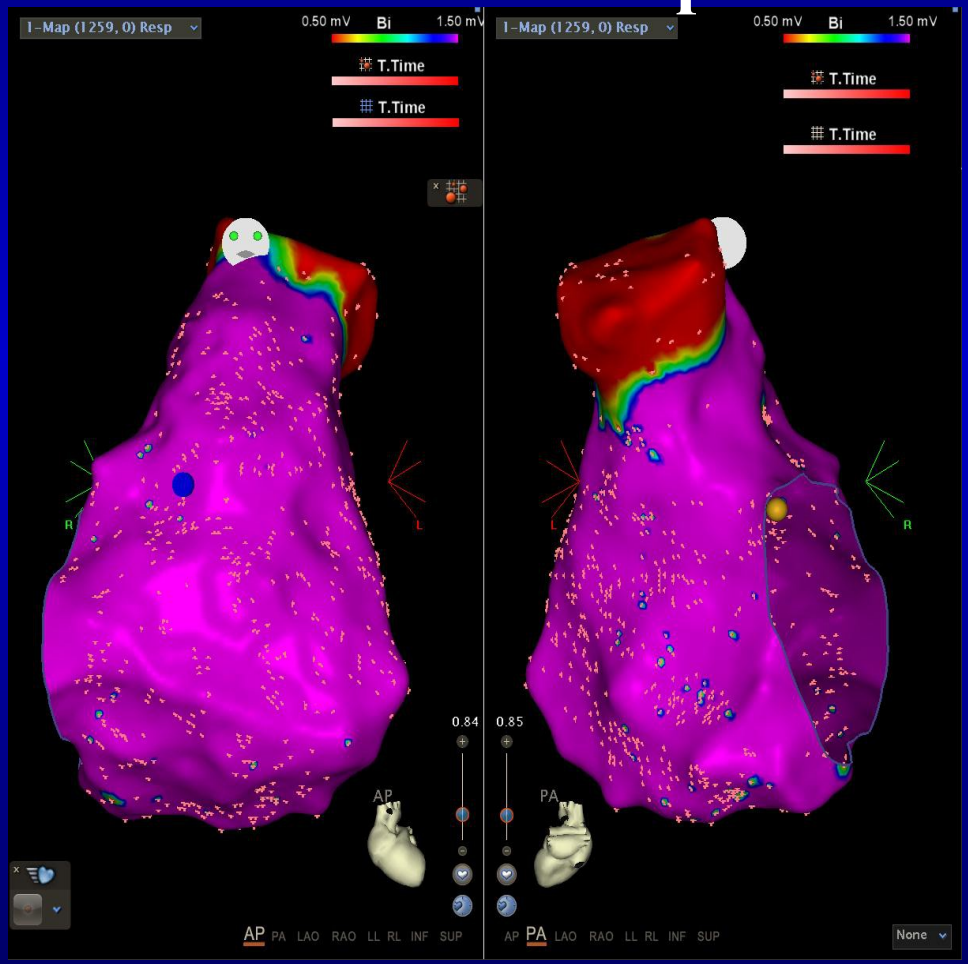
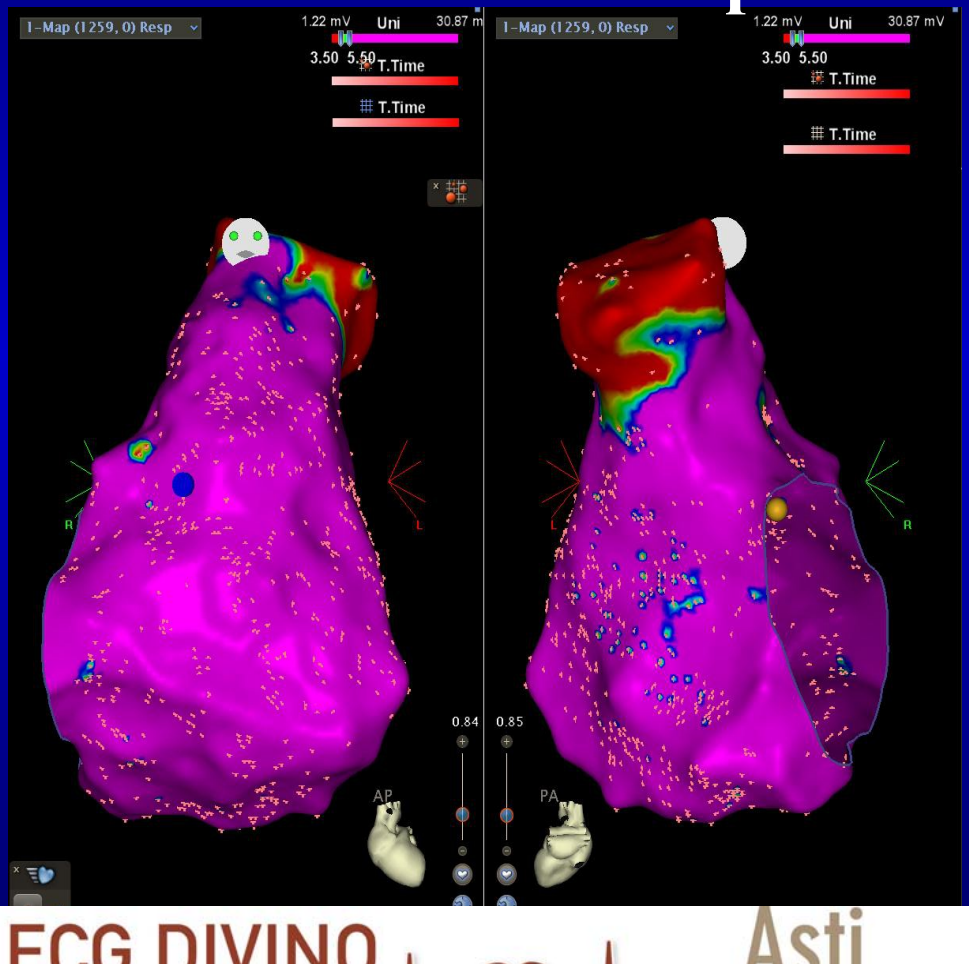
RV EA voltage mapping

BIPOLAR map



UNIPOLAR map



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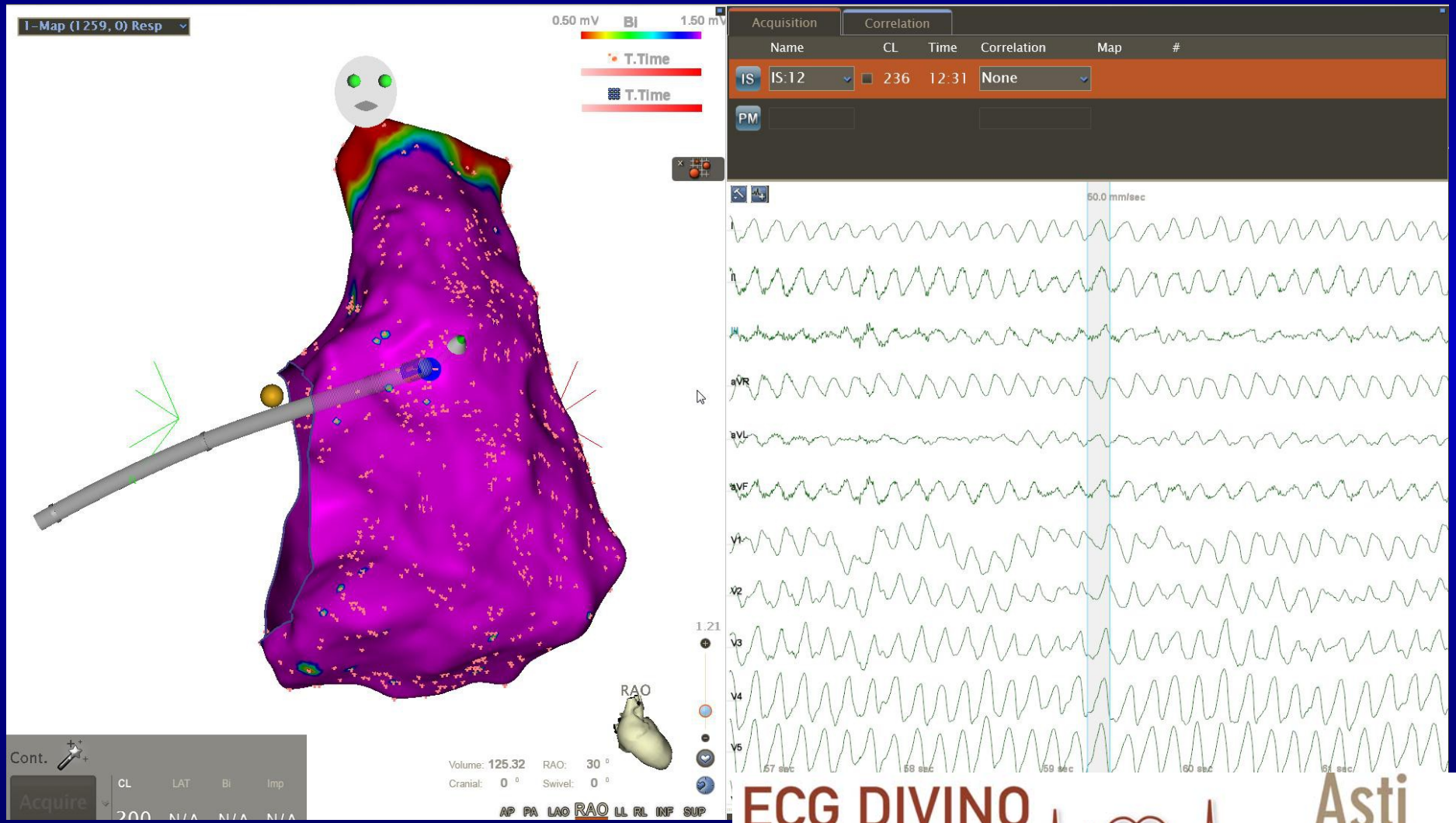
Is EP testing really reliable?



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What should be the next most logical step?

1) Nothing. Wait and see.

2) Carry on hydroquinidine + cholestyramine.

3) Amiodarone +/- beta-blocker.

4) Mexiletine.

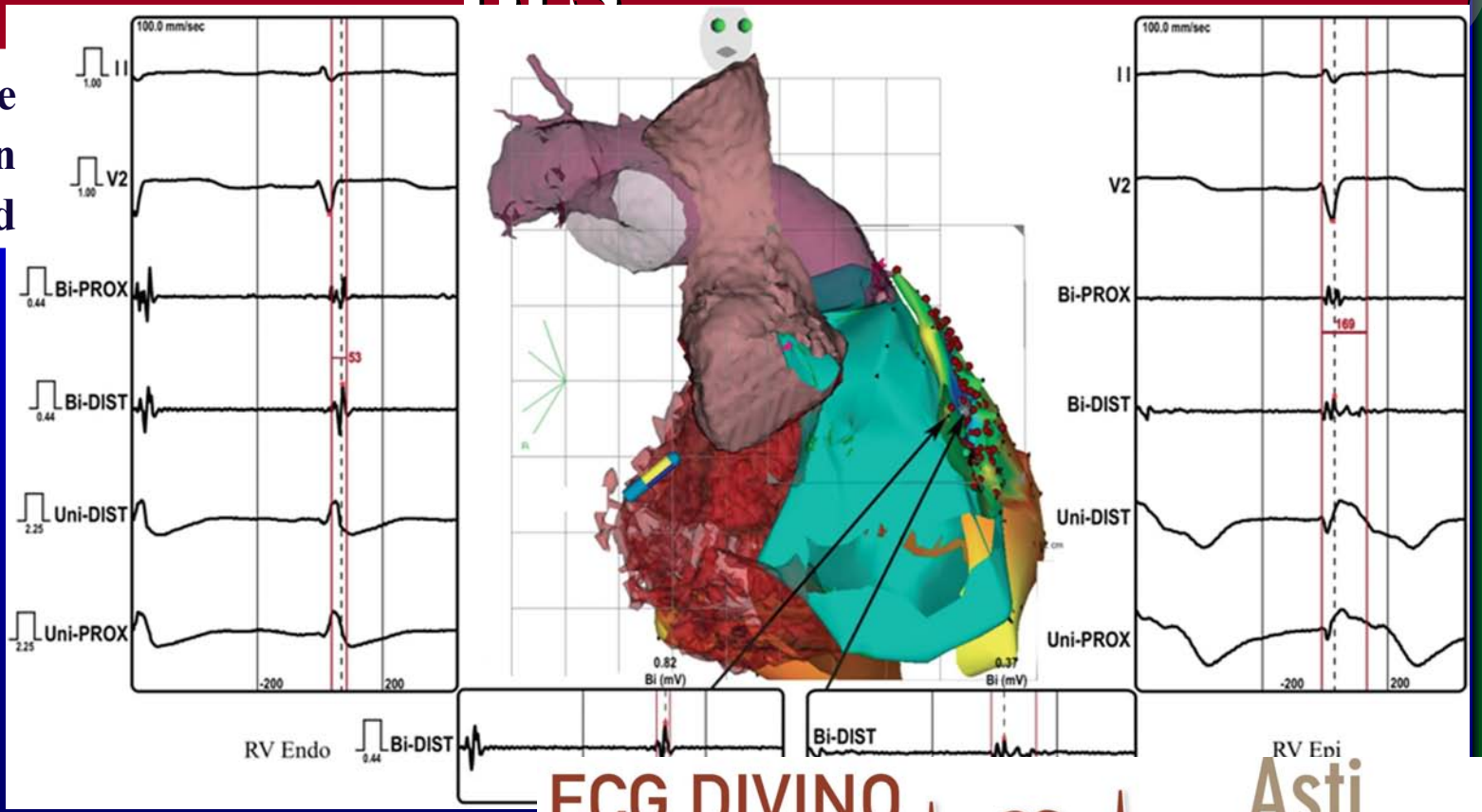
5) Try again RVOT-CPV ablation.

6) Epicardial RVOT ablatio

Anterior RVOT epicardium: The arrhythmogenic area underlying BrS

9 patients with type I Brugada pattern, inducible VF and multiple ICD shocks.

Low voltage
Prolonged duration
Fractionated



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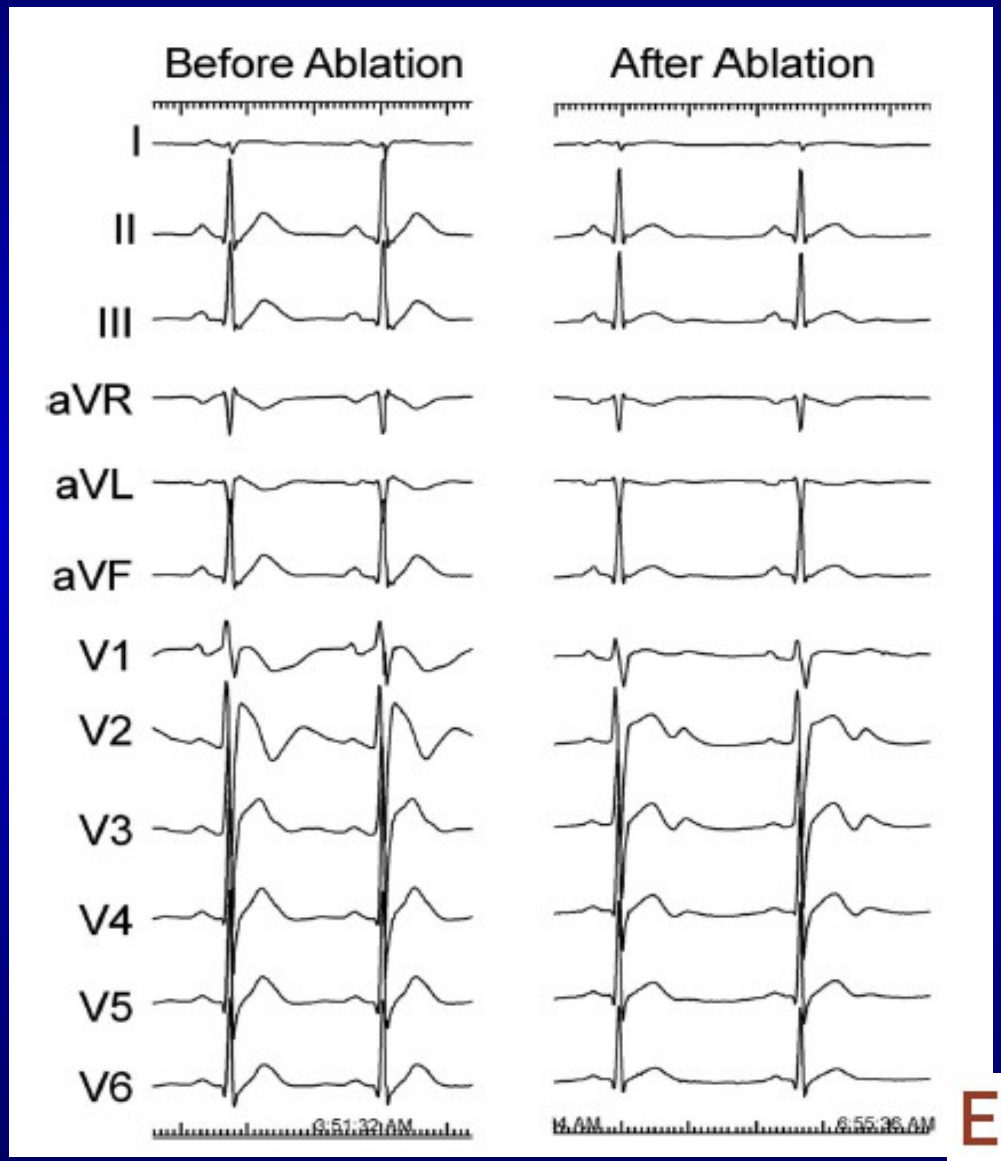
90% normalization of Brugada pattern



At 20±6 months, no recurrent VT/VF in all patients off medications.

Thanks
for your attention!