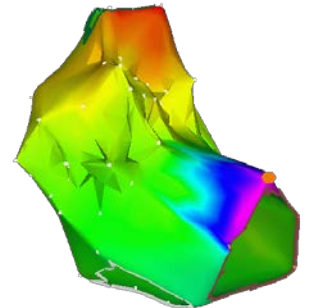


Elektro-Anatomische Mapping: Hartritmestoornissen in Beeld

Team EFO- Rotterdam



Natasja MS de Groot
Cardioloog-Elektrofysioloog
Erasmus Medisch Centrum
Rotterdam



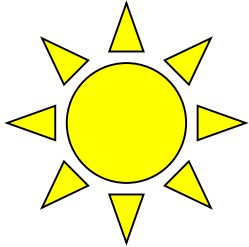
**Wat veroorzaakt een
hartritmestoornis?**

Oorzaken Hartritmestoornis

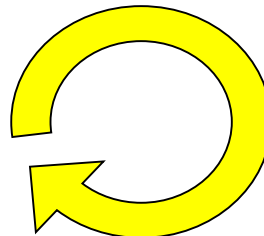
Storing in de:

- **vorming van een elektrische impuls**

HF: 180/min.



- **geleiding van een elektrische impuls**



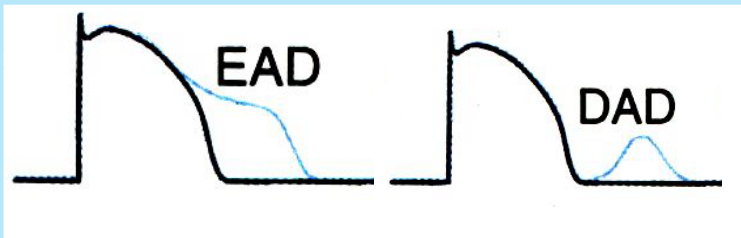
Oorzaken Hartritmestoornis

Impuls Vorming

- Verhoogde automaticiteit



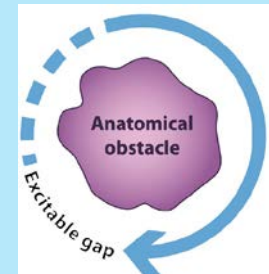
- Early/Late After Depolarizations



Impuls Geleiding

- Reentry

Anatomische reentry



Leading Circle reentry

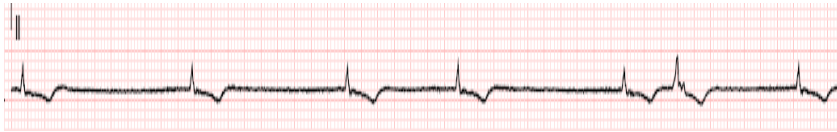


Indeling Hartritmestoornis

Indeling

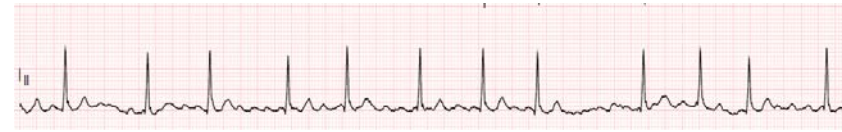
Bradycardie

<60 slagen/min



Tachycardie

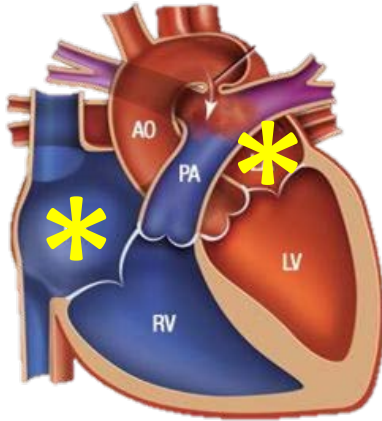
>100 slagen/min



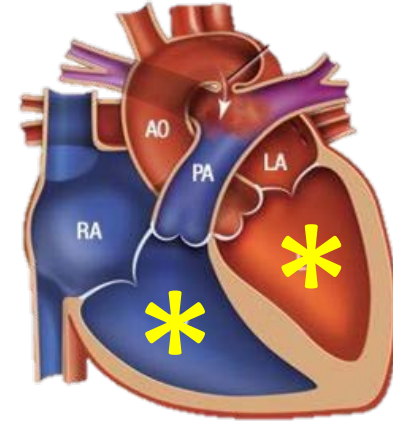
Oorsprong Hartritmestoornis

Oorsprong

Supraventriculair



Ventriculair



Behandeling Hartritmestoornis

Medicatie



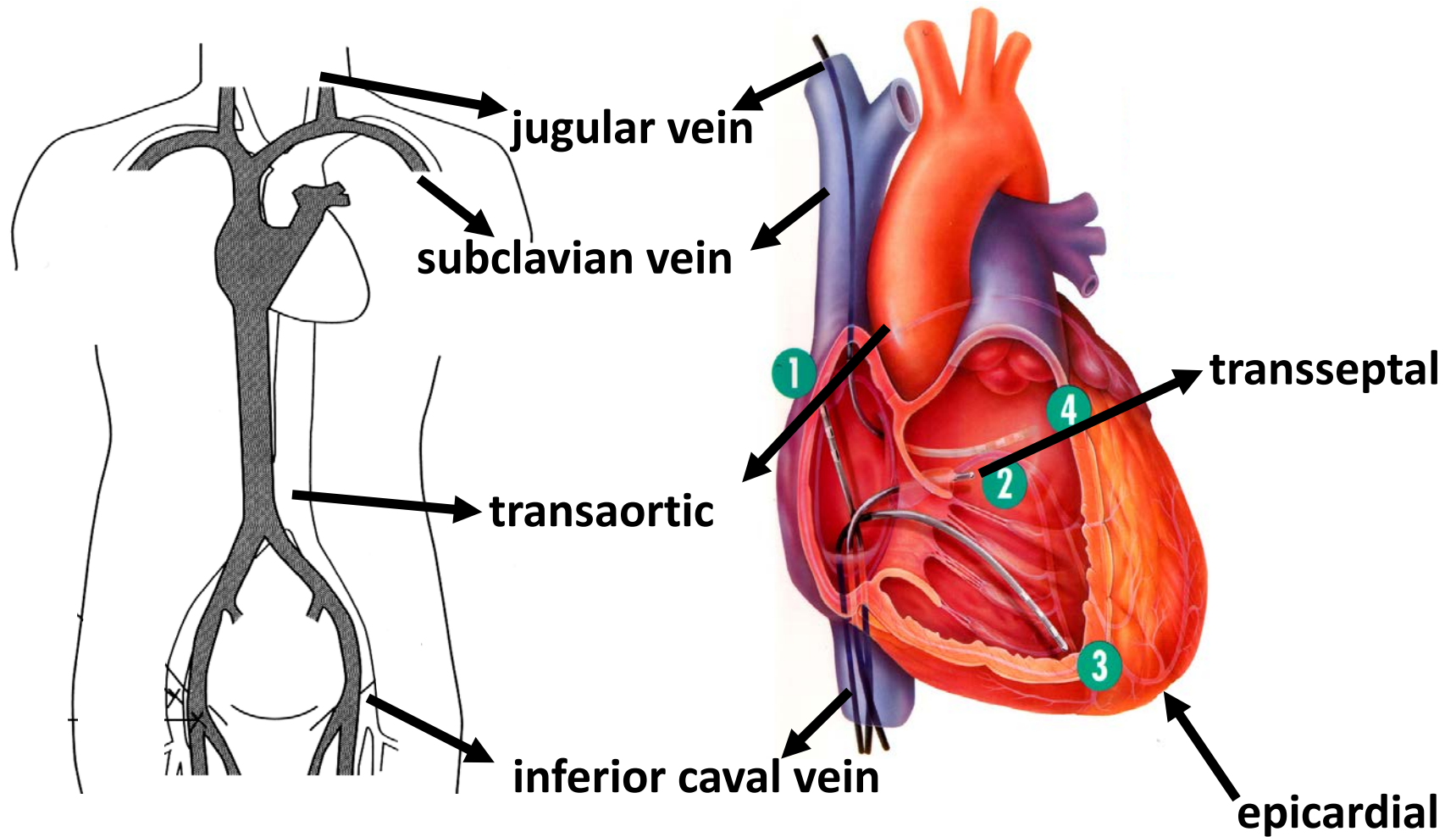
Cardioversie



Ablatie Therapie



Ablatie Therapie

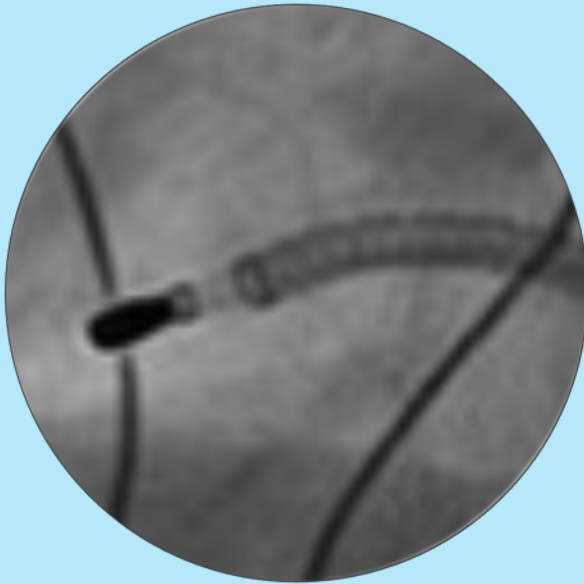


Ablatie Therapie

“Fire”

or

“ICE”



**Hoe weet ik nu precies waar ik
moet ableren?**

Cardiale Mapping

Definitie Mapping

‘ a method by which potentials recorded directly from the surface of the heart are spatially depicted as a function of time in an integrated manner ’

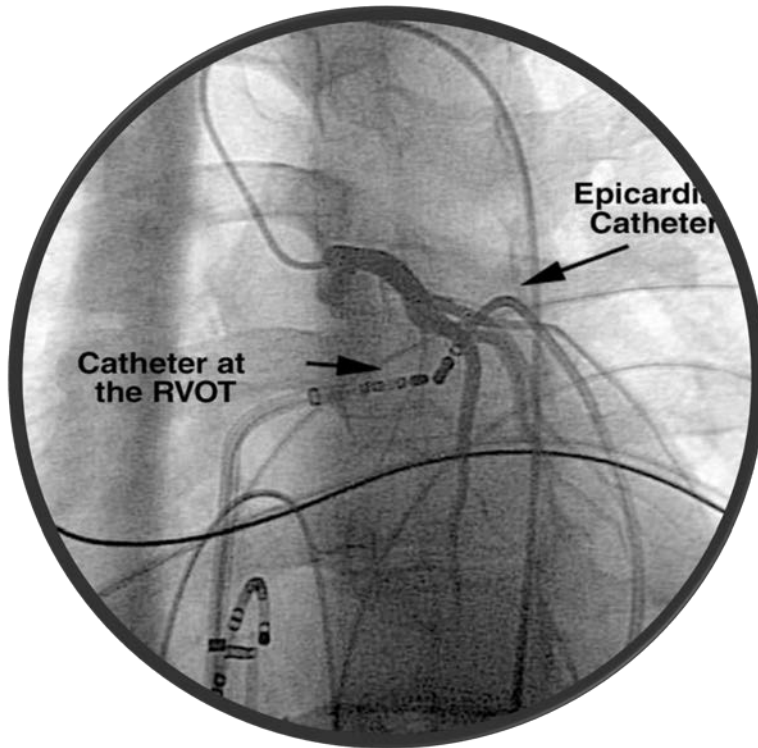
Berbari EJ, Landr P, Geselowitz DB. The methodology of cardiac mapping 1993: 11-134

Doel van Mapping

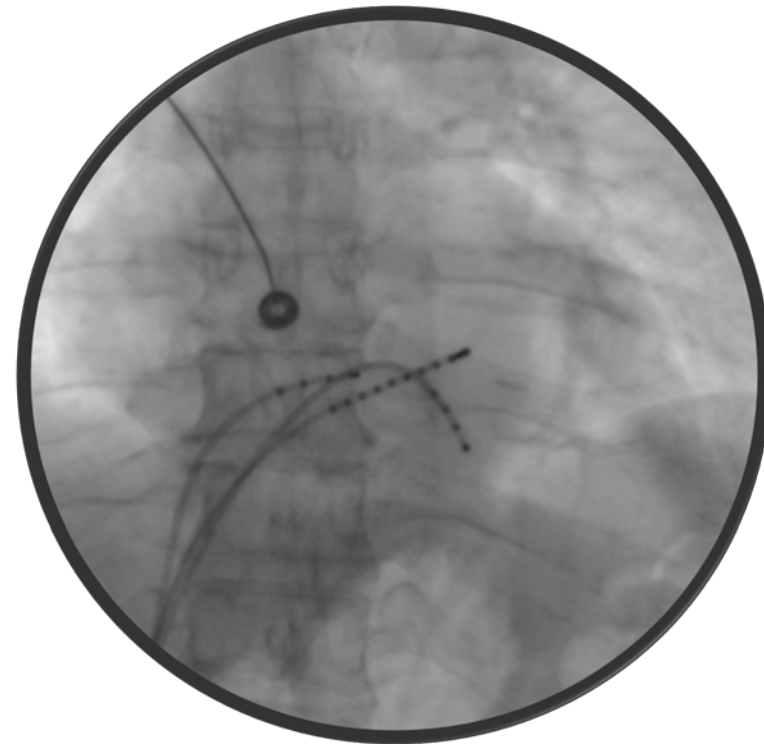
- 1. Mechanisme van de ritmestoornis**
- 2. Selectie locatie ablatie laesie**
- 3. Onderzoekstool**

Mapping Technieken

Epicardium

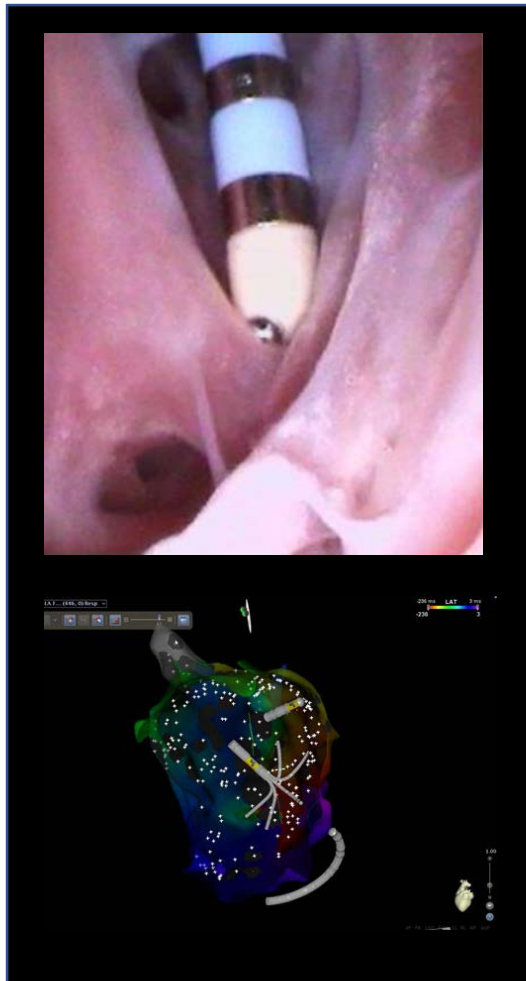


Endocardium

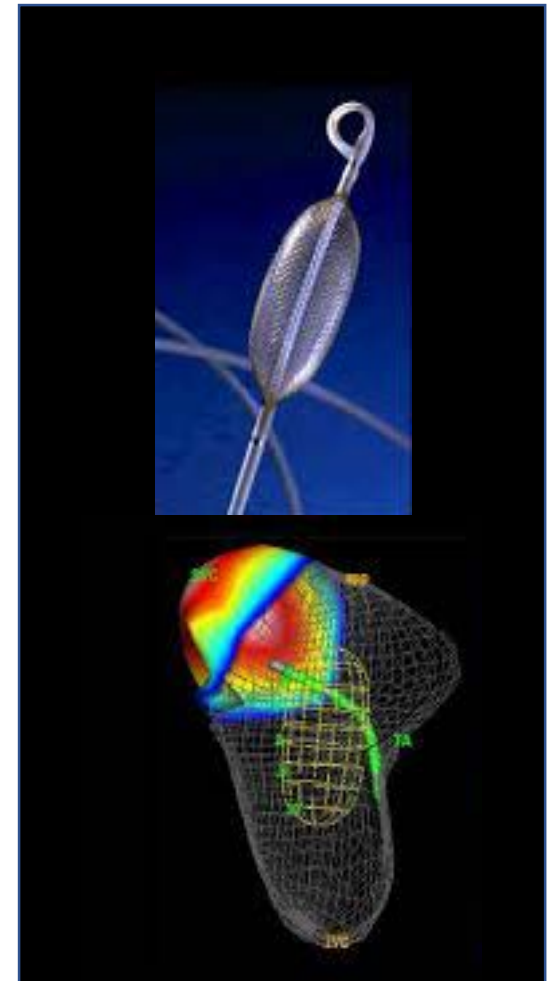


Mapping Technieken

Contact



Non-Contact



Mapping Technieken

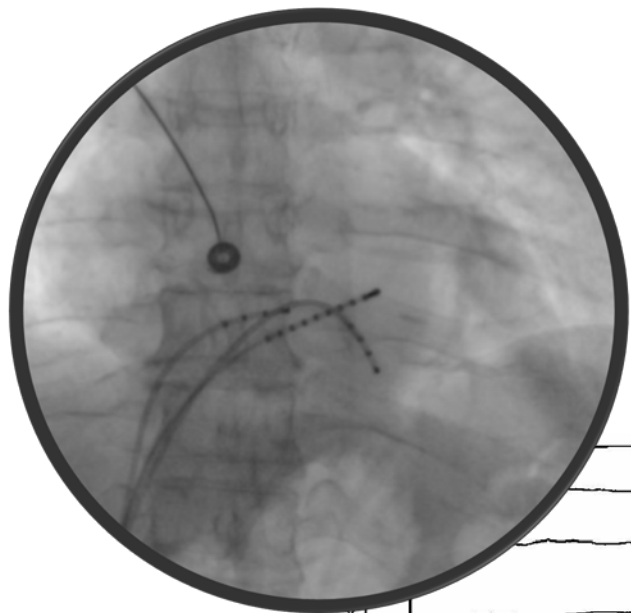
Simultaan

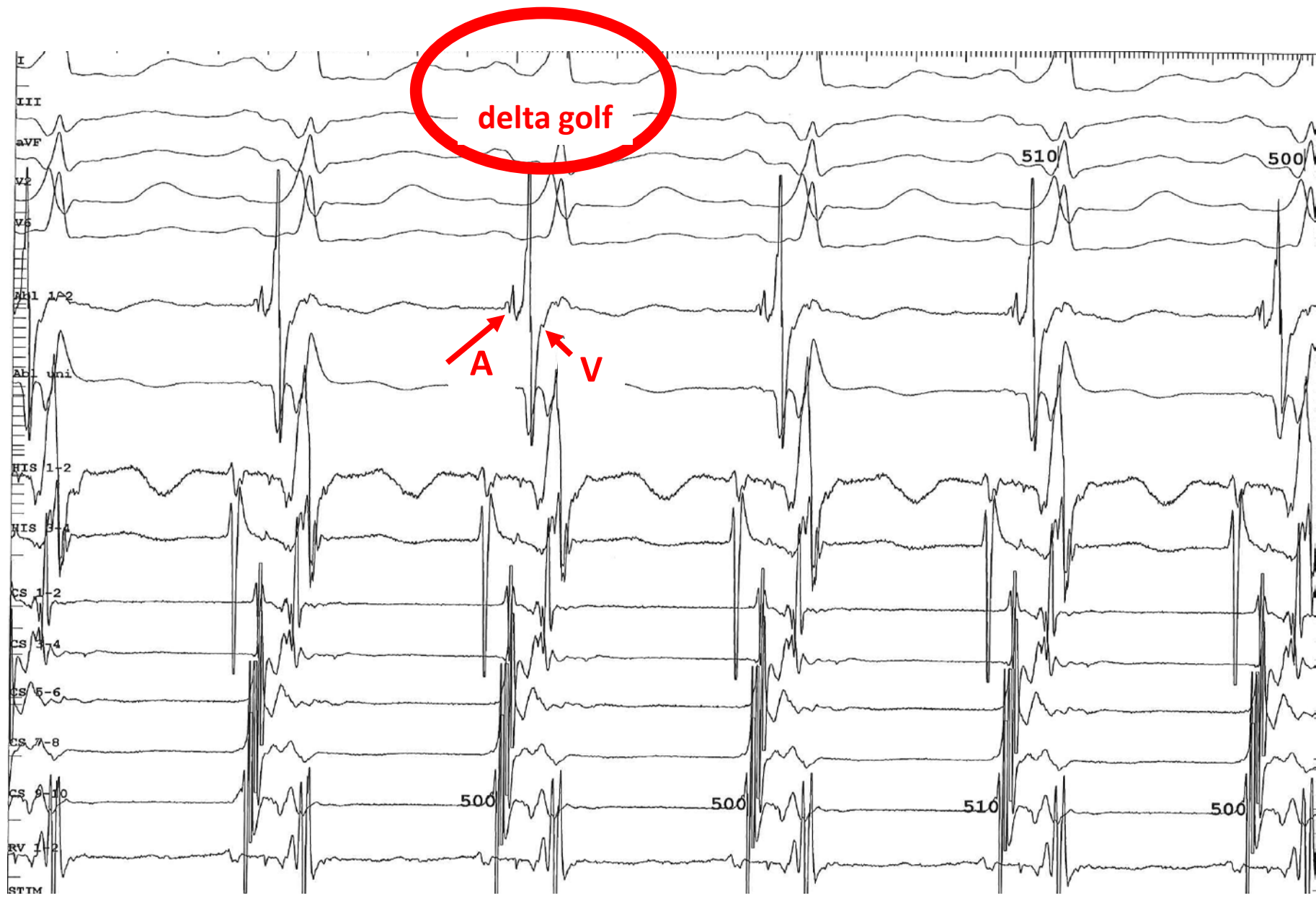


Sequentieel

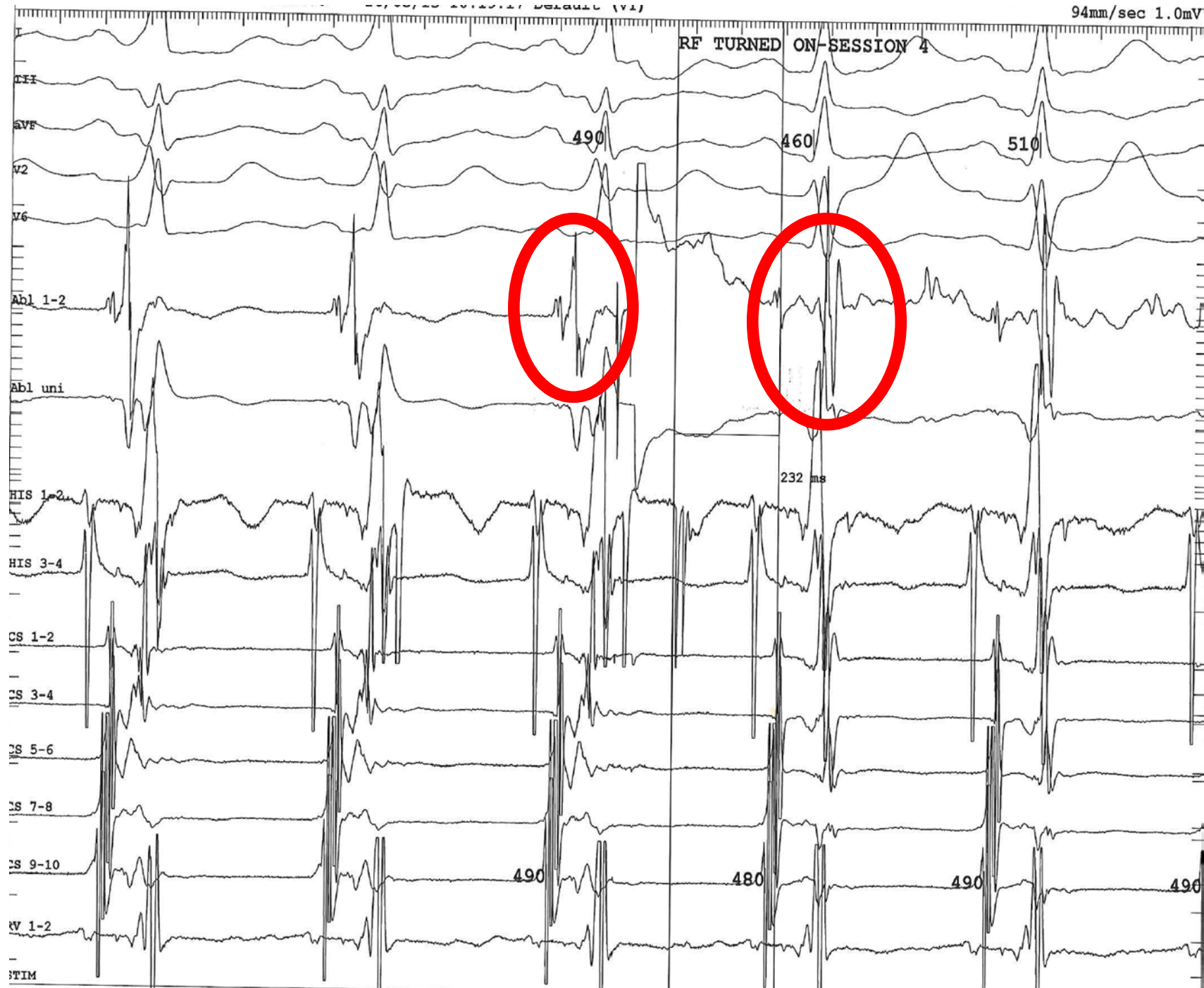


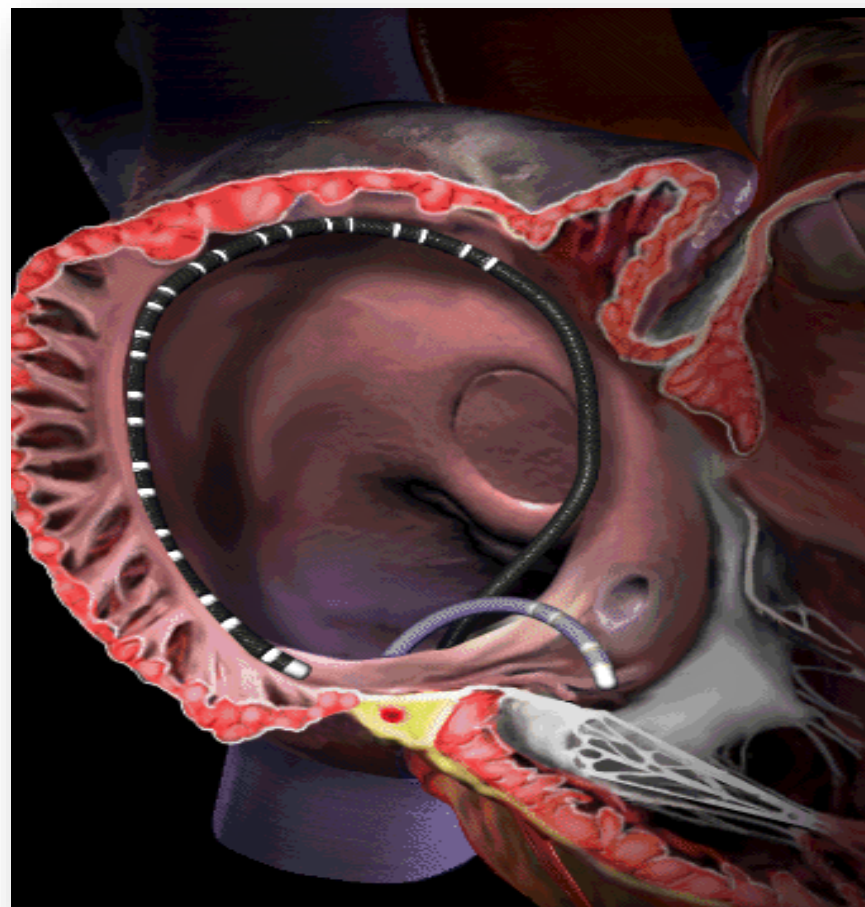
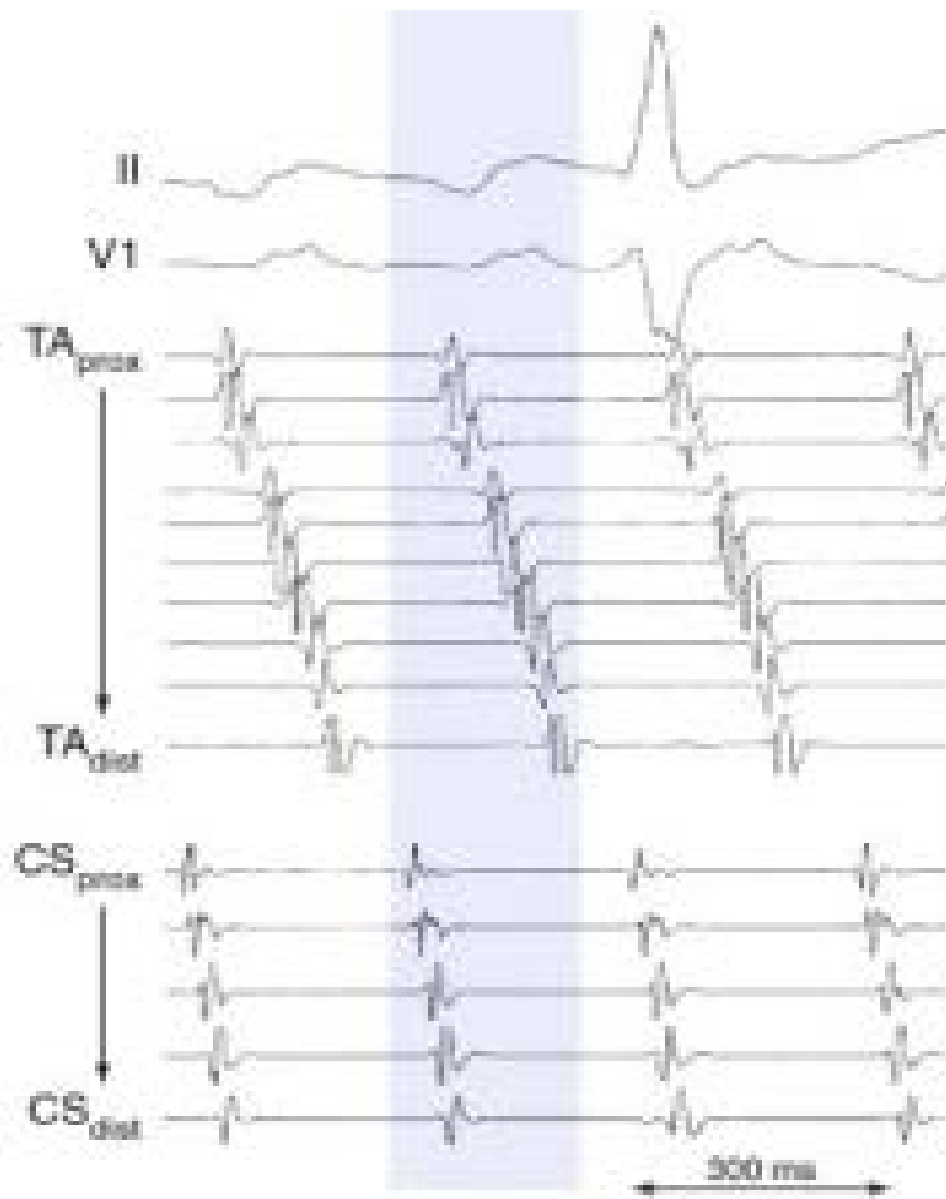
Basis Concepten Mapping



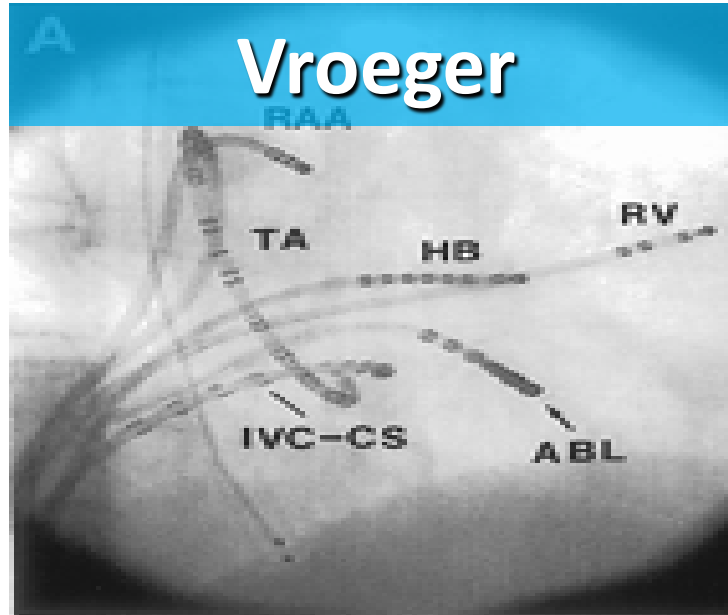


RF TURNED ON-SESSION 4

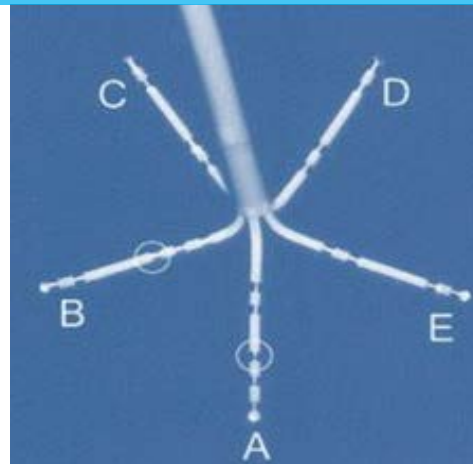
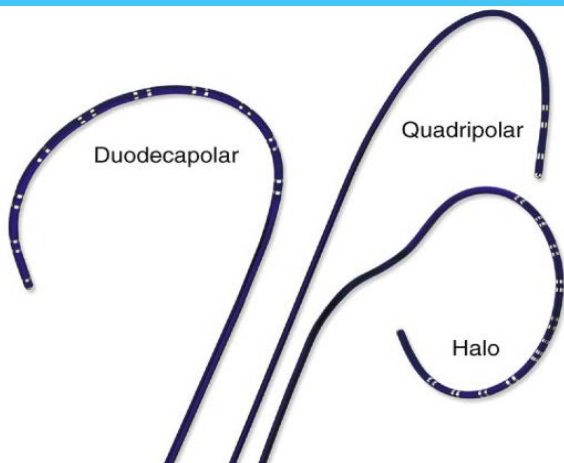




MultiPolaire Catheters

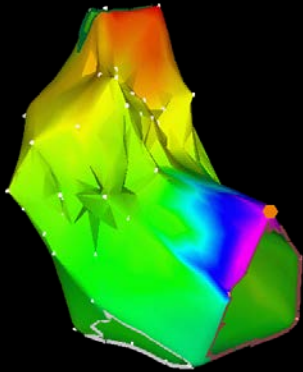


Nu

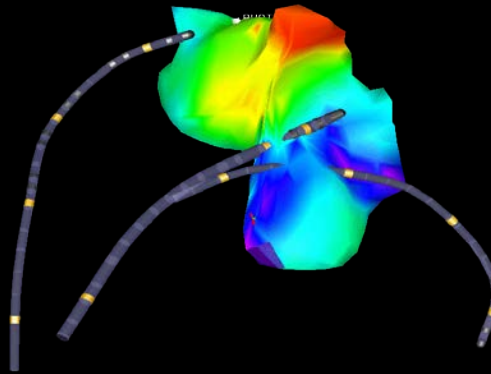


3-D Elektro-Anatomische Mapping Technik

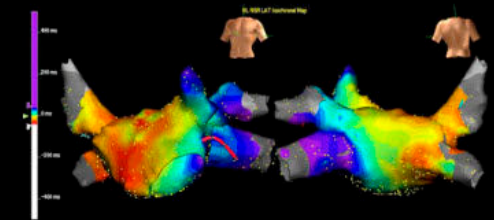
CARTO
Biosense Webster



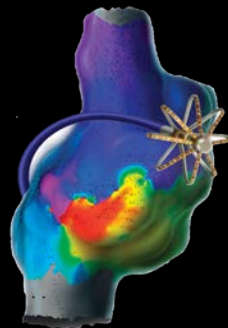
Real-Time Position
Management



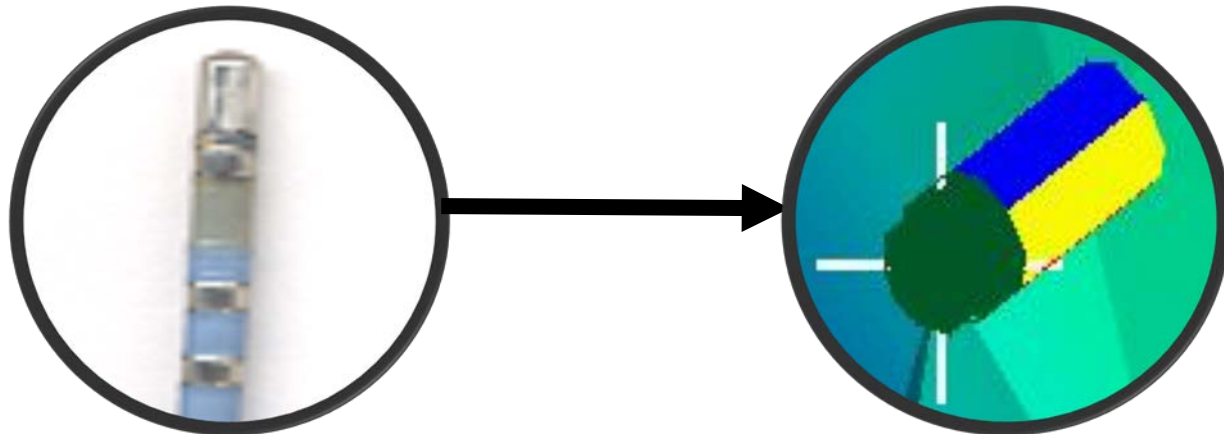
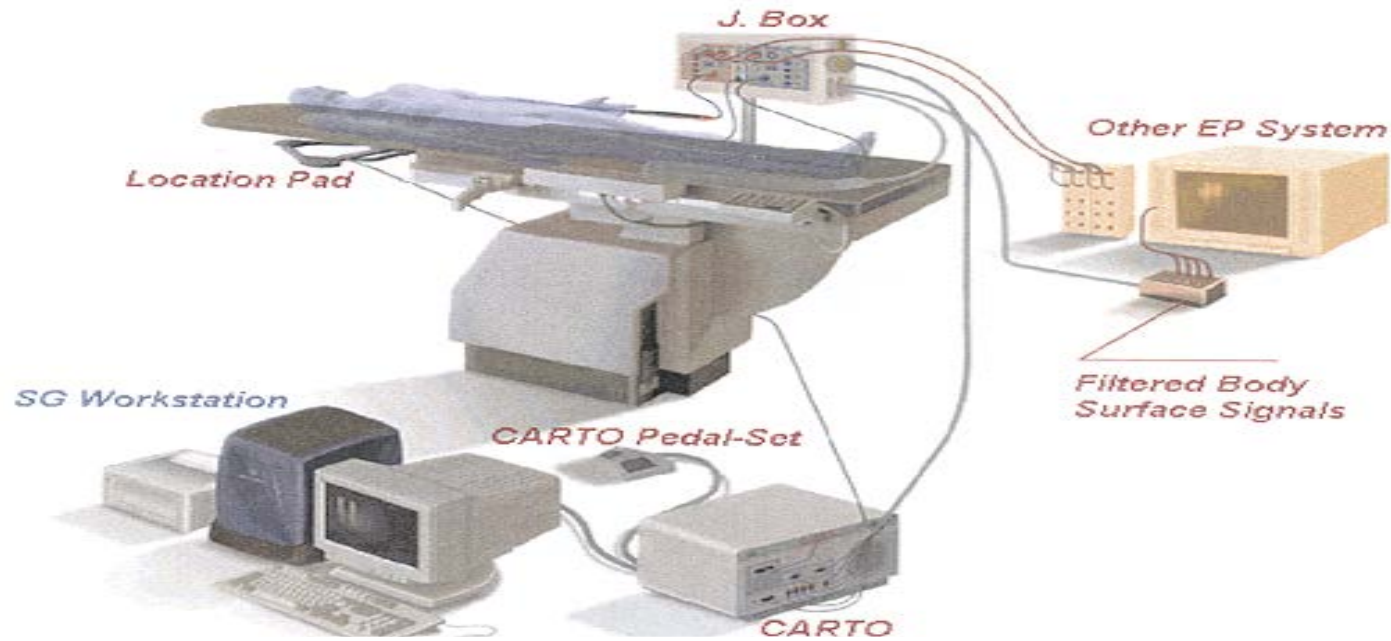
Navx
St Jude



Rhythmia Mapping
Boston Scientific



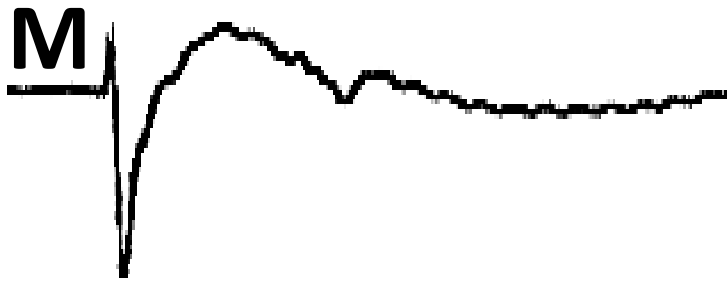
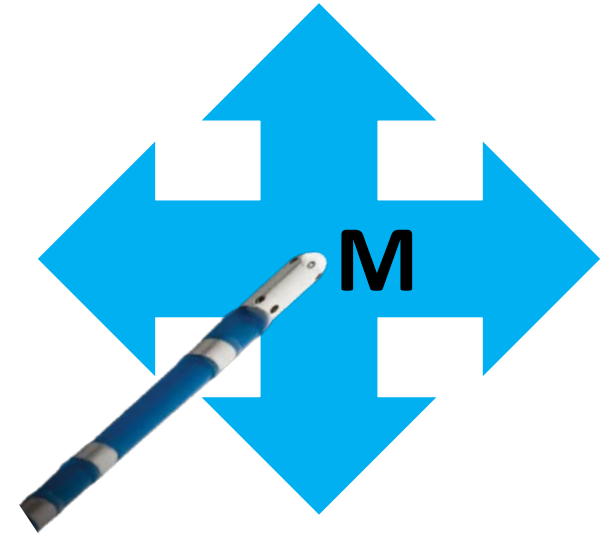
3-D Elektro-Anatomische Mapping Technik



Referentie

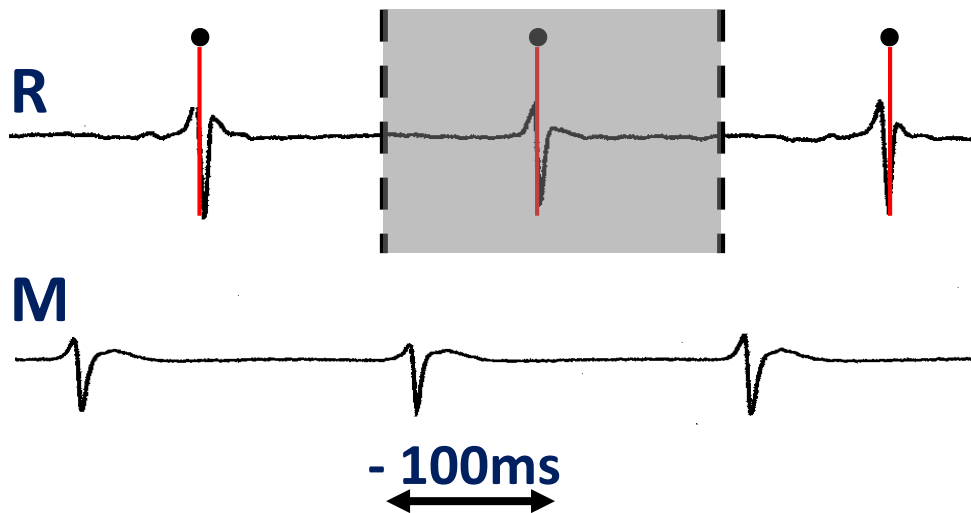


Mapping

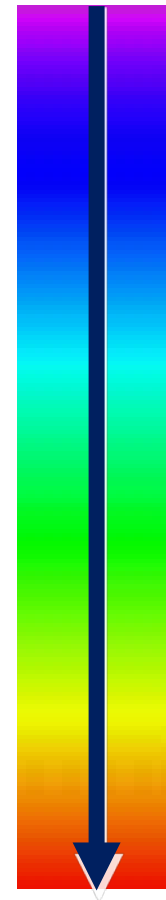
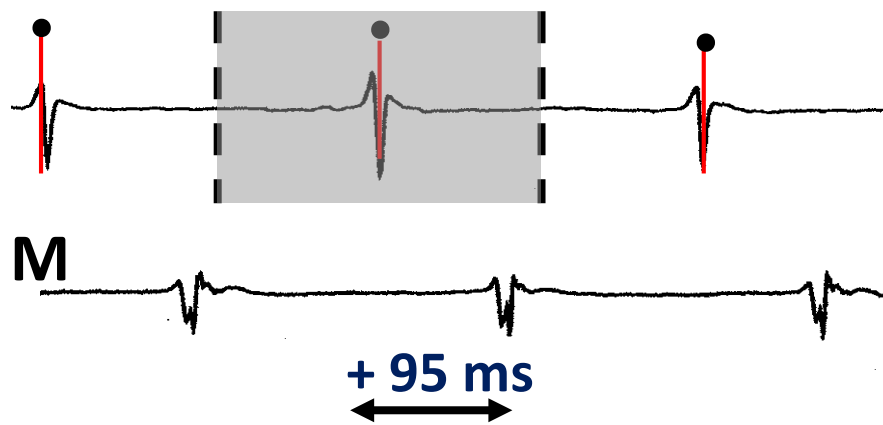




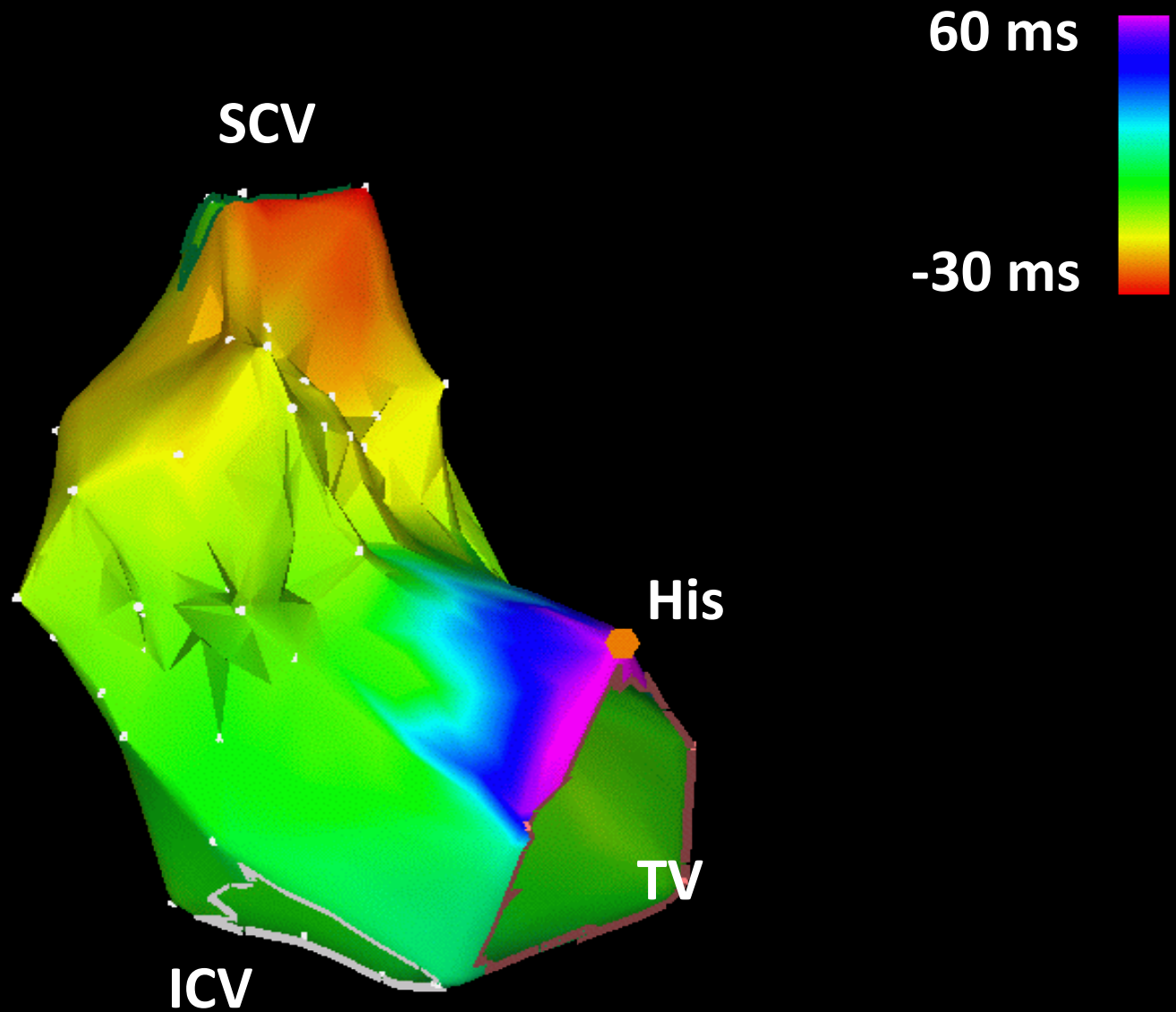
“vroeg”



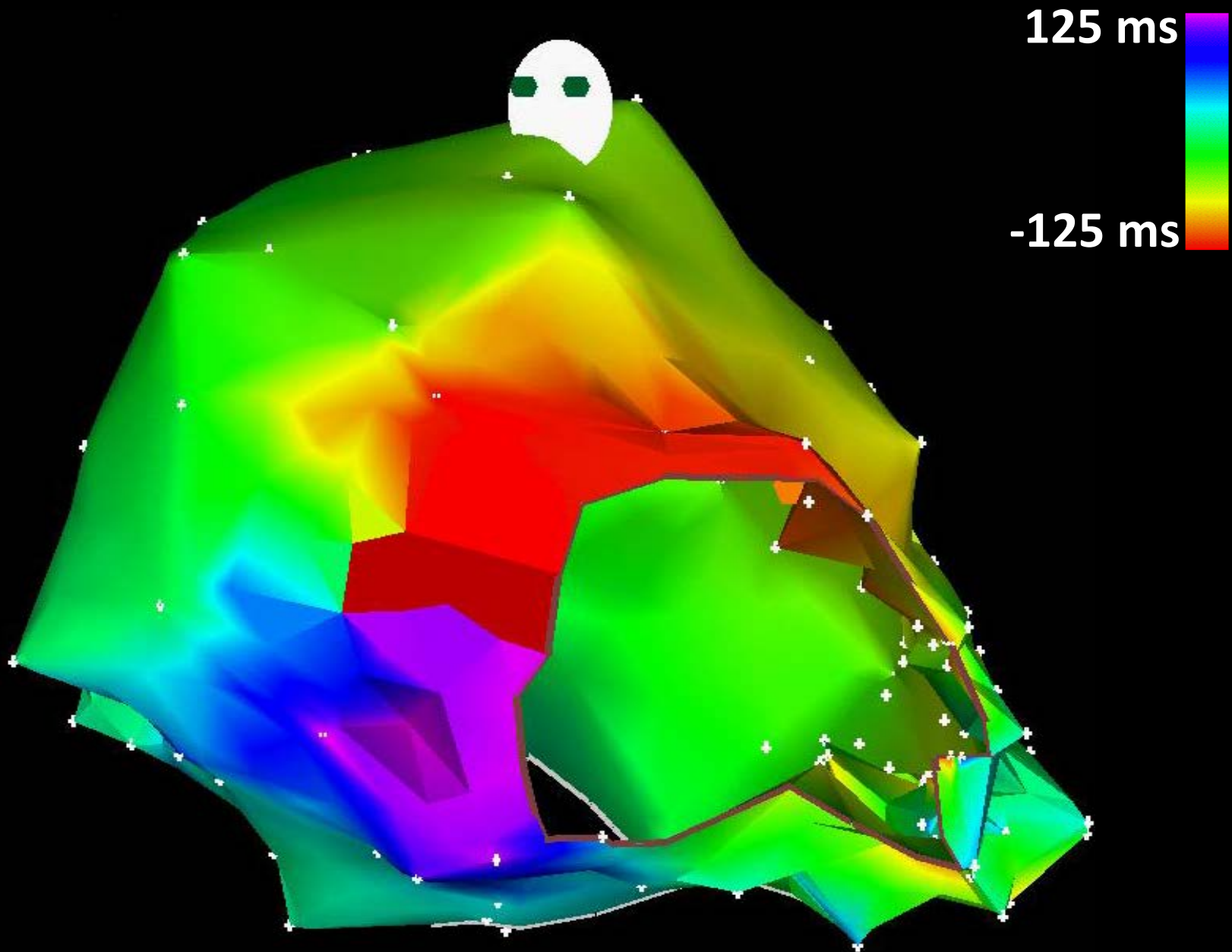
“laat”



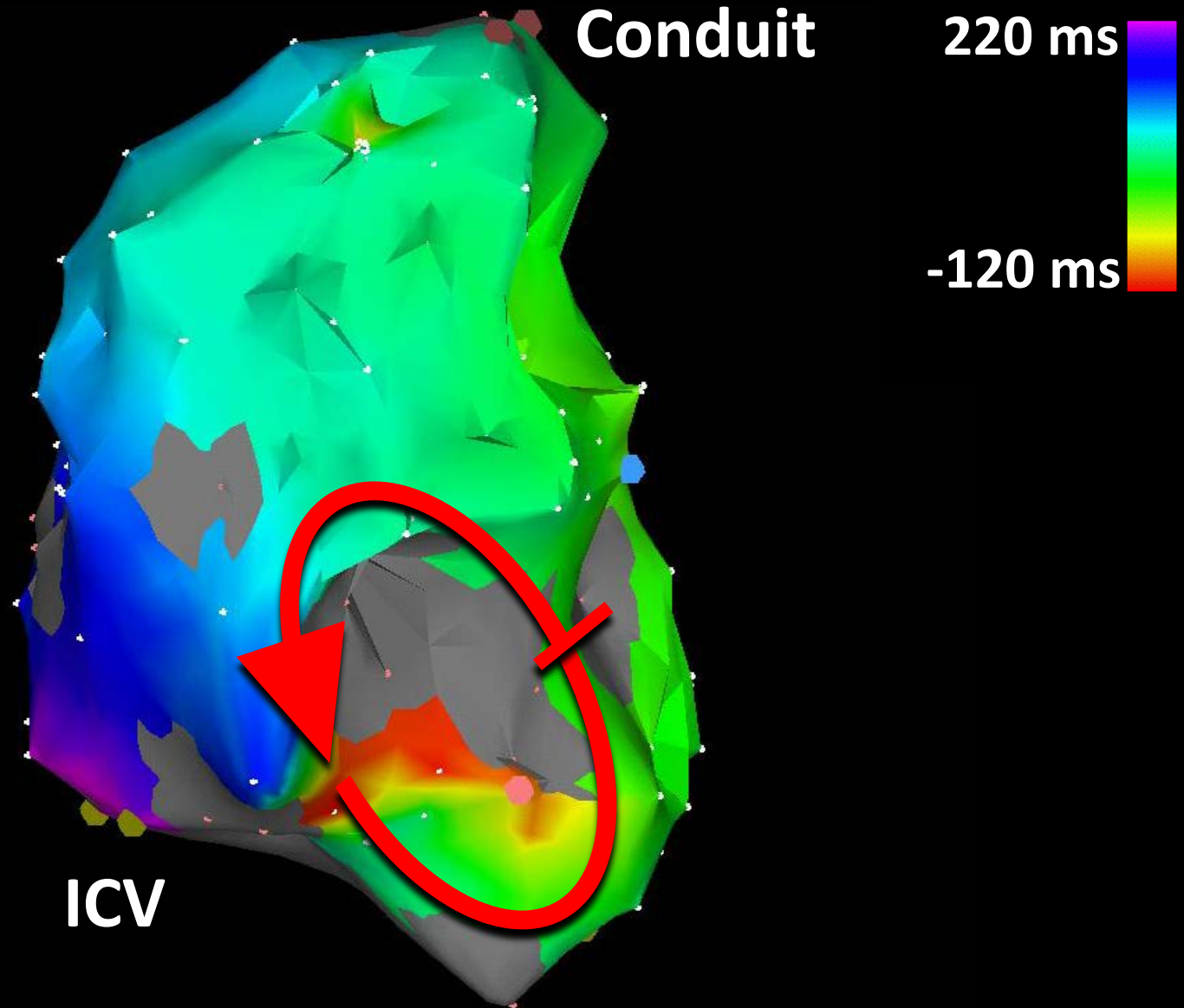
3D-EA Map Rechter Boezem

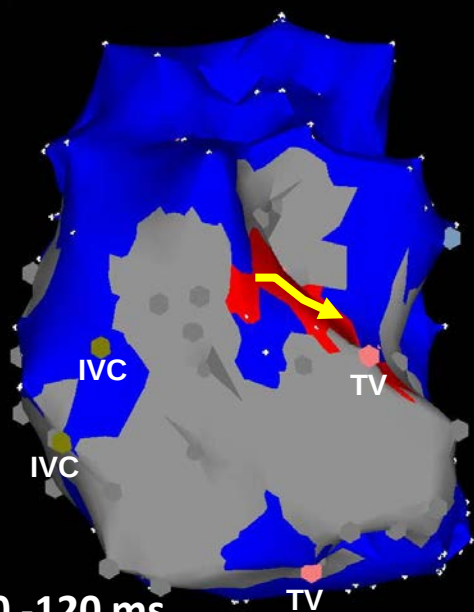


3D-EA Map Rechter Boezem

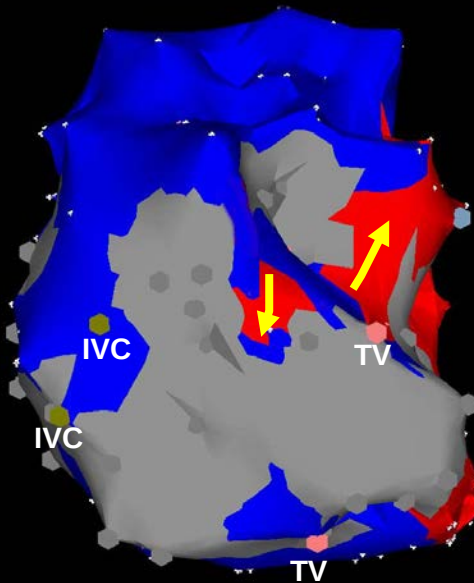


3D-EA Map Rechter Boezem

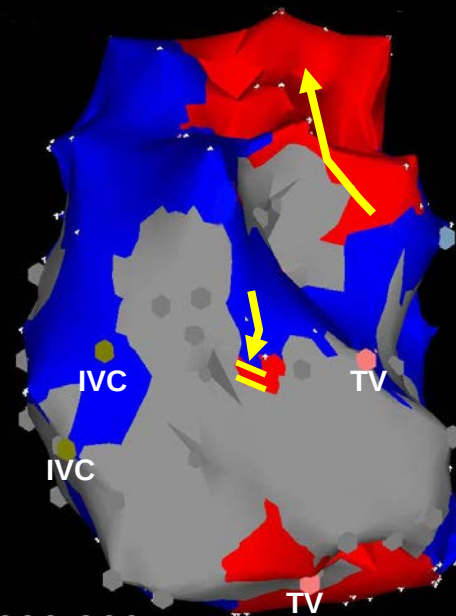




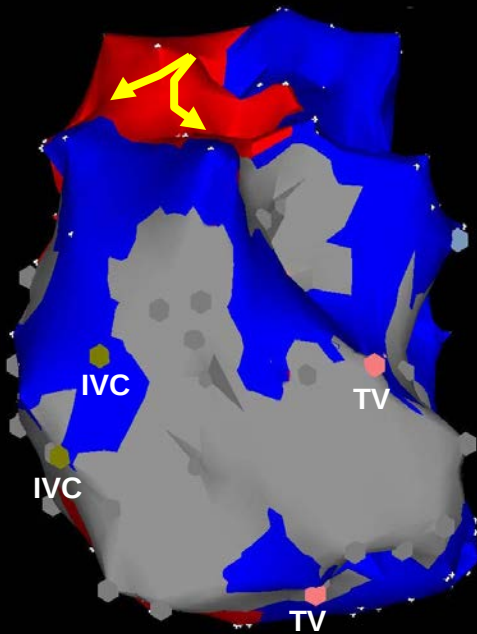
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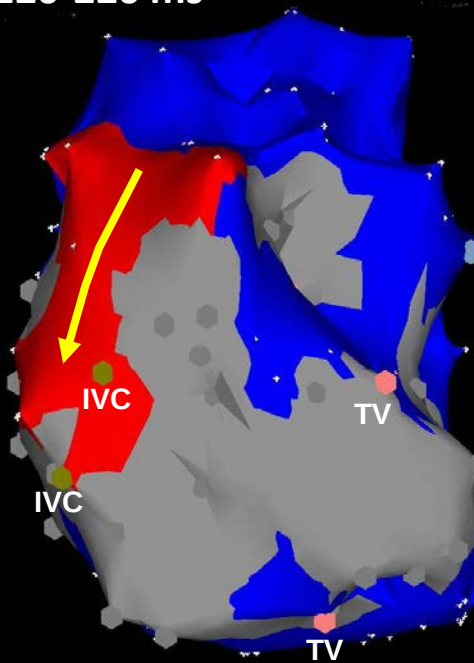
T= 120-220 ms



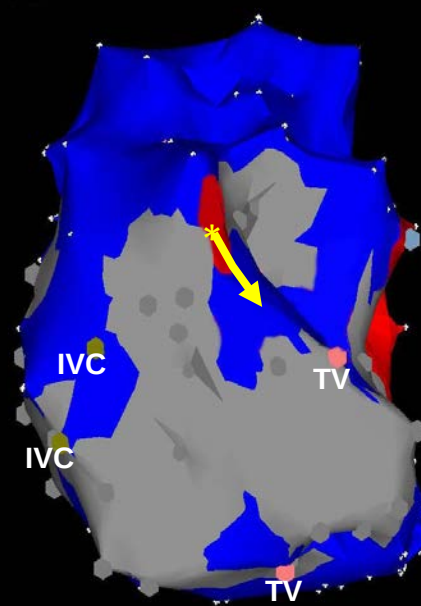
T=220-300 ms



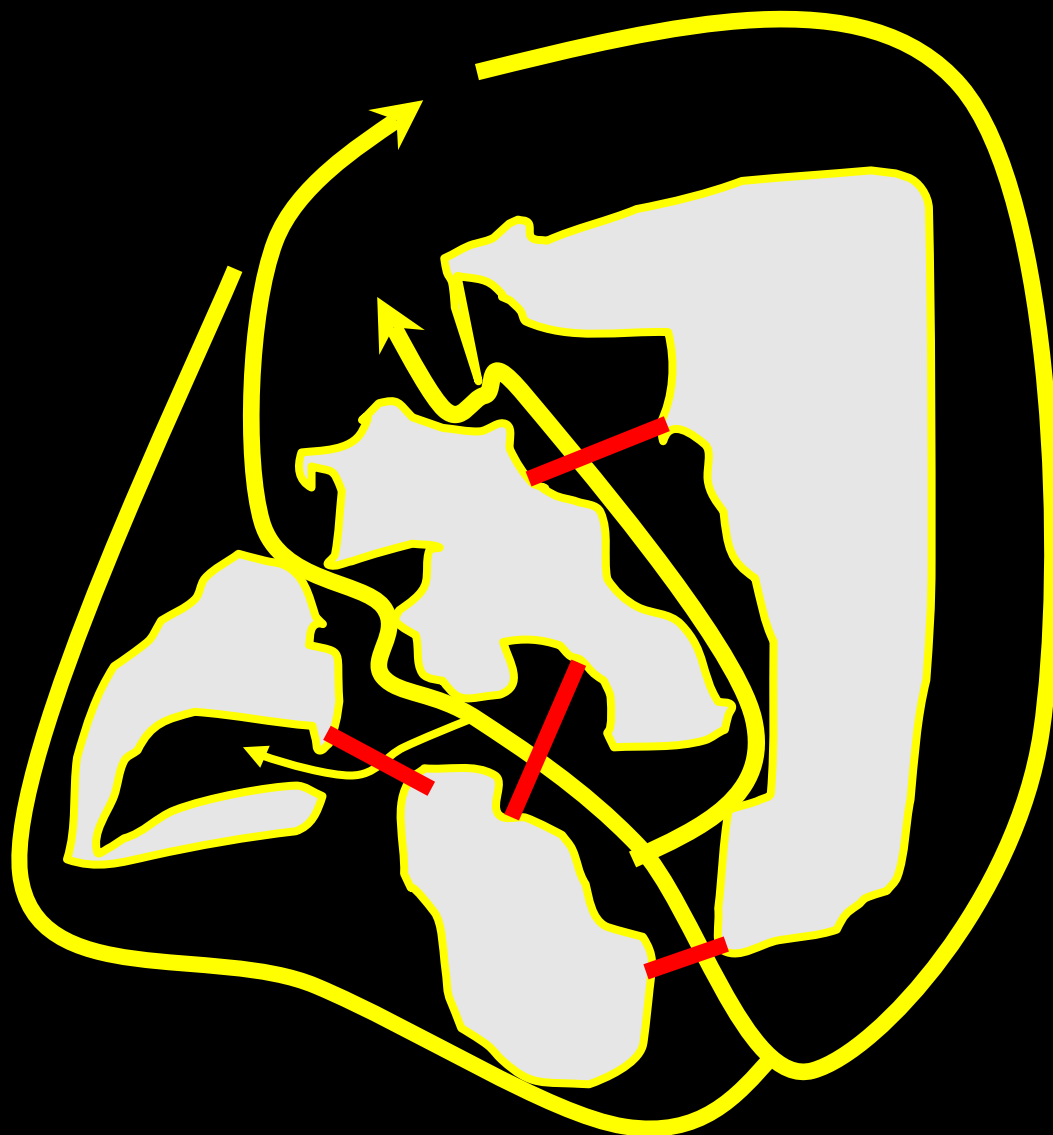
T=300-330 ms

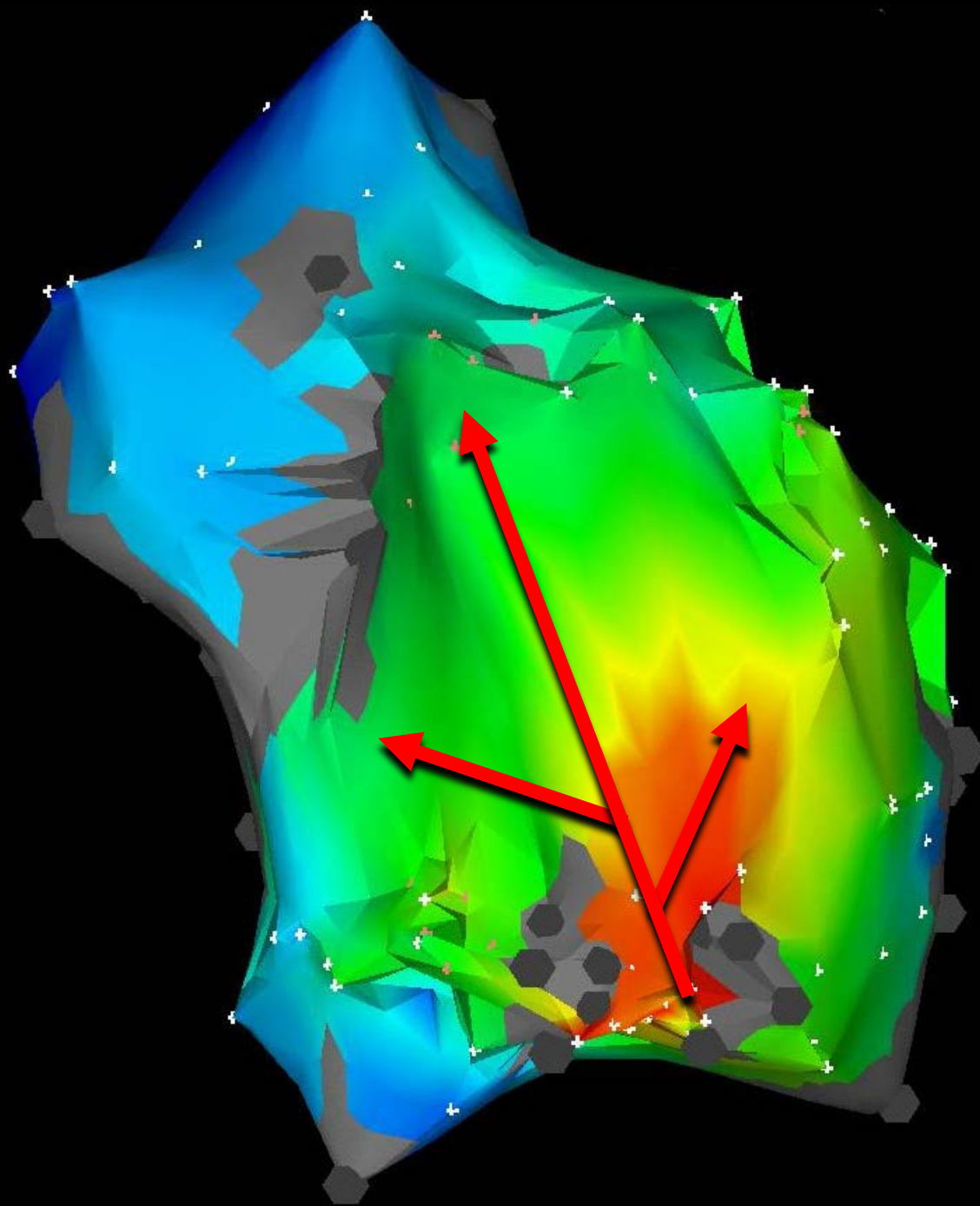


T=330-430 ms



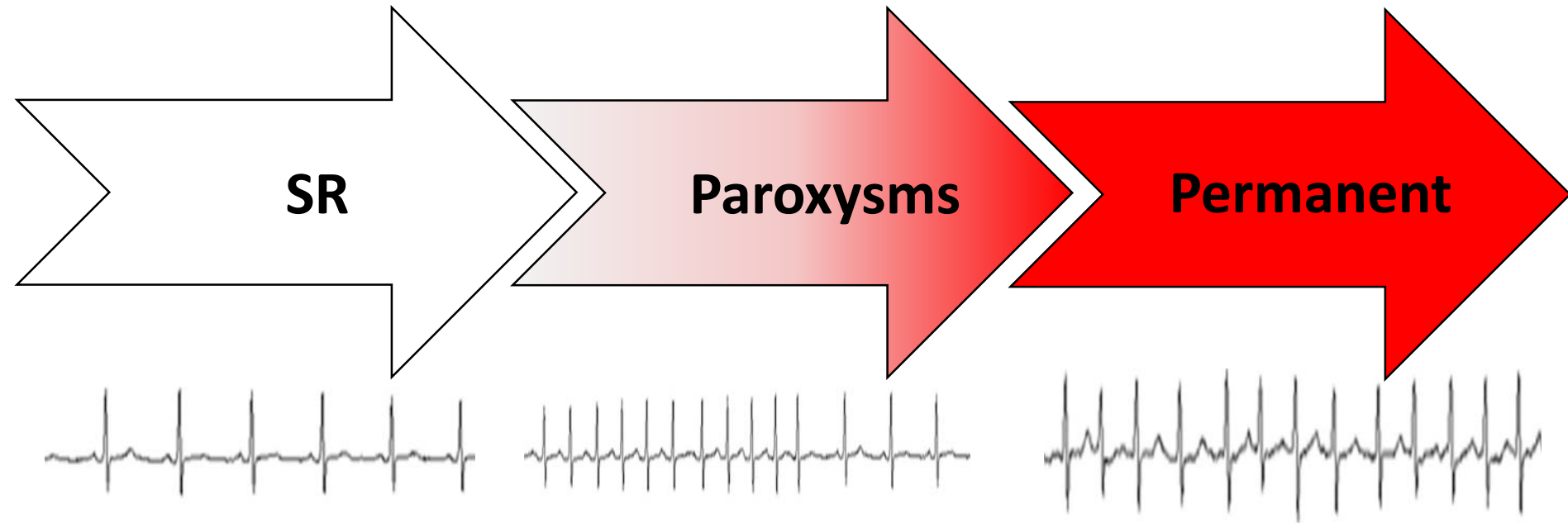
T= 430 ms





Onderzoek

Atrium Fibrilleren: Progressieve Ziekten



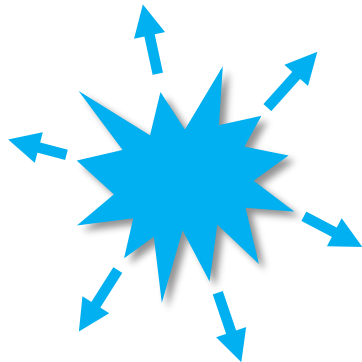
Geschiedenis van Atrium Fibrilleren

1959: Experimenten van Moe

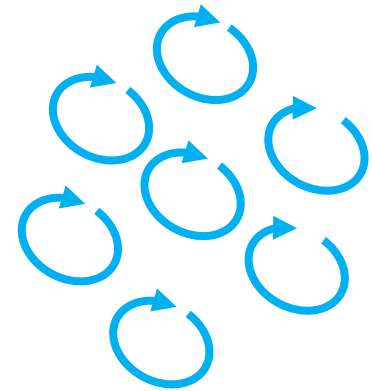
verschillend mechanismen



“fibrillatory conduction”



“true fibrillation”

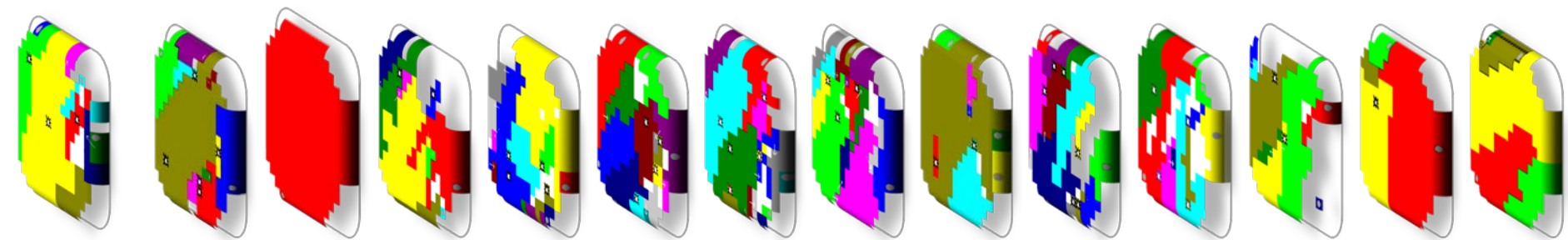


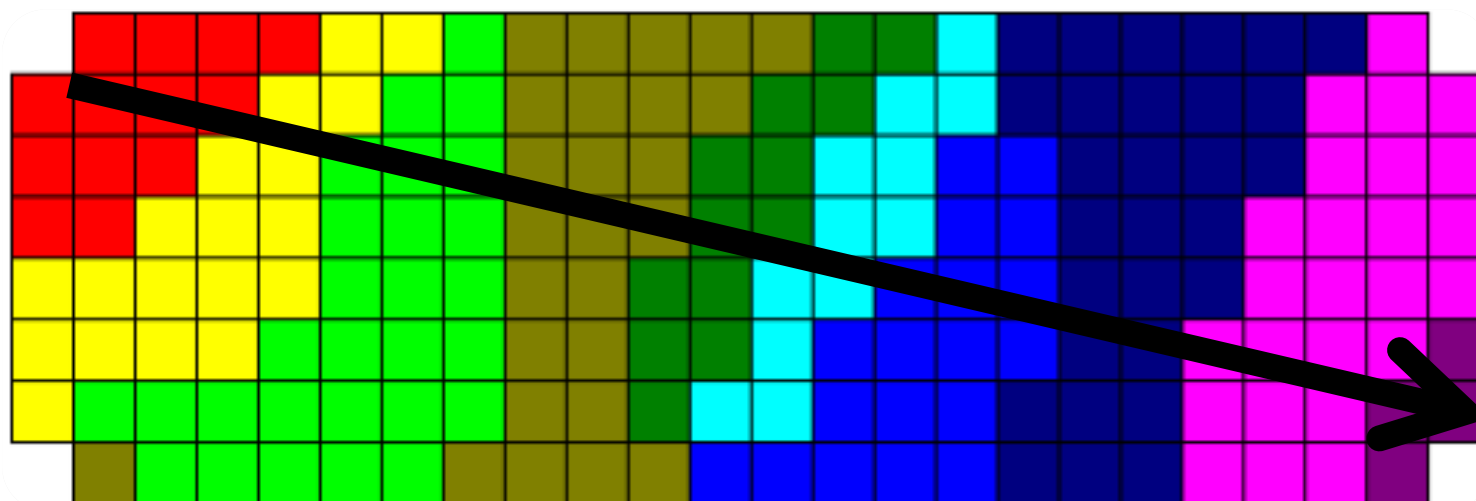
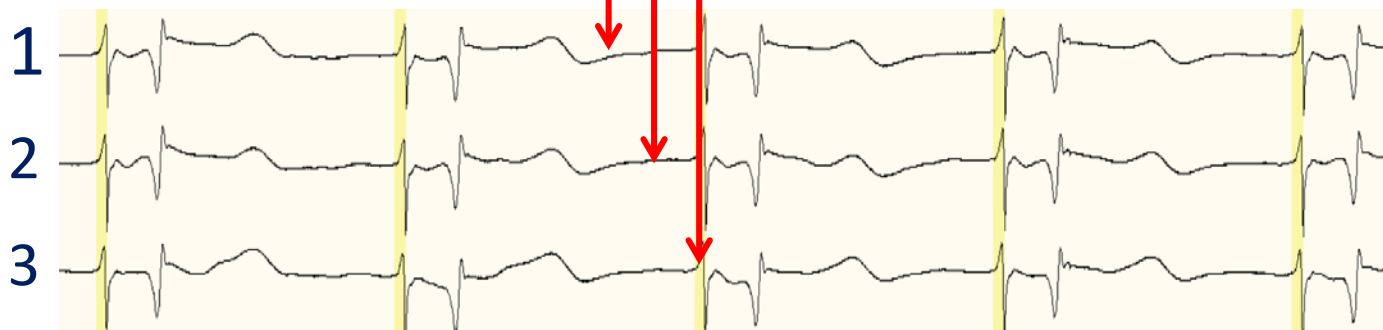
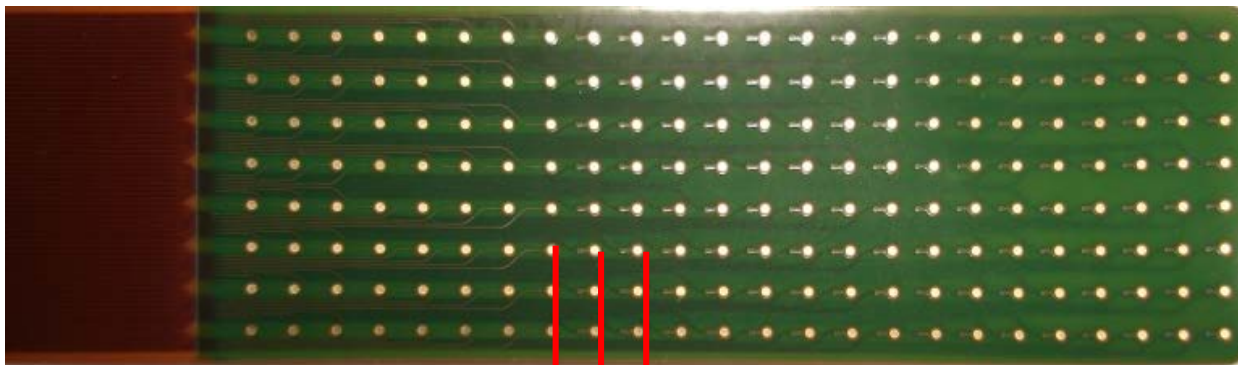
De Uitdaging: Atrium Fibrilleren

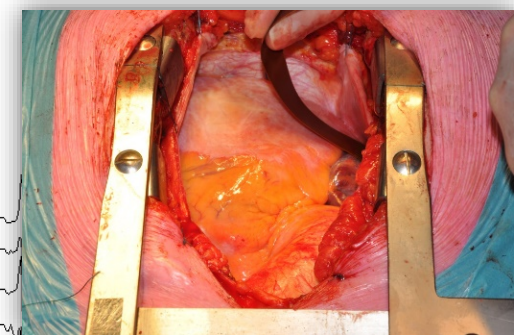


Continue slag-op-slag veranderingen in

- electrogram morfologie
- activatie patronen

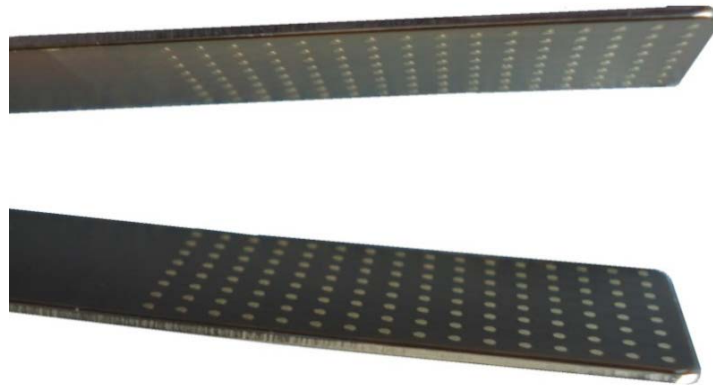






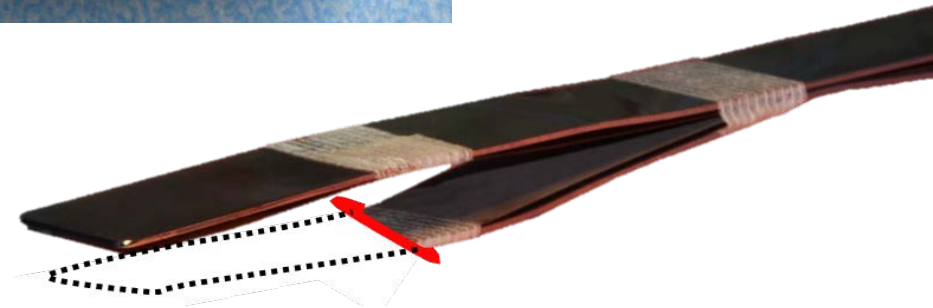
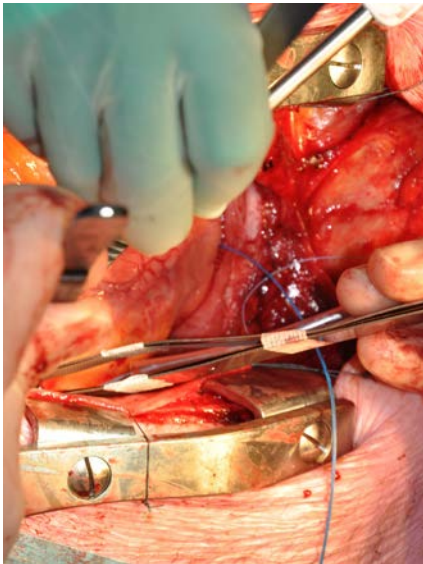
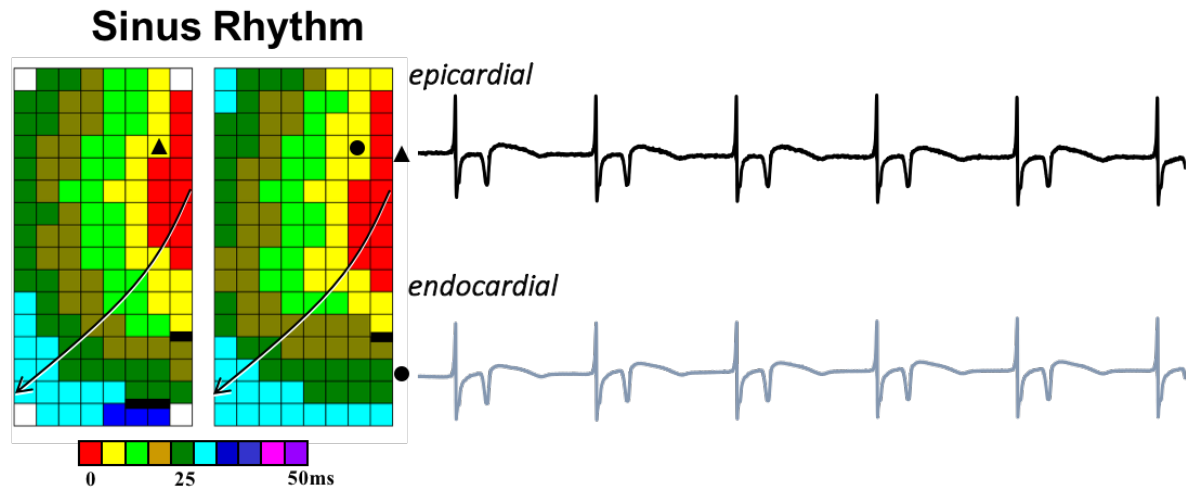
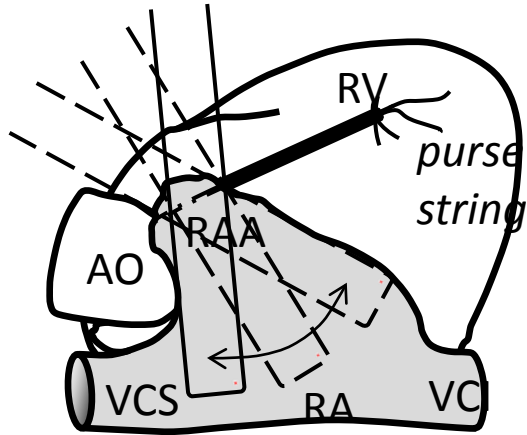
Methode

Endo-Epicardial mapping



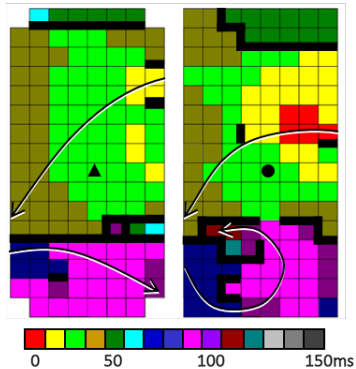
2x 128 Electroden
Ø 0.65 mm
2 mm spacing

Simultaan Endo-Epicardial Mapping



Simultaan Endo-Epicardial Mapping

Synchronous AF



epicardial



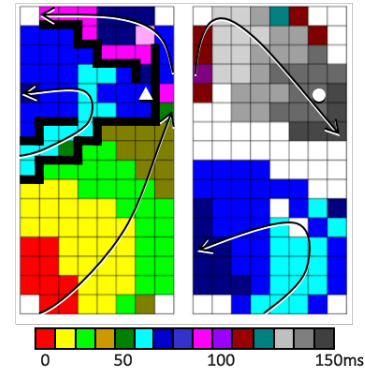
endocardial



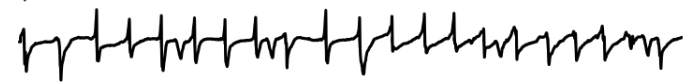
overlay



Asynchronous AF



epicardial



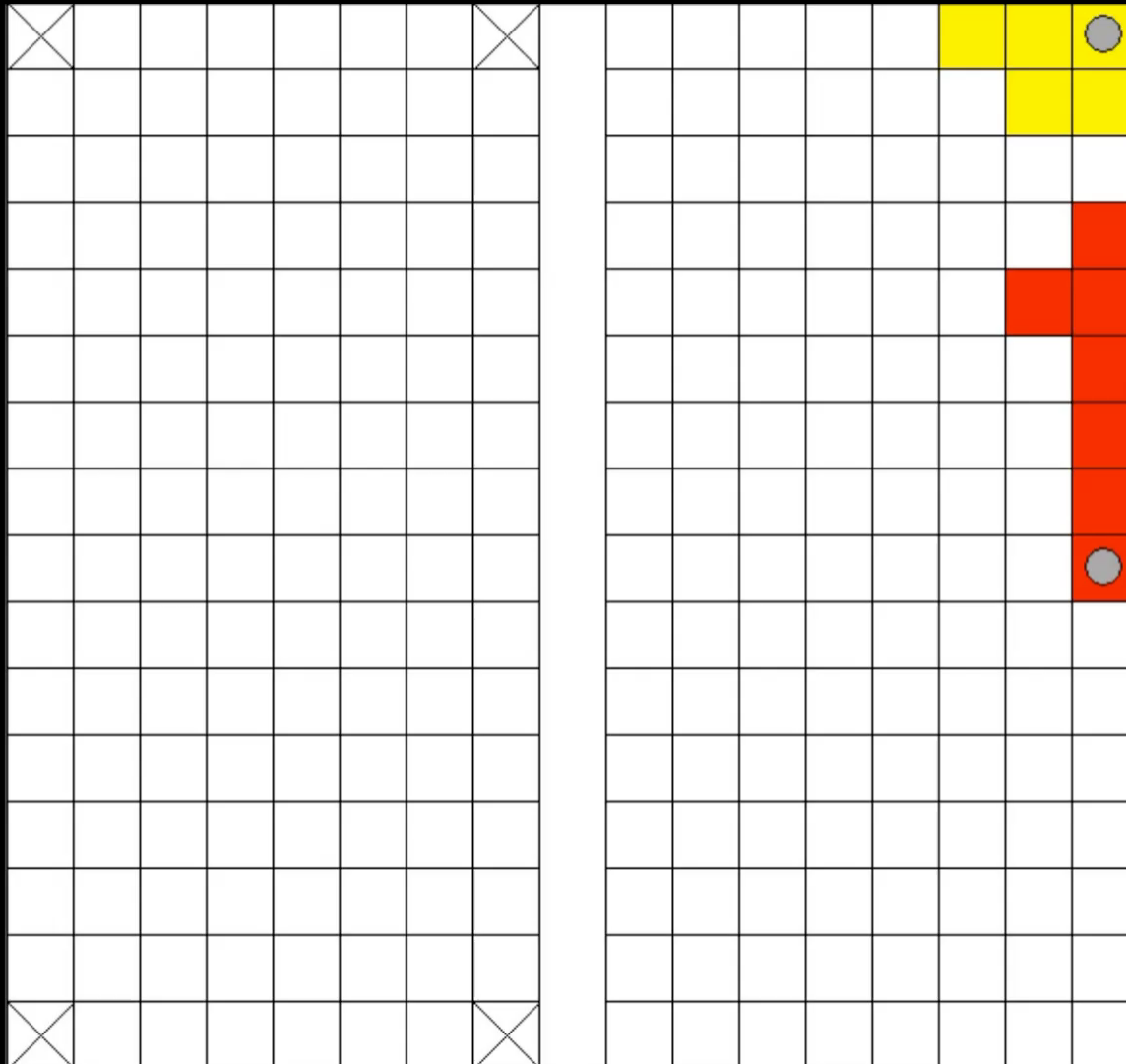
endocardial



overlay



1





Founders
prof. Dr. B. Brundel & Dr. N. De Groot



Dank u voor de aandacht !
Vragen?

