



# Cardioneuroablation

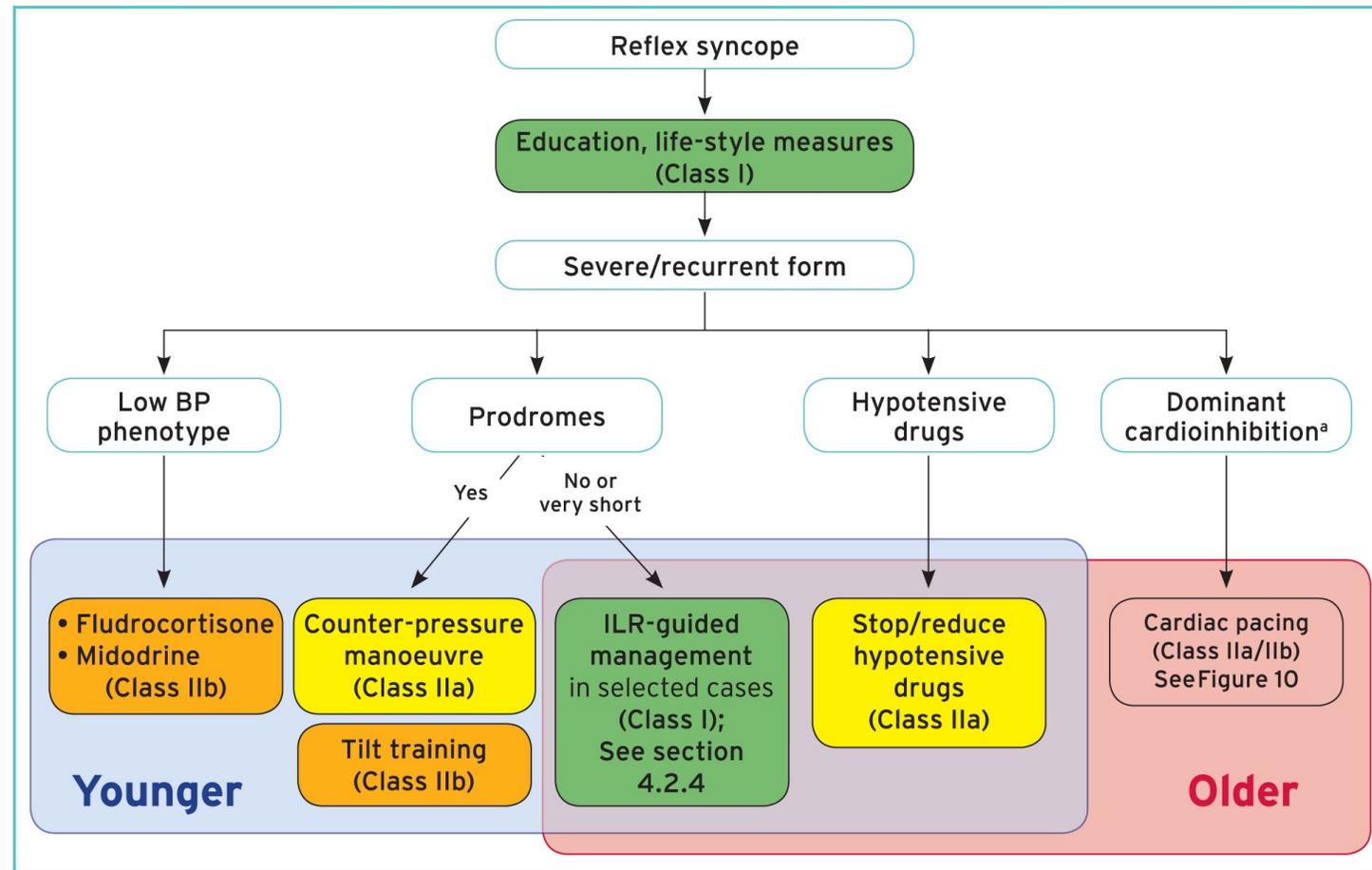
Journée d'actualités thérapeutiques

09/09/2023

Hugo Marchand

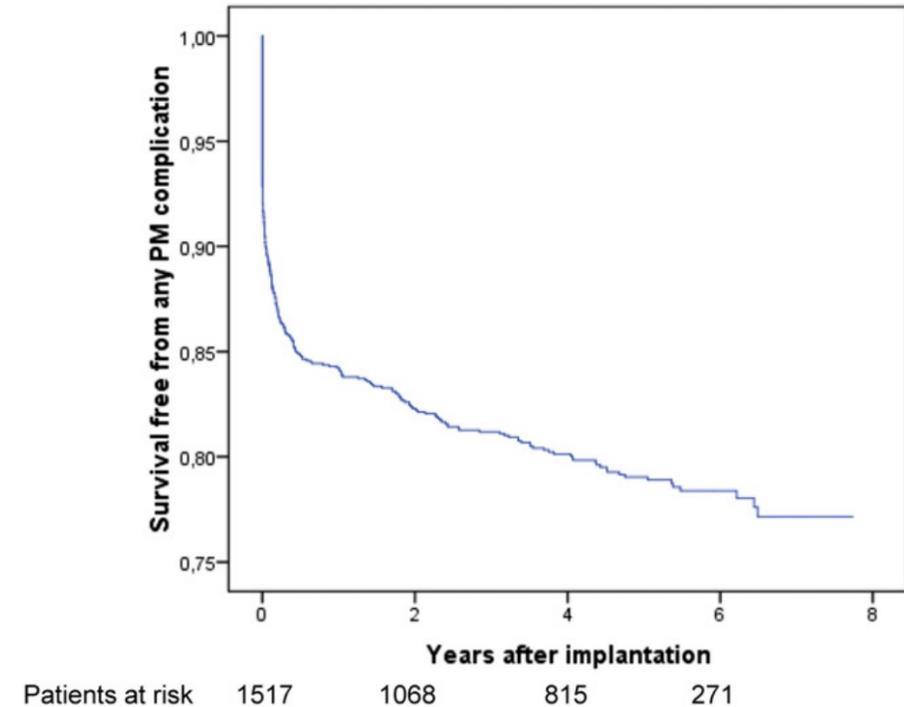
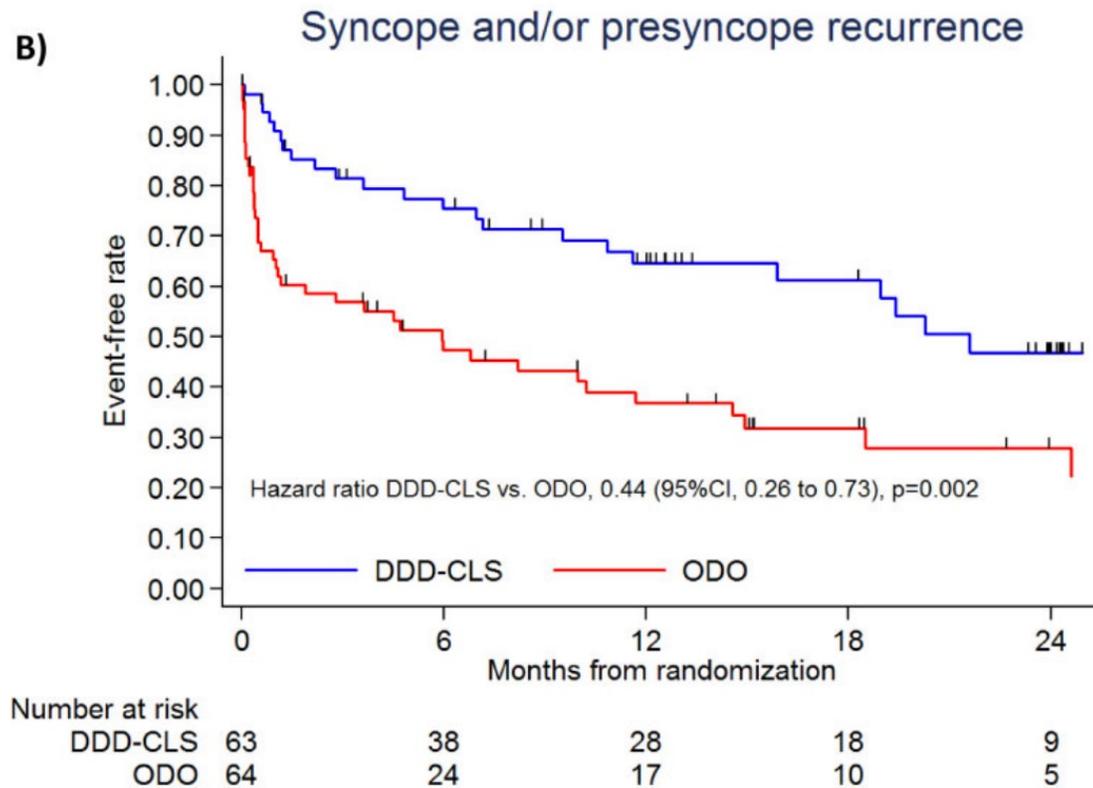
*Avec l'aimable autorisation du Dr Duchateau, CHU Bordeaux*

# Prise en charge de la syncope vagale



©ESC 2018

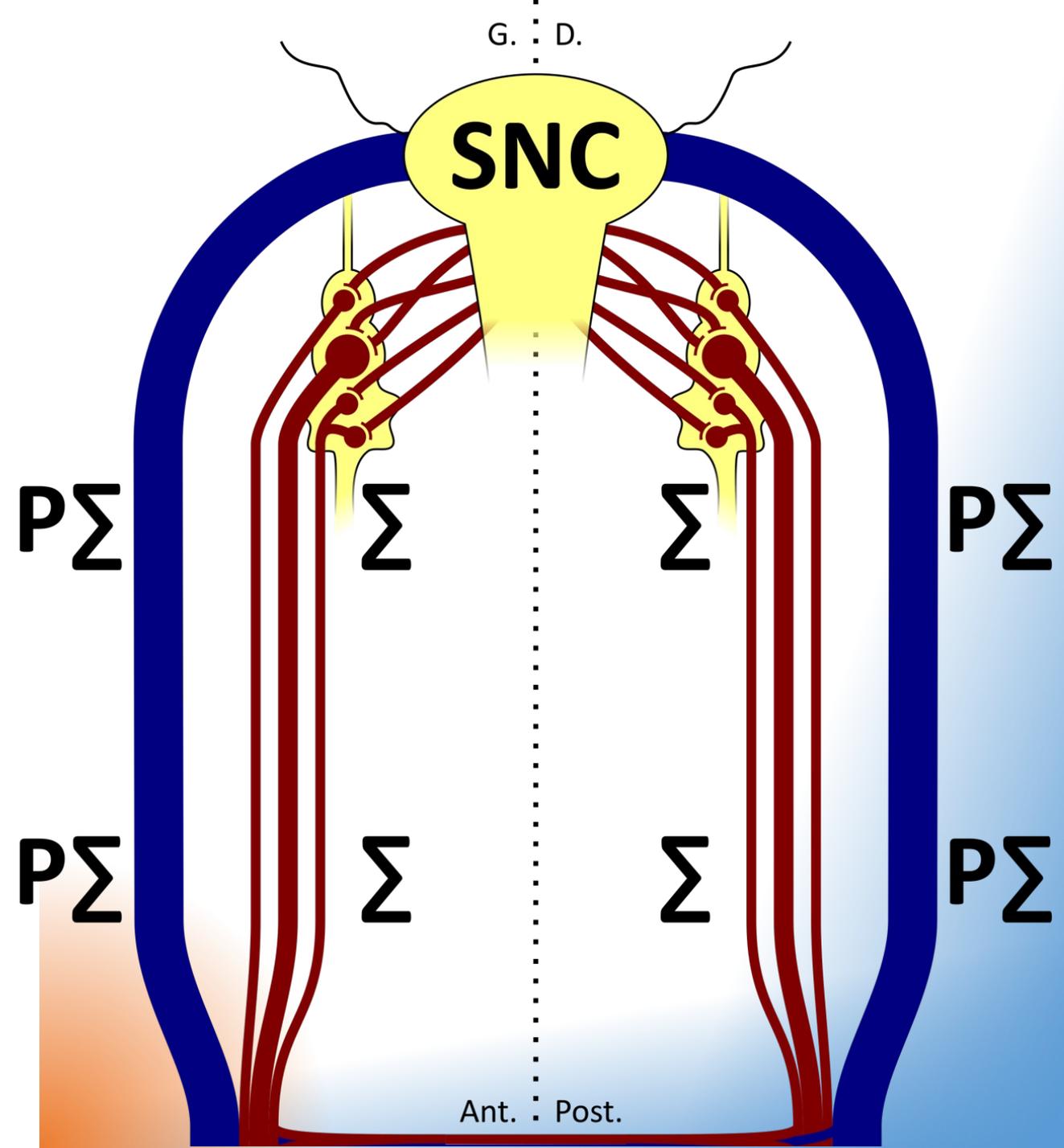
# Pacemaker dans la syncope réflexe



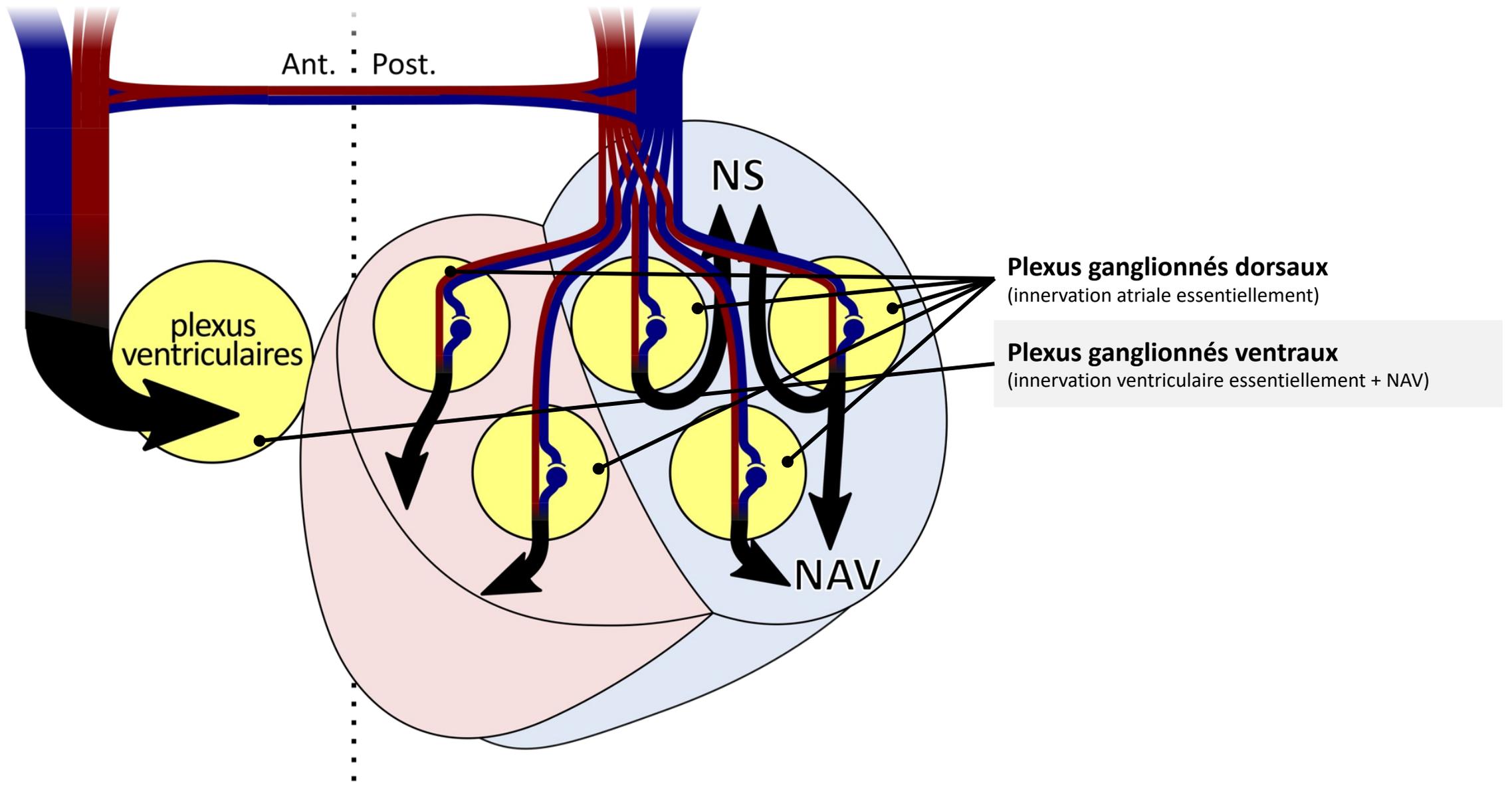
## Patients sélectionnés:

- Réponse asystolique au tilt
- Age > 40 ans

Rationnel de la  
cardioneuroablation

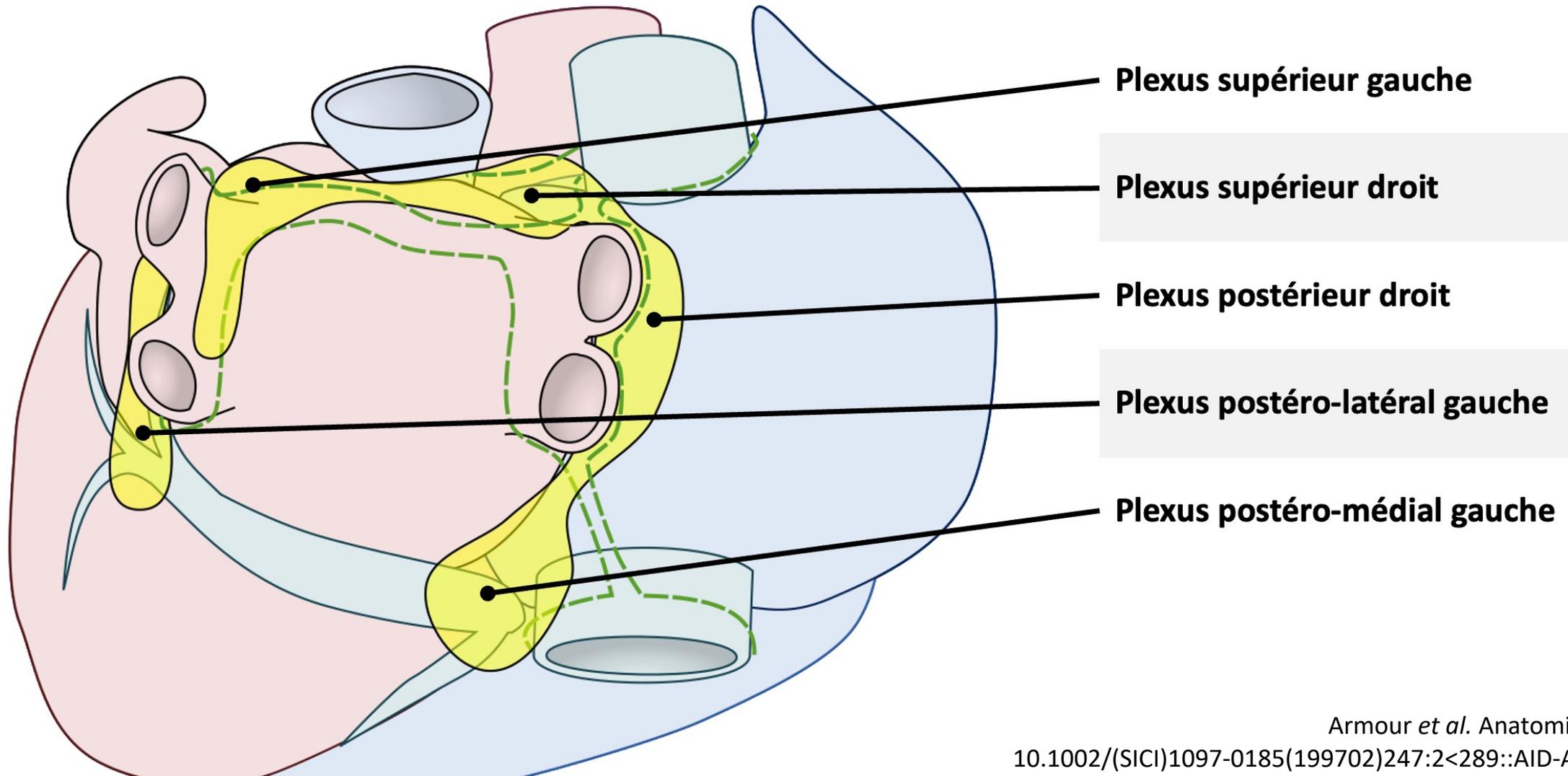


# Neuro-anatomie cardiaque



# Neuro-anatomie cardiaque

## Plexus ganglionnés postérieurs

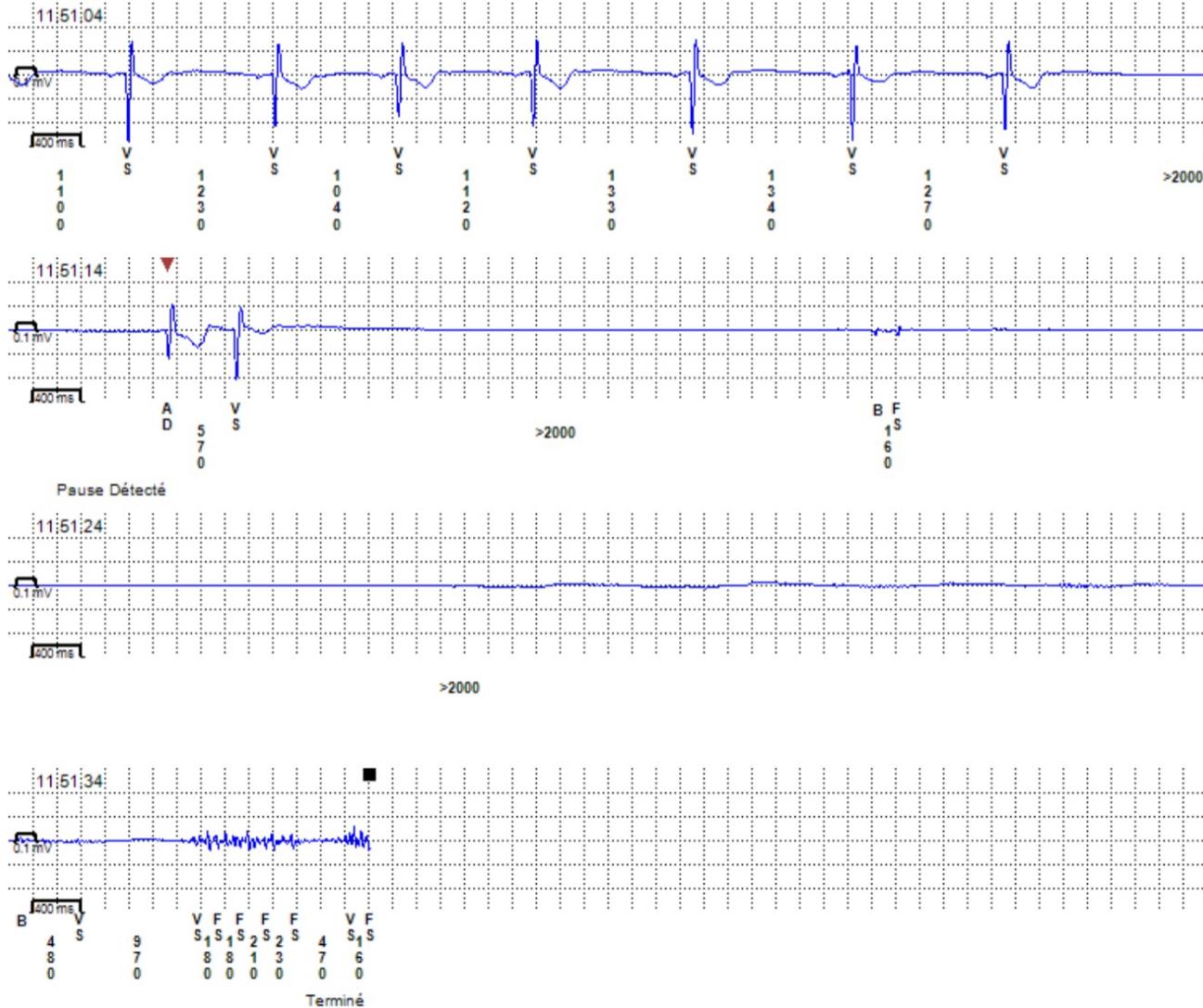


# La procédure de CNA

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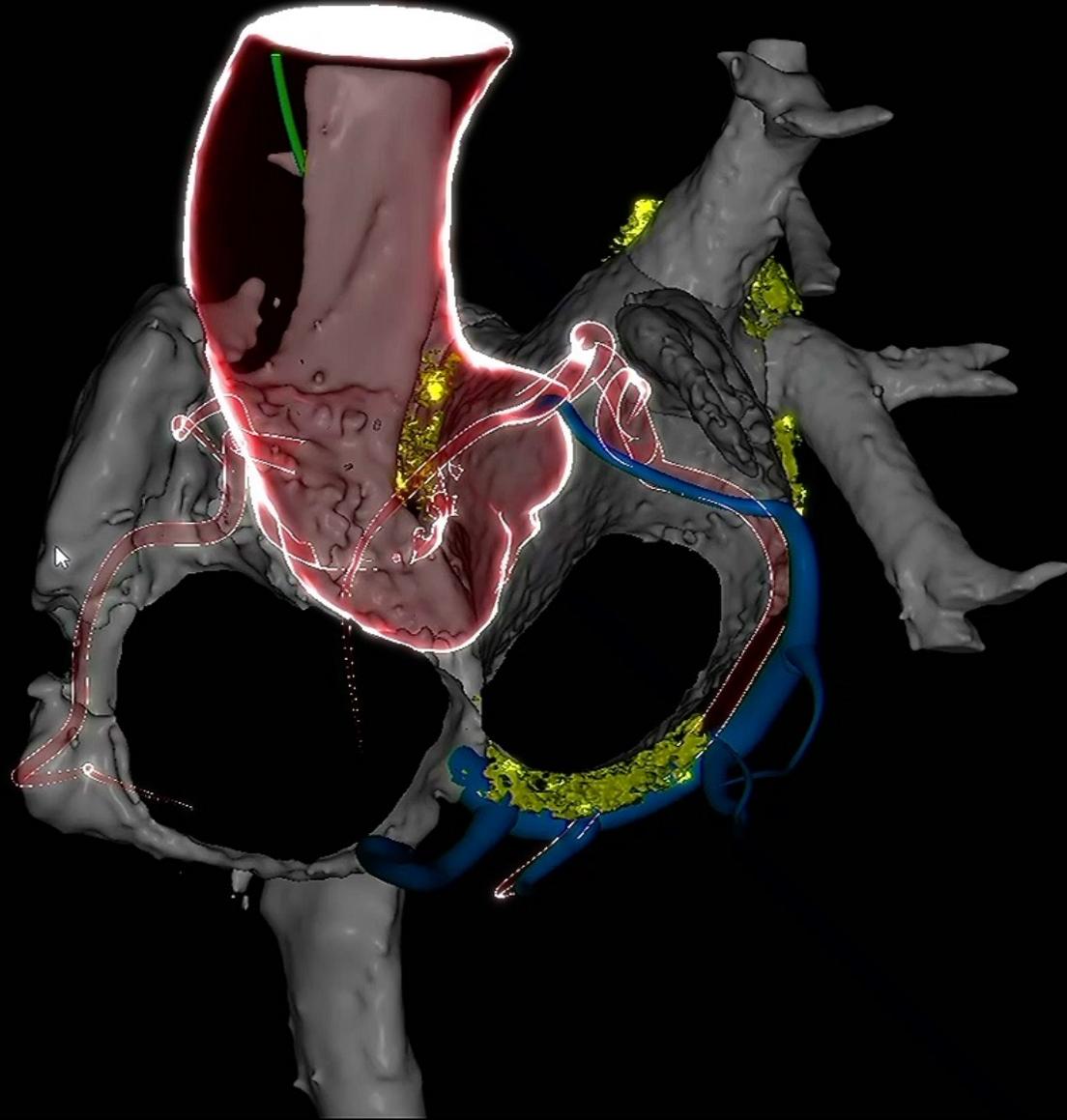
Etapes clés

# 1 - Sélectionner les patients

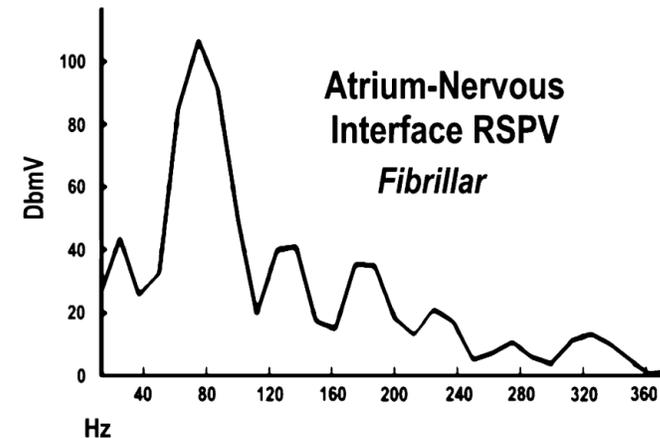
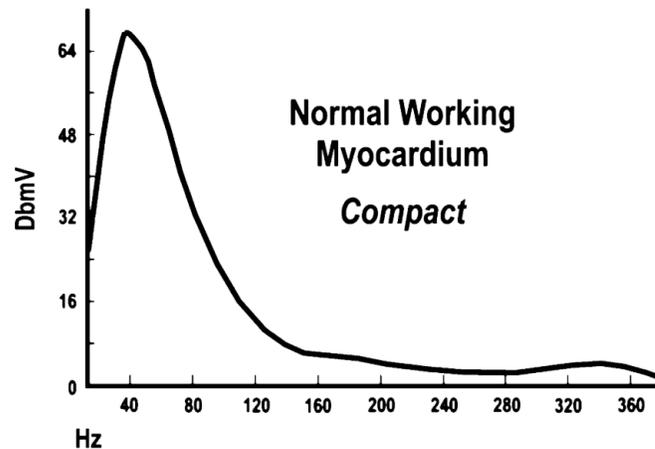
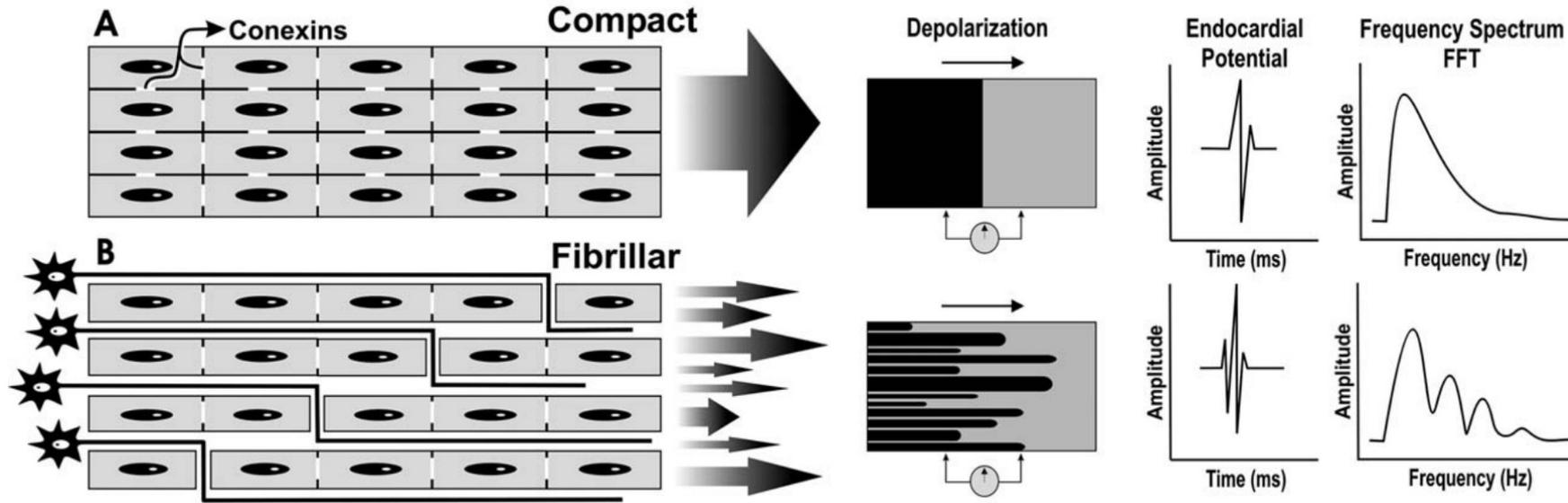


Patient de 25 ans, **couvreur**  
Syncope itératives sans prodromes  
Tilt-test : réponse vasoplégique...

## 2- Localiser les plexus ganglionnés

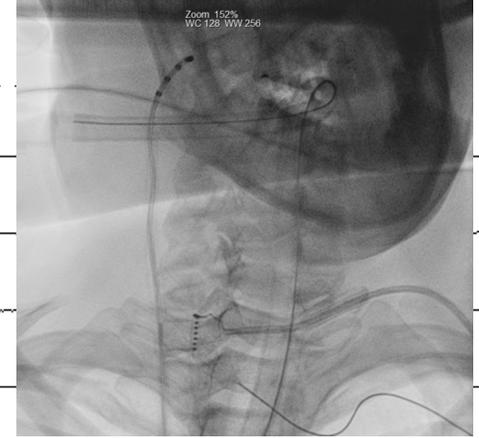
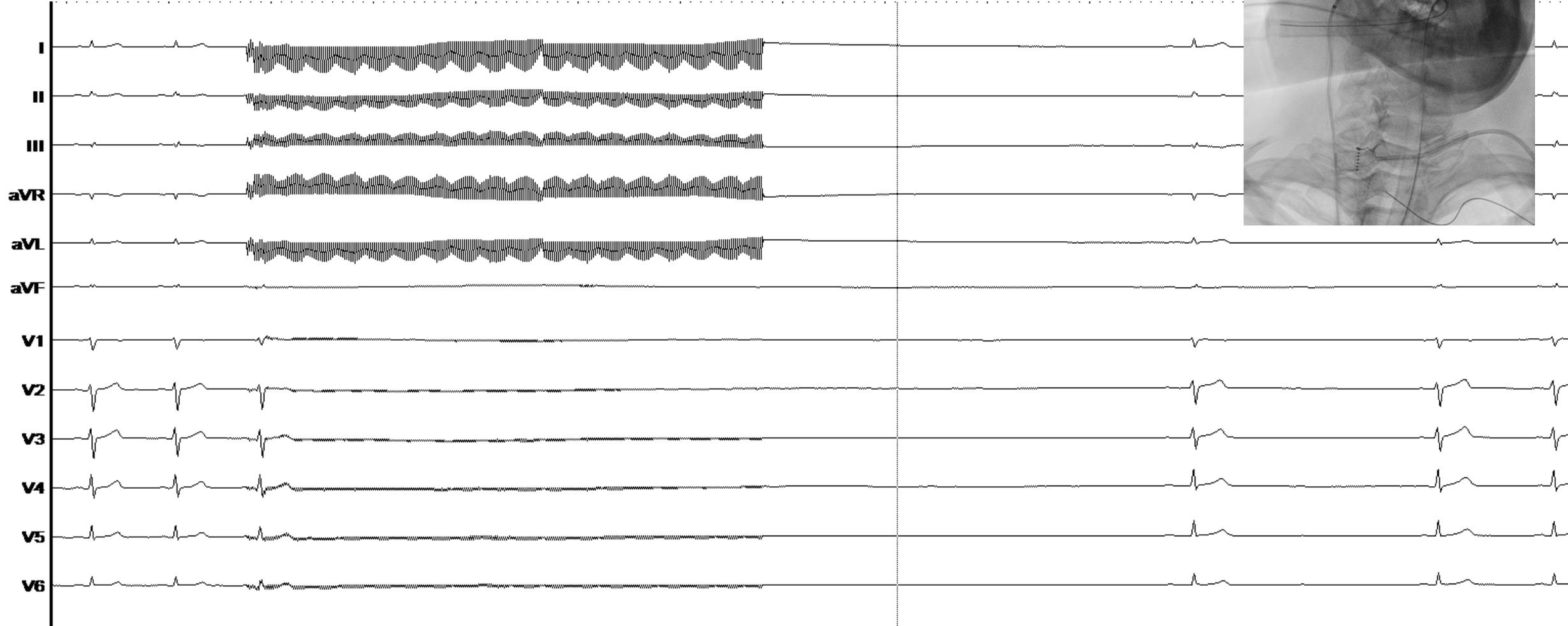


## 2- Localiser les plexus ganglionnés



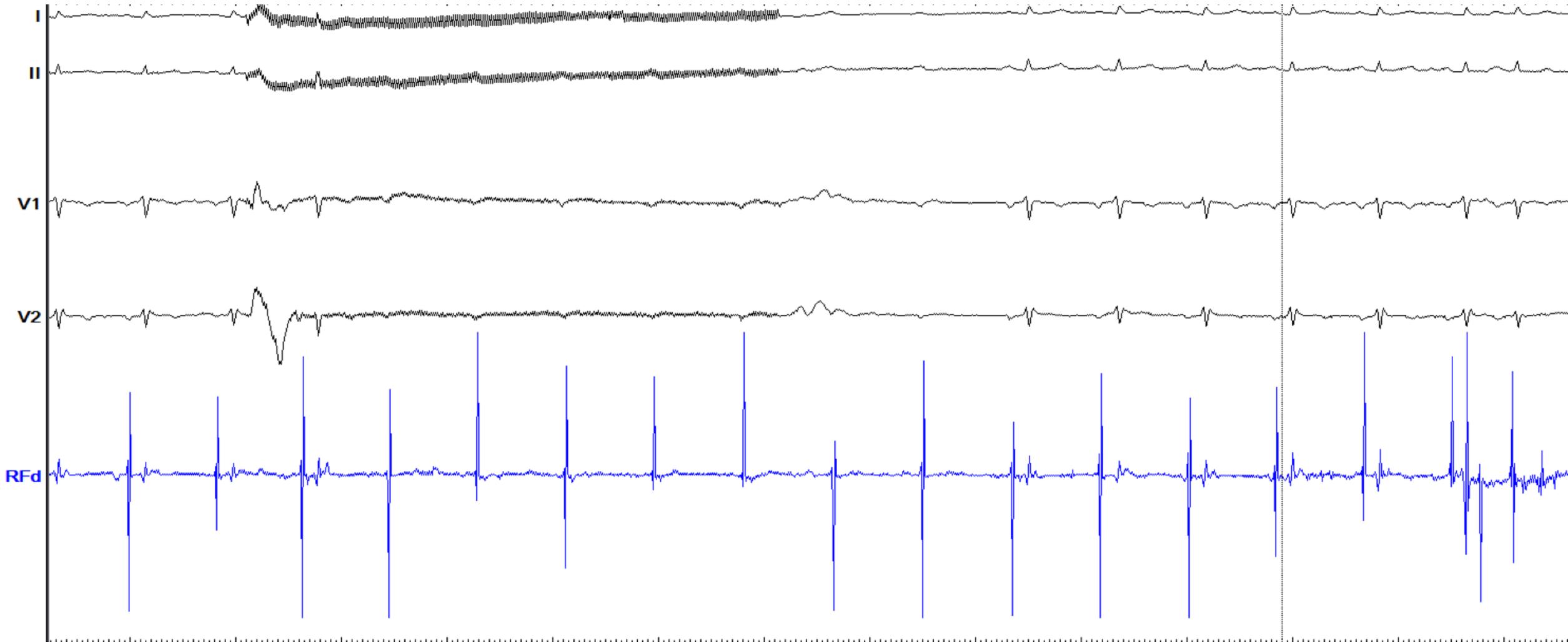
# Stimulation vagale haute intensité

## Impact sur la fonction cardiaque

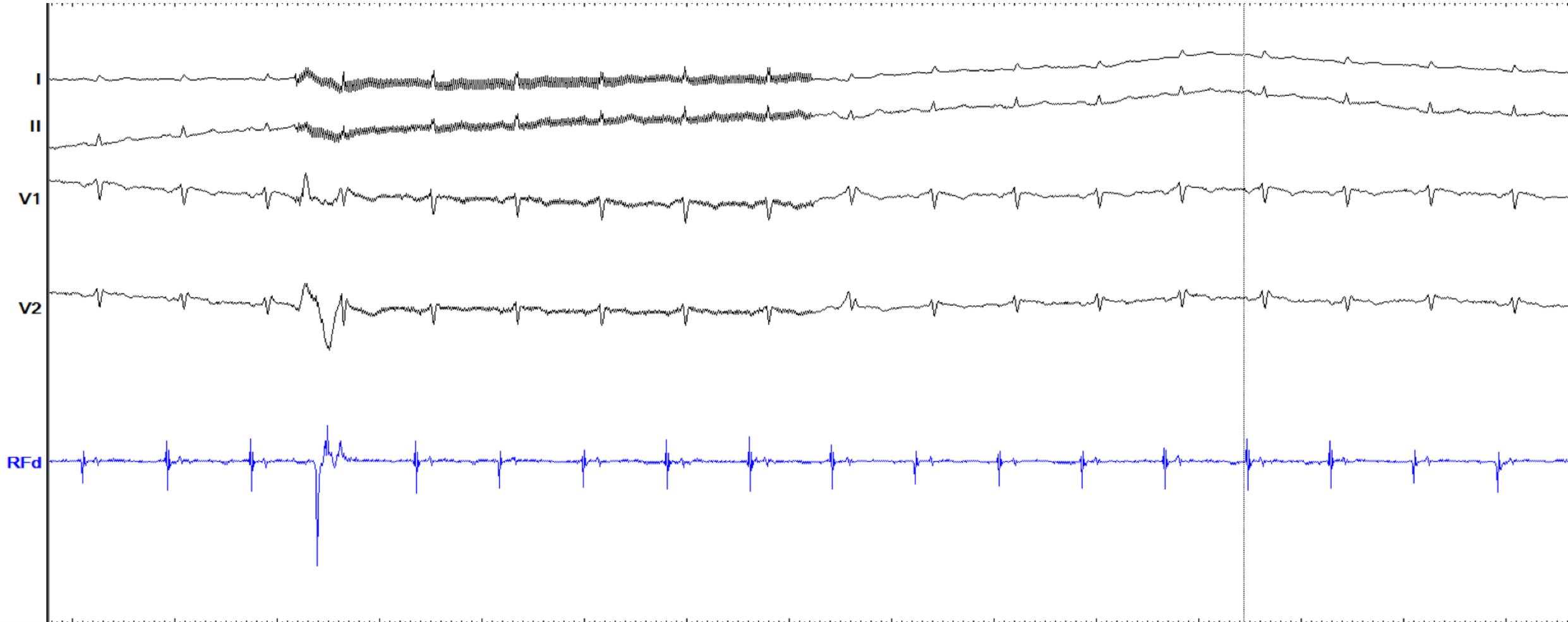


Paralysie sinusale

# Post-ablation RSGP

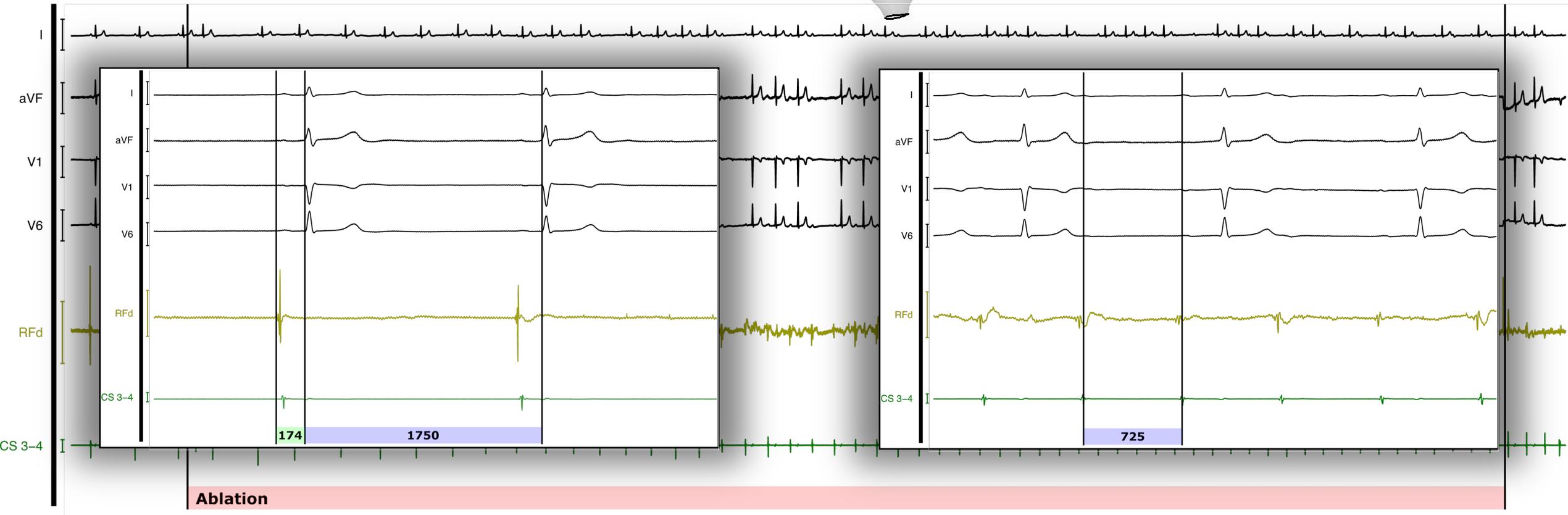
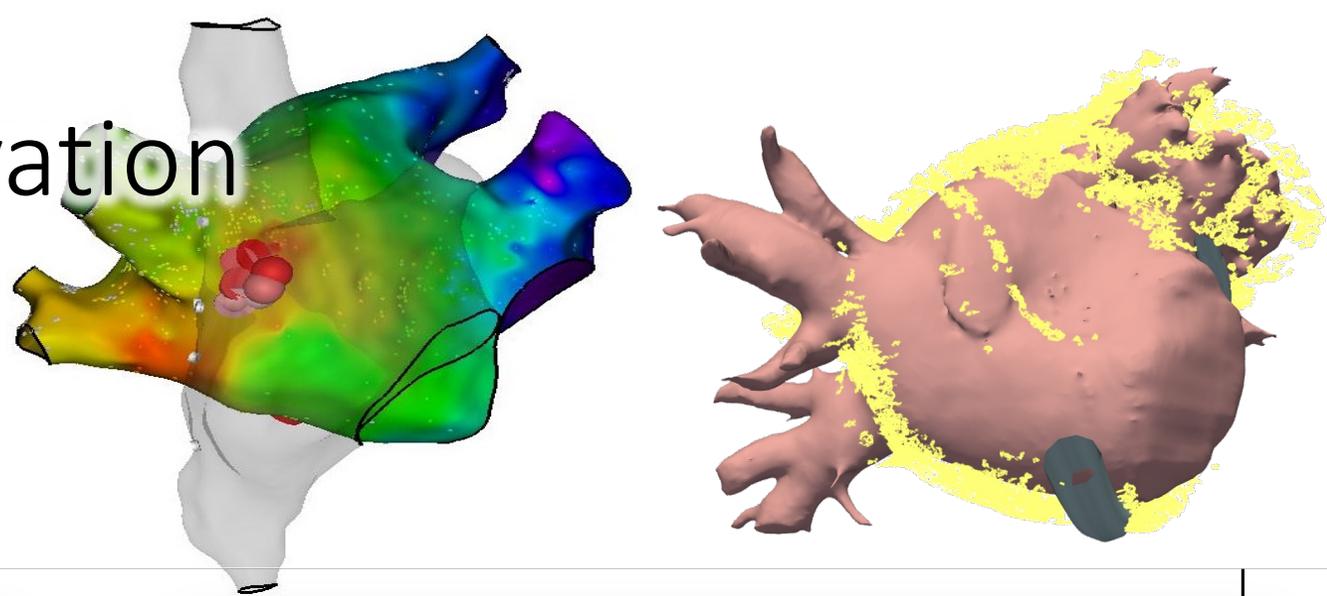


# Post-ablation RSGP + LPMGP



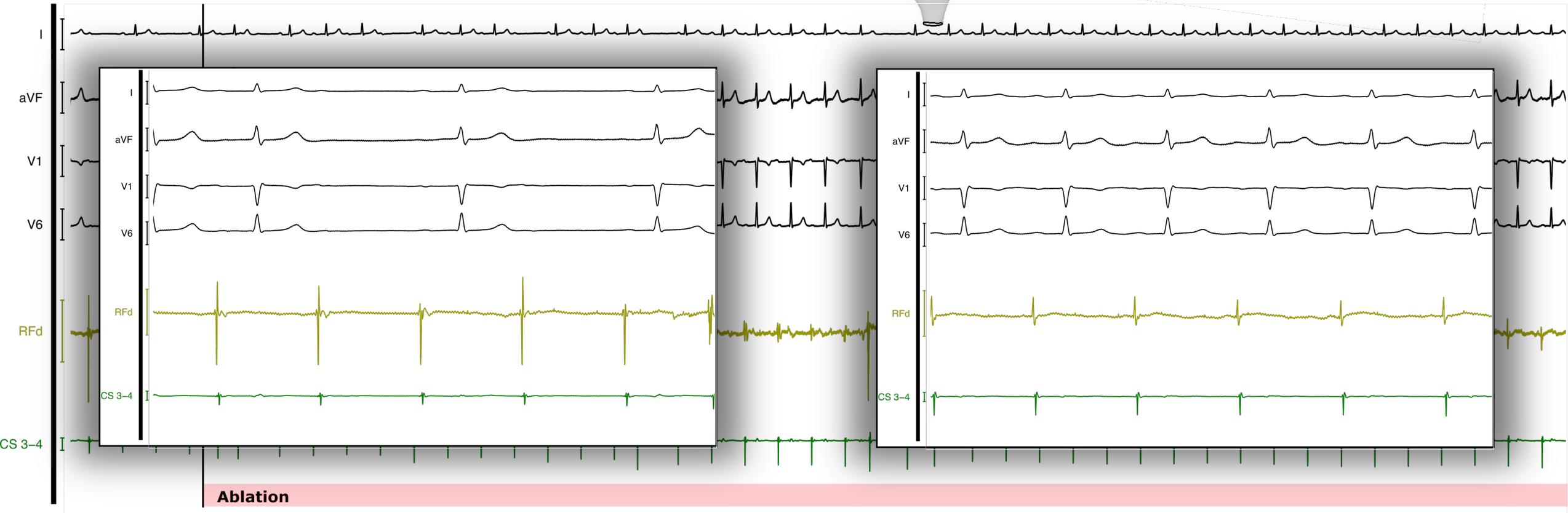
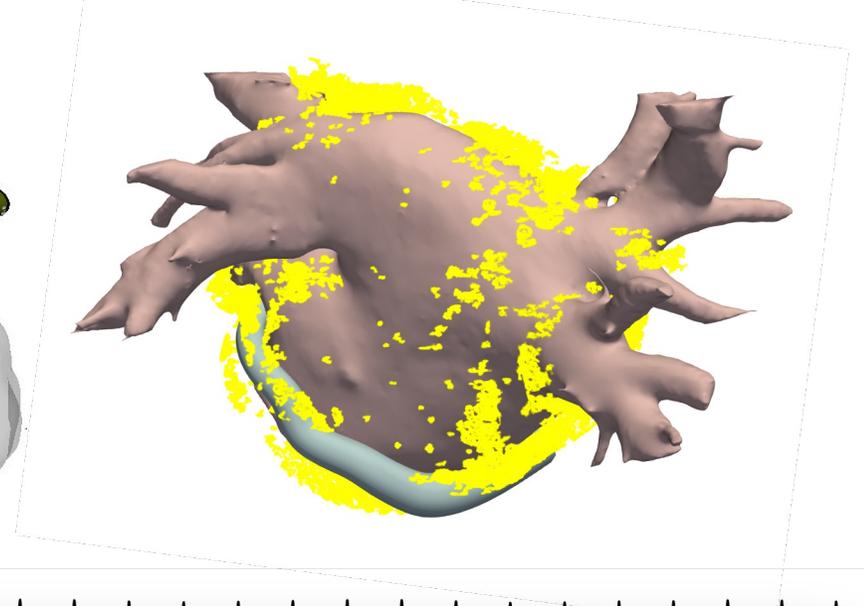
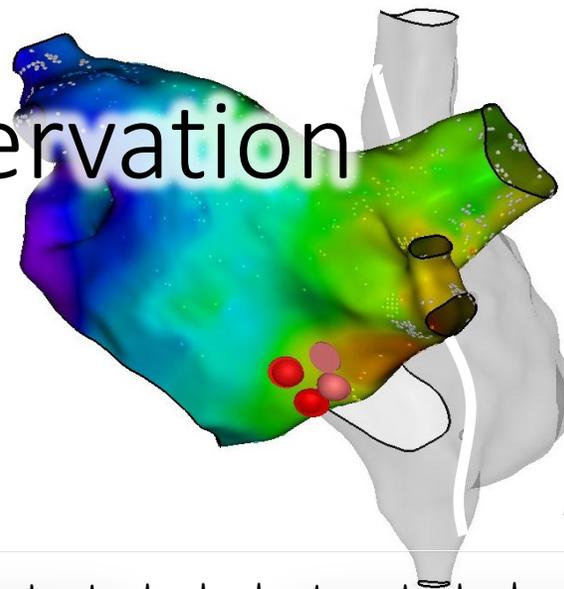
# Sélectivité de l'innervation

## Dénervation sinusale



# Sélectivité de l'innervation

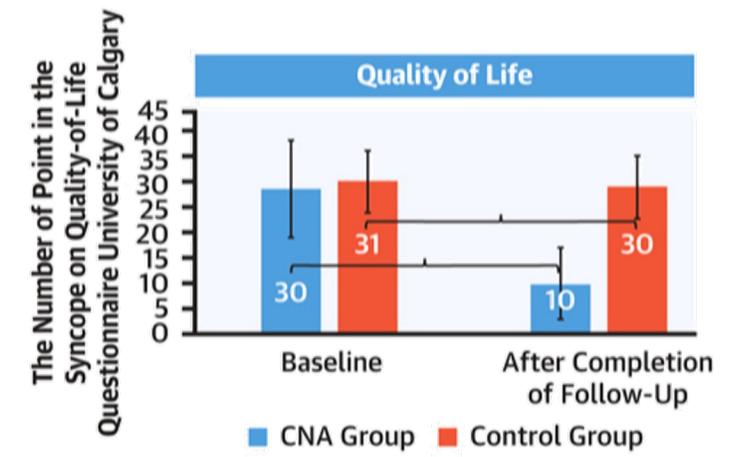
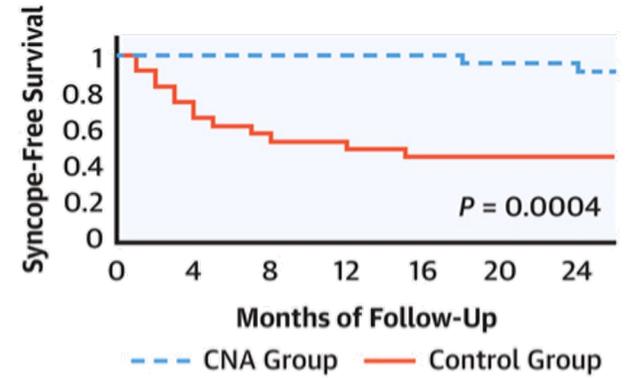
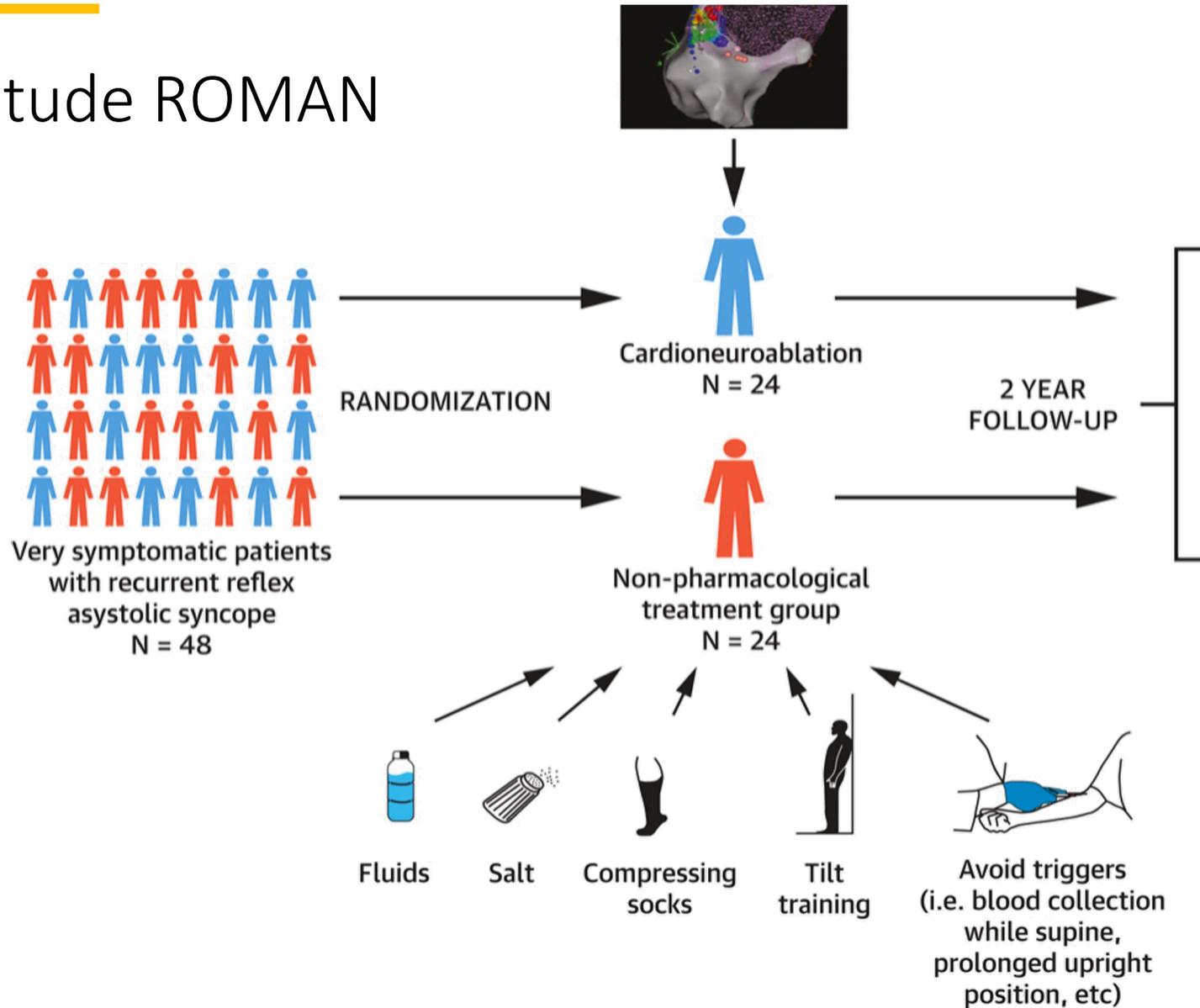
## Dénervation AV



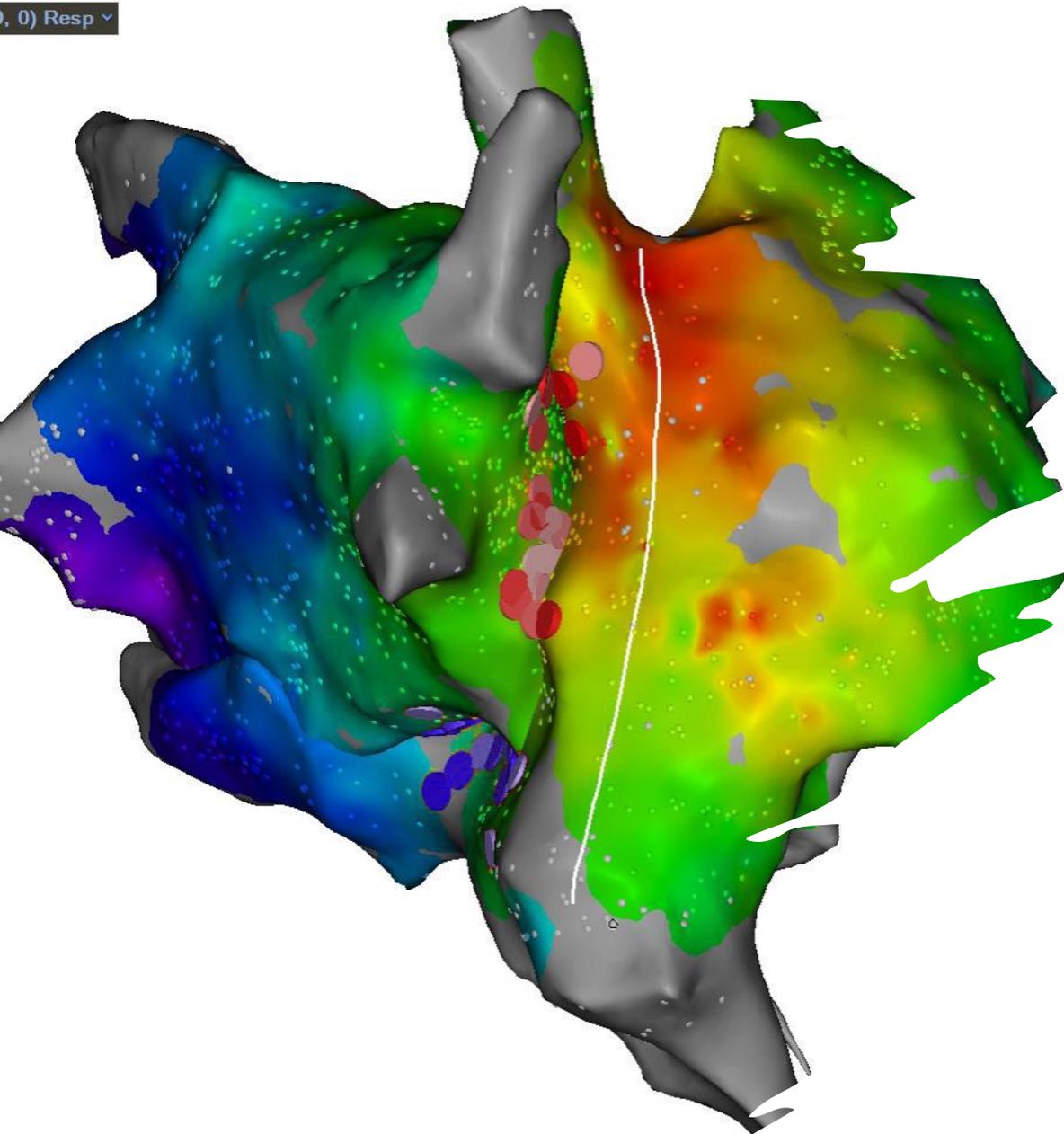


Author, year	VVS cases (n)	Method of CNA	Ablated GP	CNA approach	Syncope recurrence (%)	Mean follow up (months)
Pachon et al. <i>Europace</i> 2015	VVS = 5, AVB = 7 SND = 13	SM + AA	RAGP, RIGP, LIGP	BiA	0	9
Pachon, et al. <i>Europace</i> 2011	VVS = 43	SM + AA	RAGP, RIGP, LIGP	BiA	7	45
Pachon, et al. <i>CAE</i> 2020	VVS=80	SM + AA	RAGP, RIGP, LIGP	BiA	20	40
Yao et al. <i>Circ AE</i> . 2012	VVS = 10	HFS	RAGP, LSGP, LIGP	LA	0	30
Rebecchi et al. <i>JICE</i> 2012	VVS = 2	AA	RAGP, RIGP, LIGP,	RA	0	6.5
Aksu et al. <i>PACE</i> 2016	VVS = 8, AVB = 7 SND = 7	SM+AA+HFS	RAGP, RIGP, LIGP	BiA	0	11
Sun et al. <i>JAHA</i> 2016	VVS = 57	HFS (n = 10), AA (n = 37)	RAGP, RIGP, LSGP, LIGP LLGP	LA	0 (HFS) 13 (AA)	36
Rivarola et al. <i>Circ AE</i> 2017	VVS = 5, AVB = 10	AA	RAGP, RIGP, LSGP, LIGP	BiA	0 (VVS) 40 (AVB)	22
Debruyne et al. <i>Circ AE</i> 2018	VVS = 20	AA	RAGP	RA	25	6
Piotrowski et al. <i>Kardiol Pol</i> 2018	VVS = 3	AA	RAGP, RIGP	BiA	0	13
Hu et al. <i>Heart Rhythm</i> . 2019	VVS = 123	AA + HFS	RAGP, RIGP, LSGP, LIGP	LA	4	21
Aksu et al. <i>JICE</i> 2020	VVS = 46, AVB = 11 SND= 8 BiA = 58, RA = 7	AA + HFS (Group 1) SM+AA+HFS (Group 2)	BiA: RAGP, RIGP, LSGP, LIGP RA: RAGP, LIGP	BiA RA	0 (VVS) 27 (AVB) 0 SND	VVS = 15 AVB = 35 SND = 25
Aksu et al. <i>Europace</i> 2020	VVS = 51	AA + HFS + AA	BiA: RAGP, RIGP, LSGP, LIGP RA: RAGP, LIGP	BiA	6	11
May et al. <i>Indian Pace</i> 2020	VVS = 26	AA (CB)	RAGP, RIGP, LSGP	LA	16	20
Lu et al. <i>Chin Med. J.</i> 2020	VVS = 13	SM + AA	RAGP, RIGP	RA	16	13
Aksu et al. <i>JICE</i> 2021	VVS=51, control=50	AA	?	?	6 (VVS) vs 18 (control)	20
Calo et al. <i>JICE</i> 2020	VVS = 18	AA	RAGP, RIGP	RA	16	34
<b>Total</b>	<b>N = 624</b>				<b>10 (0-40)</b>	<b>21 (5-45)</b>

# Etude ROMAN



- Piotrowsky *et al.* JACC:EP 2022
- 10.1016/j.jacep.2022.08.011



# Conclusion

- La Cardioneuablation est une solution prometteuse
- Procédures avec peu de complications, bons résultats
- Etudes cliniques montrant un bénéfice
- Manque :
  - Sélection de la population
  - Standardisation de la procédure
  - Suivi au long cours