PLACE

PLATFORM OF LABORATORIES FOR ADVANCES IN CARDIAC EXPERIENCE

ROMA
Centro Congressi
di Confindustria
Auditorium
della Tecnica

9ª Edizione

30 Settembre
1 Ottobre
2022

Cardiostimolazione: Nuove Evidenze

L'APPROCCIO EP-BASED

Mario Volpicelli, Nola (NA)

Case Report 1

Patient history

- Age 72 years old , man
- Ischemic cardiomyopathy, Paroxysmal Type II AV Block, QRS 114 ms, FE 35%

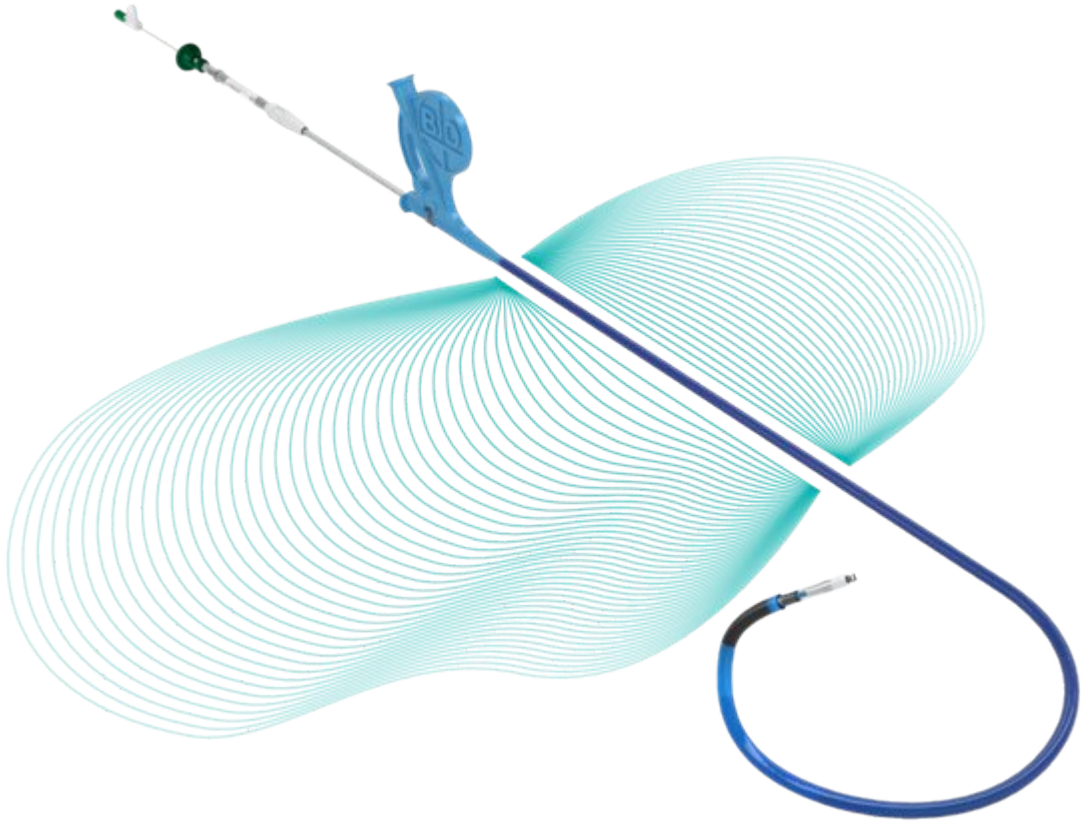
Lab setup

Systems

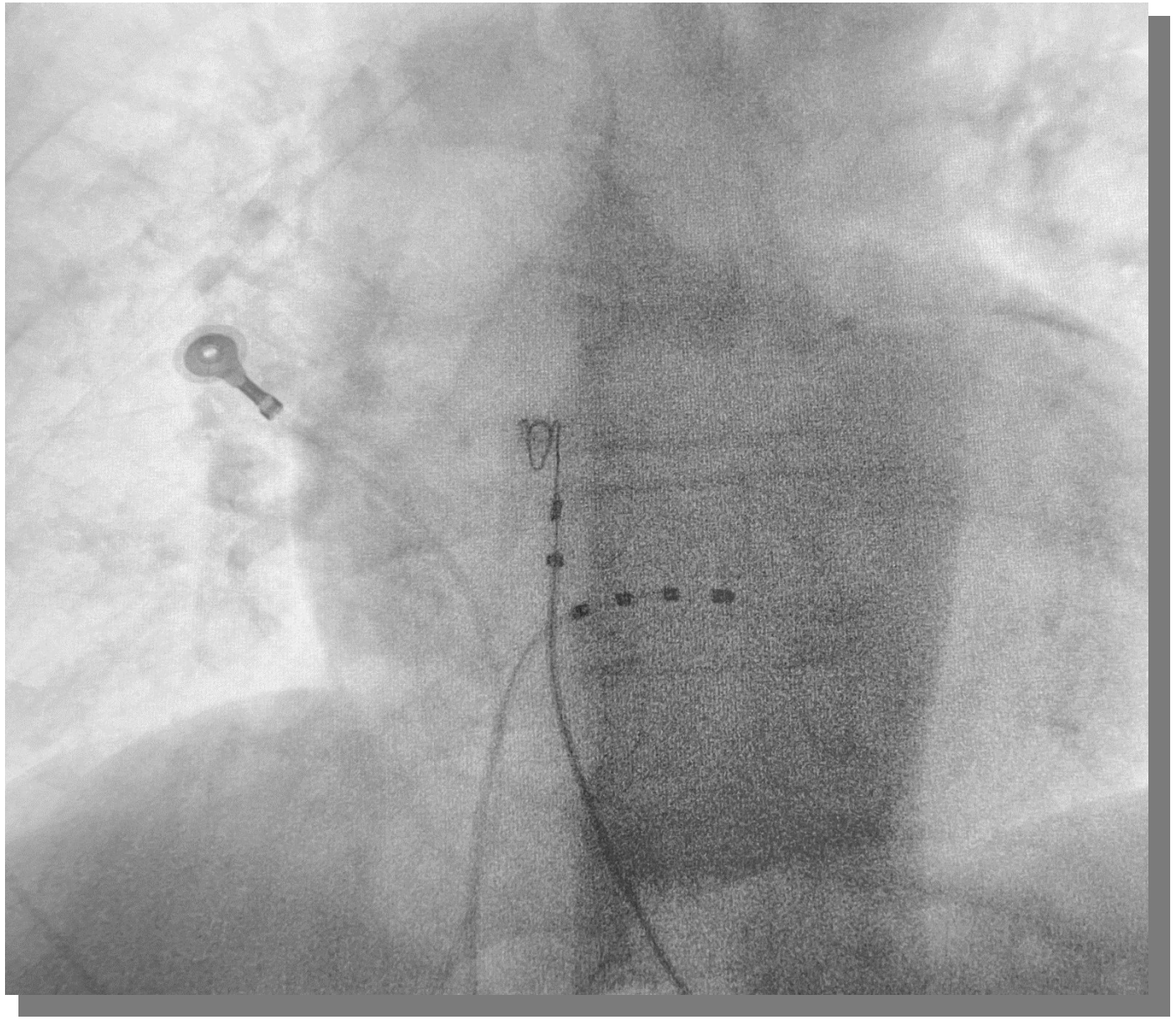
- Polygraph
- Angiograph
- Programmer PSA | EP4 stimulator

Device and Catheters

- Multicath 4J quadripolar diagnostic catheter
- Selectra 3D M / Solia S 60
- Acticor 7 HF-T CRT-D

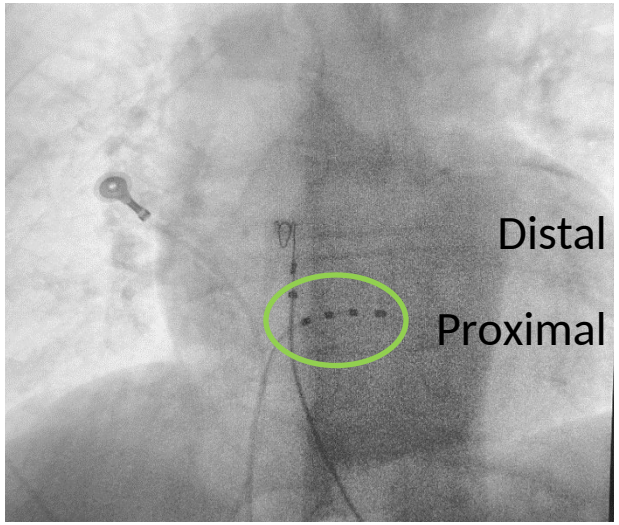


1.
Search for the His signal with the diagnostic catheter, femoral access.



1. Search for the His signal with the diagnostic catheter, femoral access.
2. **Verify the signals and the capture**

Green track: diagnostic catheter



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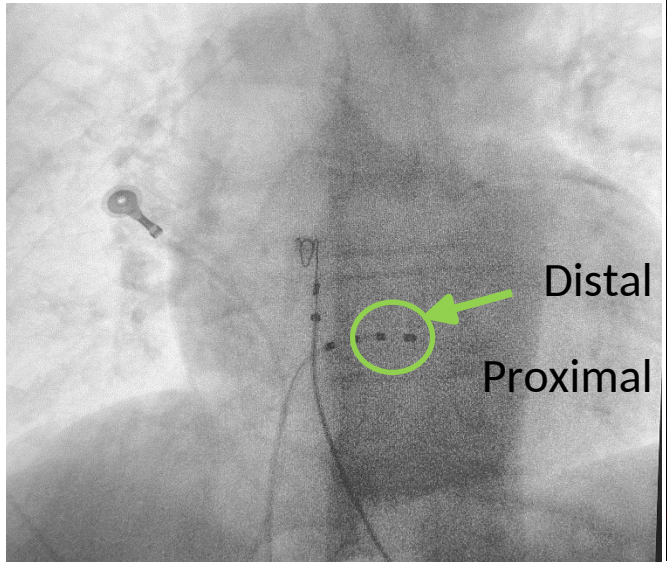
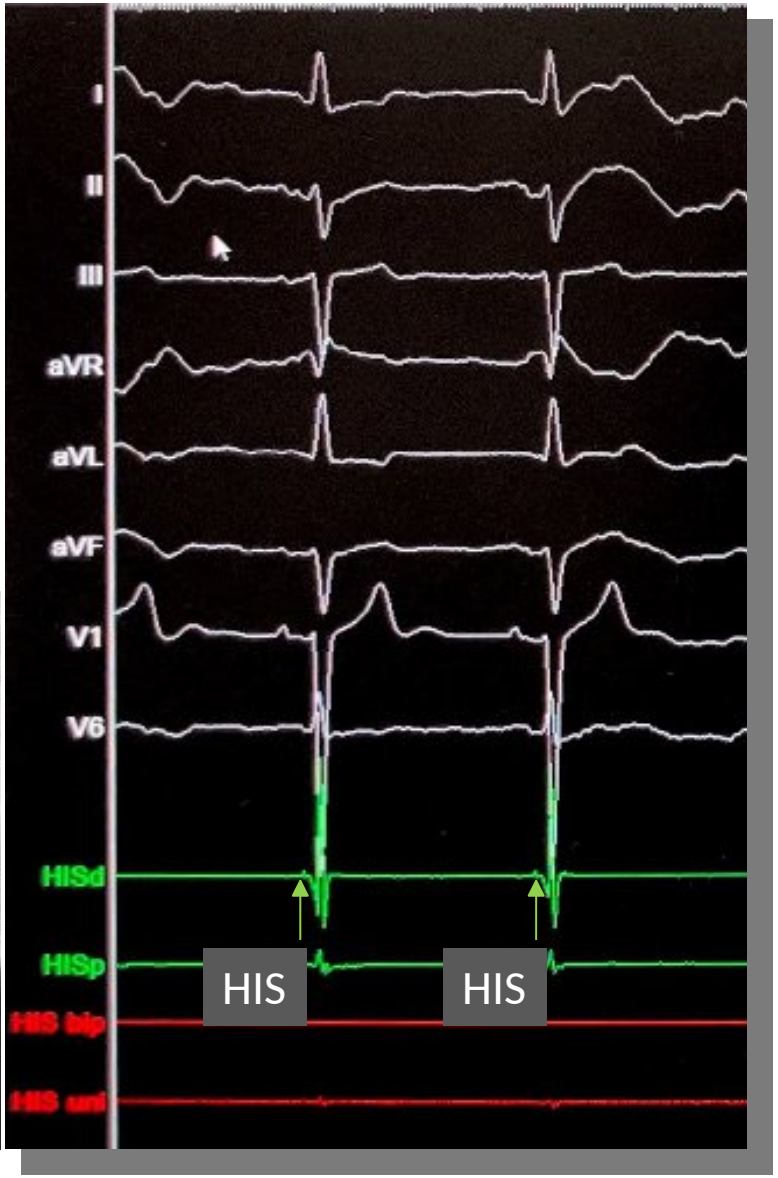
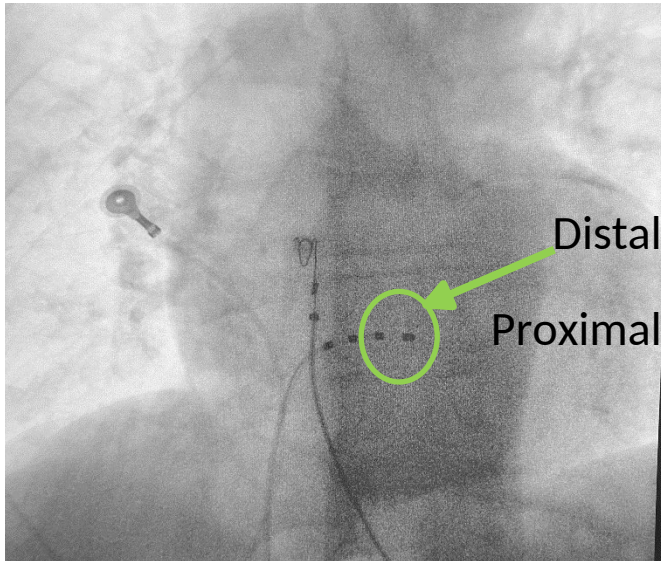
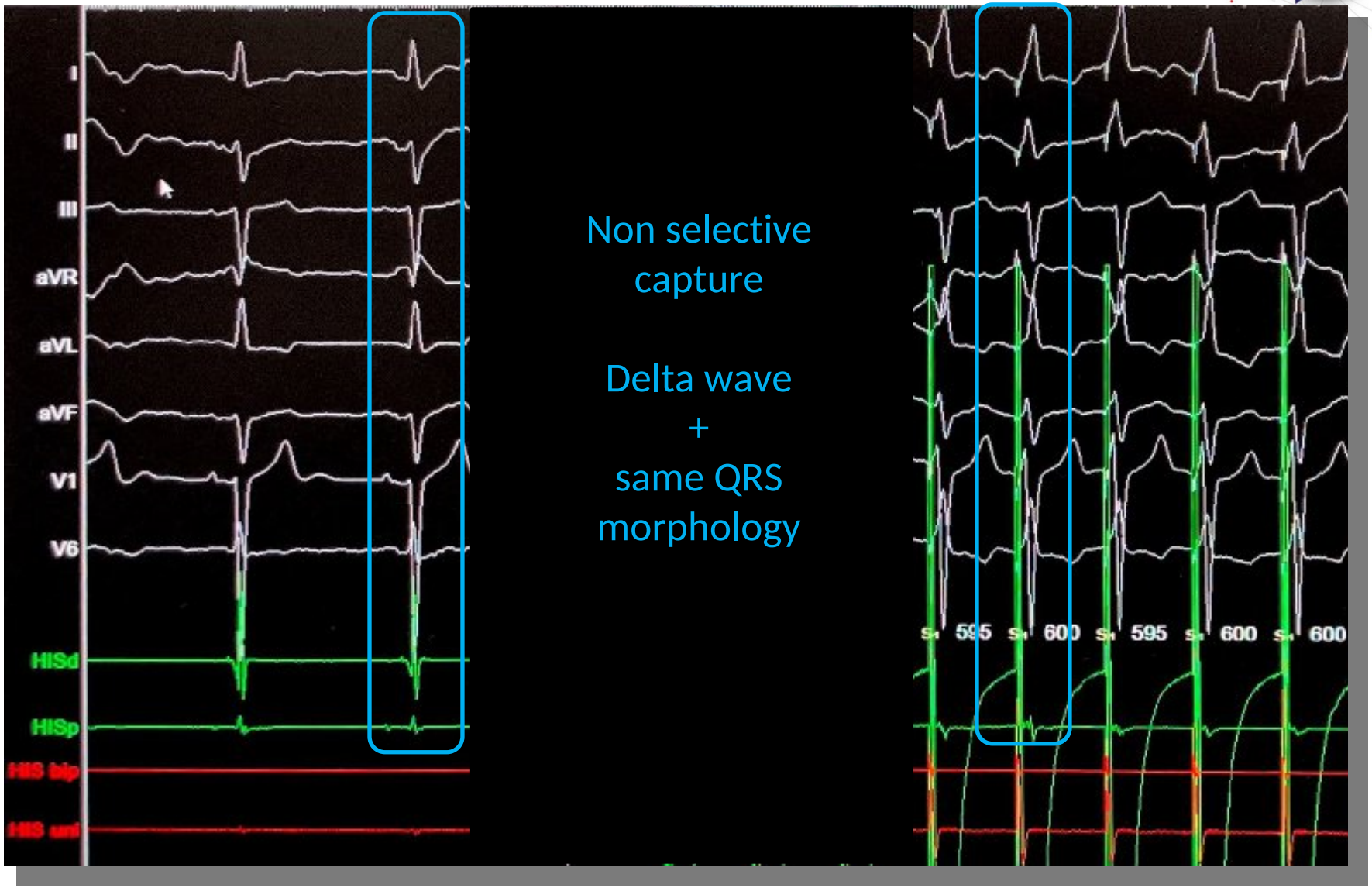
Green track: diagnostic catheter



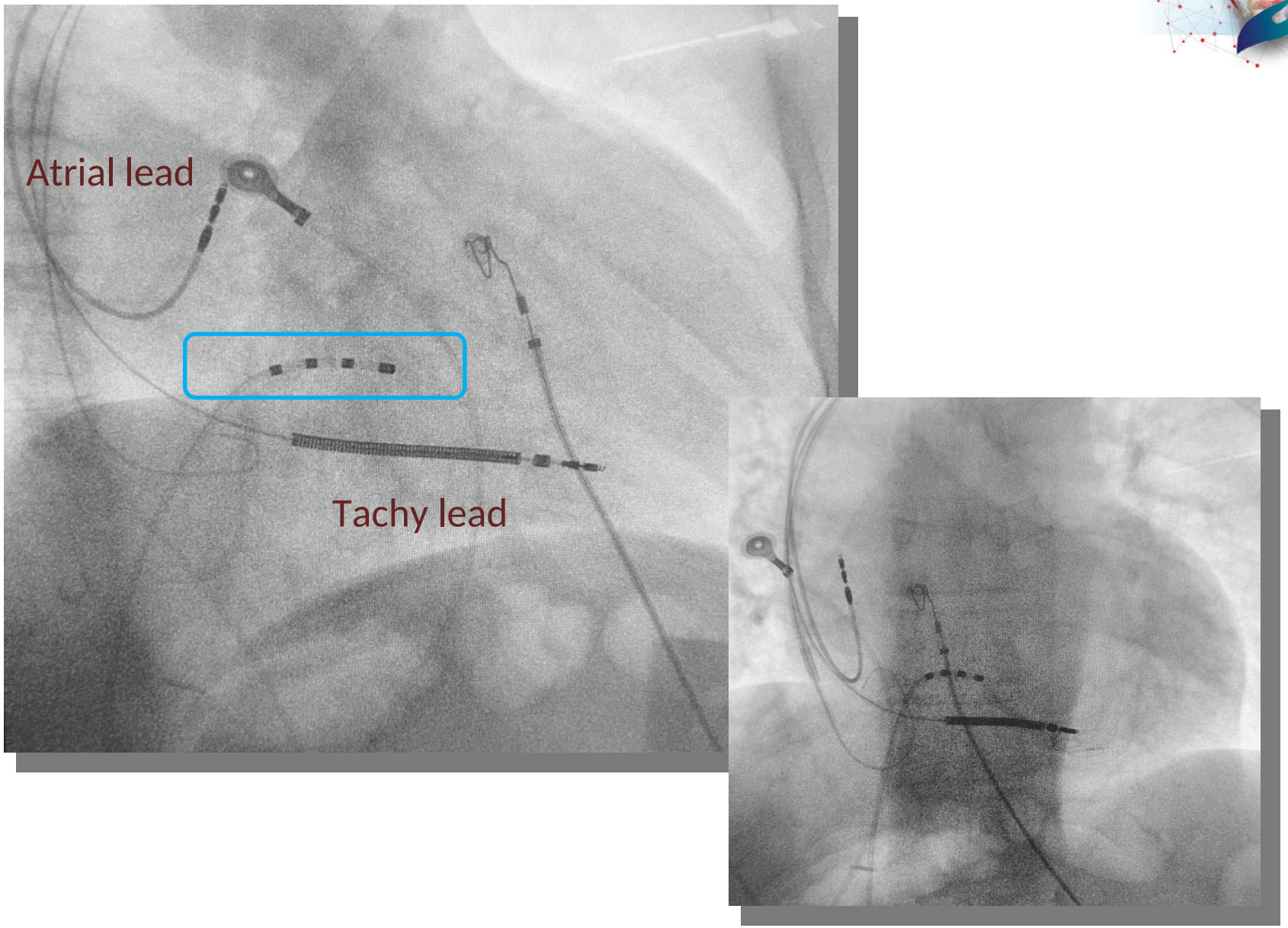


1. Search for the His signal with the diagnostic catheter, femoral access.
2. Verify the signals and **the capture**





3.
Leave the diagnostic catheter in place and place the other leads (atrium + tachy)



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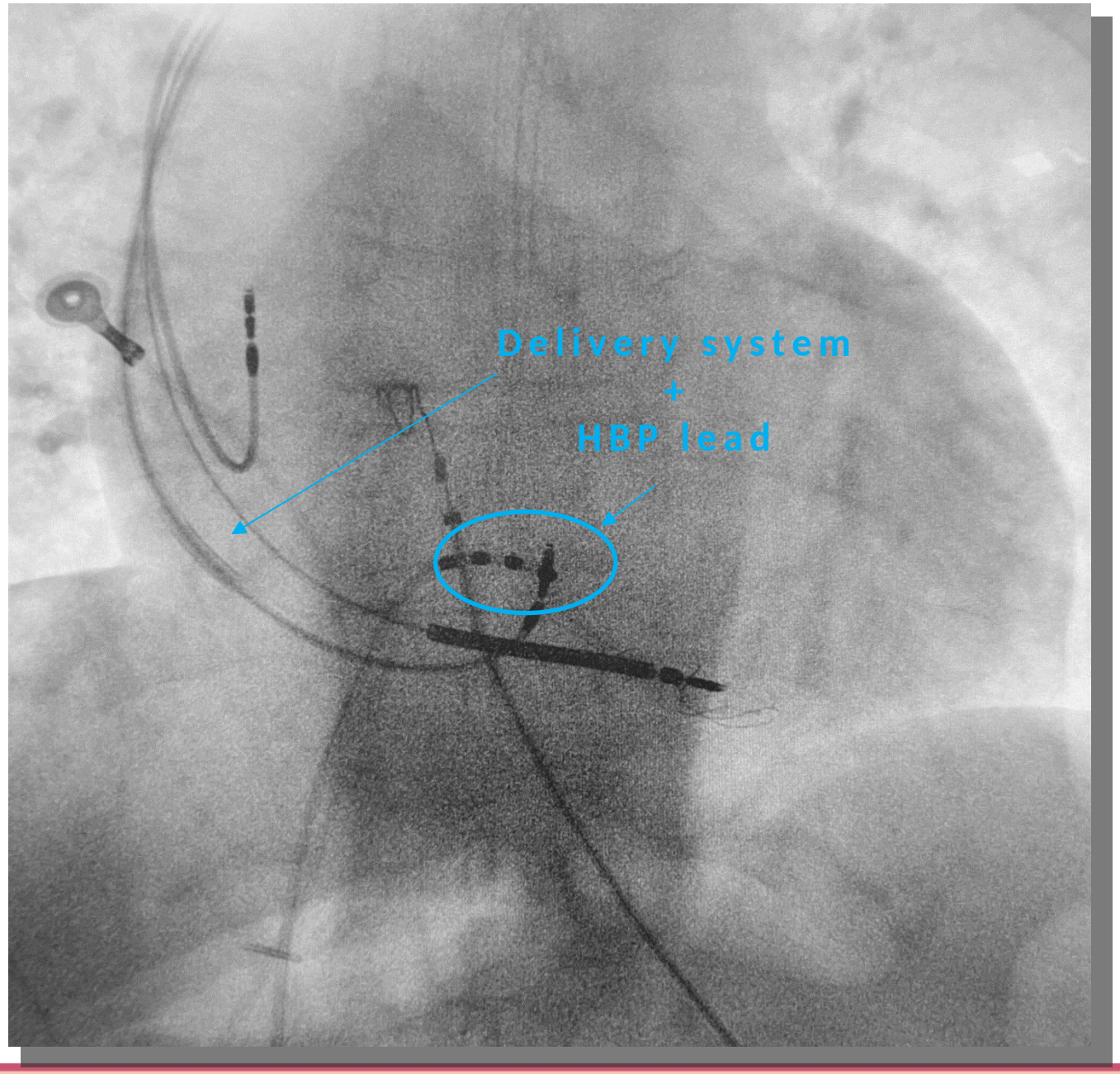
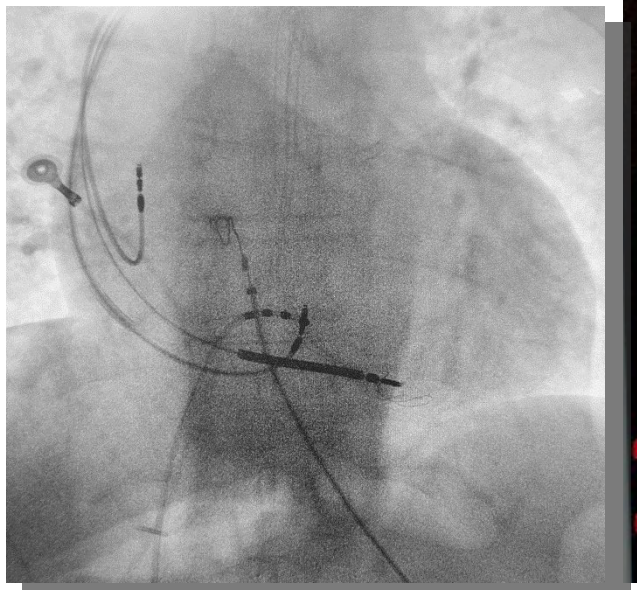
4.

With the permanent HBP system (Selectra 3D M + Solia S 60) reach the position identified by the diagnostic catheter



4. With the permanent HBP system (Selectra 3D M + Solia S 60) reach the position identified by the diagnostic catheter

5. Verify the signals



Green track: diagnostic catheter

Red track: Solia lead

4. With the permanent HBP system (Selectra 3D M + Solia S 60) reach the position identified by the diagnostic catheter

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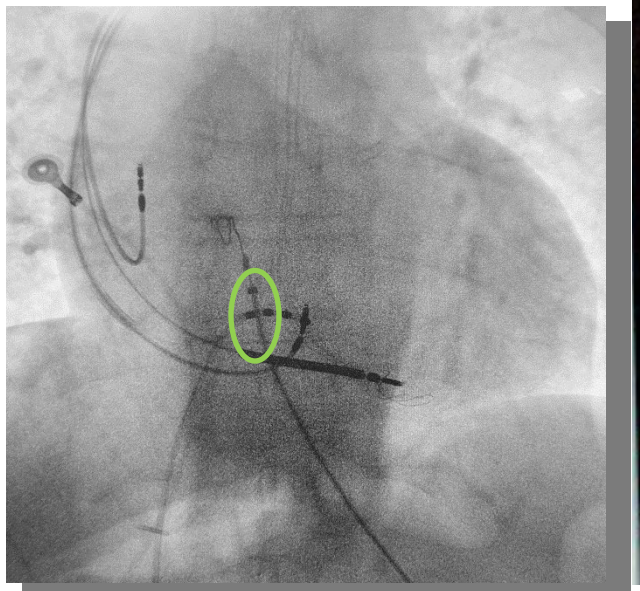

Green track: diagnostic catheter Red track: Solia lead

Red track: Solia lead
Solia positioned more distally.
His signal is also more distal

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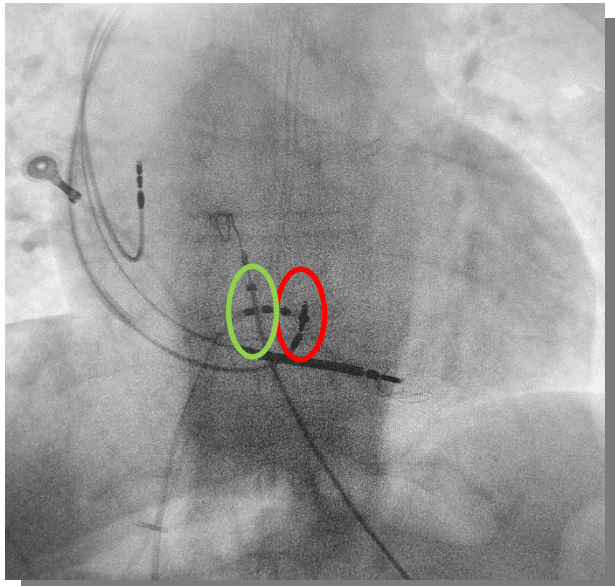
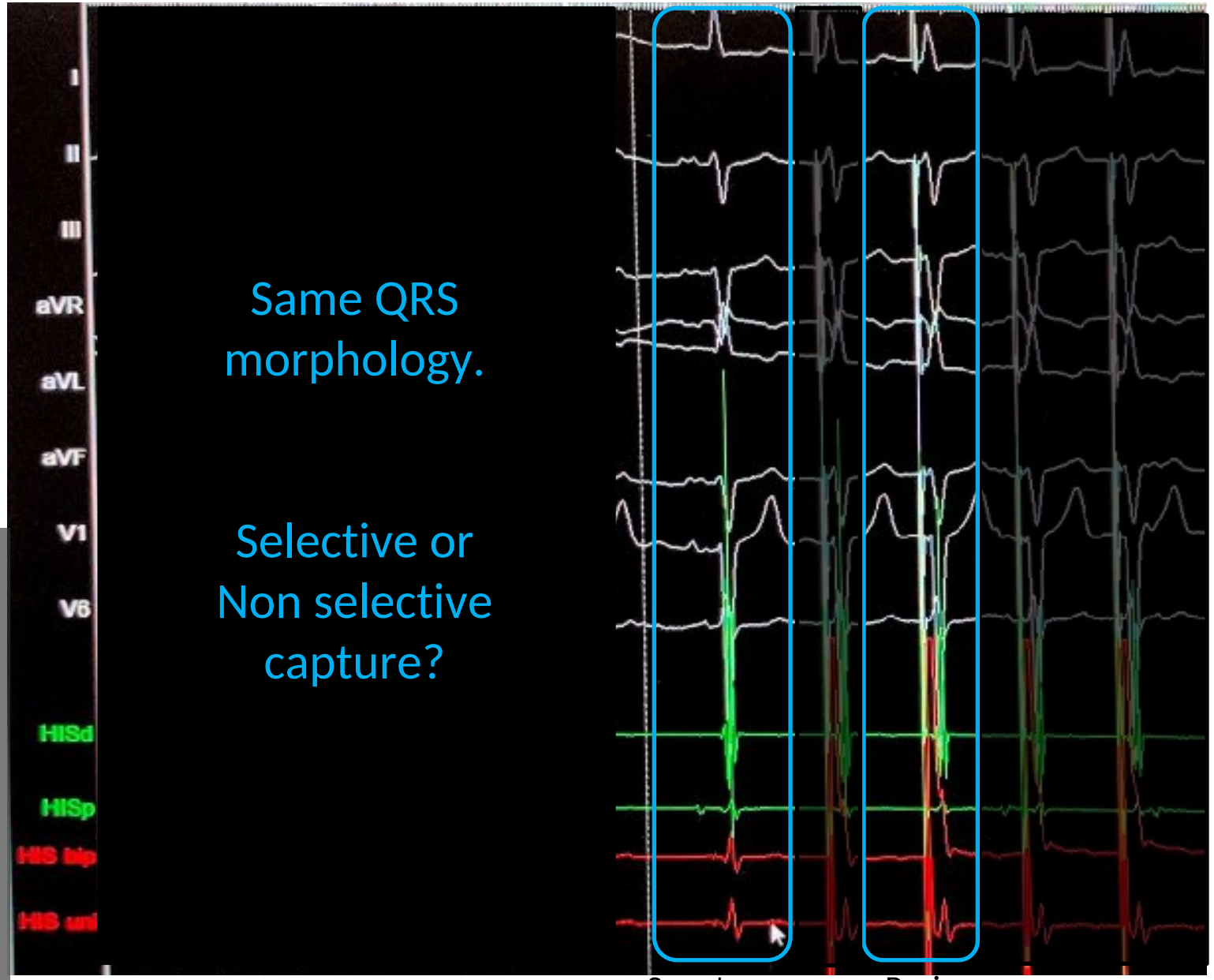
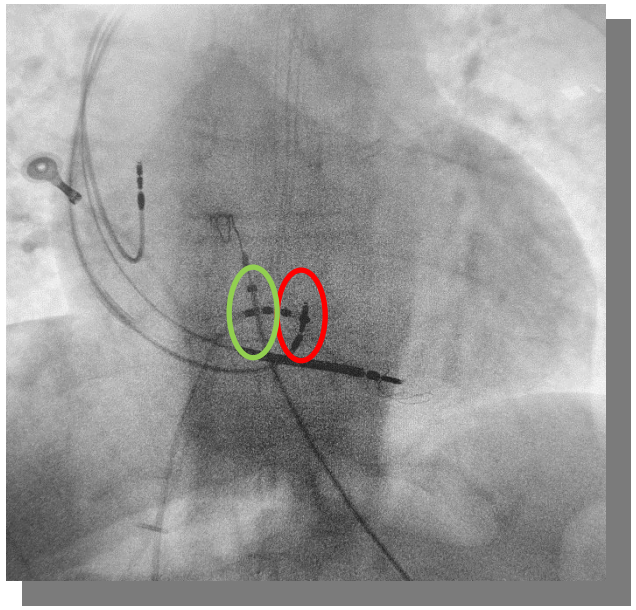
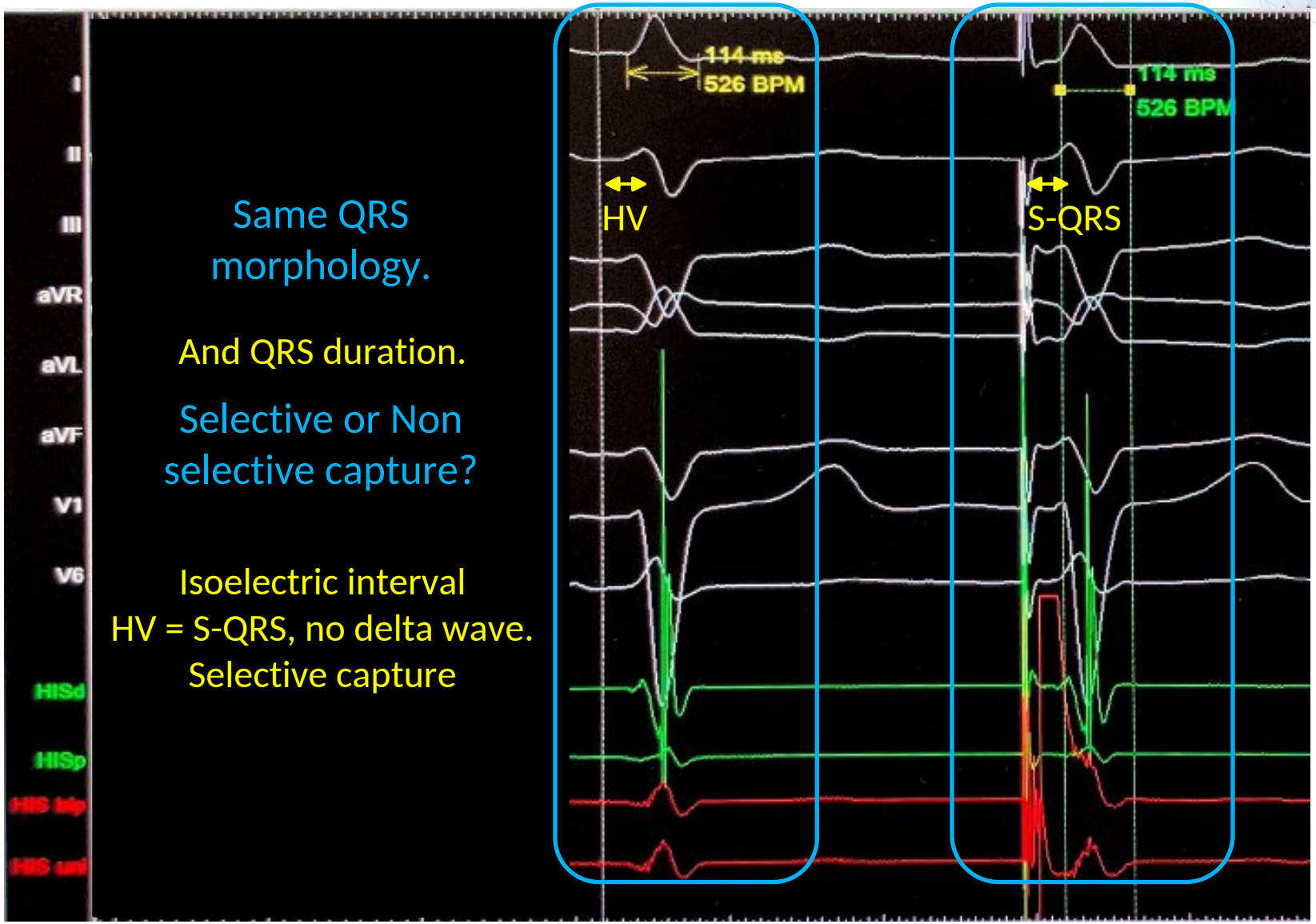




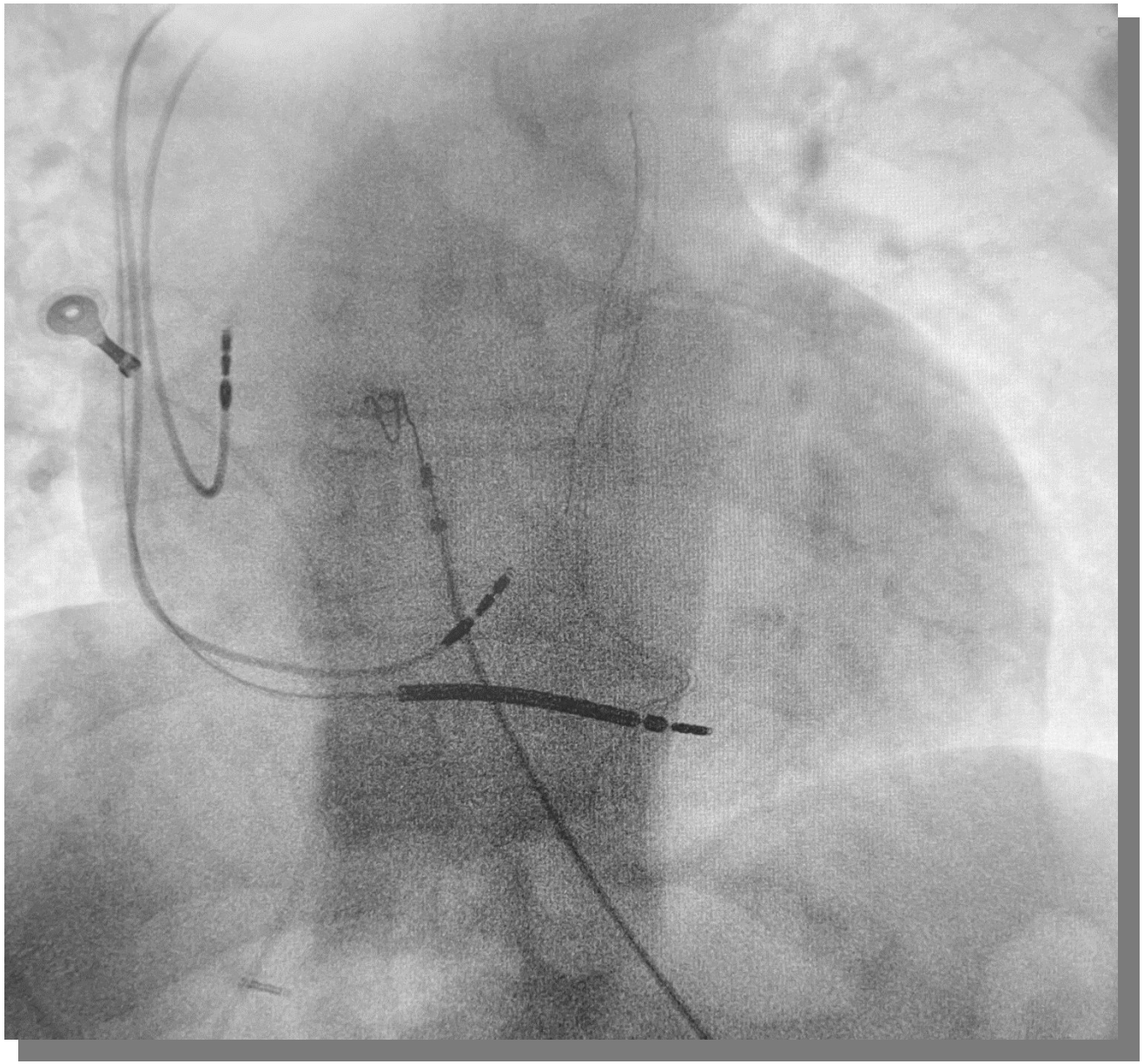
4. With the permanent HBP system (Selectra 3D M + Solia S 60) reach the position identified by the diagnostic catheter

5. Verify the signals





6.
Screwing the lead in final position.
Delivery cut and final adjustment of leads' slacks.
Remove the diagnostic catheter.



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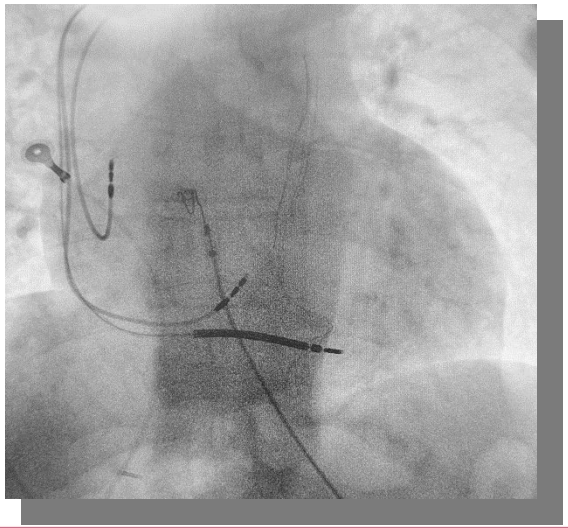
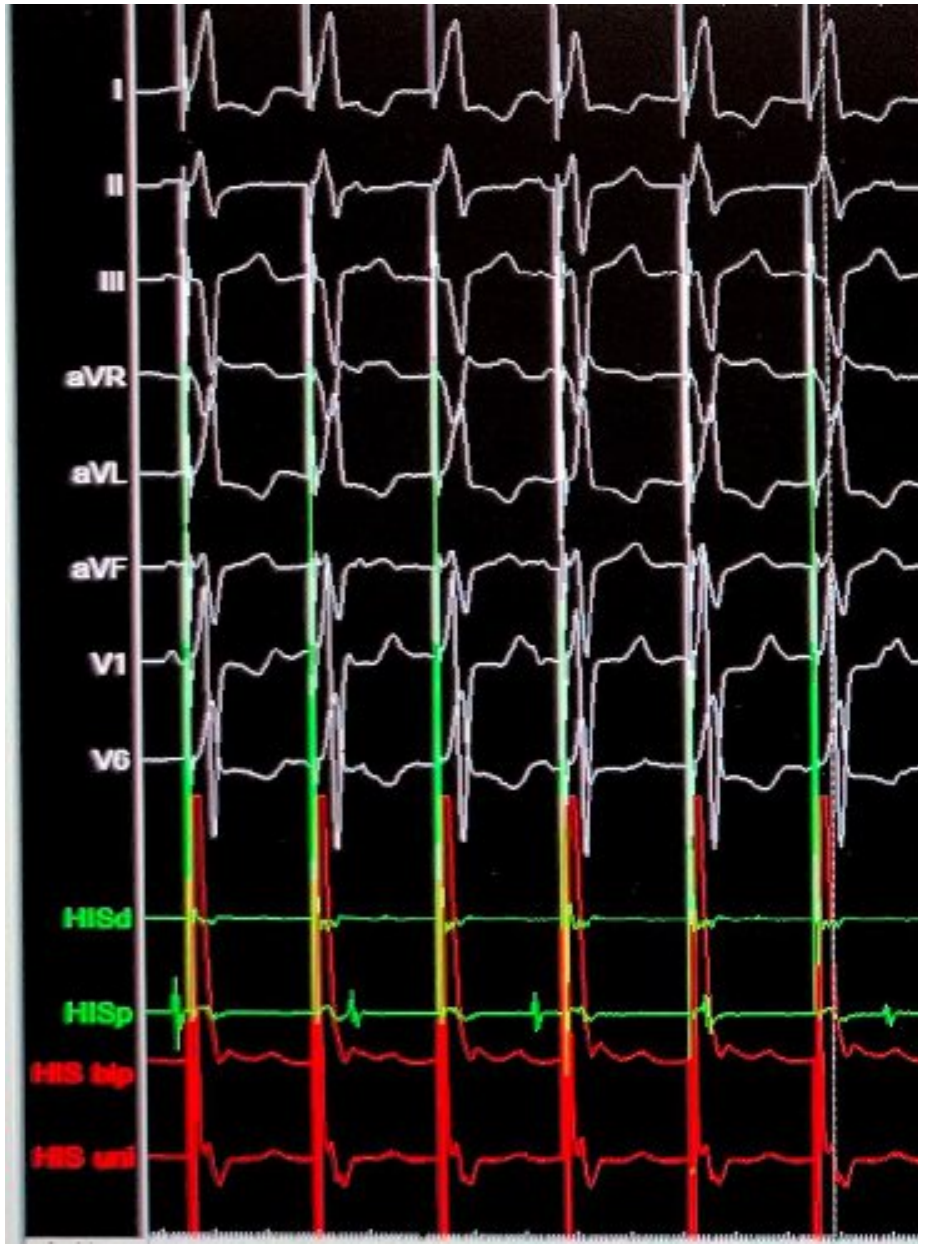
6.
Screwing the lead in final position.
Delivery cut and final adjustment of leads' slacks.
Remove the diagnostic catheter.

7.
Check the final capture



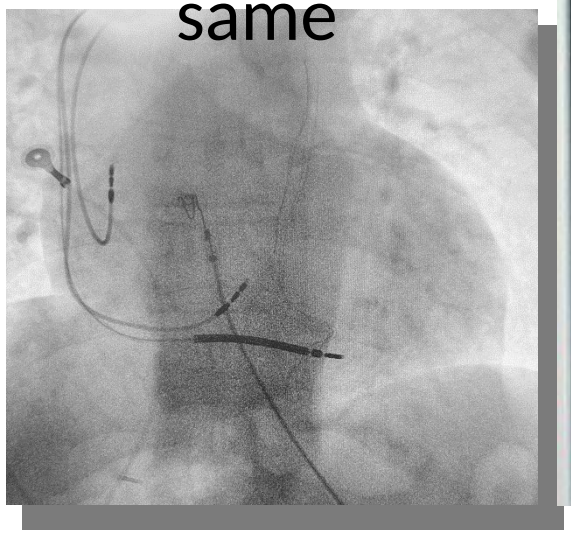


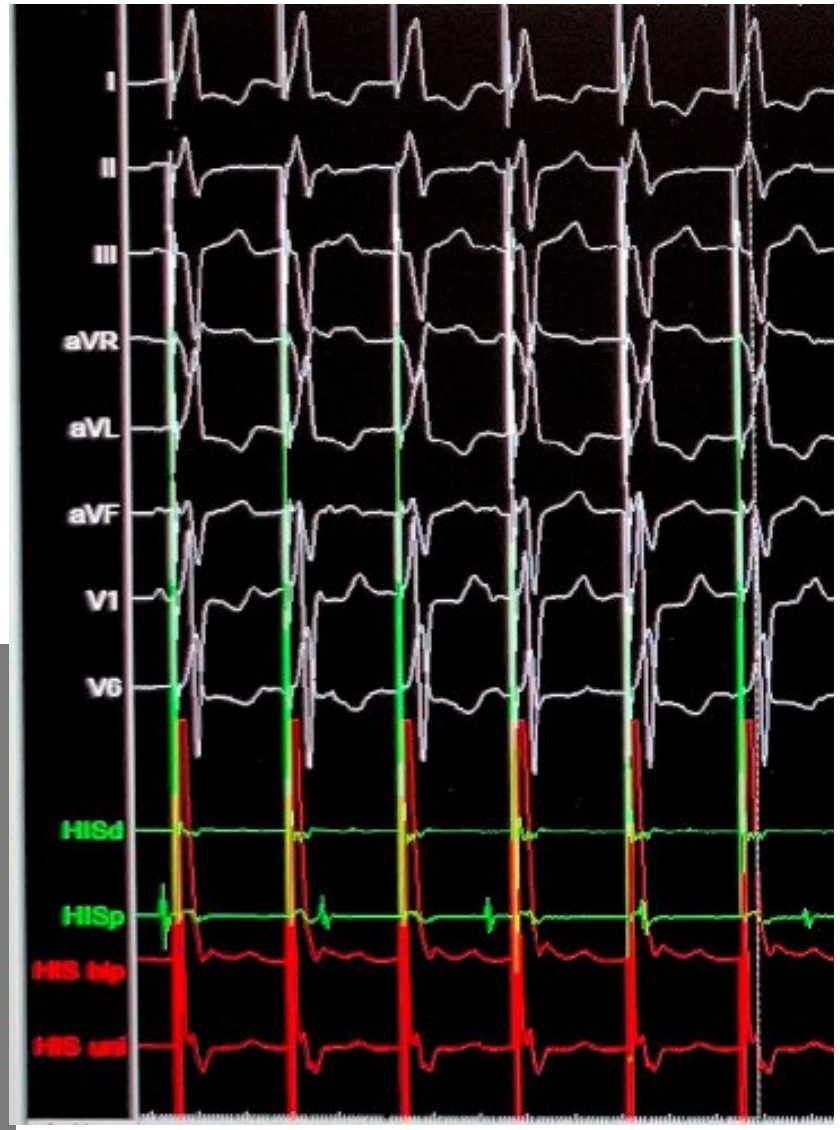
Final capture:
Non Selective pacing

R-wave: 3.2 mV
Threshold: 1V @ 1ms (UP)
Impedance: 484 Ω (UP)

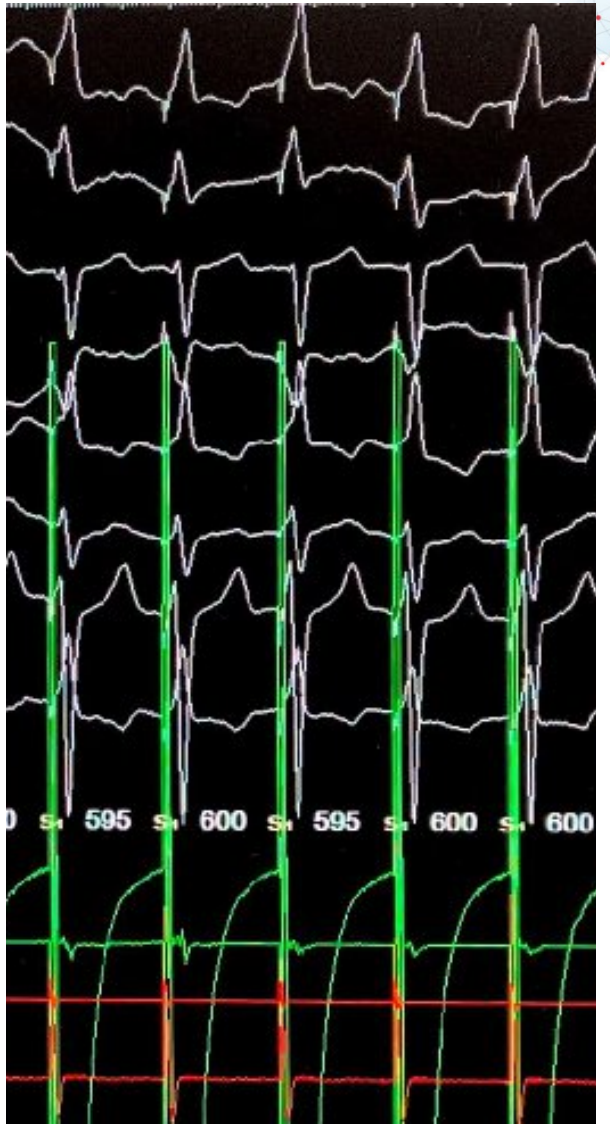
Total procedure's duration: 60 min
Fluoroscopy time: 7 min

Final QRS and QRS given by pacing with the diagnostic catheter are the same





Final capture

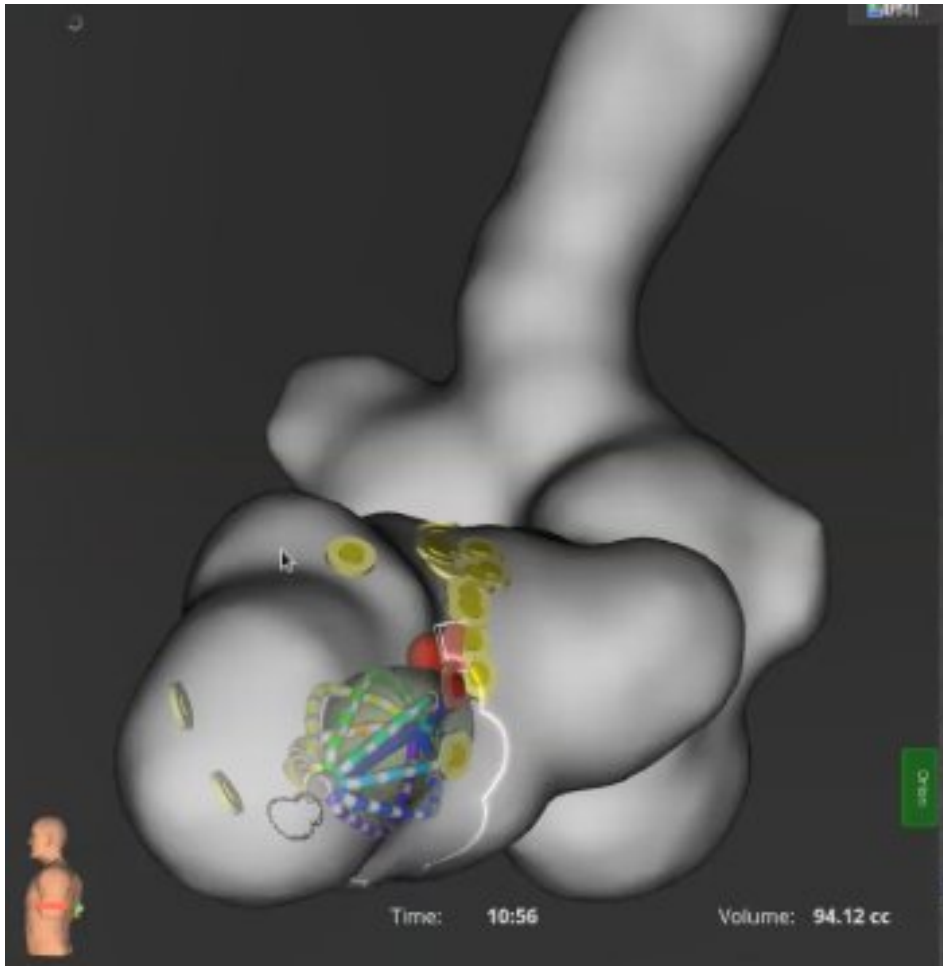


Pacing with the diagnostic catheter at the beginning of the procedure

Case Report 2

Patient history

- Age 77 years old , man
- Disease of the AV node with high-response AF episodes not tolerated, programmed for AV node ablation, QRS 108 ms, FE 50 %,



Lab setup

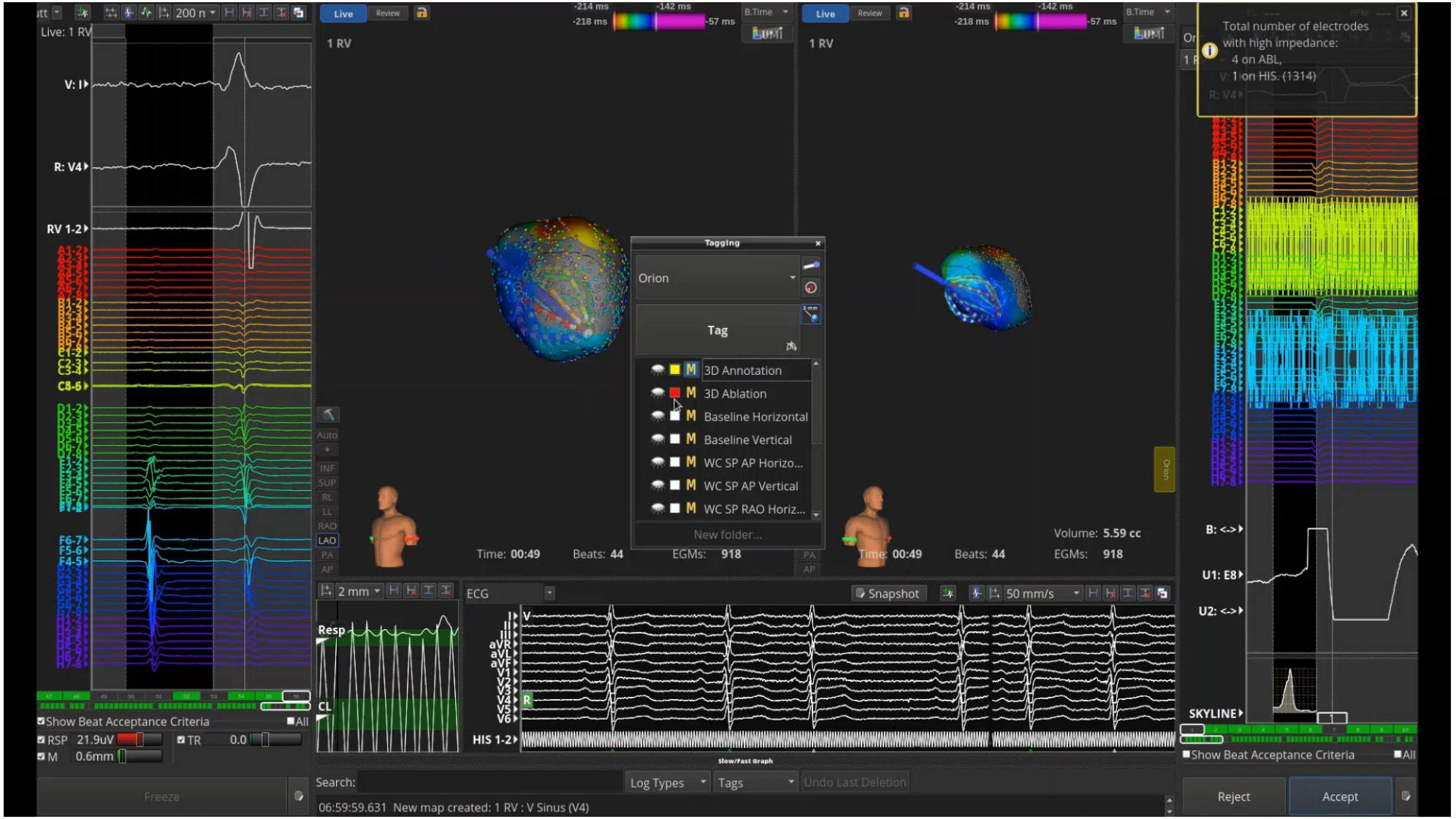
Systems

- Rhythmia HDX Mapping system

Device and Catheters

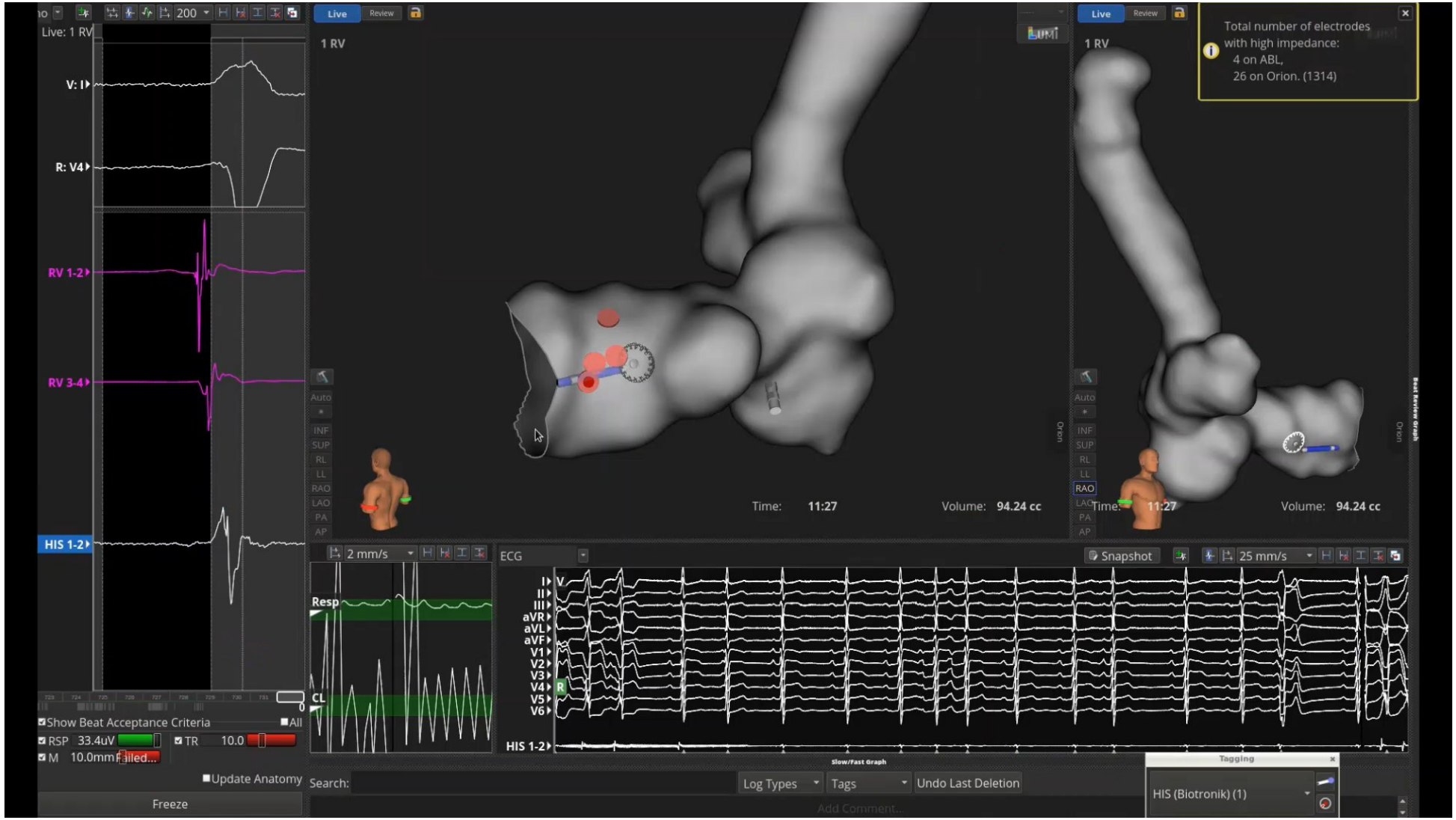
- IntellaMap Orion
- Dynamic XT decapolar deflectable diagnostic catheter
- Selectra 3D M / Solia S 60
- Acticor 7 HF-T

1.
3D Map ping
Tag the His



1. 3D Map ping Tag the His

2. Place the lead to the tag



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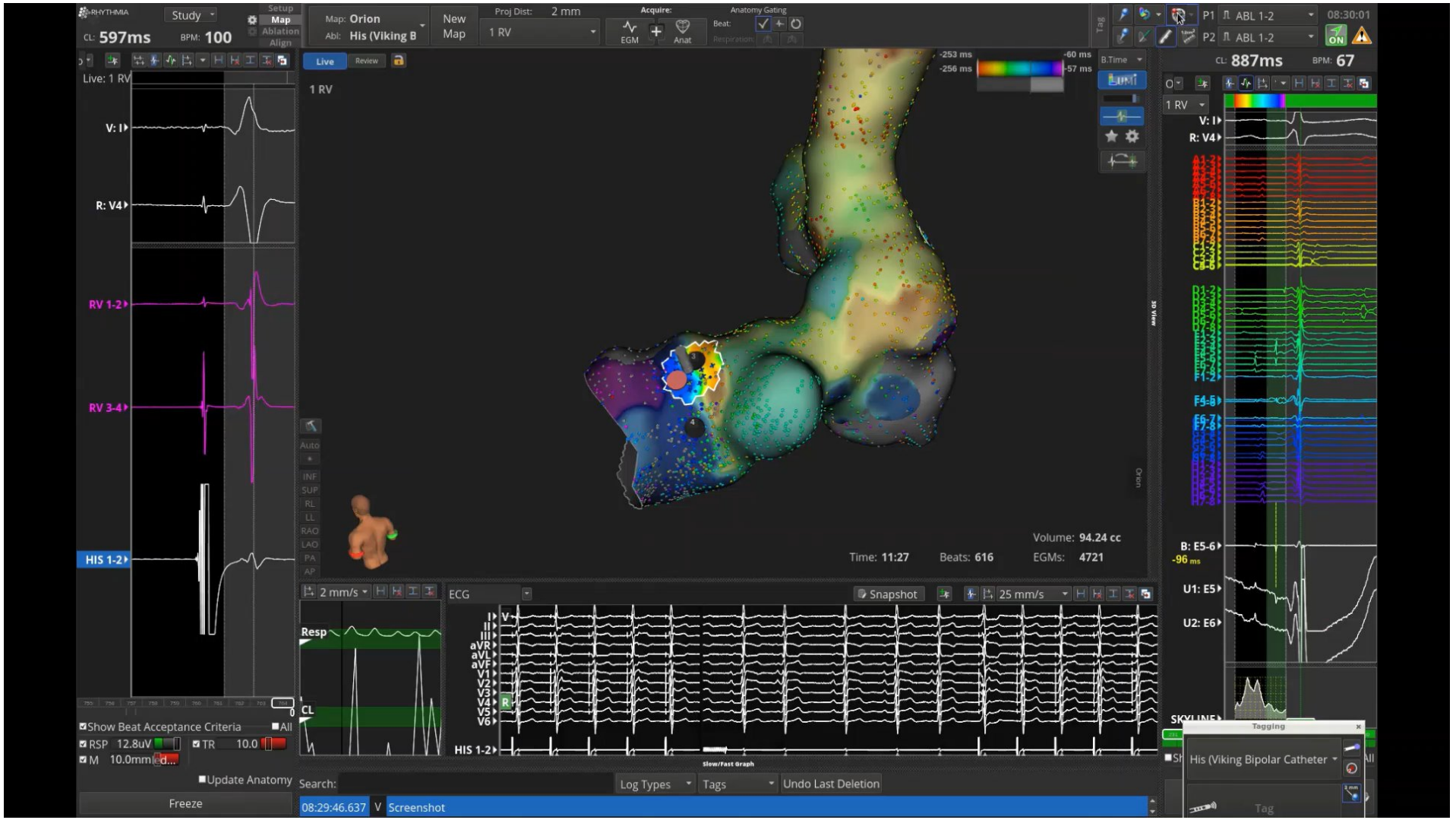
1. 3D Map ping Tag the His

2. Place the lead to the tag

3. Final HBP capture



Case Report 3

Patient history

- Age 81 years old , woman
- Disease of the sinus and AV node with high-response AF episodes not tolerated. QRS 105 ms, AH interval 70 ms, HV interval 65 ms

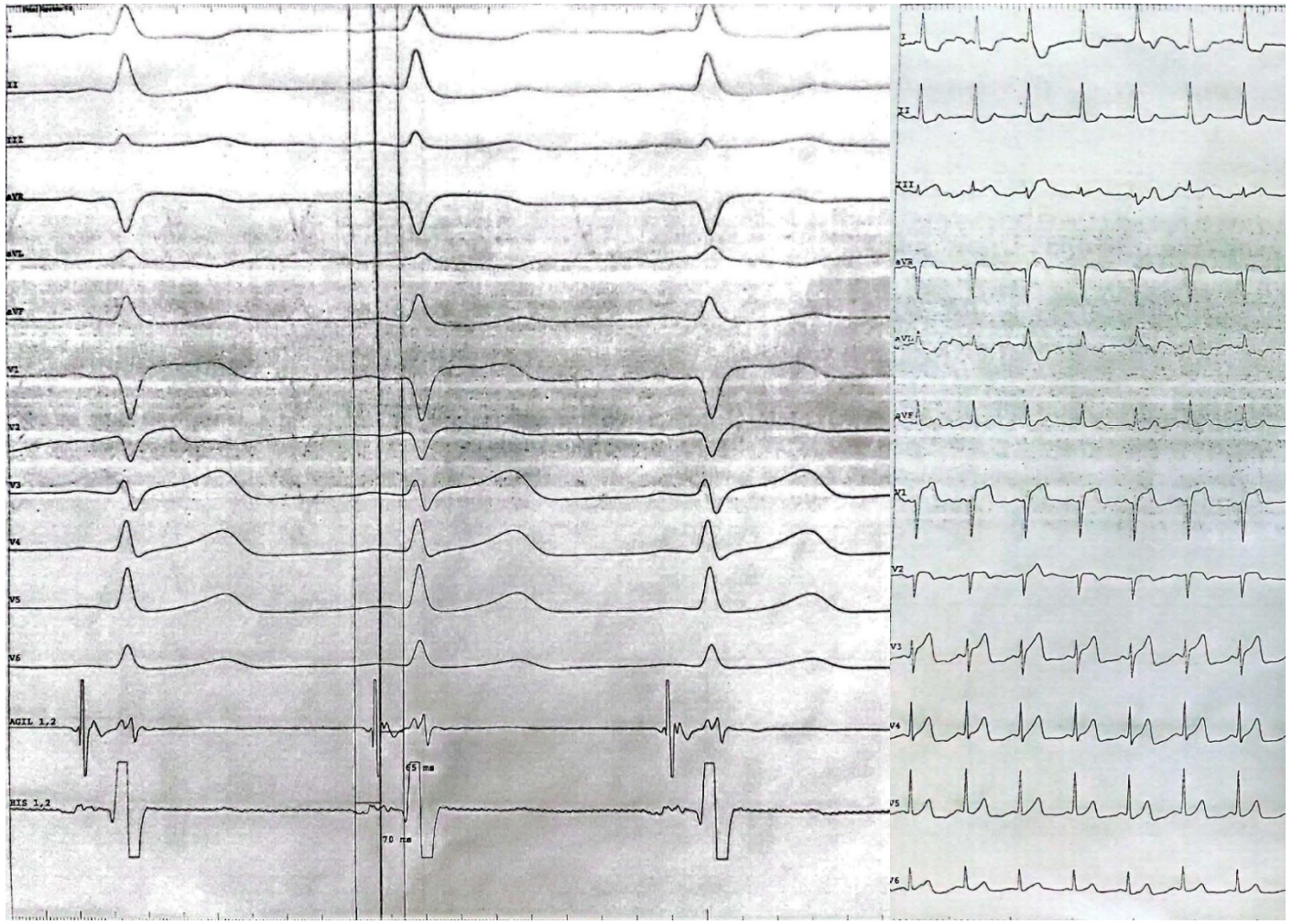
Lab setup

Systems

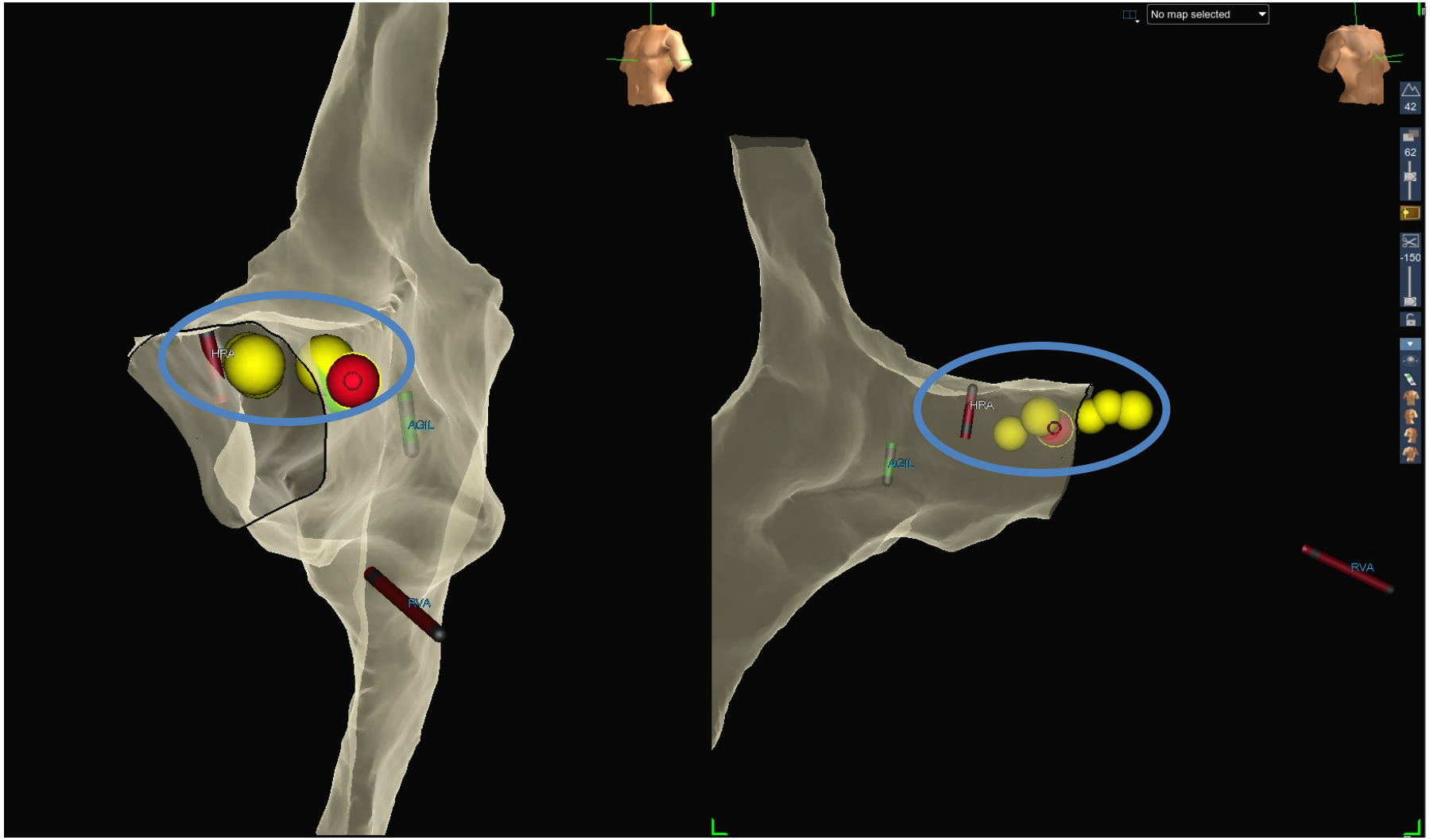
- EnSite Precision Mapping system
- WorkMate Claris and EP-4 stimulator

Catheters

- Tendril 2088TC/65 HIS
- Quadripolar steerable catheter for mapping
- Agilis HisPro



1.
3D Electroanatomic Mapping of the HIS Cloud

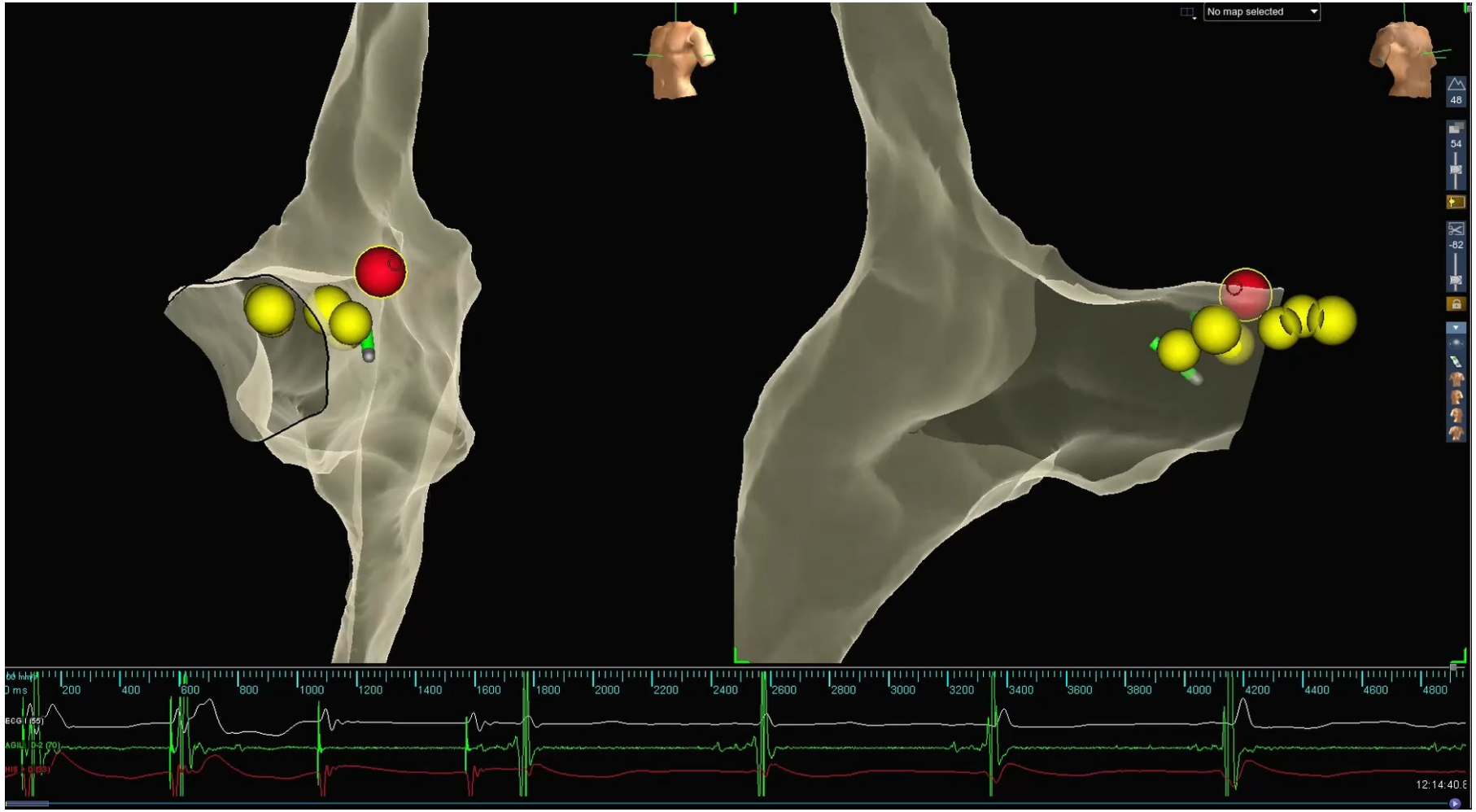


Tags:
Selective (Red)
Non Selective (Yellow)

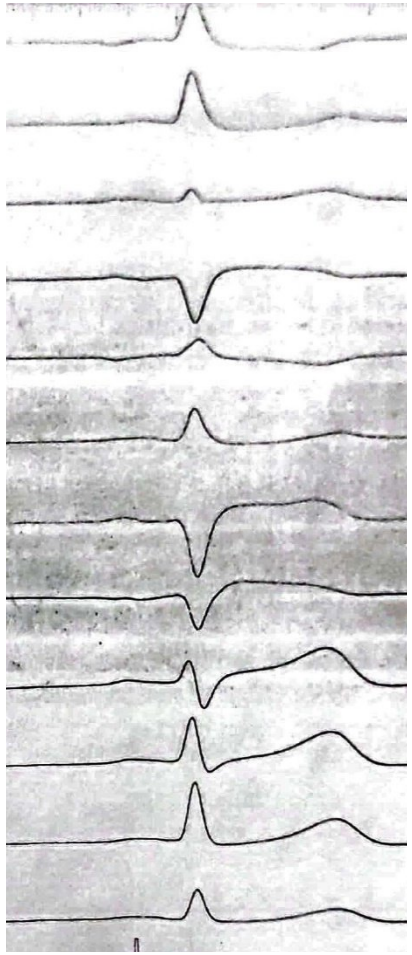
1.
3D Electroanatomic Mapping of the HIS Cloud

2.
Tendril 2088TC/65 positioning on the His bundle

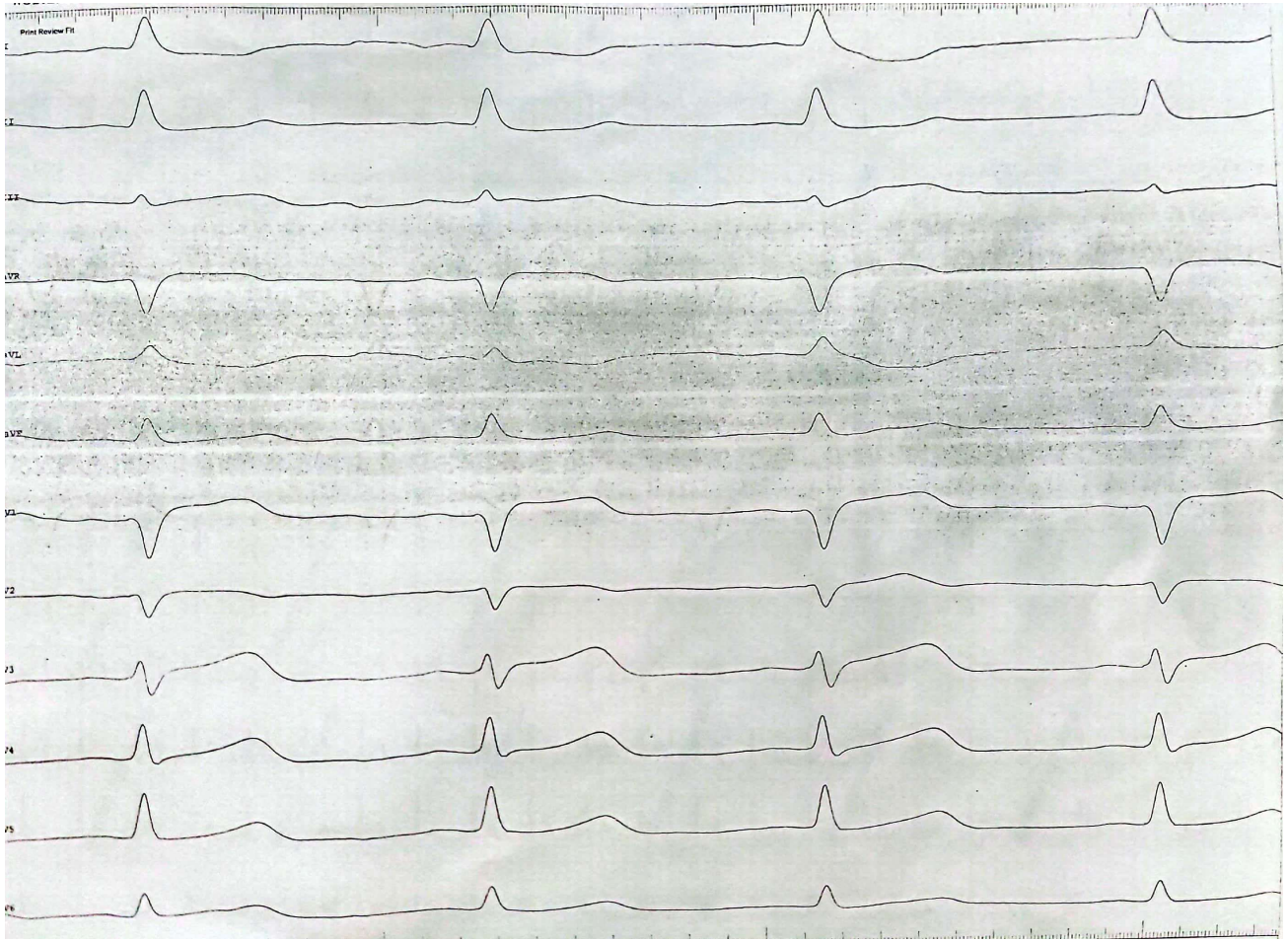
Tags:
Selective (Red)
Non Selective (Yellow)



12-lead ECG

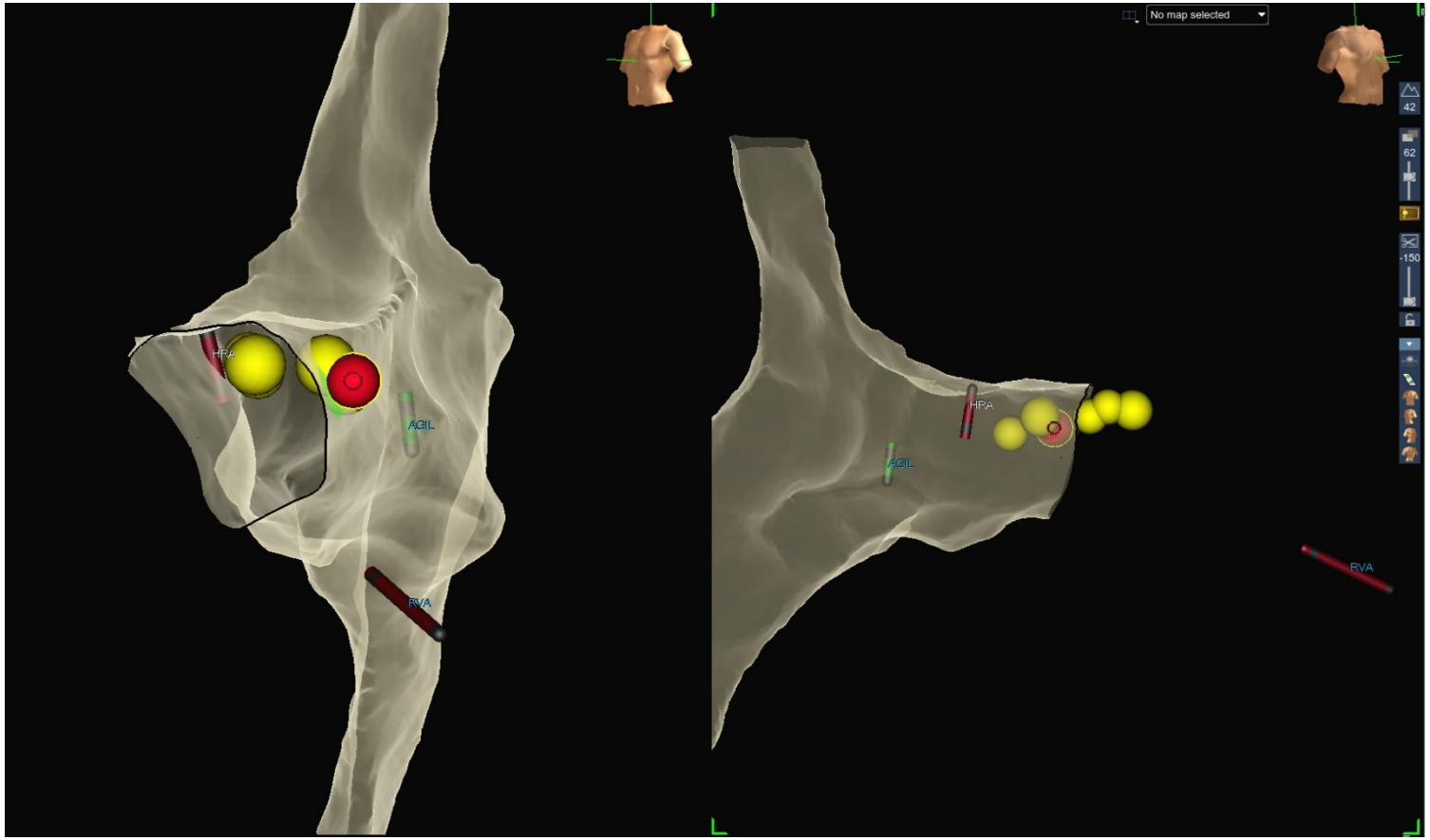


Spontaneous



Pacing

Final leads position



3D

2D

Case Report 4

Patient history

- Age 58 years old , man
- Ischemic cardiomyopathy, Syncope; VT not inducible at EP Study; evidence of intraventricular conduction delay RBBB type, QRS 160 ms, HV 65 msec, EF 33%

Lab setup

Systems

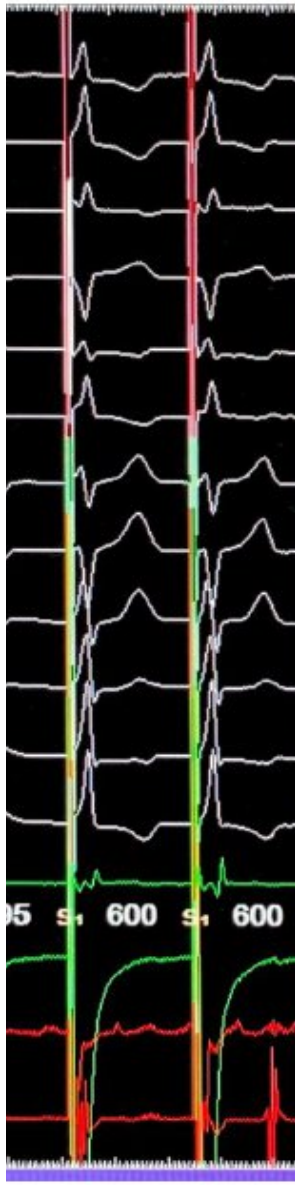
- Polygraph
- Angiograph
- Programmer PSA | EP4 stimulator

Device and Catheters

- Quadripolar diagnostic catheter
- Selectra 3D M/ Solia S 60
- Unify Assura CRT-D

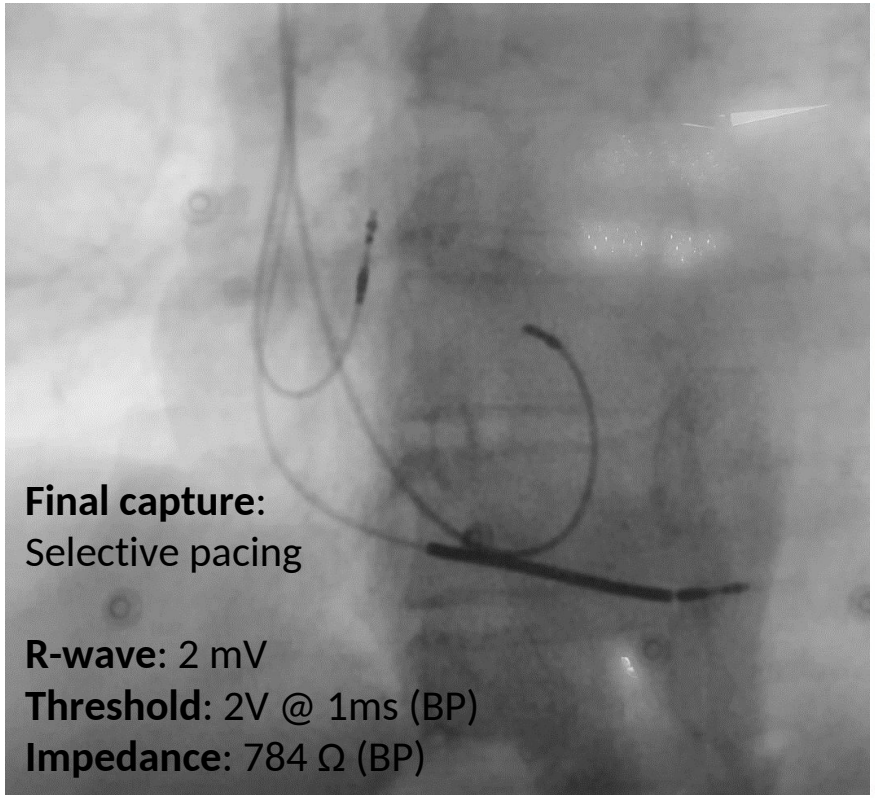
1. Search for the His signal with the diagnostic catheter, femoral access.
2. **Verify the signals and the capture**

Spontaneous



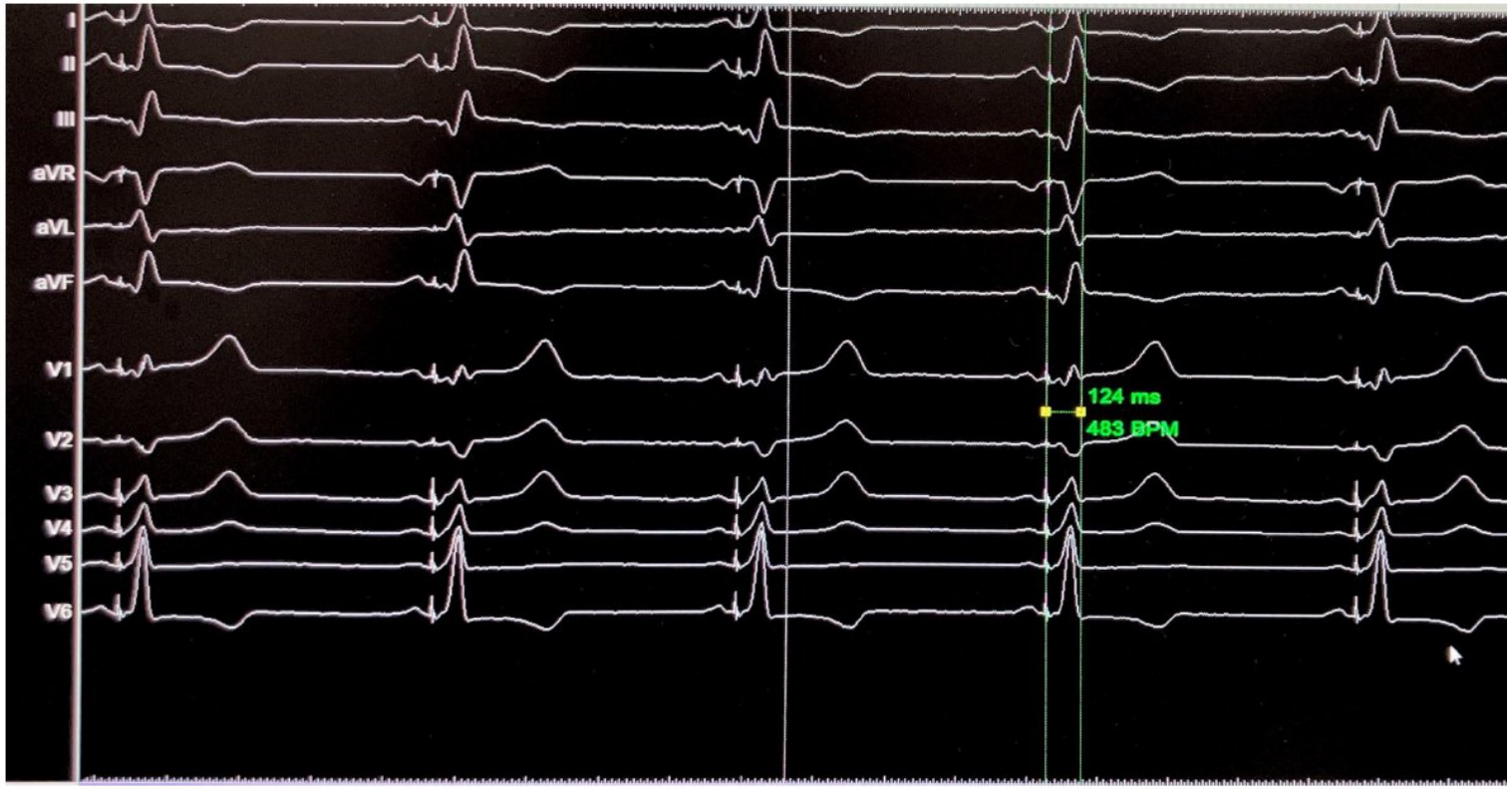
Pacing with diagnostic catheter

Final leads position and capture



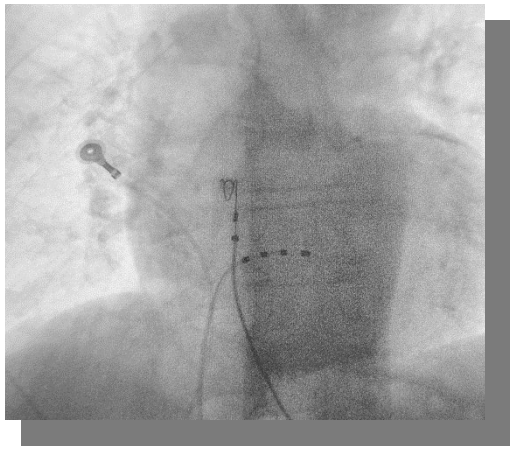
Final capture:
Selective pacing

R-wave: 2 mV
Threshold: 2V @ 1ms (BP)
Impedance: 784 Ω (BP)

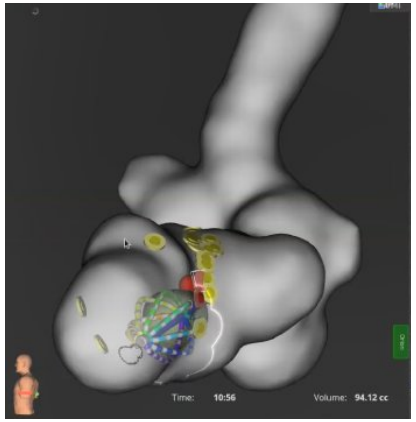


Why EP based approach?

- Electrophysiologists are more comfortable looking for His signal with a diagnostic catheter
- So looking for His signal with a diagnostic catheter can be a quick and safe way
- The different captures can be tested before moving with delivery and the catheter, and before screwing
- You can keep the diagnostic catheter as a radiological reference and go over it with the CSP delivery system



- Reduction of fluoroscopy times
- His cloud mapping 3D vs 2D (only fluoroscopy)
- Mapping with AGILIS HIS PRO introducer visible in the system Ensite.
- In case of lead displacement, repositioning is easier thanks to the tags identified during the mapping.
- Possibility of implanting with 0 rays also for atrial and ventricular leads.



Thanks for your attention!