



ENMG & Anastomoses nerveuses

F. Wang

Ateliers d'ENMG – Lyon - 13 juin 2025

Types d'anastomoses du M. Sup

Fréquence : 1-5 anastomoses dans 91 % des membres supérieurs

Au plexus brachial:

Contribution de C7 au faisceau médial,
de C8 au faisceau latéral,
du faisceau latéral au nerf ulnaire

À l'avant-bras (Martin et al, 2019)

- Martin-Gruber : médian-ulnaire, moteur, 19,5 %
- Marinacci : ulnaire-médian, moteur, 0,7%

À la main (Martin et al, 2019)

- Riché-Cannieu : ulnaire (br. profonde)-médian (br. récurrente), moteur, 55,5 % à 100 % (Caetano et al, 2019)
- Berrettini : médian (III^e NDCP)-ulnaire (IV^e NDCP) , sensitif, 60,9%

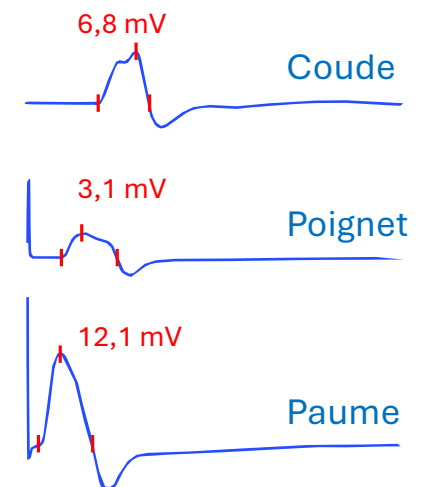
Variations	%
Aucune	8,9
PB	3,3
AB	2,2
M	10
PB + M	51
AB + M	6,7
PB + AB + M	18

Yang et al, 2016
(90 cas anat.)

Pourquoi s'inquiéter des anastomoses ?

- Documenter une variante anatomique, mais pas seulement...
- Ne pas interpréter comme BC ce qui n'en est pas :
 - au poignet (n. médian)
 - à l'avant-bras (n. ulnaire)
 - au coude (n. ulnaire)
- Définir les conditions pour admettre un BC du nerf médian au poignet
- Ne pas réfuter le diagnostic de neuropathie ulnaire au coude (parfois sévère) sur base d'une réponse F strictement normale

APB/médian



N médian

N ulnaire

Muscles
thénariens

Muscles
hypothenariens

Muscle
1^{er} IO dorsal

Br. récurrente

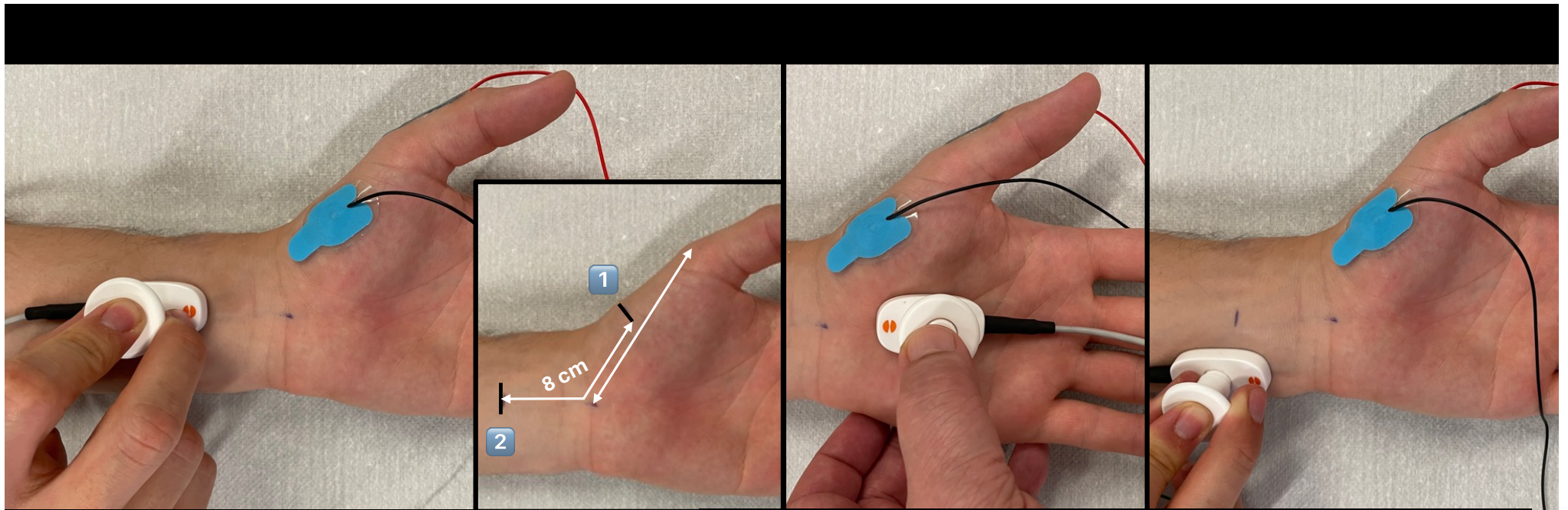
CFP

Br. profonde

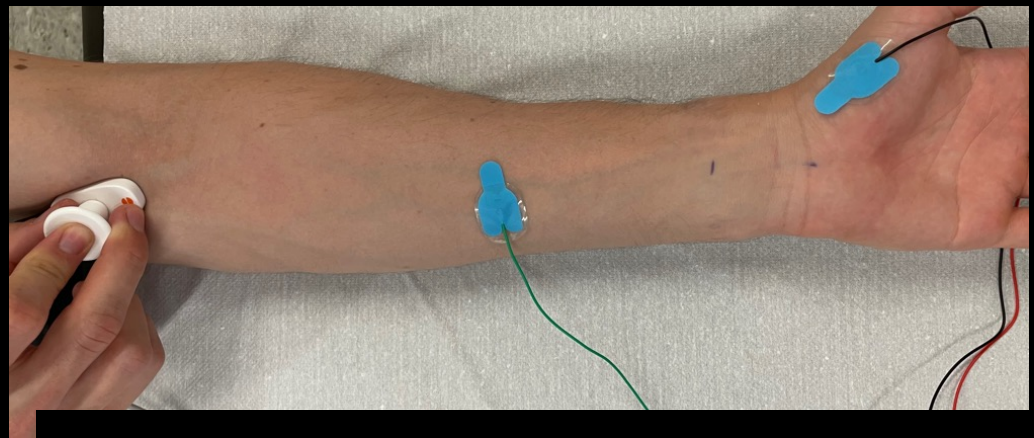
2 nerfs : médian
ulnaire

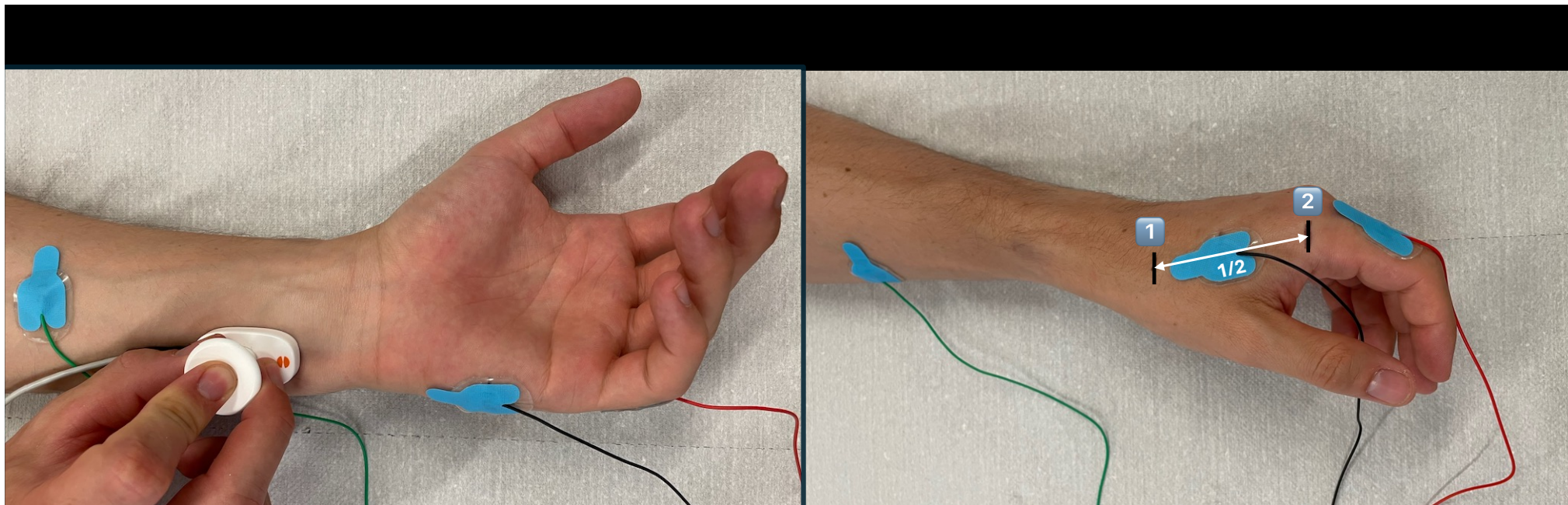
4 muscles : Court abd du pouce
1^{er} IO dorsal
Court fle du pouce
Add du V

6 sites : MED poignet
MED coude
MED paume
ULN poignet
ULN sous-coude
ULN sus-coude

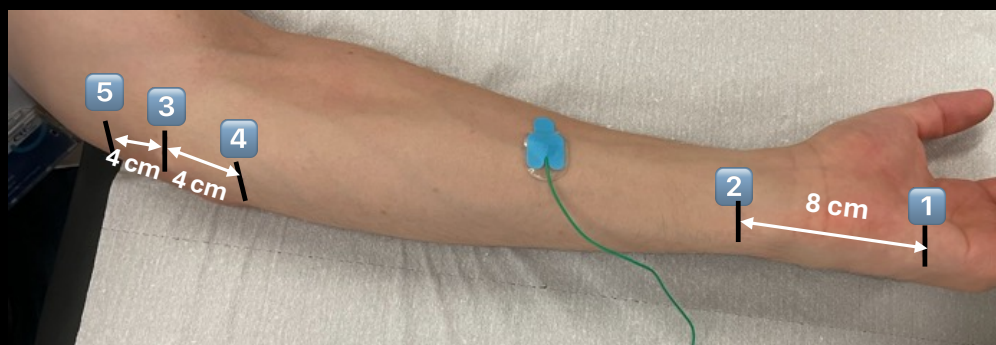


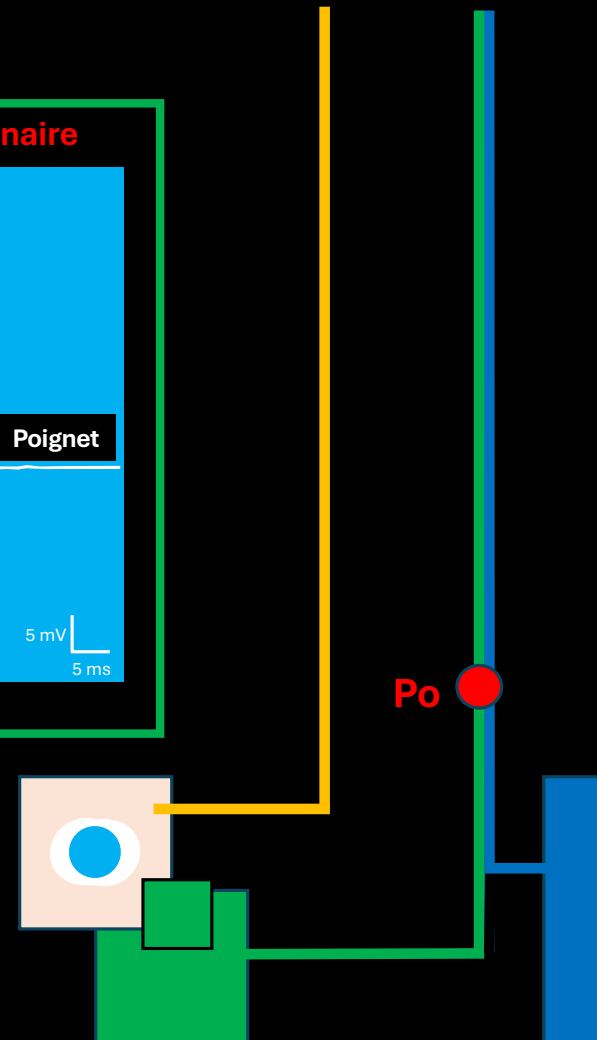
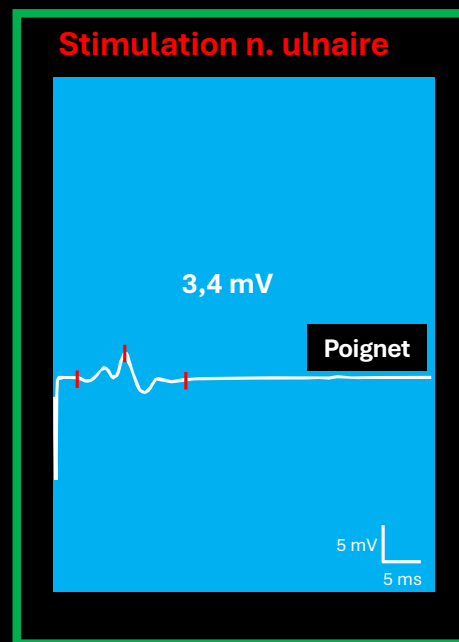
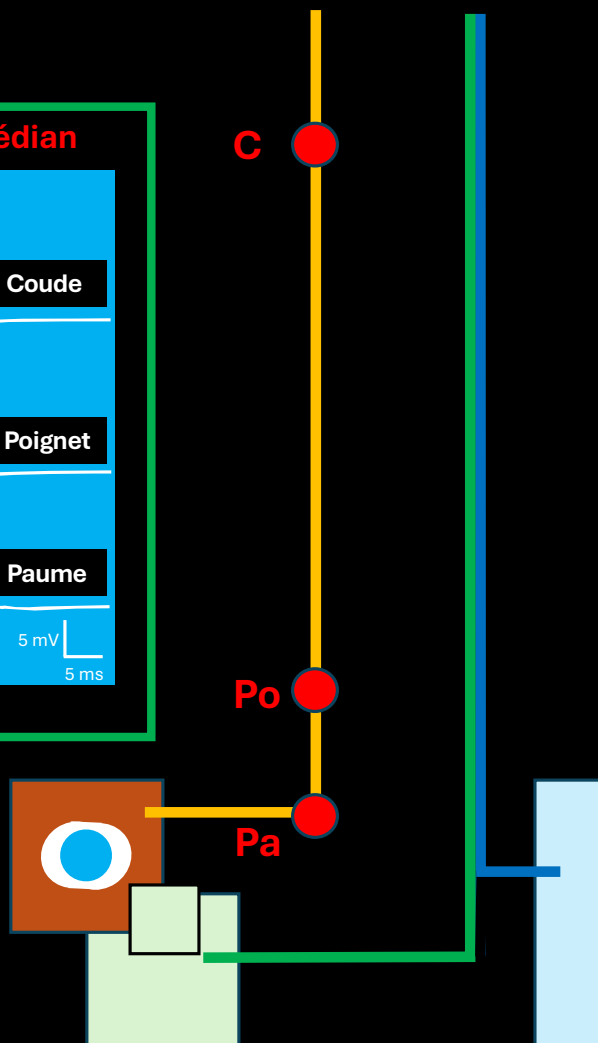
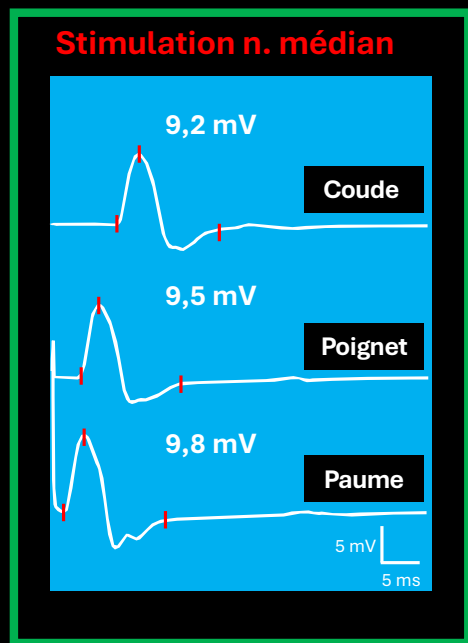
Nerf médian

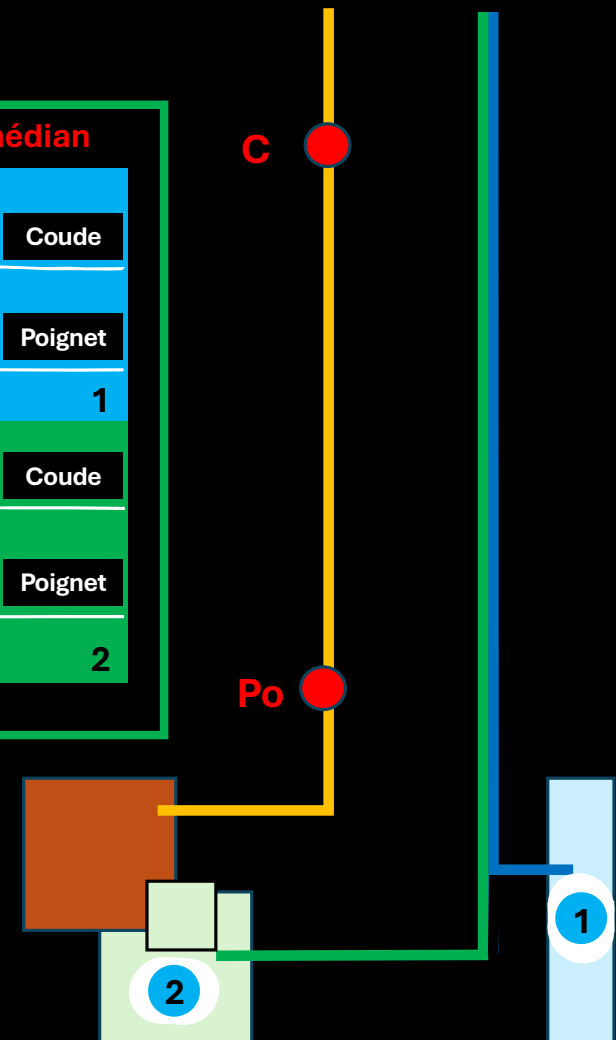
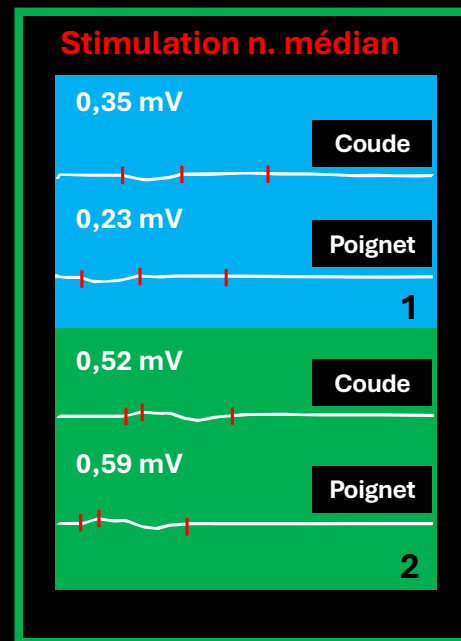
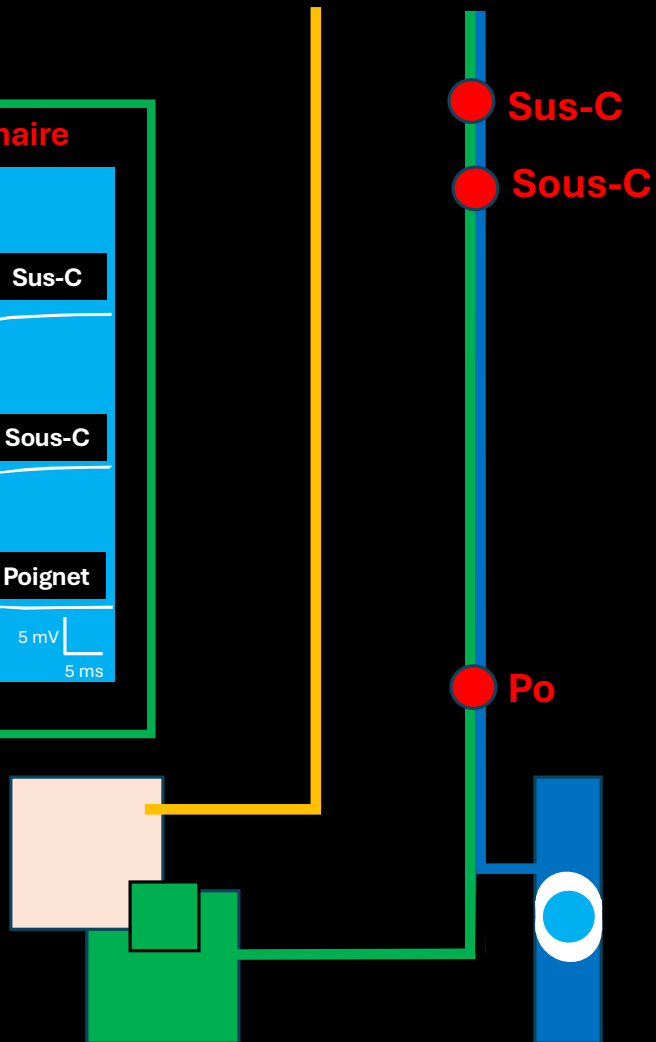
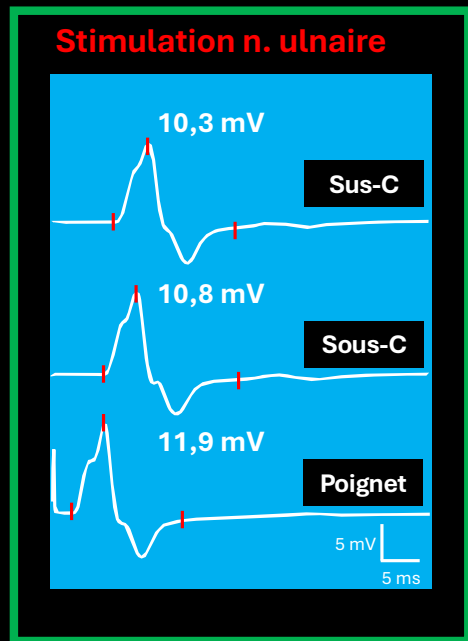




Nerf ulnaire

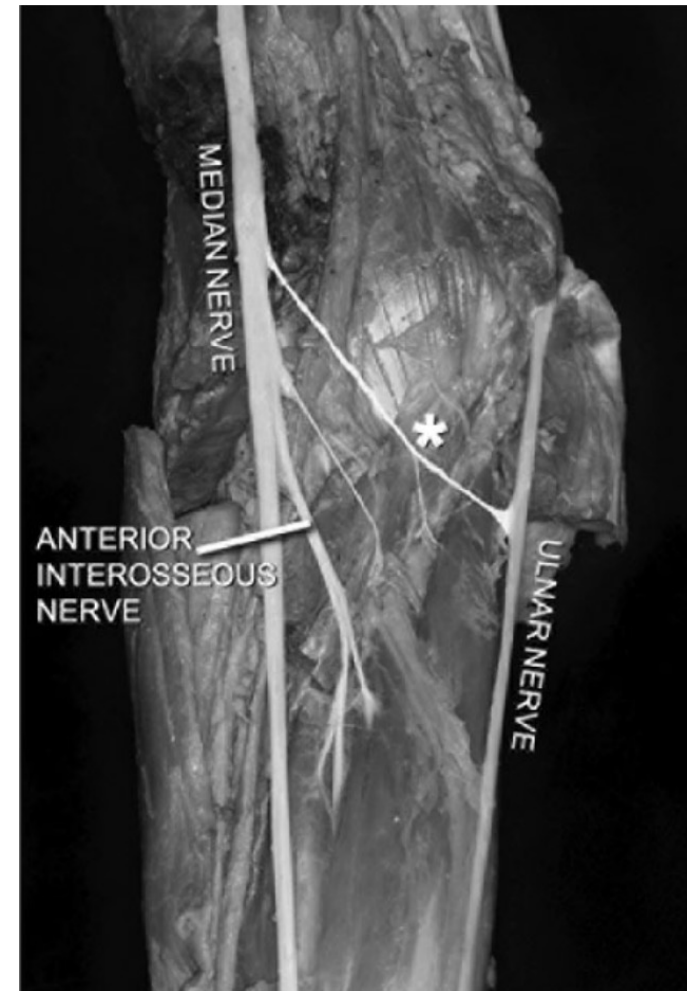






AMG (Martin-Gruber)

- Anastomose médian -> ulnaire à l'avant-bras (1/3 proximal)
- Dans 50 % des cas le(s) rameau(x) communiquant(s) est (sont) issu(s) du nerf interosseux antérieur
- Les fibres motrices de l'anastomose aboutissent :
 - muscles hypothénariens (*abductor digiti minimi*) = Type 1
 - muscles interosseux (1^{er} IO dorsal) = Type 2
 - muscles thénariens (*abductor pollicis brevis*) = Type 3
- Prévalence Type 2 ($\simeq 50\%$) >> Type 1 > Type 3

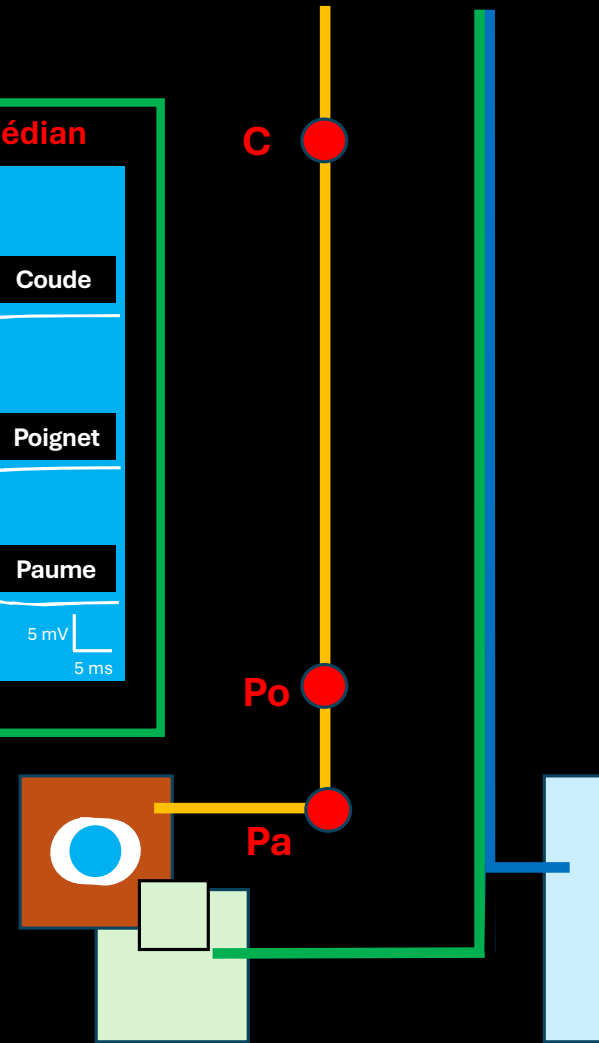
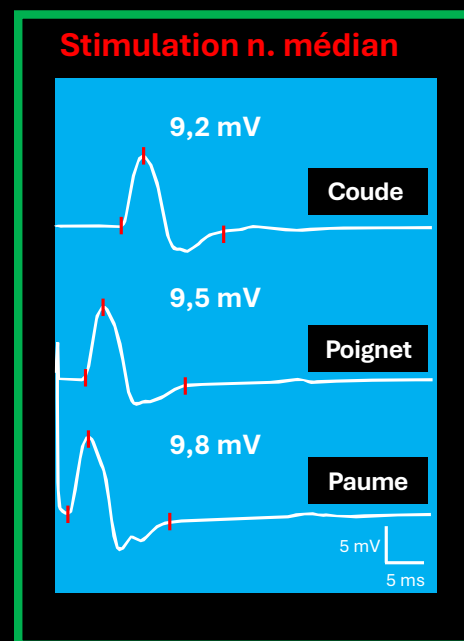
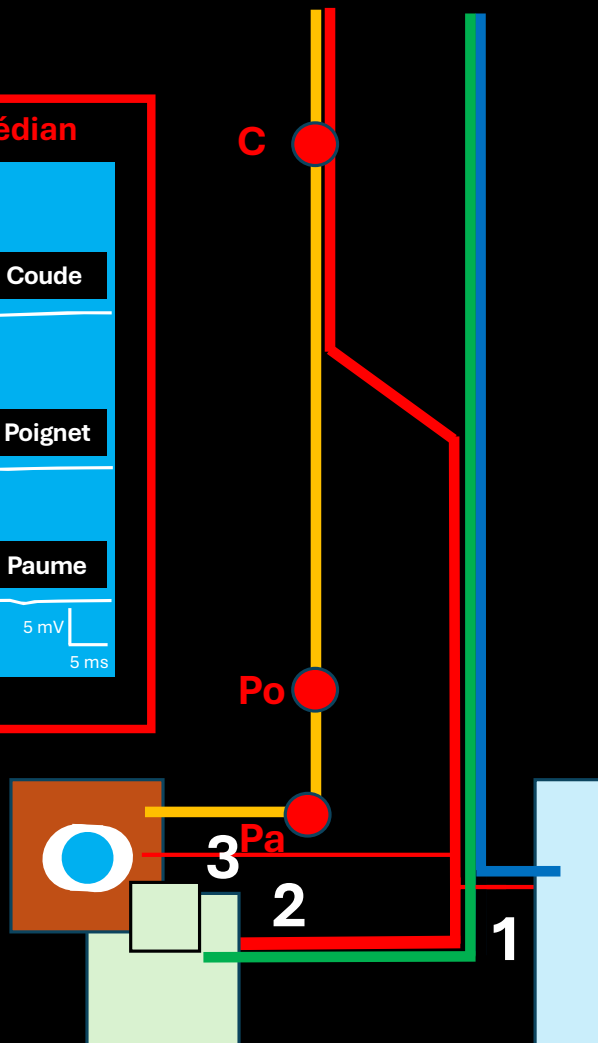
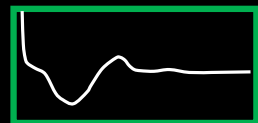
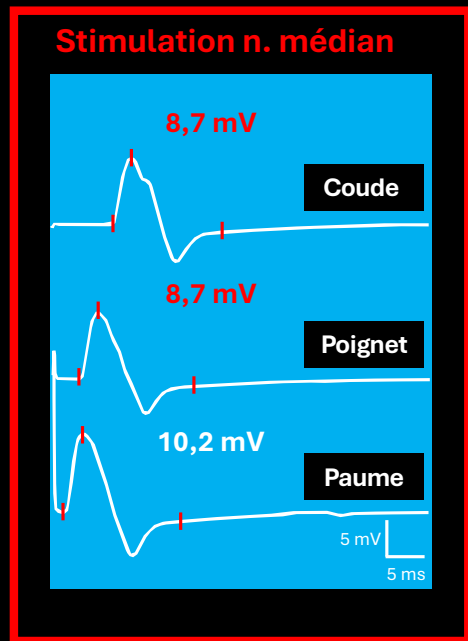


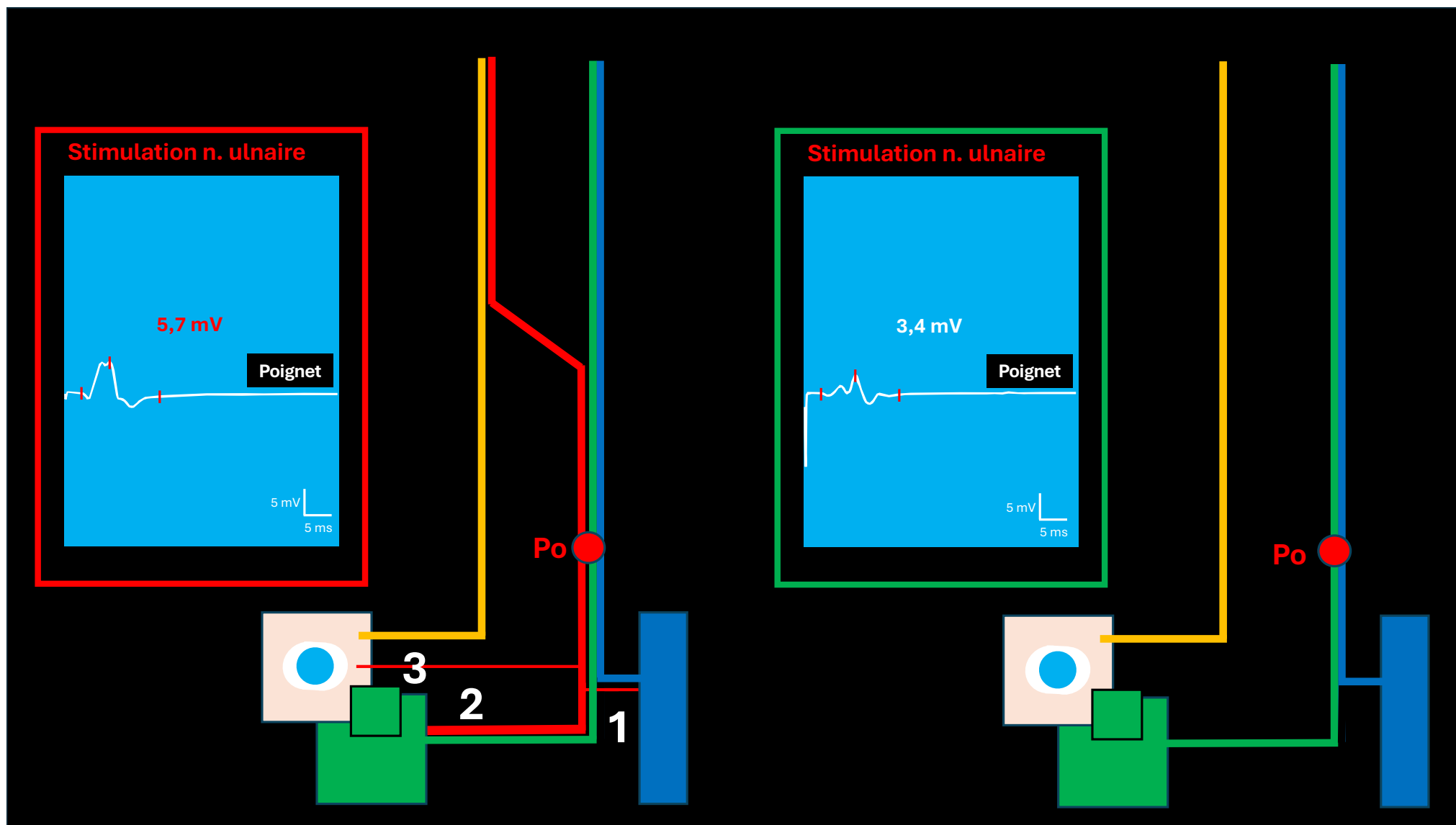
Yang et al, 2016

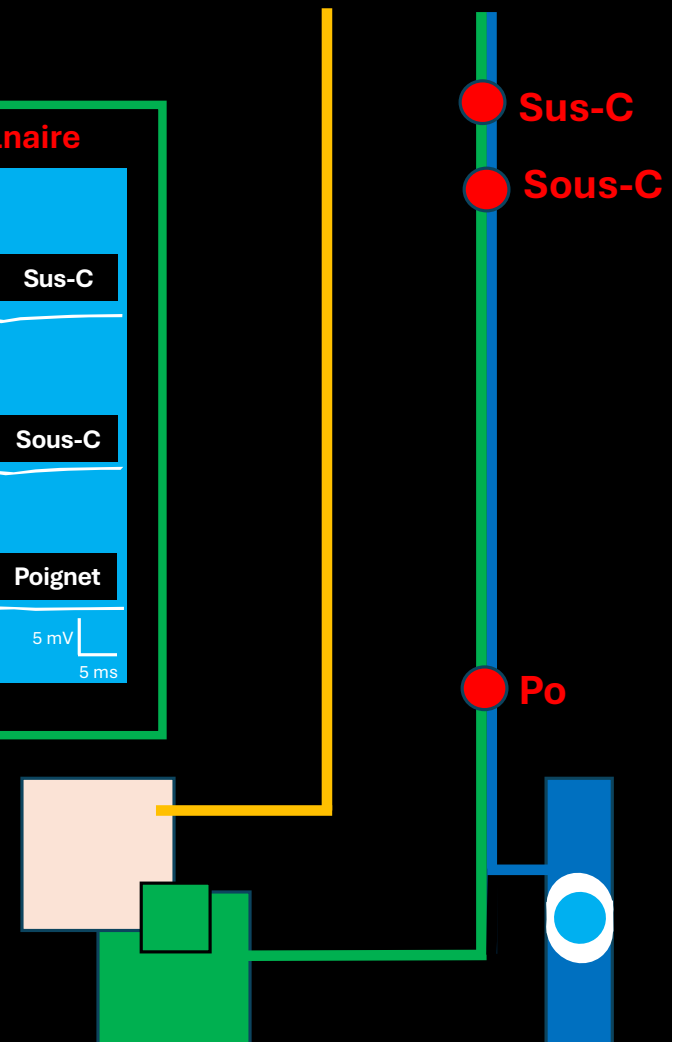
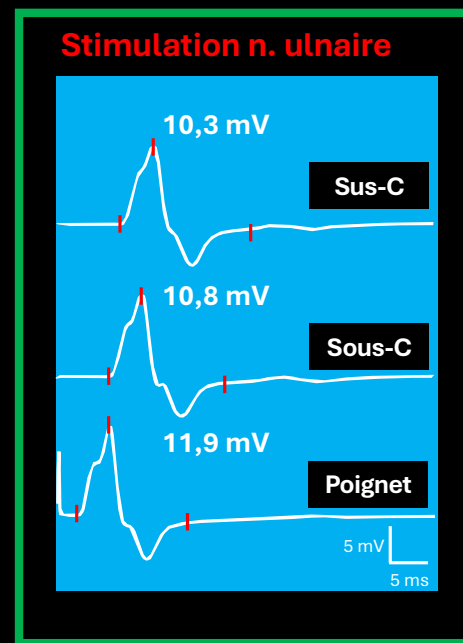
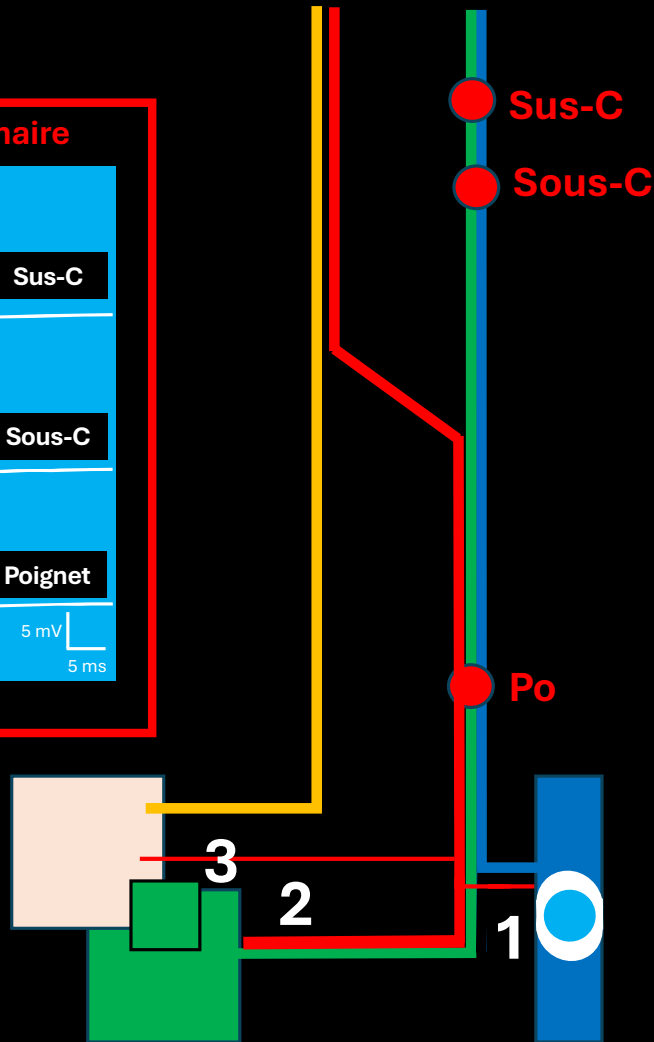
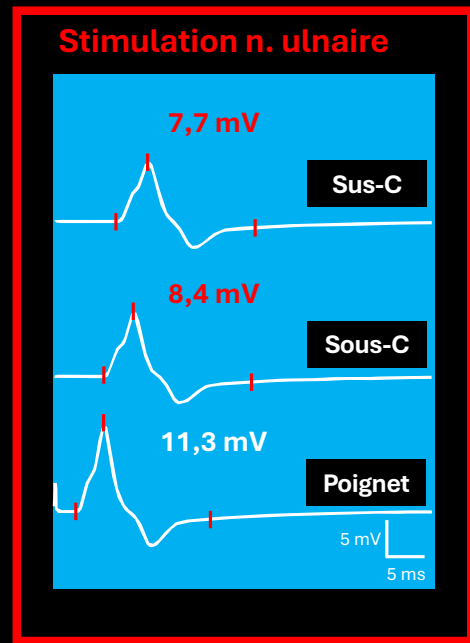


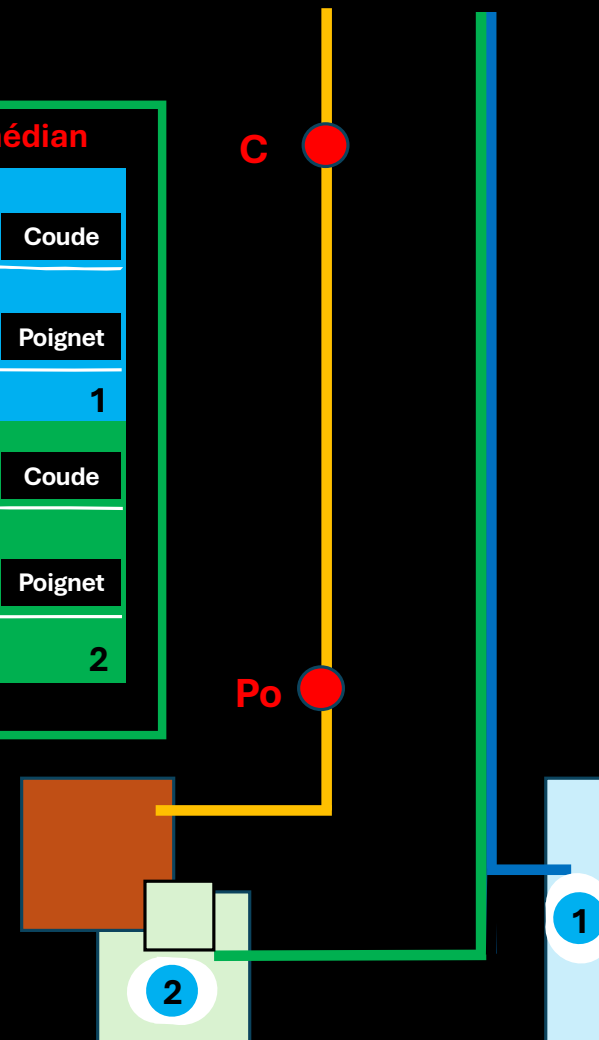
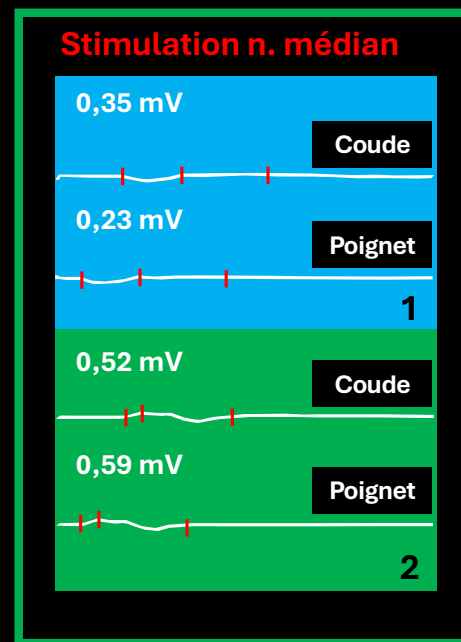
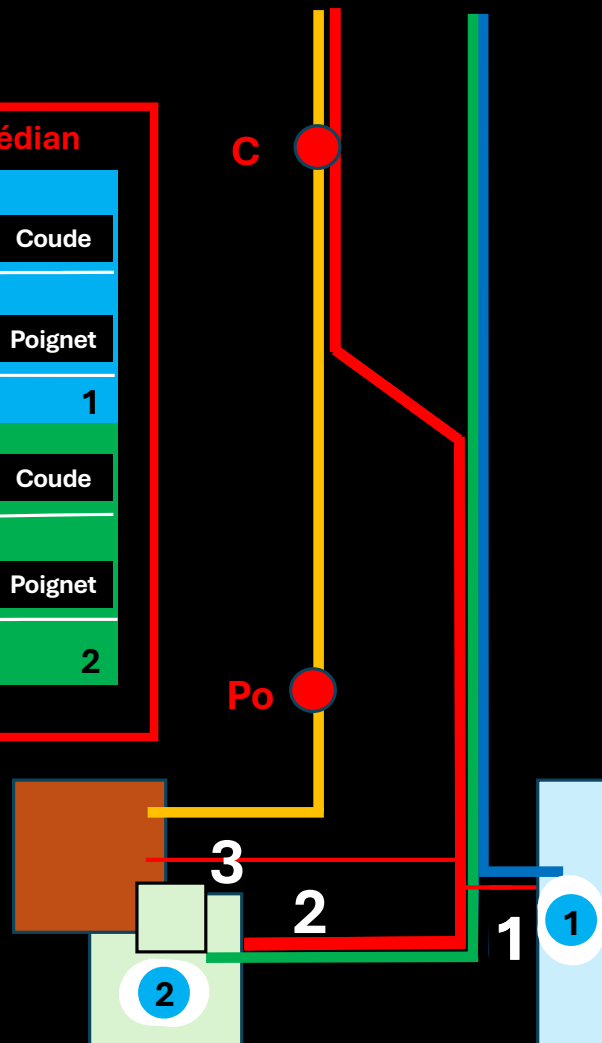
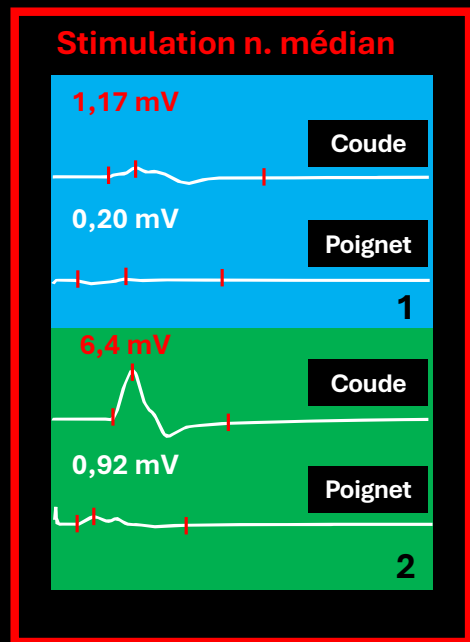
Cas 1

**Documenter une variante anatomique de
type anastomose de Martin-Gruber**





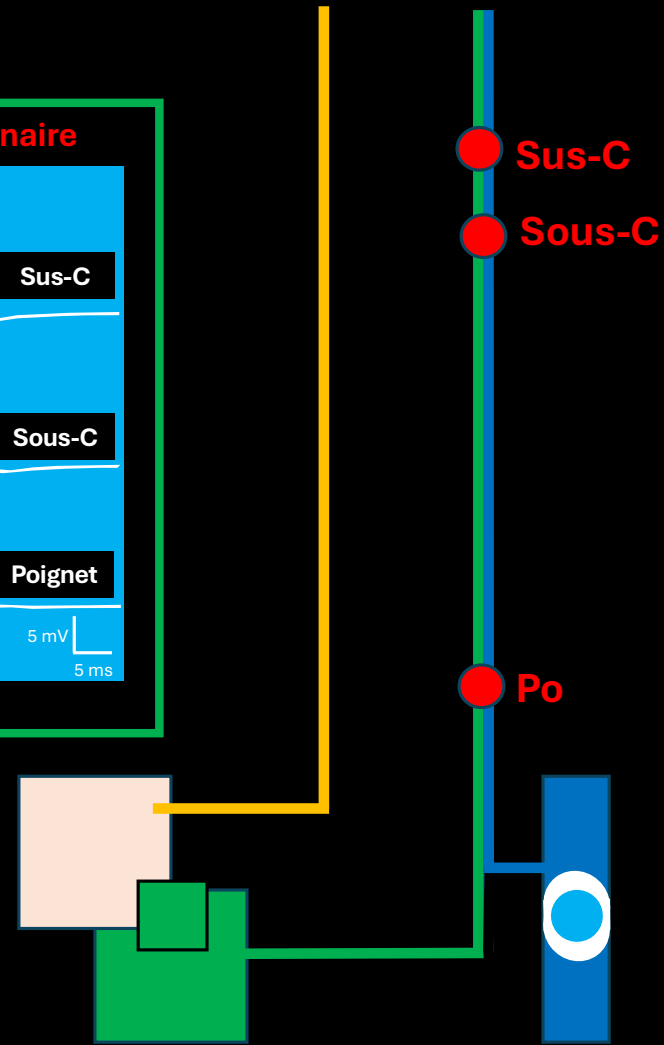
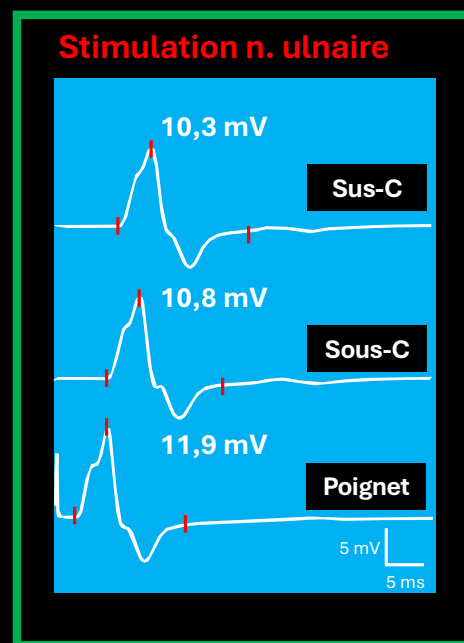
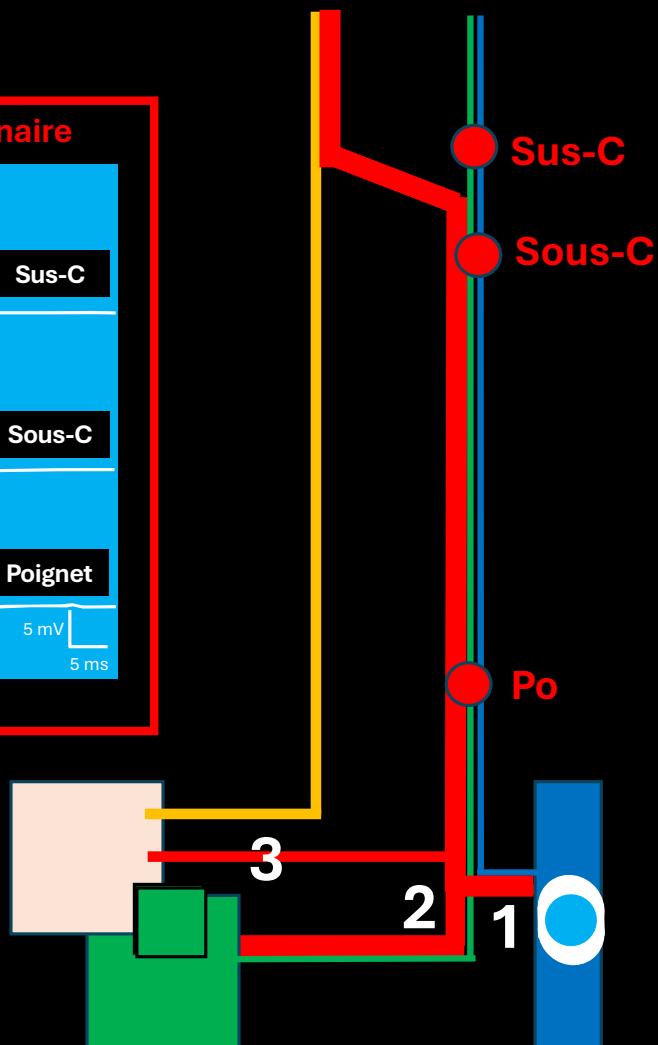
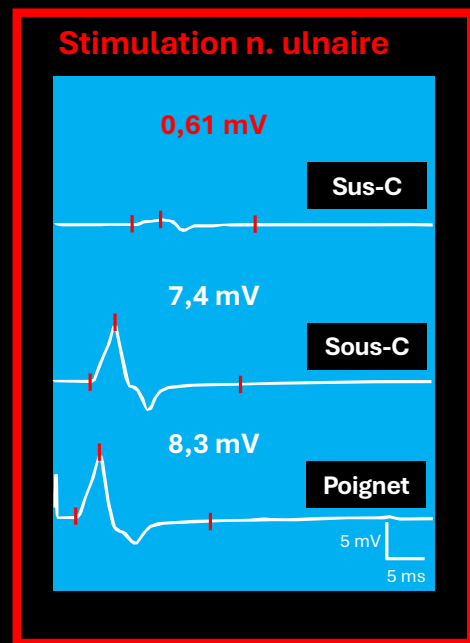


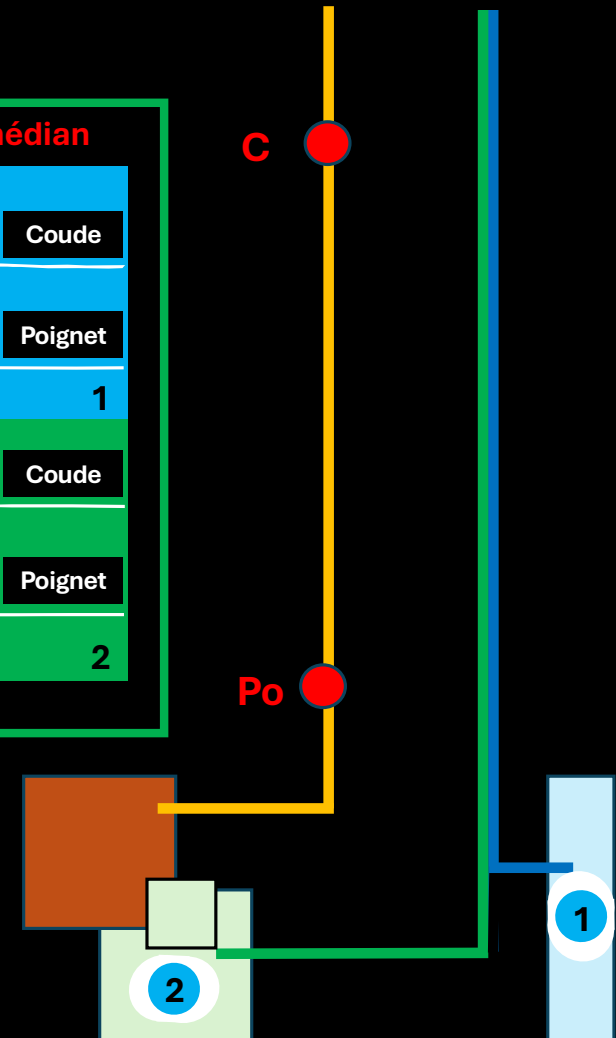
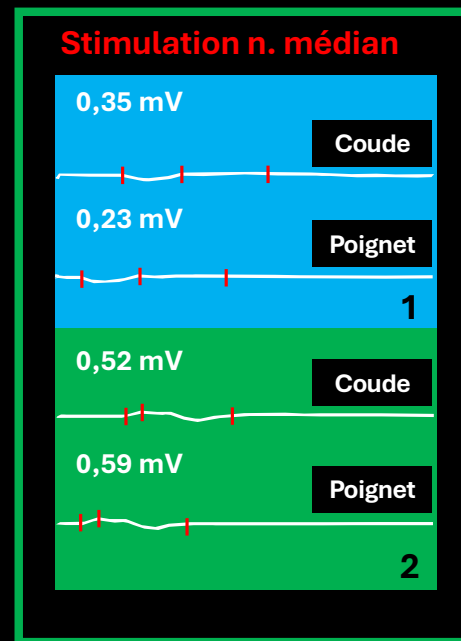
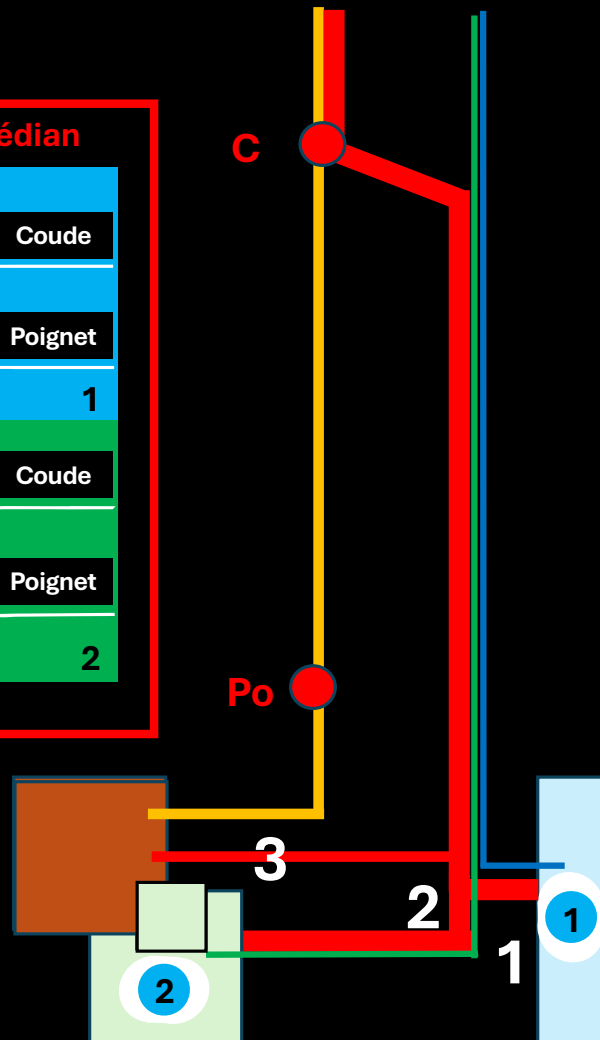
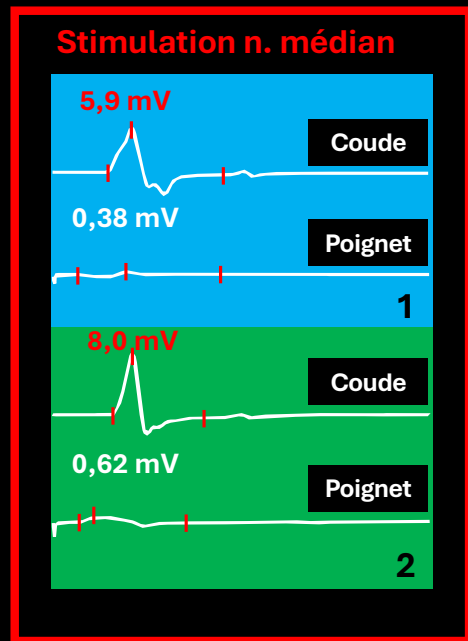




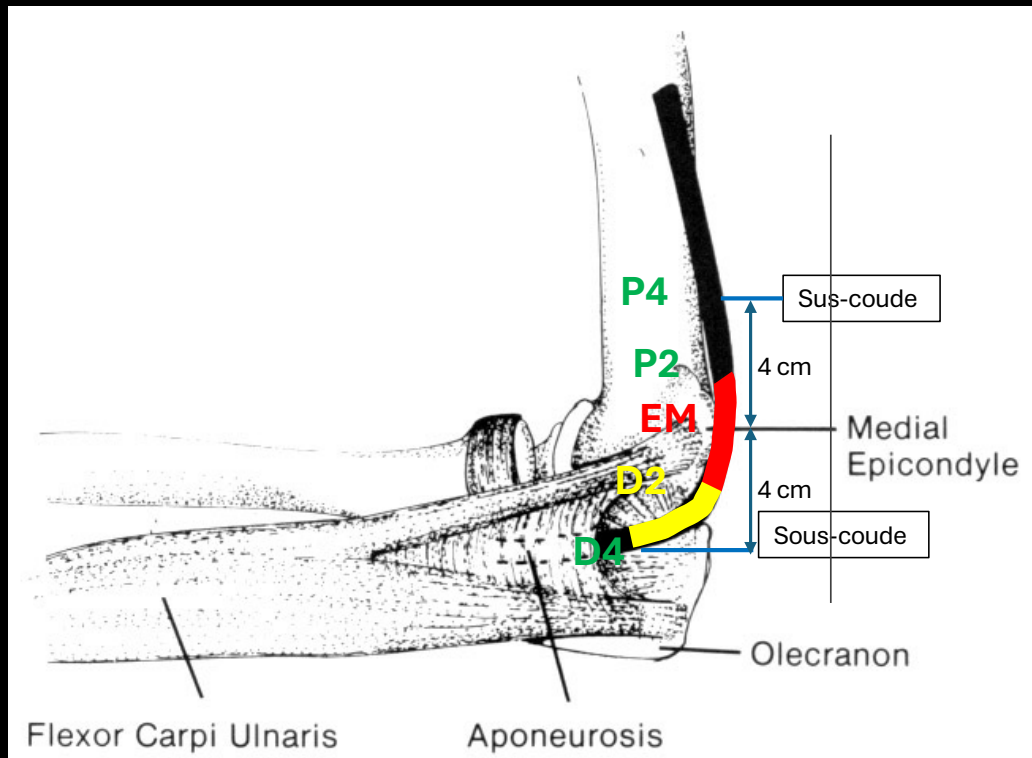
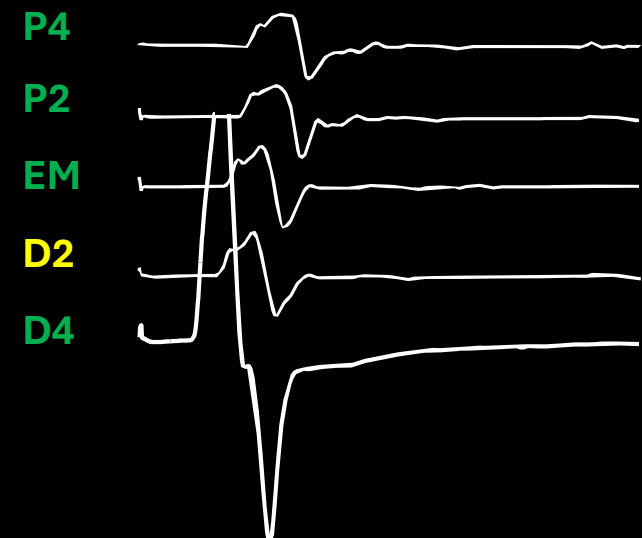
Cas 2

- Ne pas interpréter comme BC ce qui n'en est pas :
 - au poignet (n. médian)
 - à l'avant-bras (n. ulnaire)
 - **BC > 90 % au coude (n. ulnaire) ?**





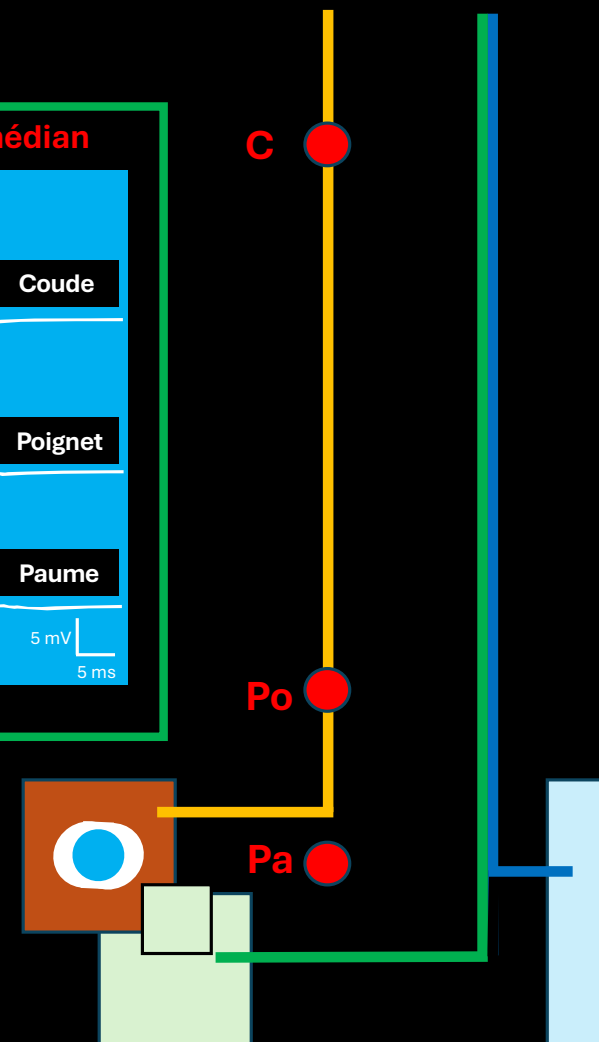
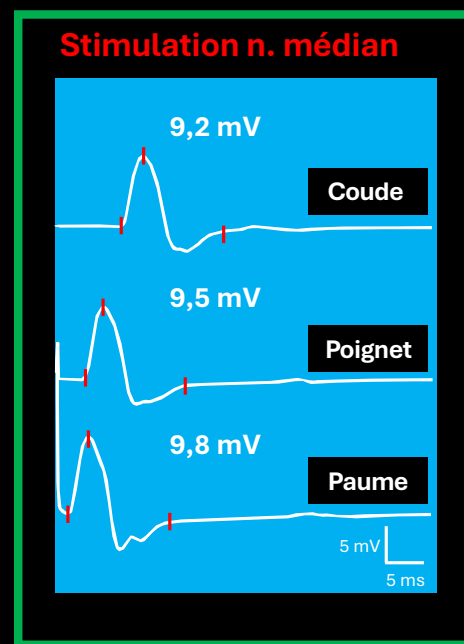
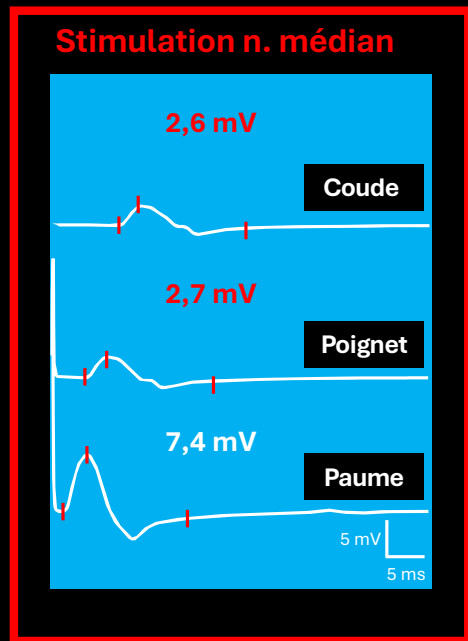
STIMULATION BICENTIMÉTRIQUE AU COUDE



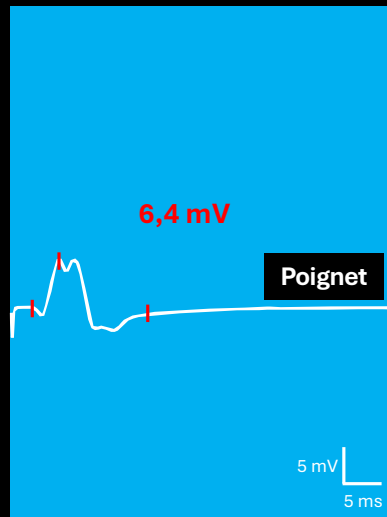


Cas 3

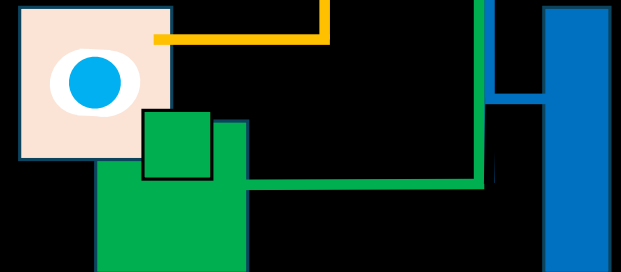
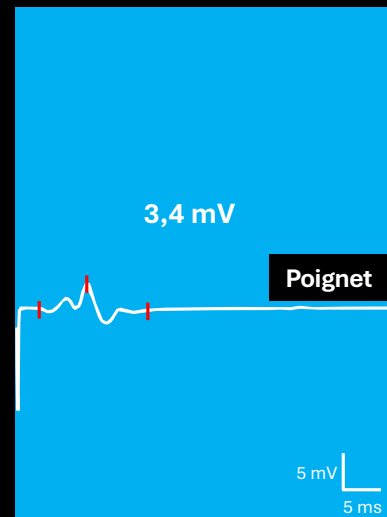
- Ne pas interpréter comme BC ce qui n'en est pas :
 - BC de 63 % au poignet (n. médian) ?
 - à l'avant-bras (n. ulnaire)
 - au coude (n. ulnaire)



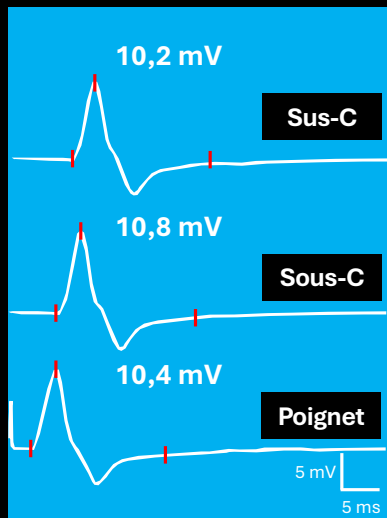
Stimulation n. ulnaire



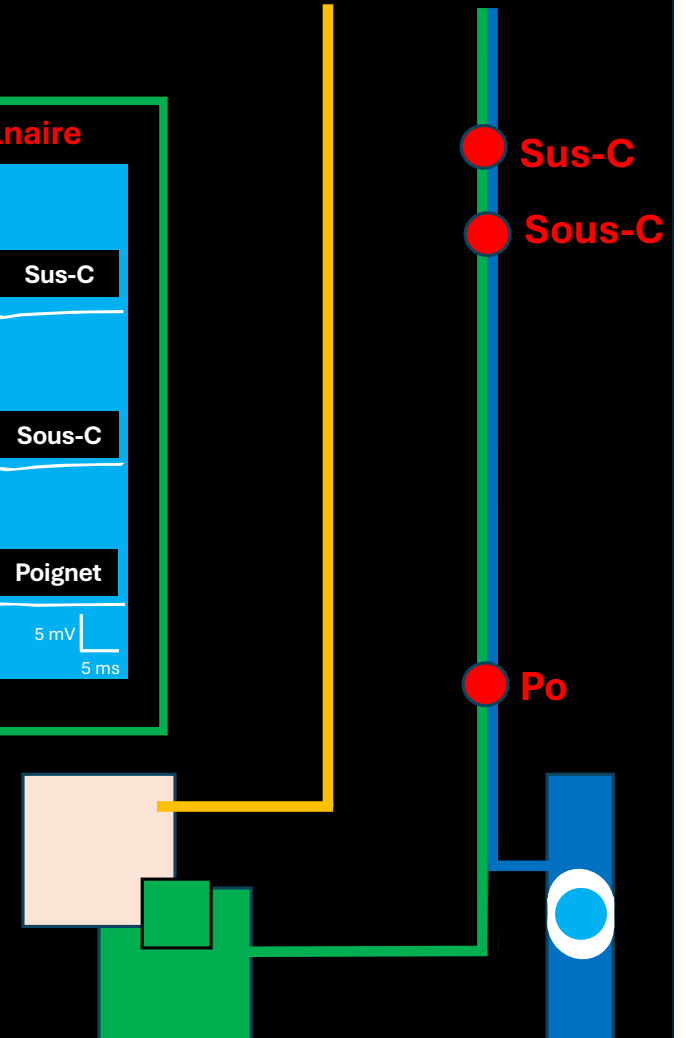
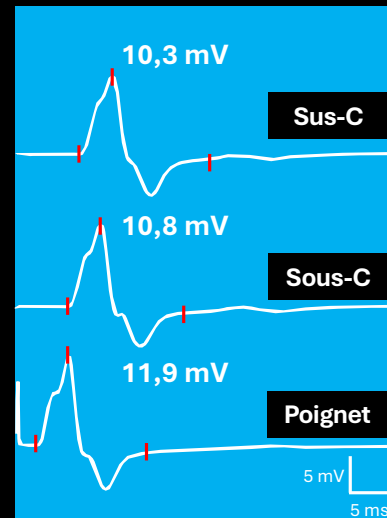
Stimulation n. ulnaire

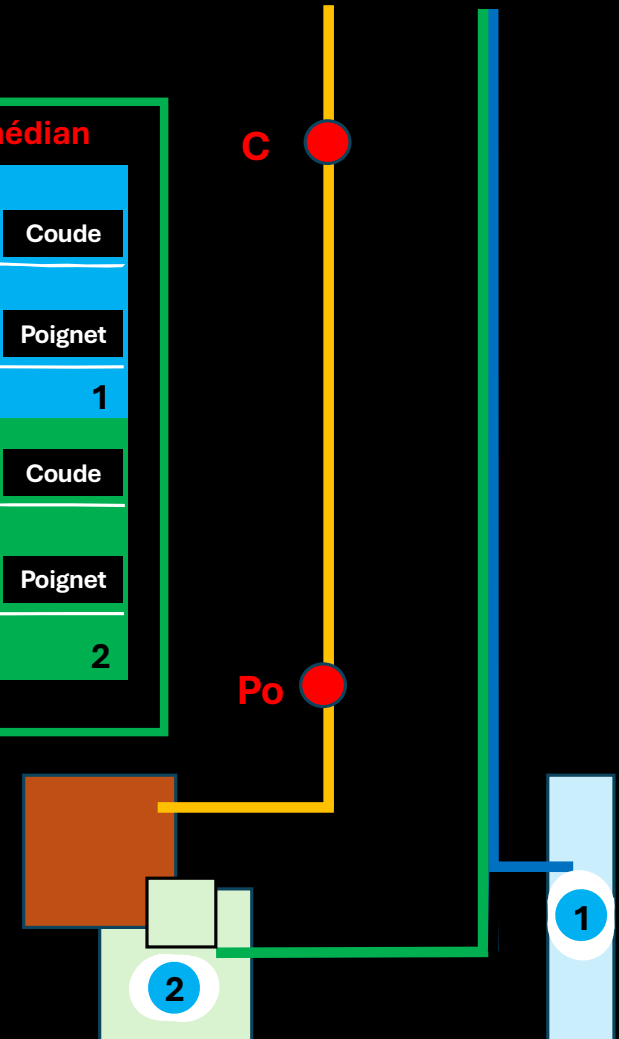
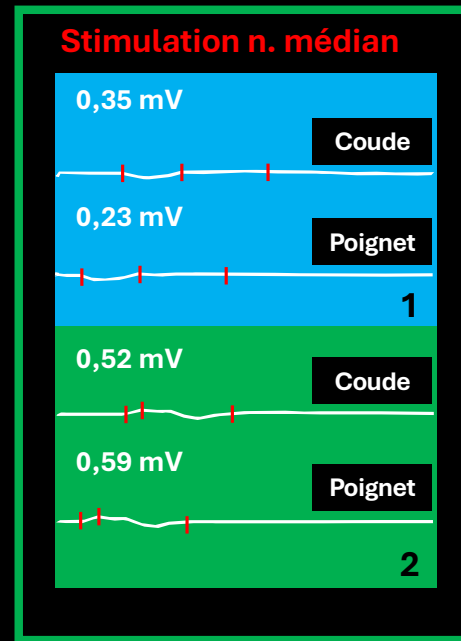
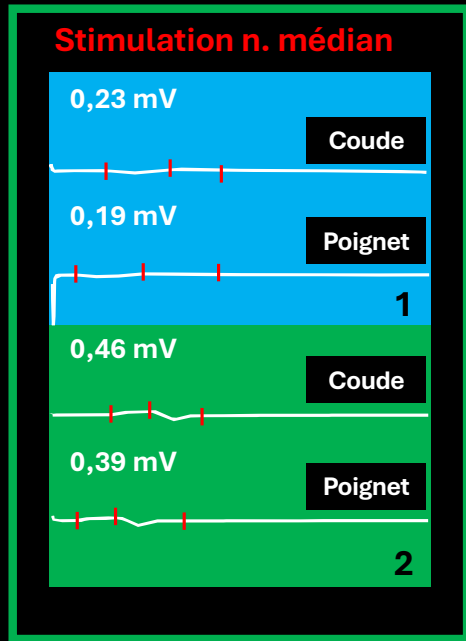


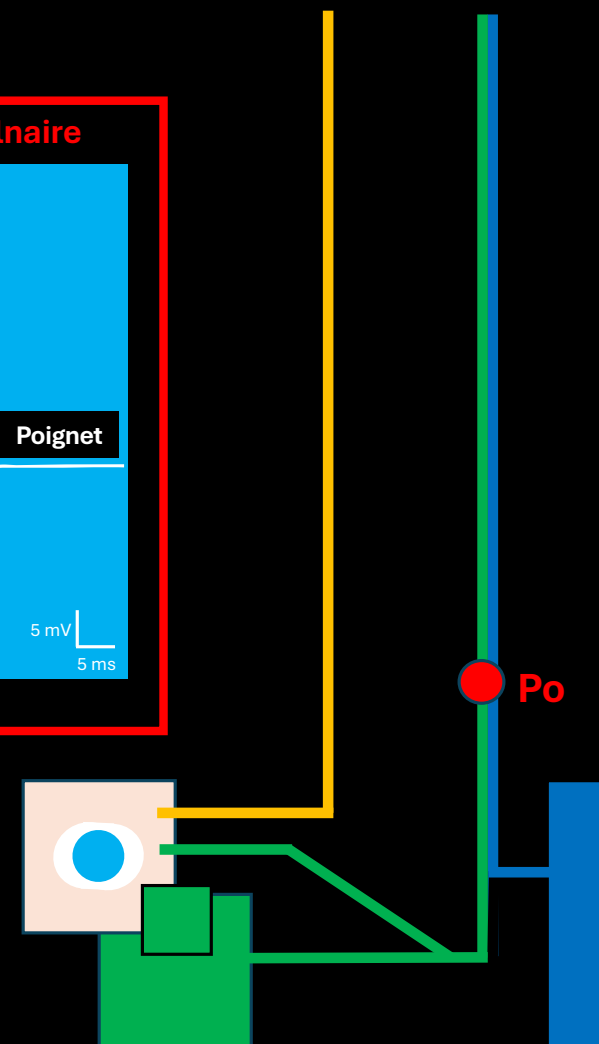
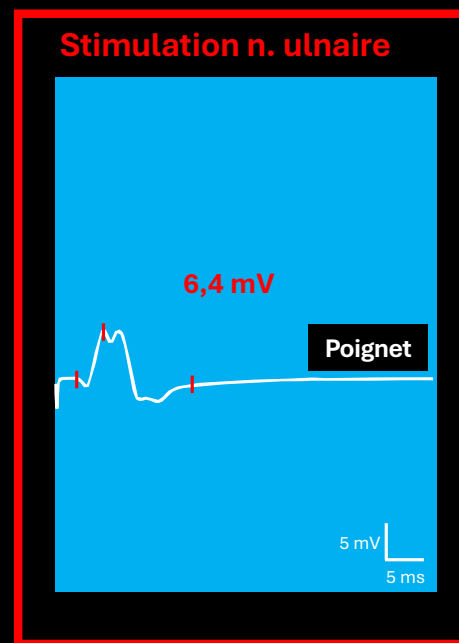
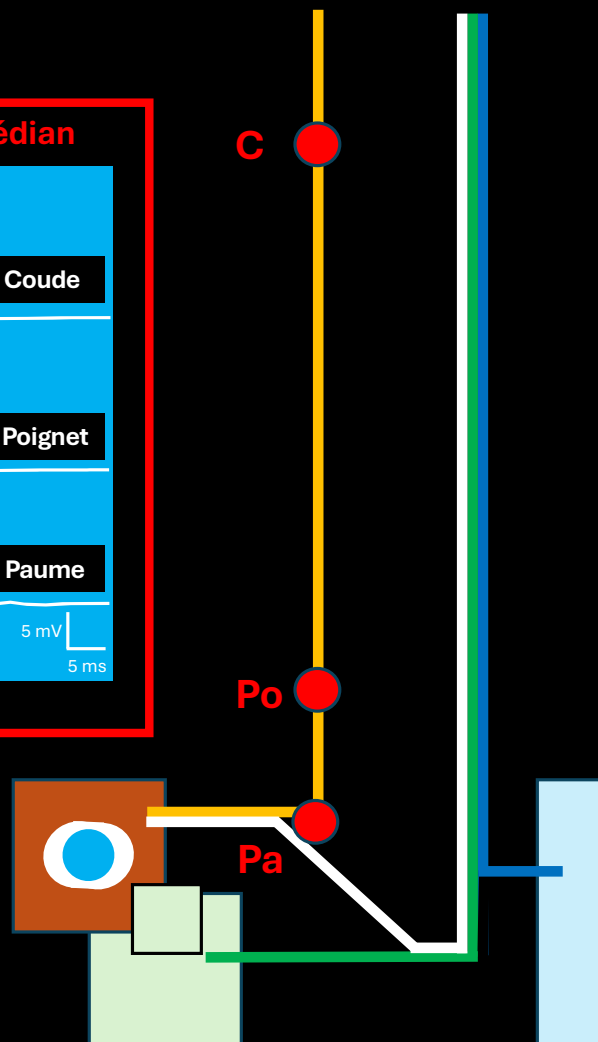
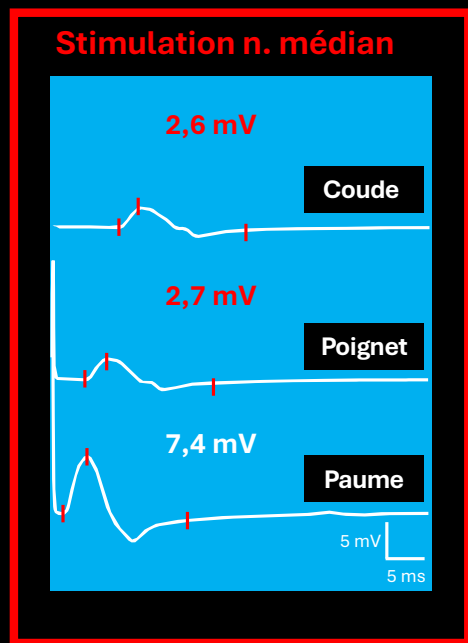
Stimulation n. ulnaire



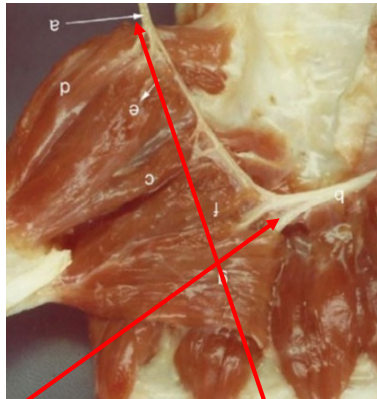
Stimulation n. ulnaire



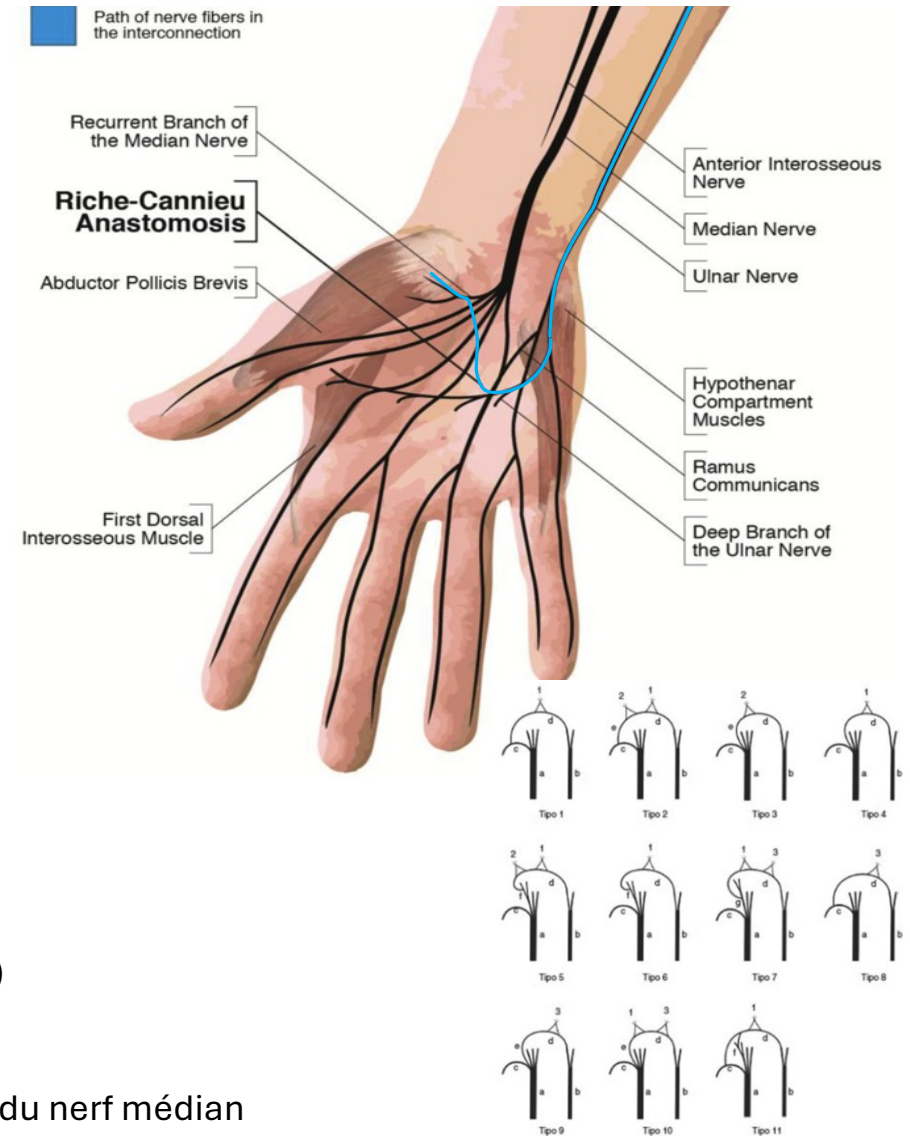




ARC (Riché -Cannieu)



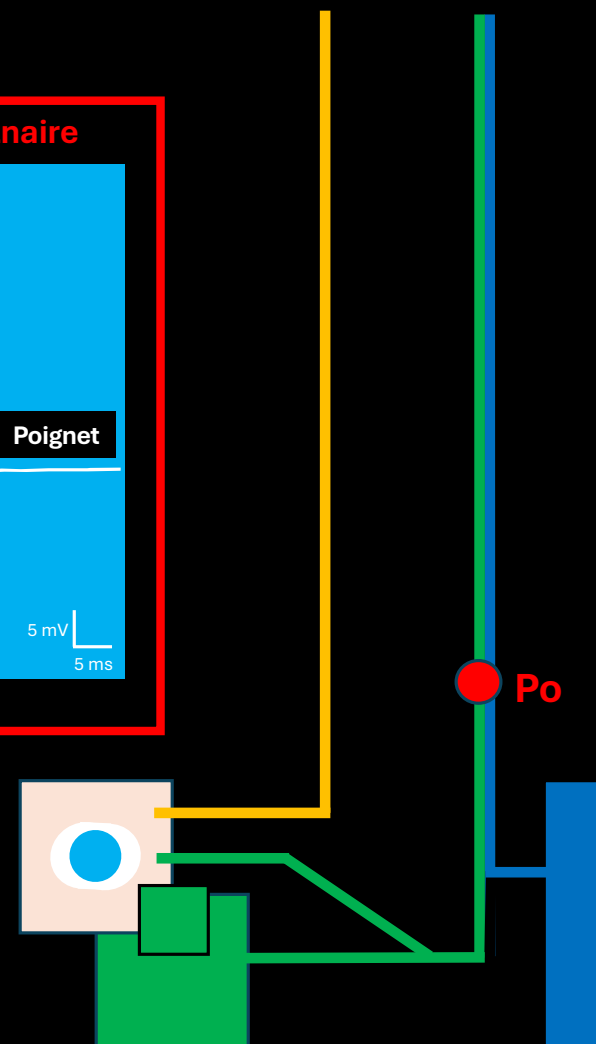
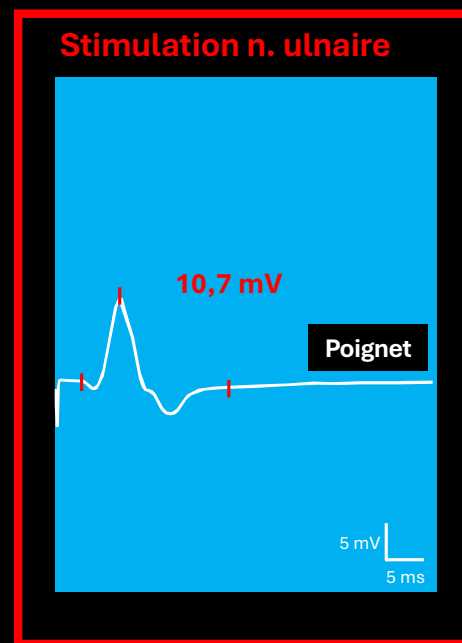
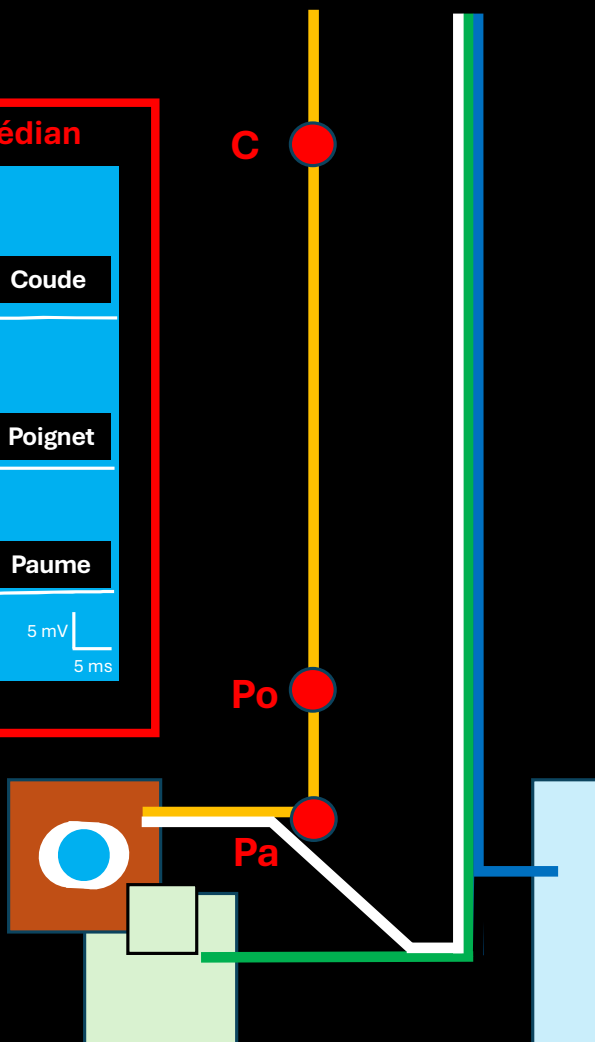
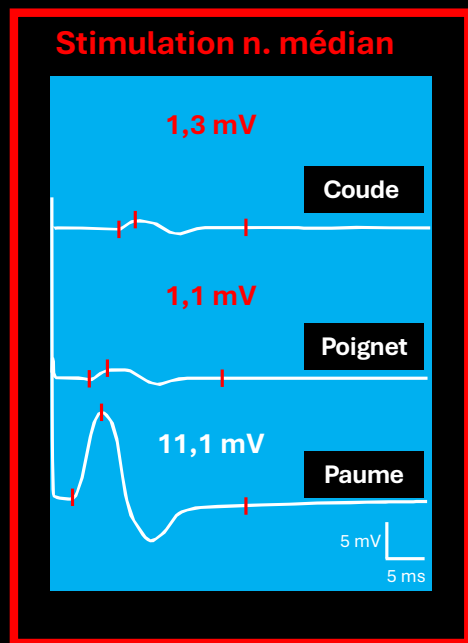
- Anastomose ulnaire (br. Pfd) -> médian à la main (br. Réc)
- Études anatomiques : 100 % des cas (80/80)
(Caetano et al, 2019)
 - extramusculaire (71 %)
 - intramusculaire (24 %)
 - mixte (5 %)
- Étude électrophysiologique : 50 % des cas (Martin et al, 2019)
 - ARC
 - innervation ulnaire des muscles dépendant habituellement du nerf médian





Cas 4

- Ne pas interpréter comme BC ce qui n'en est pas :
 - BC de 90 % au poignet (n. médian) ?
 - à l'avant-bras (n. ulnaire)
 - au coude (n. ulnaire)

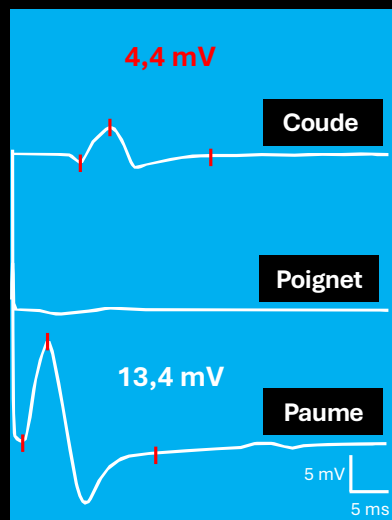




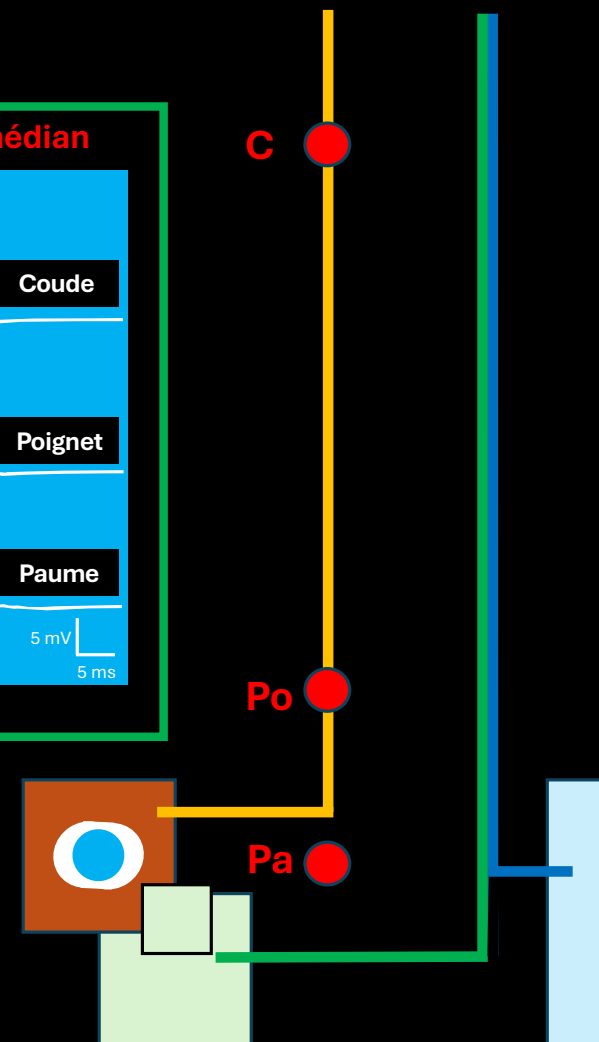
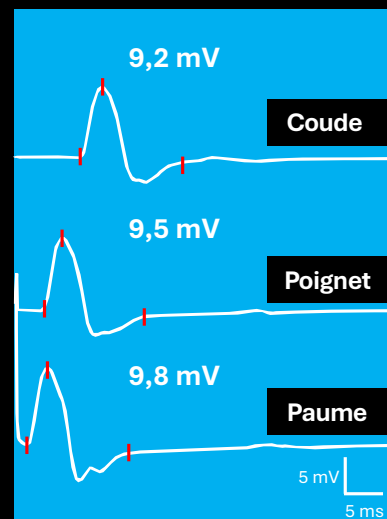
Cas 5

- Ne pas interpréter comme BC ce qui n'en est pas :
 - BC de 100 % au poignet (n. médian) ?
 - à l'avant-bras (n. ulnaire)
 - au coude (n. ulnaire)

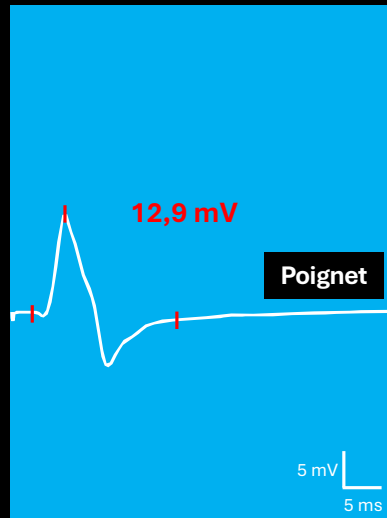
Stimulation n. médian



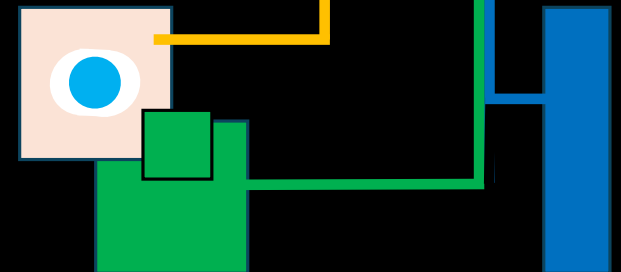
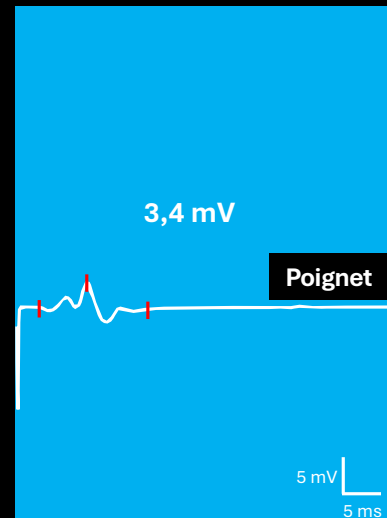
Stimulation n. médian



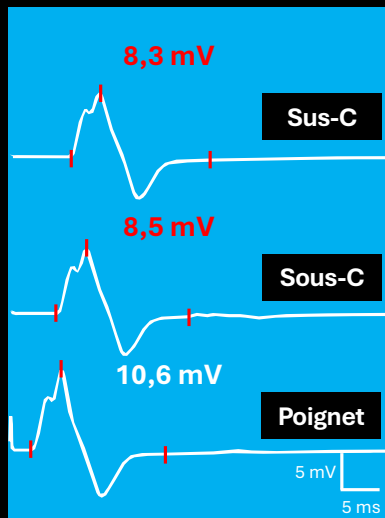
Stimulation n. ulnaire



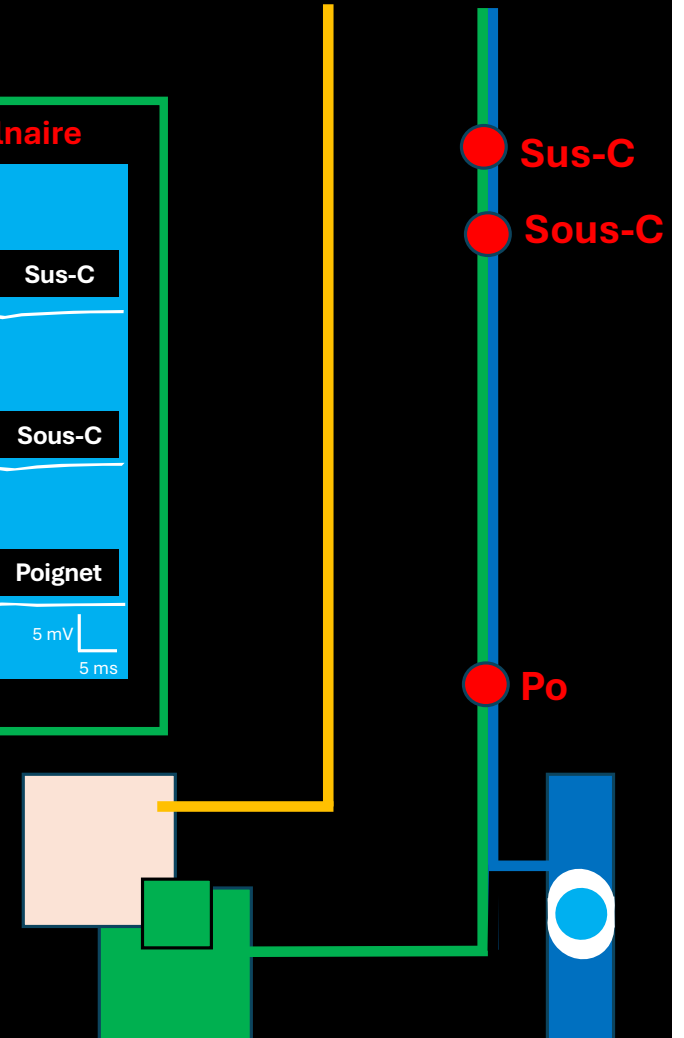
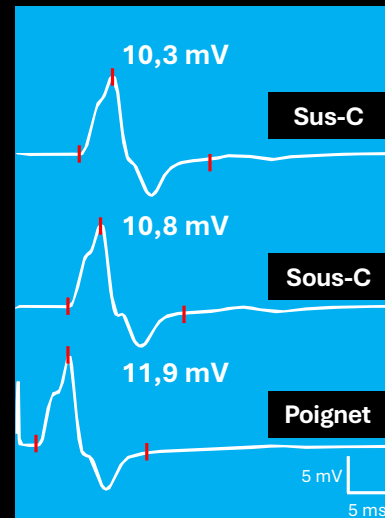
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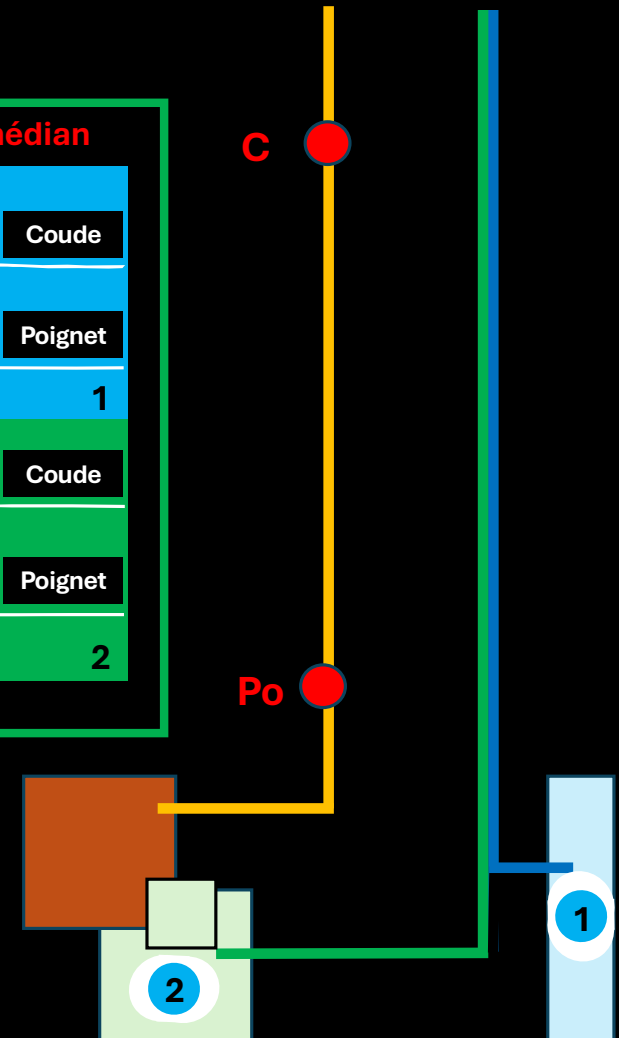
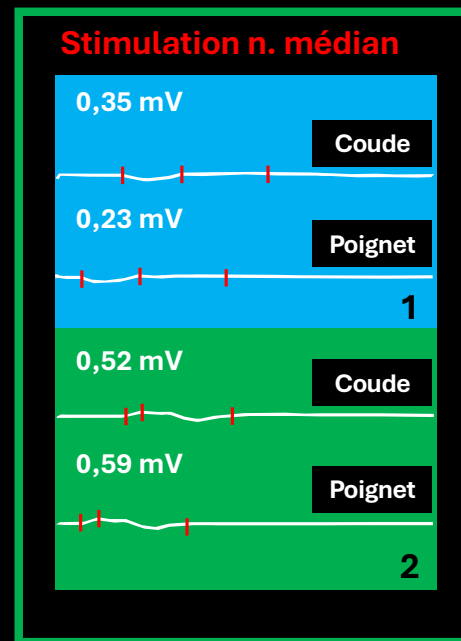
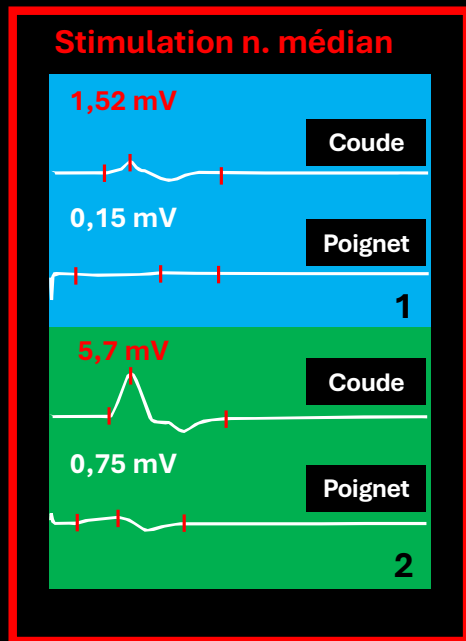


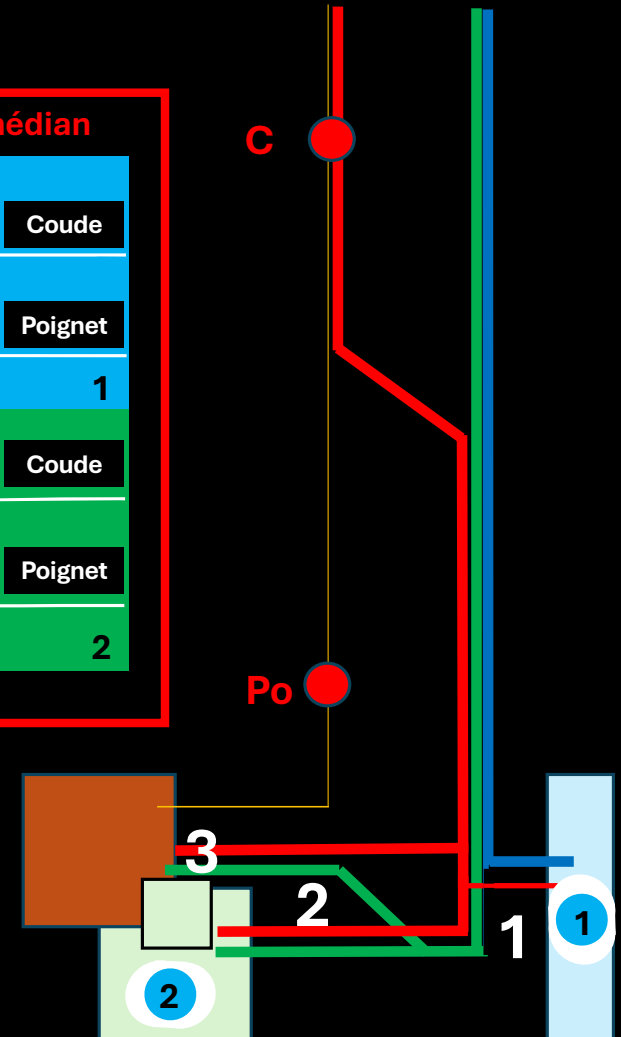
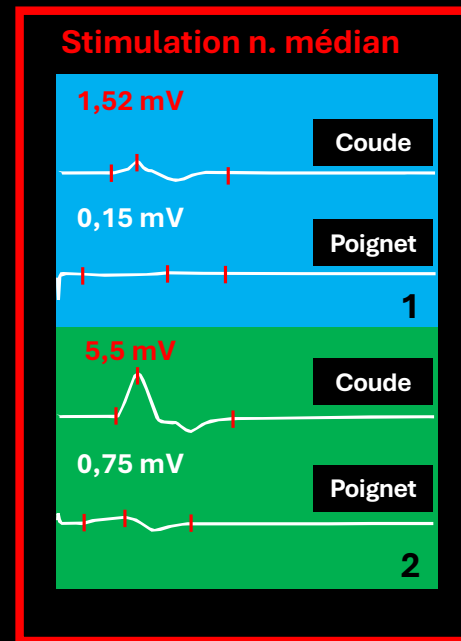
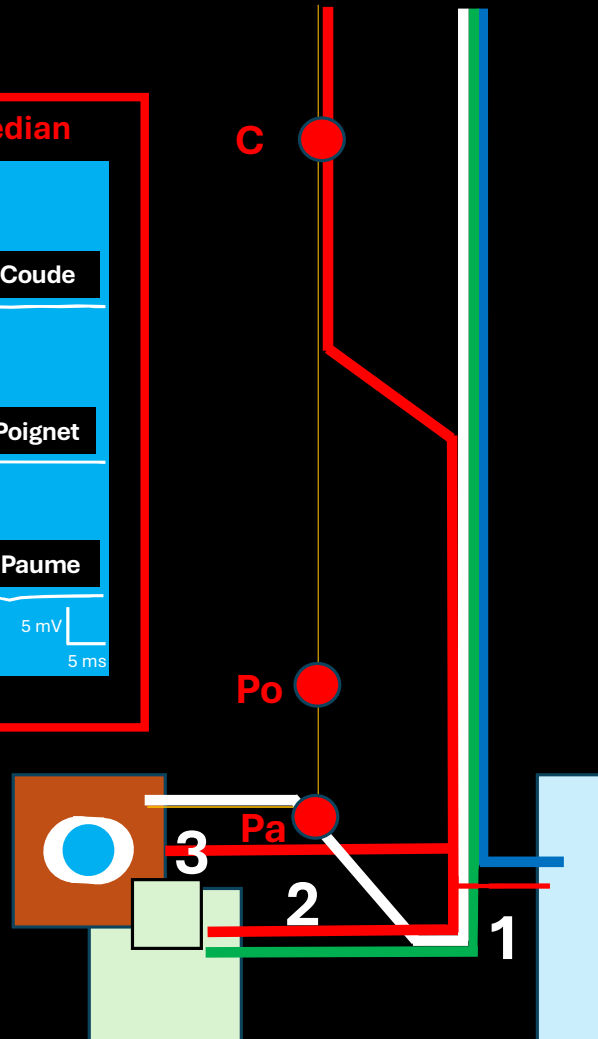
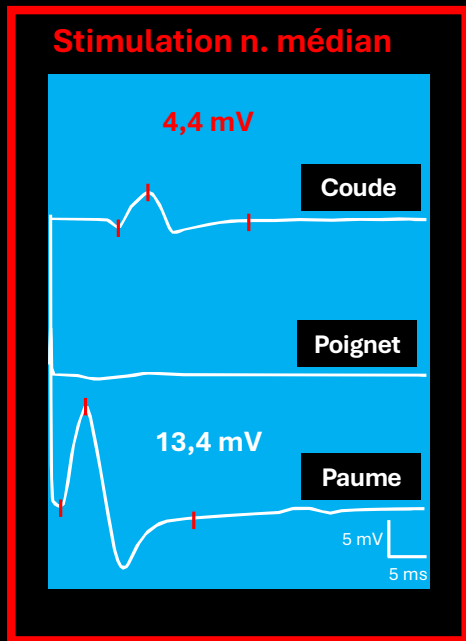
Stimulation n. ulnaire

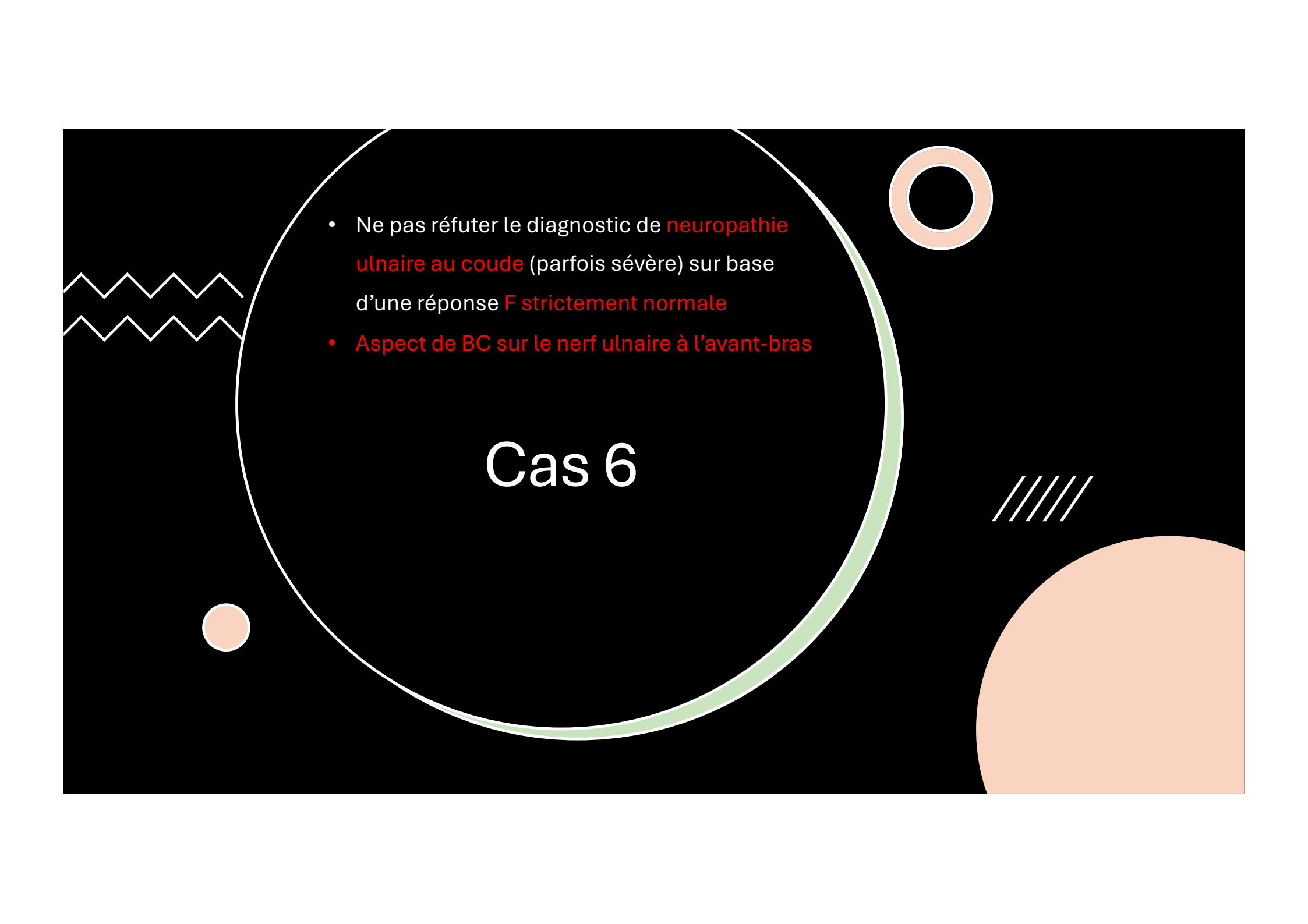


Stimulation n. ulnaire

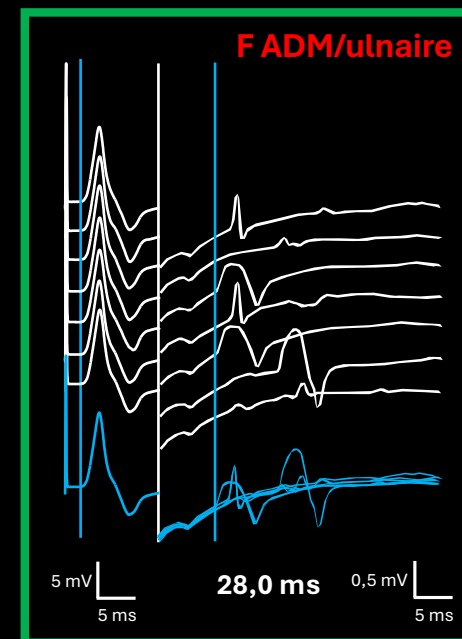
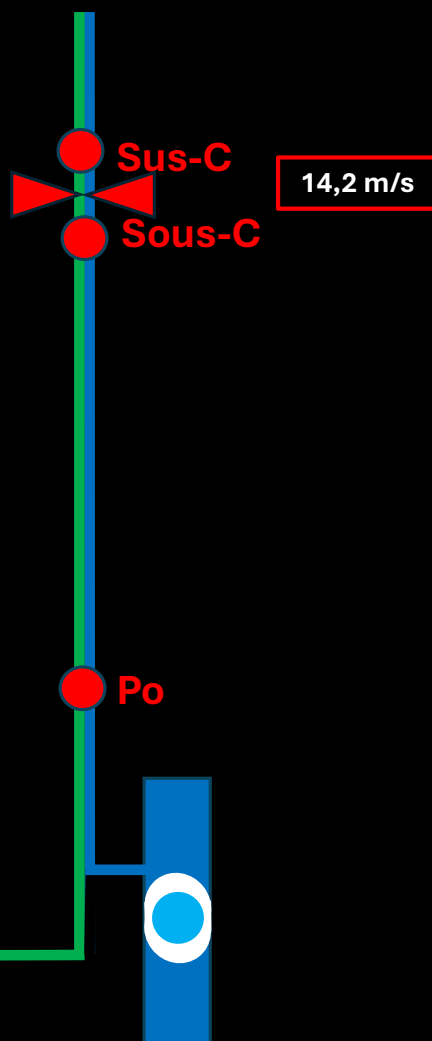
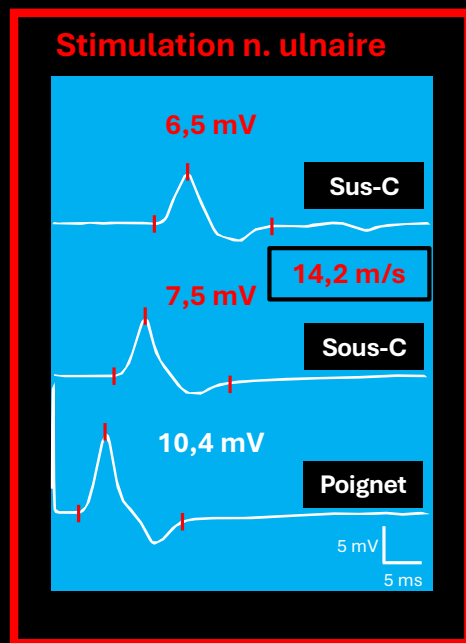


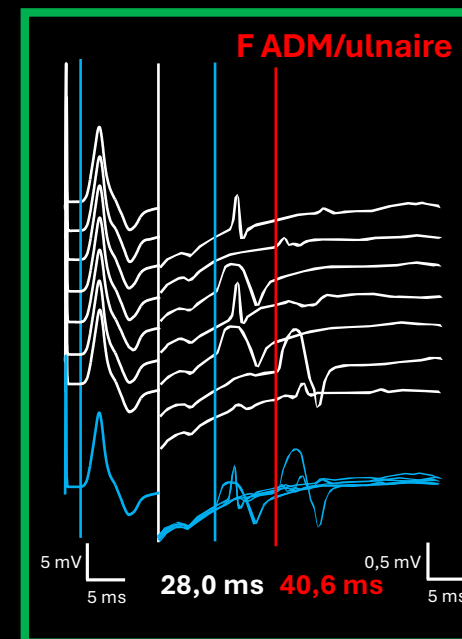
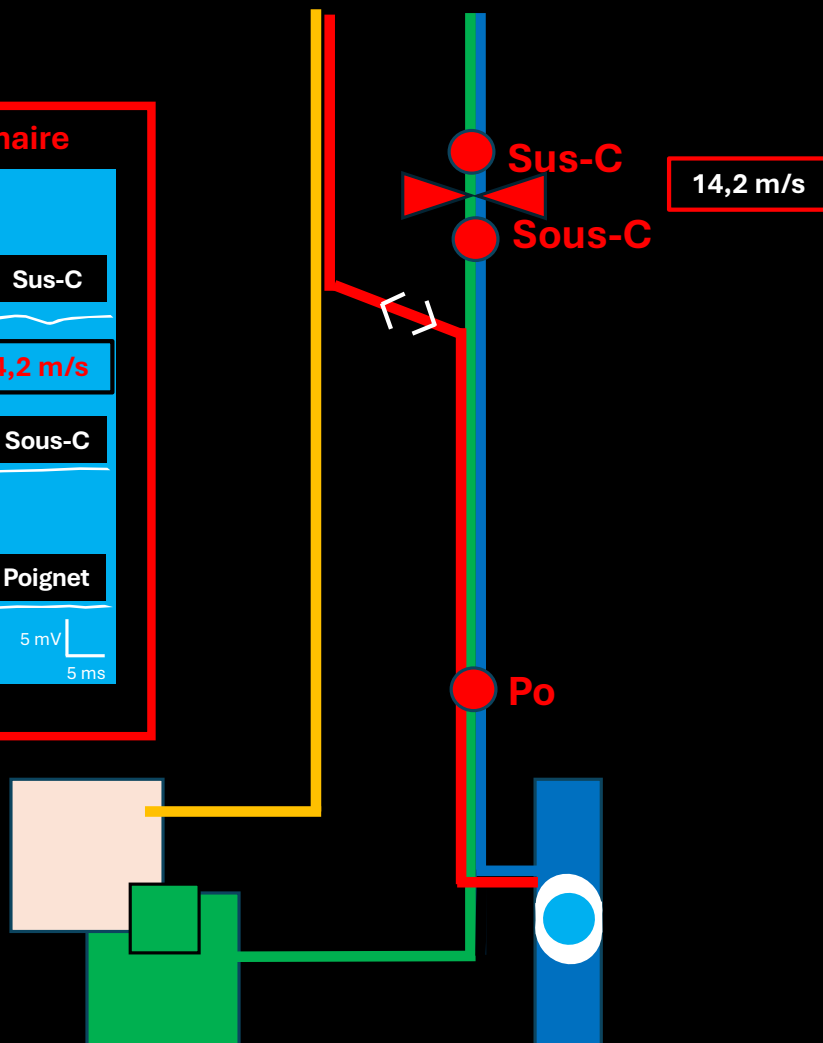
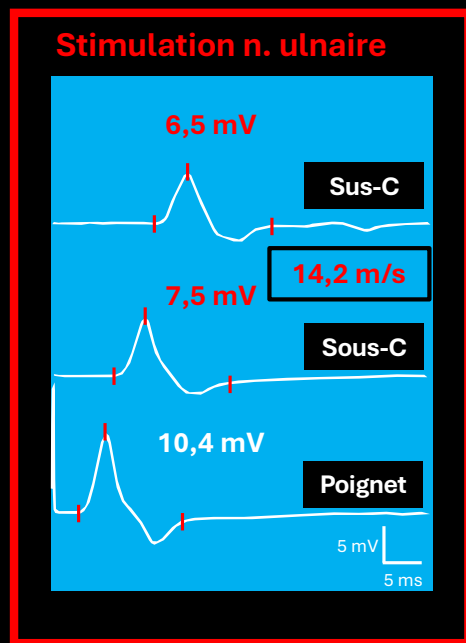




- 
- Ne pas réfuter le diagnostic de **neuropathie ulnaire au coude** (parfois sévère) sur base d'une réponse **F strictement normale**
 - **Aspect de BC sur le nerf ulnaire à l'avant-bras**

Cas 6







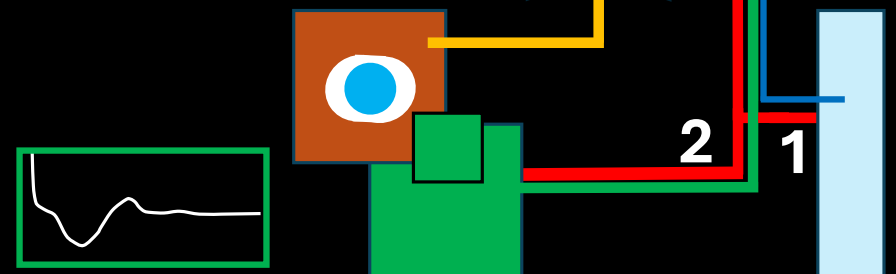
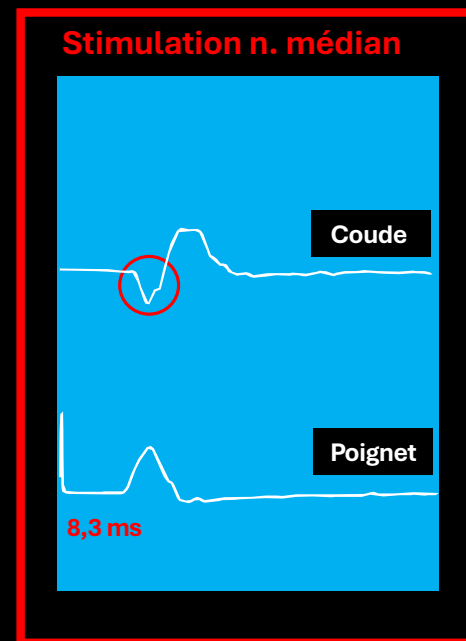
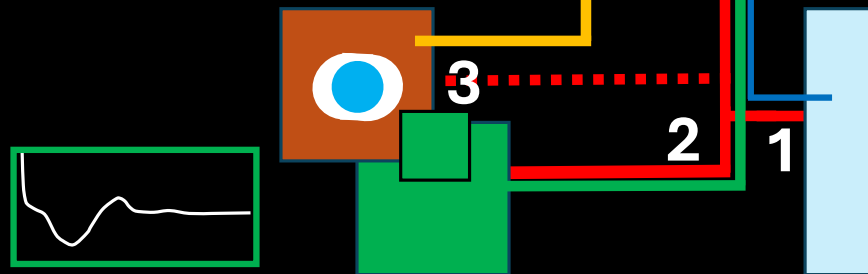
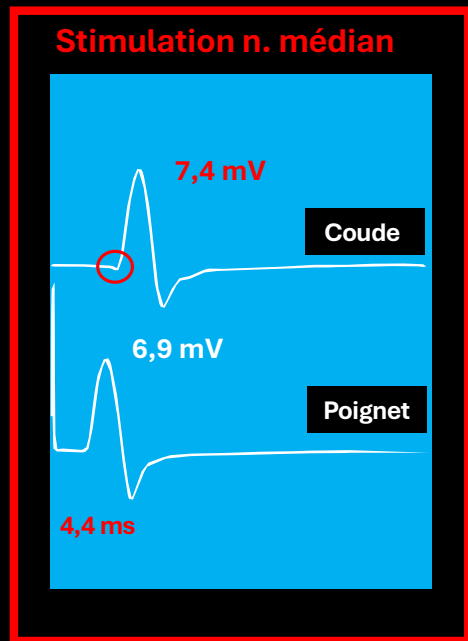
Cas 7

Anastomose de Martin-Gruber

+

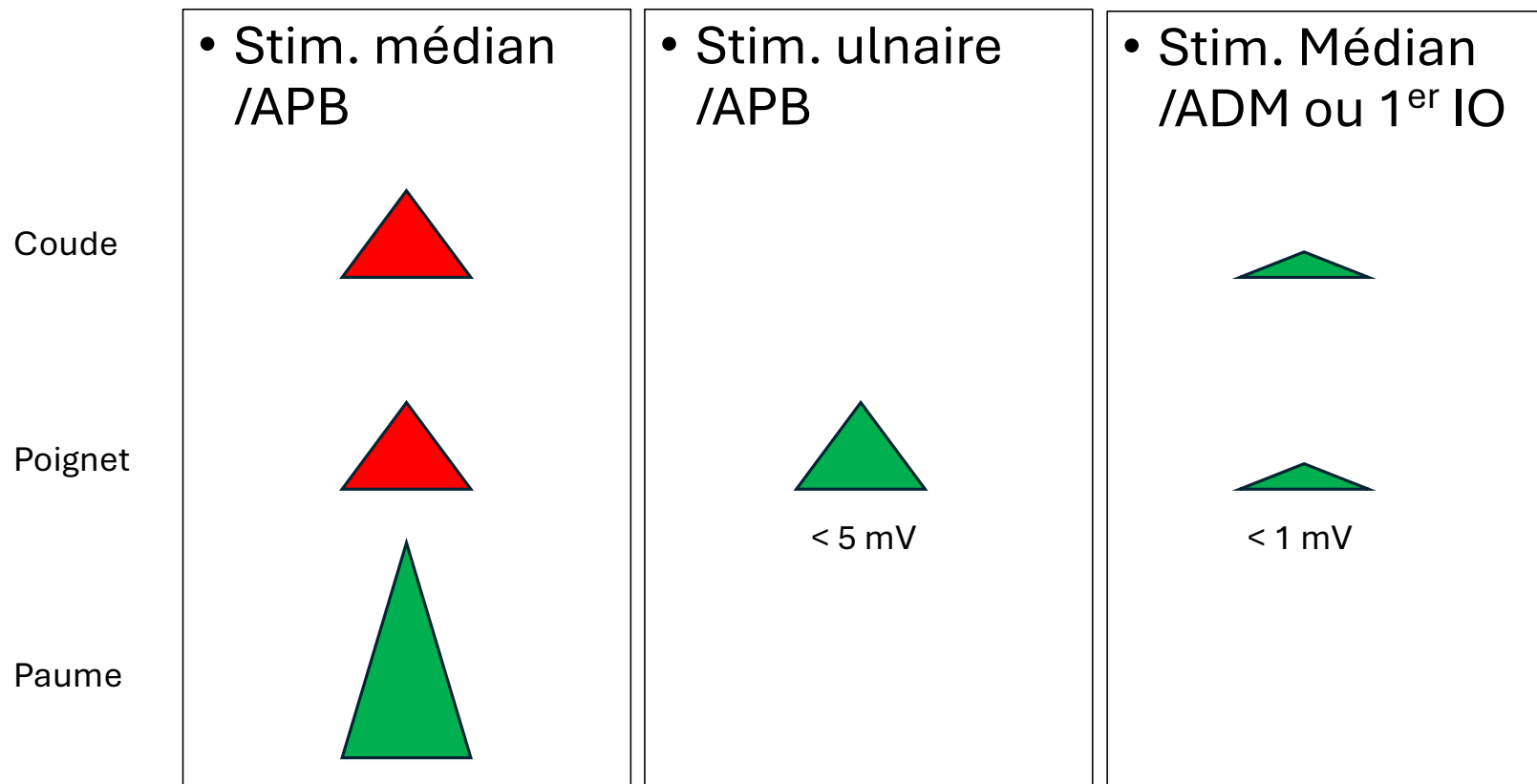
Syndrome du canal carpien

Difficulté à mesurer de façon précise
la VCM du n. médian à l'avant-bras



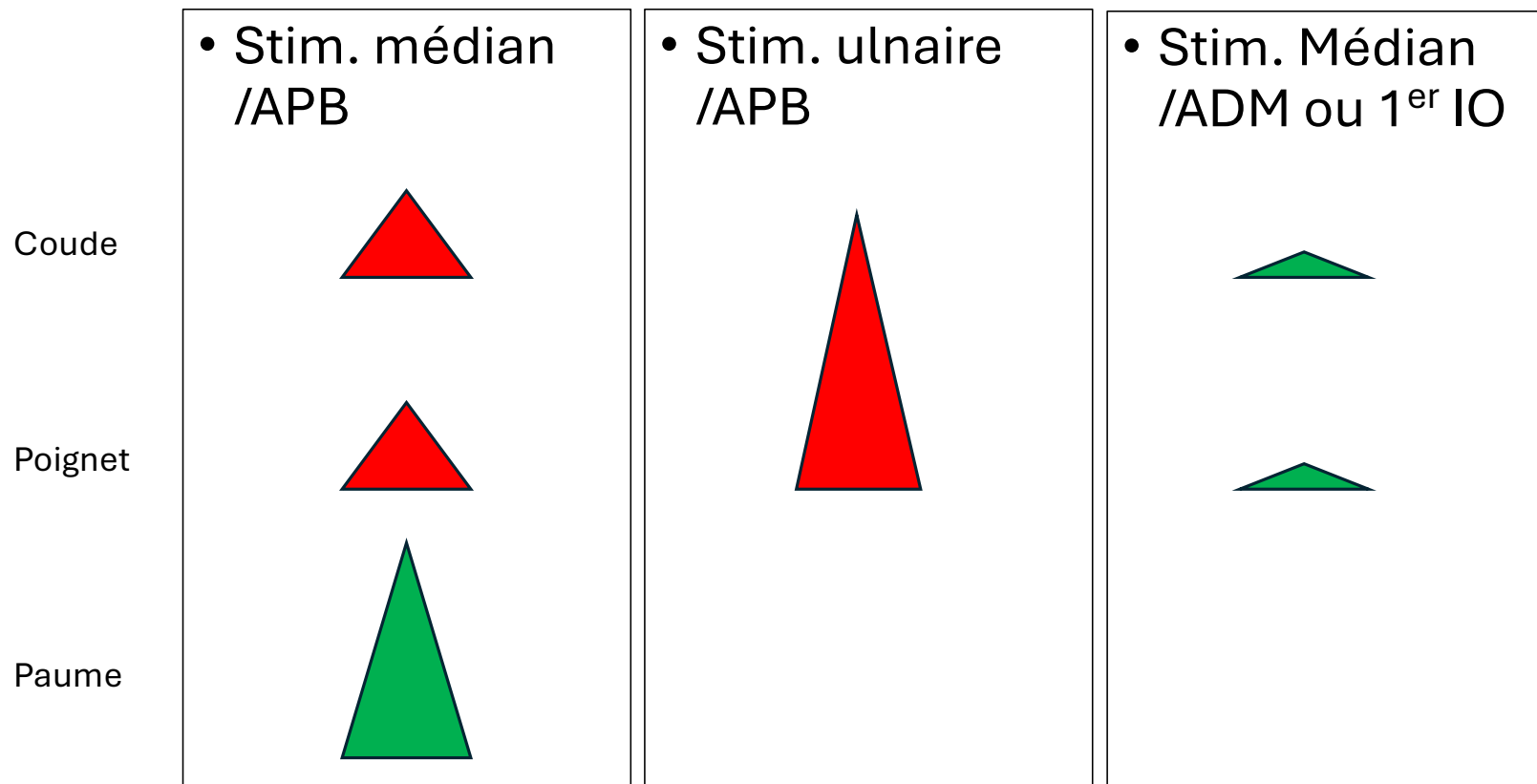
BC ou pas ?

- Composante aigüe/récente d'un syn. du canal carpien
- BC distal dans le cadre d'une neuropathie inflammatoire



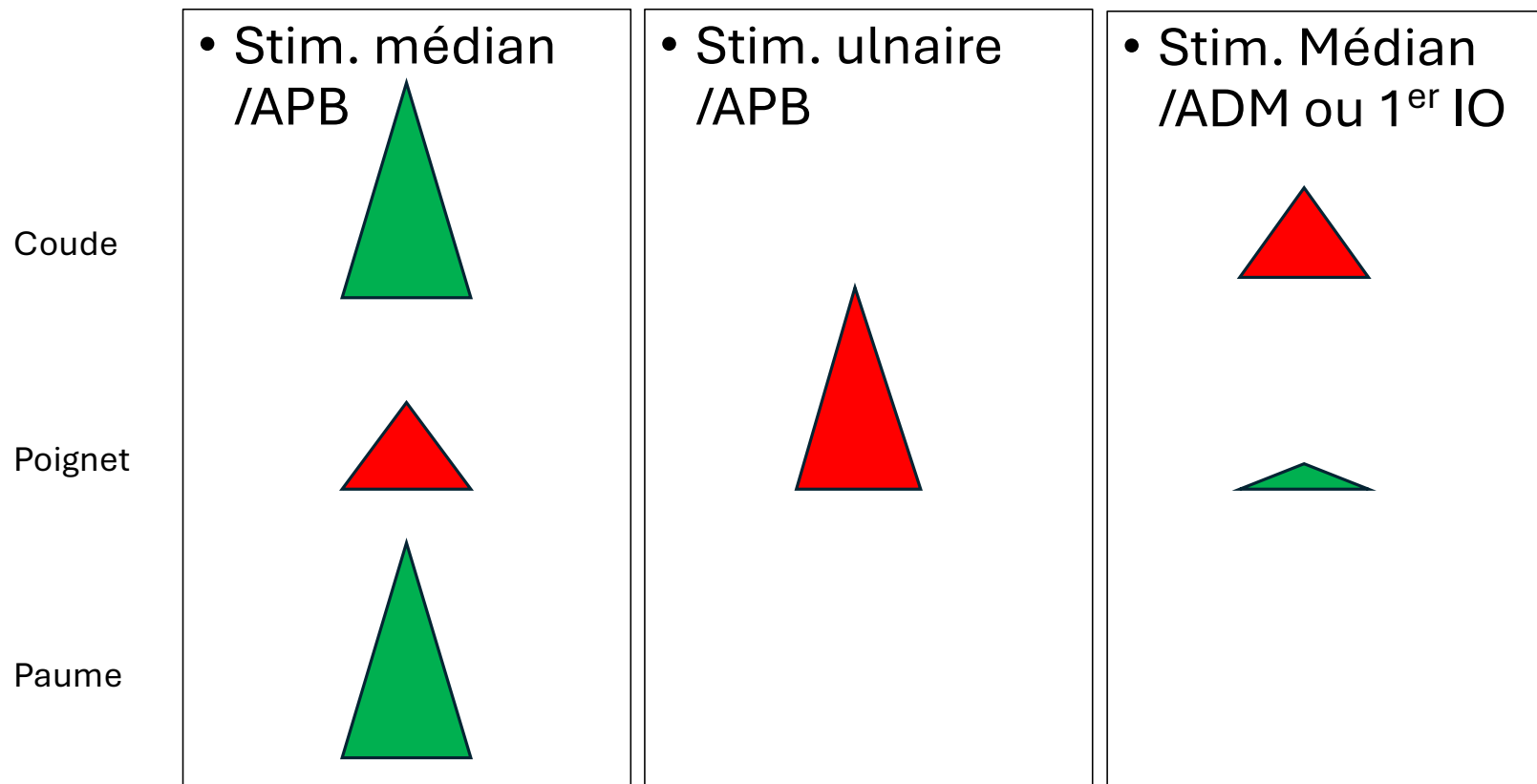
BC ou pas ?

- ARC
- Innervation ulnaire ++ des muscles thénariens



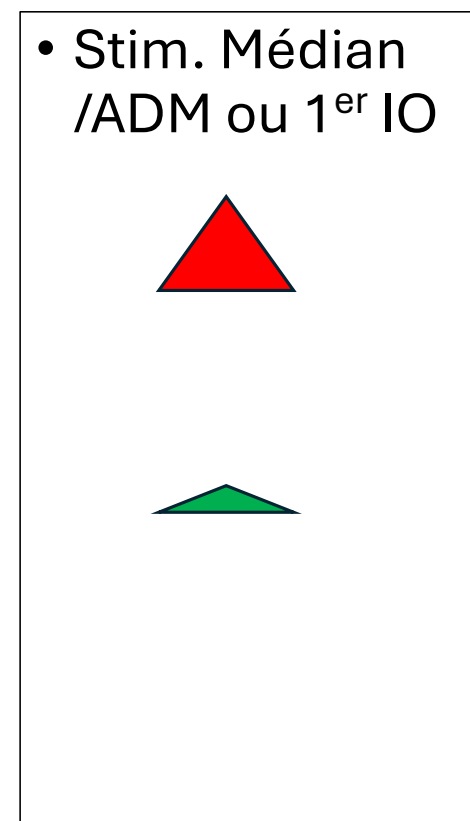
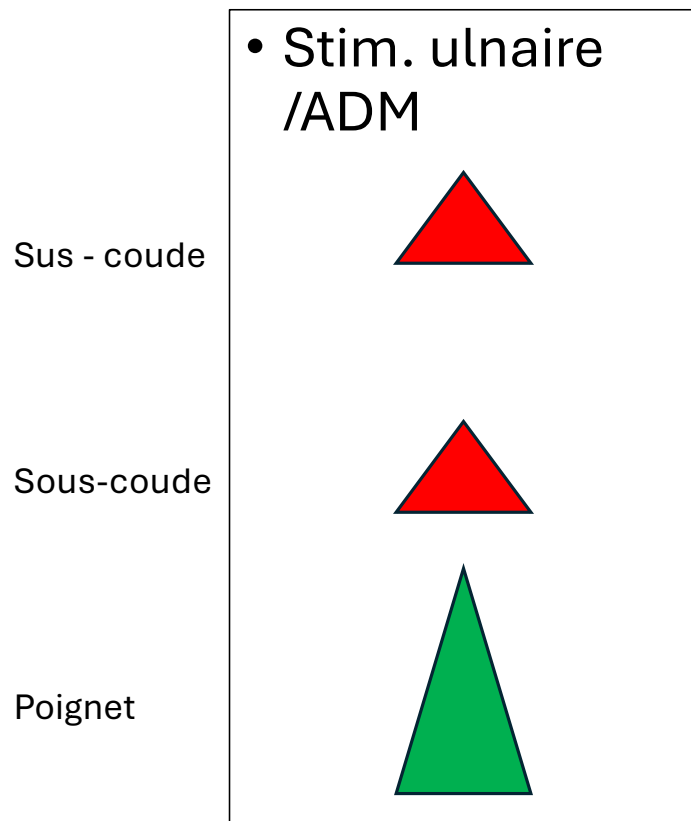
BC ou pas ?

- AMG



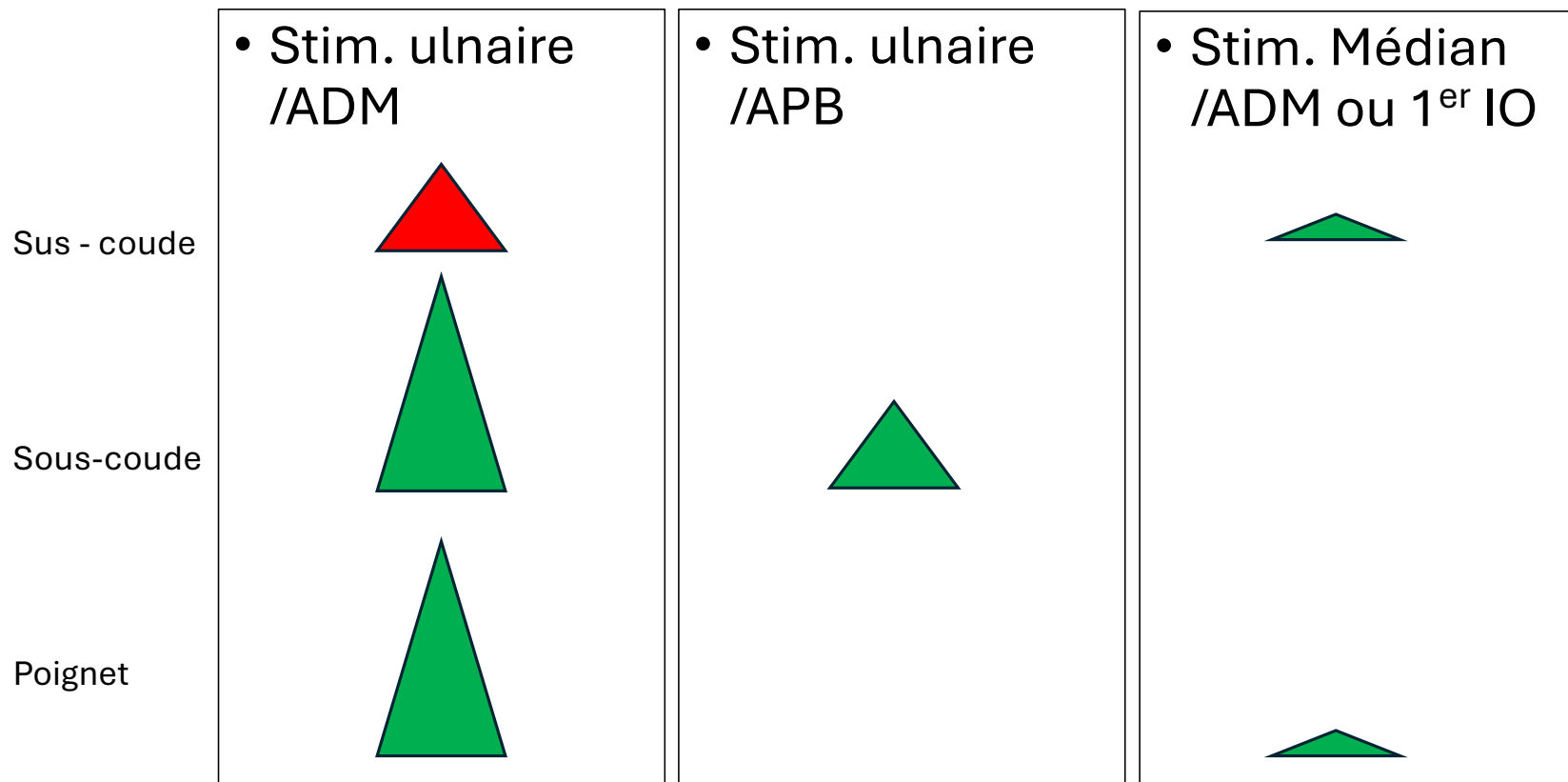
BC ou pas ?

- AMG



BC ou pas ?

- Neuropathie ulnaire au coude avec BC



BC ou pas ?

- Se méfier d'AMG haute

