

NEUROLOGIE

PHYSIOLOGIE – ANATOMIE SEMIOLOGIE (Partie 1)

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Un site de neuroanatomie

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CH Pitié-Salpêtrière (*Jussieu, Paris VI*)

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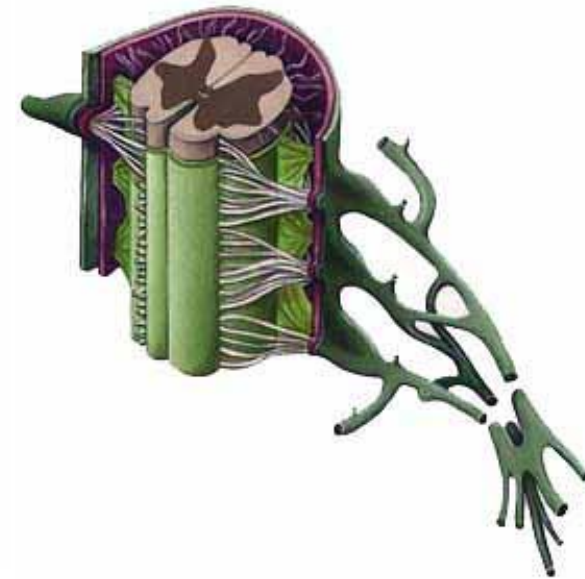
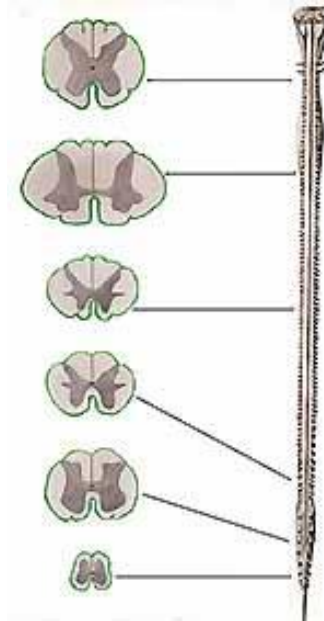
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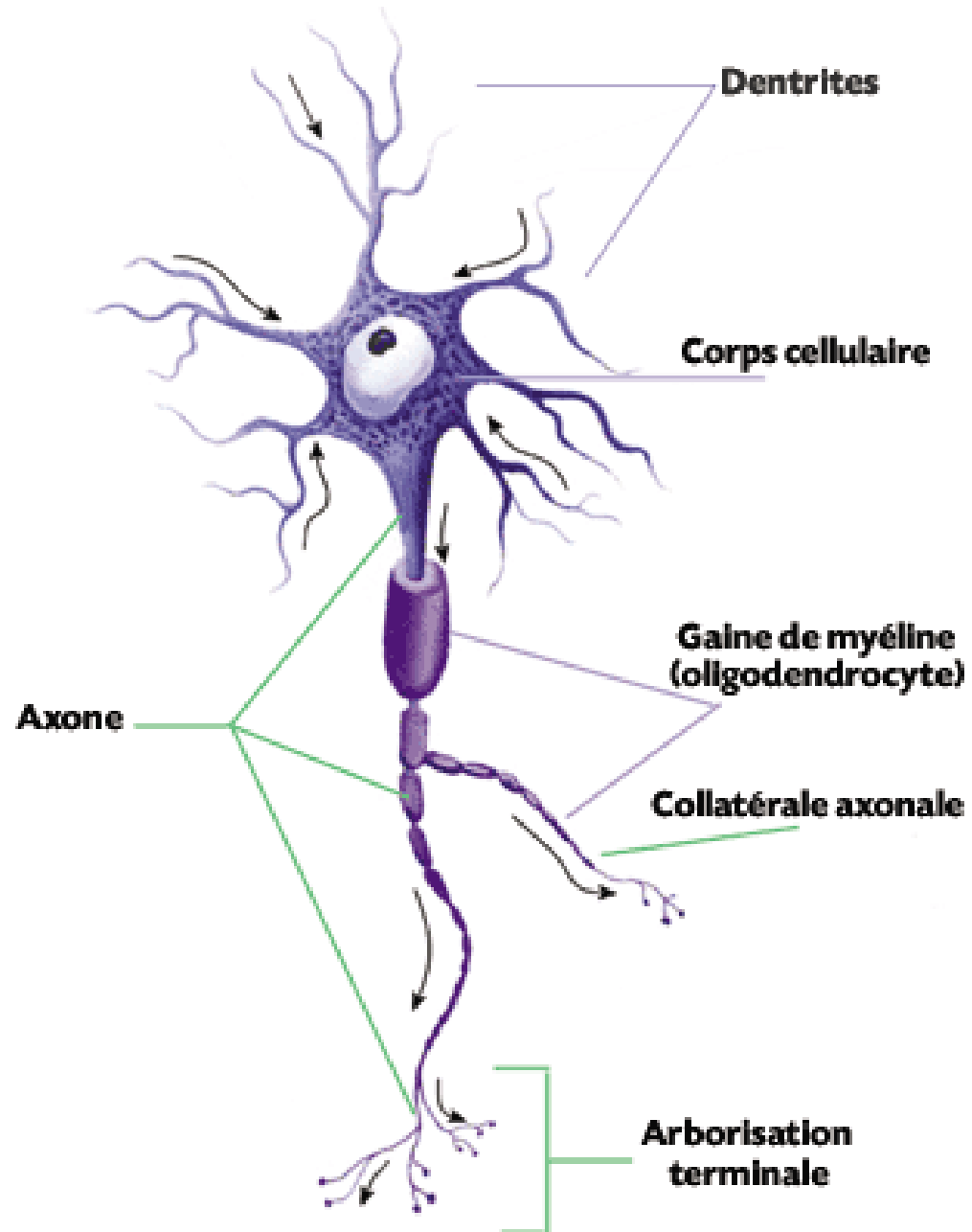
1- SYSTEME NERVEUX

SYSTEME NERVEUX

- **Encéphale** : cerveau / tronc cérébral / cervelet
- **Moelle épinière**
- **Système nerveux périphérique** : racines / plexus / troncs nerveux

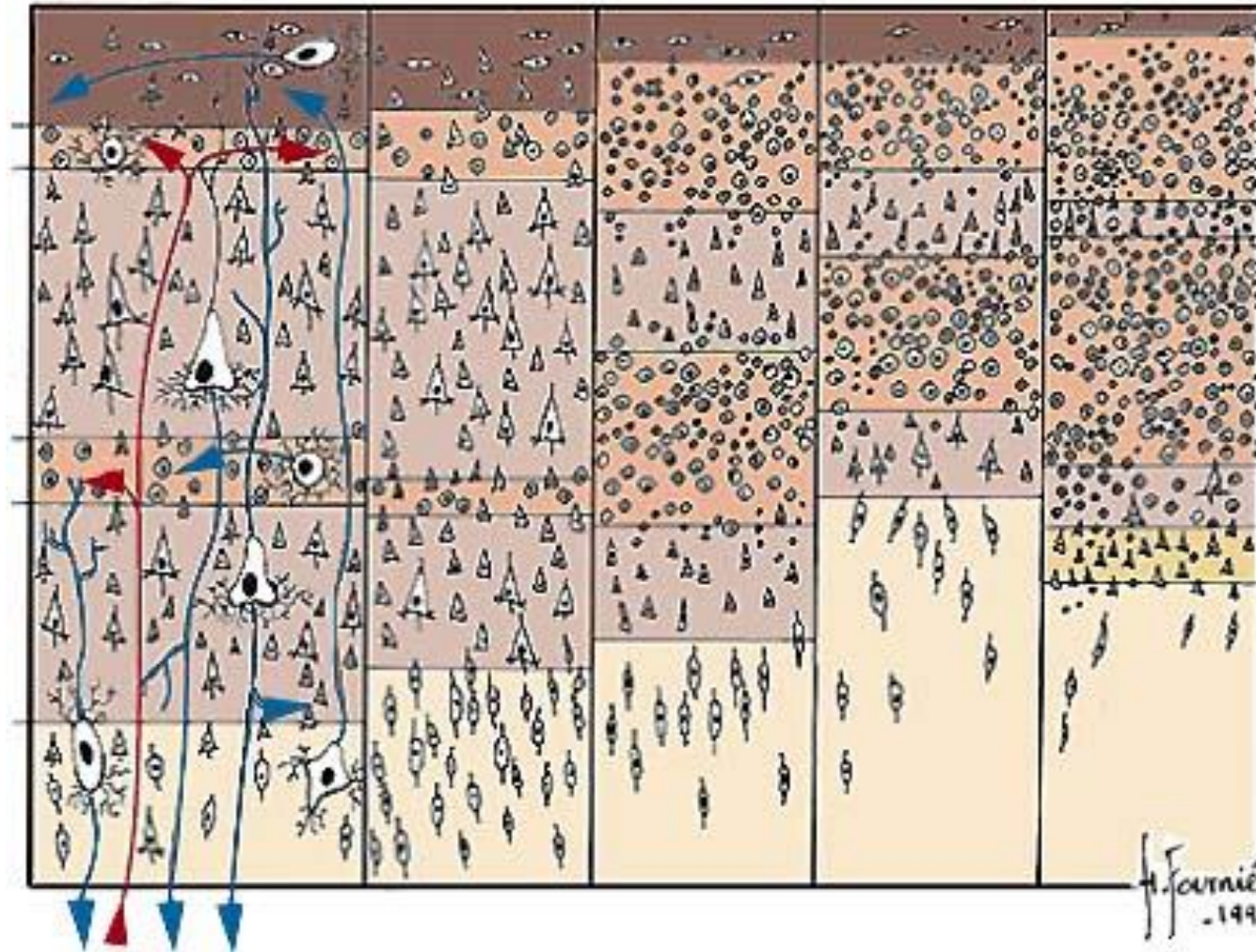


NEURONE



SYSTEME NERVEUX CENTRAL

- **Neurones** : corps cellulaires / axones
- **Substance grise** / **Substance blanche** (fibres)

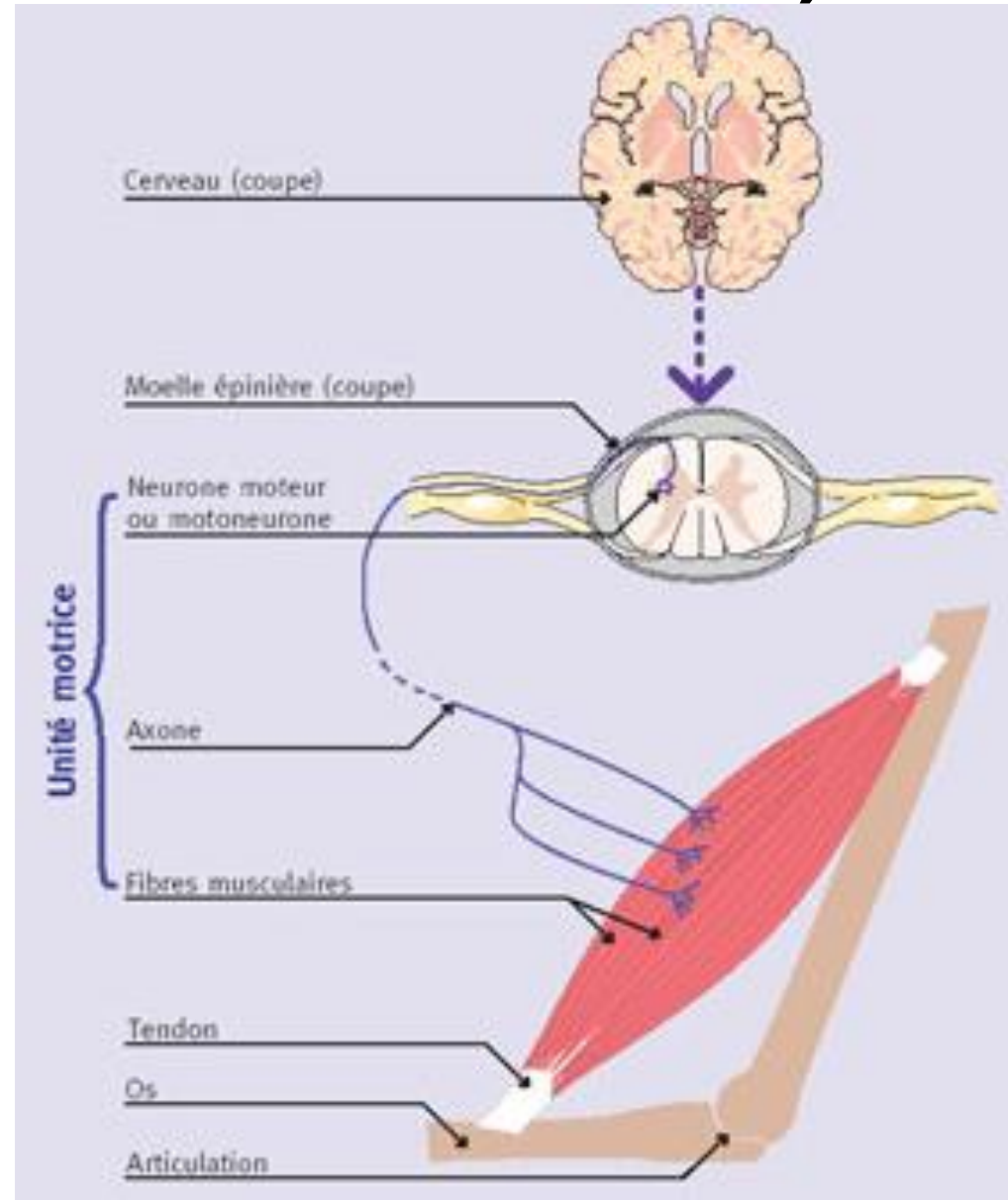


Exemple du motoneurone périphérique (2^{ème} motoneurone)

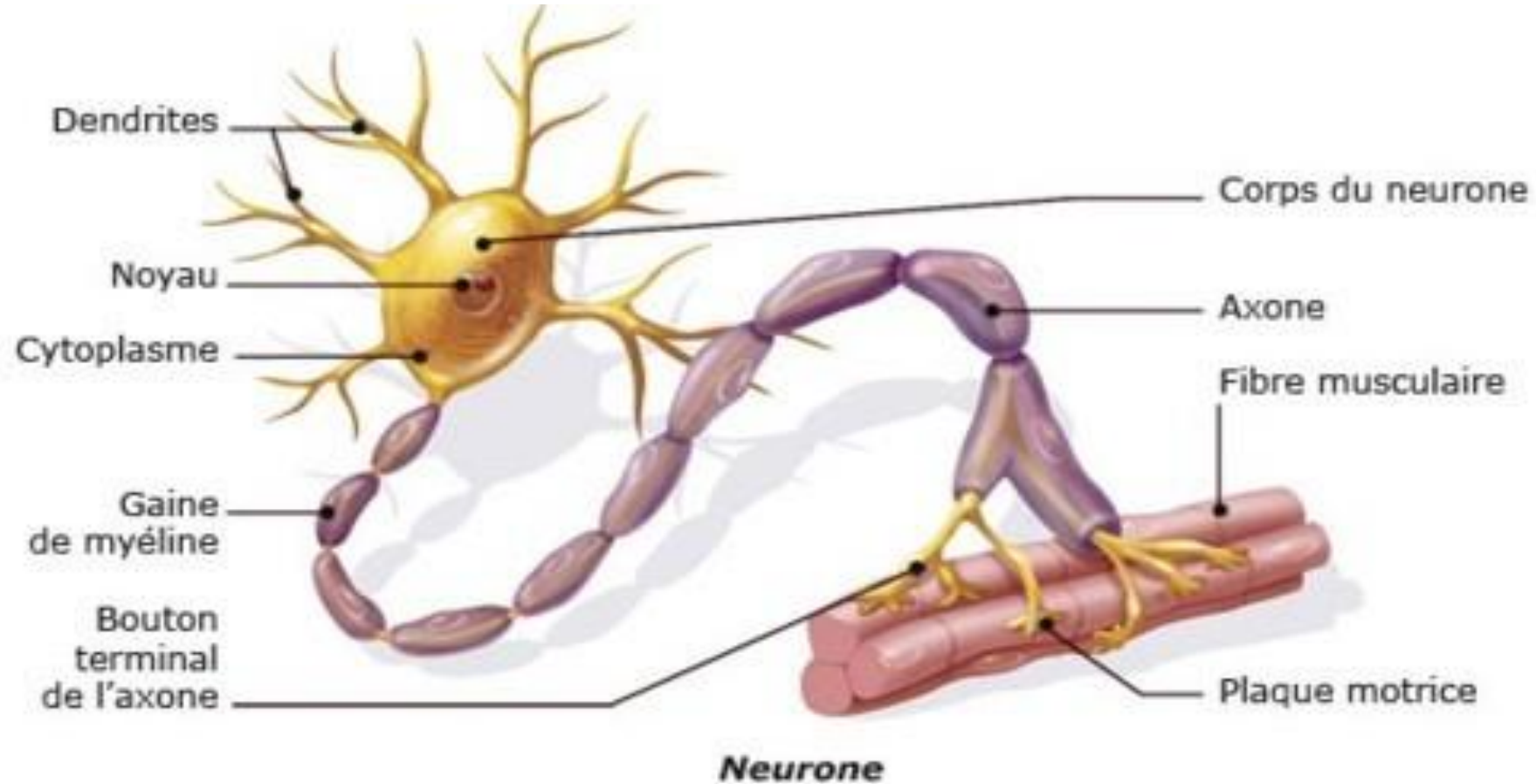
1^{er} motoneurone : cortex
moteur à la moelle

2^{ème} motoneurone : moelle -
muscle

- > **Corne antérieure** de moelle
épinière
- > **Racine** ventrale
- > **Tronc nerveux**
- > **Terminaison** nerveuse
- > **Muscle**



Motoneurone périphérique

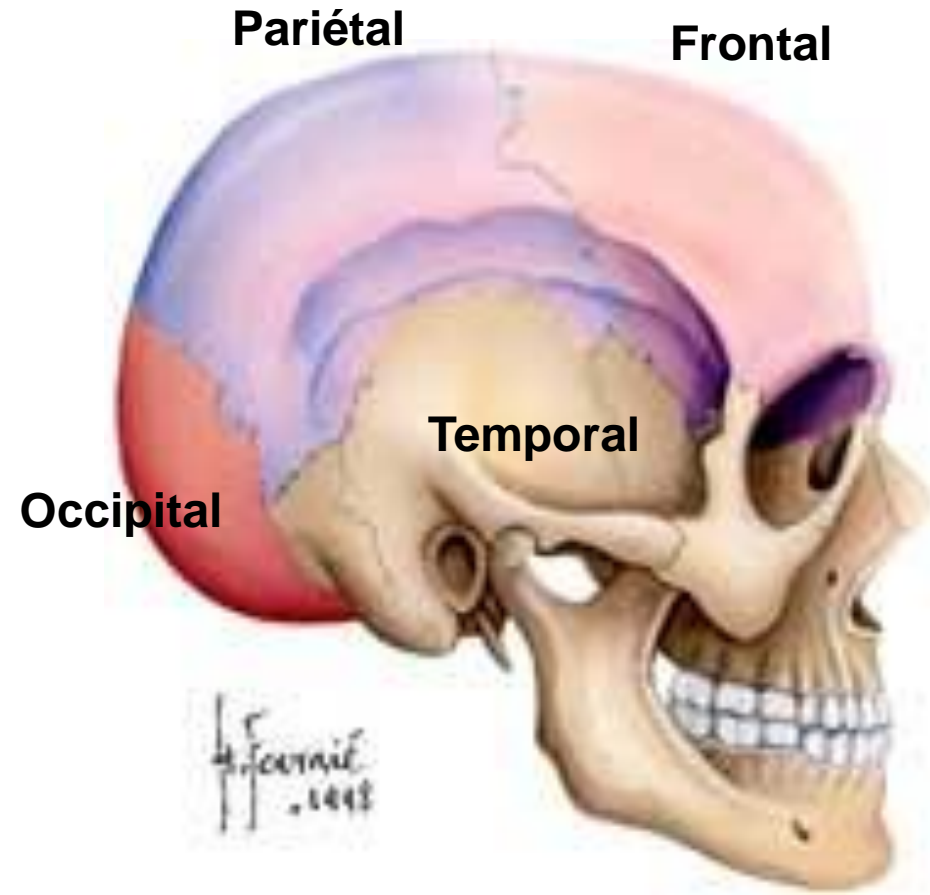
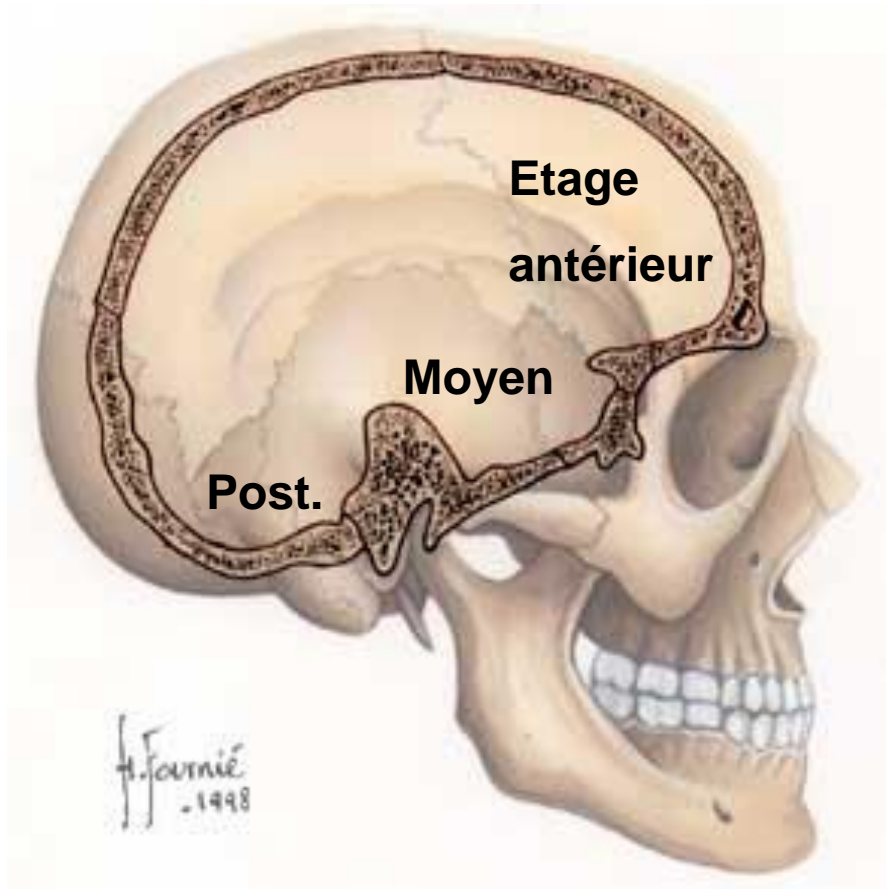


A sa terminaison : se ramifie, perd sa gaine de myéline

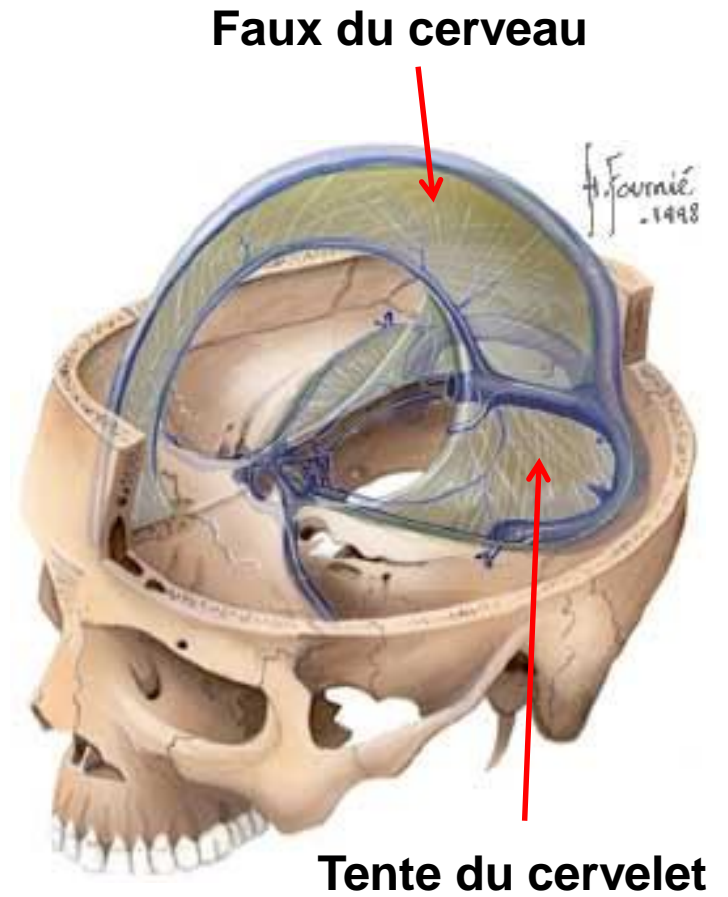
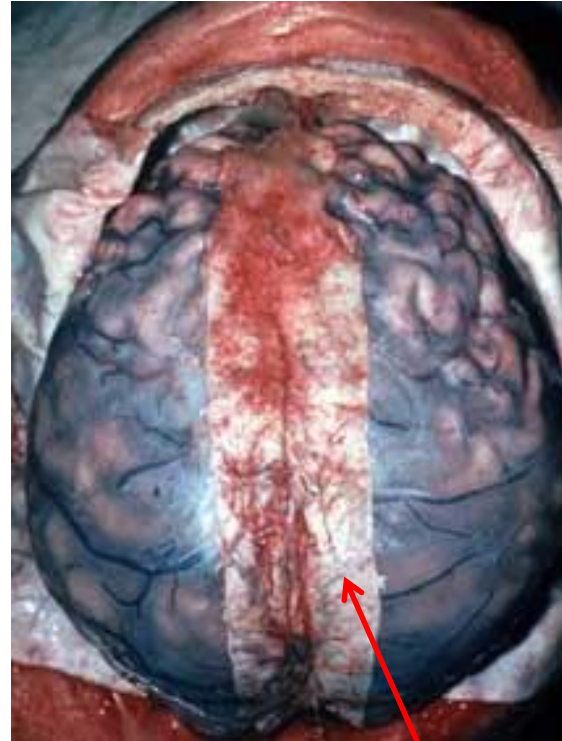
SYSTEME NERVEUX CENTRAL

- **Neurones** : corps cellulaires / axones
- Substance grise / Substance blanche (= fibres)
- **Cerveau** : cortex (gris) + substance blanche
- **Noyaux gris centraux**
- **Tronc cérébral**
- **Cervelet**
- **Moelle épinière**

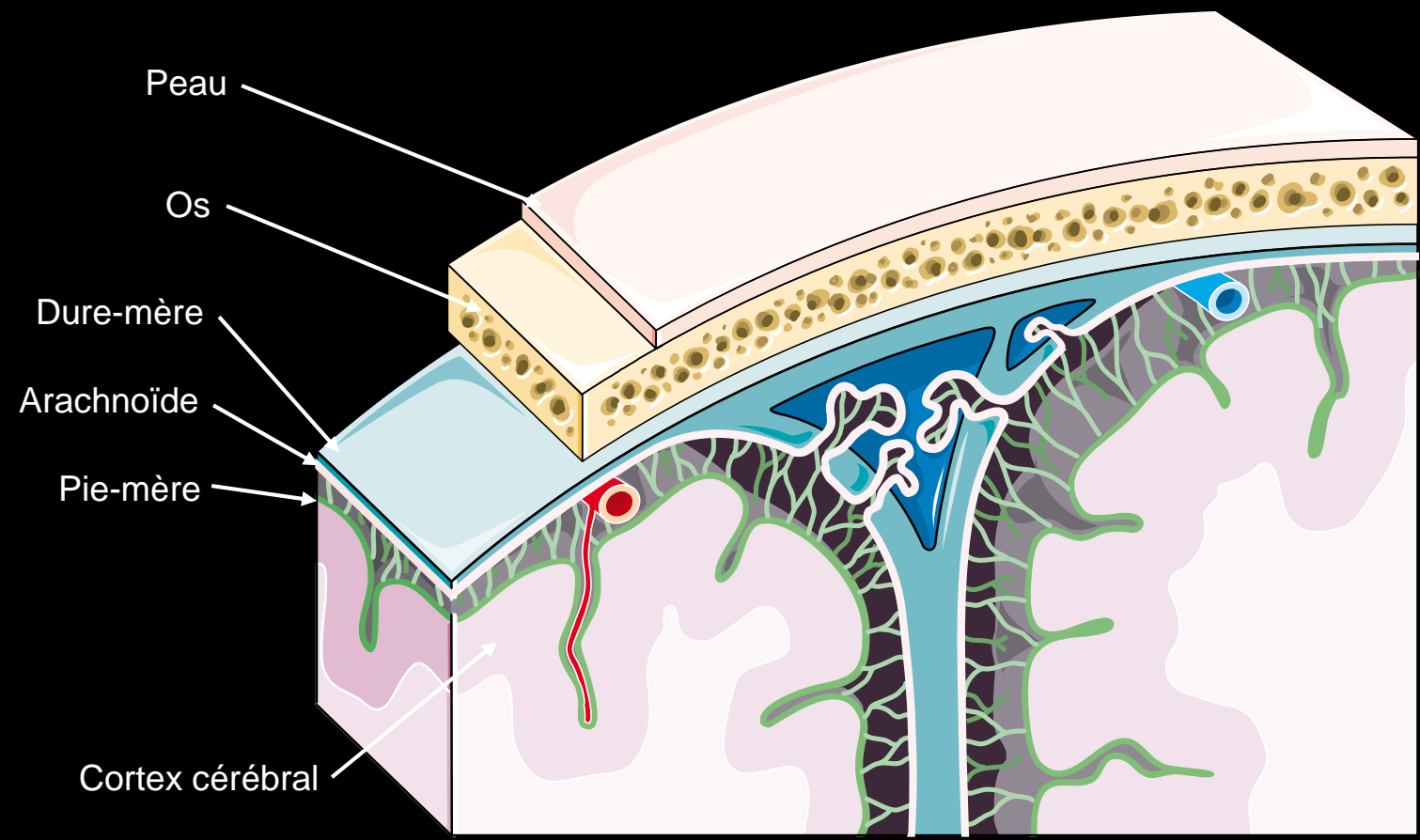
Crâne



Méninges

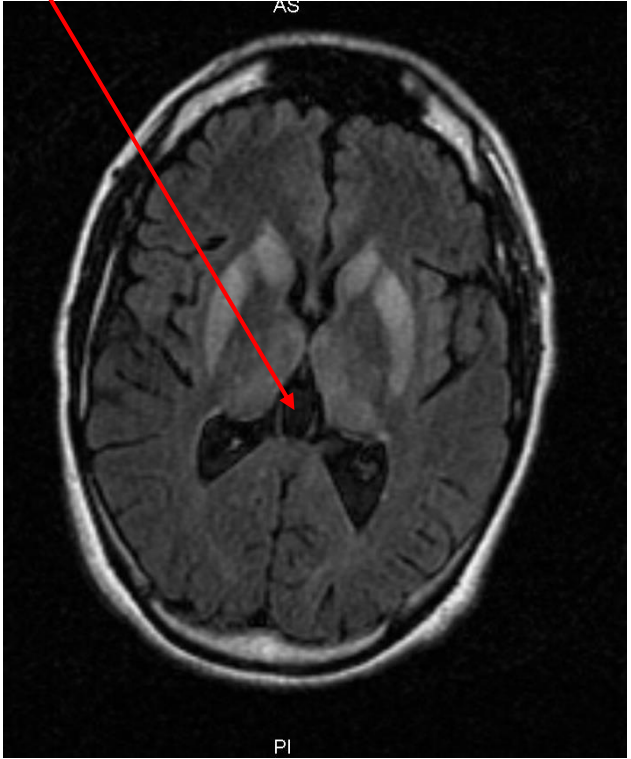
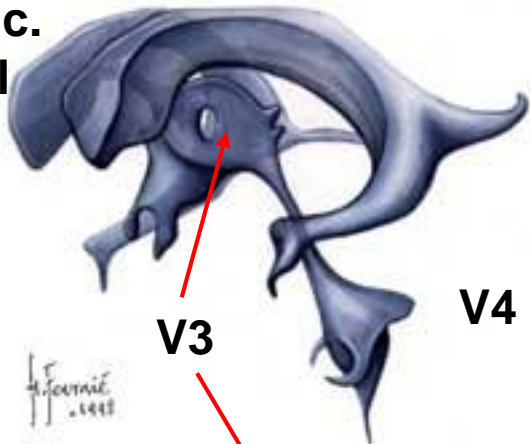
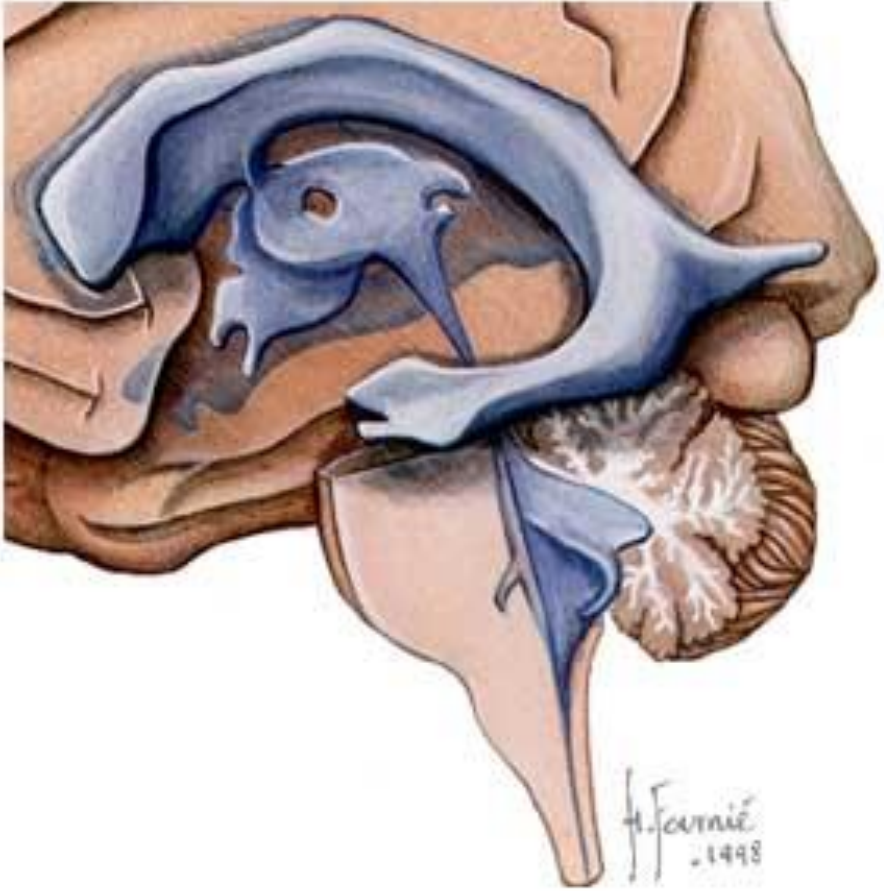


3 « feuillets » : Dure-mère / Arachnoïde / Pie-mère

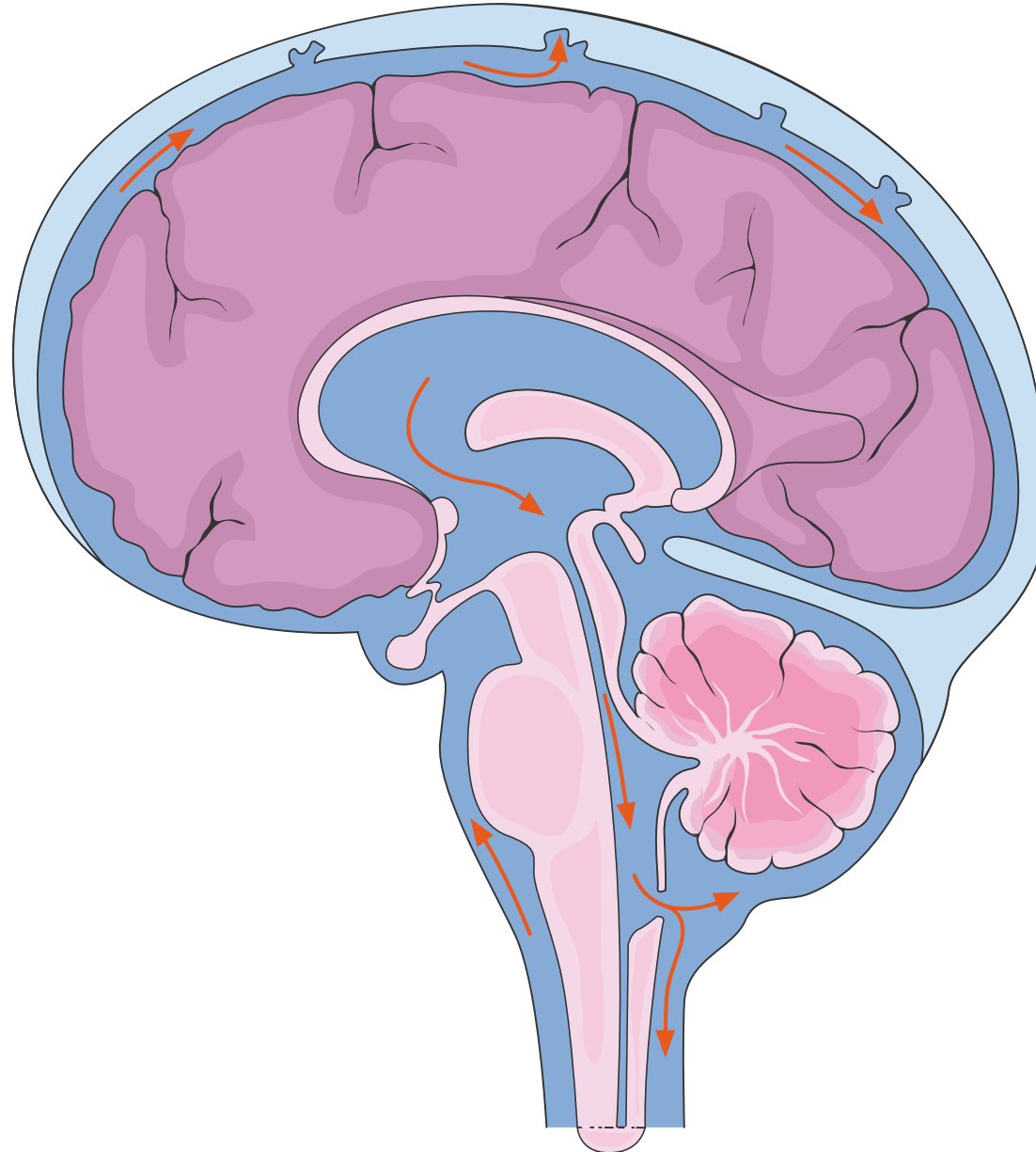


Ventricules

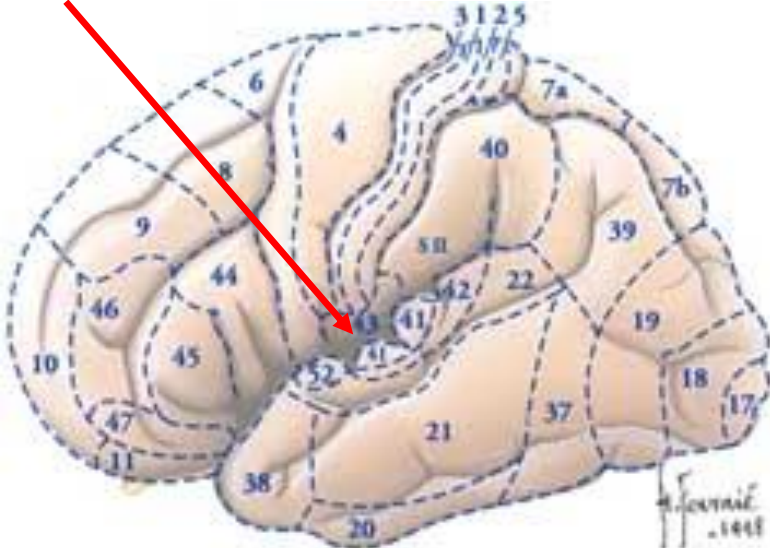
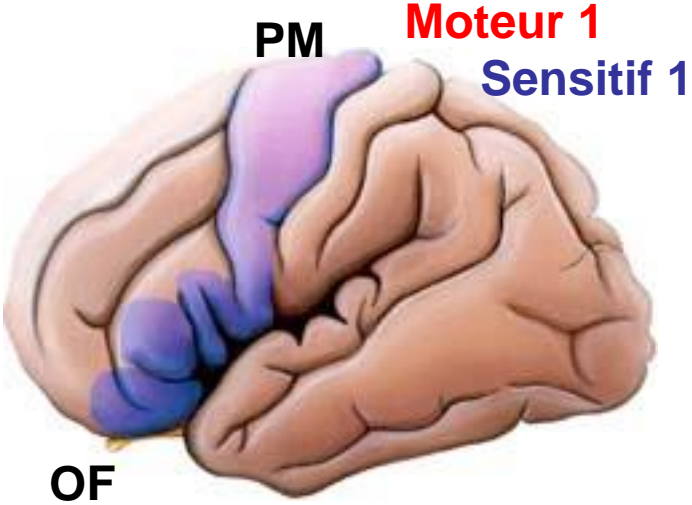
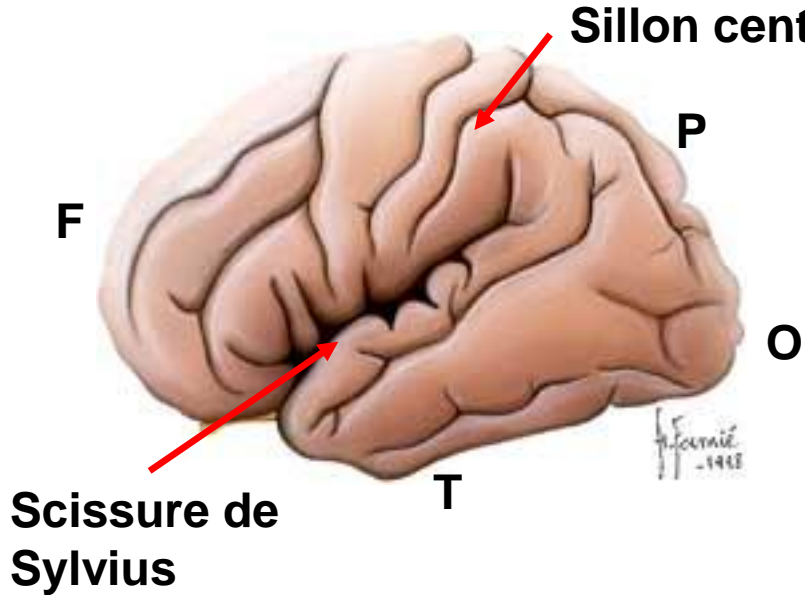
Ventric.
latéral



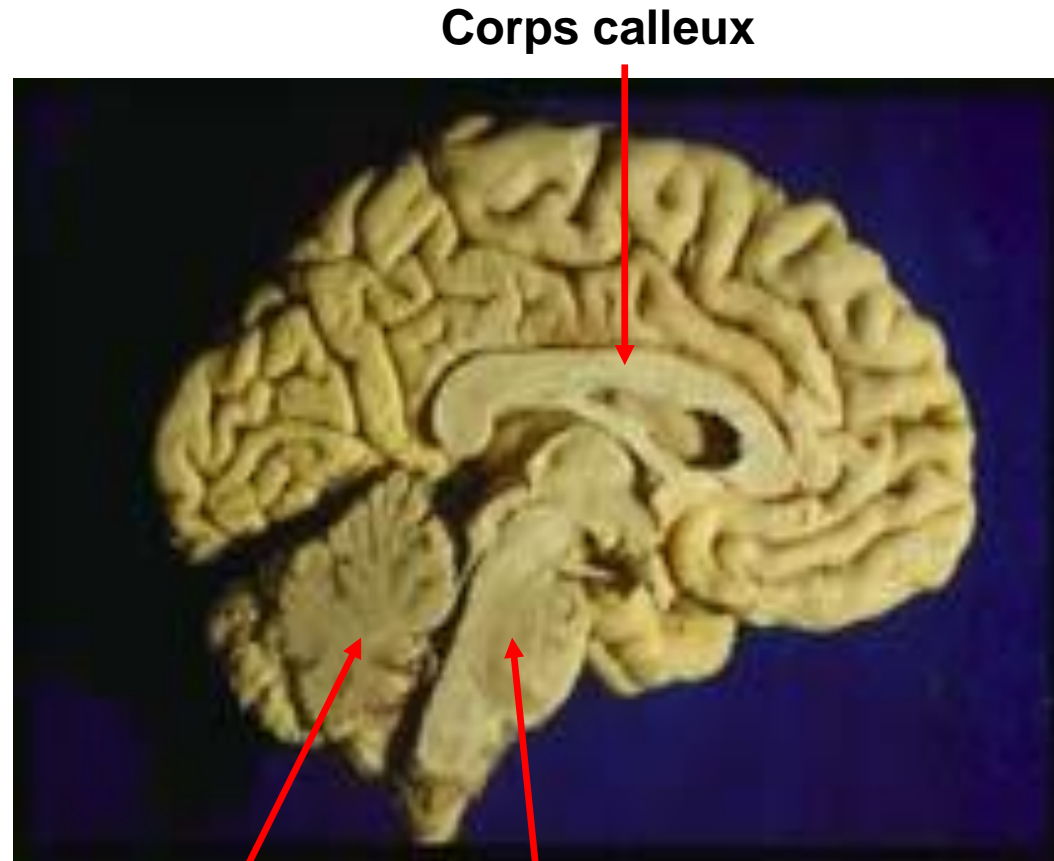
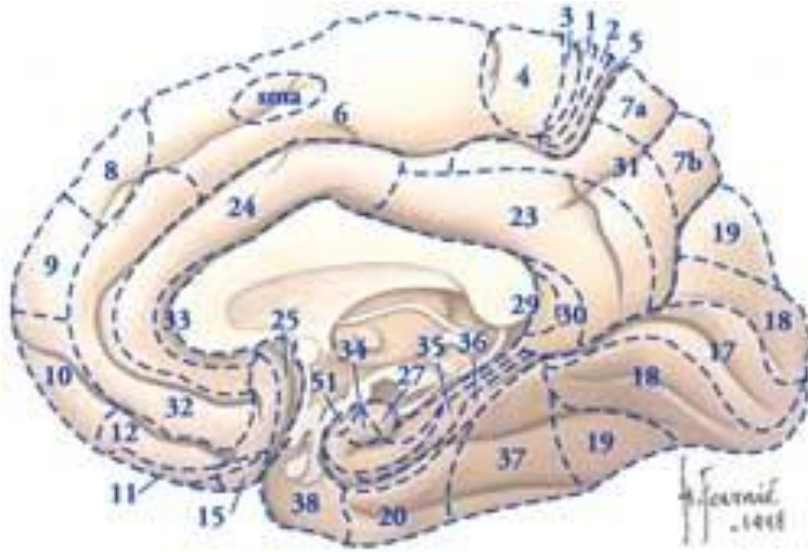
Circulation du liquide cérébro-spinal



SNC – Cortex – Face latérale



SNC – Cortex – Face médiale

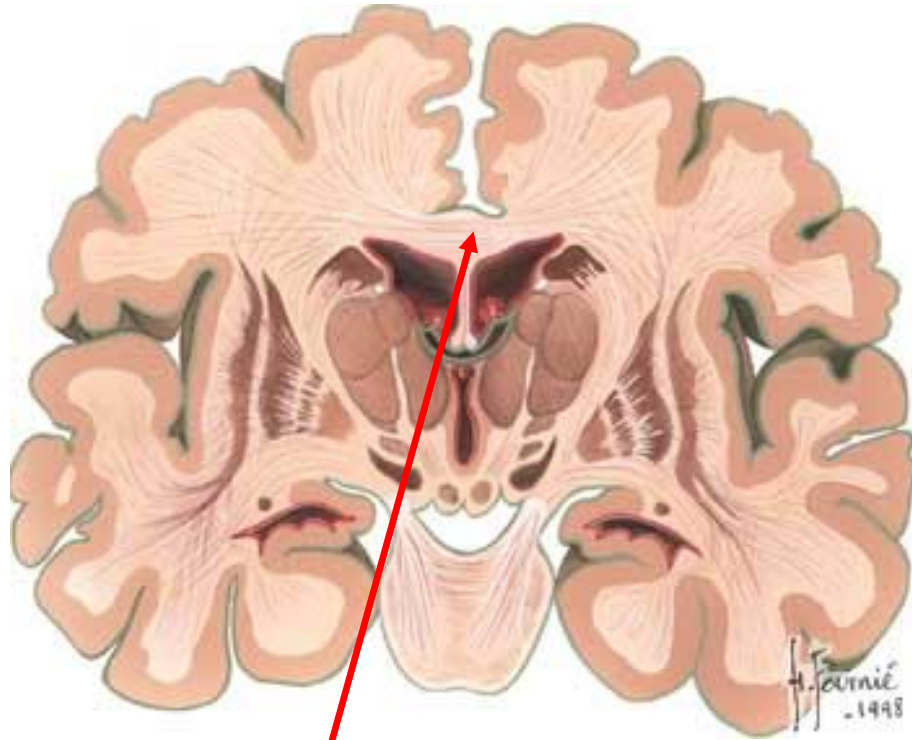


Corps calleux

Cervelet

Tronc cérébral

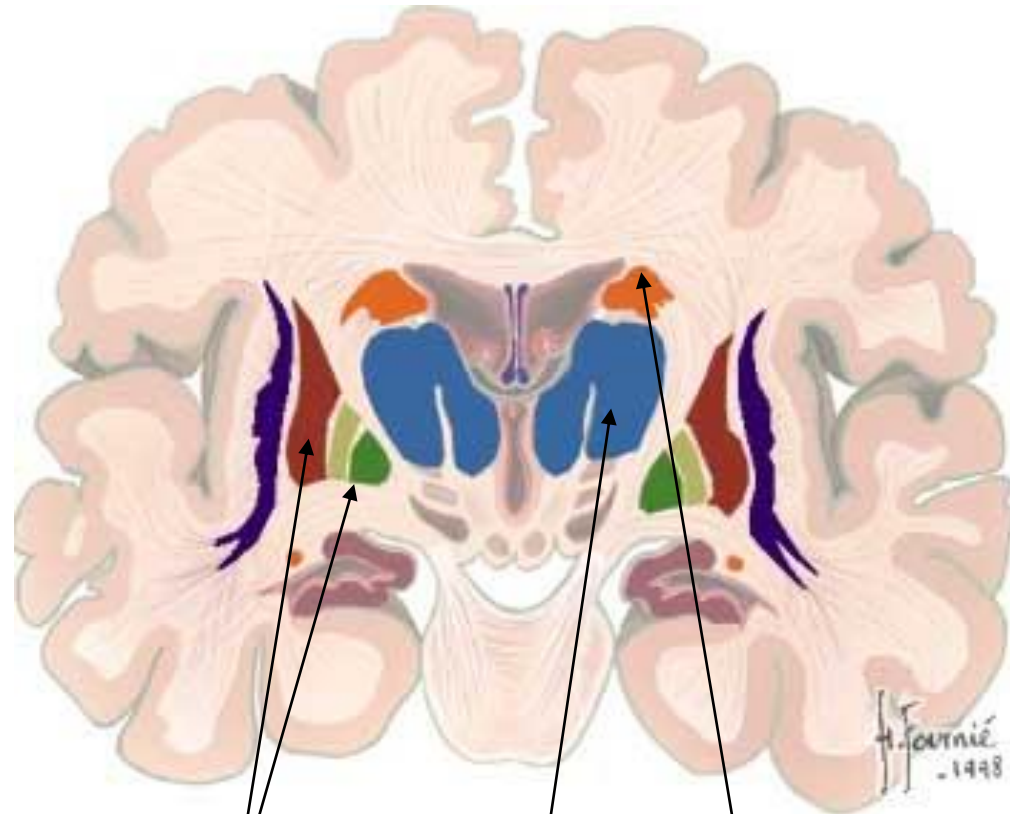
SNC – Substance blanche



Corps calleux



SNC – Noyaux gris centraux

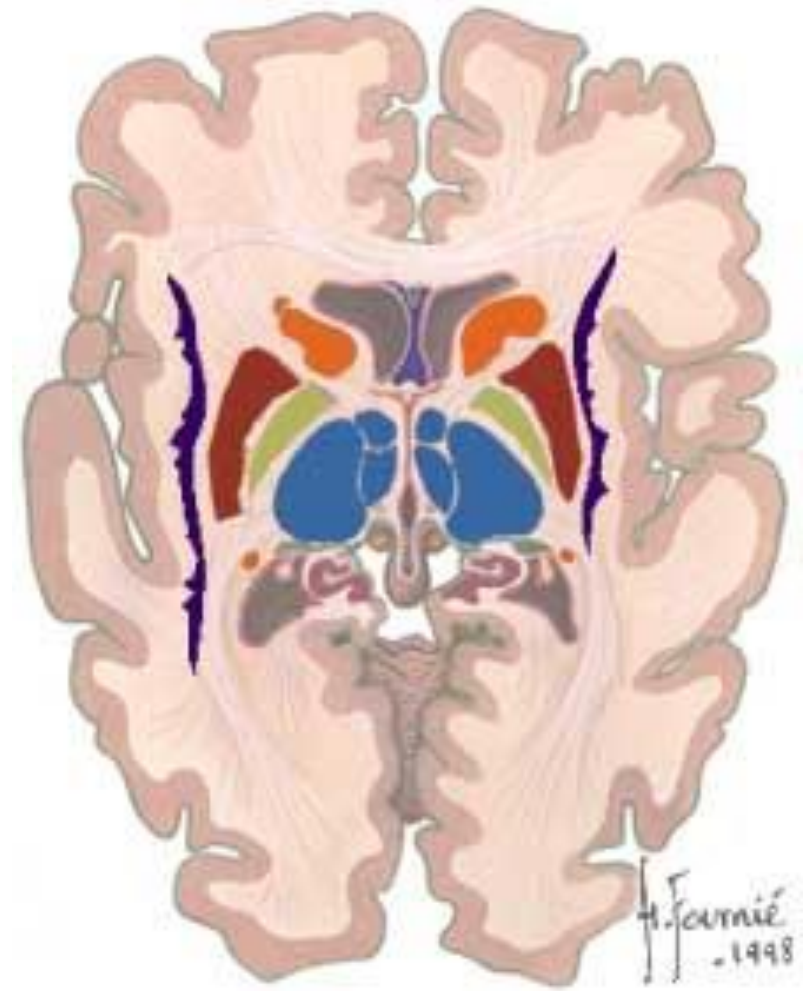


Thalamus

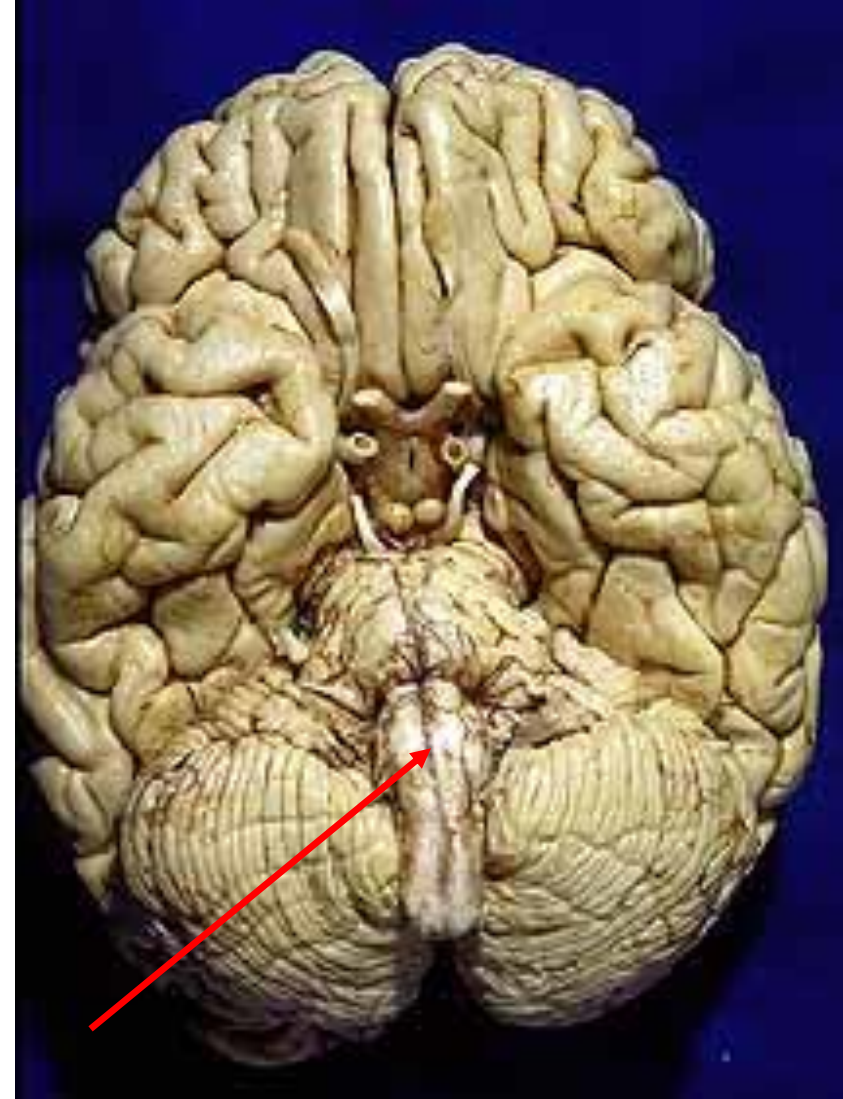
Nx lenticulaire :

- Putamen
- Pallidum

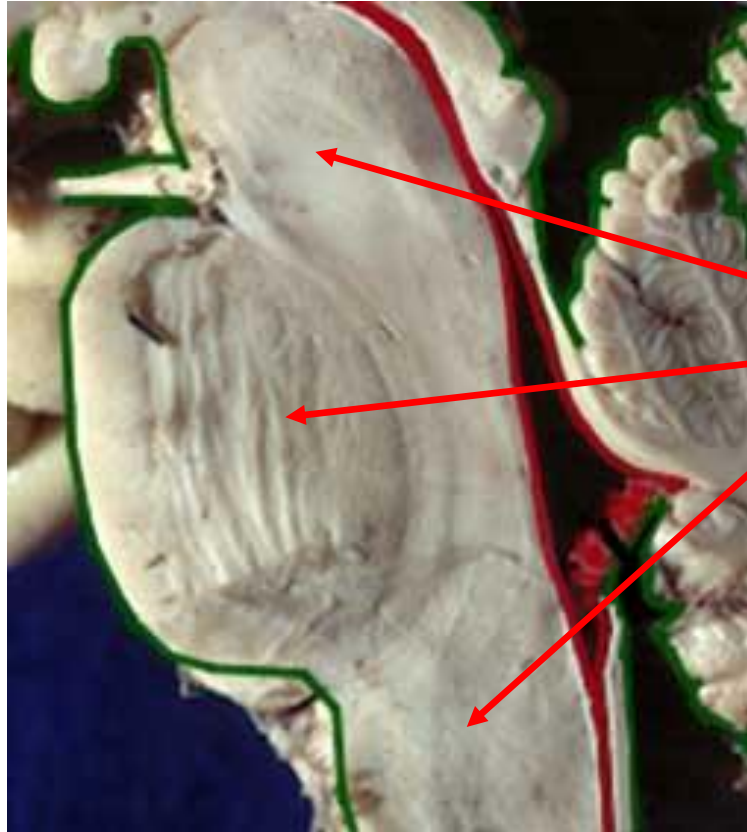
Nx caudé



SNC – Tronc cérébral



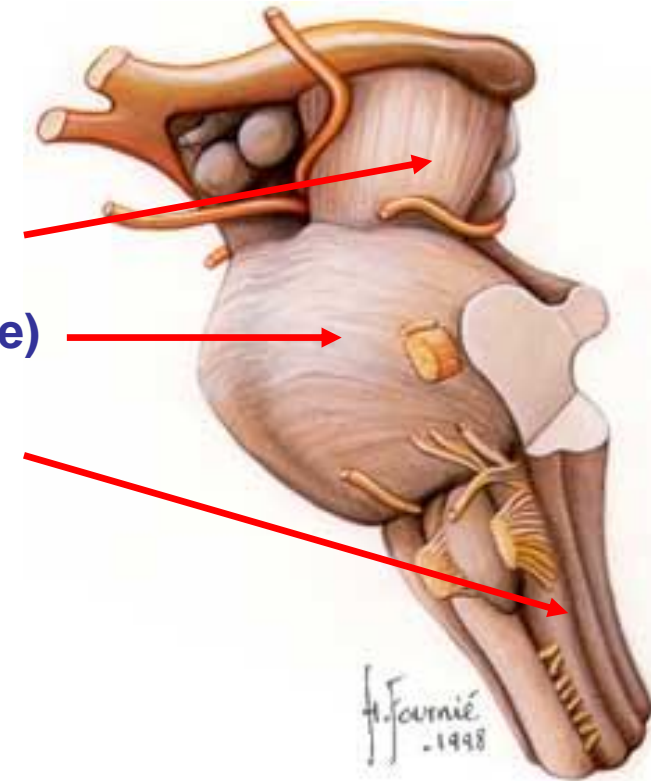
SNC – Tronc cérébral



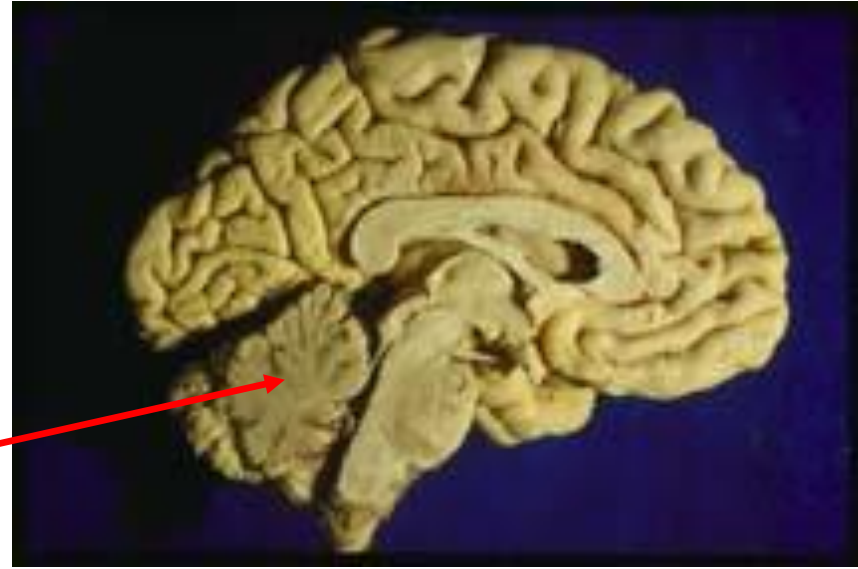
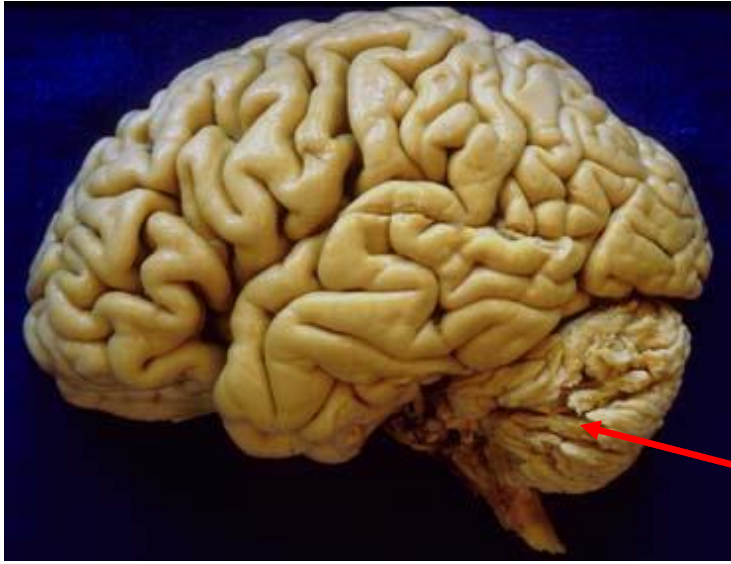
Mésencéphale

Pont (protubérance)

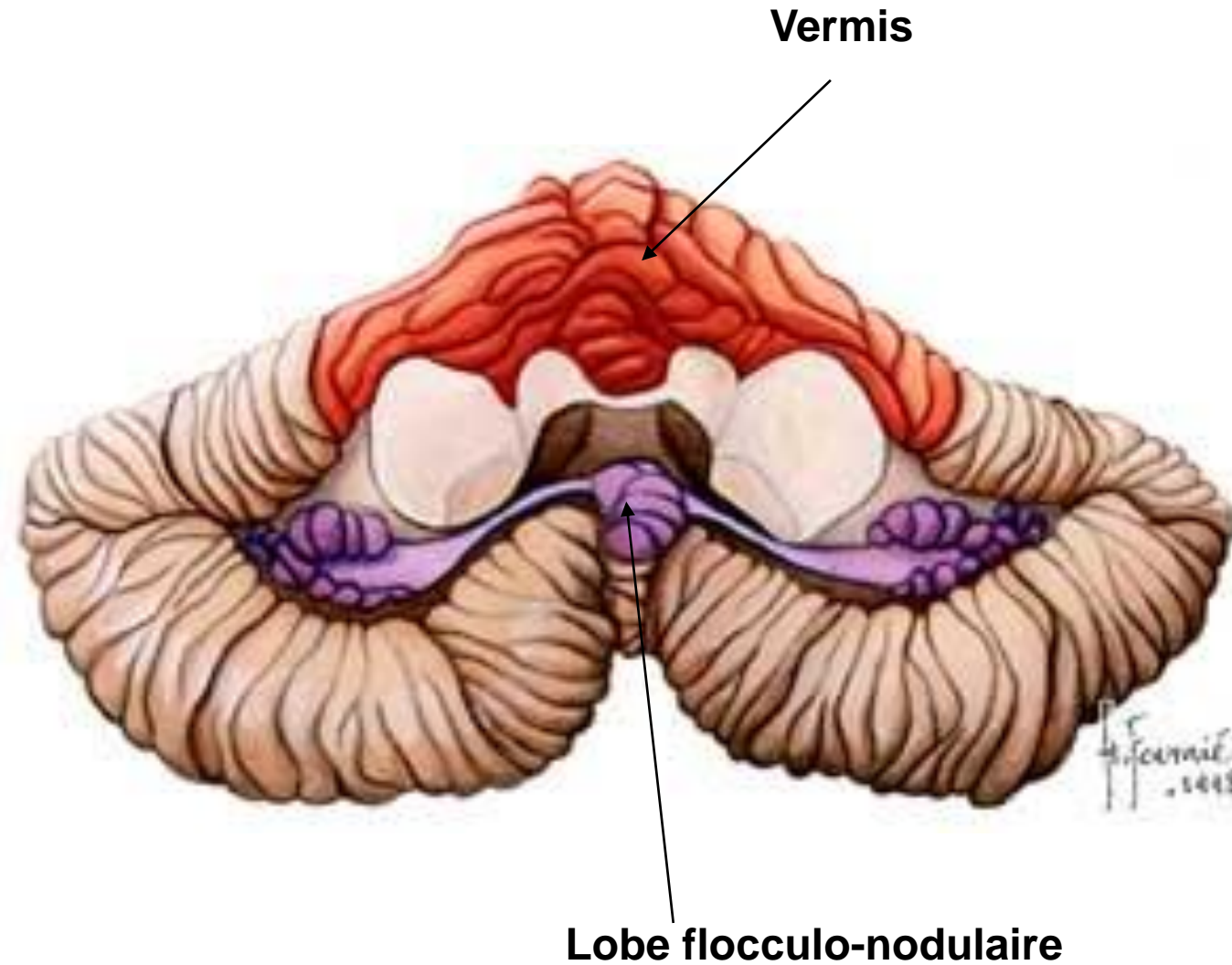
Bulbe rachidien



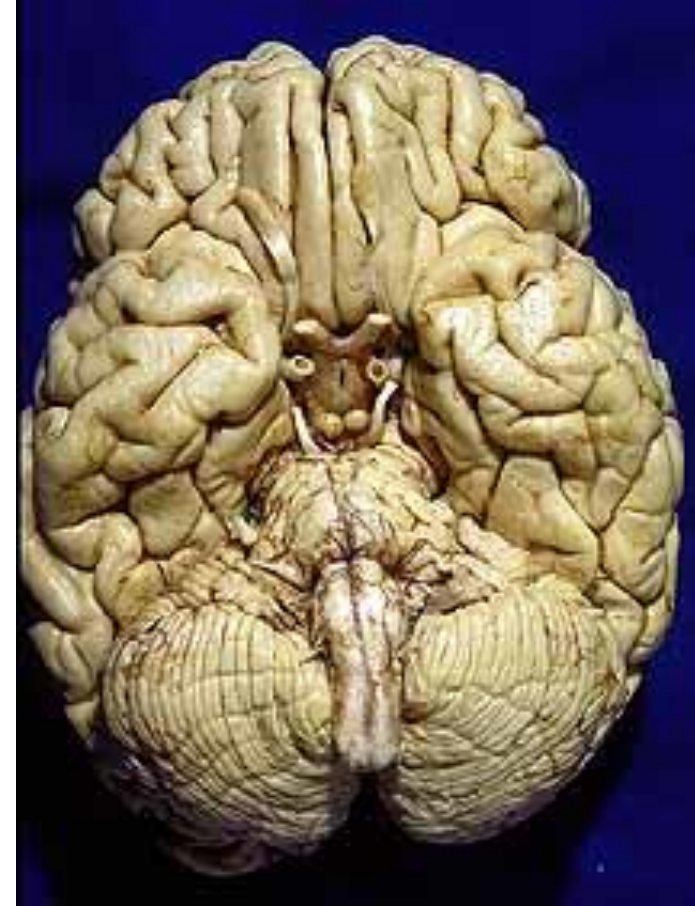
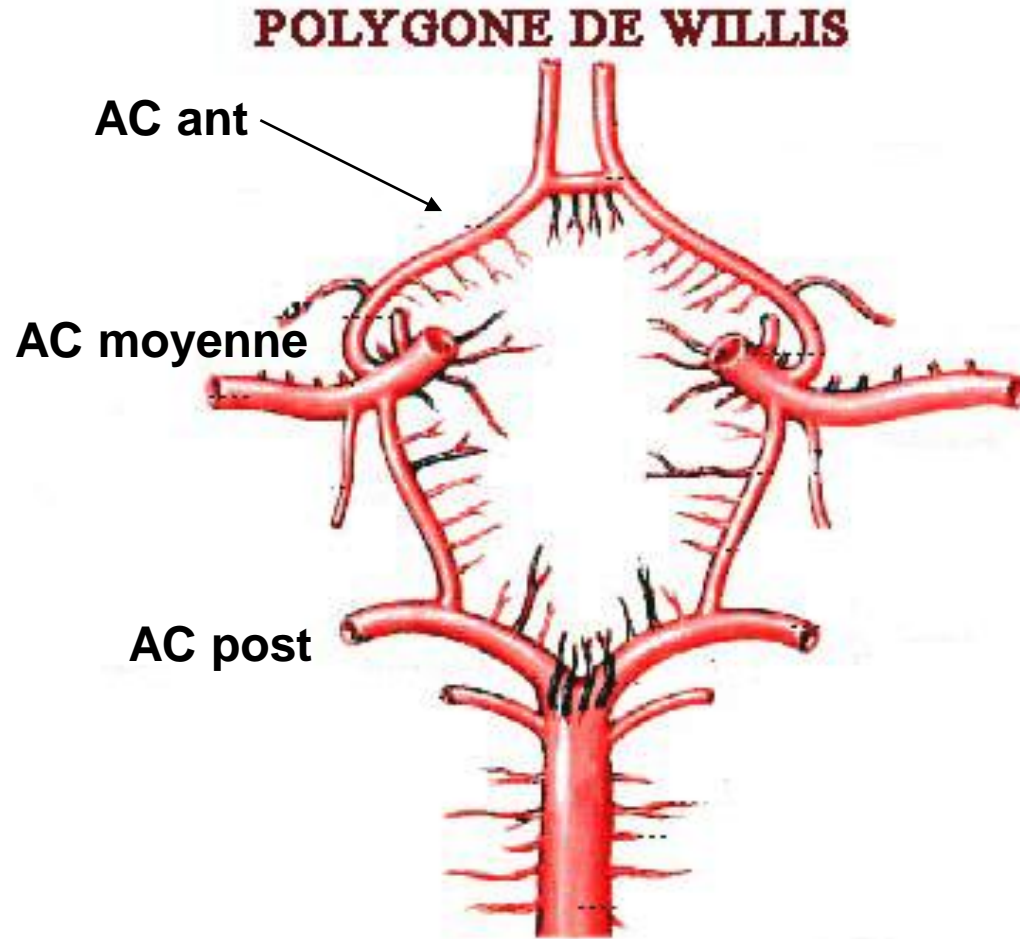
SNC – Cervelet



SNC – Cervelet



SNC – Vascularisation

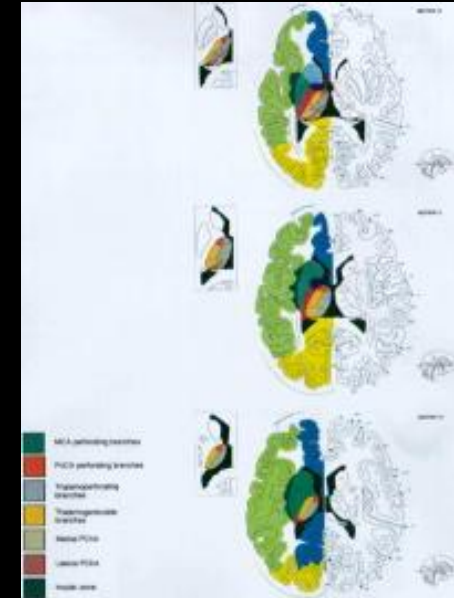
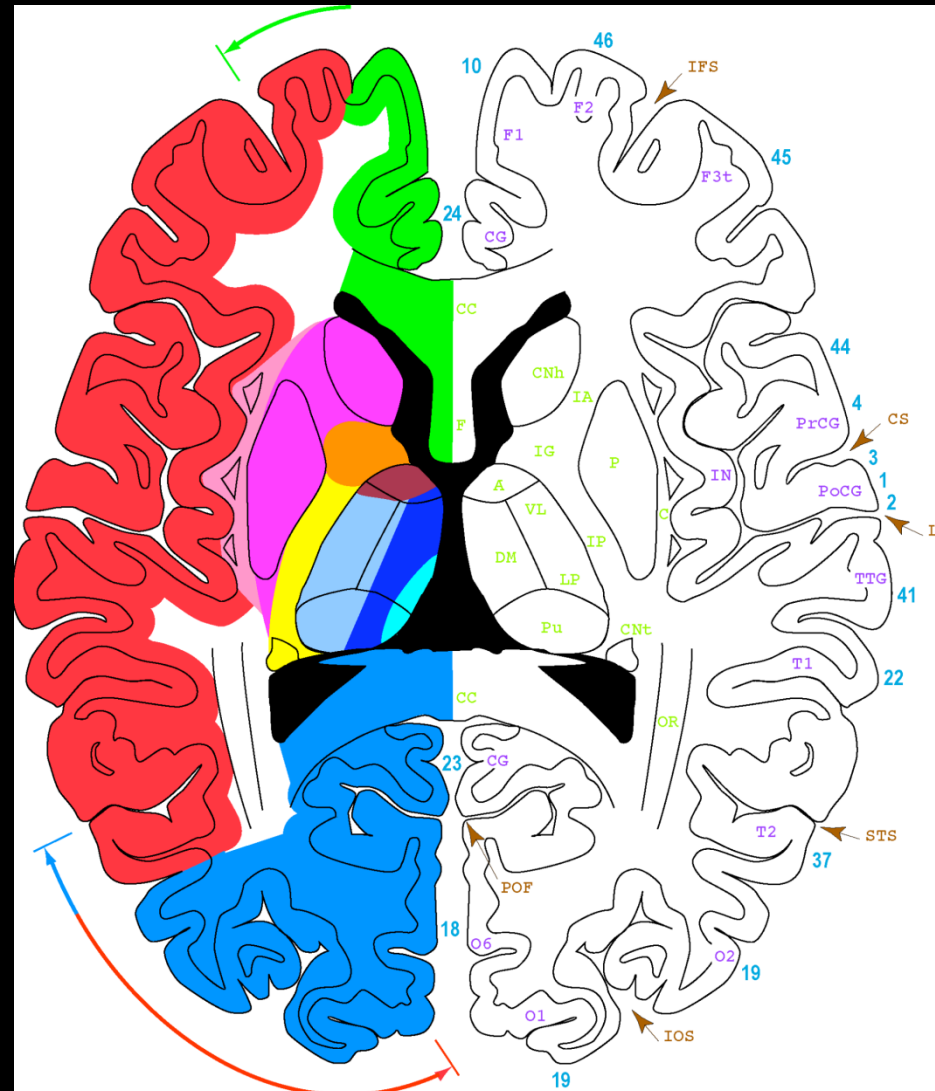


SNC – Vascularisation

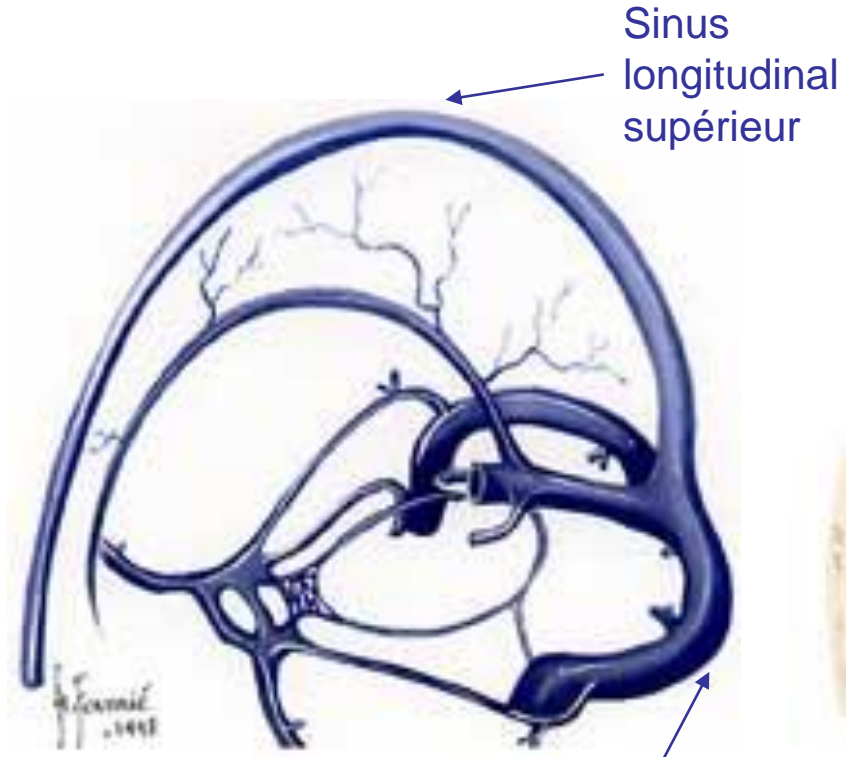
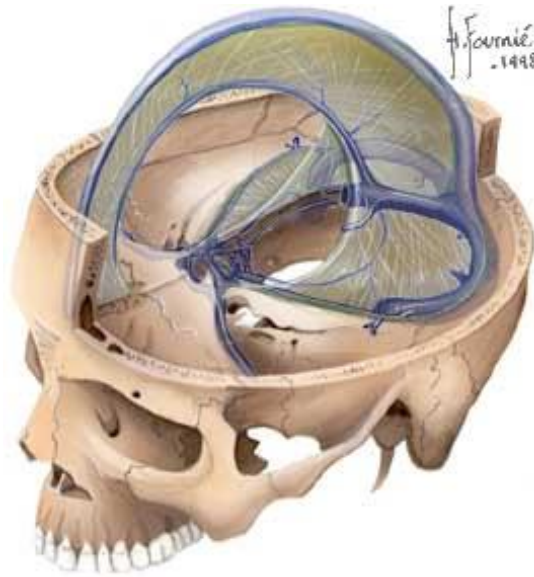
ACA

ACM
= artère
sylvienne

ACP



SNC – Sinus / Veines

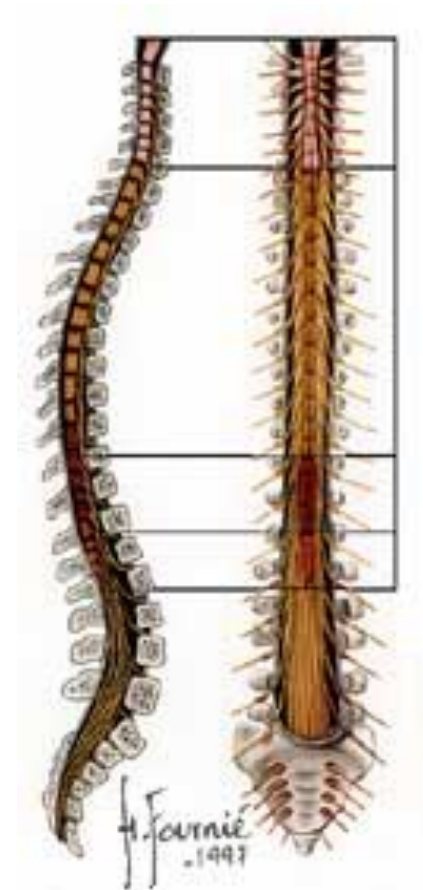
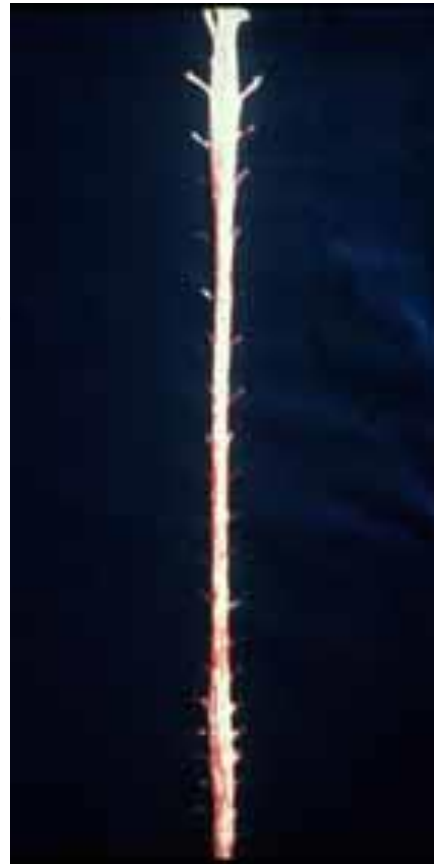
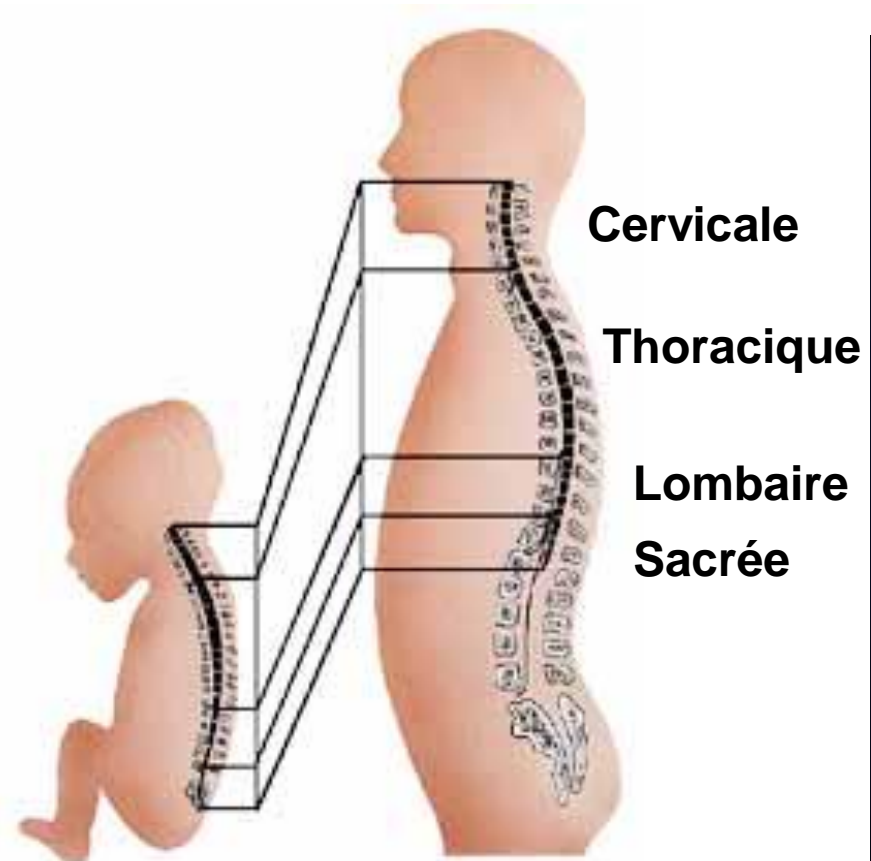


Sinus longitudinal supérieur

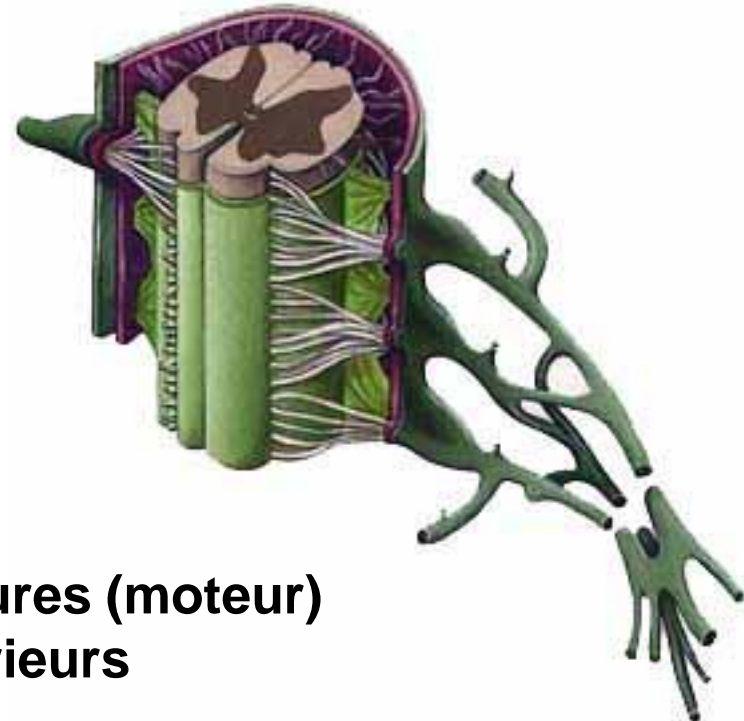
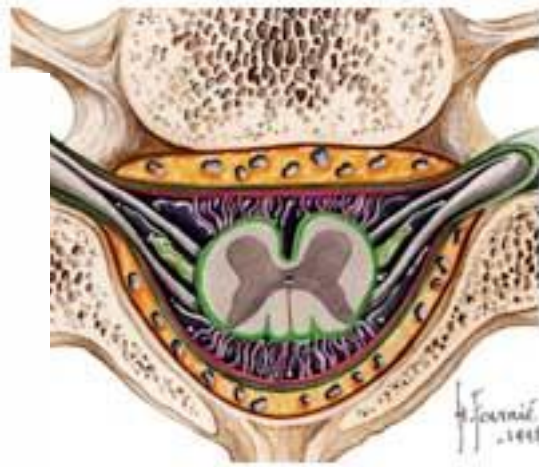
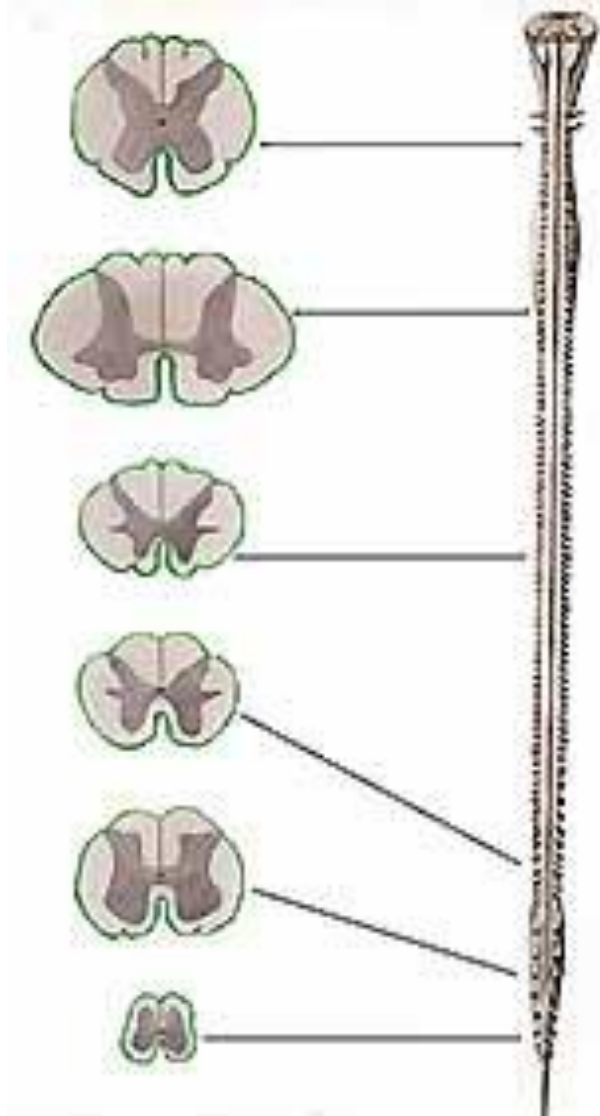
Sinus latéral



SNC – Moelle épinière



SNC – Moelle épinière



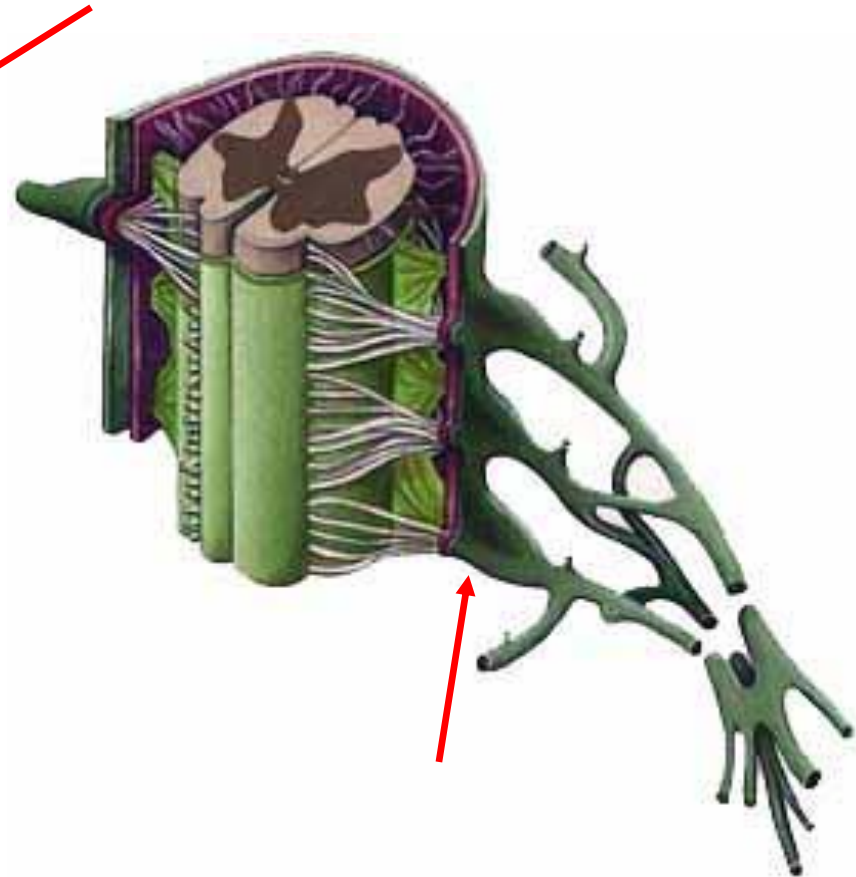
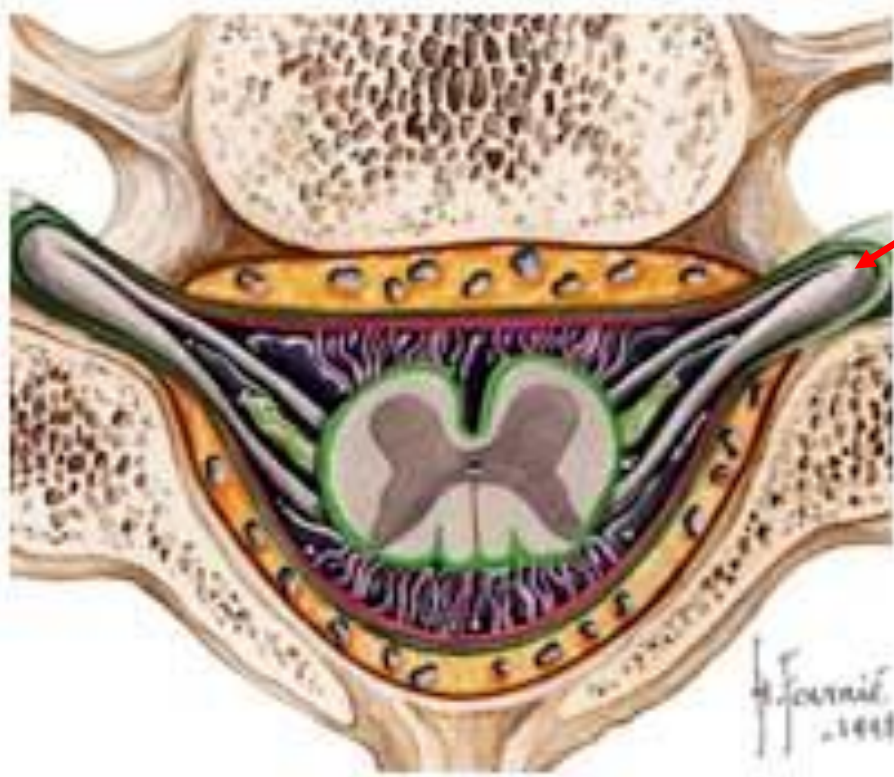
Cornes antérieures (moteur)
Cordons postérieurs

SYSTEME NERVEUX PERIPHERIQUE

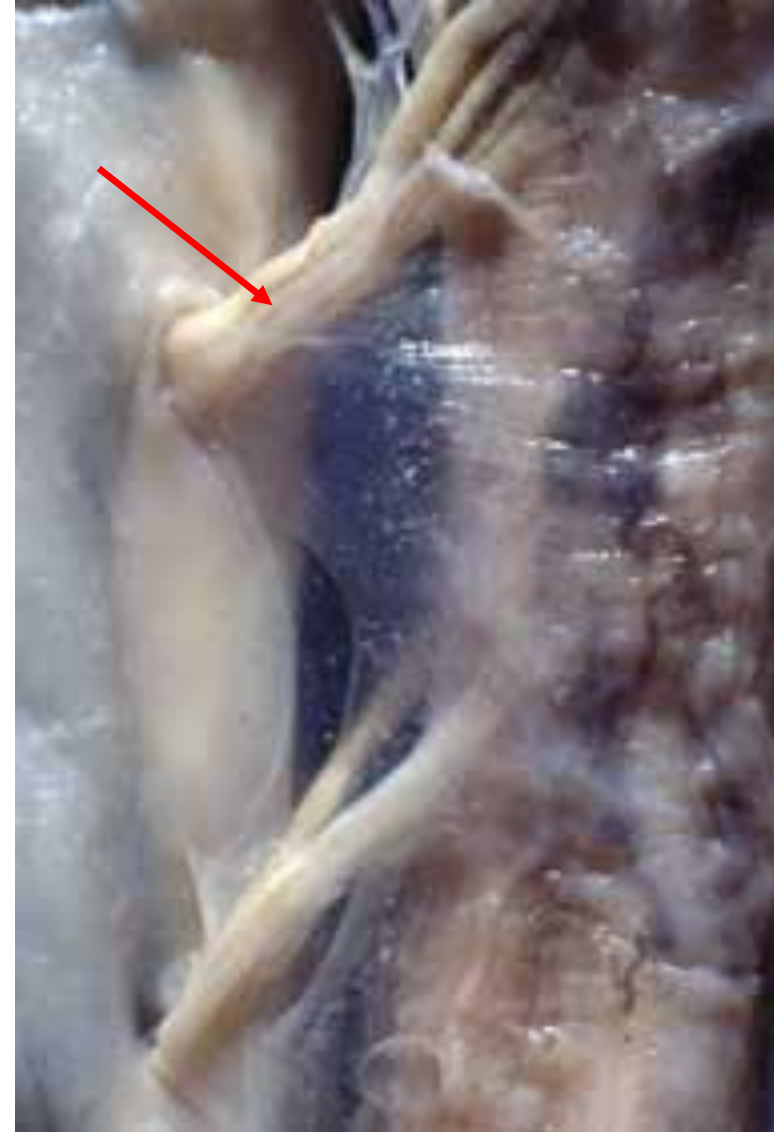
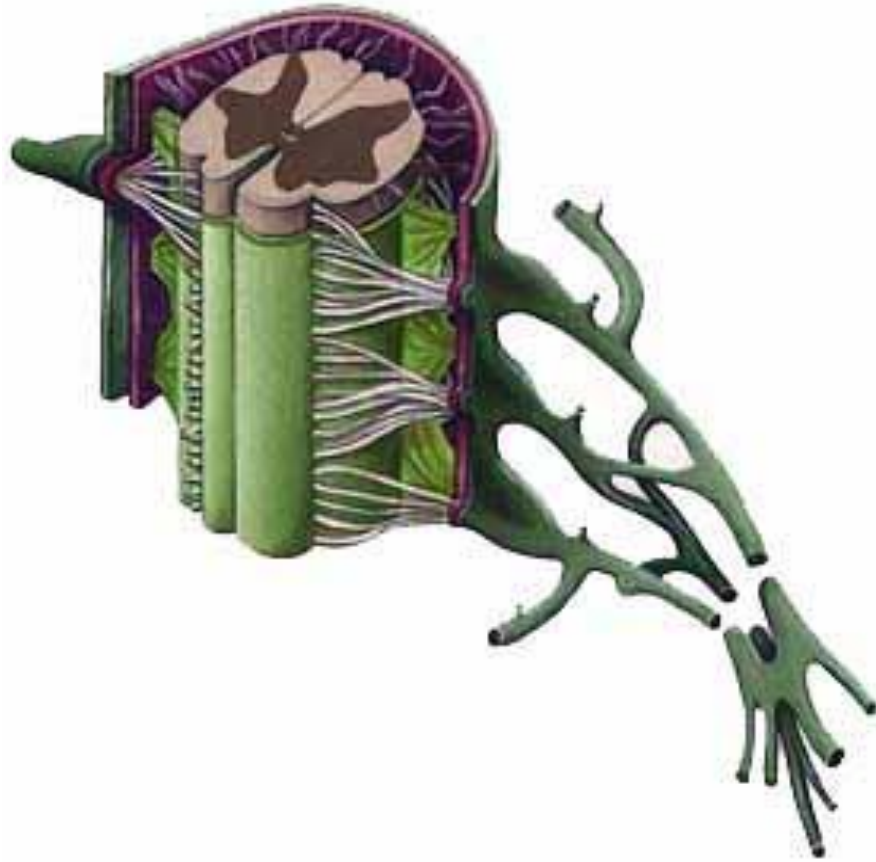
- **Racines**
- **Plexus**
- **Nerfs** (troncs nerveux)

- Neuropathies (diabète, alcool...)
- Polyradiculonévrite aiguë inflammatoire (syndrome de Guillain-Barré)

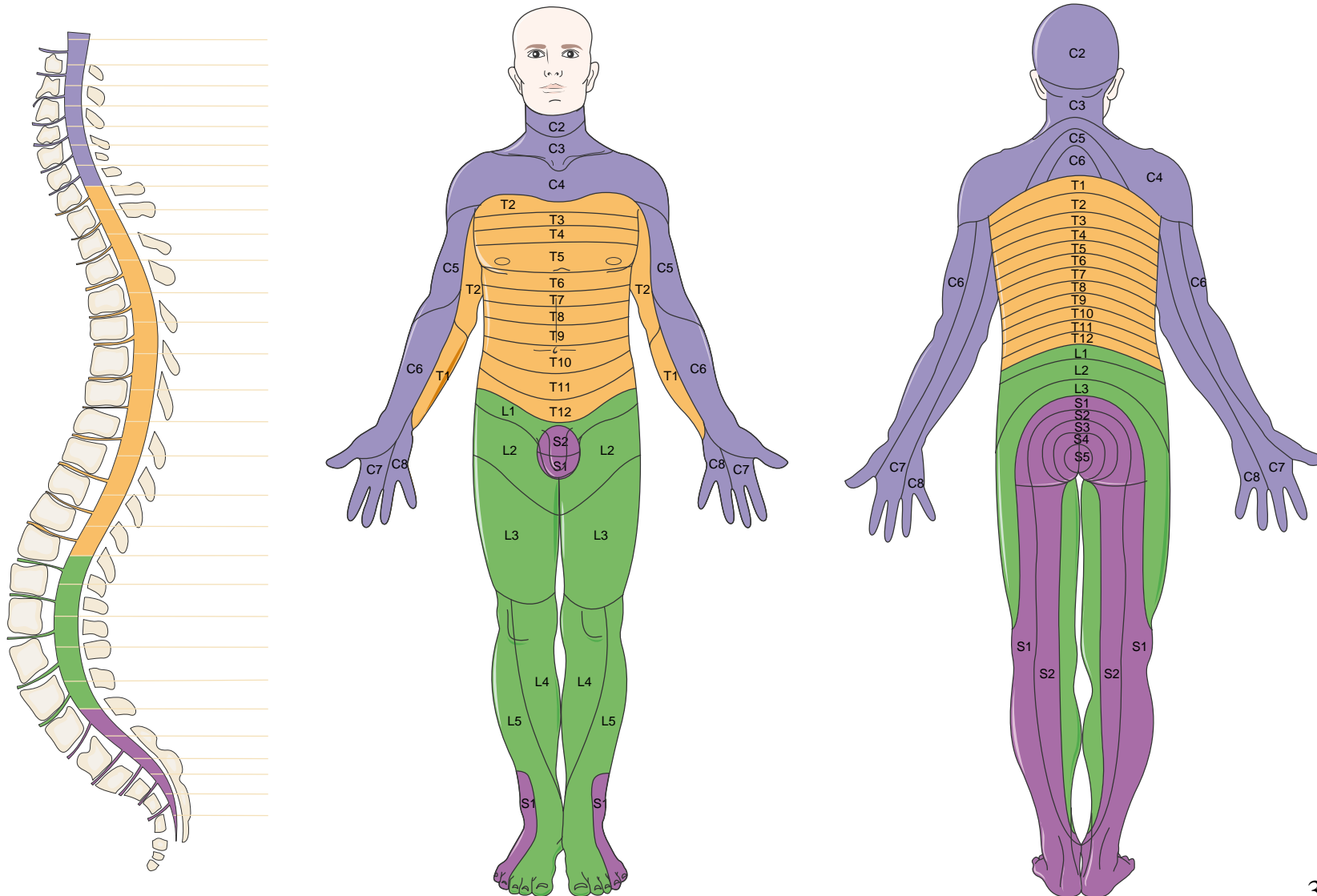
SNP – Racines



SNP – Racines

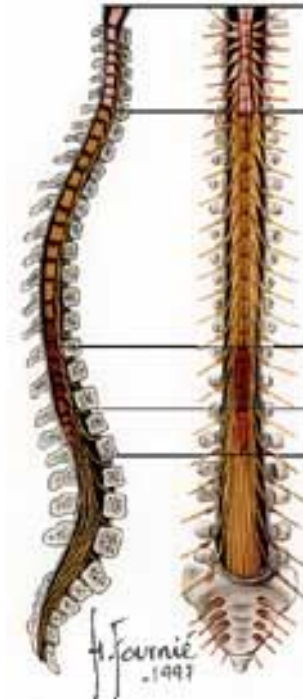
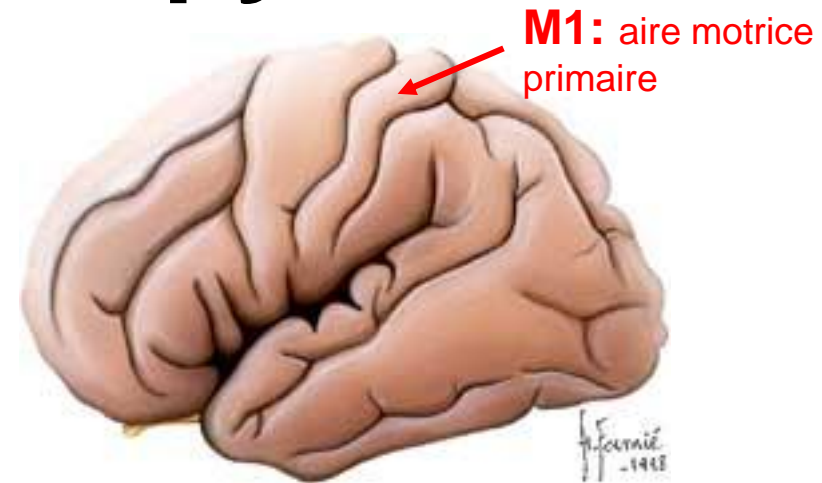
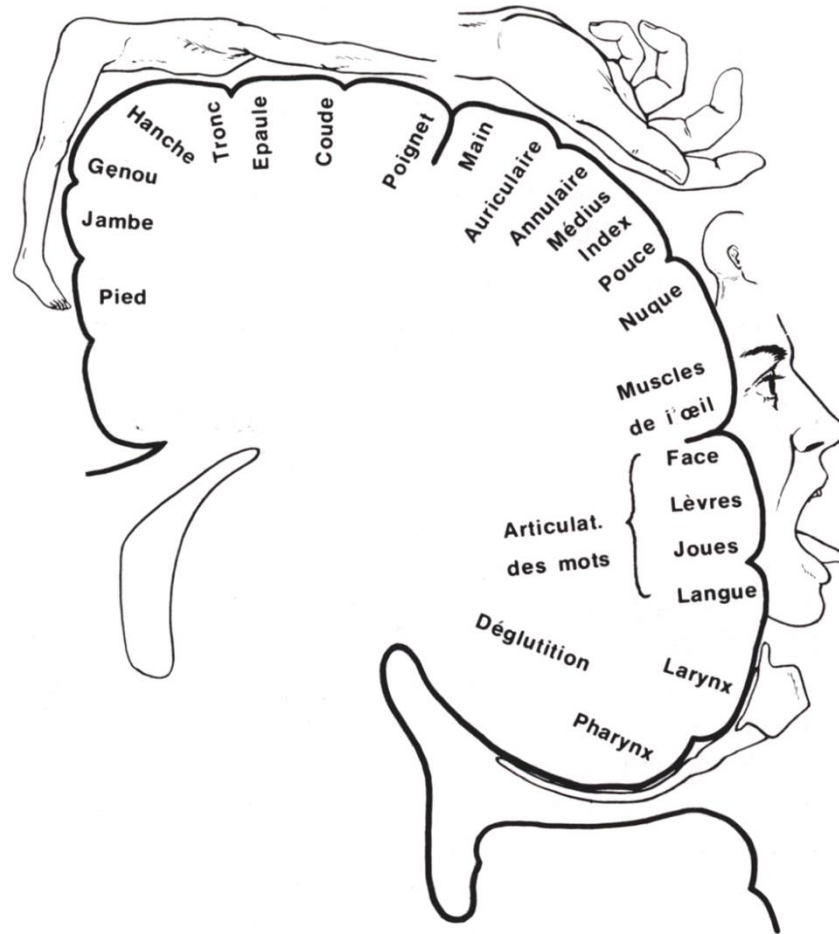


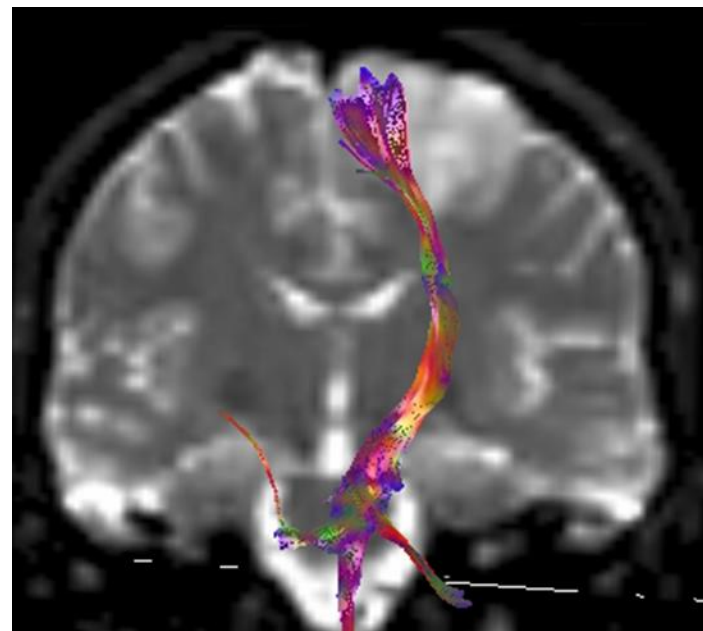
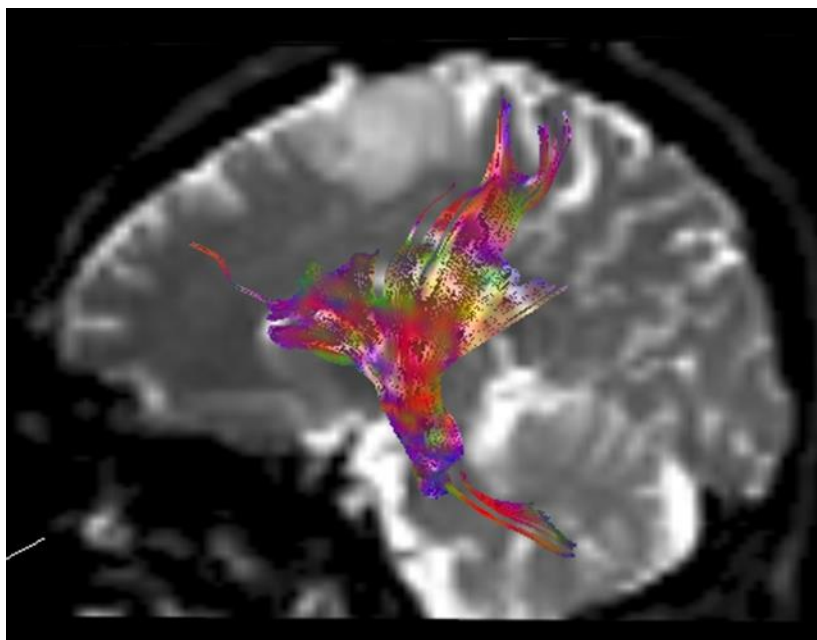
SNP – Nerfs (troncs nerveux)



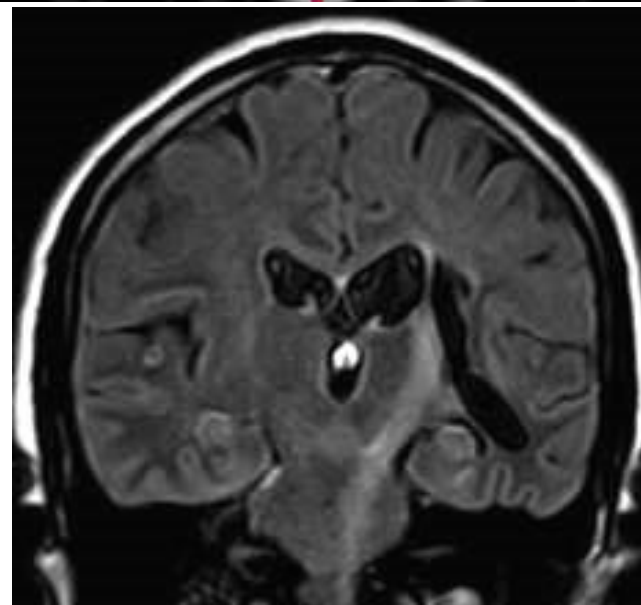
2- MOTRICITE

MOTRICITE – Voie pyramidale

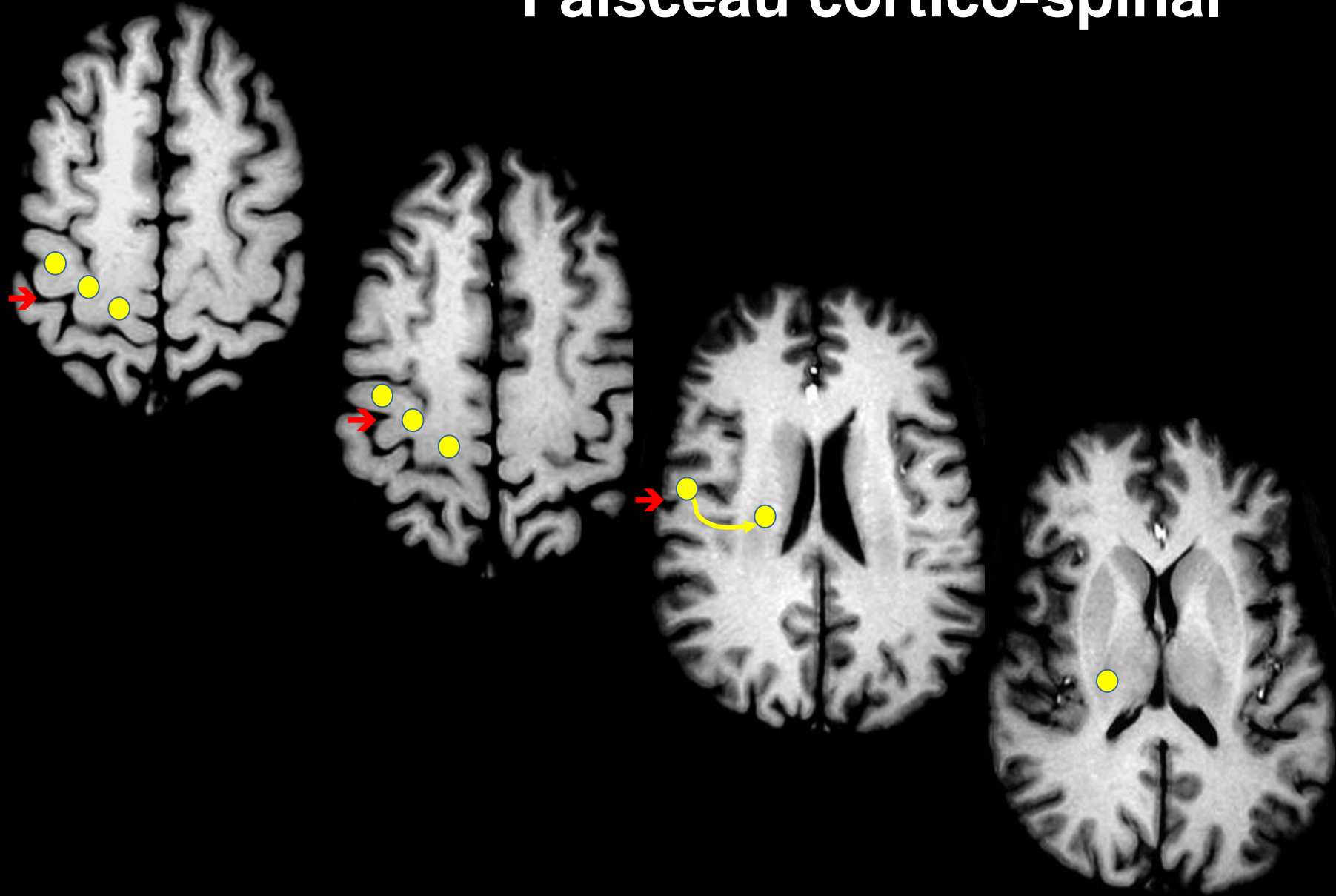




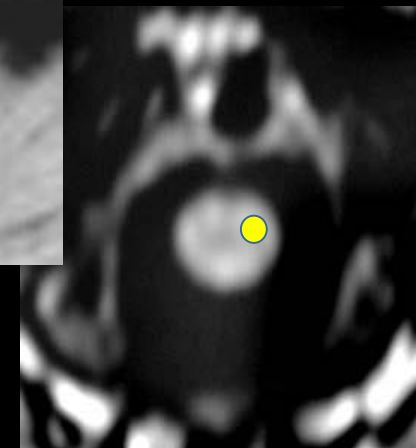
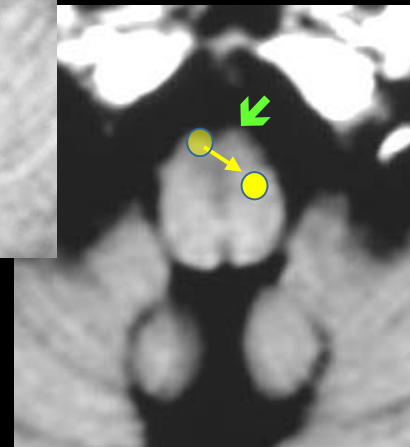
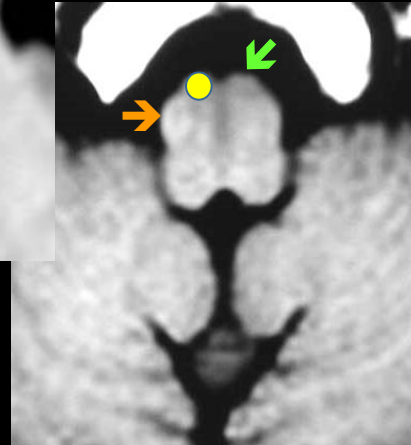
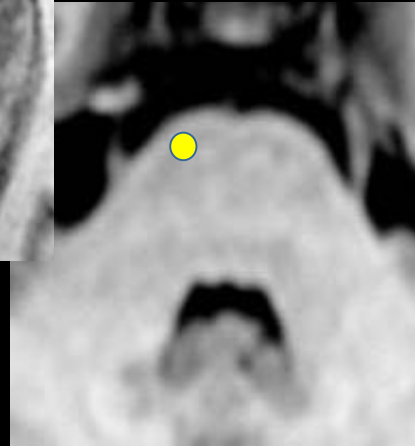
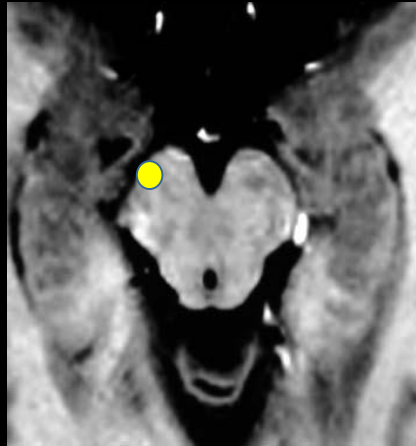
Faisceau cortico-spinal



Faisceau cortico-spinal



Faisceau cortico-spinal

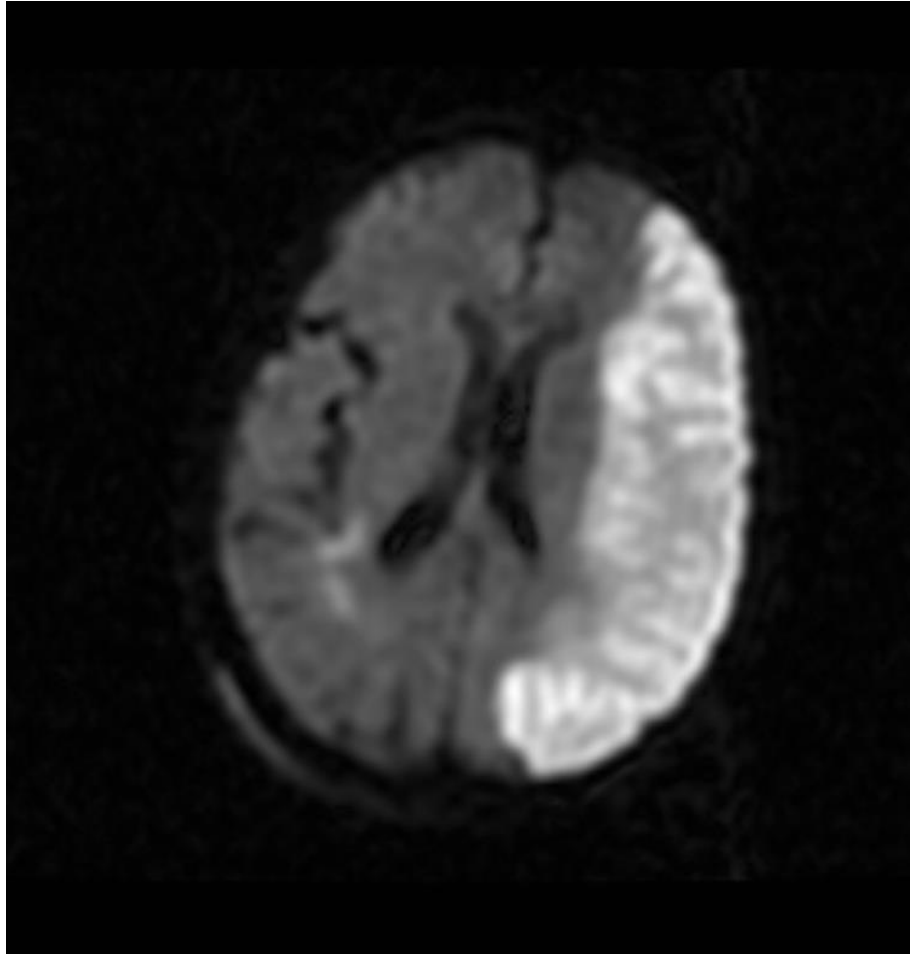


MOTRICITE – Voie pyramidale

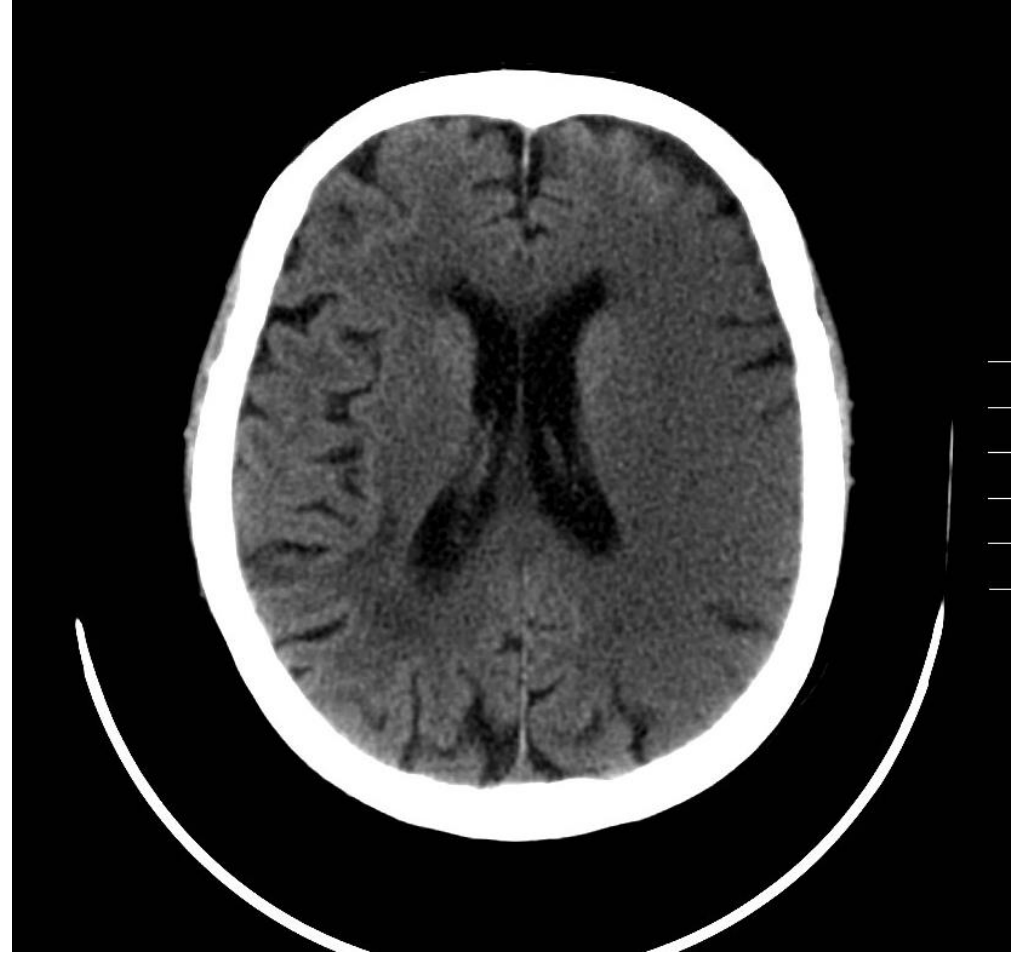
- Hémiplégie / Hémiparésie : *controlatérale*
- Paraplégie / Paraparésie
- **Syndrome pyramidal** : paralysie, hypertonie « élastique »
(*spasticité*)
- **Troubles de déglutition !!!**

MOTRICITE – Voie pyramidale

Infarctus cérébral gauche
IRM / TDM



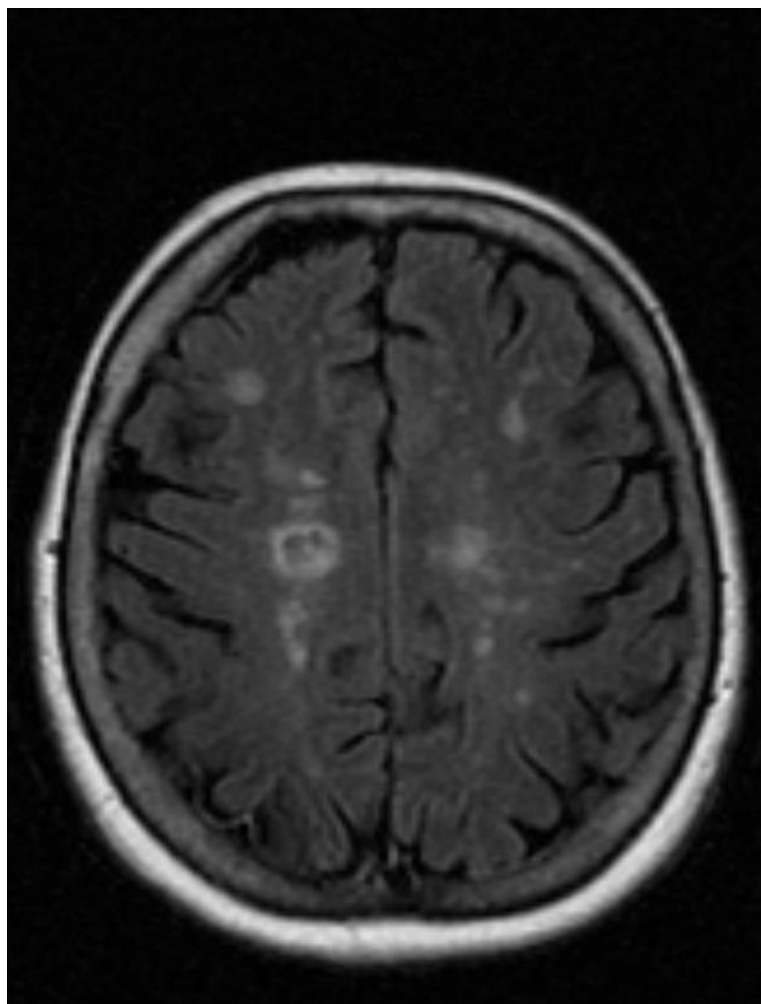
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G

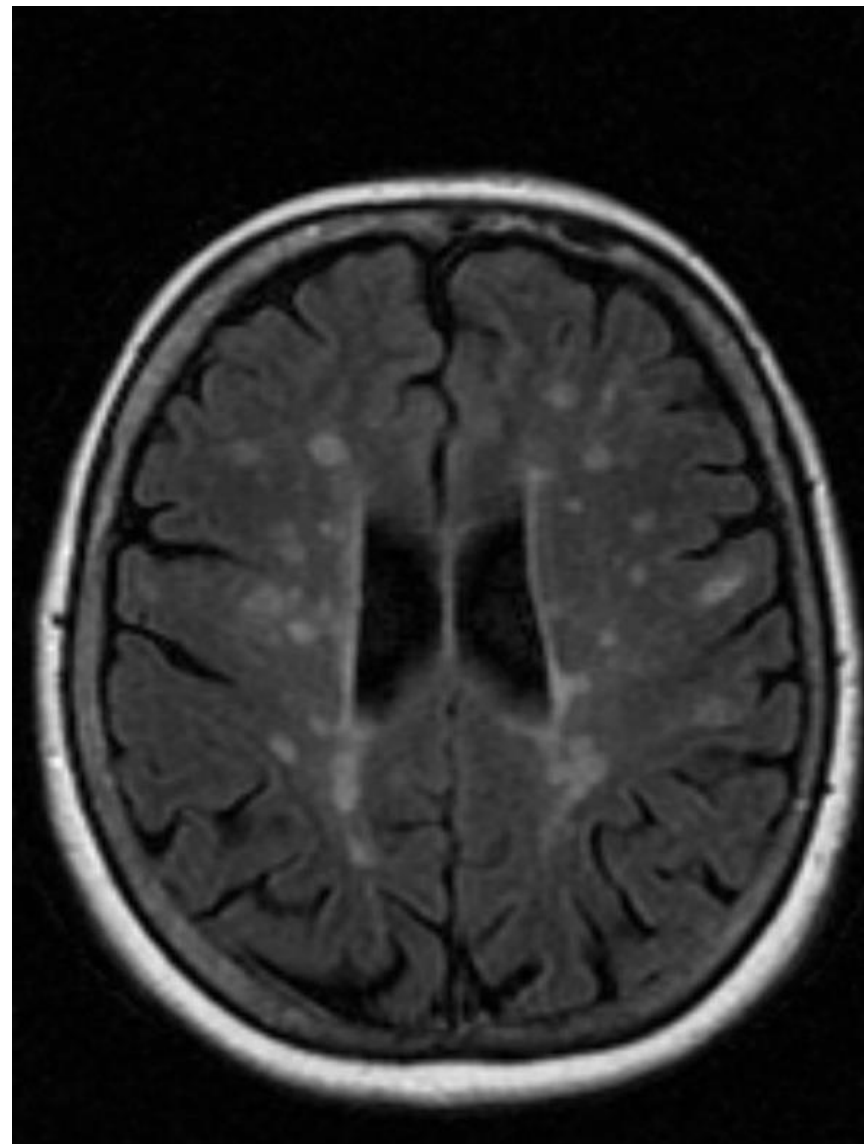
MOTRICITE – Voie pyramidale

Sclérose en plaques



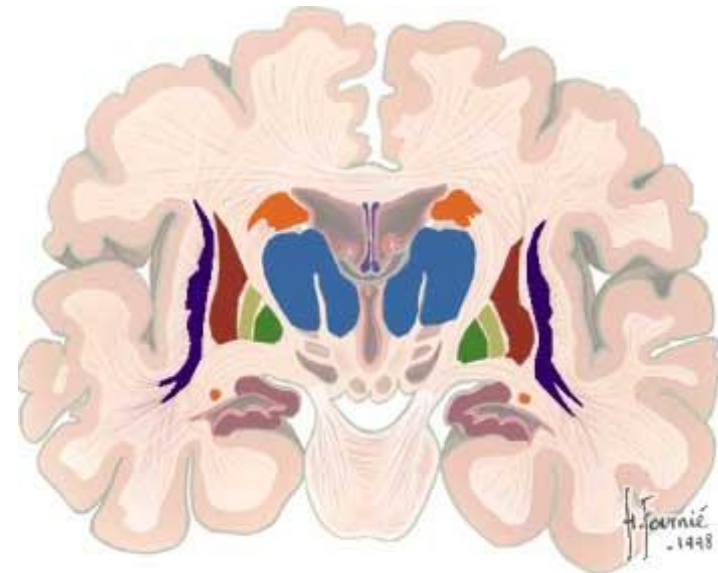
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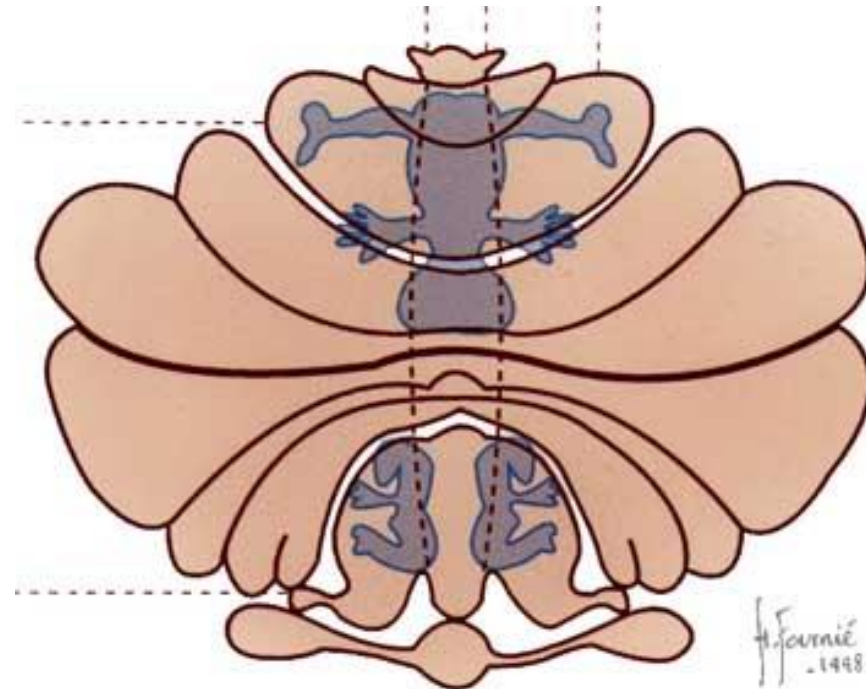
MOTRICITE – Noyaux gris

- **Boucles** : favorisent le mouvement normal et « filtrent » les mouvements parasites
- **Syndrome parkinsonien** (maladie de Parkinson) : akinésie, tremblement de repos, hypertonie « plastique »
- Tremblement essentiel (familial)
- Dystonie / Chorée / Myoclonies



MOTRICITE – Cervelet

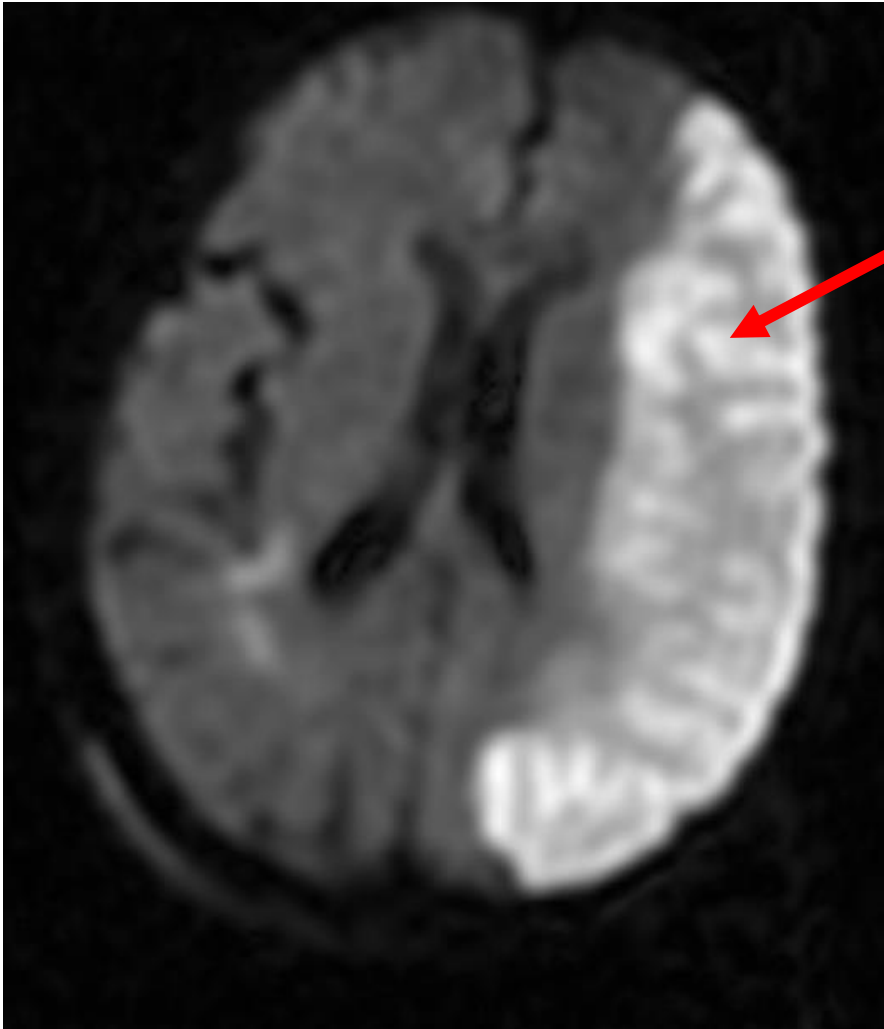
- **Coordination motrice**
- **Syndrome cérébelleux** cinétique / statique



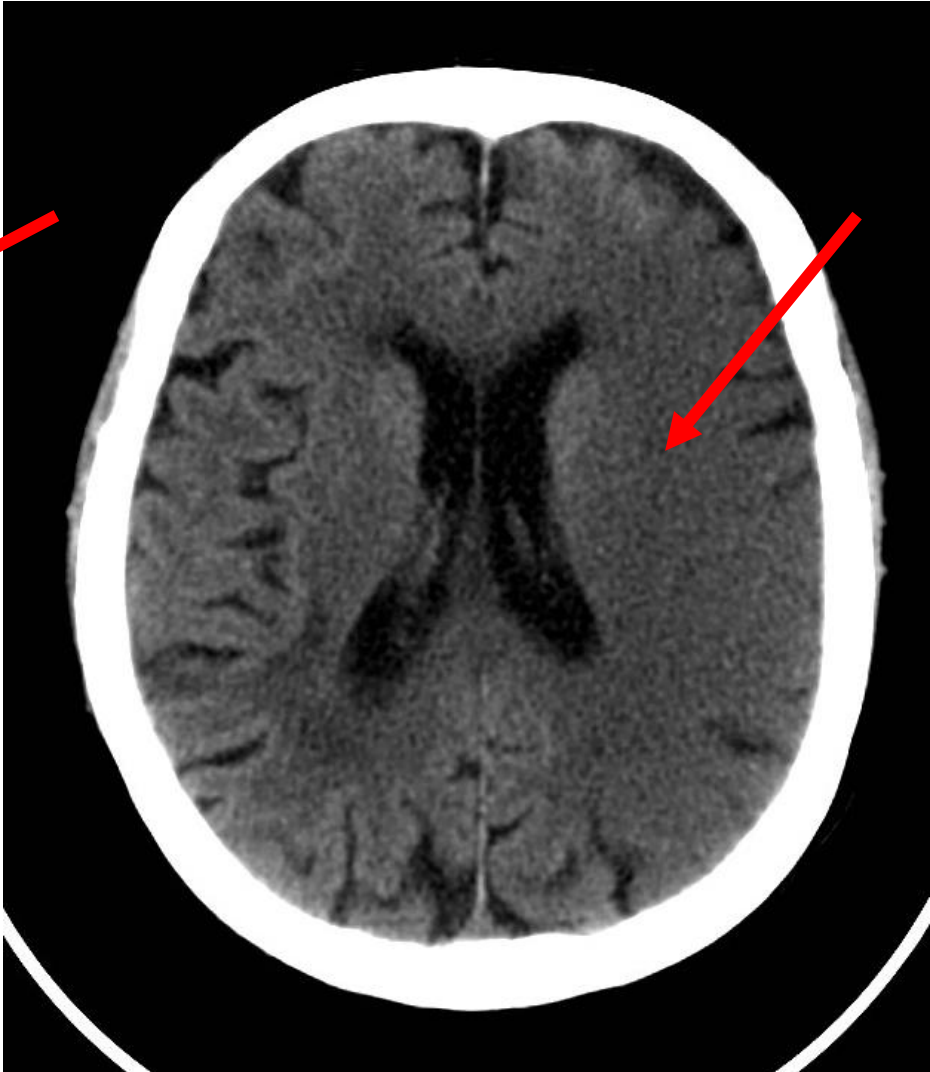
CAS ANATOMO-CLINIQUES

????

AVC ischémique : ACM gauche



D



G

Hématome intra-parenchymateux



D

G

Infarctus cérébral : ACA bilatérale





SR

**Hernie discale avec
compression
médullaire cervicale**

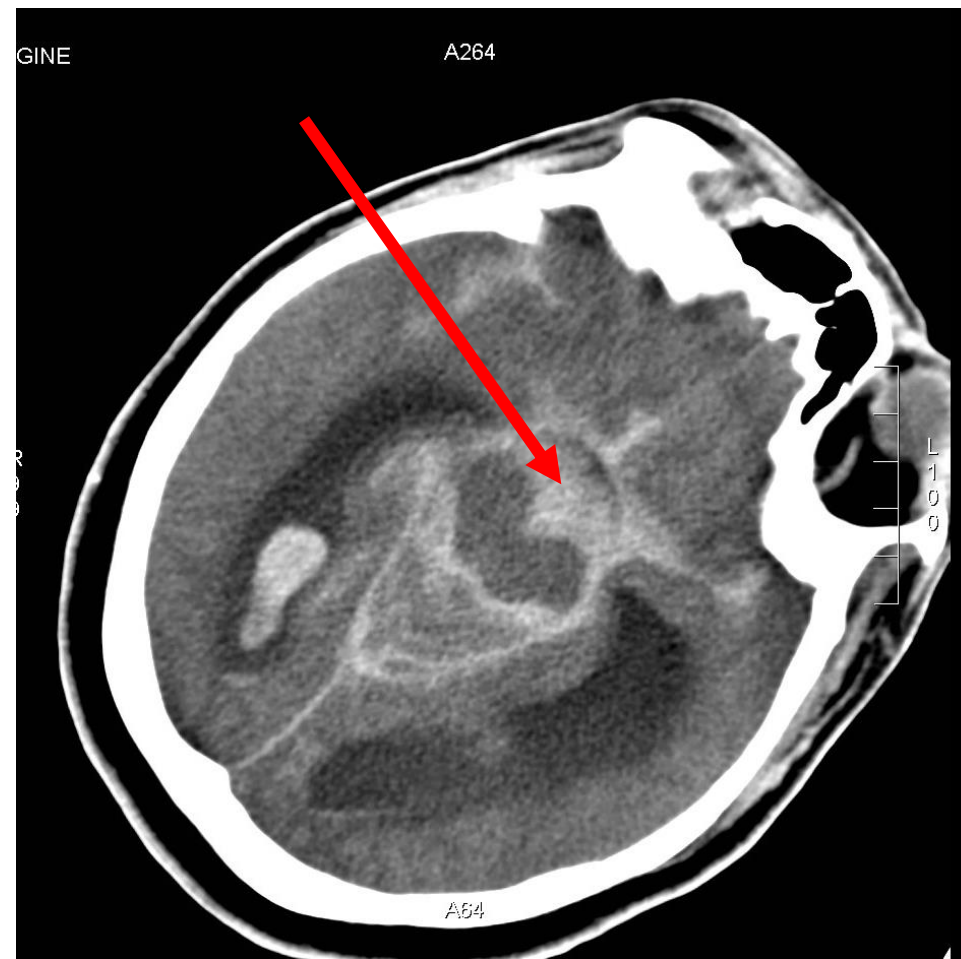
IL

Hémorragie sous-arachnoïdienne > Hypertension intracrânienne

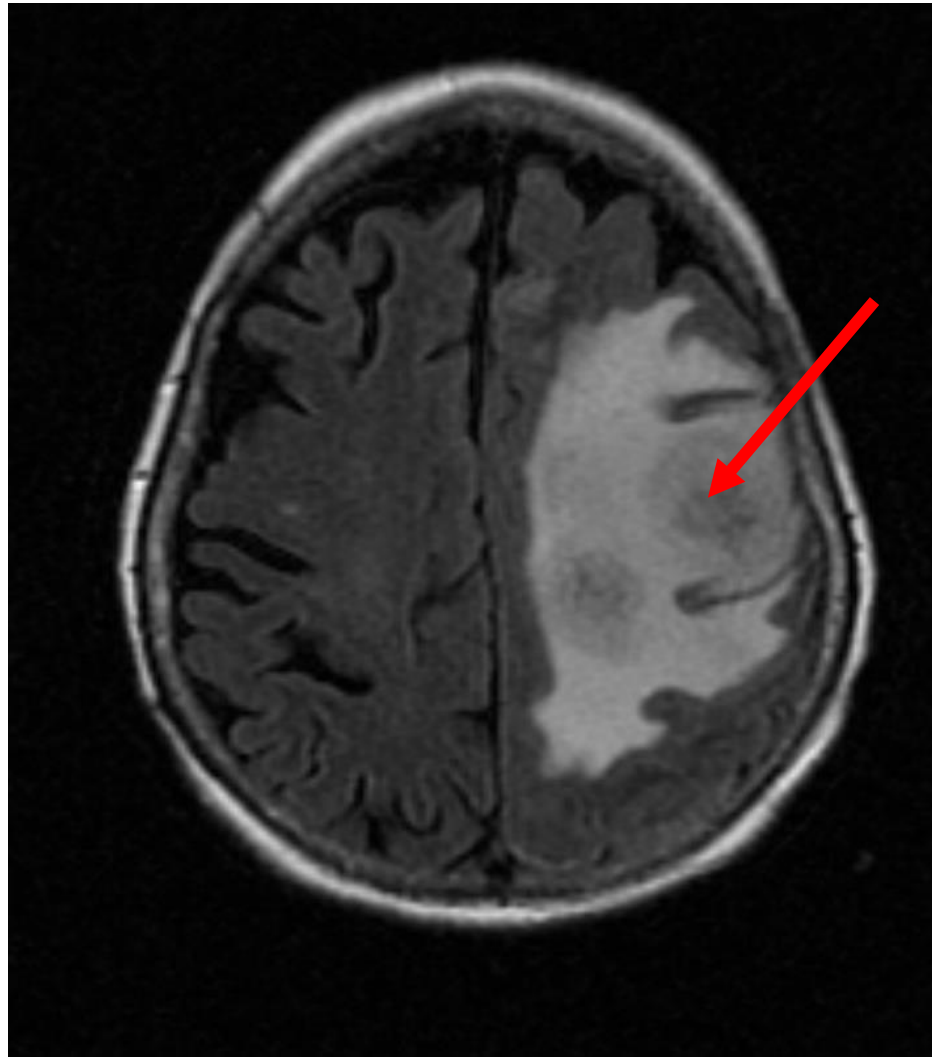


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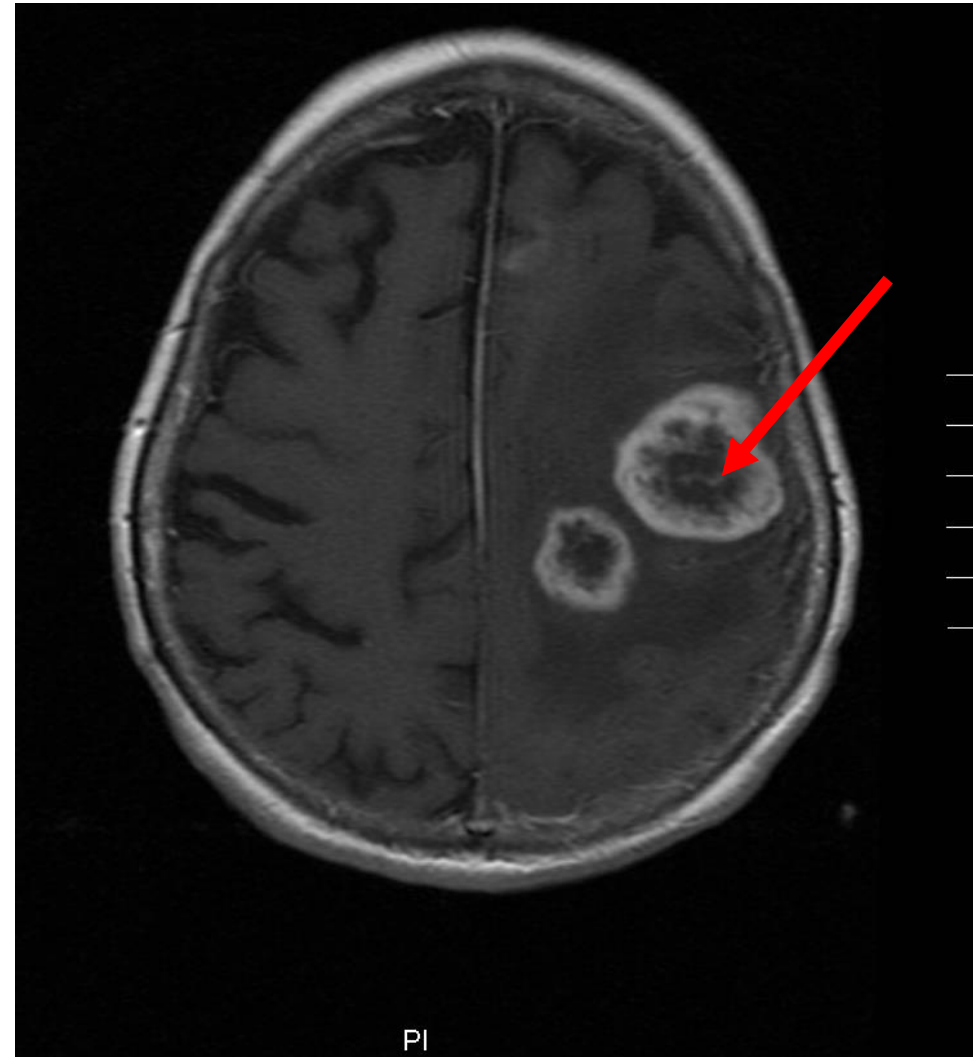


Tumeur cérébrale > Déficit + Hypertension intracrânienne



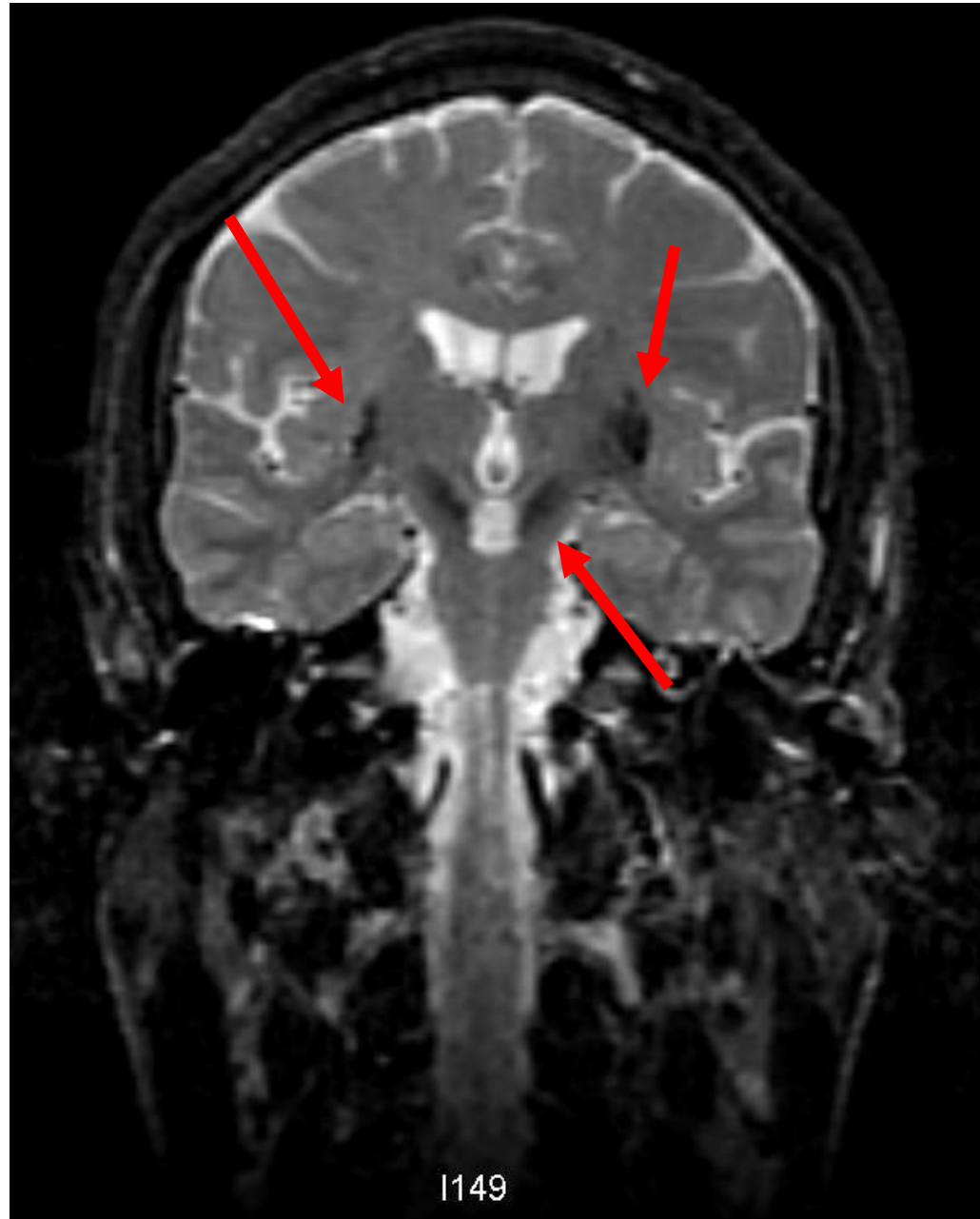
D

G



PI

**Atrophie multisystématisée
Syndrome parkinsonien (extra-pyramidal)**



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