

NEUROLOGIE

PHYSIOLOGIE – ANATOMIE SEMIOLOGIE (Partie 1)

Dr O. Detante

Neurologie, CHU Grenoble Alpes

Neur@nat

Un site de neuroanatomie

Dr D. Hasboun

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

SOMMAIRE

1. SYSTEME NERVEUX - Généralités

2. MOTRICITE

3. SENSIBILITE

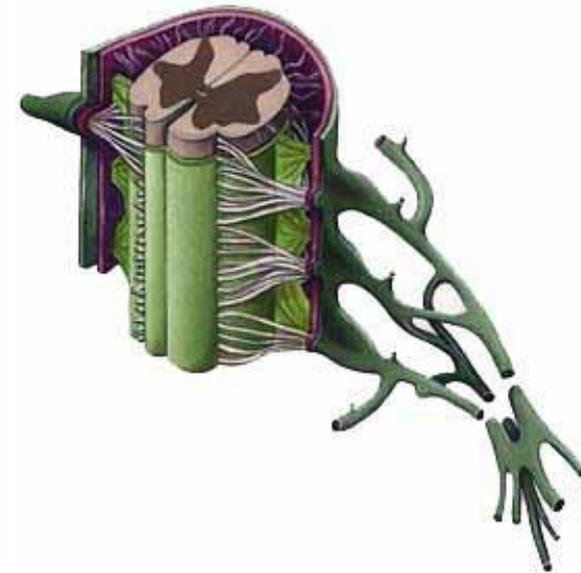
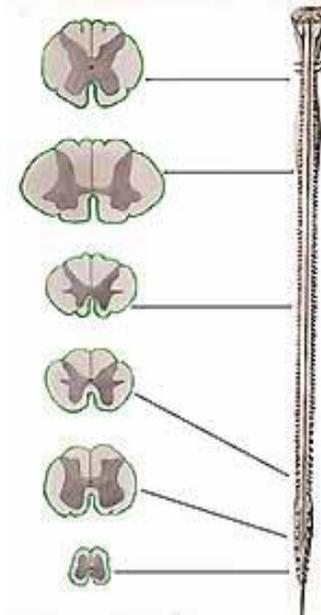
4. VISION

5. FONCTIONS COGNITIVES

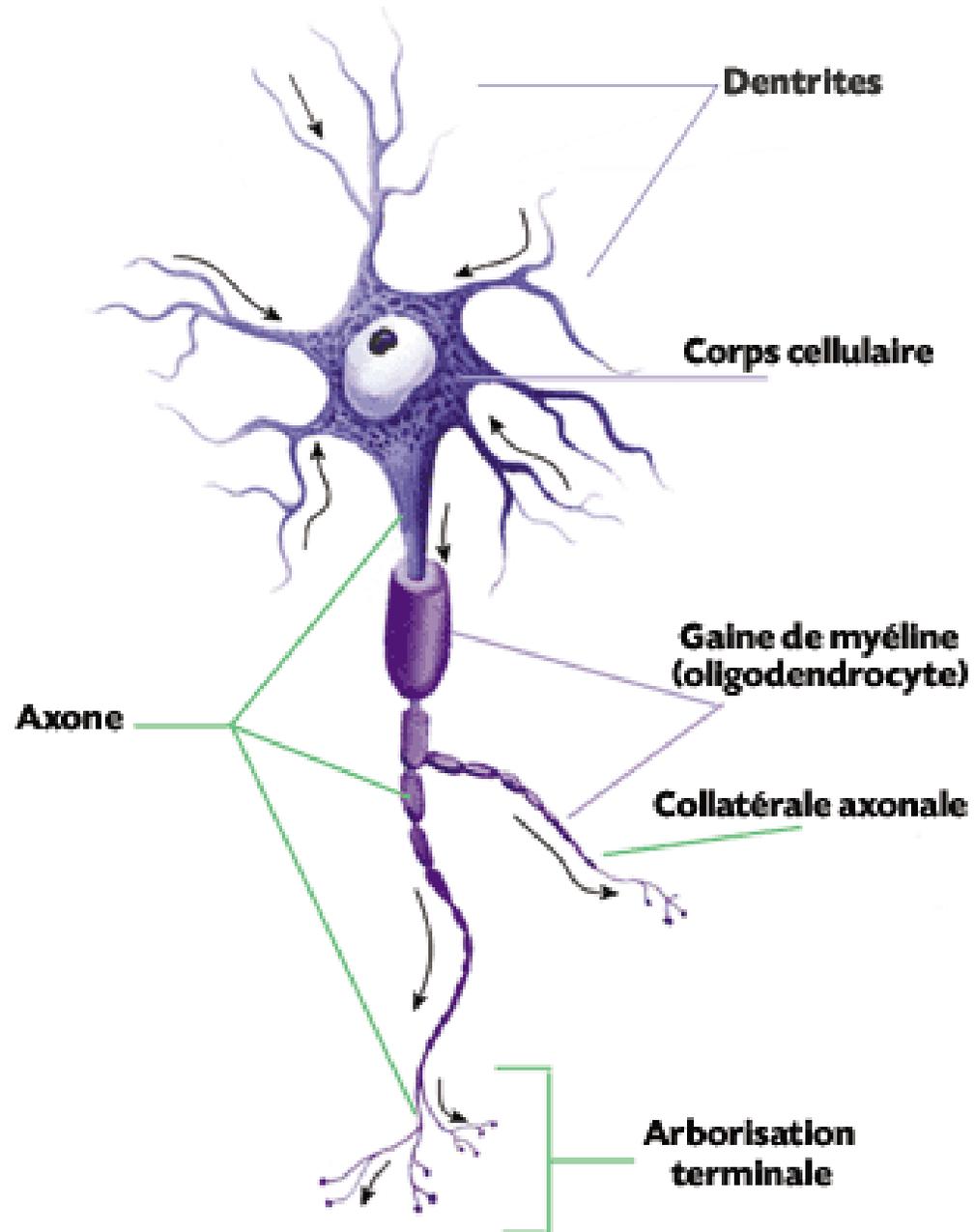
1- SYSTEME NERVEUX

SYSTEME NERVEUX

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

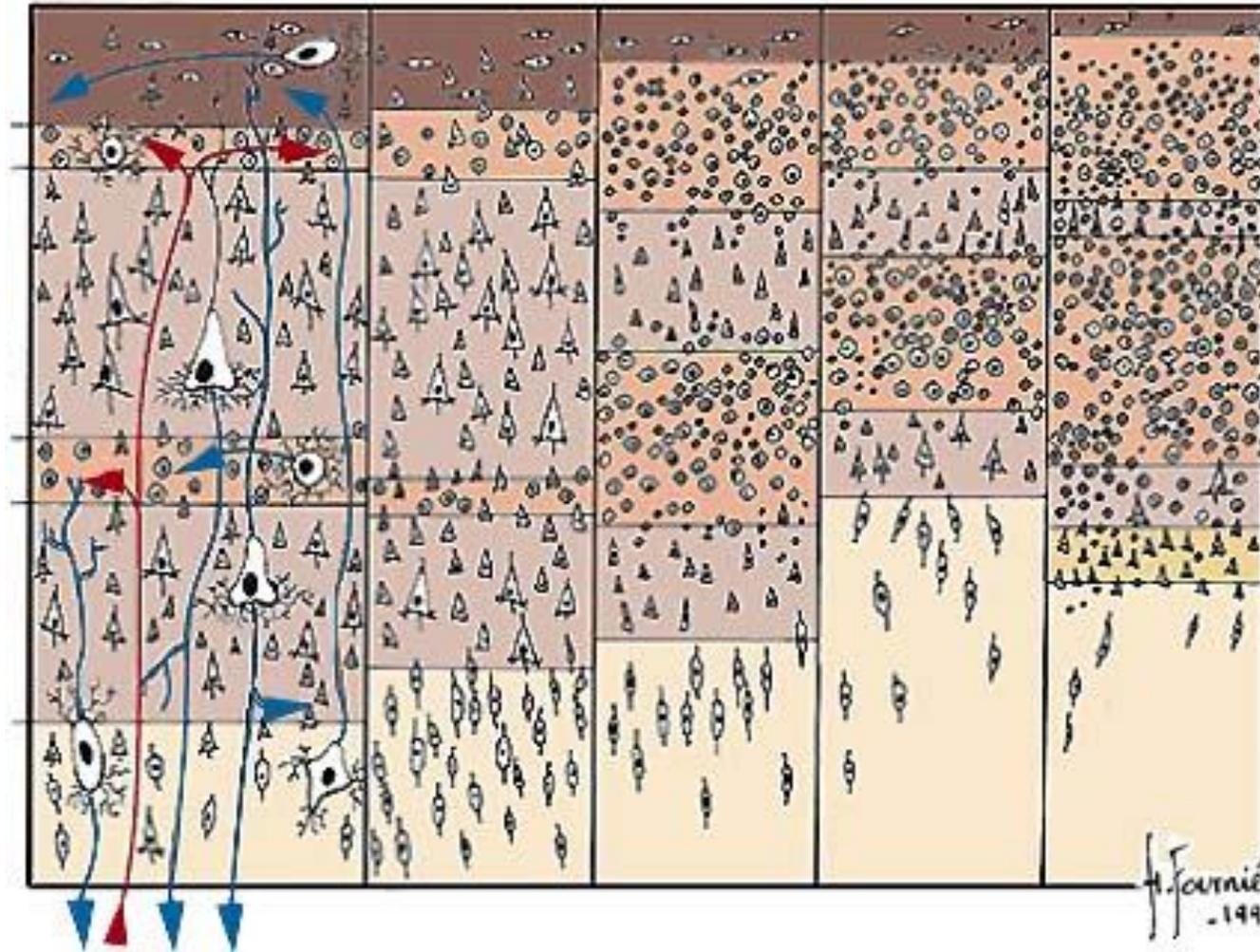


NEURONE



SYSTEME NERVEUX CENTRAL

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

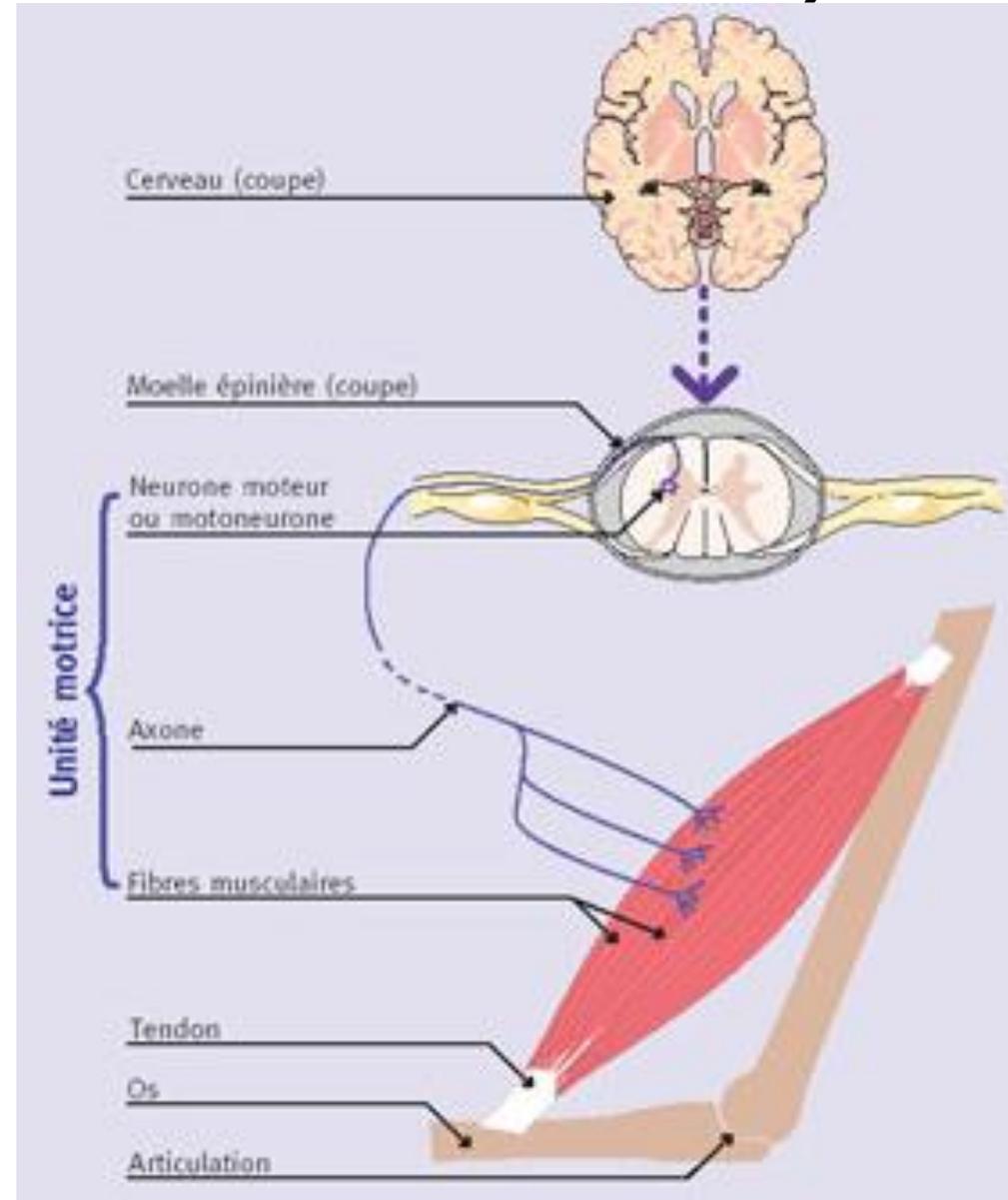


Exemple du motoneurone périphérique (2^{ème} motoneurone)

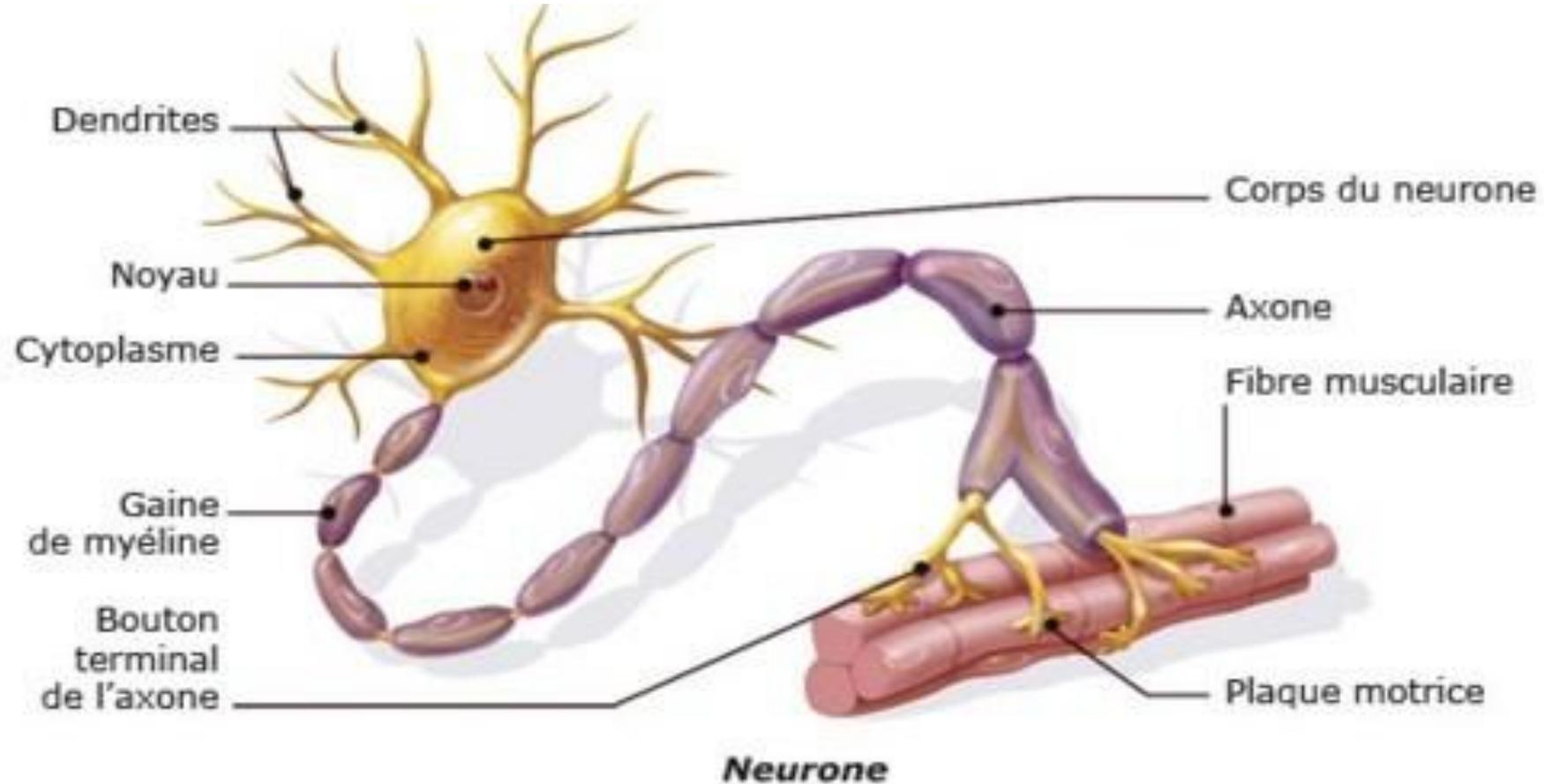
1^{er} motoneurone : cortex moteur à la moelle

2^{ème} motoneurone : moelle - muscle

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



Motoneurone périphérique

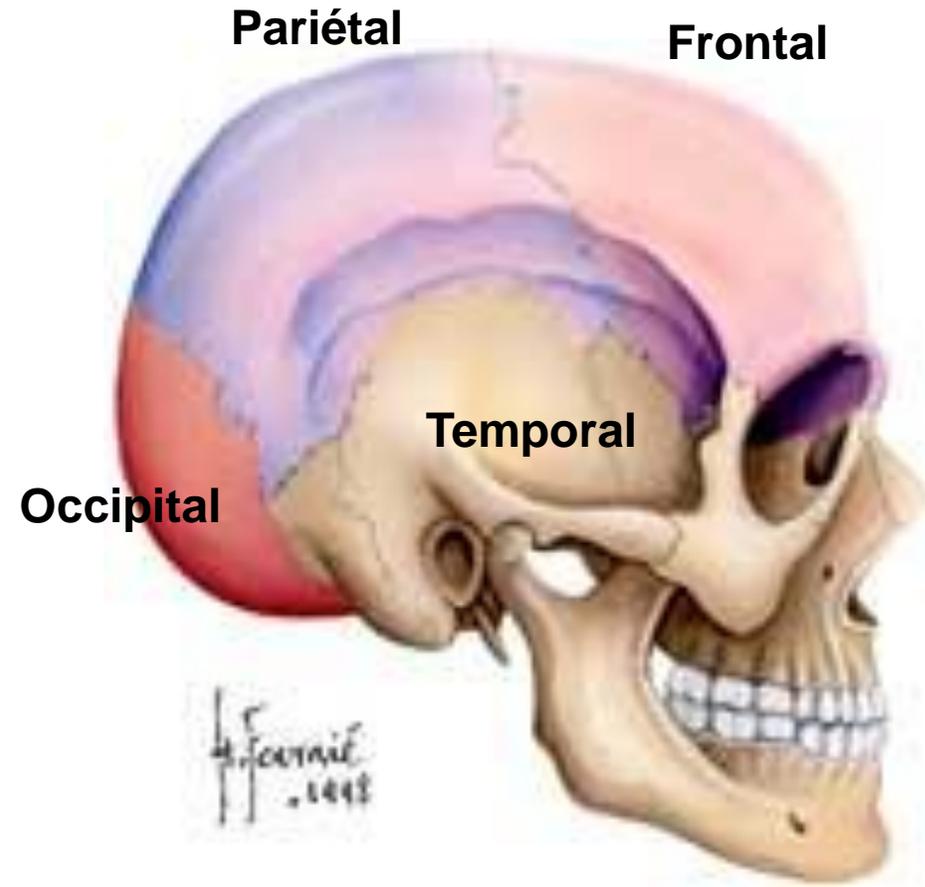
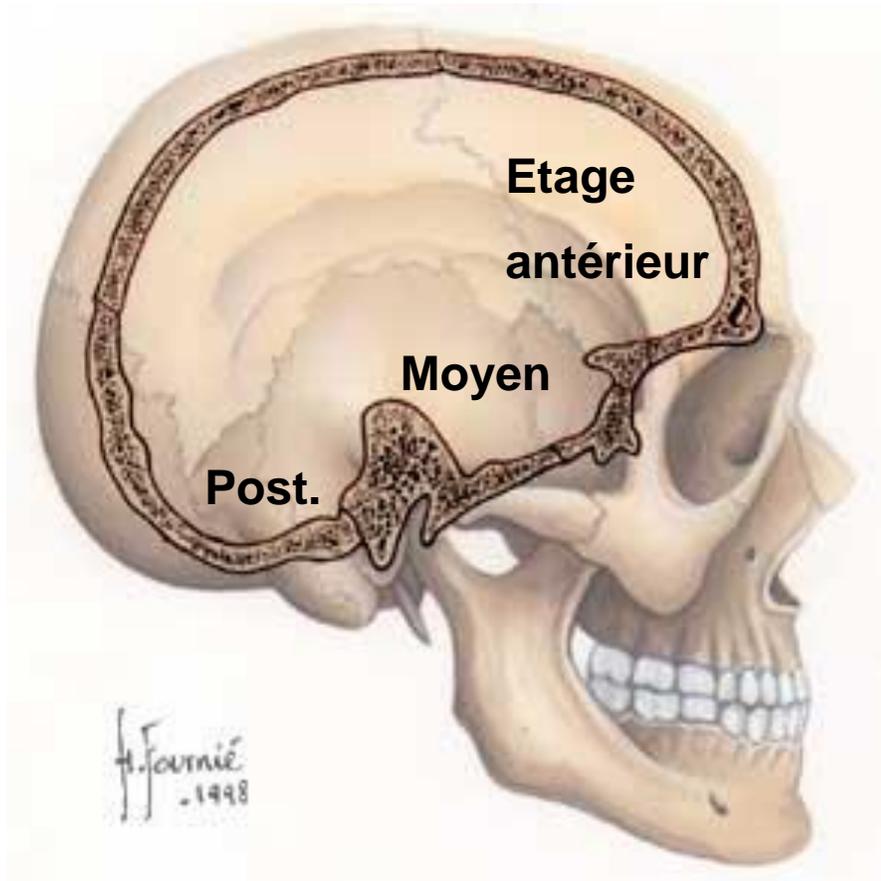


A sa terminaison : se ramifie, perd sa gaine de myéline

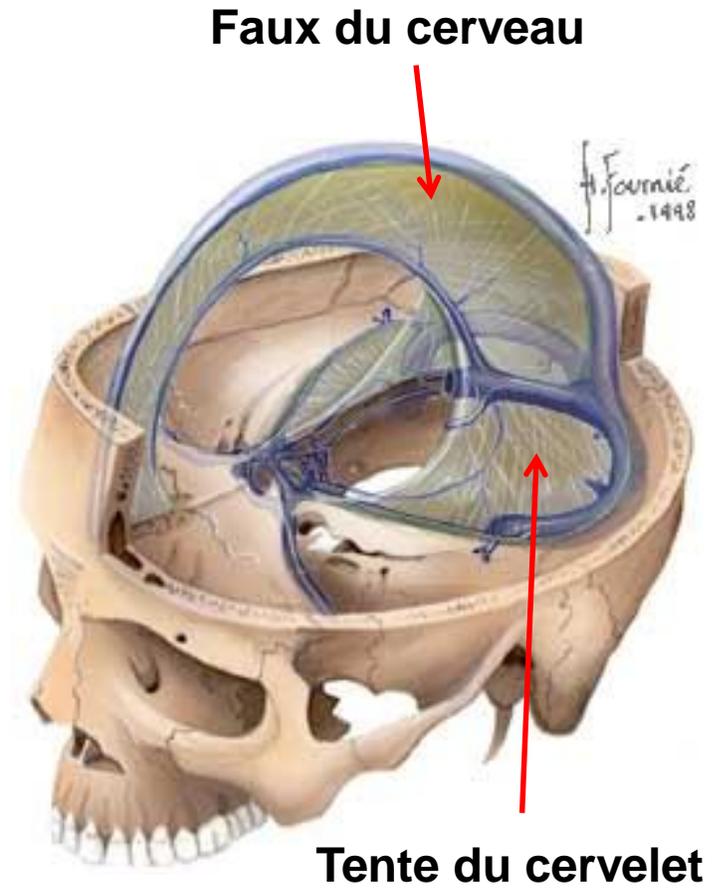
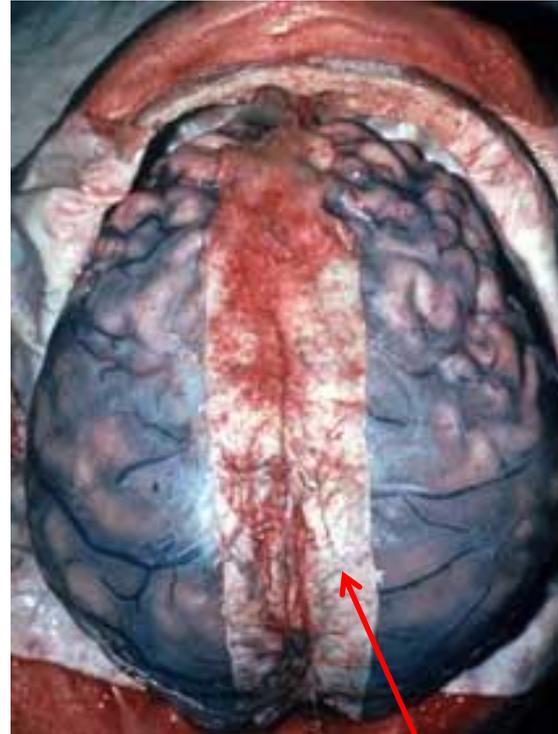
SYSTEME NERVEUX CENTRAL

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

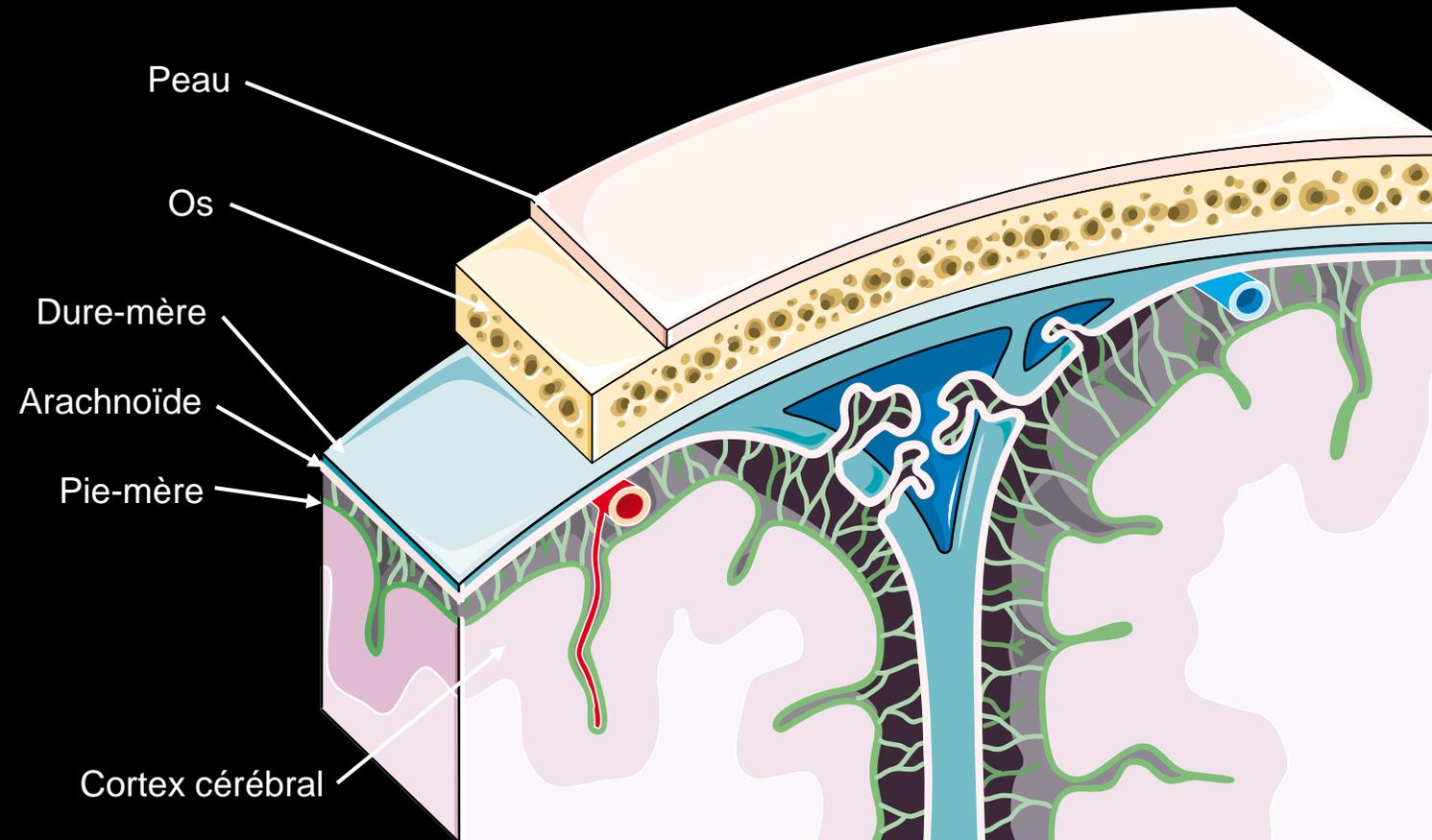
Crâne



Méninges

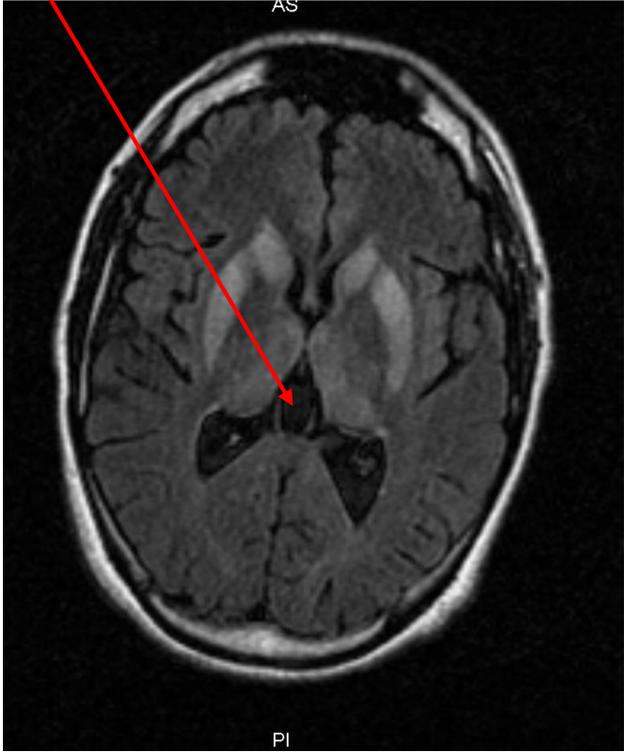
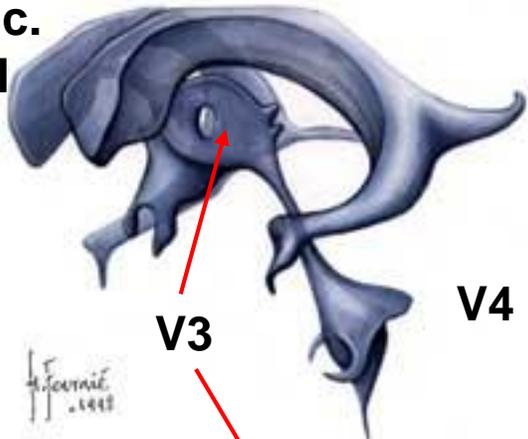
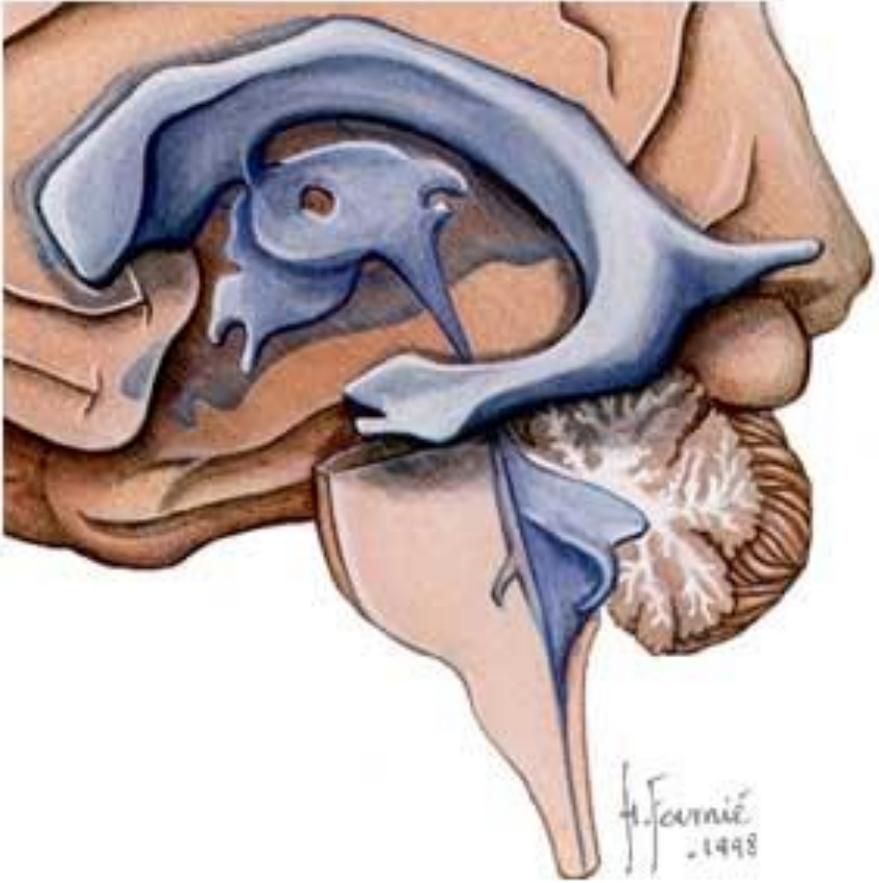


3 « feuillets » : Dure-mère / Arachnoïde / Pie-mère

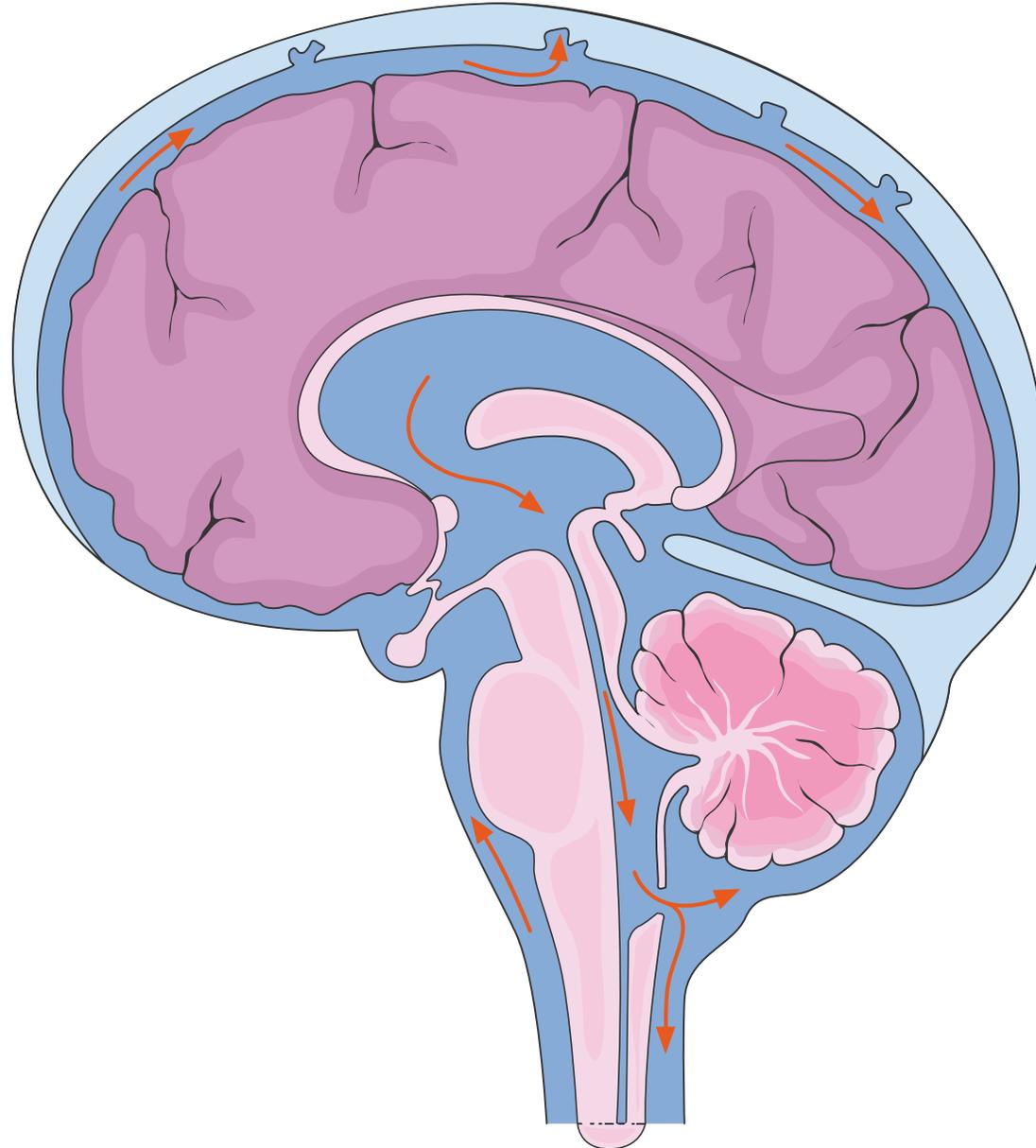


Ventricules

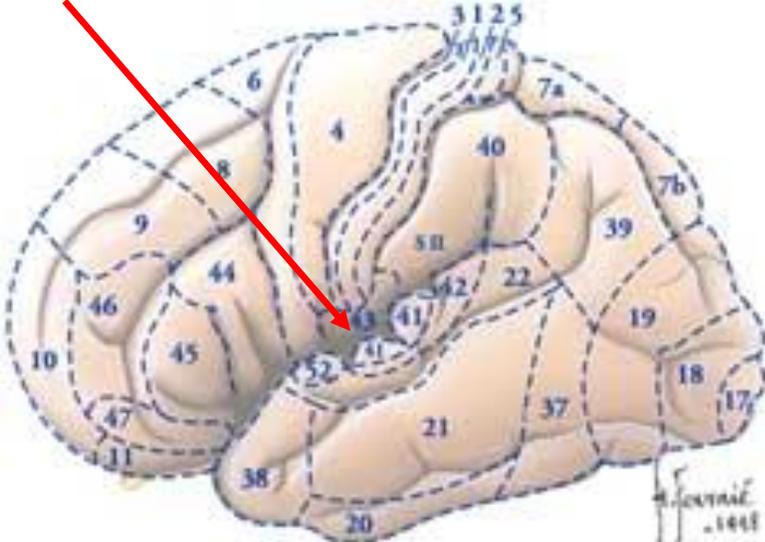
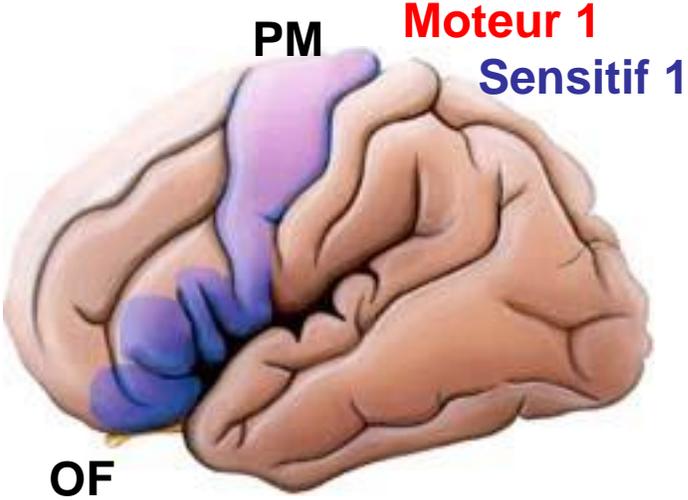
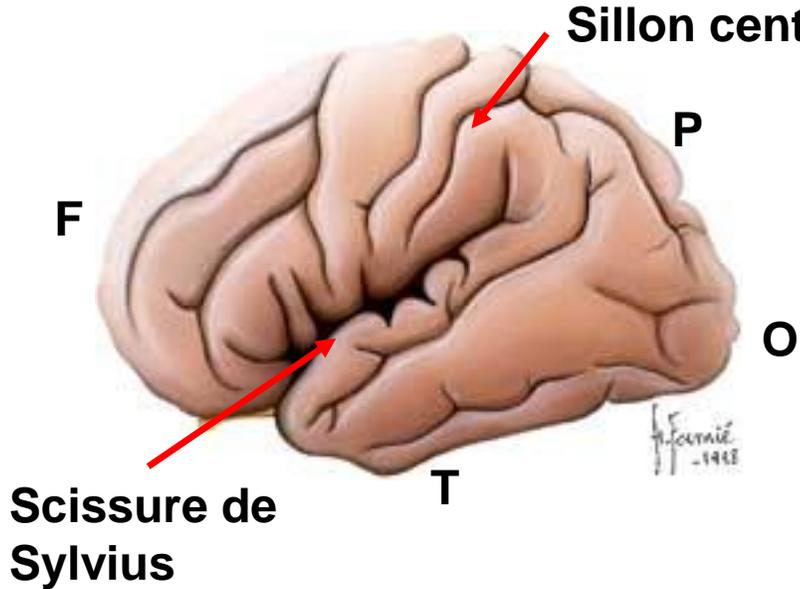
Ventric.
latéral



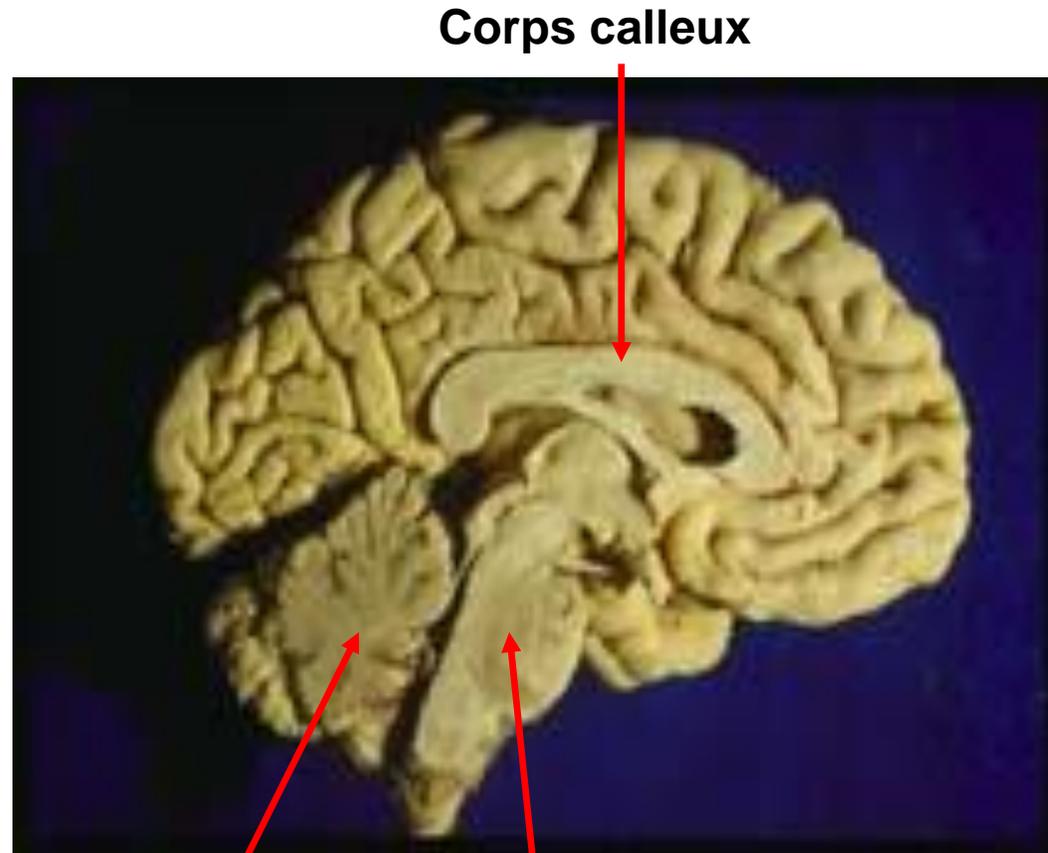
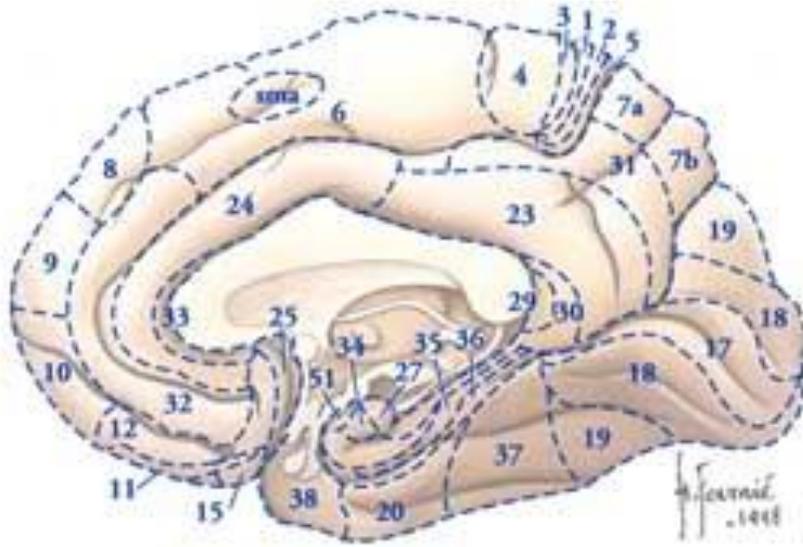
Circulation du liquide cérébro-spinal



SNC – Cortex – Face latérale



SNC – Cortex – Face médiale

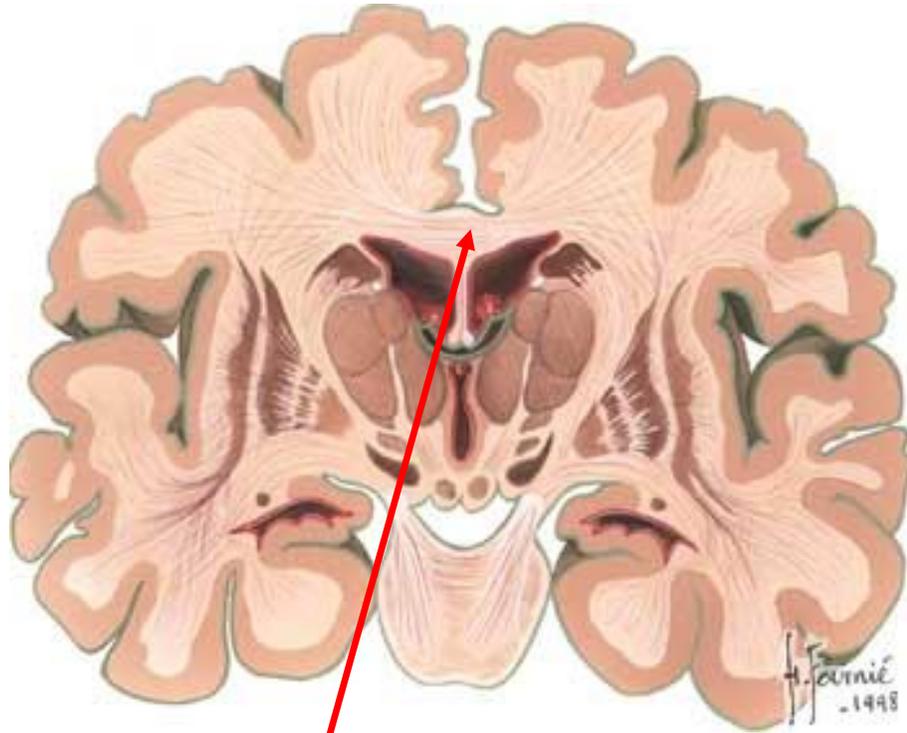


Corps calleux

Cervelet

Tronc cérébral

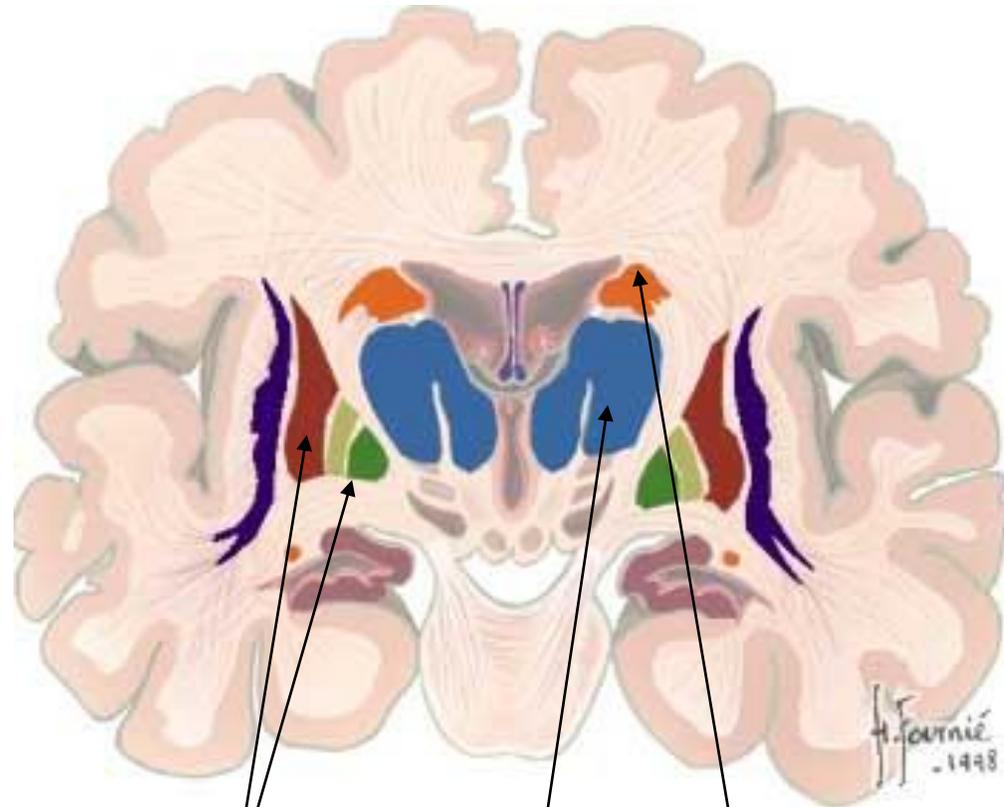
SNC – Substance blanche



Corps calleux



SNC – Noyaux gris centraux

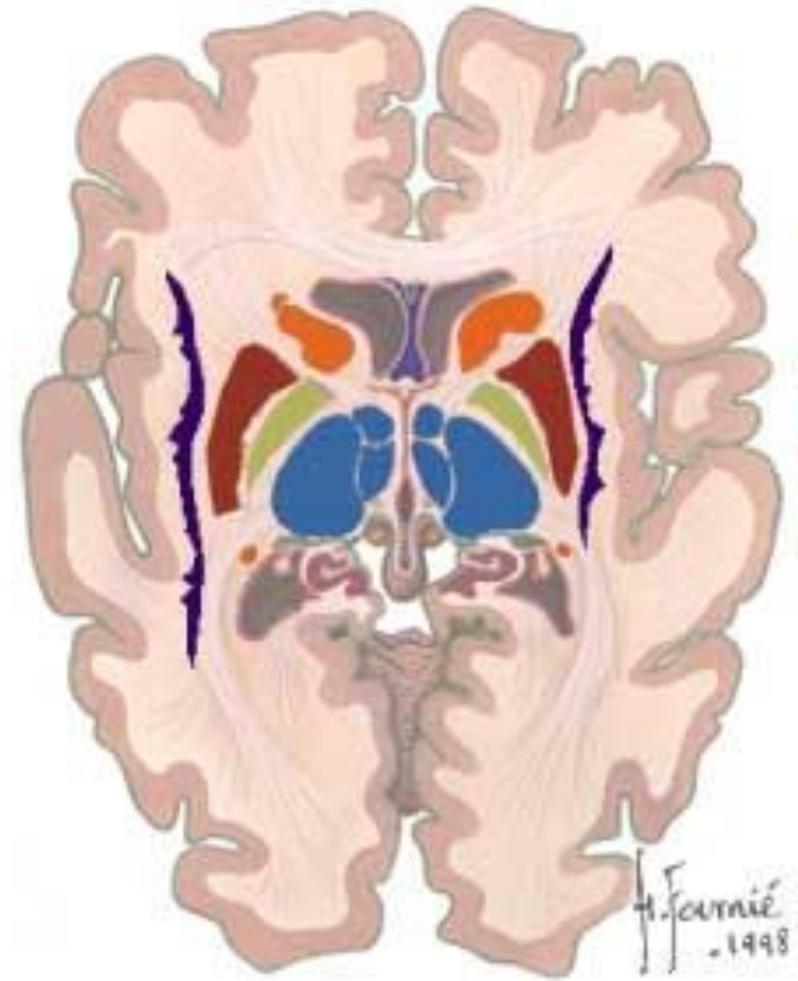


Thalamus

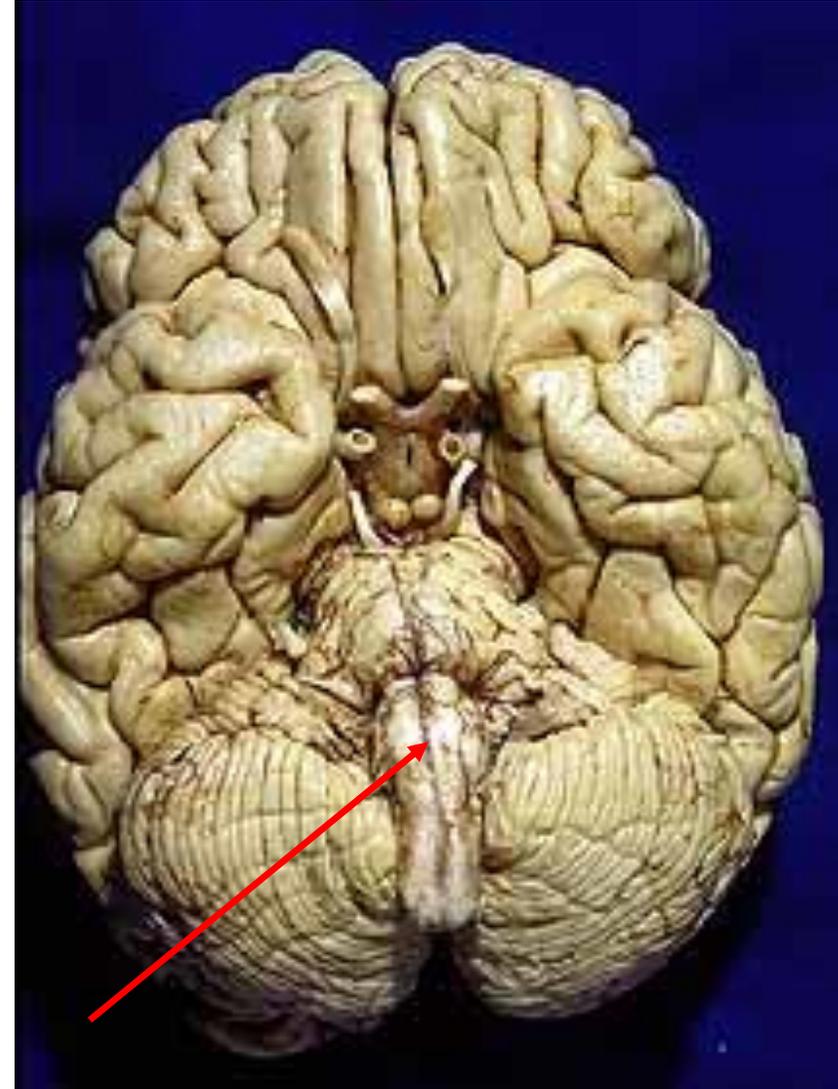
Nx lenticulaire :

- Putamen
- Pallidum

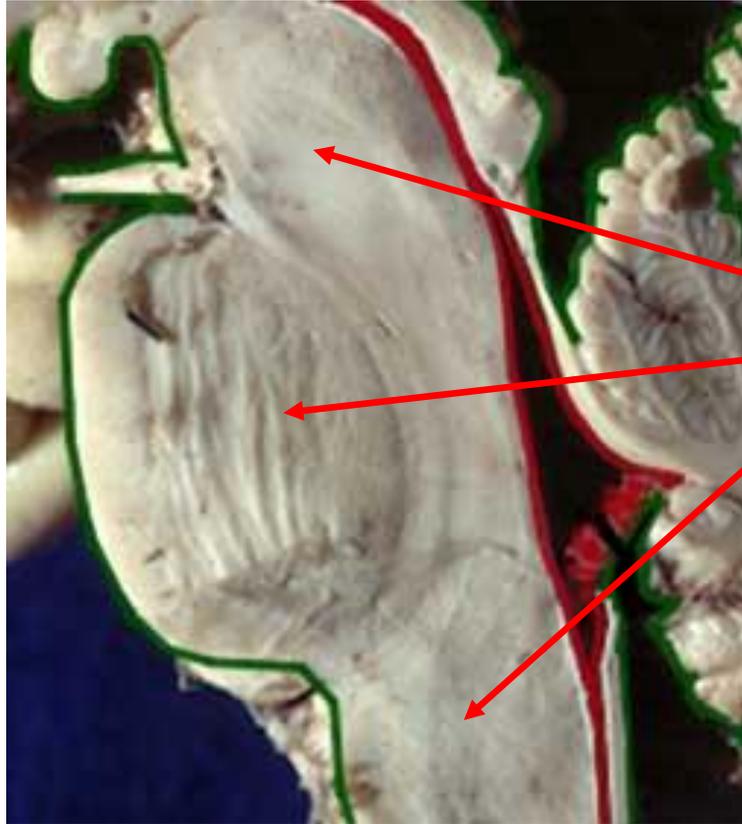
Nx caudé



SNC – Tronc cérébral



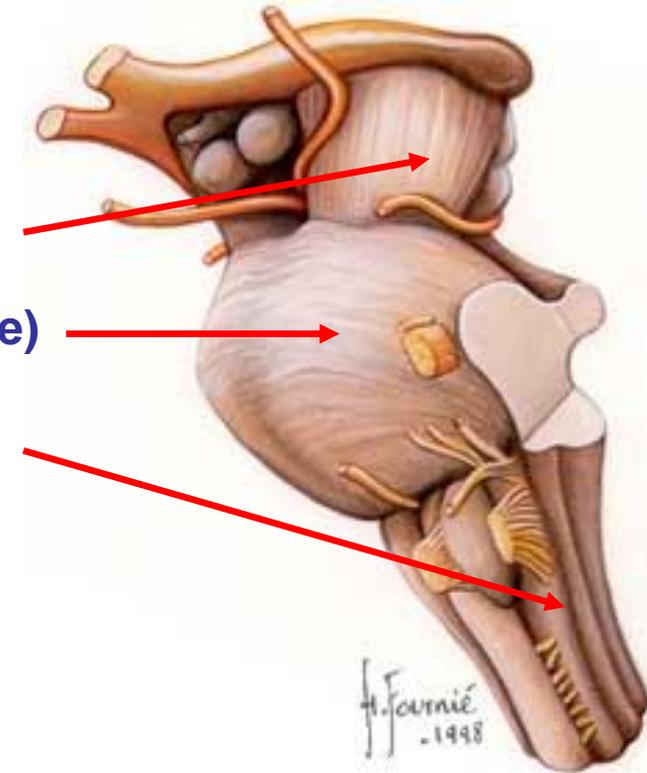
SNC – Tronc cérébral



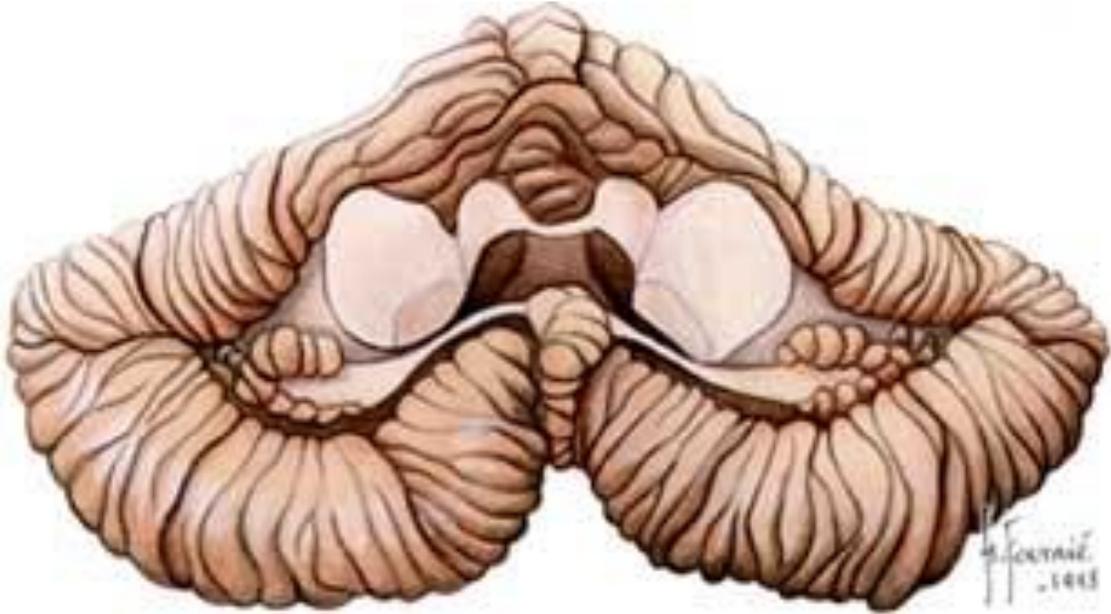
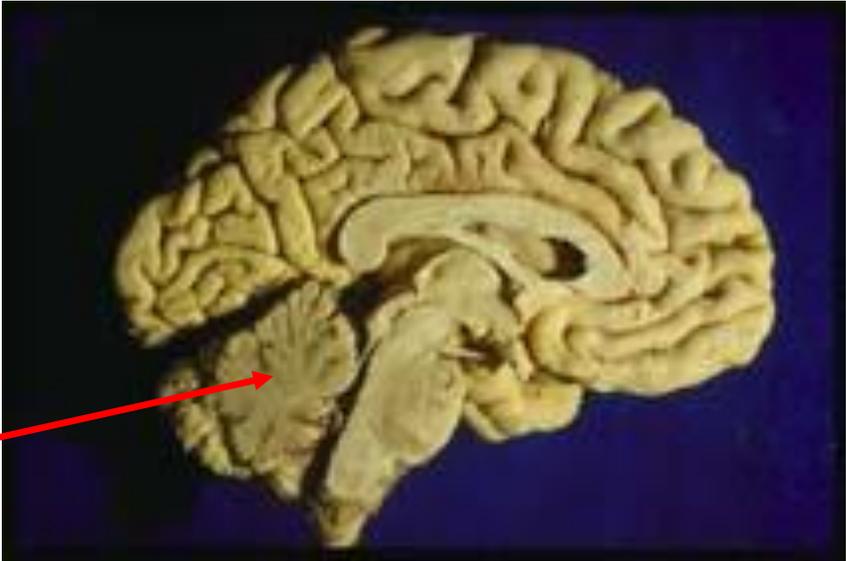
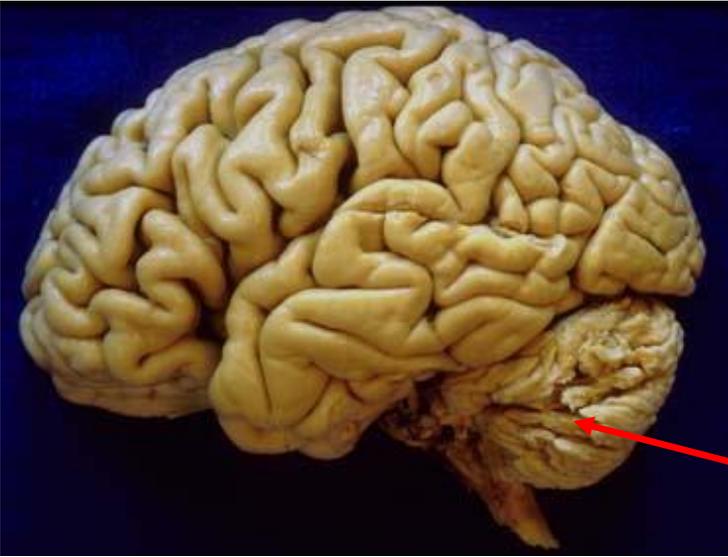
Mésencéphale

Pont (protubérance)

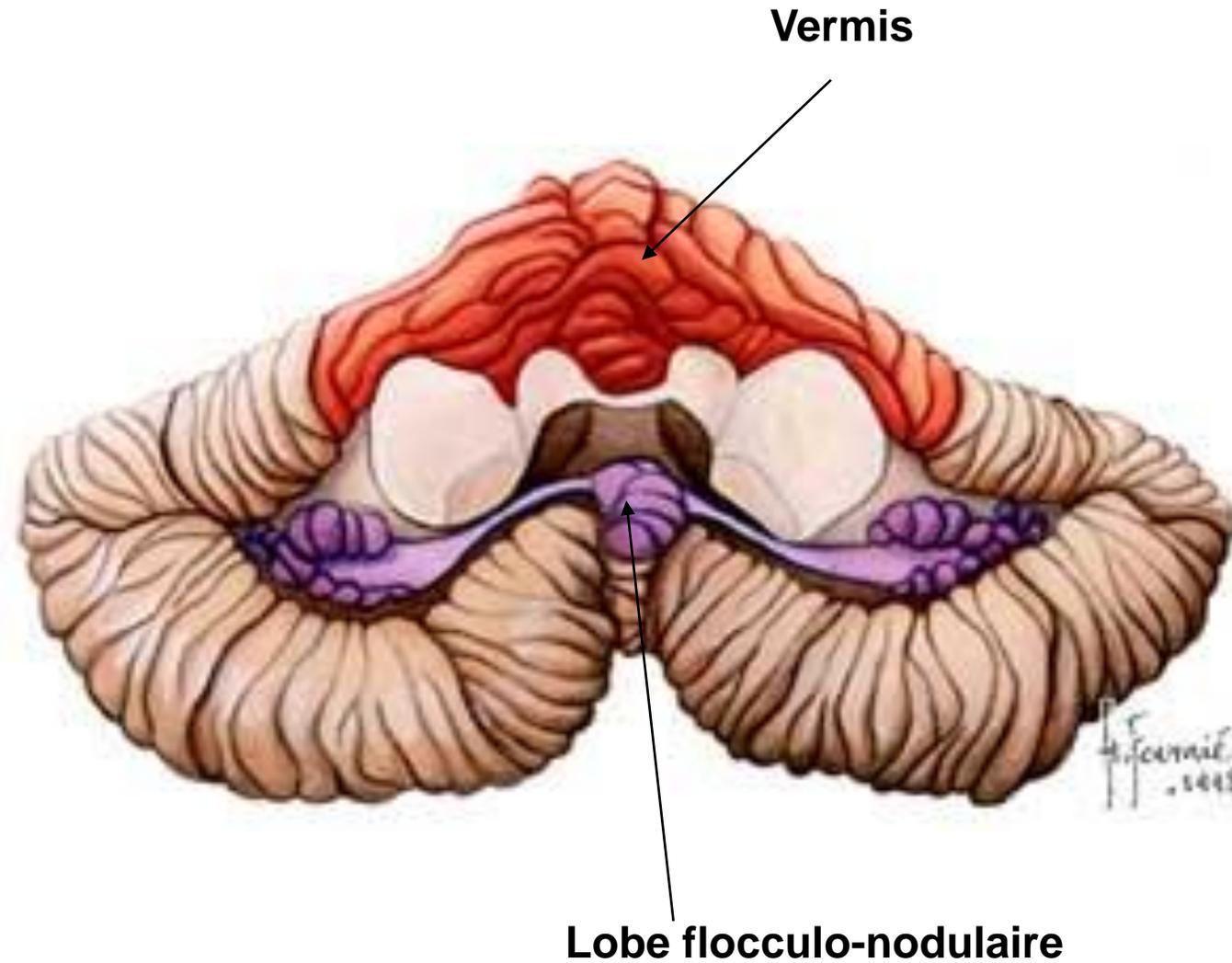
Bulbe rachidien



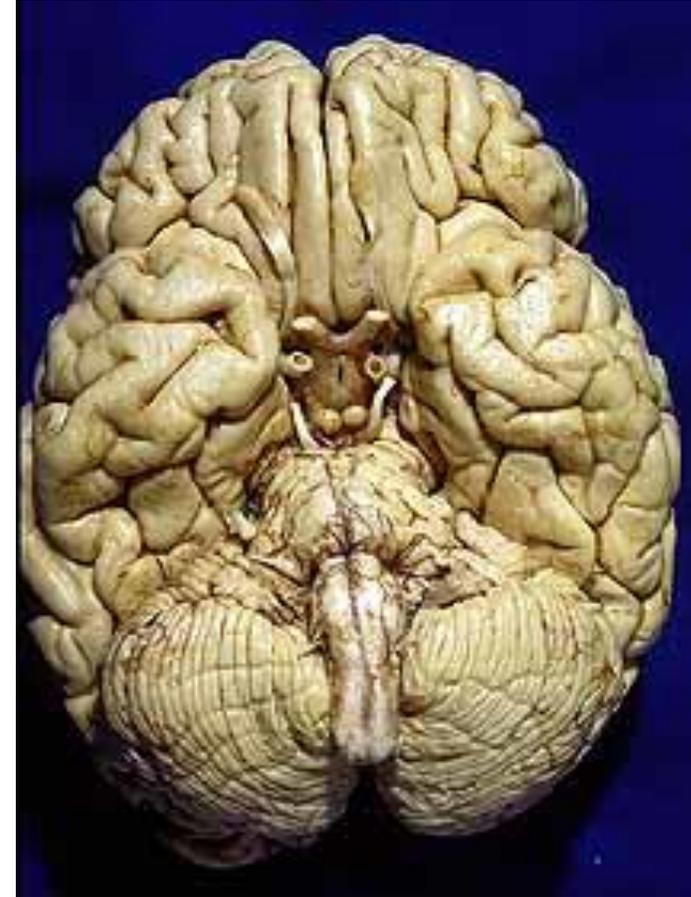
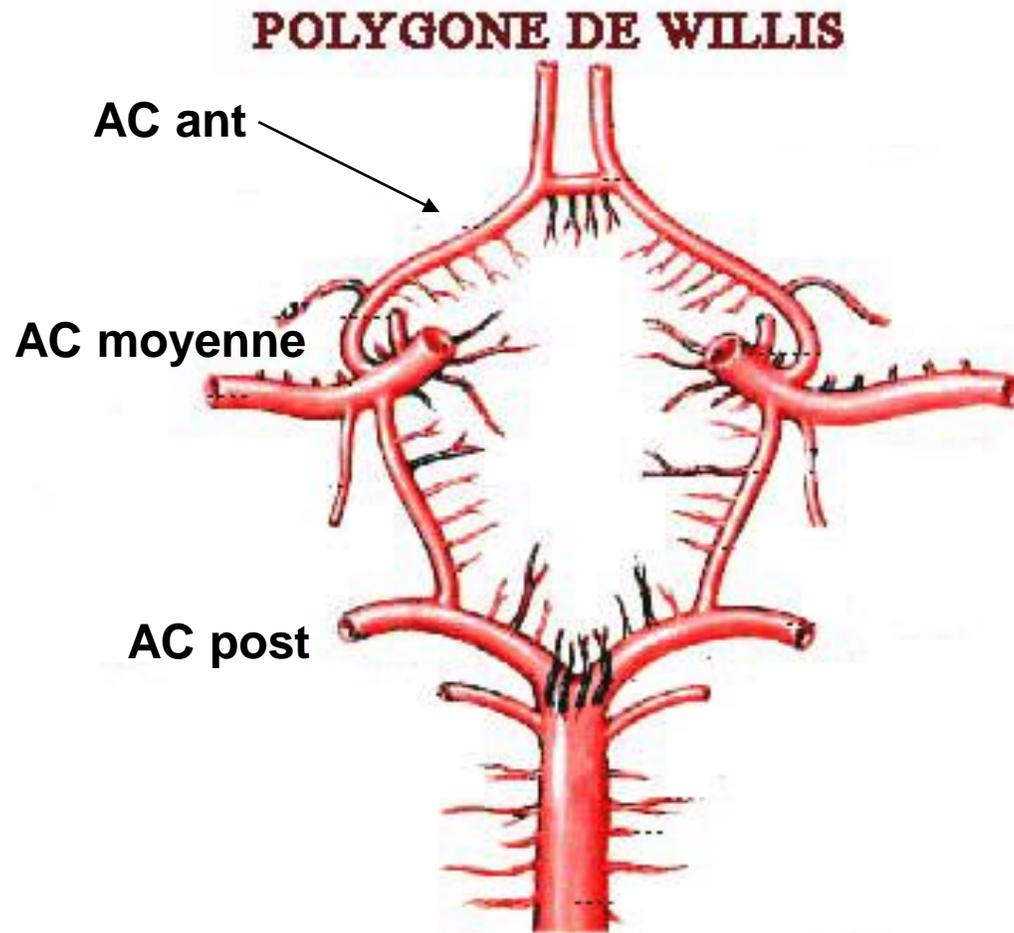
SNC – Cervelet



SNC – Cervelet



SNC – Vascularisation

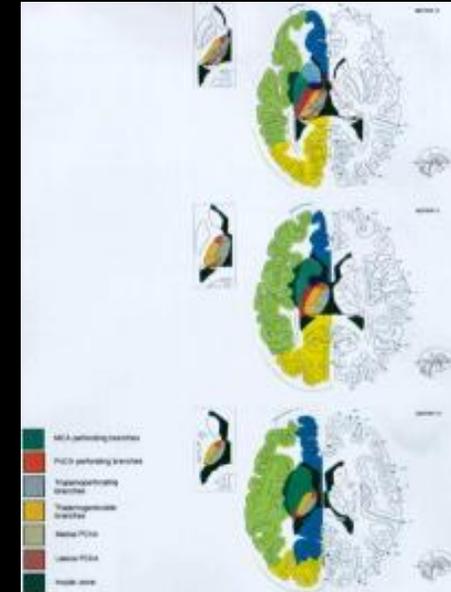
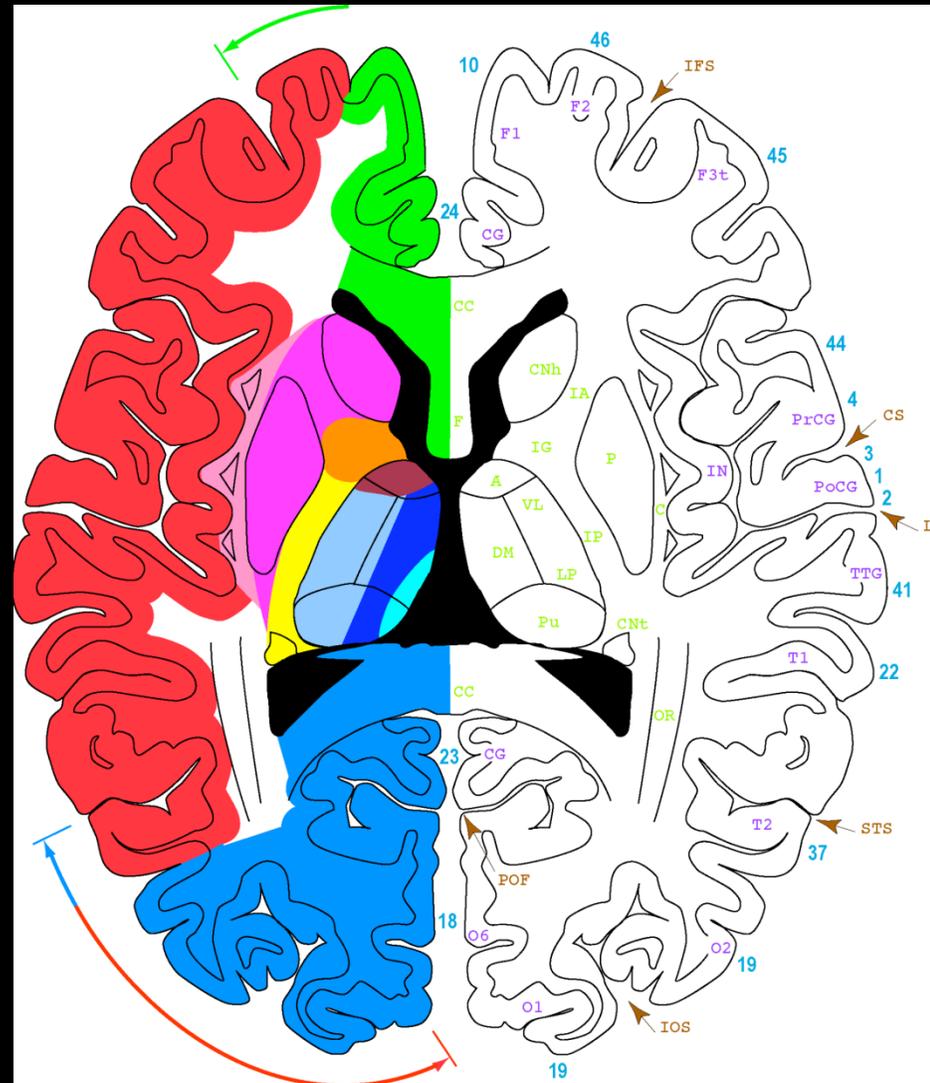


SNC – Vascularisation

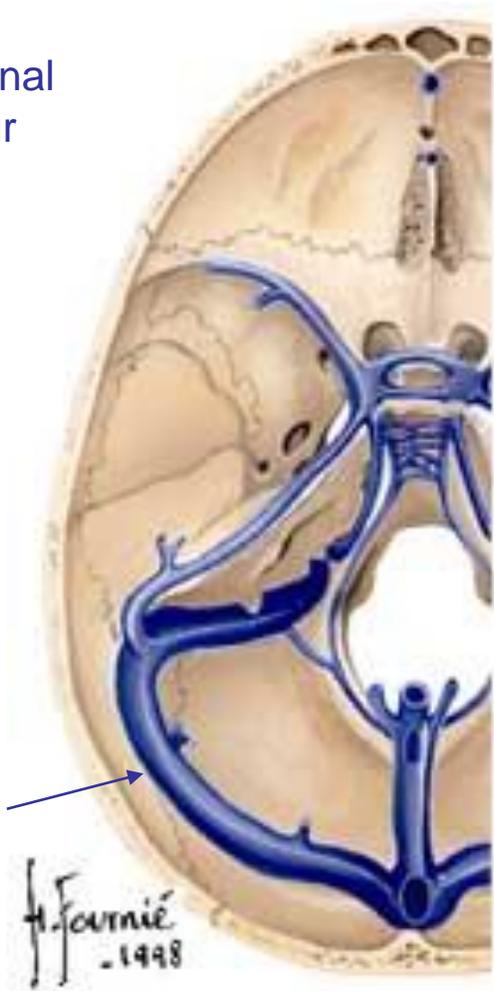
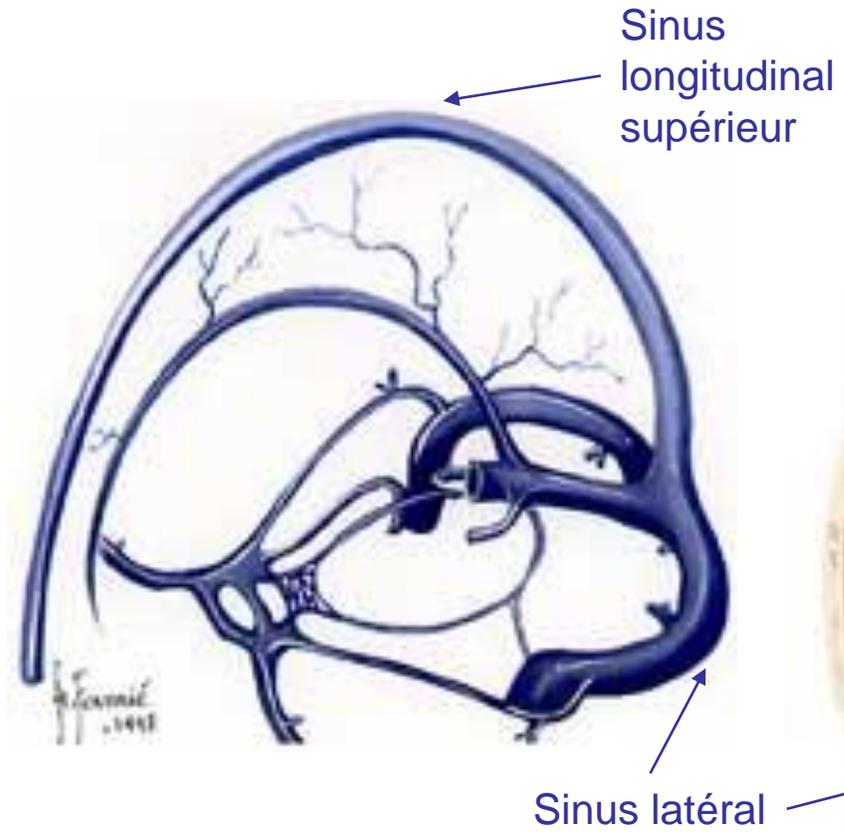
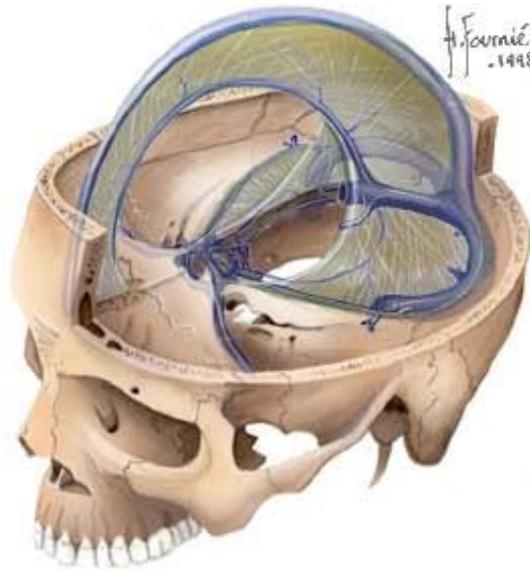
ACA

ACM
= artère
sylvienne

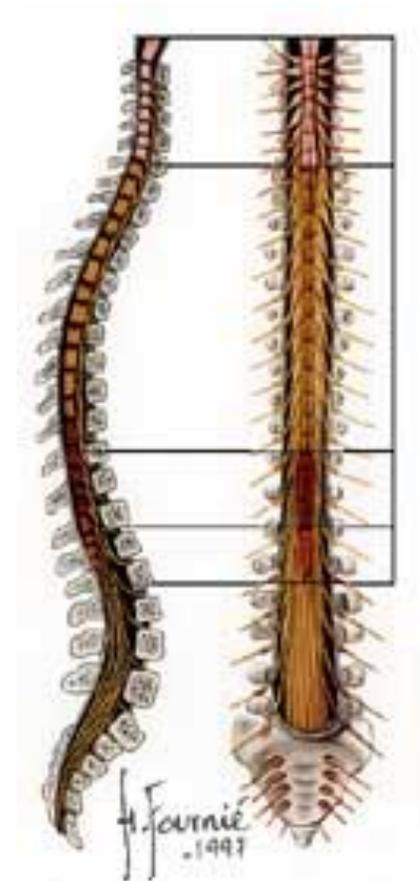
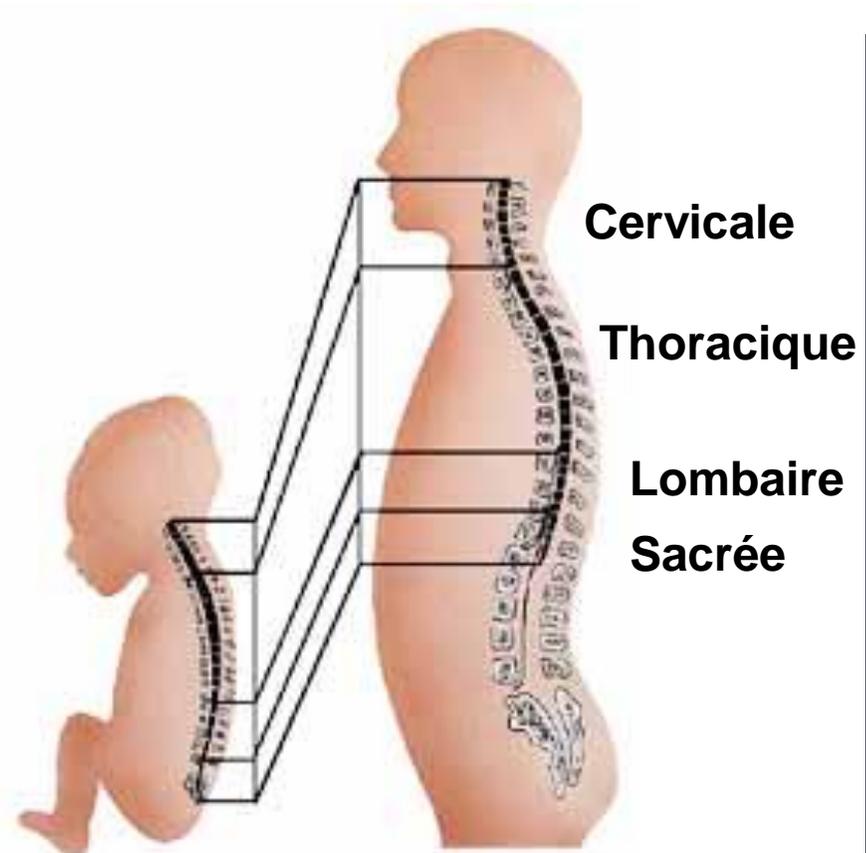
ACP



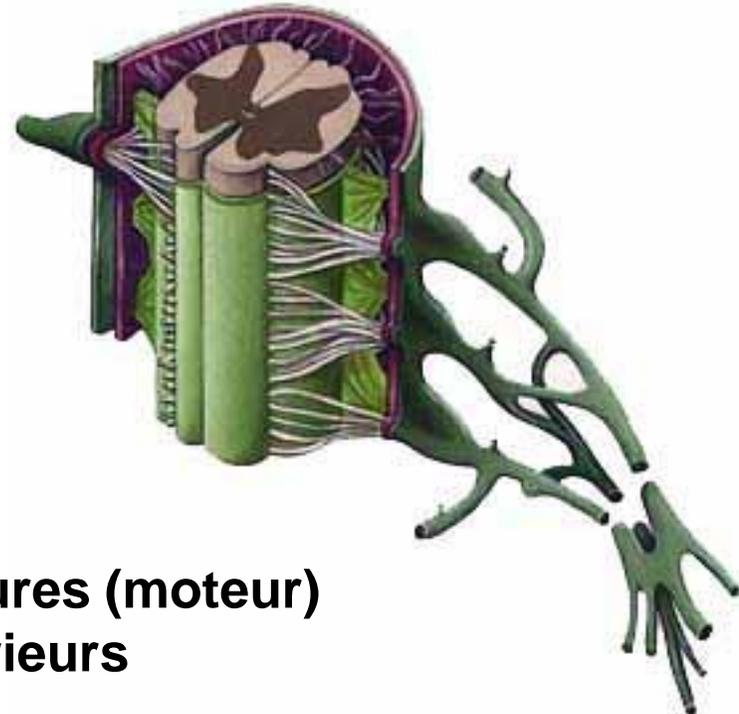
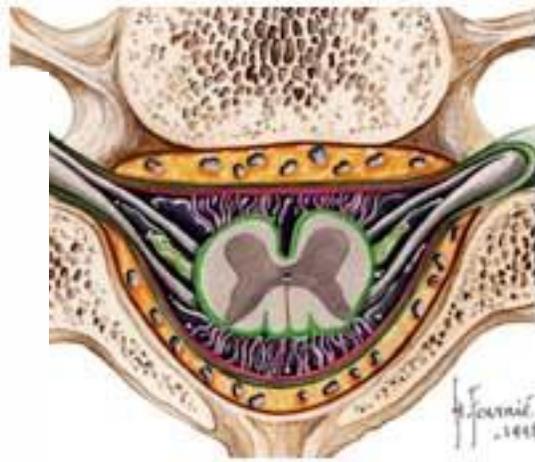
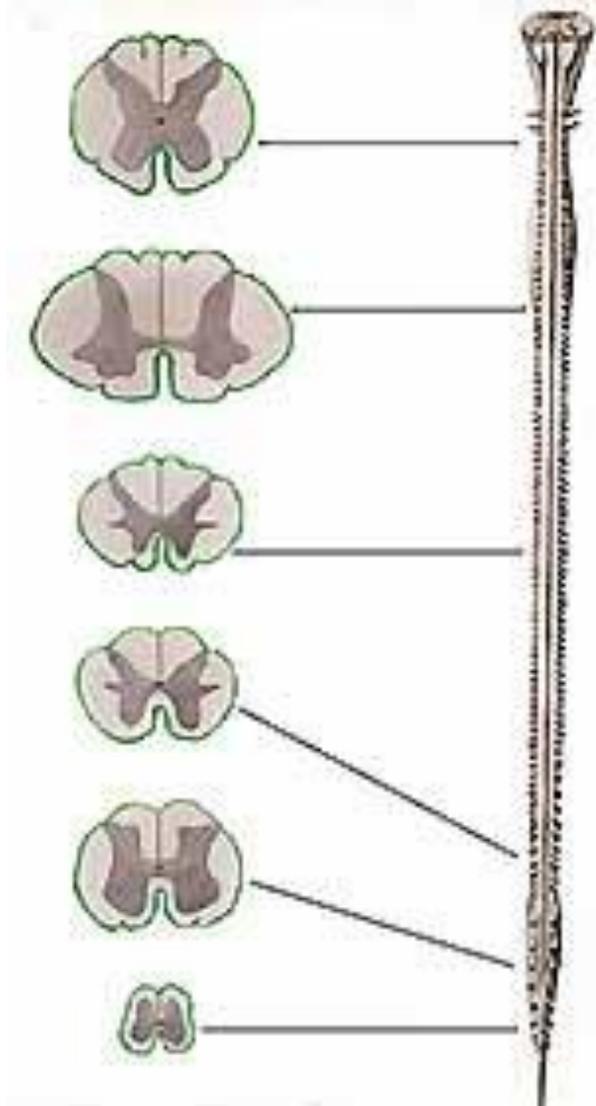
SNC – Sinus / Veines



SNC – Moelle épinière



SNC – Moelle épinière



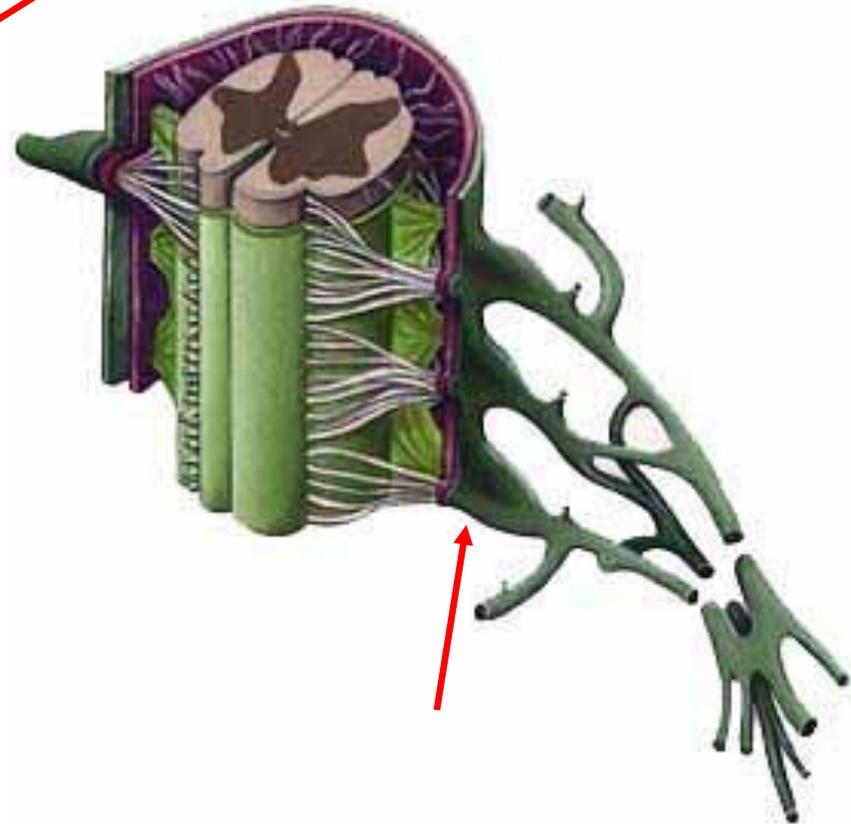
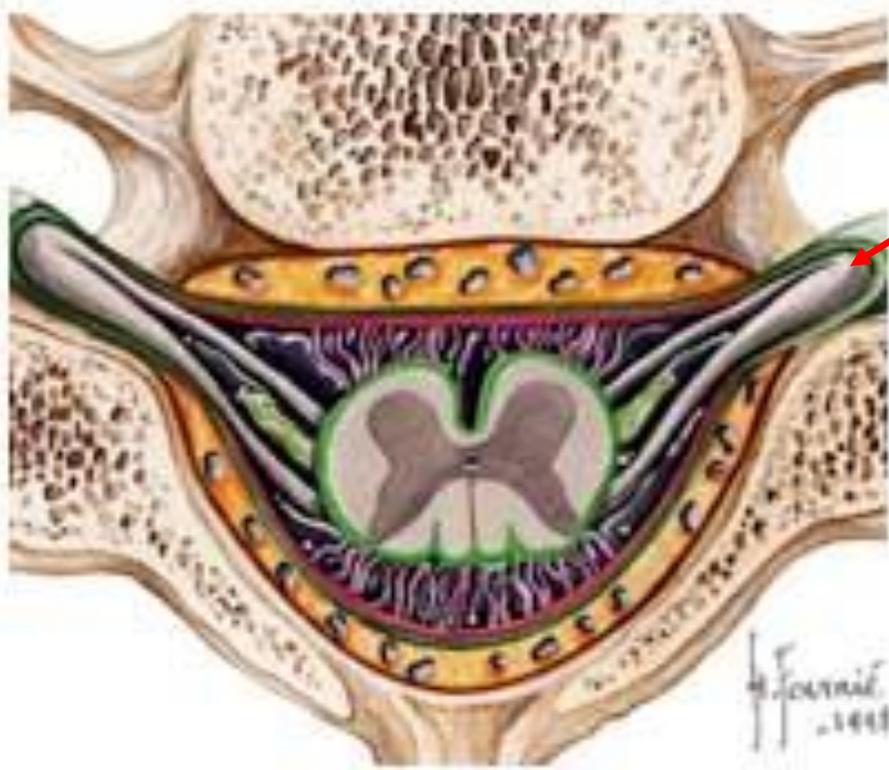
Cornes antérieures (moteur)
Cordons postérieurs

SYSTEME NERVEUX PERIPHERIQUE

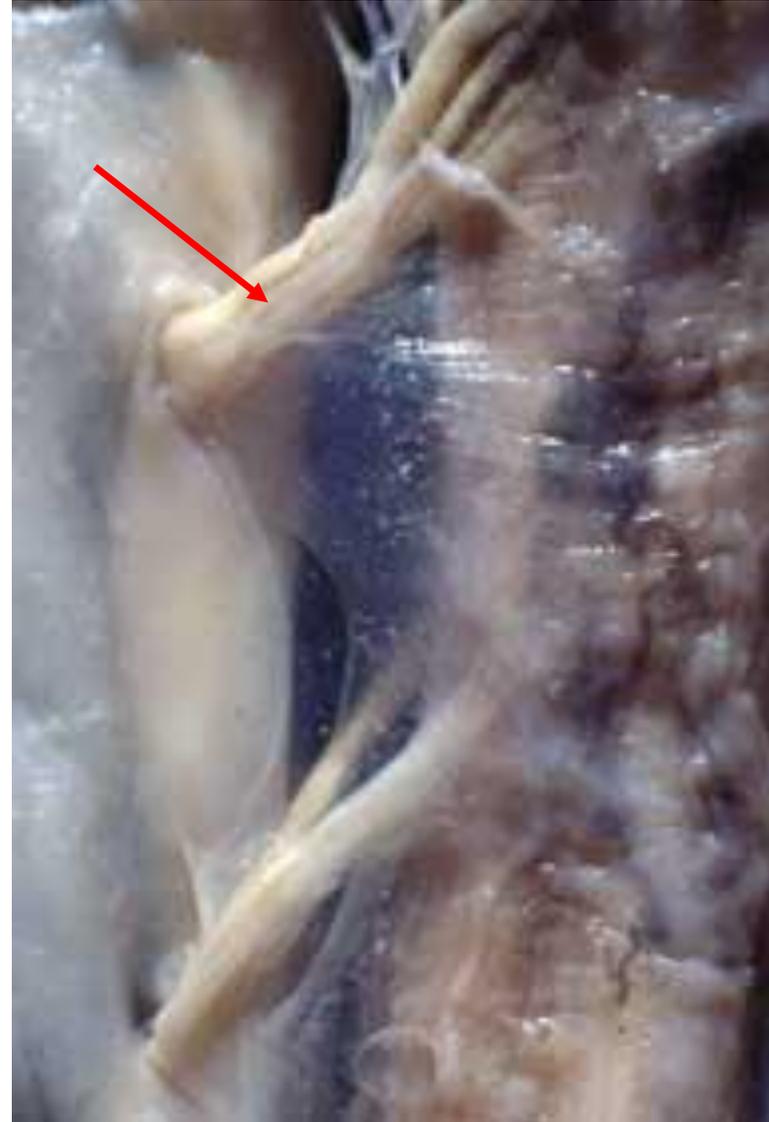
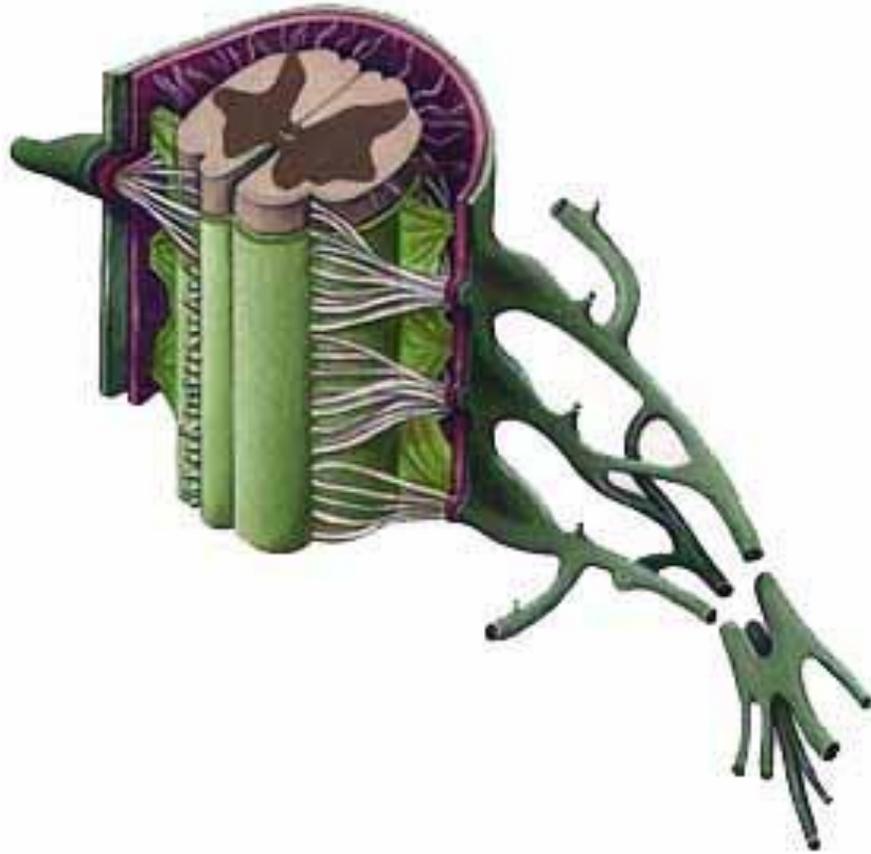
- **Racines**
- **Plexus**
- **Nerfs** (troncs nerveux)

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

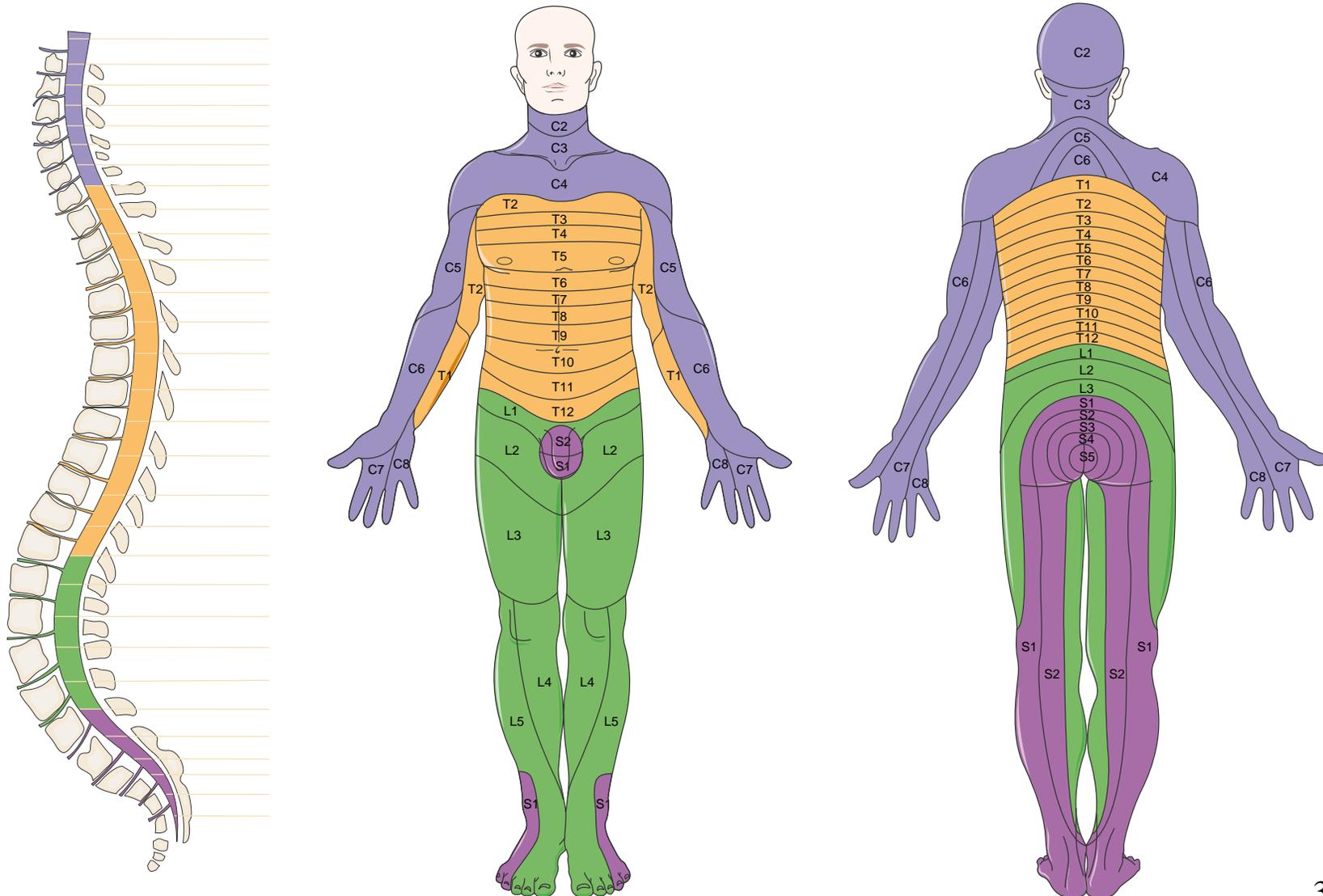
SNP – Racines



SNP – Racines

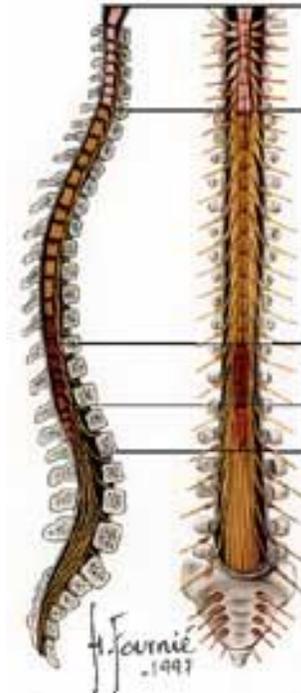
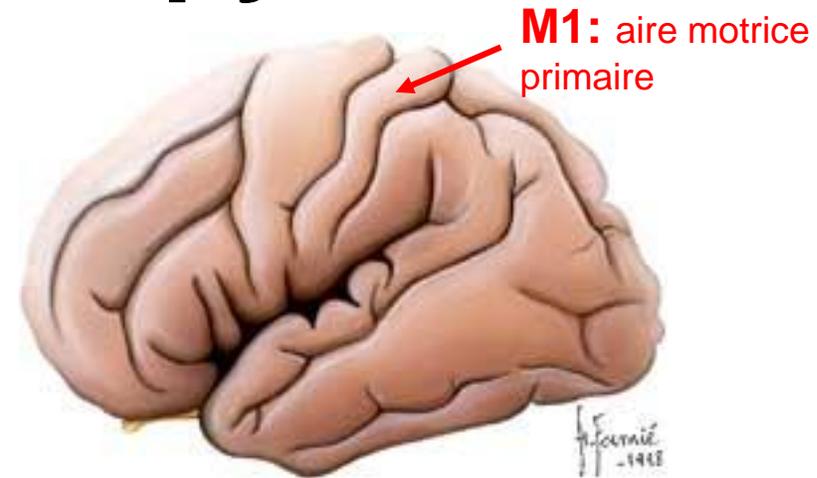
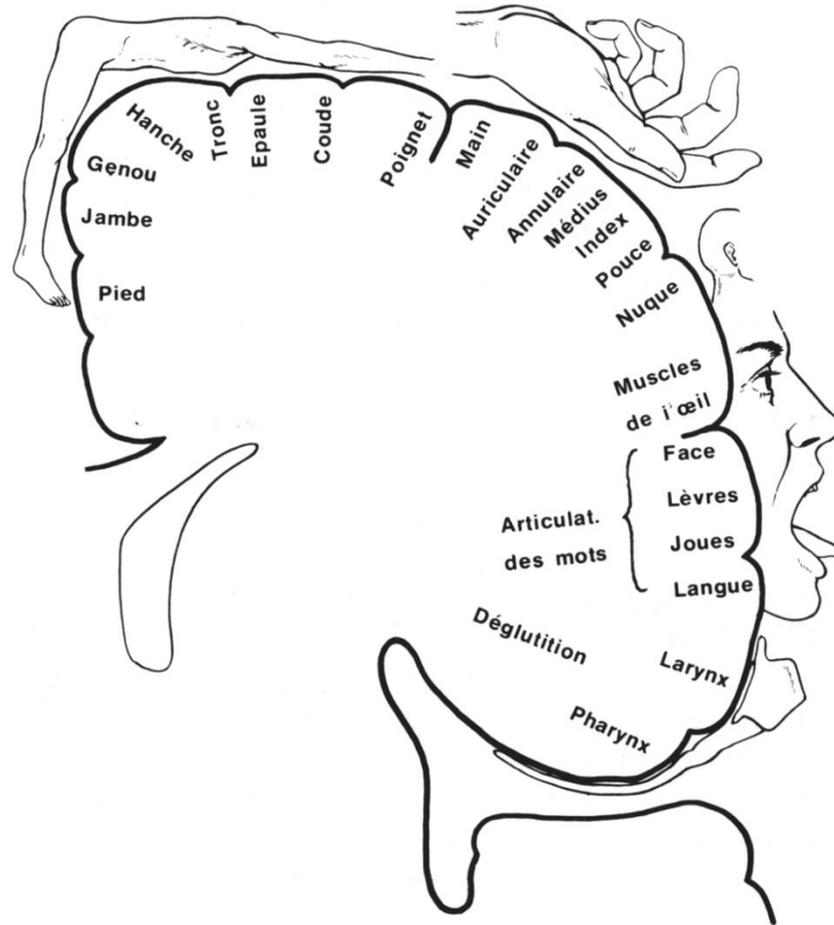


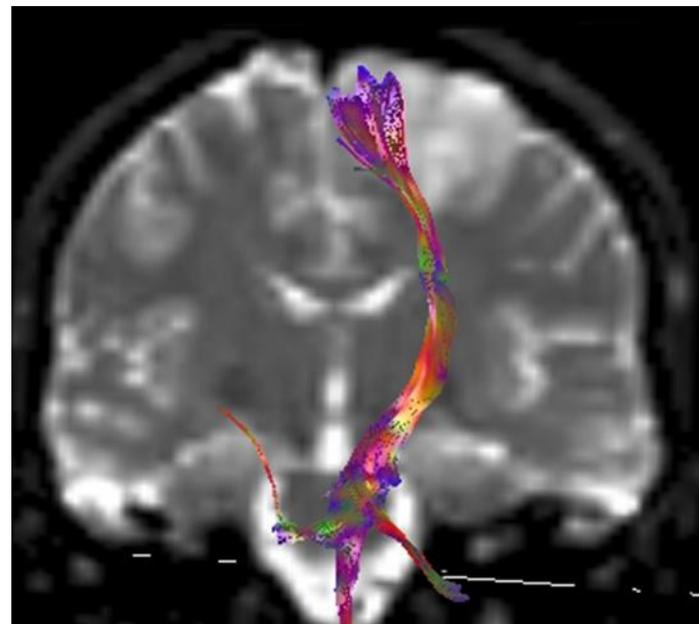
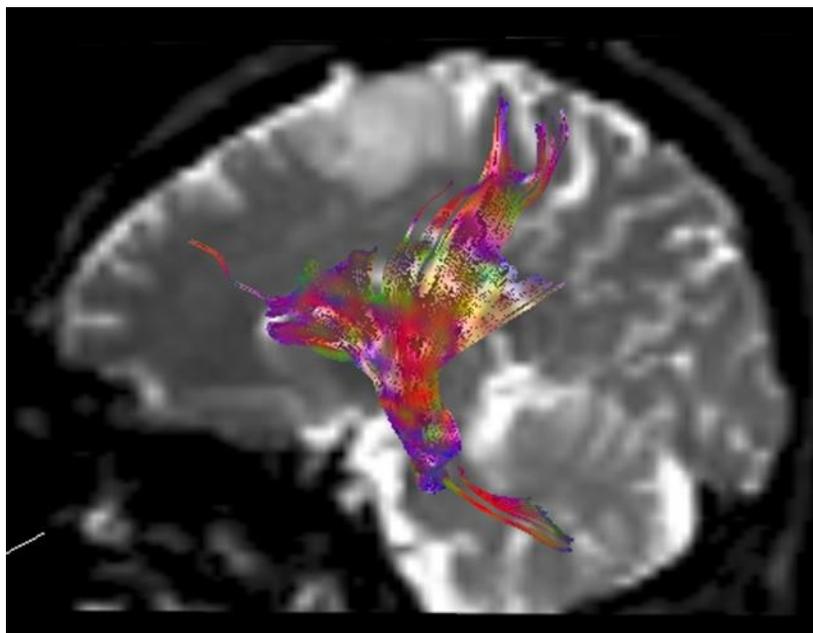
SNP – Nerfs (troncs nerveux)



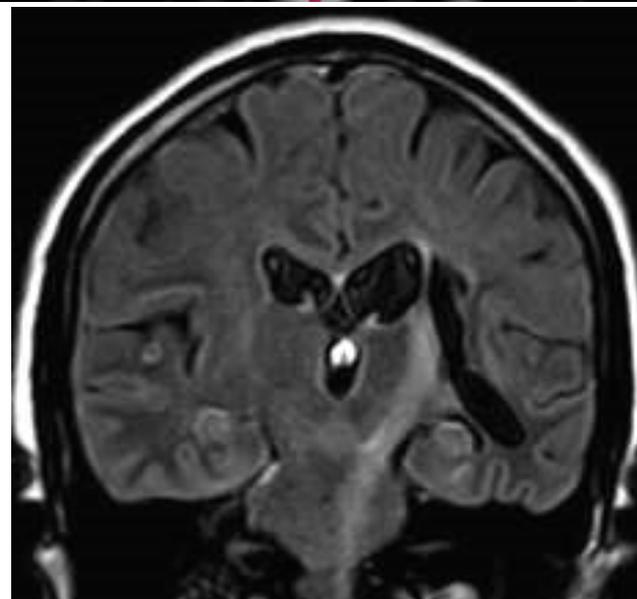
2- MOTRICITE

MOTRICITE – Voie pyramidale

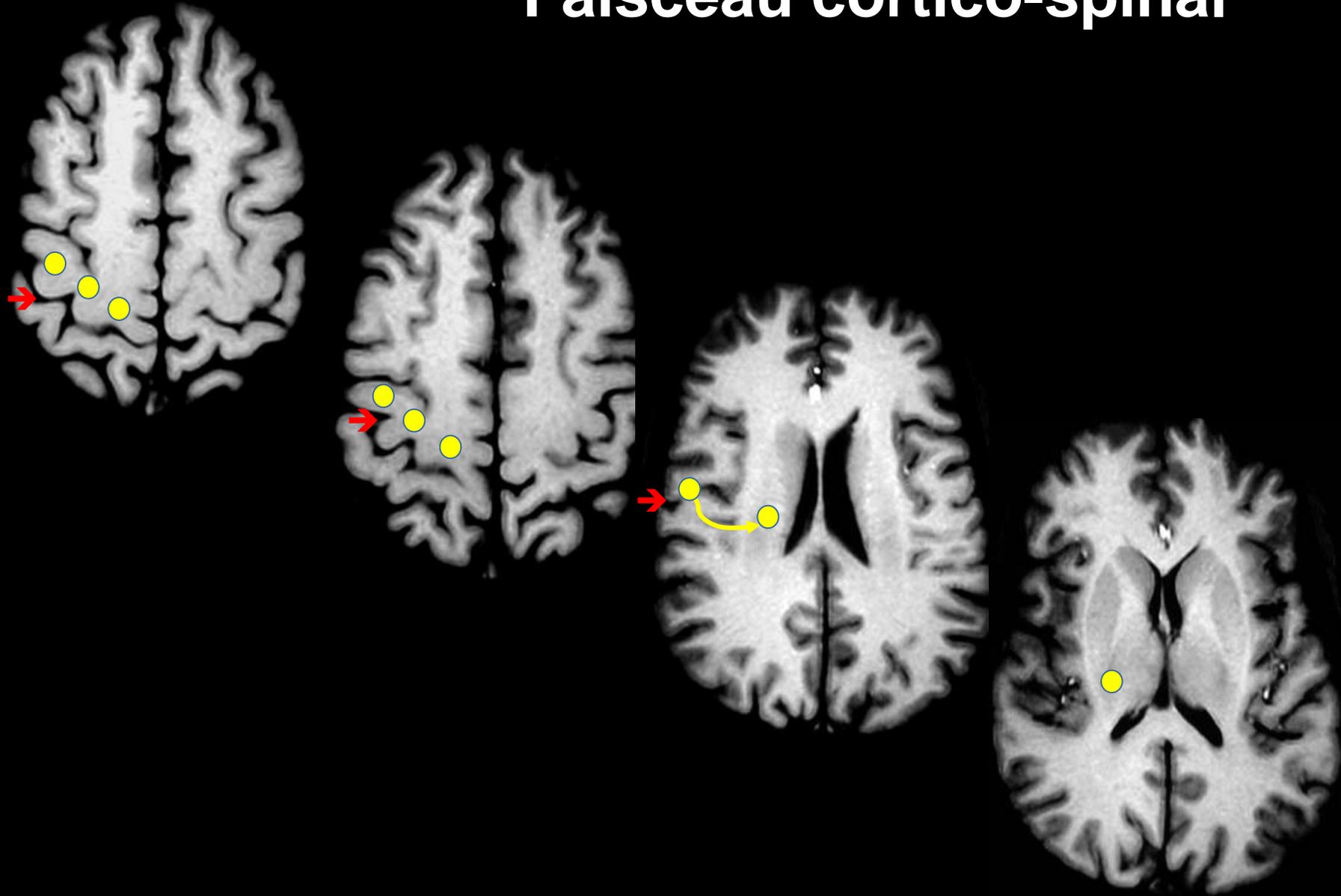




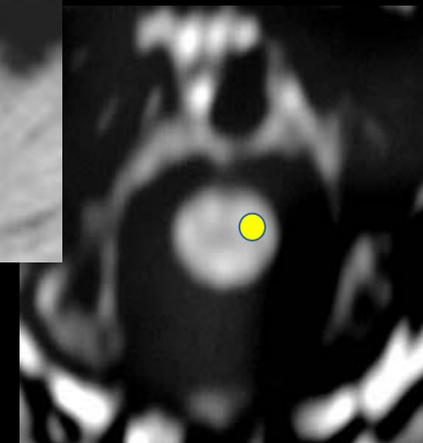
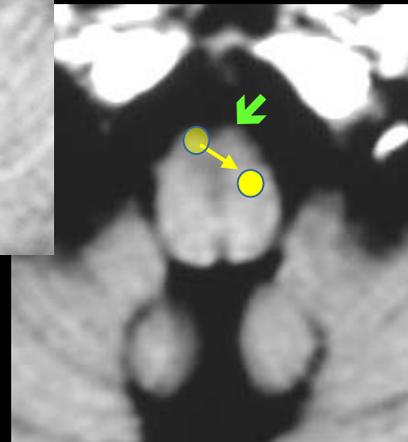
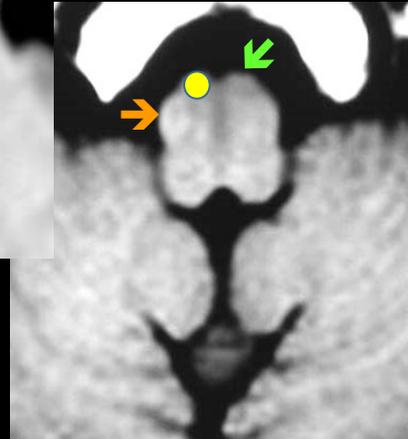
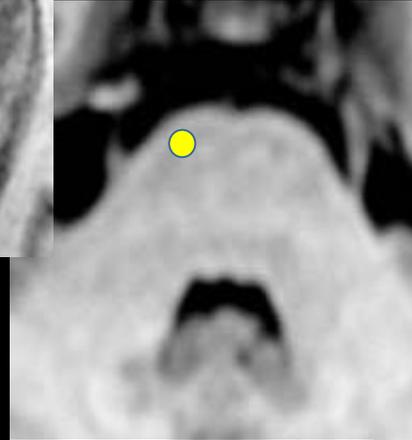
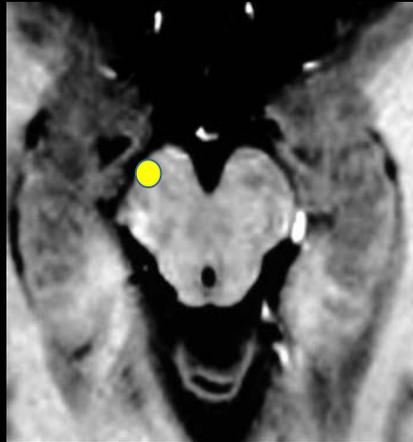
Faisceau cortico-spinal



Faisceau cortico-spinal



Faisceau cortico-spinal

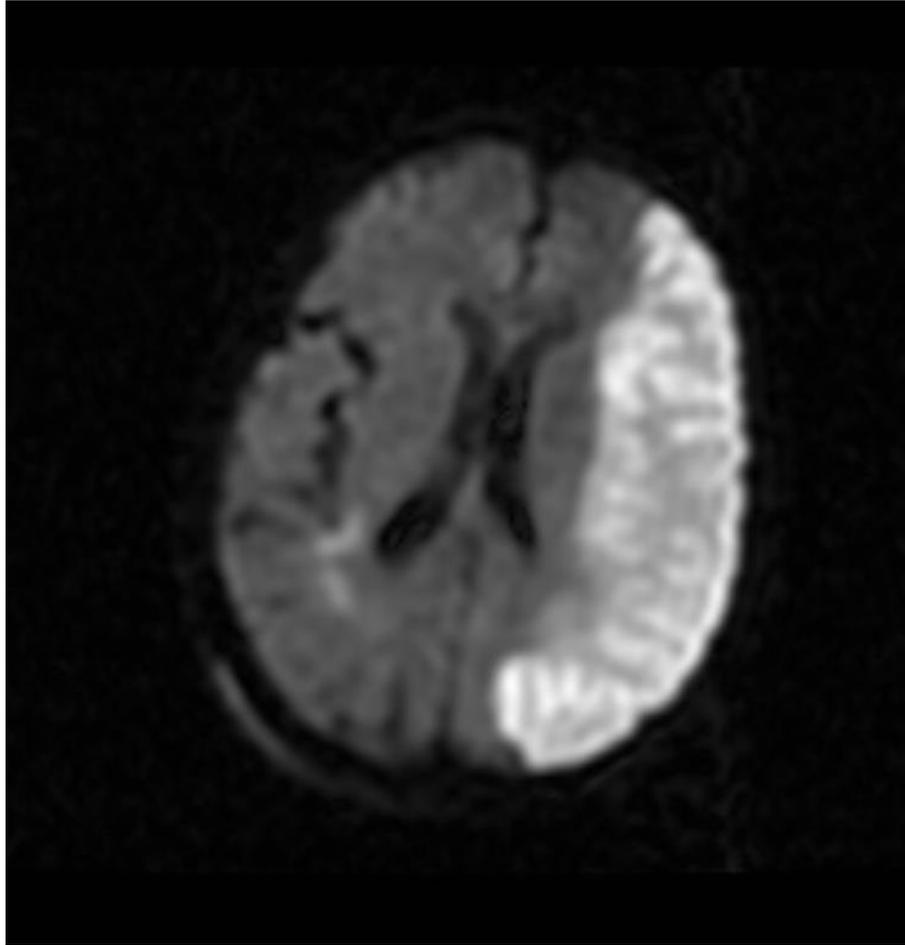


MOTRICITE – Voie pyramidale

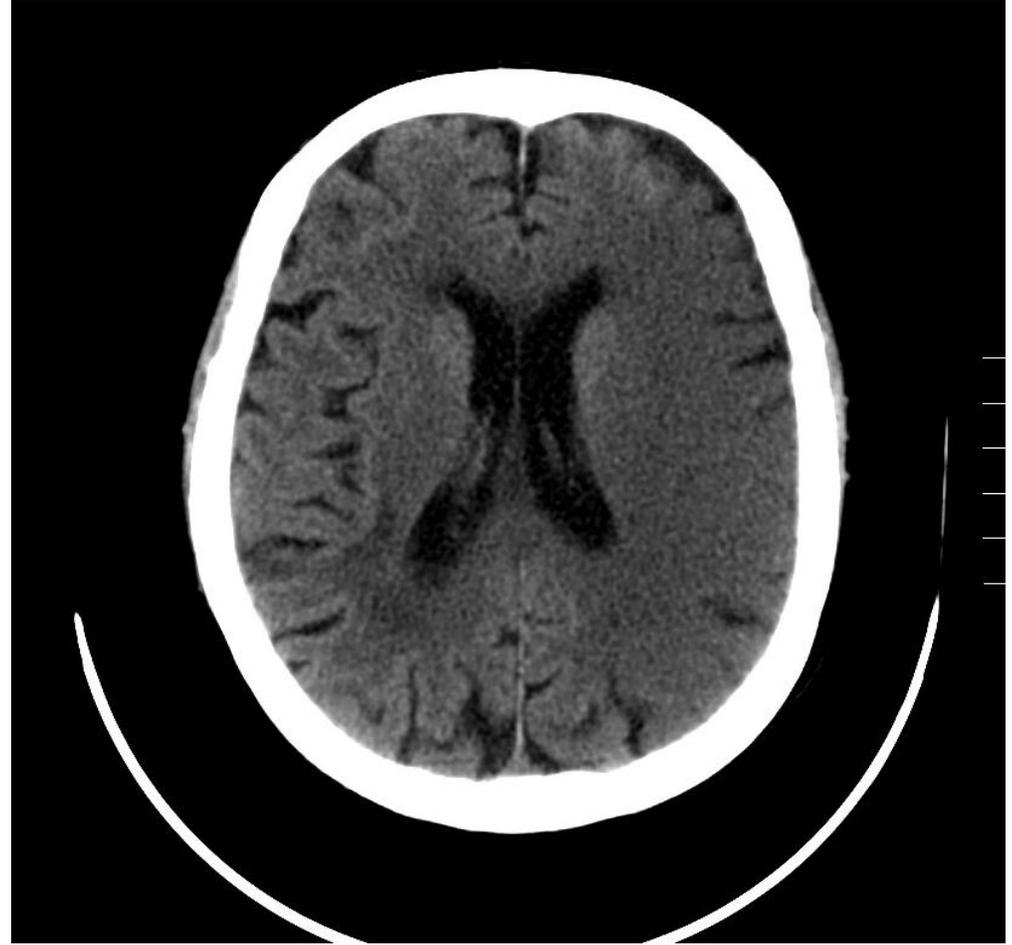
- Hémiplégie / Hémiparésie : *controlatérale*
- Paraplégie / Paraparésie
- **Syndrome pyramidal** : paralysie, hypertonie « élastique »
(*spasticité*)
- **Troubles de déglutition !!!**

MOTRICITE – Voie pyramidale

Infarctus cérébral gauche
IRM / TDM



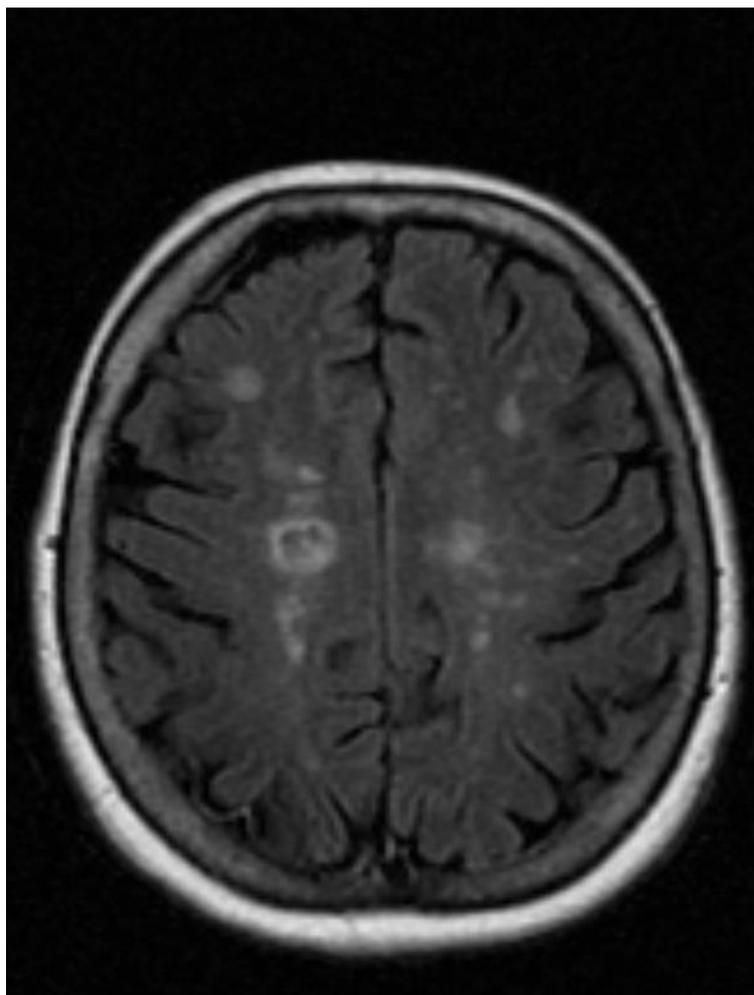
D



G

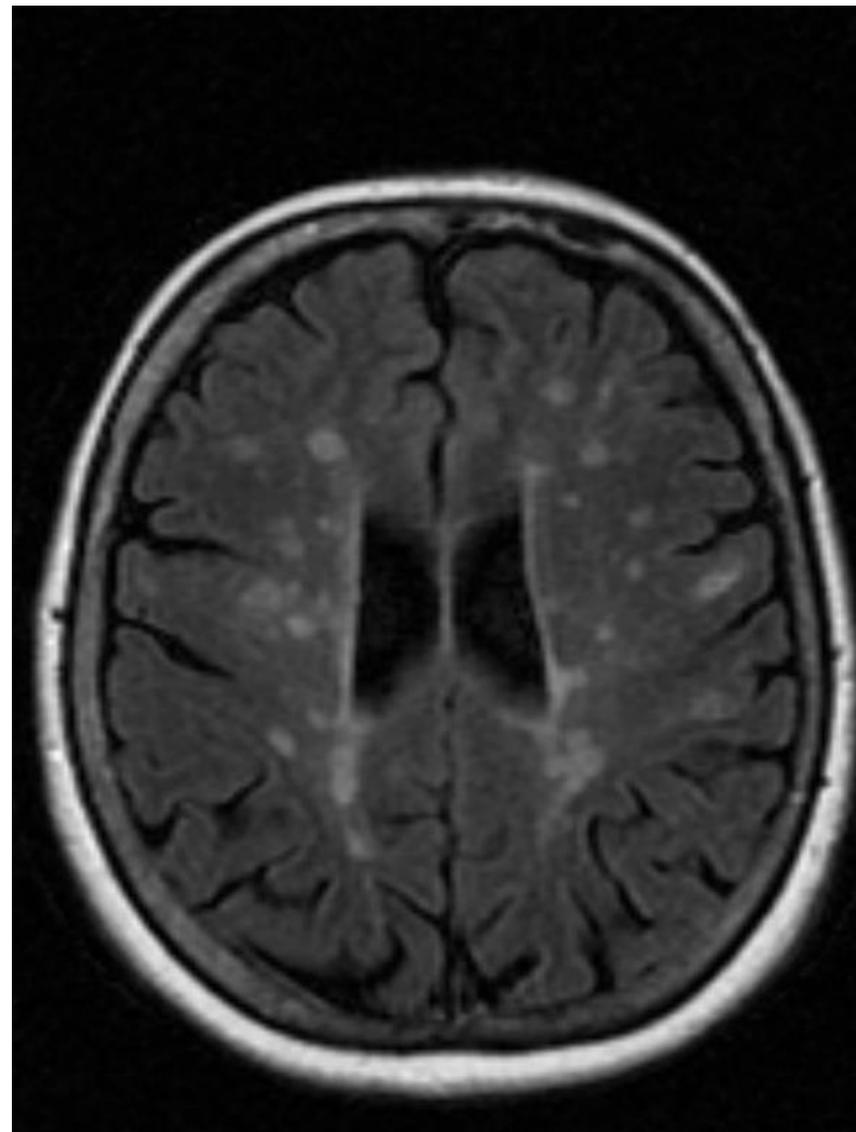
MOTRICITE – Voie pyramidale

Sclérose en plaques



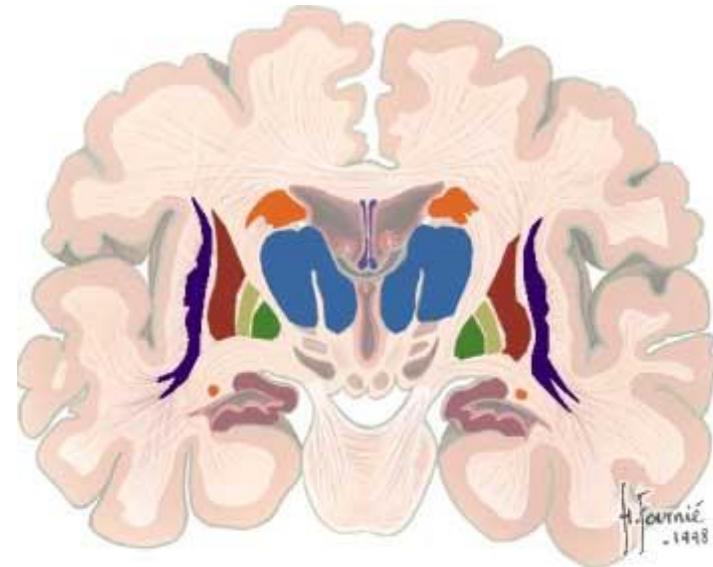
D

G



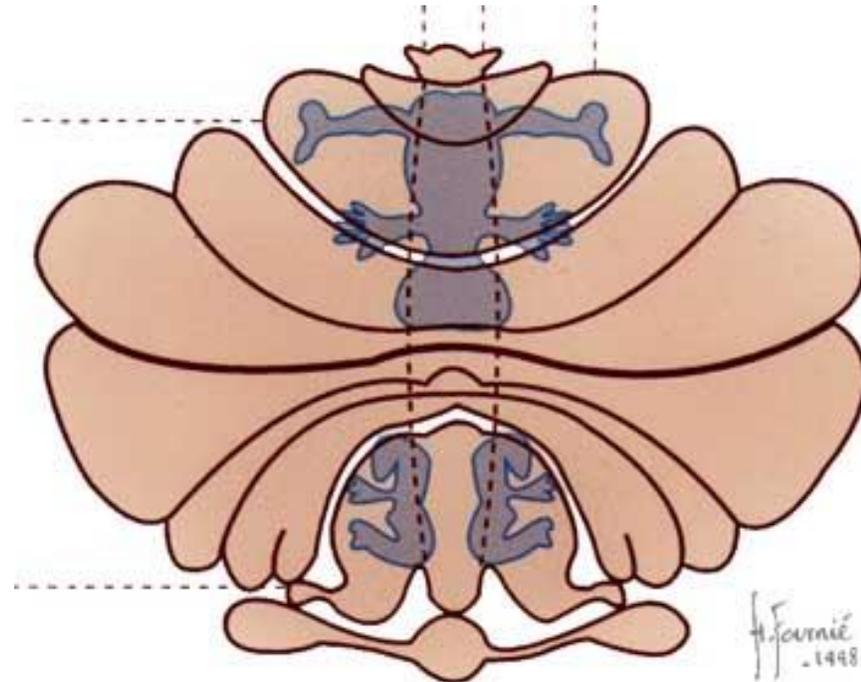
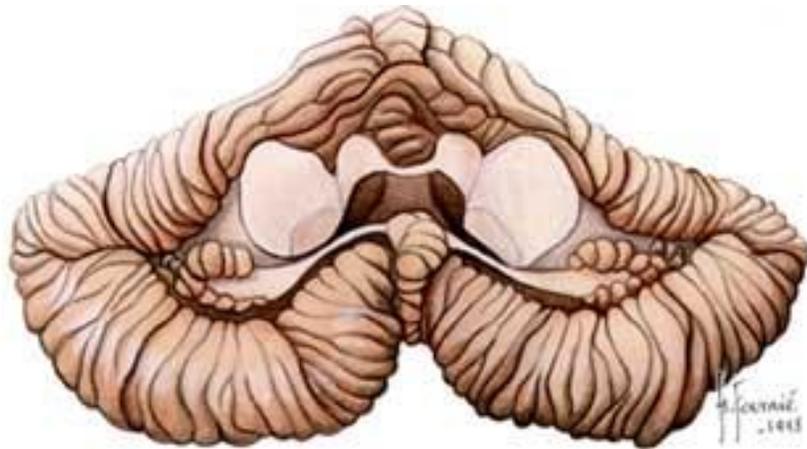
MOTRICITE – Noyaux gris

- **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

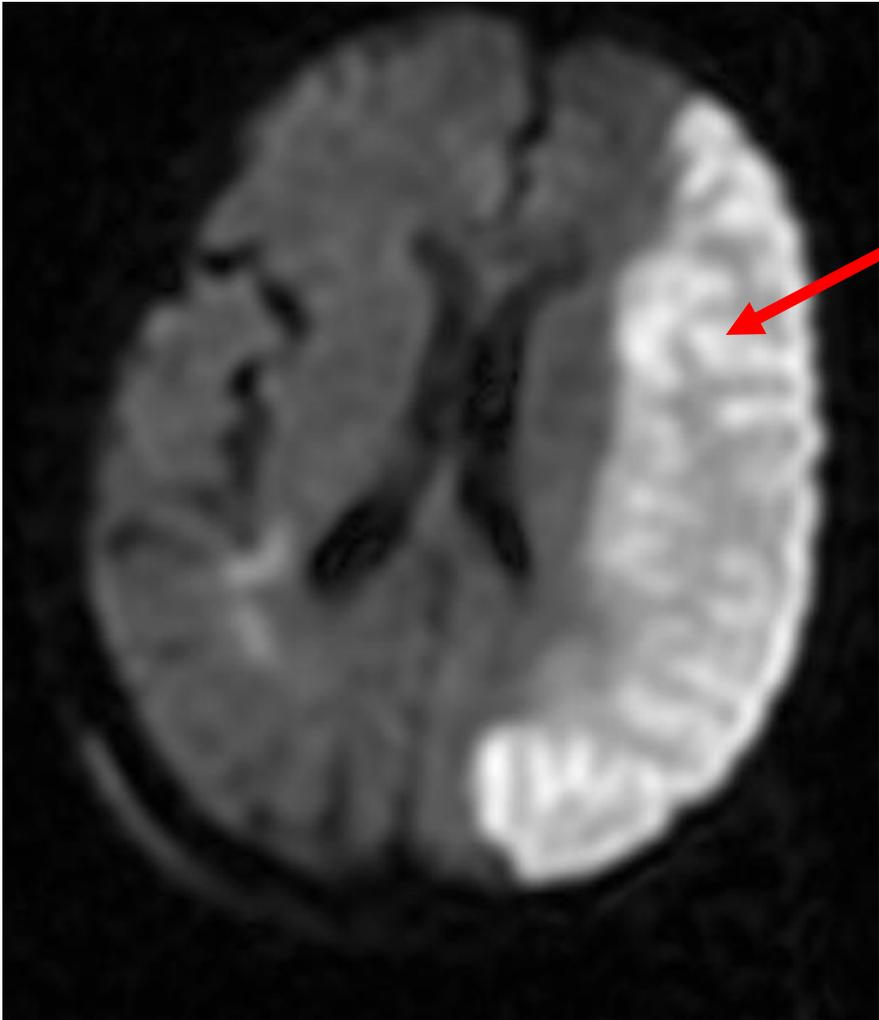
- **Coordination motrice**
- **Syndrome cérébelleux** cinétique / statique



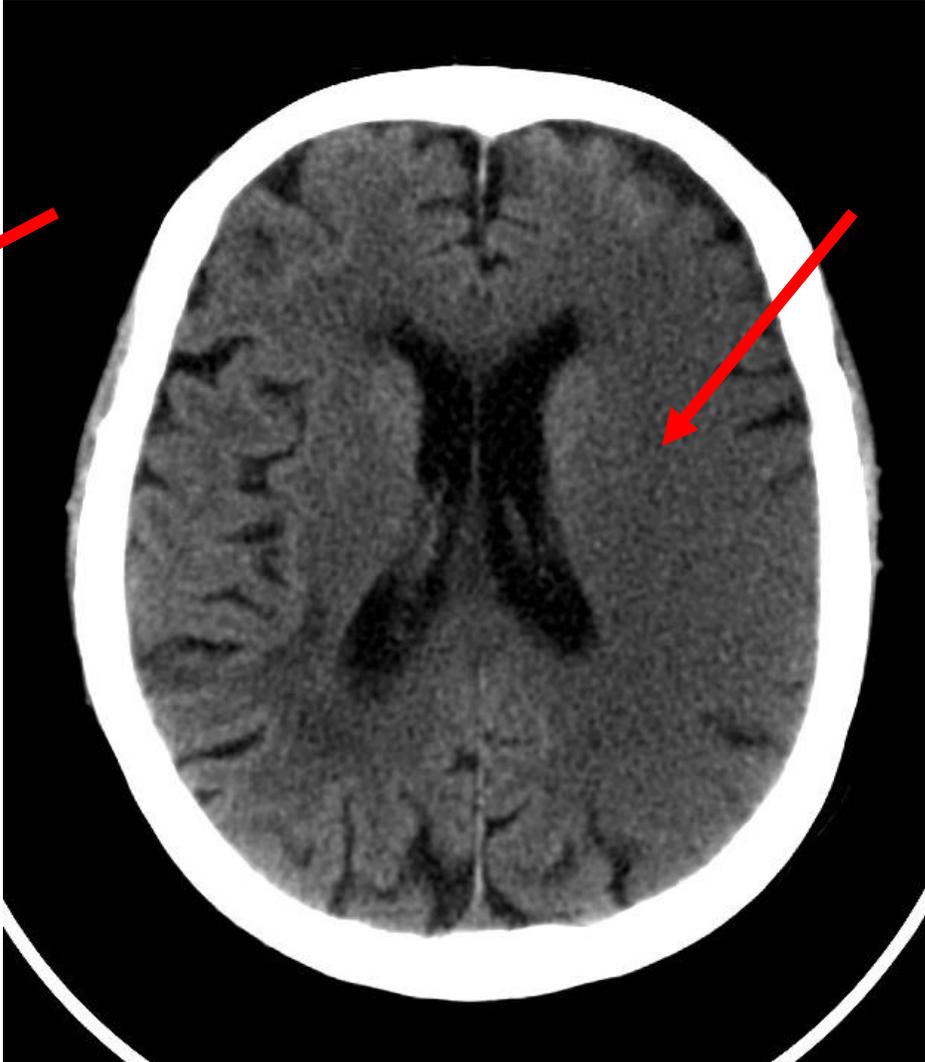
CAS ANATOMO-CLINIQUES

????

AVC ischémique : ACM gauche

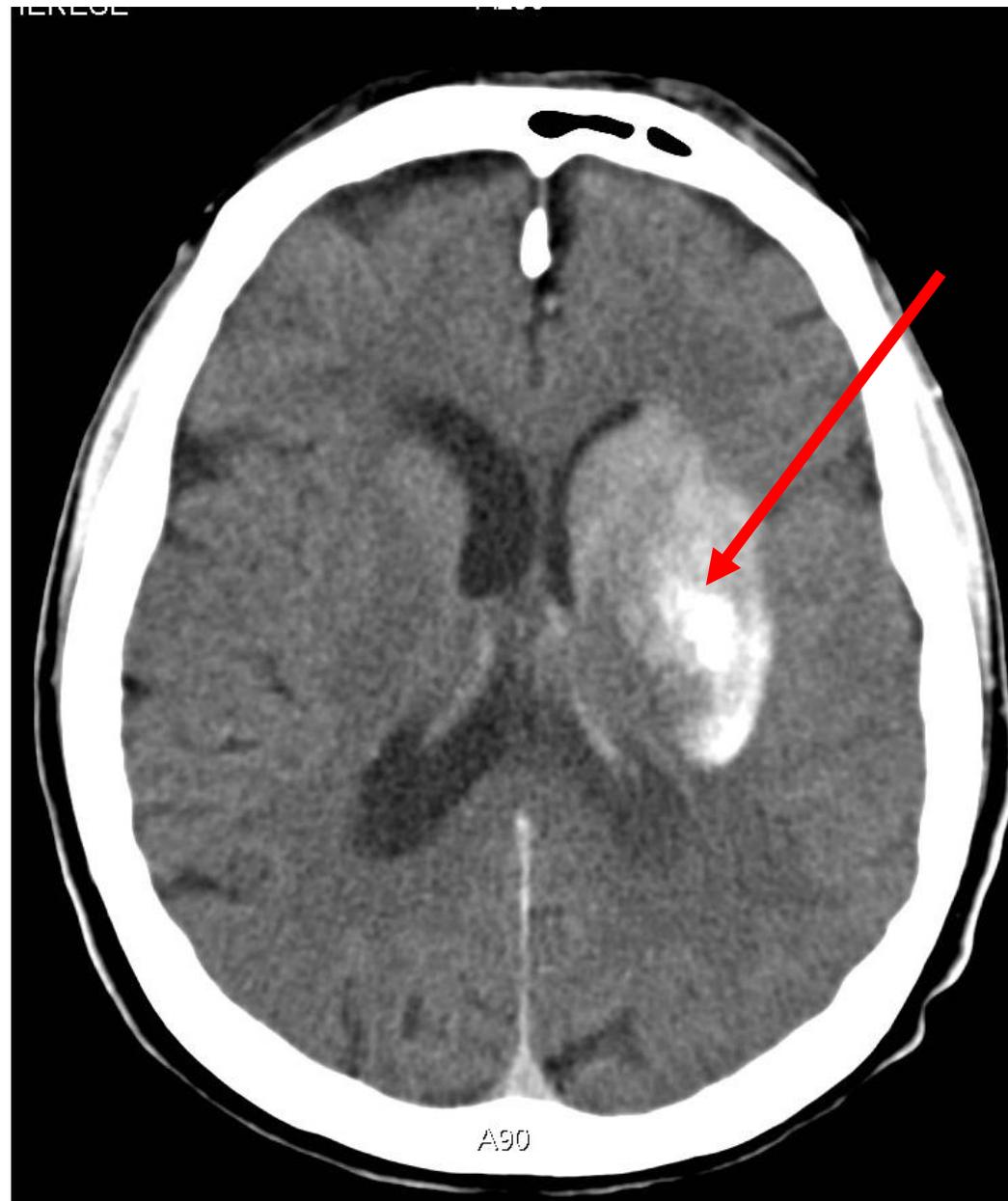


D



G

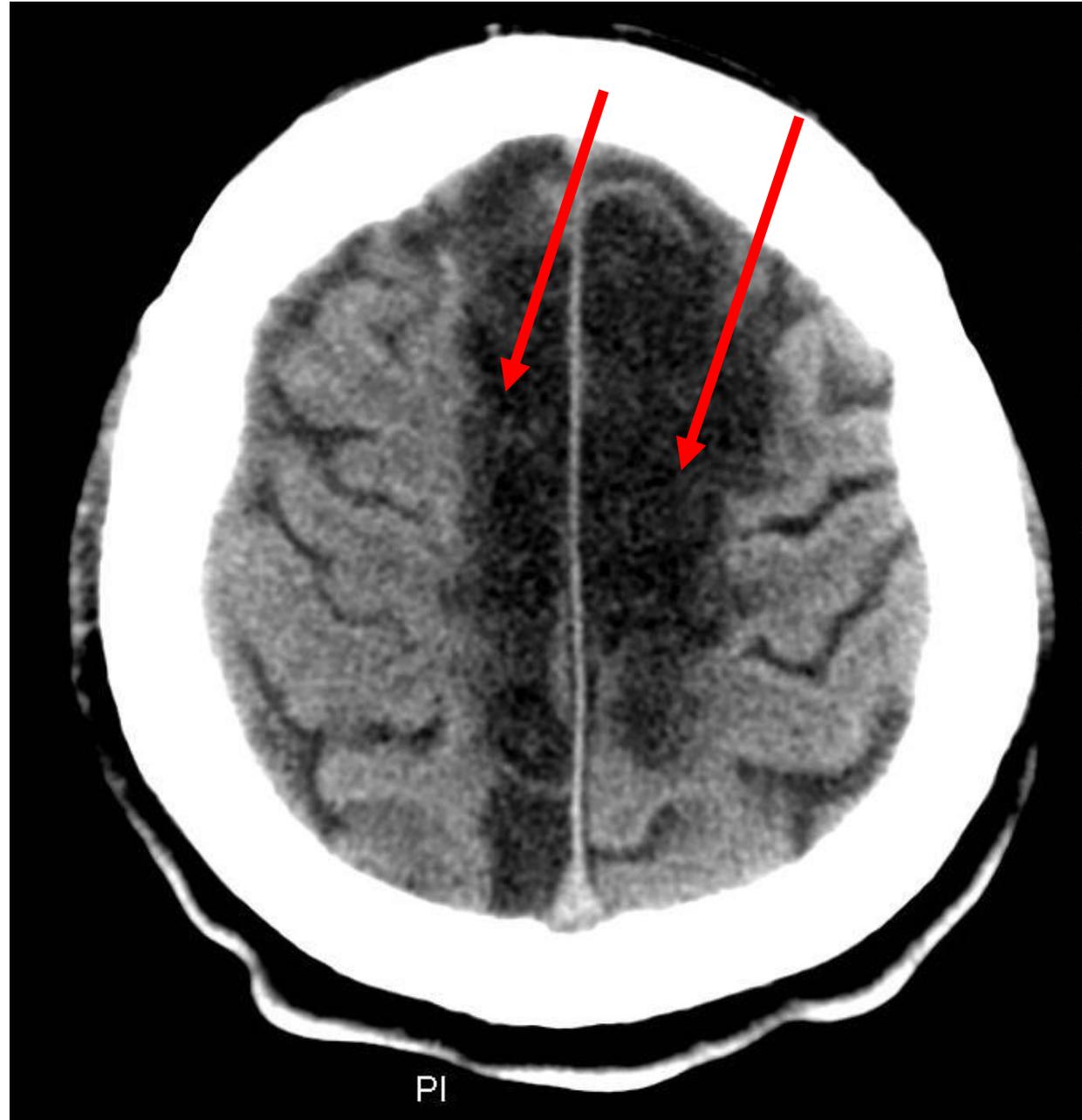
Hématome intra-parenchymateux



D

G

Infarctus cérébral : ACA bilatérale





**Hernie discale avec
compression
médullaire cervicale**

Hémorragie sous-arachnoïdienne > Hypertension intracrânienne



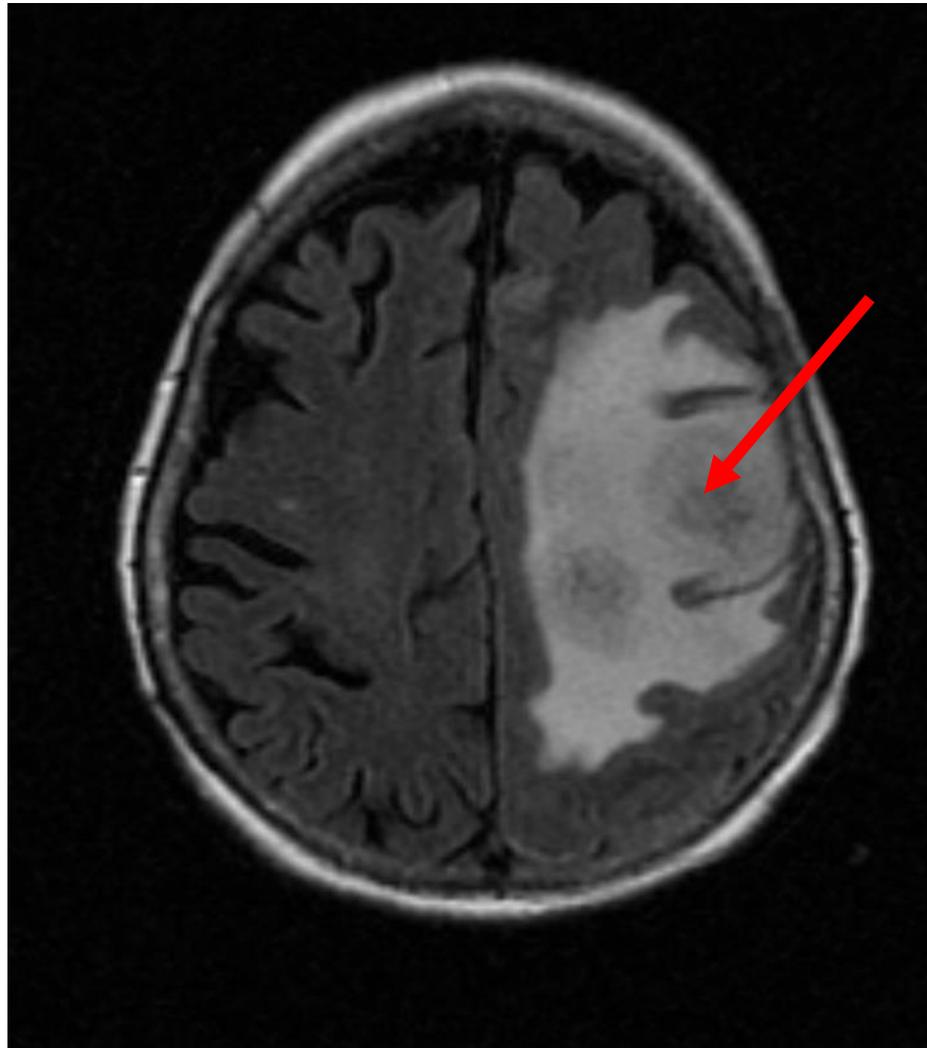
D

G



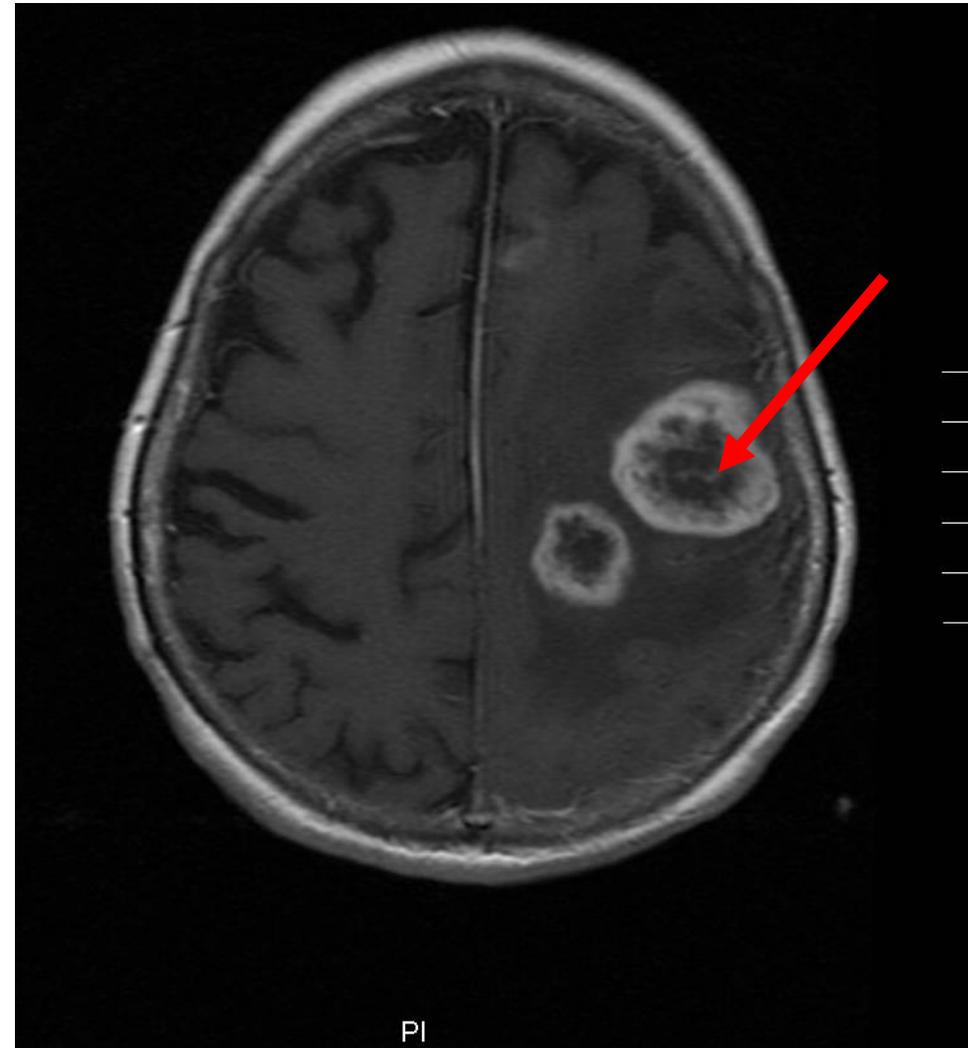
A54

Tumeur cérébrale > Déficit + Hypertension intracrânienne



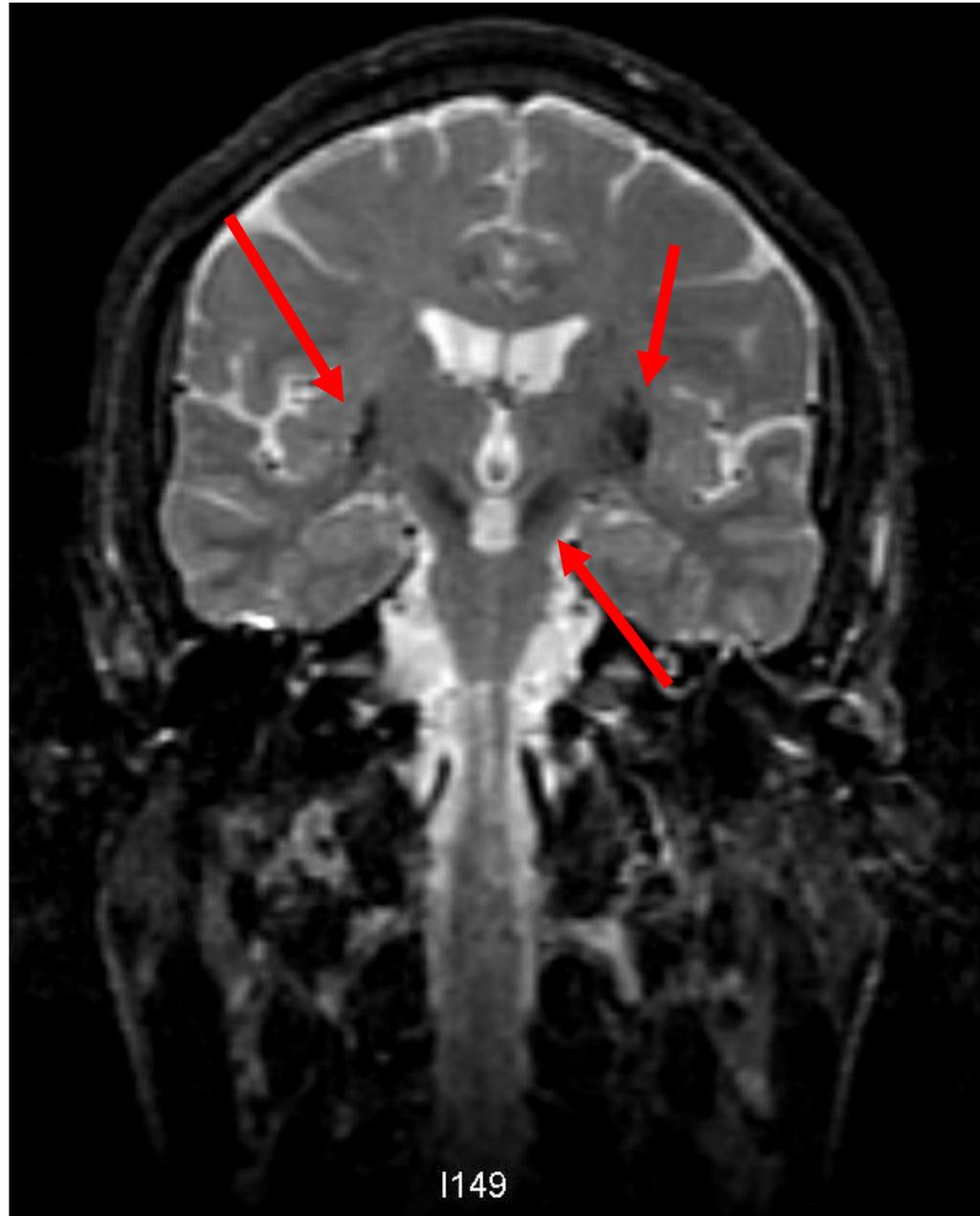
D

G



PI

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



Mentions légales

L'ensemble de ce document relève des législations française et internationale sur le droit d'auteur et la propriété intellectuelle. Tous les droits de reproduction de tout ou partie sont réservés pour les textes ainsi que pour l'ensemble des documents iconographiques, photographiques, vidéos et sonores.

Ce document est interdit à la vente ou à la location. Sa diffusion, duplication, mise à disposition du public (sous quelque forme ou support que ce soit), mise en réseau, partielles ou totales, sont strictement réservées aux Instituts de Formation en Soins Infirmiers de la région Rhône-Alpes.

L'utilisation de ce document est strictement réservée à l'usage privé des étudiants inscrits dans les Instituts de Formation en Soins Infirmiers de la région Rhône-Alpes, et non destinée à une utilisation collective, gratuite ou payante.