

Unidad de Anatomía Veterinaria UST. Santiago

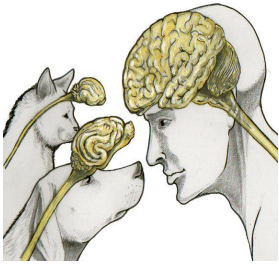
Anatomía 1



Sesión 6

Sistema Nervioso Central.

Dr. Ismael Concha A.

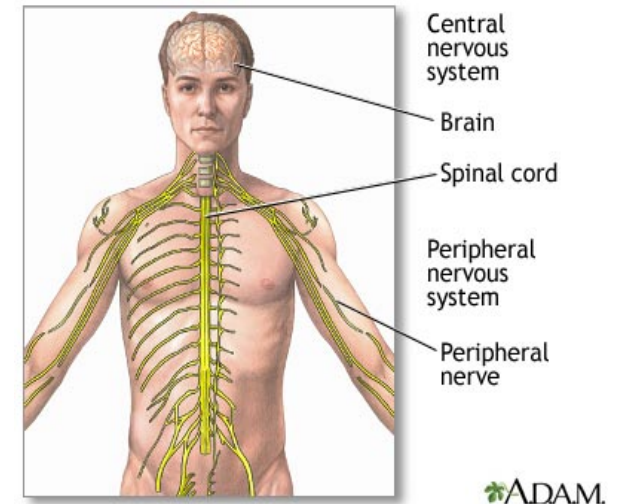


Sistema nervioso

División anatómica

- * **Sistema nervioso Central (SNC)**
 - **Encéfalo**
 - **Médula espinal**

- * **Sistema nervioso periférico (SNP)**
 - **Nervios craneales**
 - **Nervios espinales**
 - **Nervios y troncos del SNA**

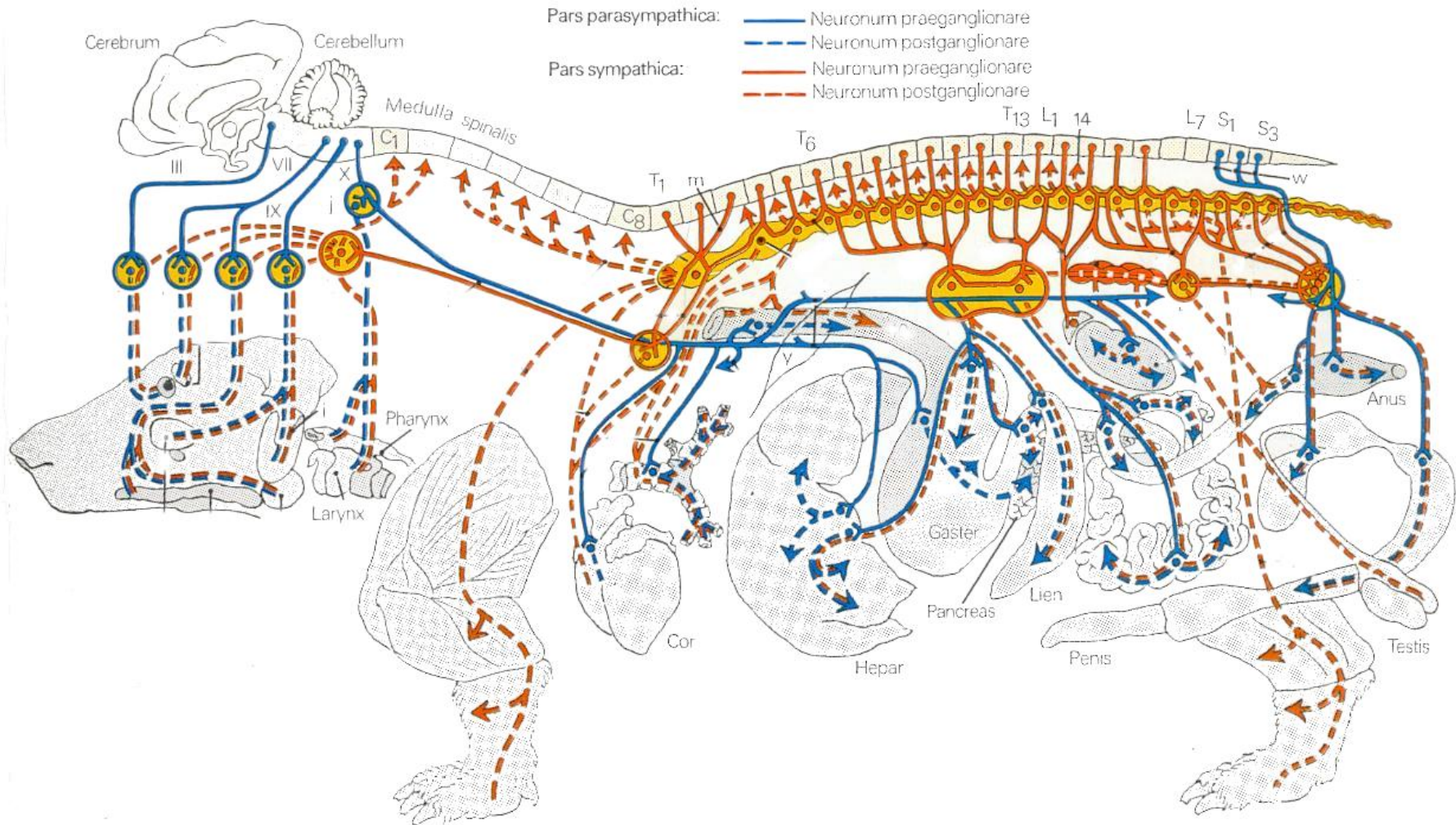


Sistema nervioso

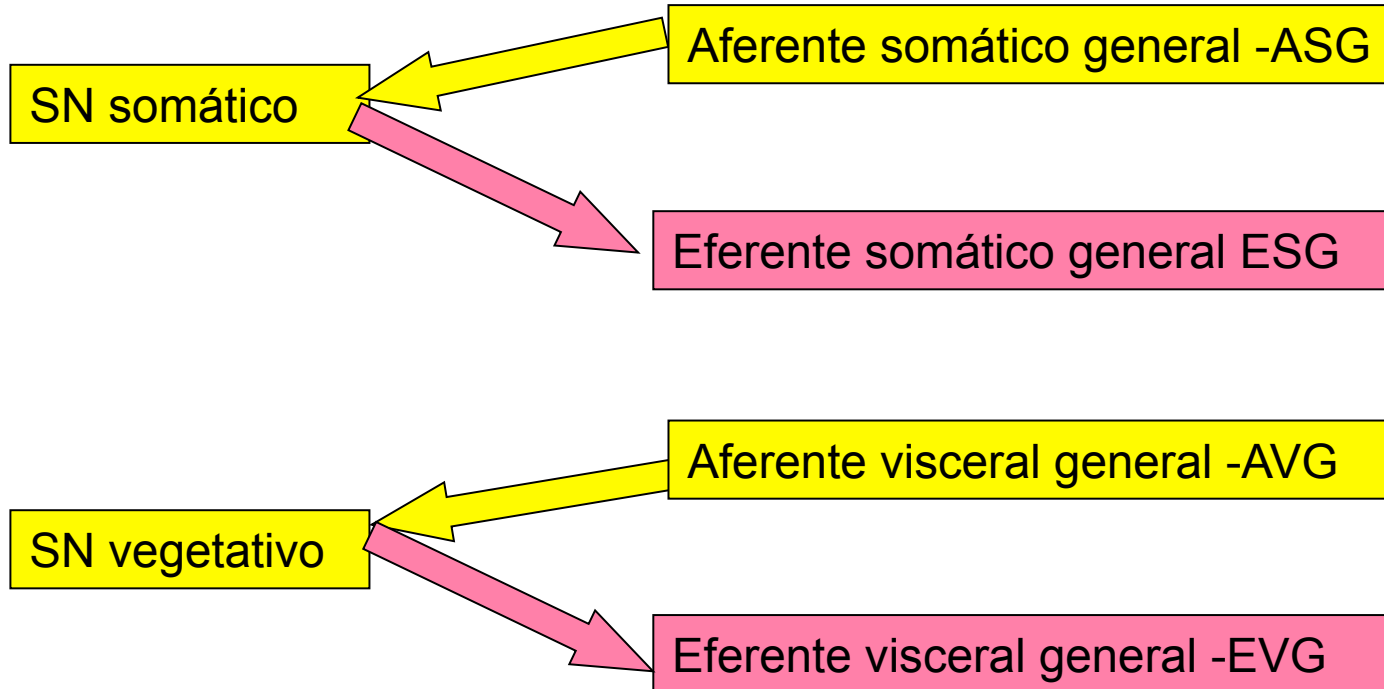
División funcional

- * Sistema nervioso somático (SNS)
(voluntario , m. Estriado esquelético)
- * Sistema nervioso autónomo (SNA)
(involuntario o vegetativo , m. Liso,
estriado cardíaco y glándulas)
 - S.N Simpático
 - S.N Parasimpático

Systema nervosum autonomicum



VÍAS NERVIOSAS



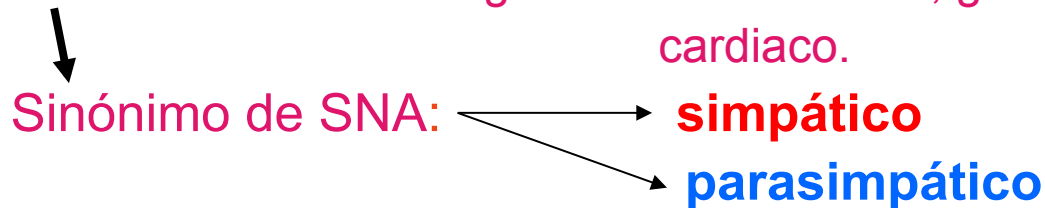
VÍAS NERVIOSAS

SOMÁTICO

- **ASG: Aferente somático general:** paredes corporales, piel, tejido conectivo, músculo esquelético..
- **ASE: Aferente somático especial:** visión y audición
- **ES: Eferente somático:** músculos esqueléticos

VISCERAL

- **AVG: Aferente visceral general:** órganos cavitarios, serosas, orofaringe, laringe, esófago, traquea, linfáticos y receptores vasculares
- **AVE: Aferente visceral especial:** Olfación y gusto
- **EVG: Eferente visceral general:** músculo liso, glándulas, músculo cardiaco.



Neurona



- Somas

- Axones

Somas y
axones

SNC

M. Gris
Núcleo
Corteza

M. blanca, Tracto,
funículo, fascículo,
lemnisco, pedúnculo
Fibras:

Formación
reticular

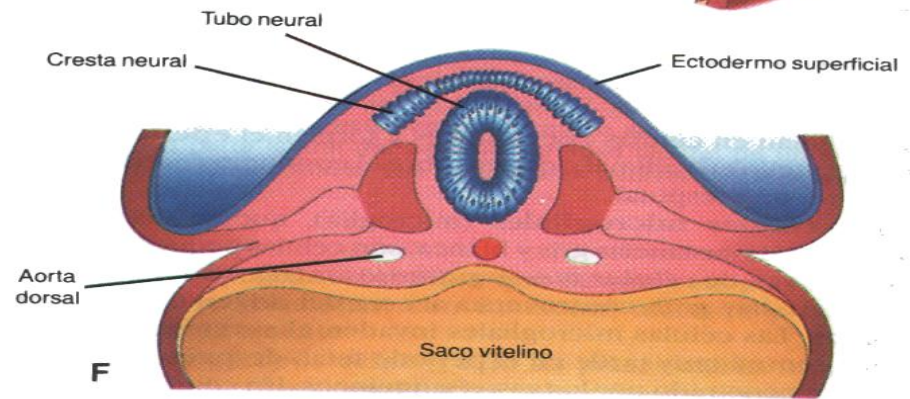
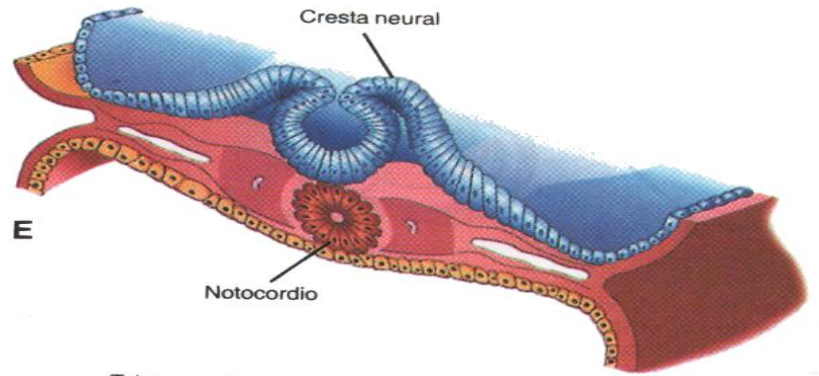
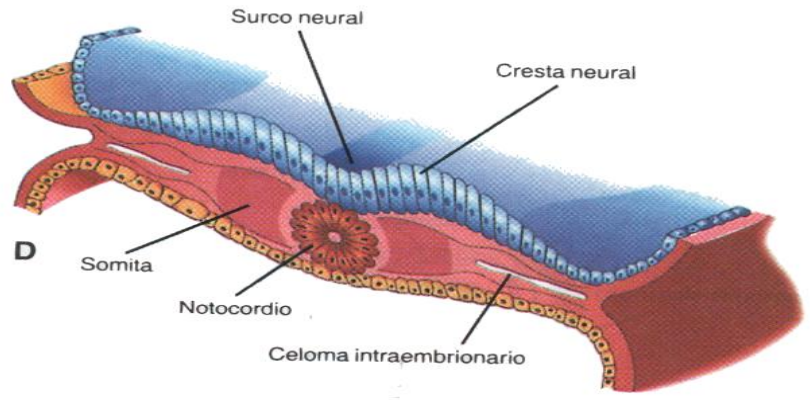
- asociación
- proyección
- comisural

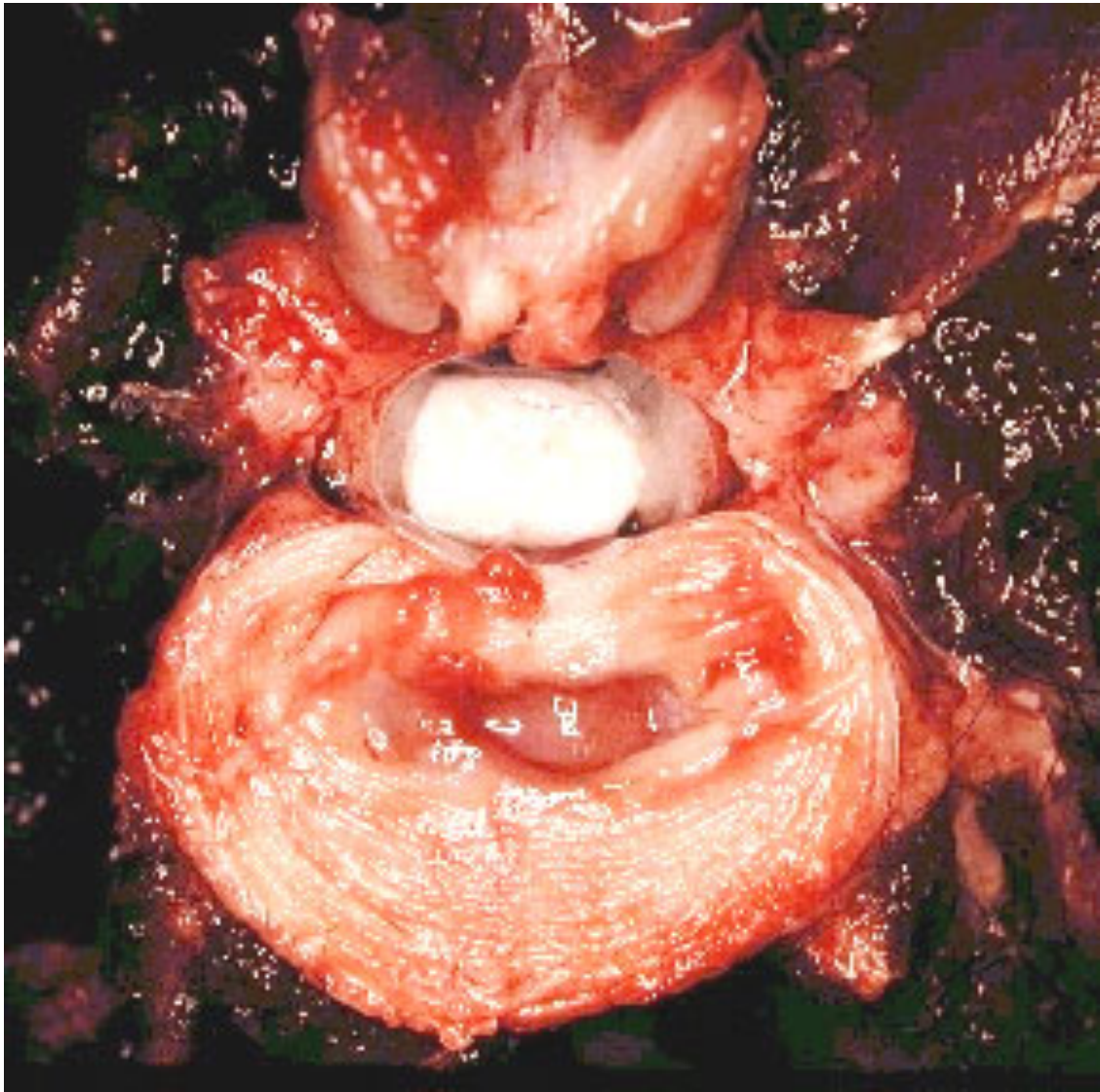
SNP

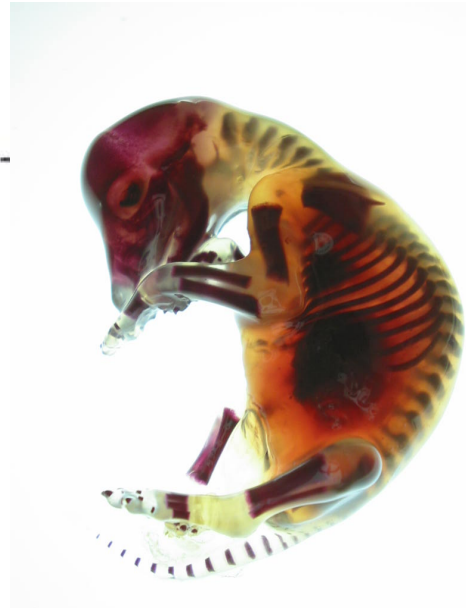
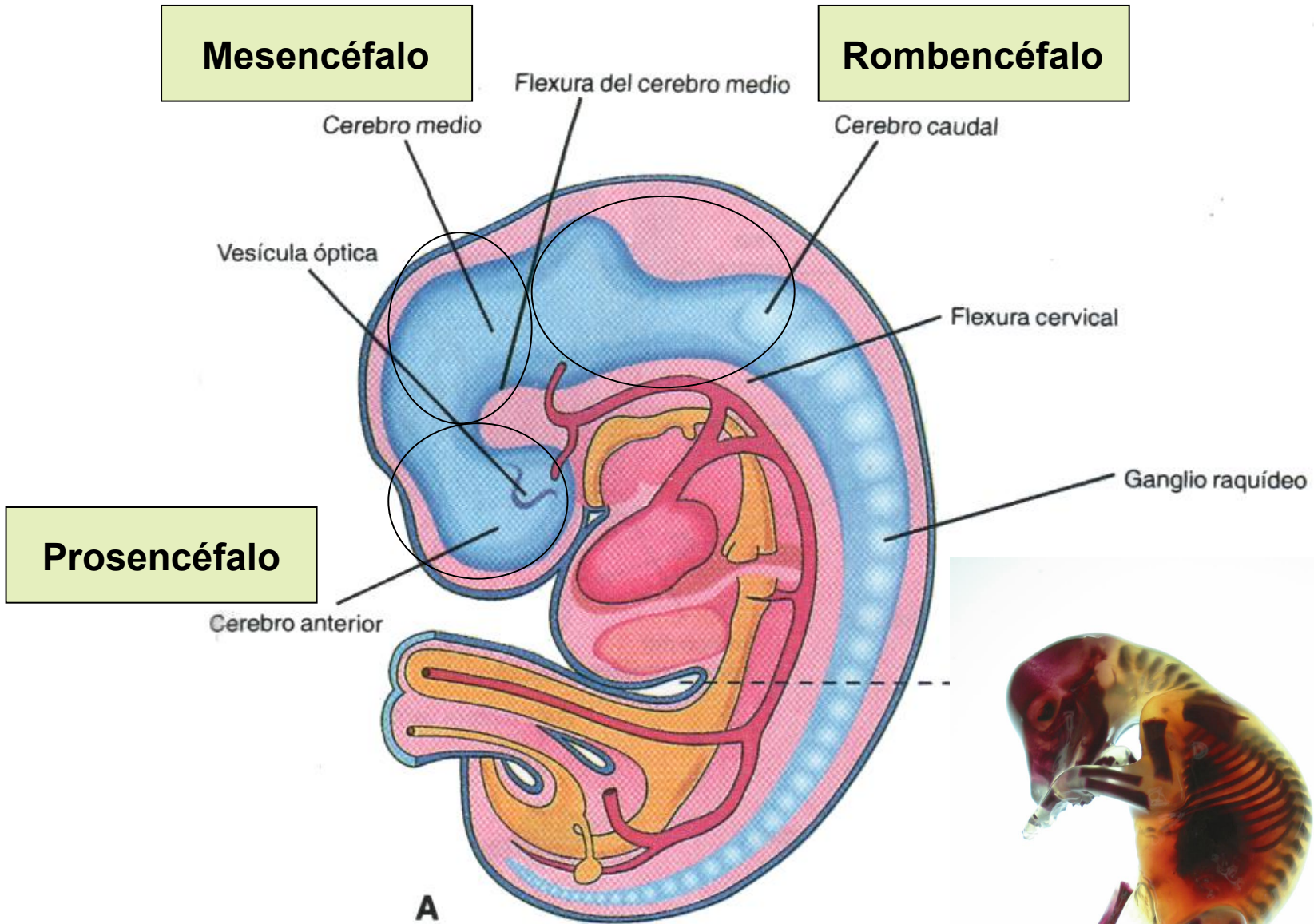
Ganglio

Nervio

Raíz,
Tronco







Vesículas encefálicas

Primarias

- Rombencéfalo



- Mesencéfalo

- Prosencéfalo

Secundarias

- Mielencéfalo

(Méd. Oblonga)

- Metencéfalo

(Puente)

- Cerebelo

- Diencéfalo

- Telencéfalo

Encéfalo

Tronco encefálico

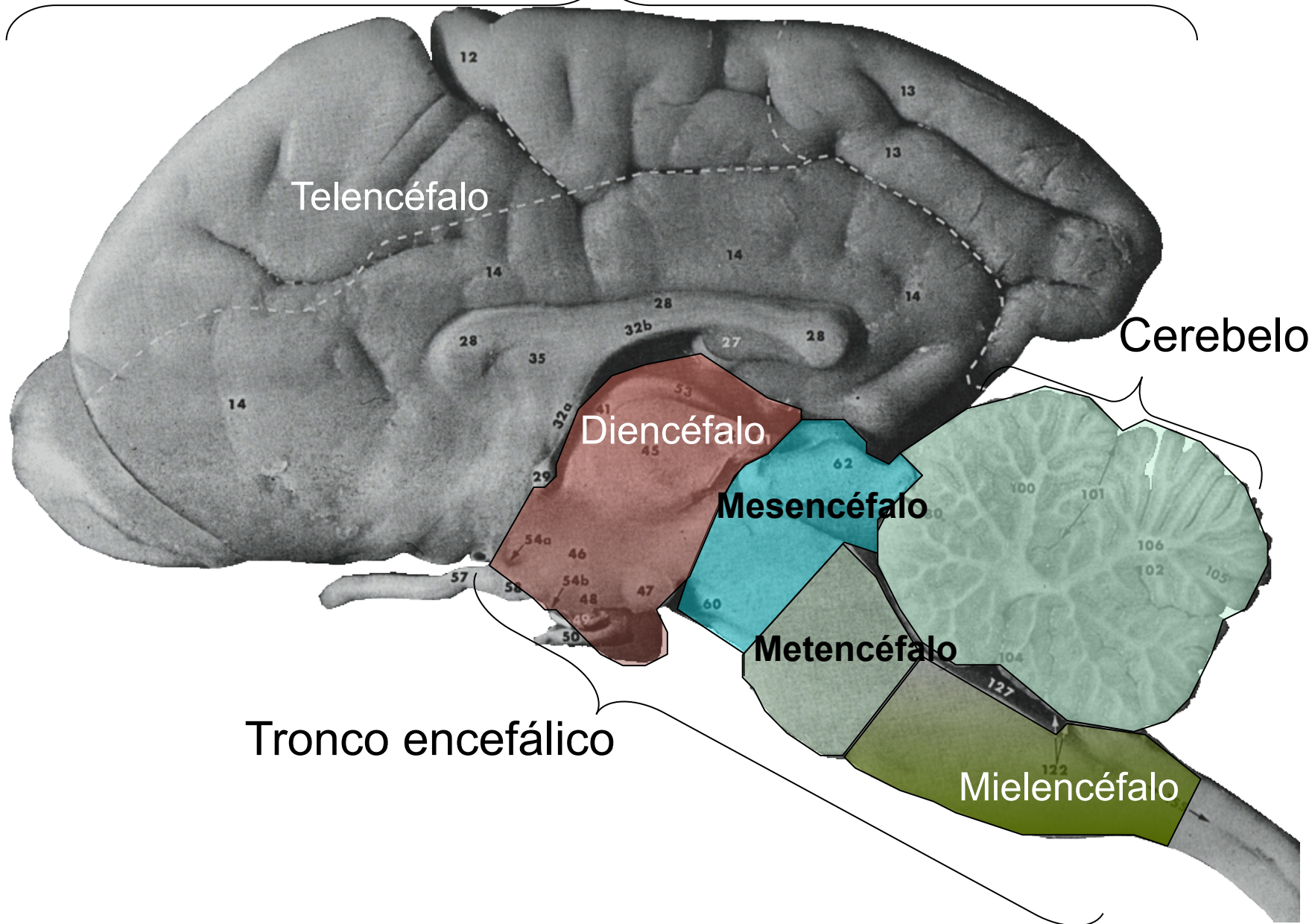
Mielencéfalo, Metencéfalo

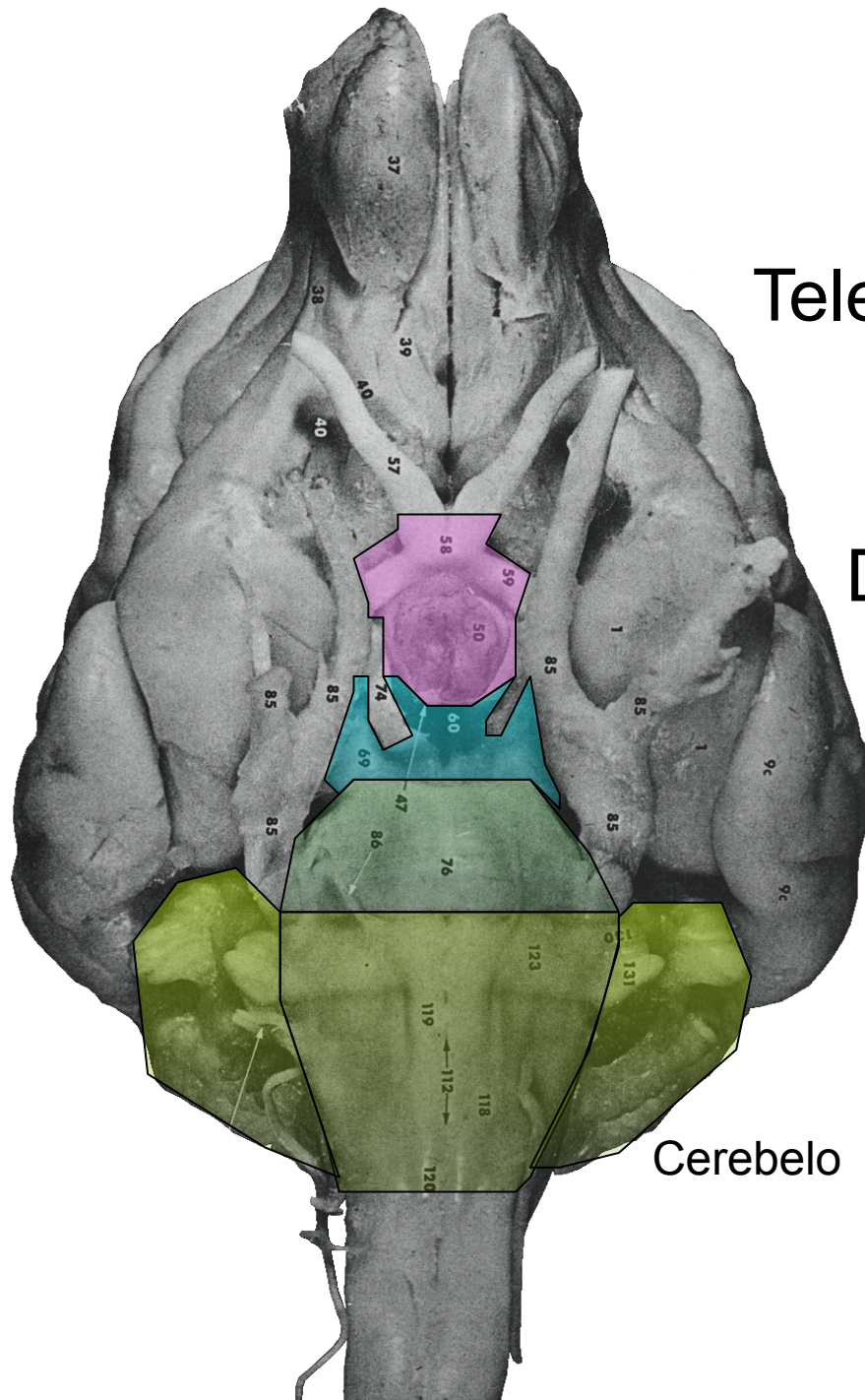
mesencéfalo y diencéfalo

Cerebelo

Cerebro Telencéfalo

Cerebro





Telencéfalo

Diencéfalo

Mesencéfalo

Metencéfalo

Mielencéfalo

Cerebelo

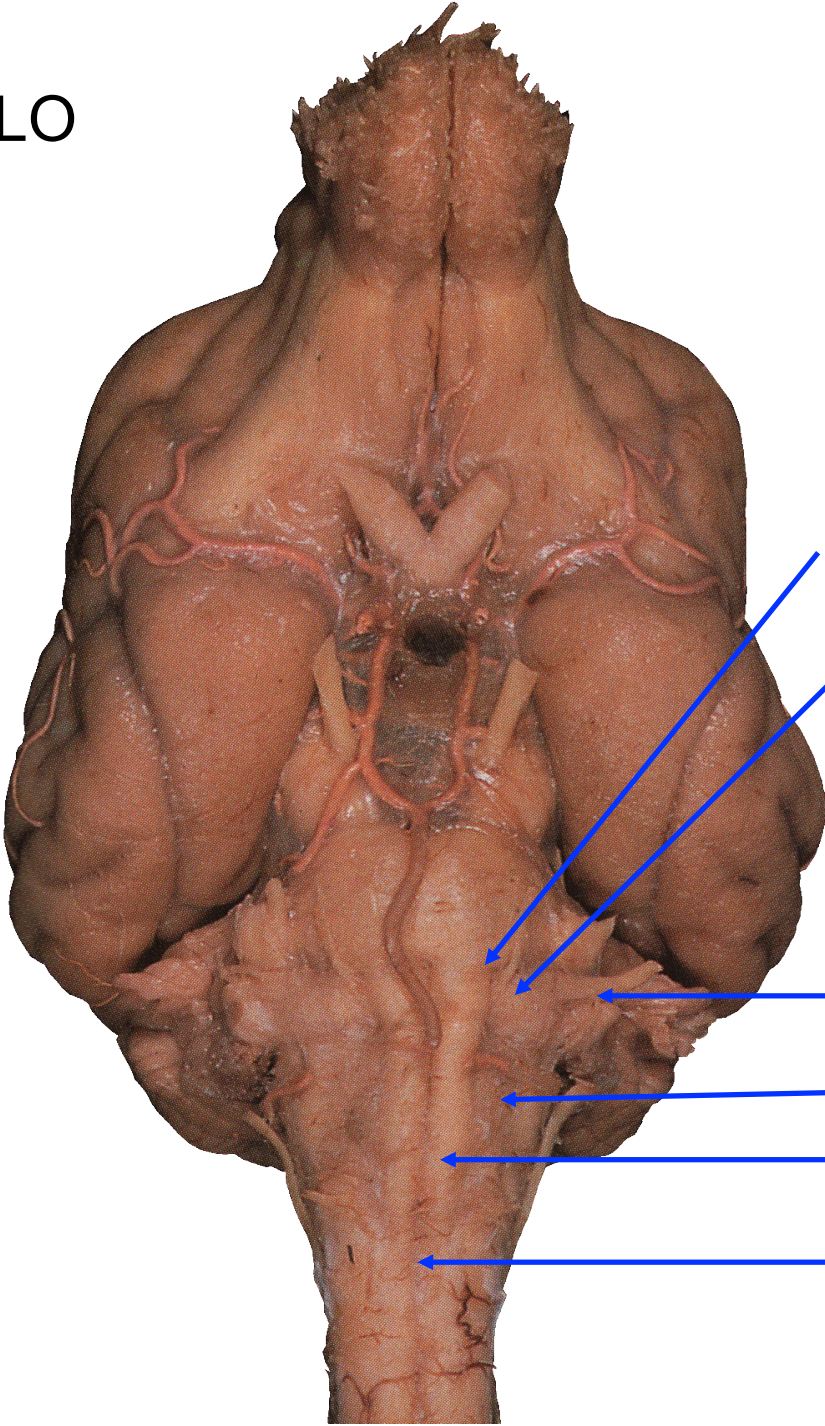
Tronco encefálico

Funciones generales:

- 1- Vegetativas
- 2- Integración de los movimientos
- 3- Movimientos oculares
- 4- Sistema de activación de la corteza cerebral

MIELENCÉFALO

VISTA VENTRAL



Surco bulbo pontino

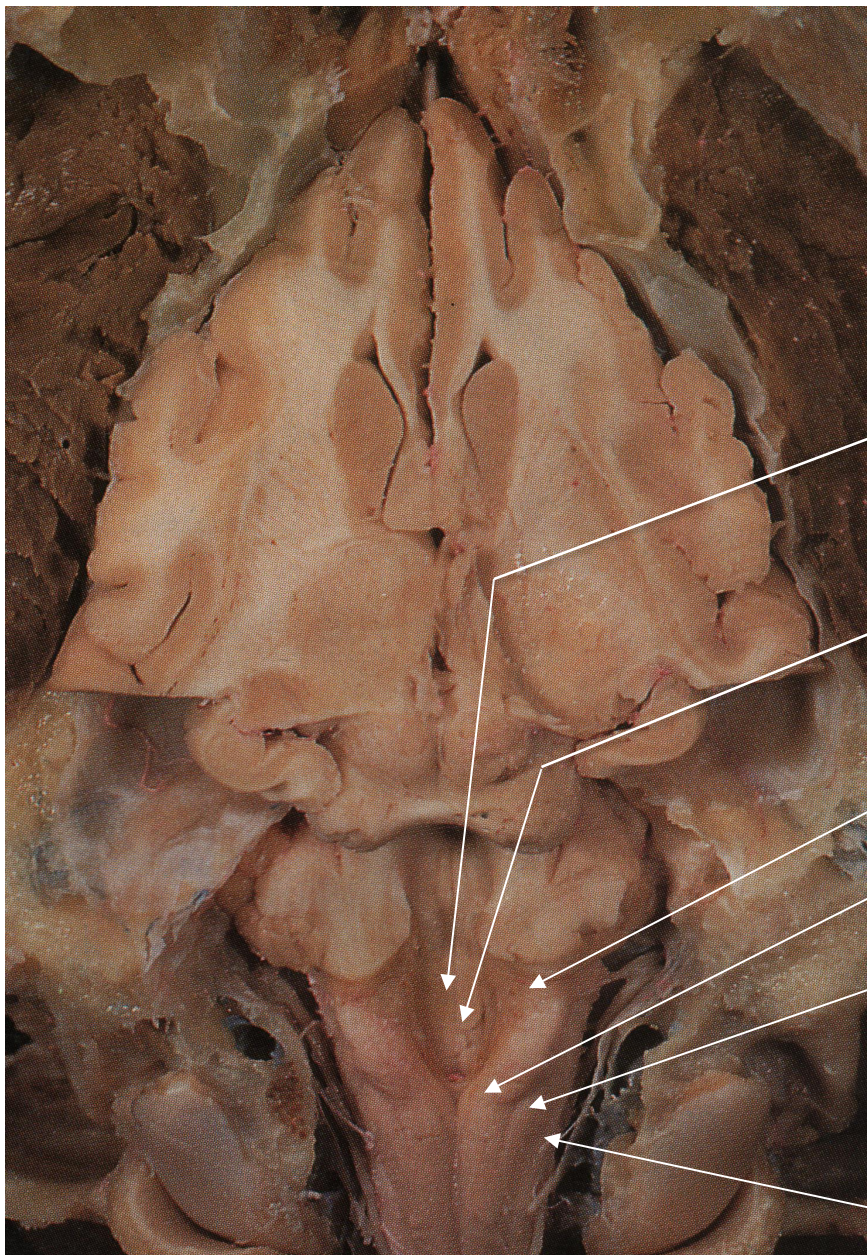
Cuerpo trapezoidal

NC VII, y VIII

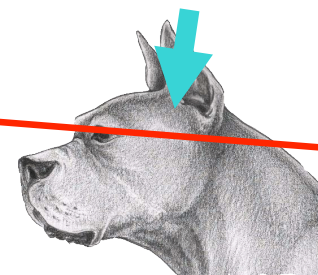
Núcleo olivar

Pirámide

Decusación piramidal



MIELENCÉFALO



VISTA DORSAL

Piso del cuarto ventrículo,
mitad caudal (fosa romboídea)

Núcleo parasimpático
del n X

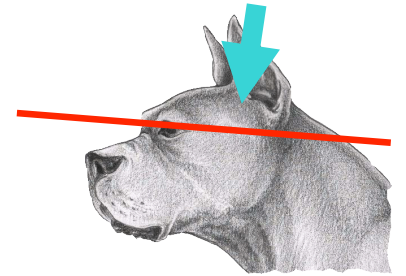
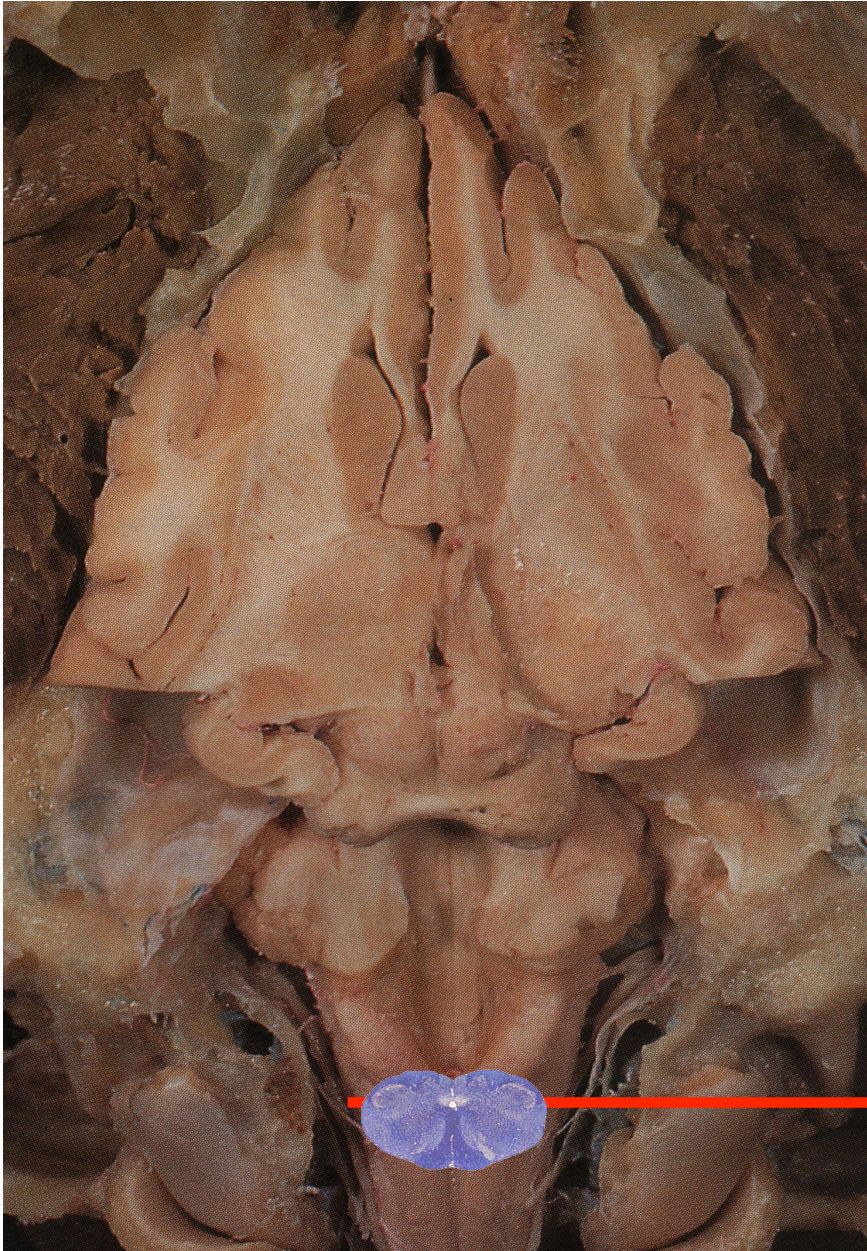
Pedúnculo cerebeloso caudal

Fascículo y tubérculo (núcleo) gracilis

Fascículo y tubérculo (núcleo) cuneatus

VISTA LATERAL

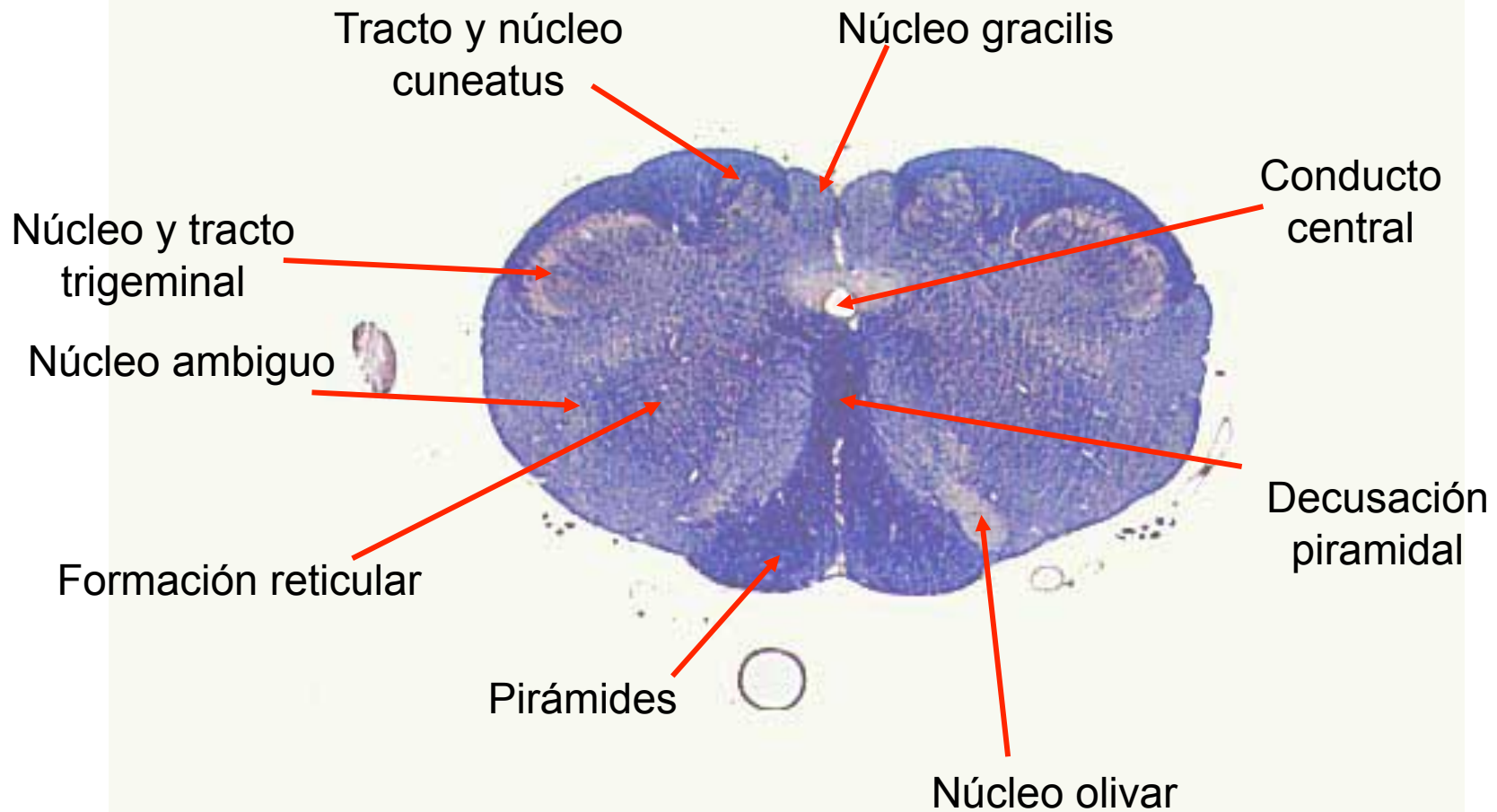
Tracto y núcleo trigeminal



MIELENCÉFALO

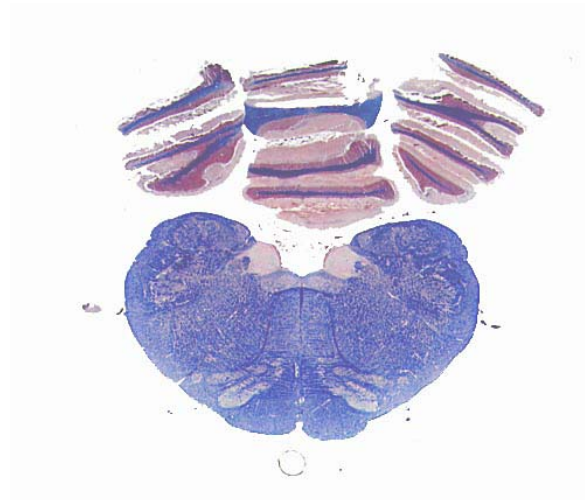
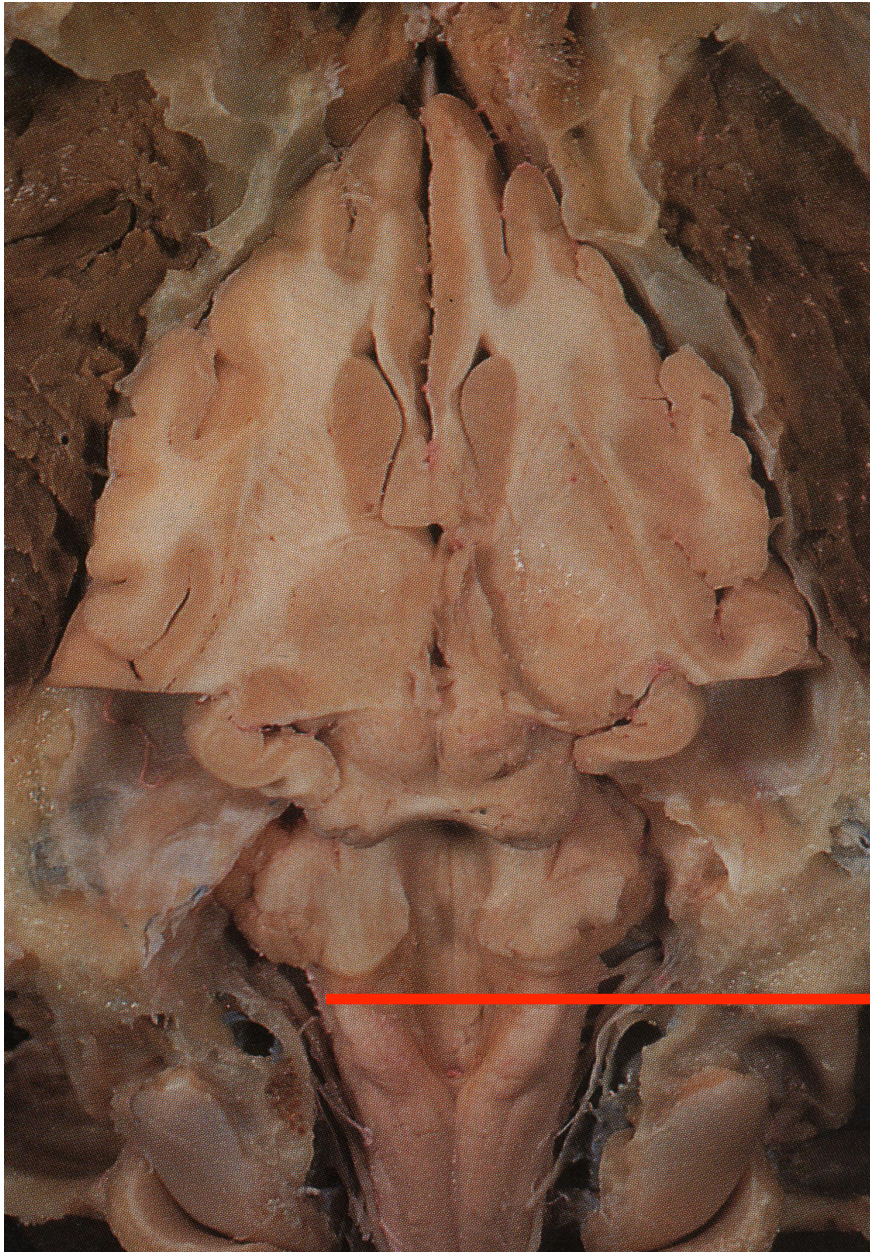


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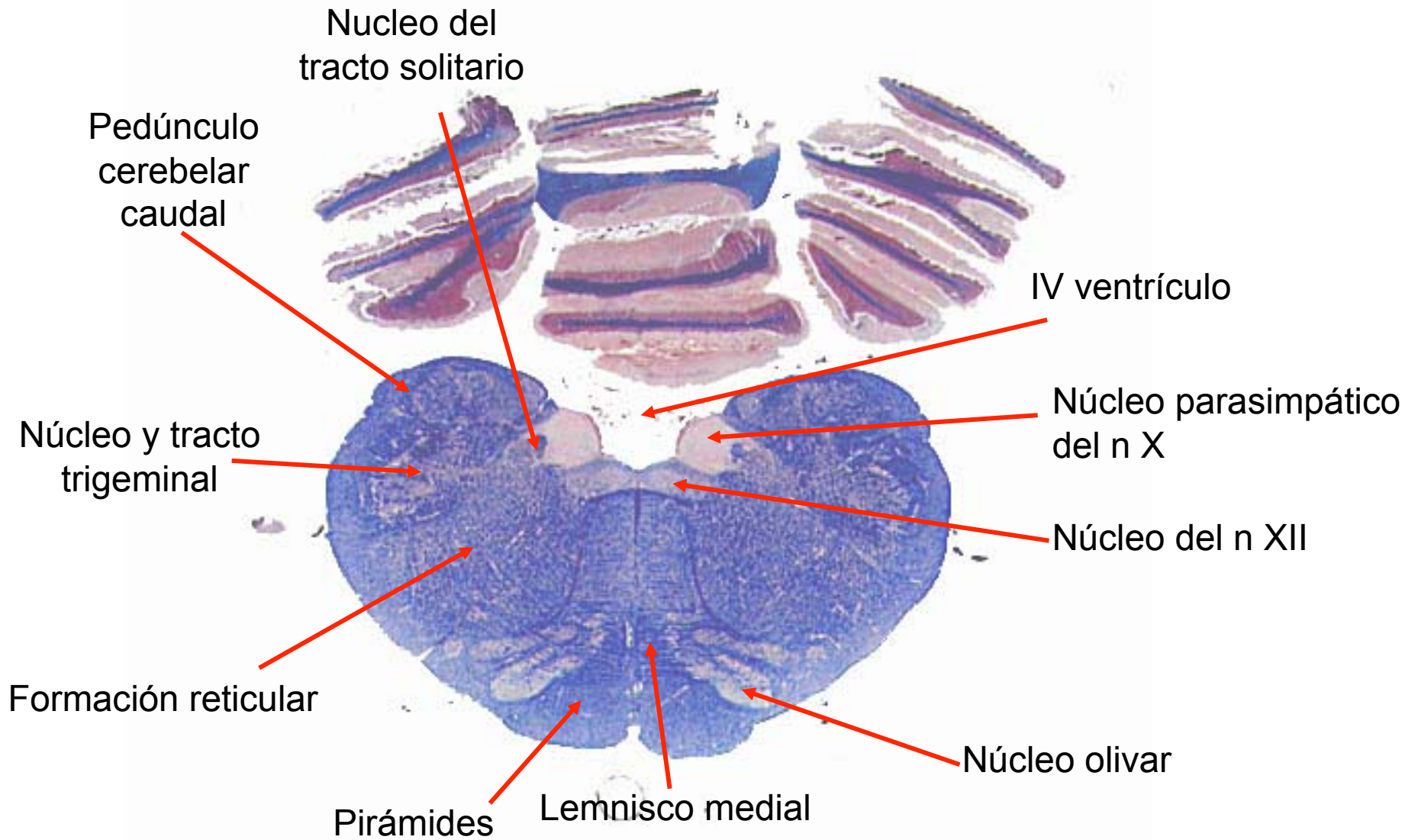


<http://vanat.cvm.umn.edu/brainsect>

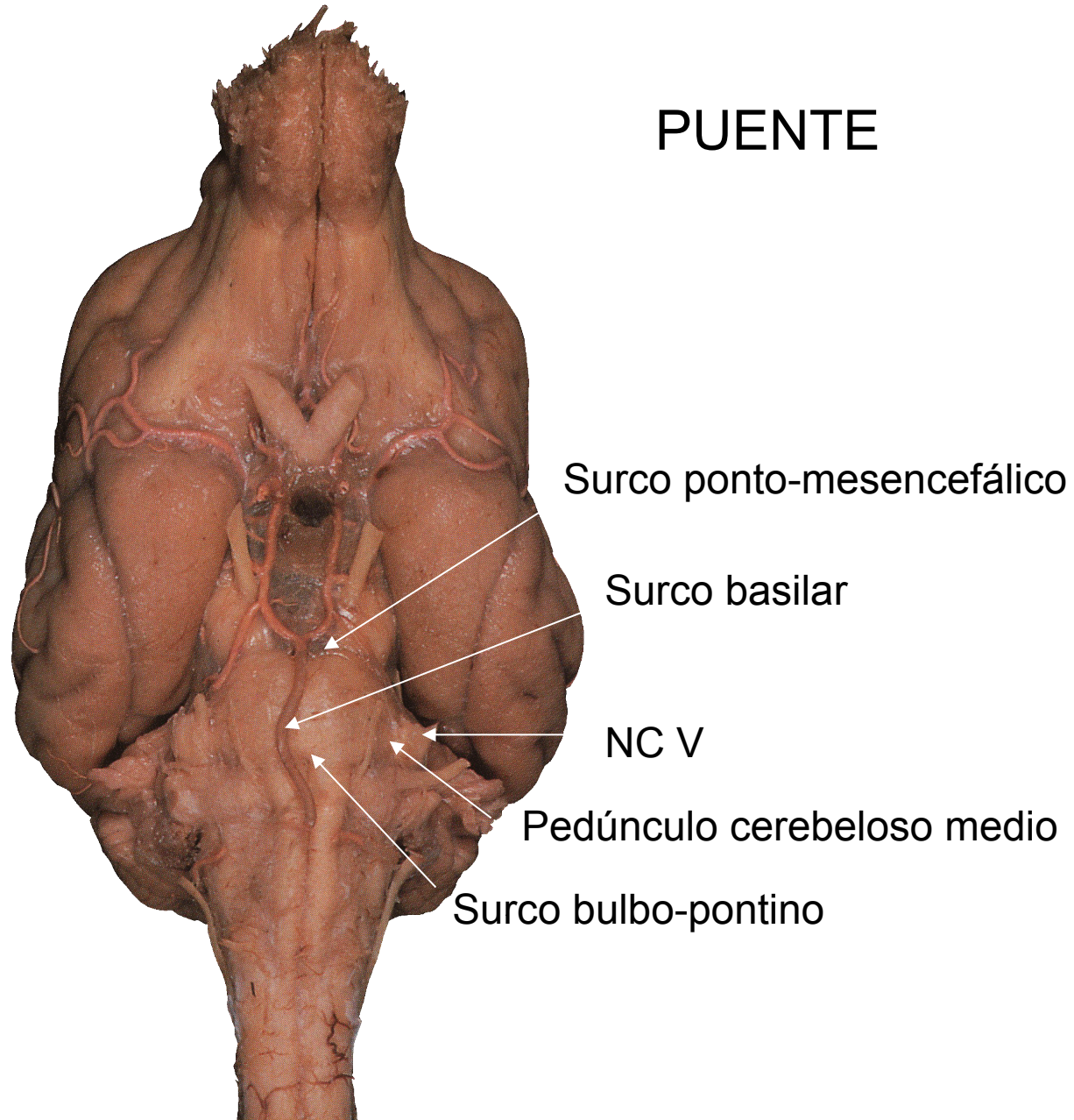
MIELENCÉFALO

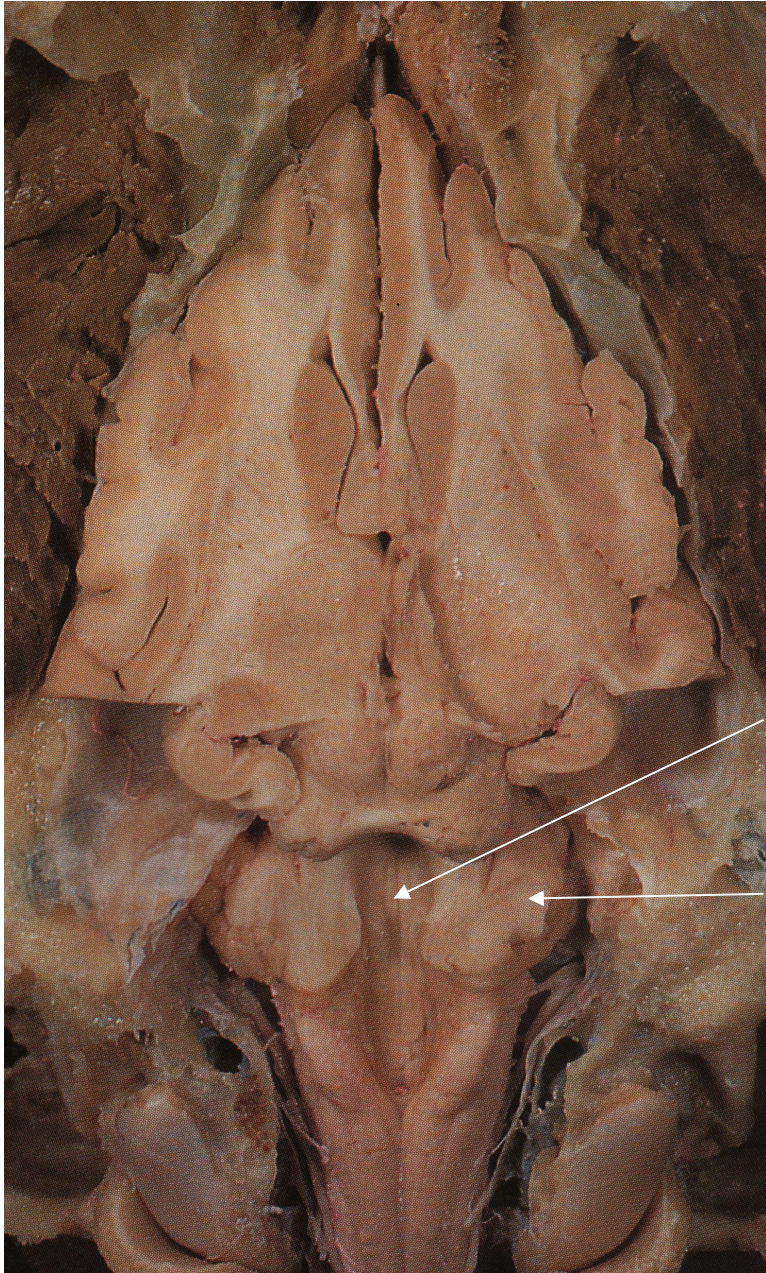


MIELENCÉFALO



PUENTE





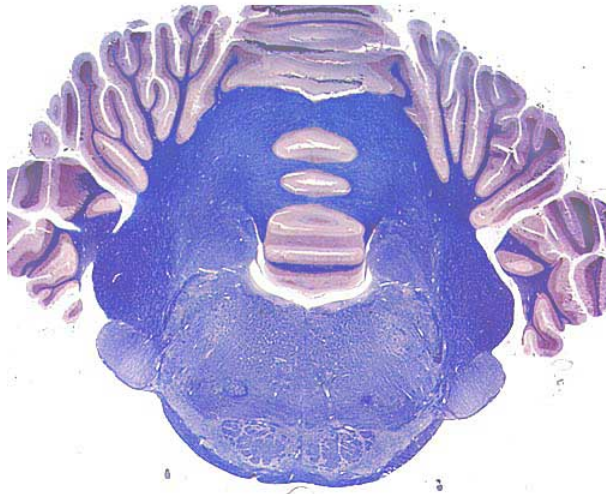
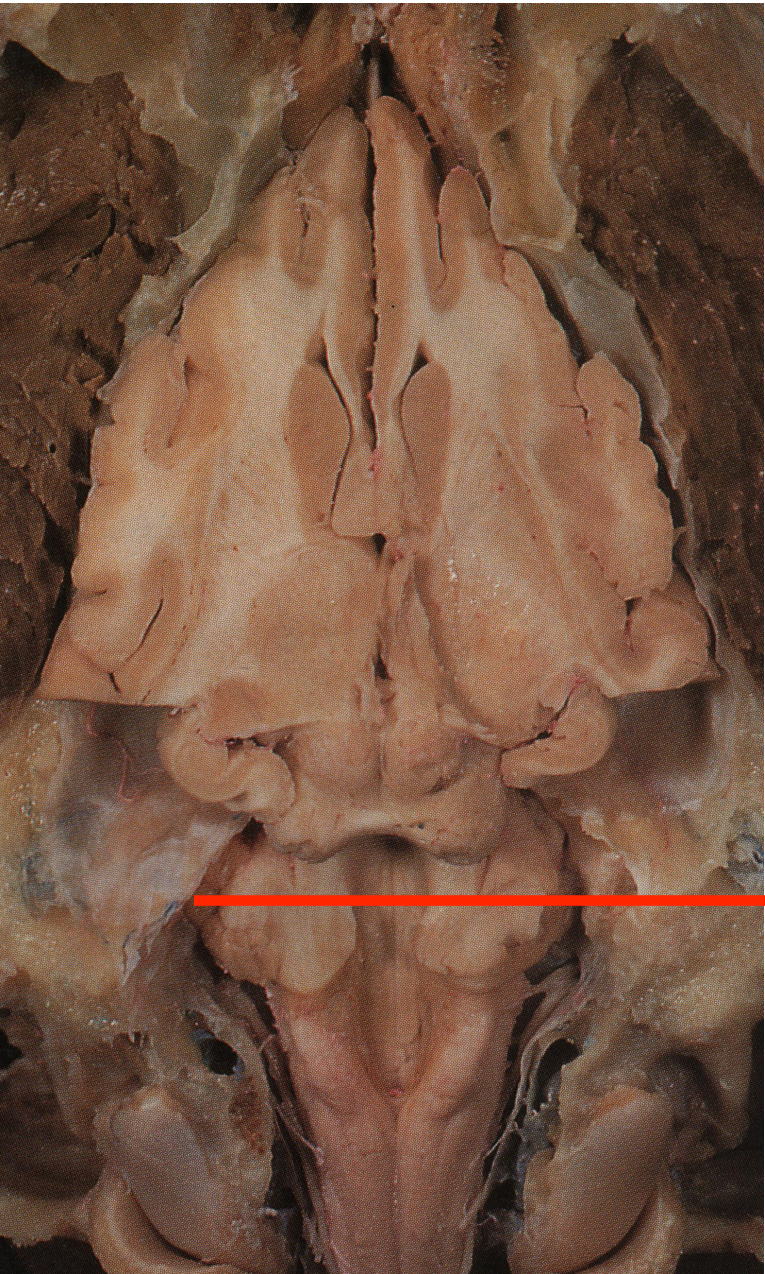
PUENTE

VISTA DORSAL

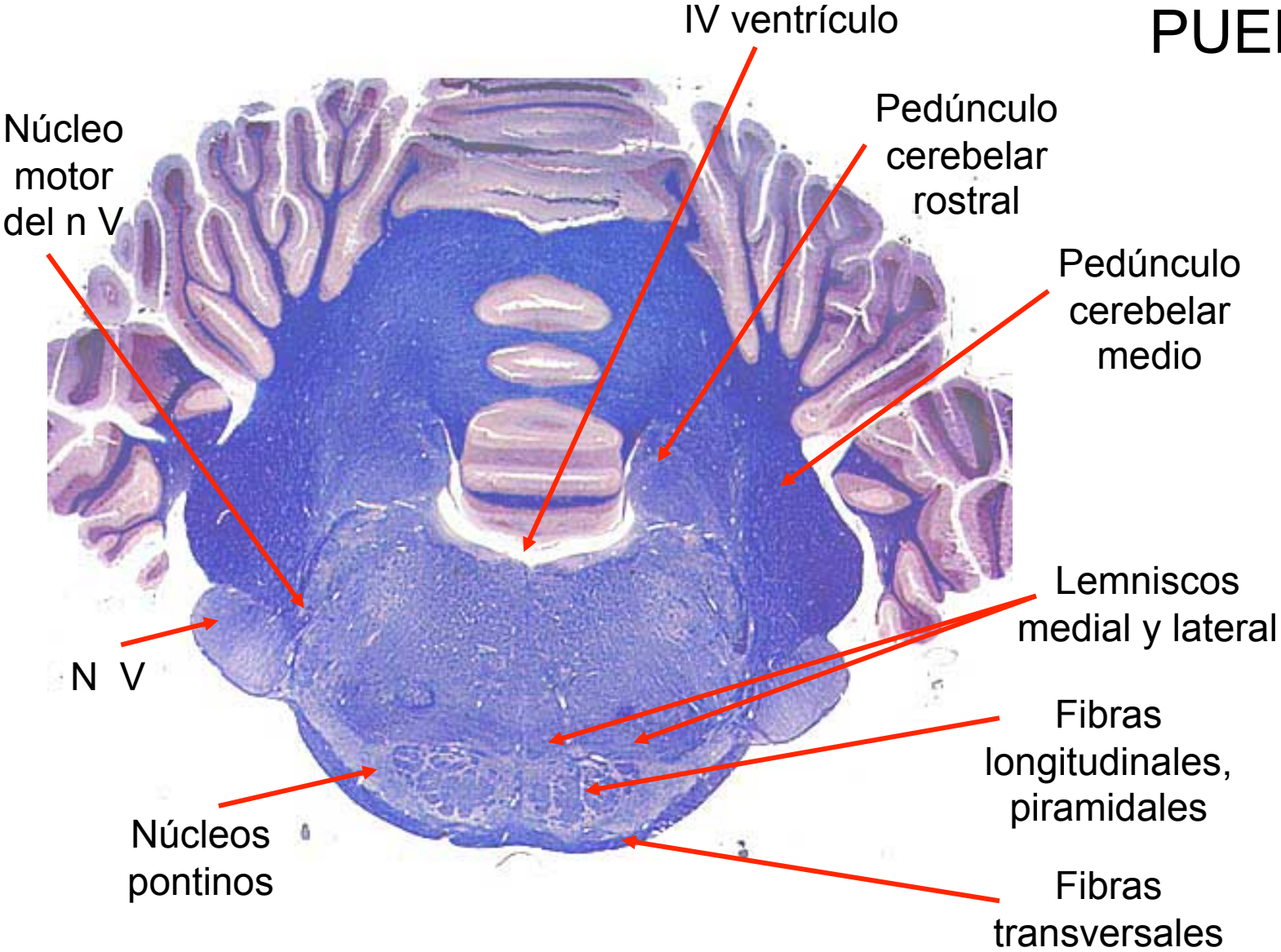
Piso del cuarto ventrículo,
mitad rostral (fosa romboídea)

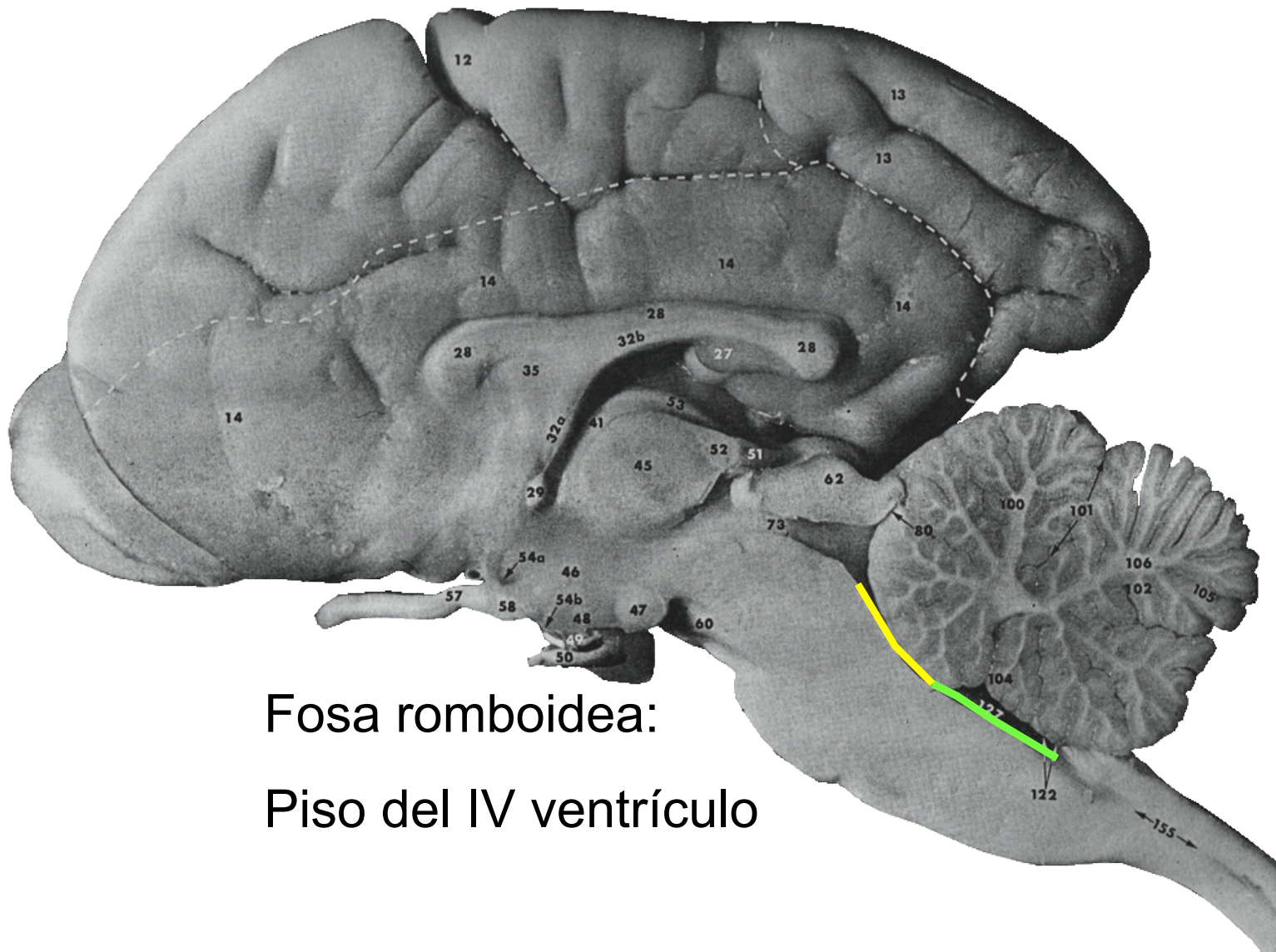
Pedúnculo cerebeloso medio

PUENTE



PUENTE





Fosa romboidea:
Piso del IV ventrículo

MESENCEFALO

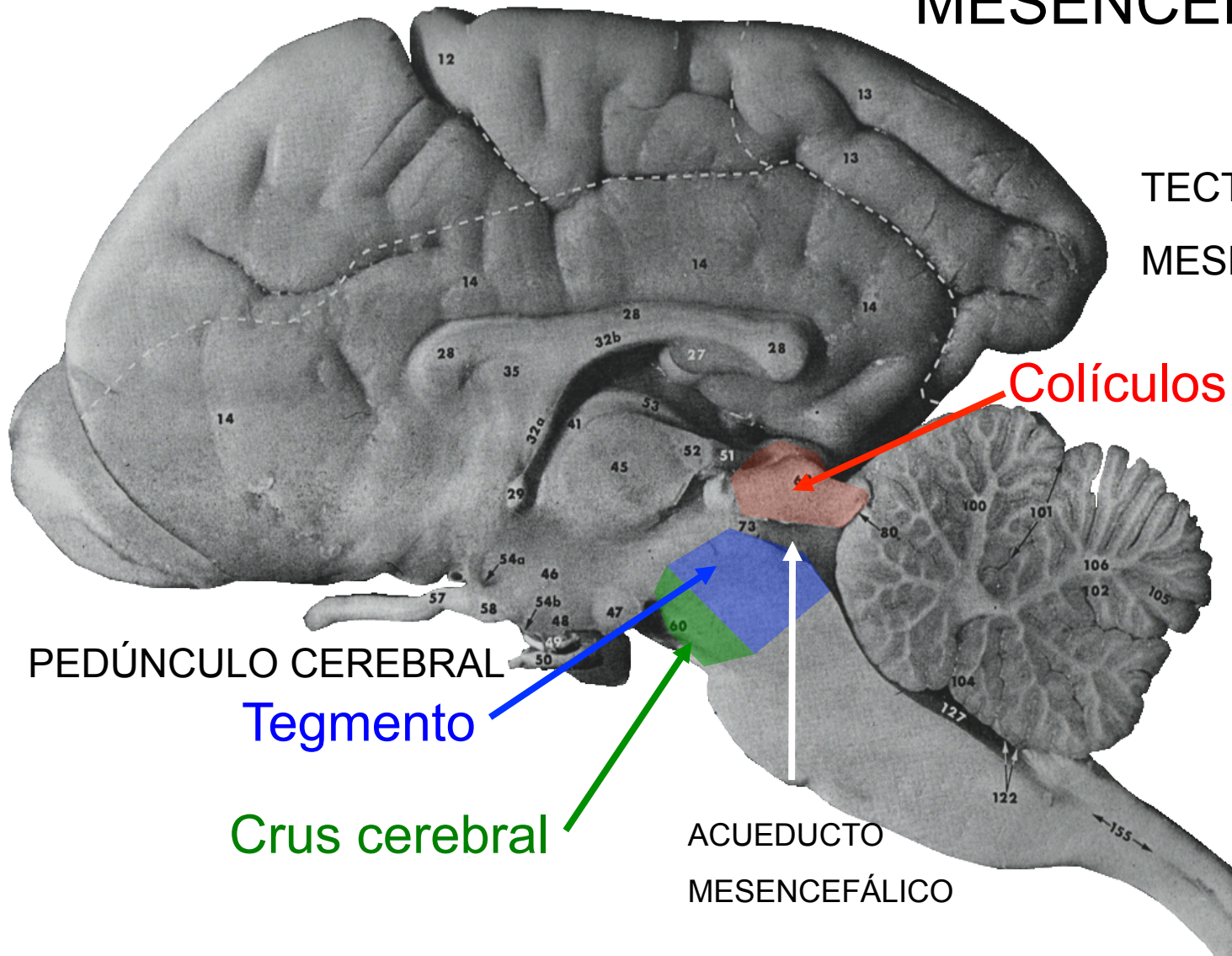
TECTO
MESENCEFÁLICO

Colículos

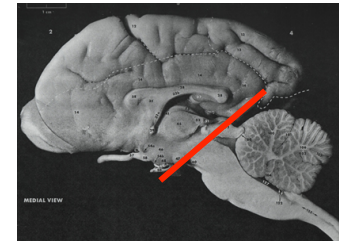
PEDÚNCULO CEREBRAL
Tegmento

Crus cerebral

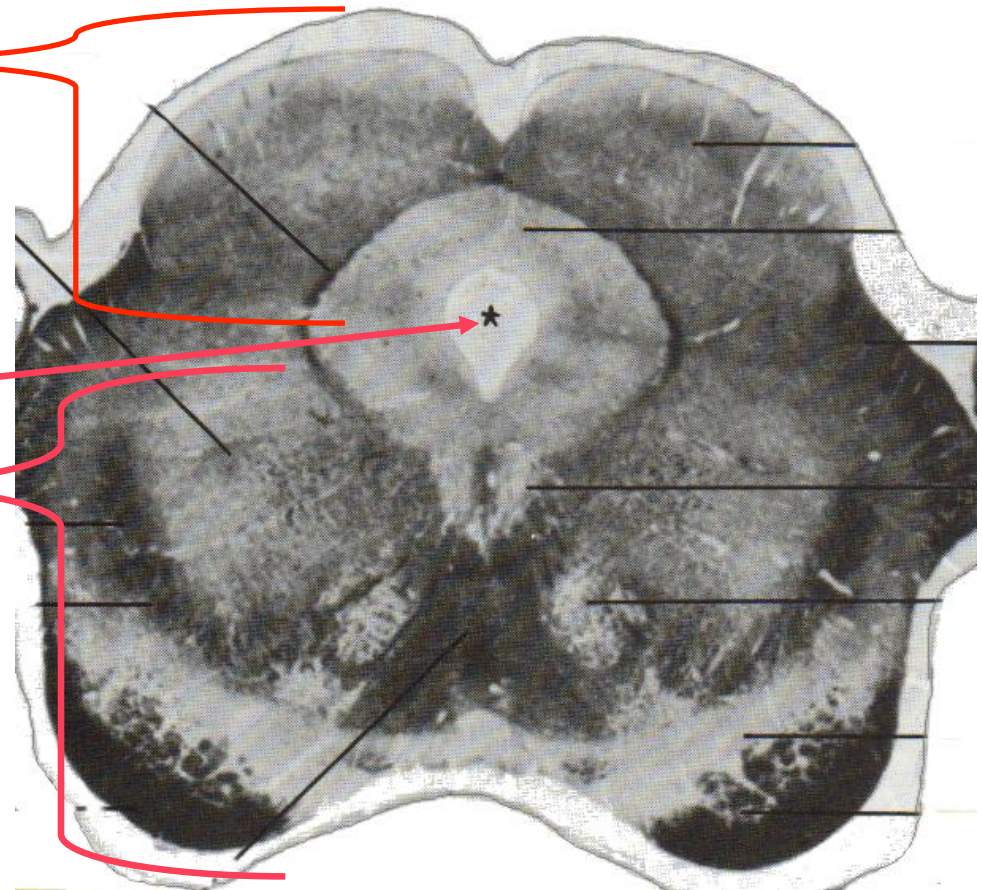
ACUEDUCTO
MESENCEFÁLICO



Mesencéfalo, “cerebro medio”



- Tecto
- Colículos rostrales -
- Colículos caudales -
- Pedúnculos cerebelosos rostrales
- **Acueducto mesencefálico**
- **Pedúnculo mesencefálico**
- Tegmento:
 - núcleo rojo
 - sustancia negra
- Crus cerebral , pie:
- fosa interpeduncular



MESENCEFALO

TECTO

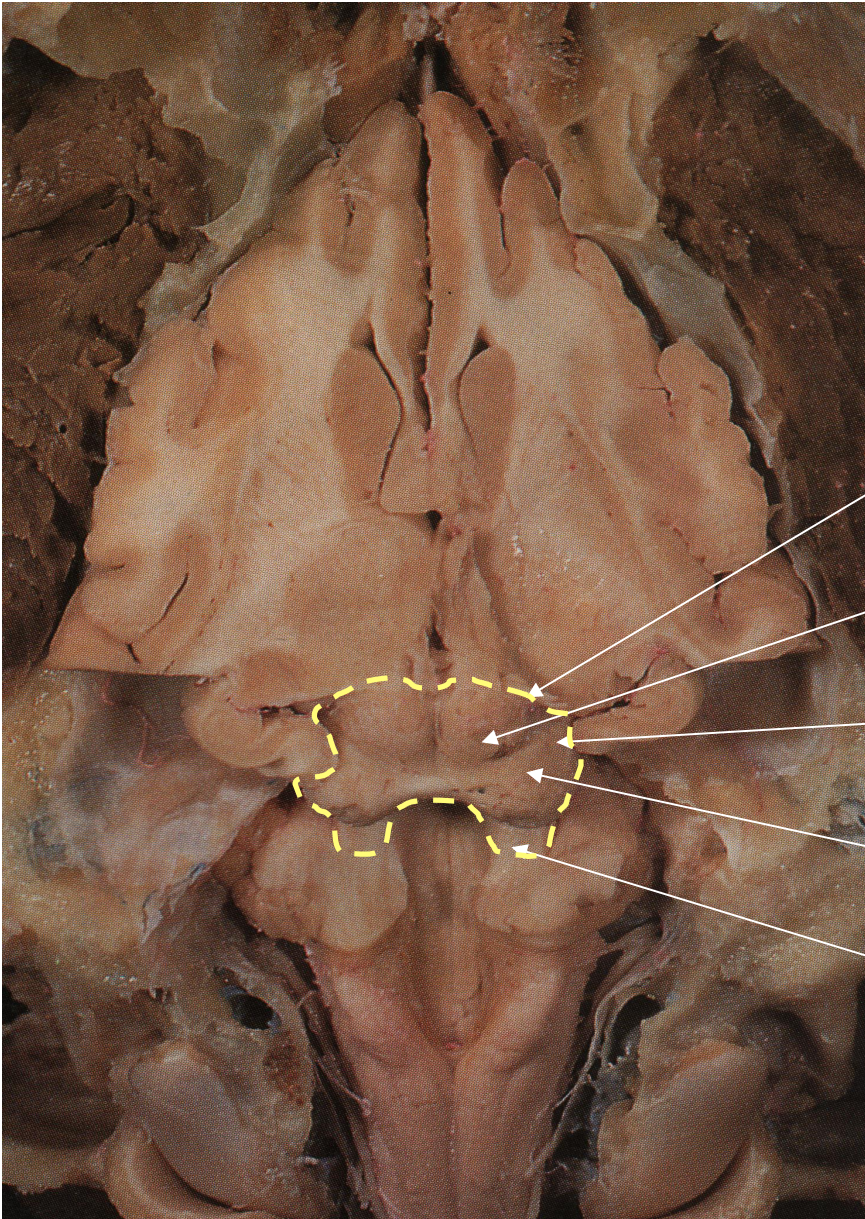
Brazo de los colículos rostrales

Colículos rostrales

Brazo de los colículos caudales

Colículos caudales

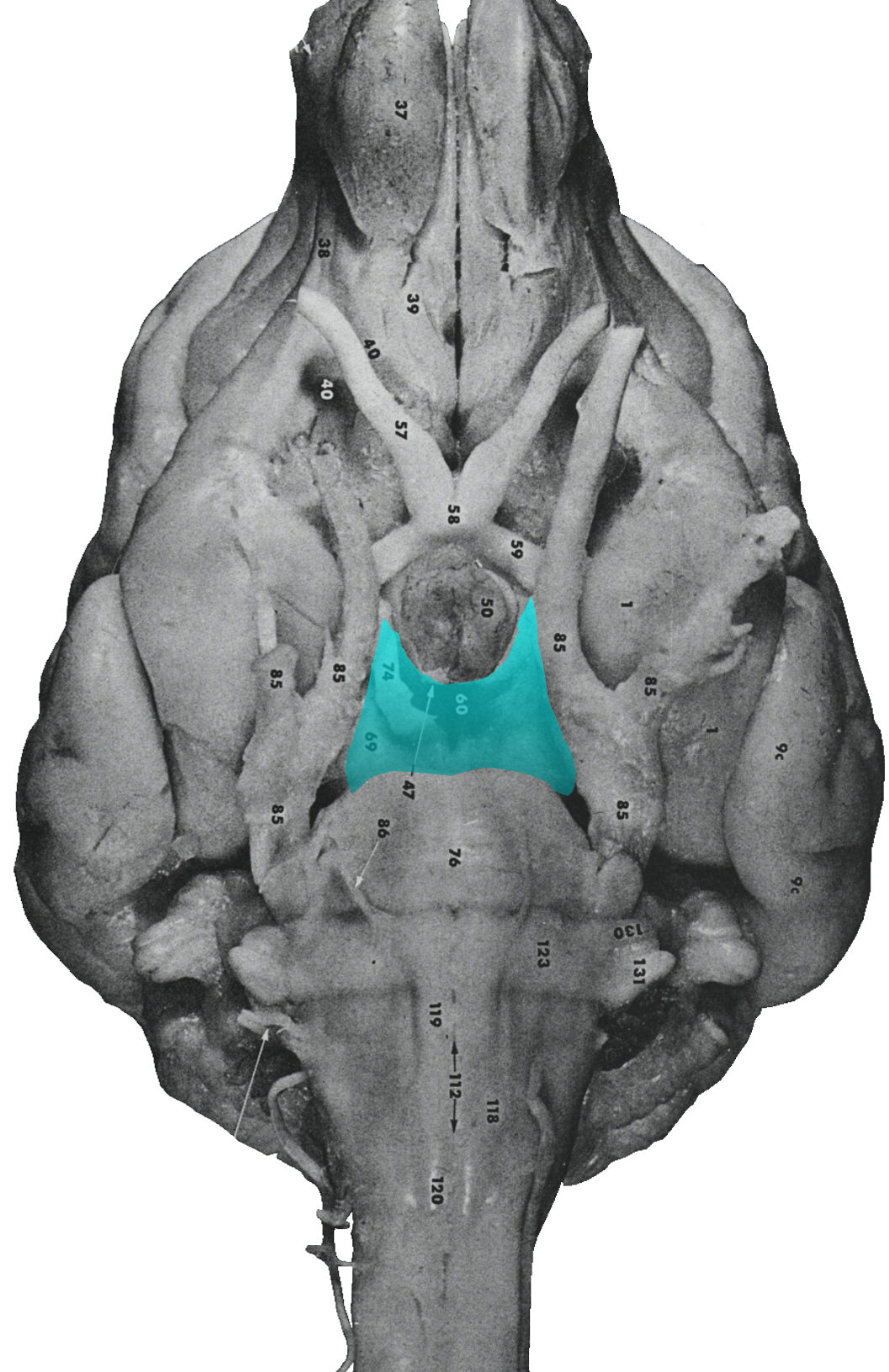
Pedúnculo
cerebeloso rostral



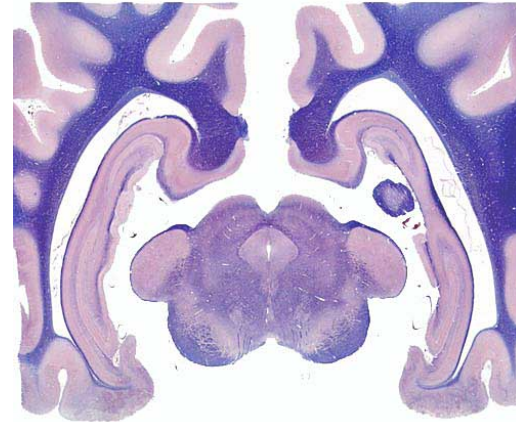
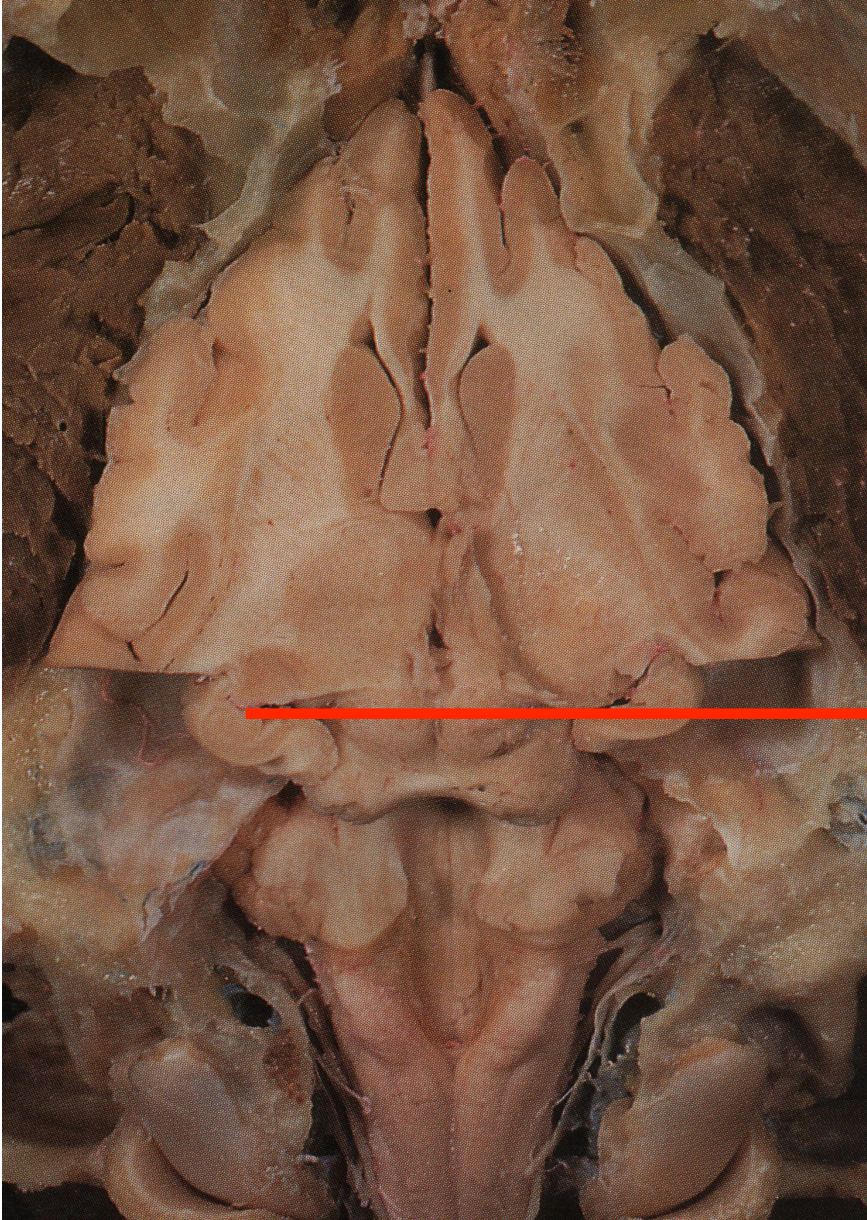
MESENCEFALO

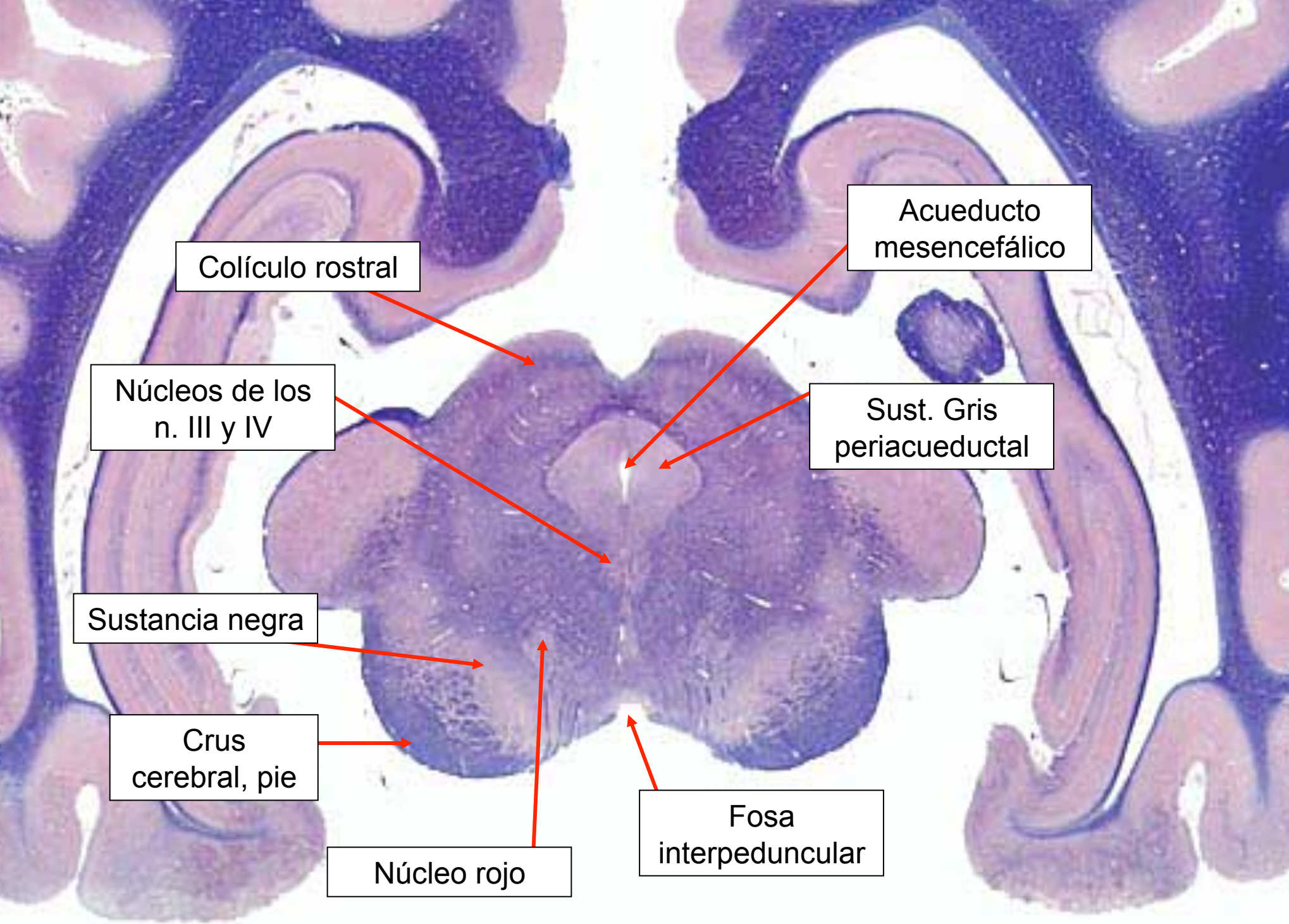
Vista ventral

PEDUNCULO



MESENCEFALO





Colículo rostral

Acueducto mesencefálico

Núcleos de los n. III y IV

Sust. Gris periacueductal

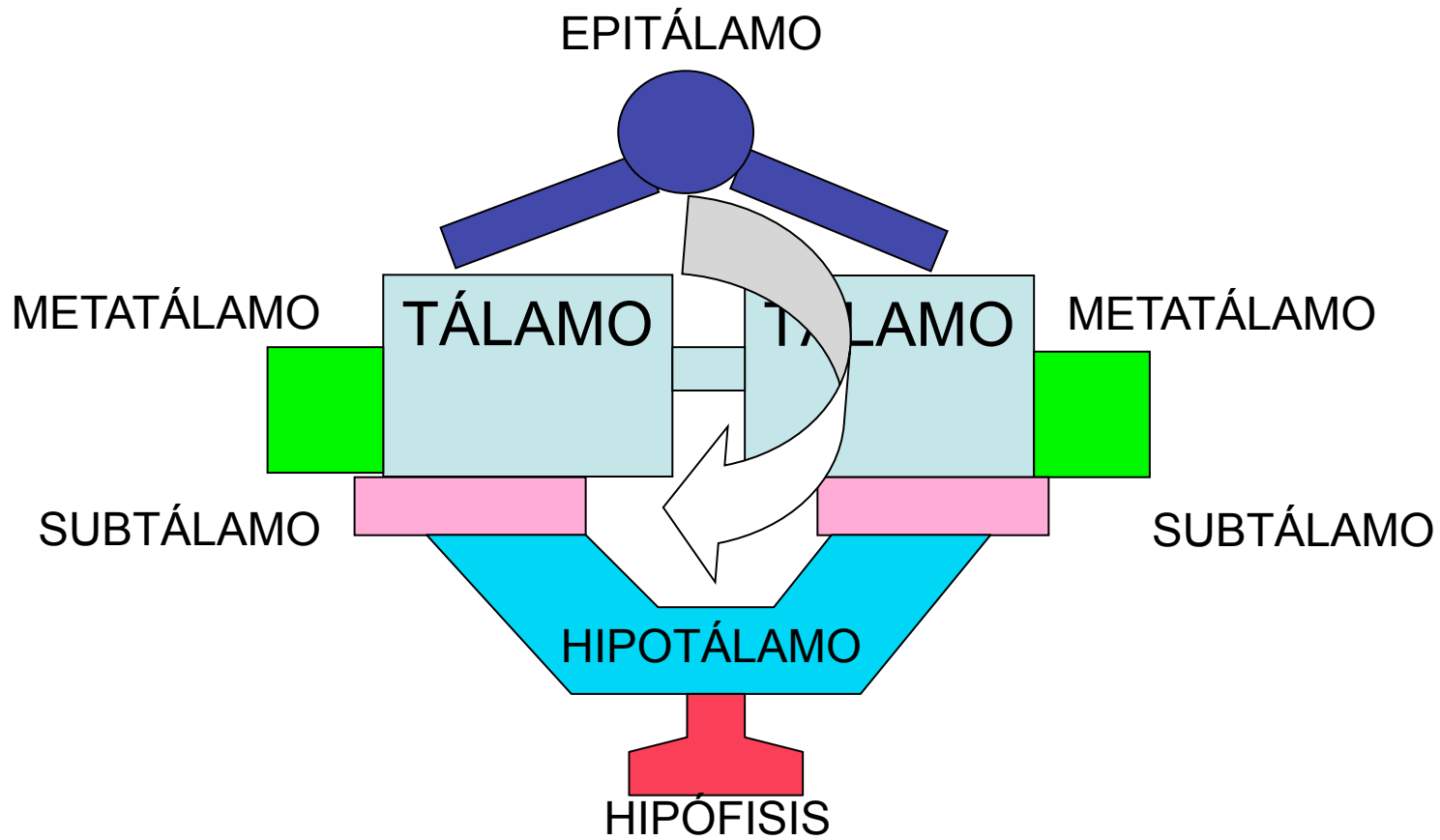
Sustancia negra

Crus cerebral, pie

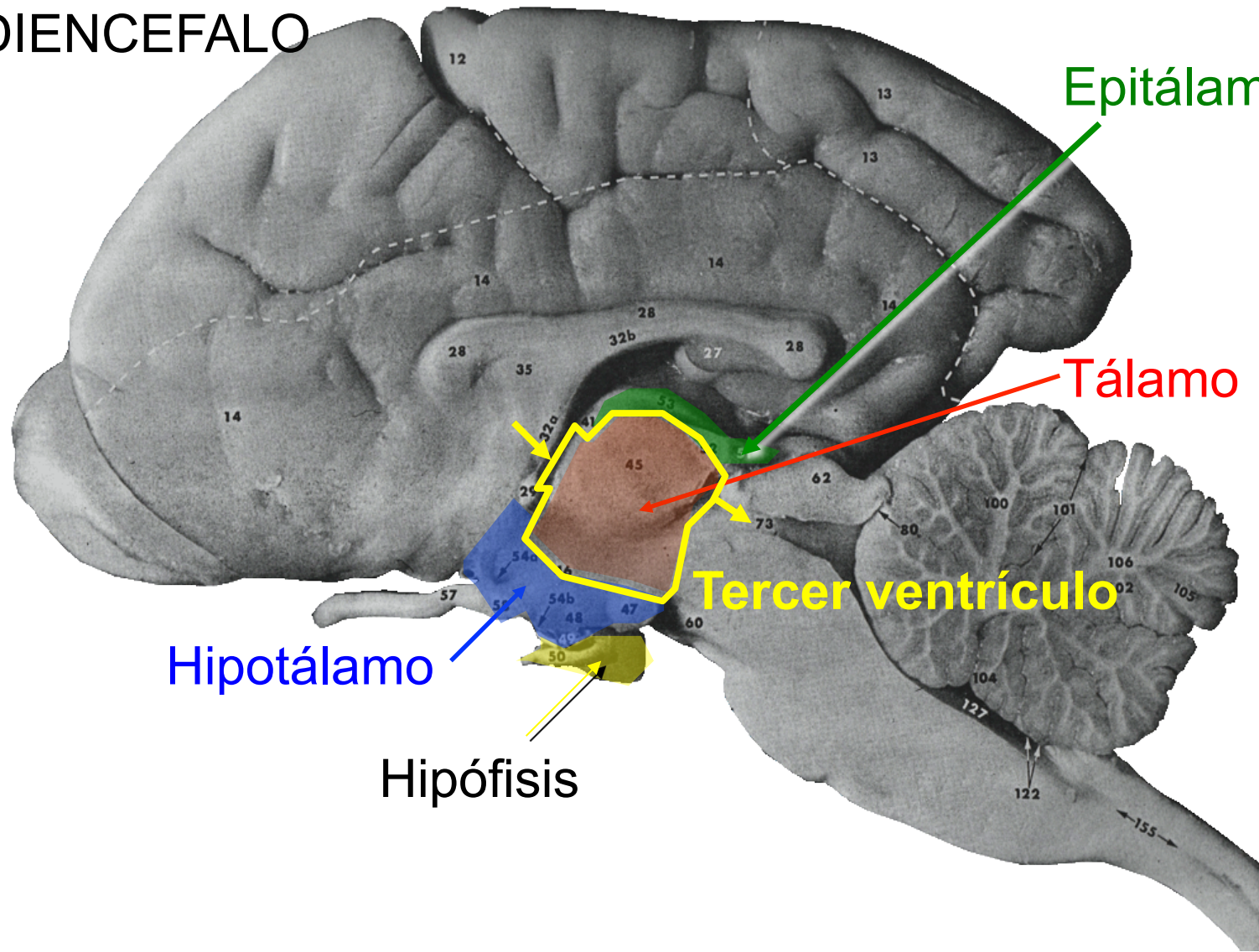
Núcleo rojo

Fosa interpeduncular

Diencéfalo



DIENCEFALO



Epitálamo

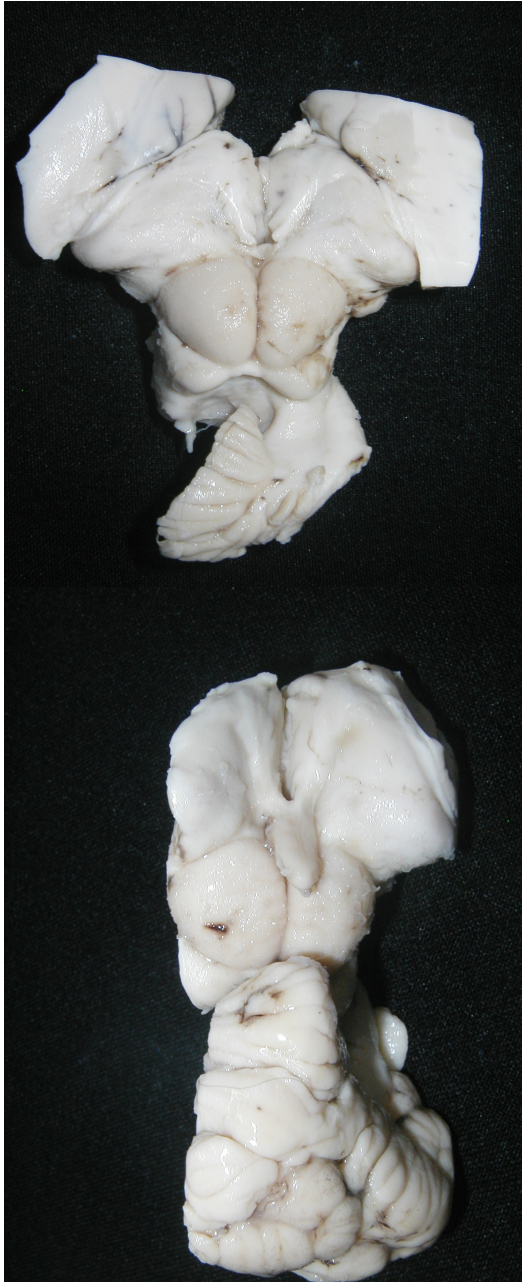
Tálamo

Tercer ventrículo

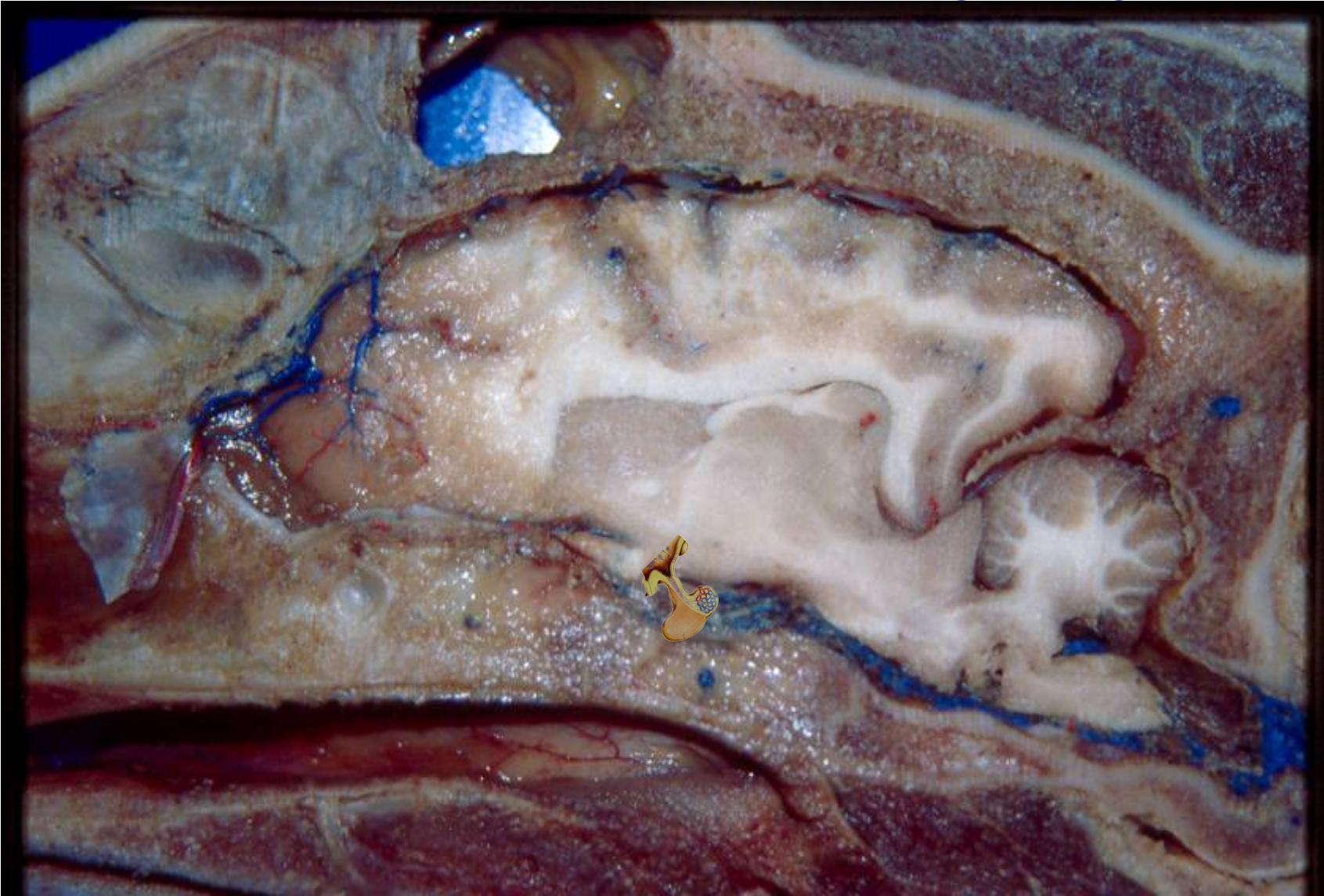
Hipotálamo

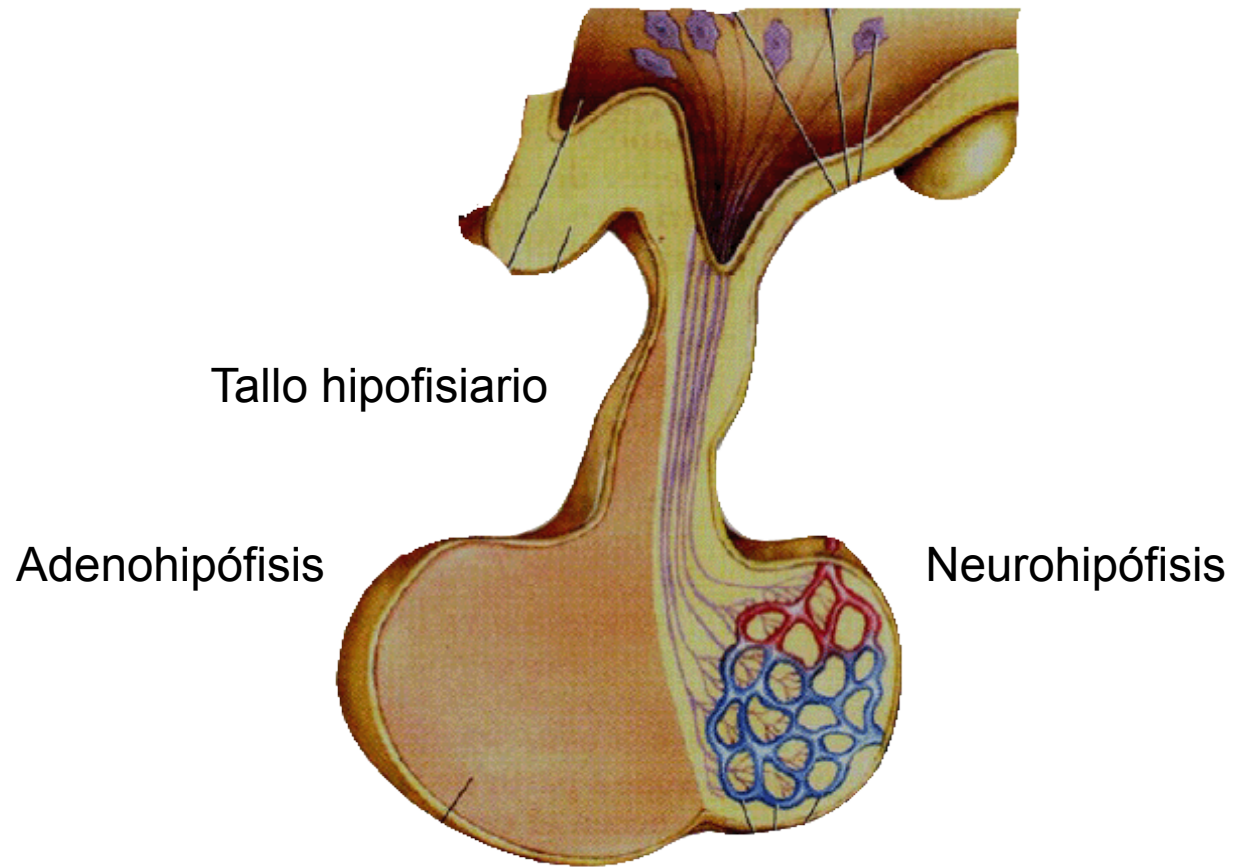
Hipófisis

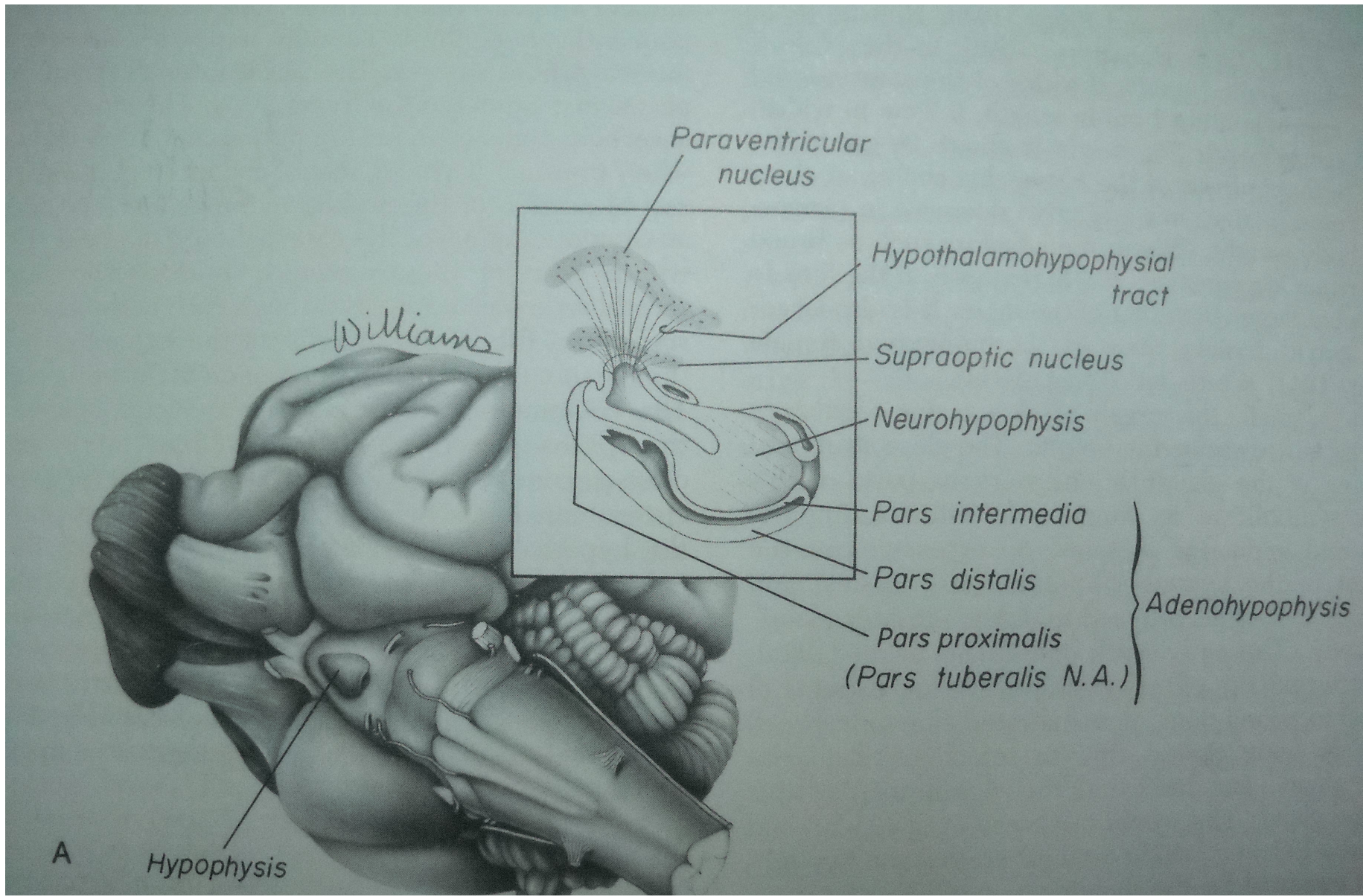
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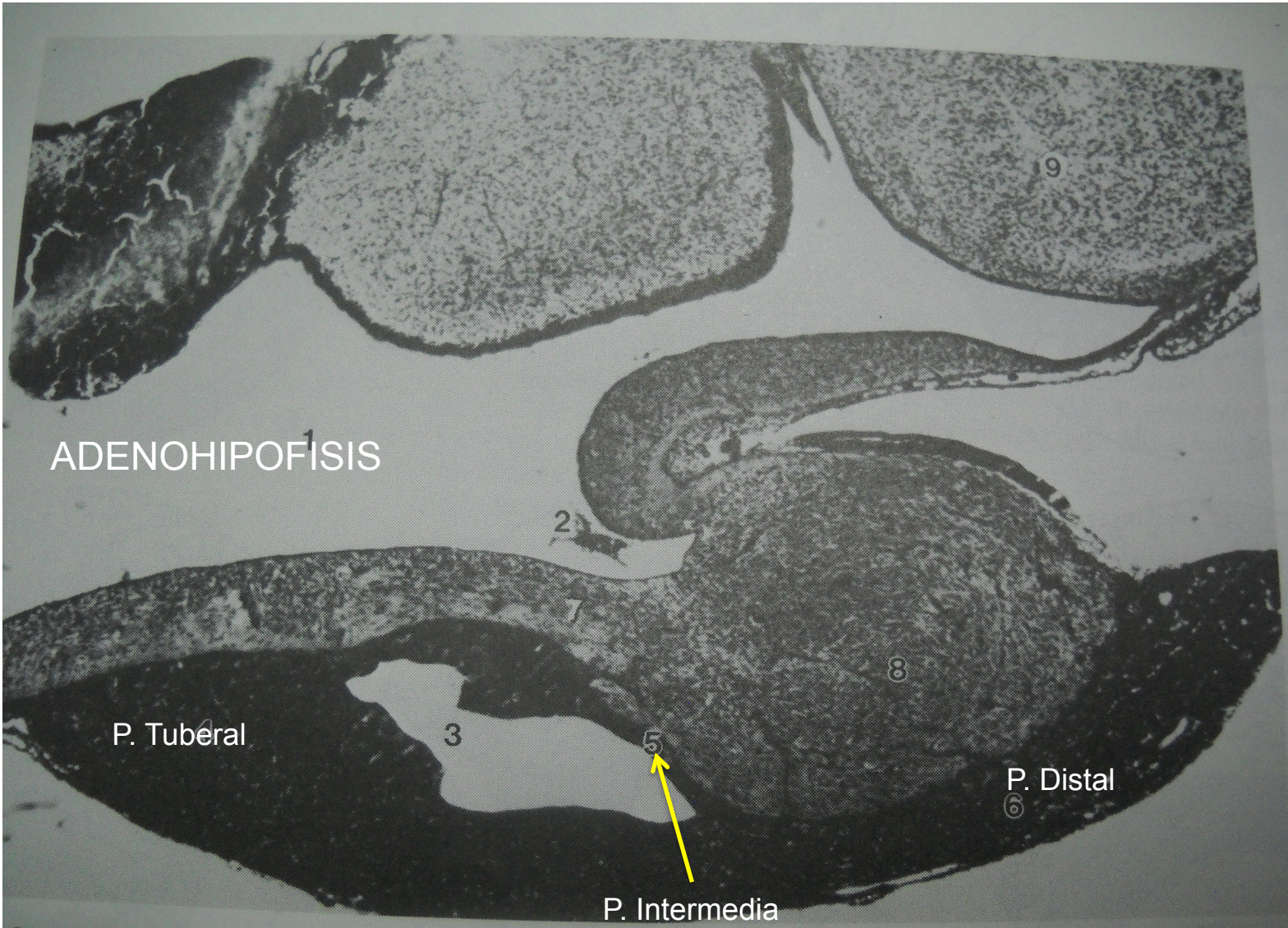


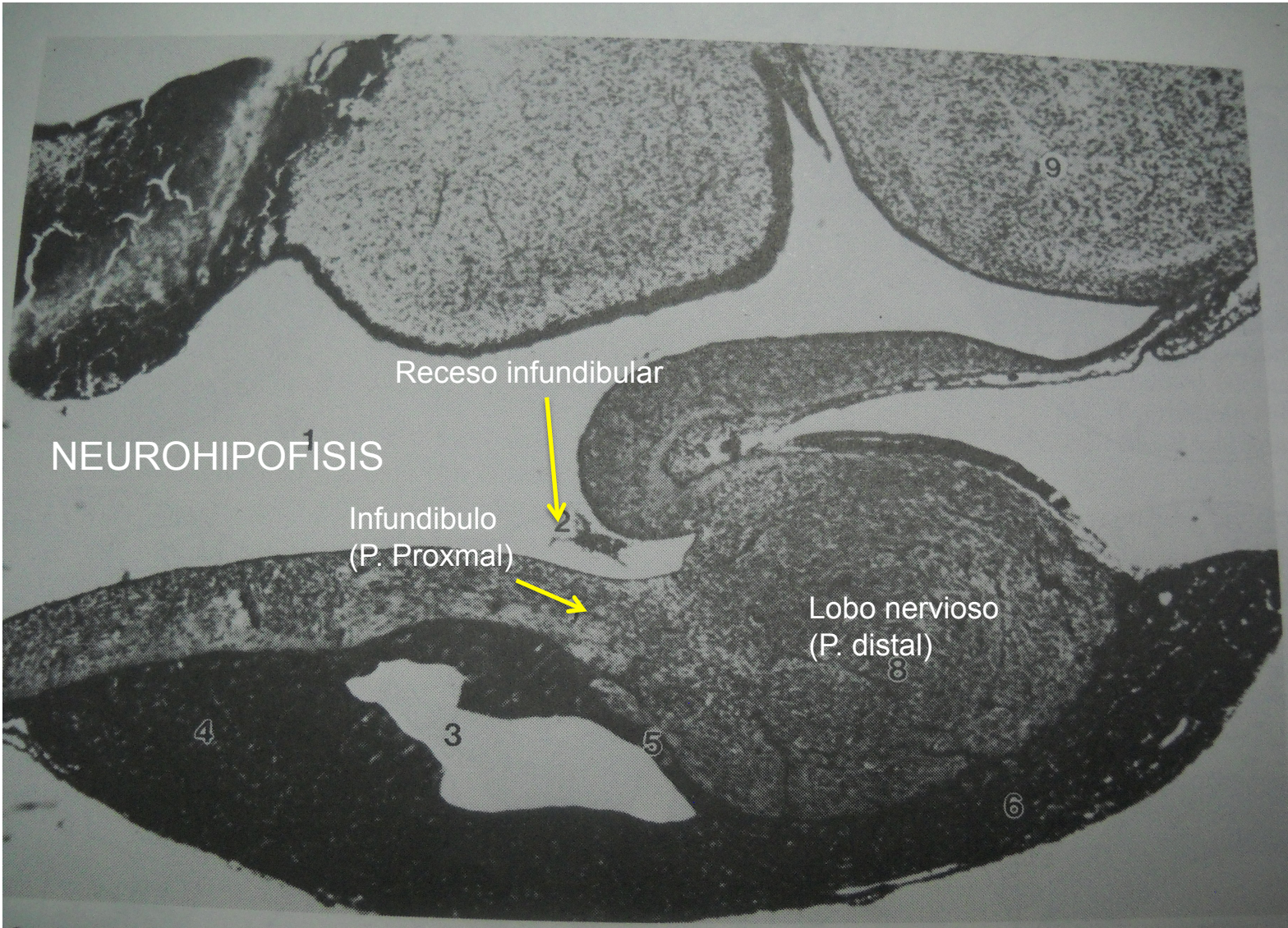
DIENCEFALO



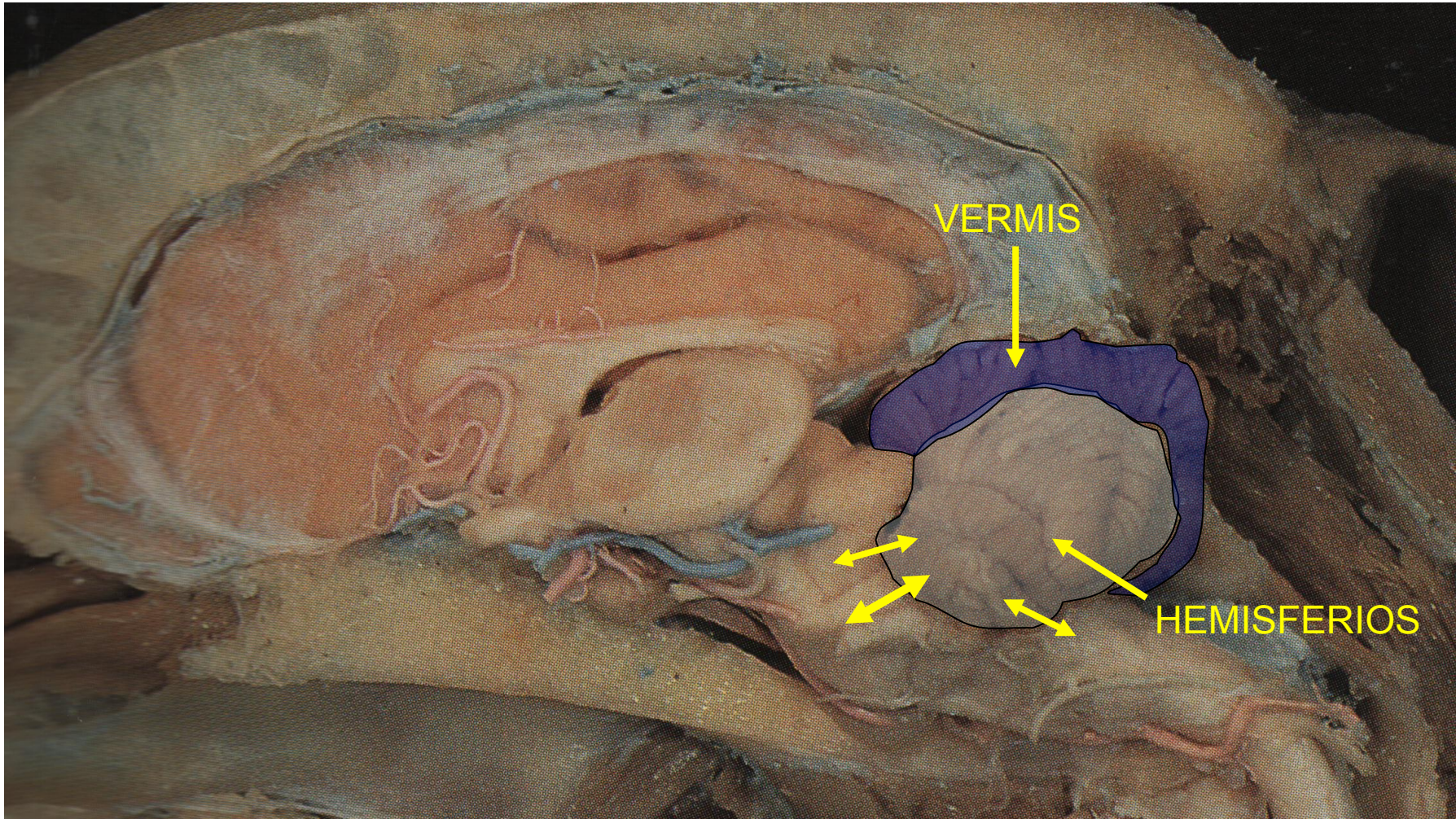




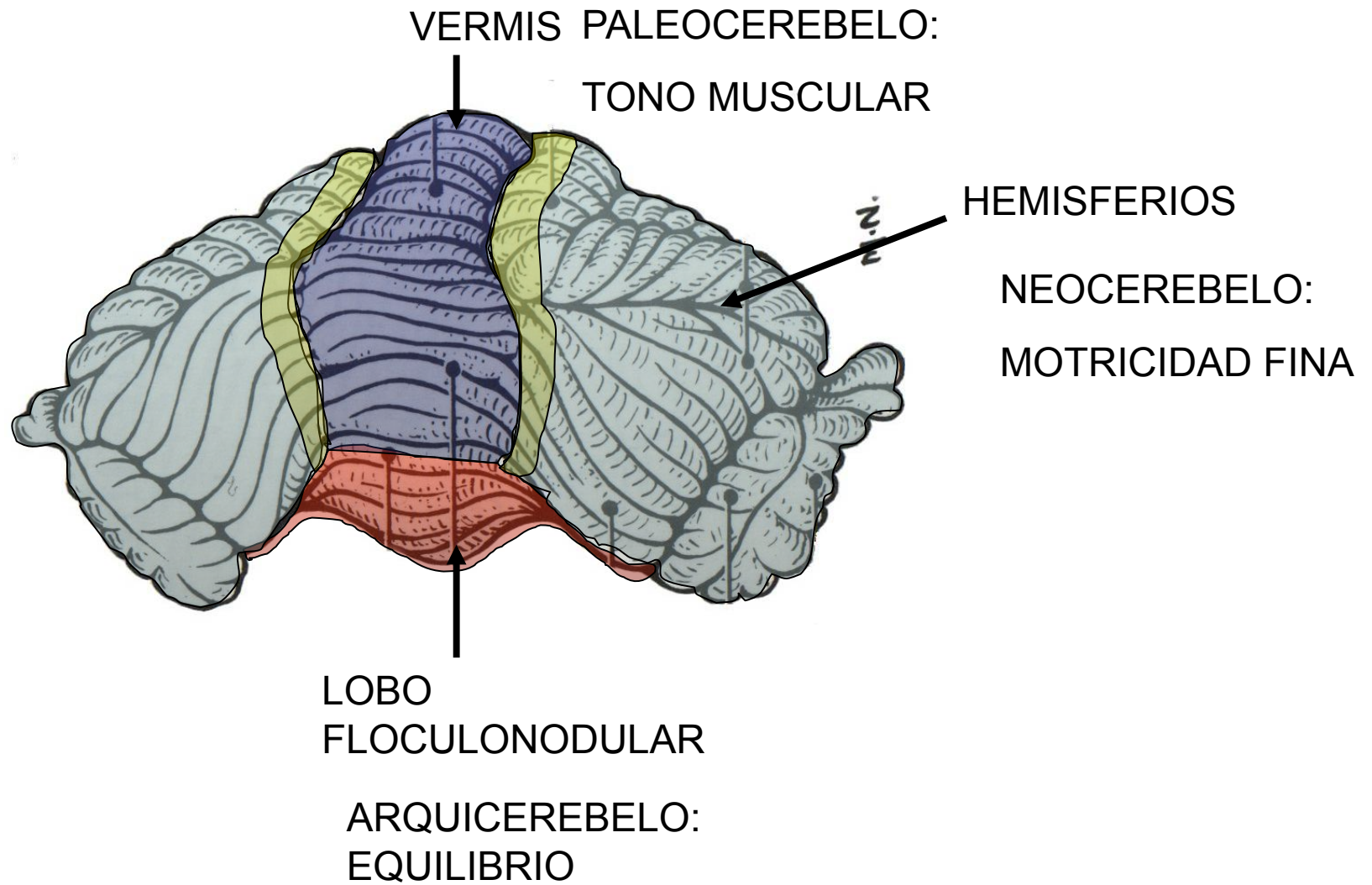




Cerebello

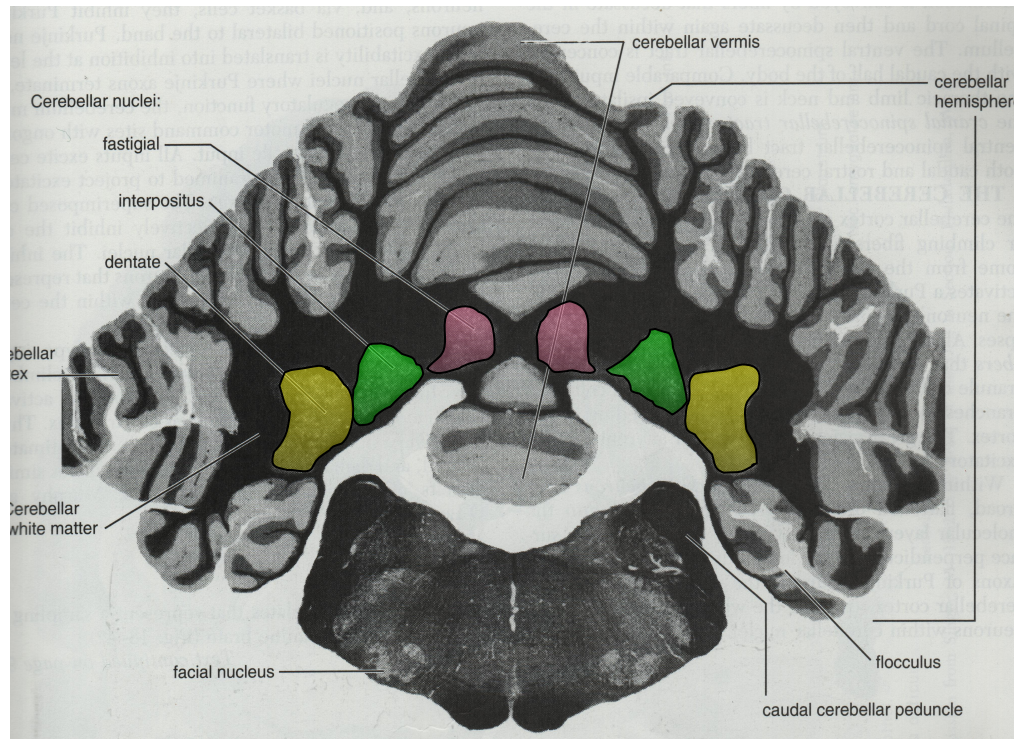


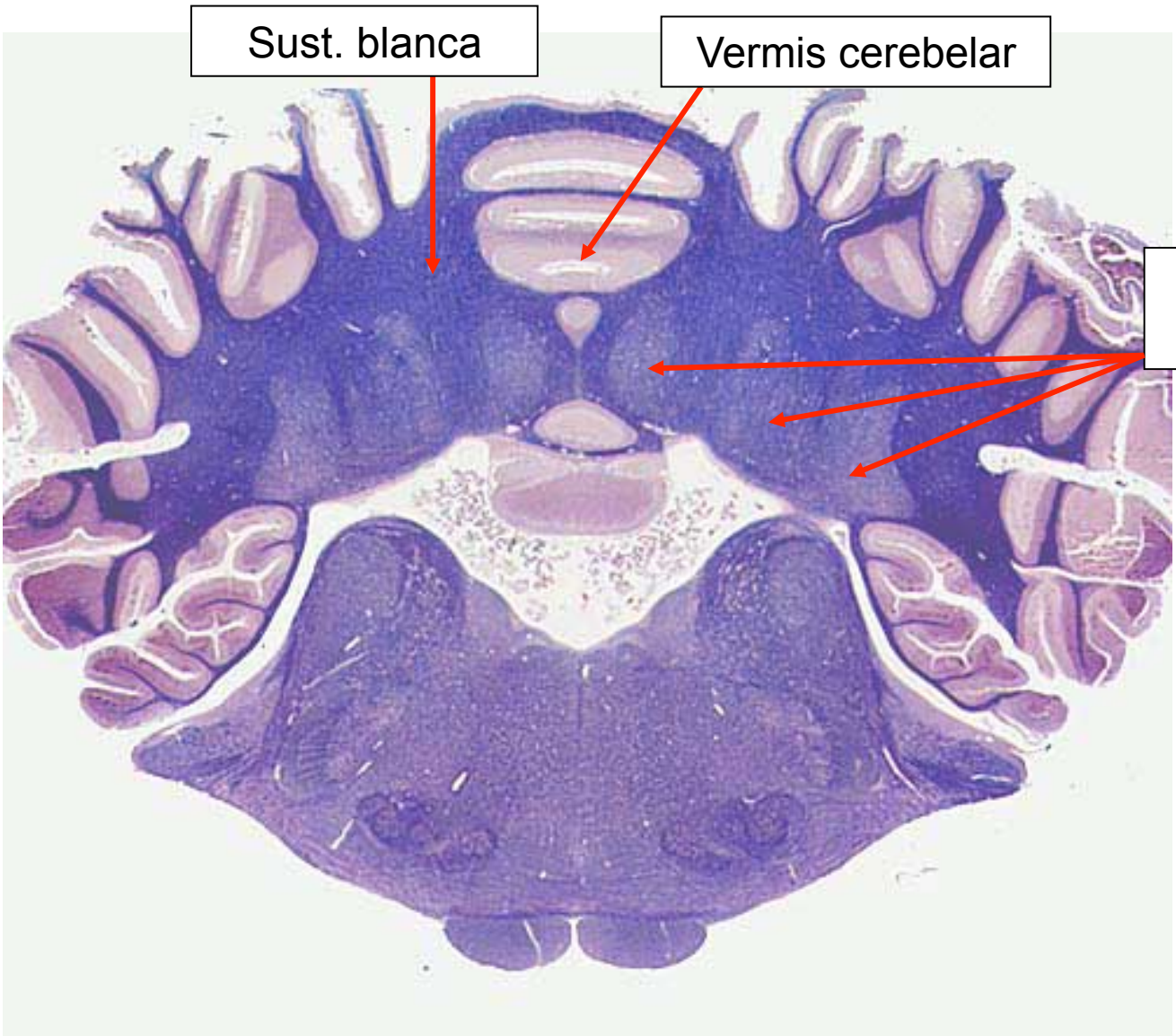
Cerebelo



Cerebelo

- Corteza: 3 estratos celulares
- Médula: Fibras (árbol vital) , núcleos

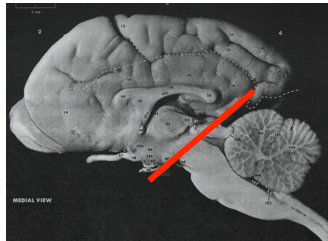




Sust. blanca

Vermis cerebelar

Núcleos cerebelares



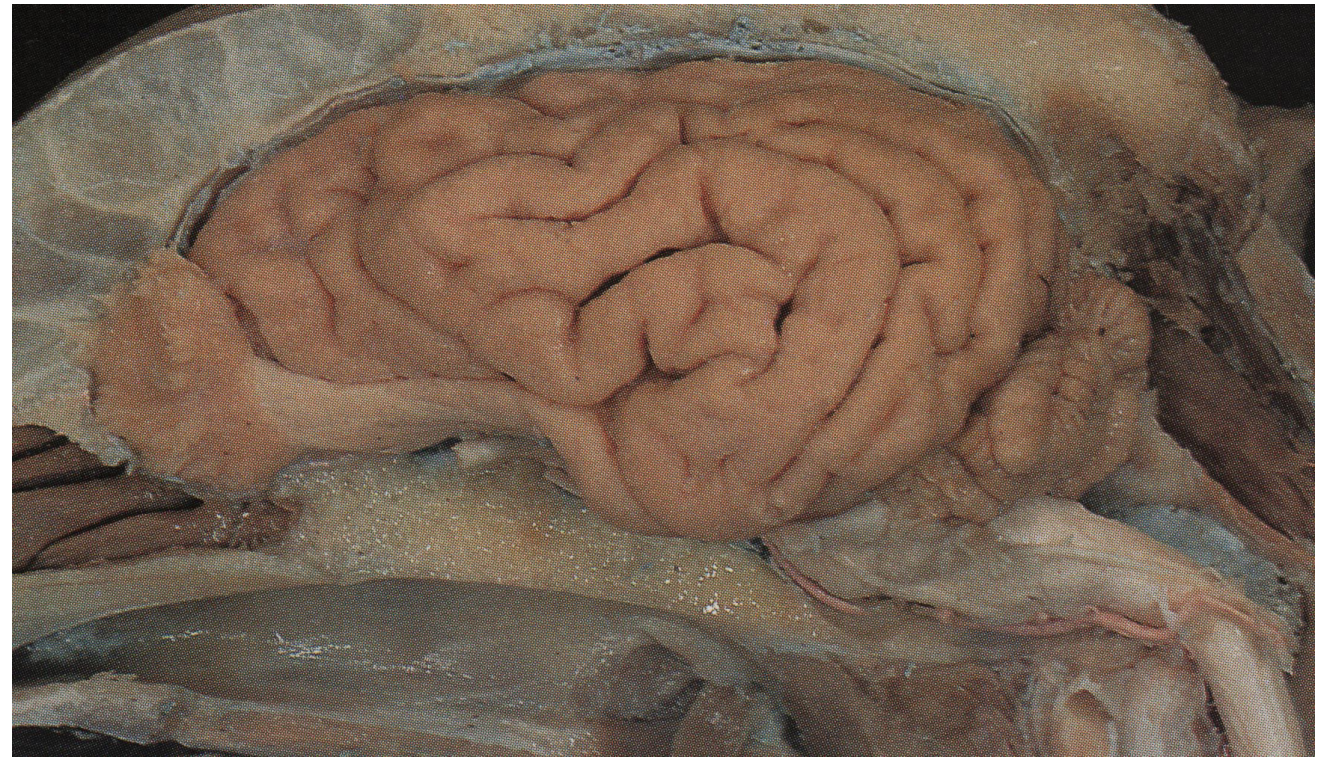
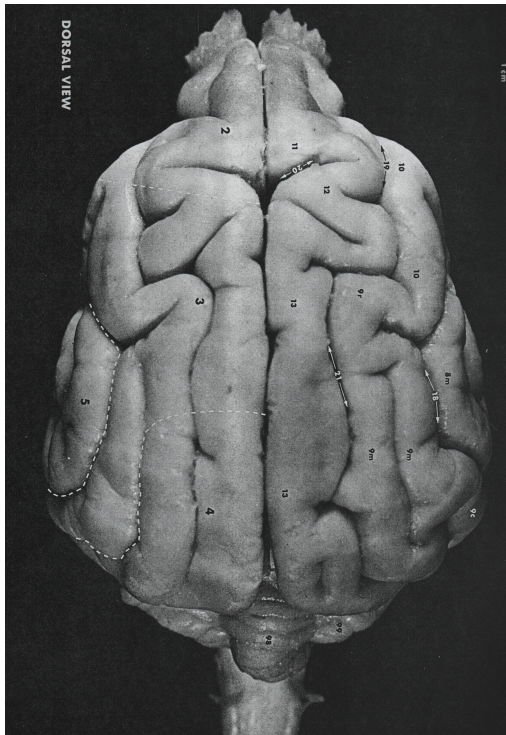
Telencéfalo Cerebro

Hemisferios

I- Fibras

II- Cuerpo estriado

III- Corteza

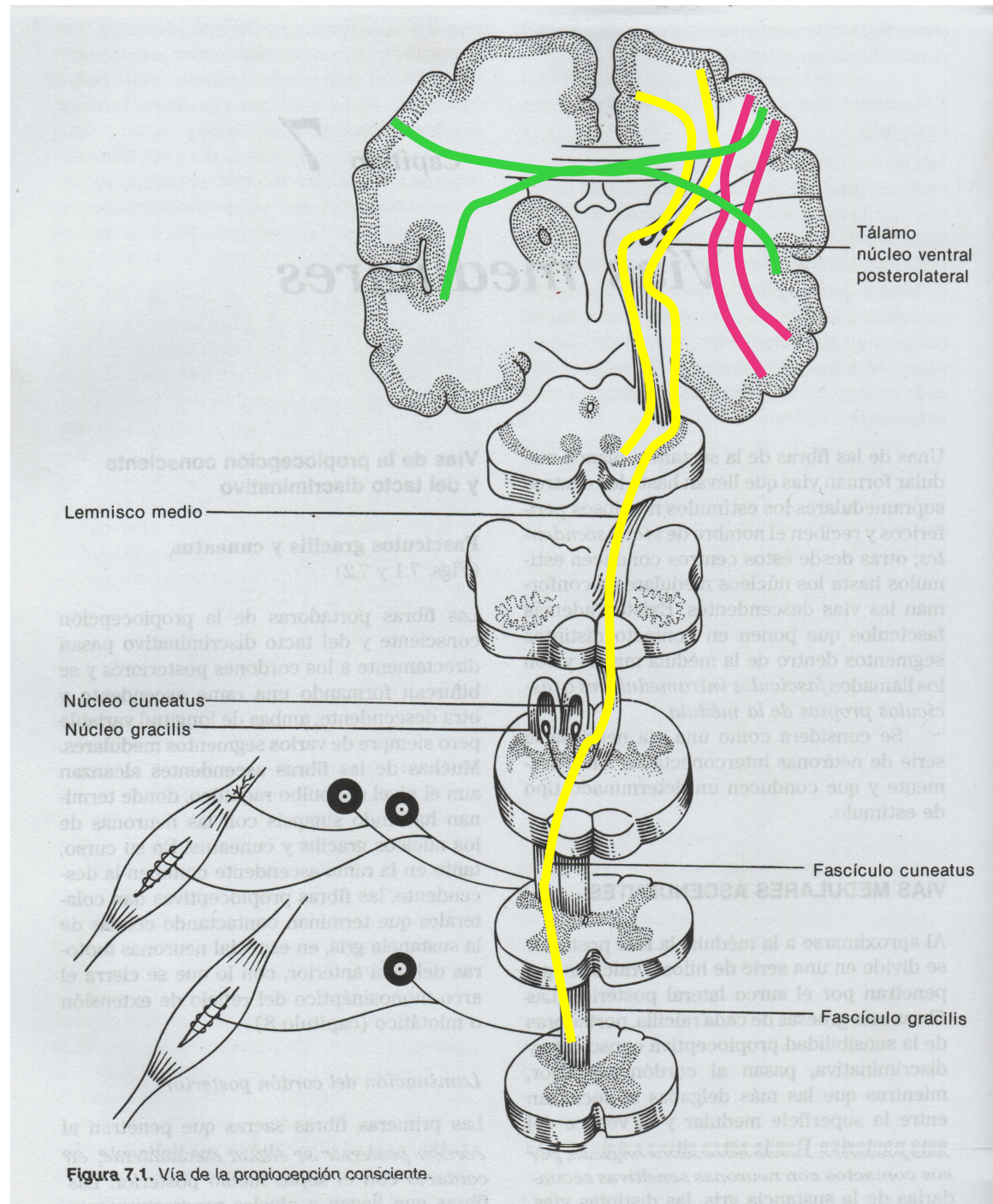


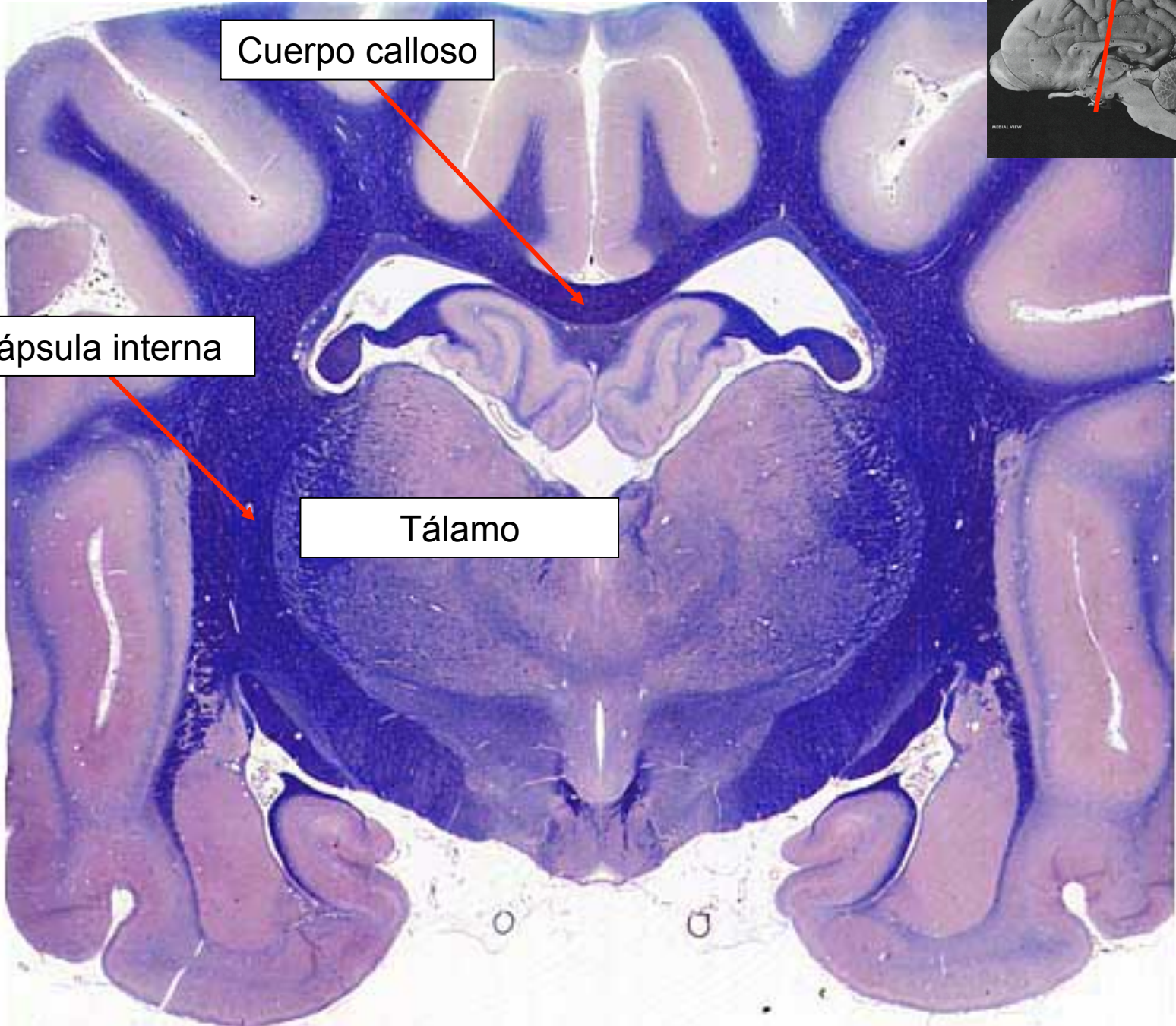
Telencéfalo

Cerebro

I- Fibras

- Asociación
- Proyección
- Comisurales

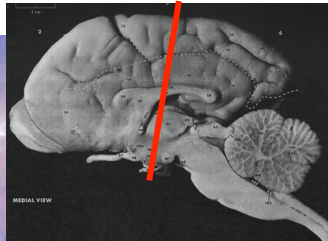


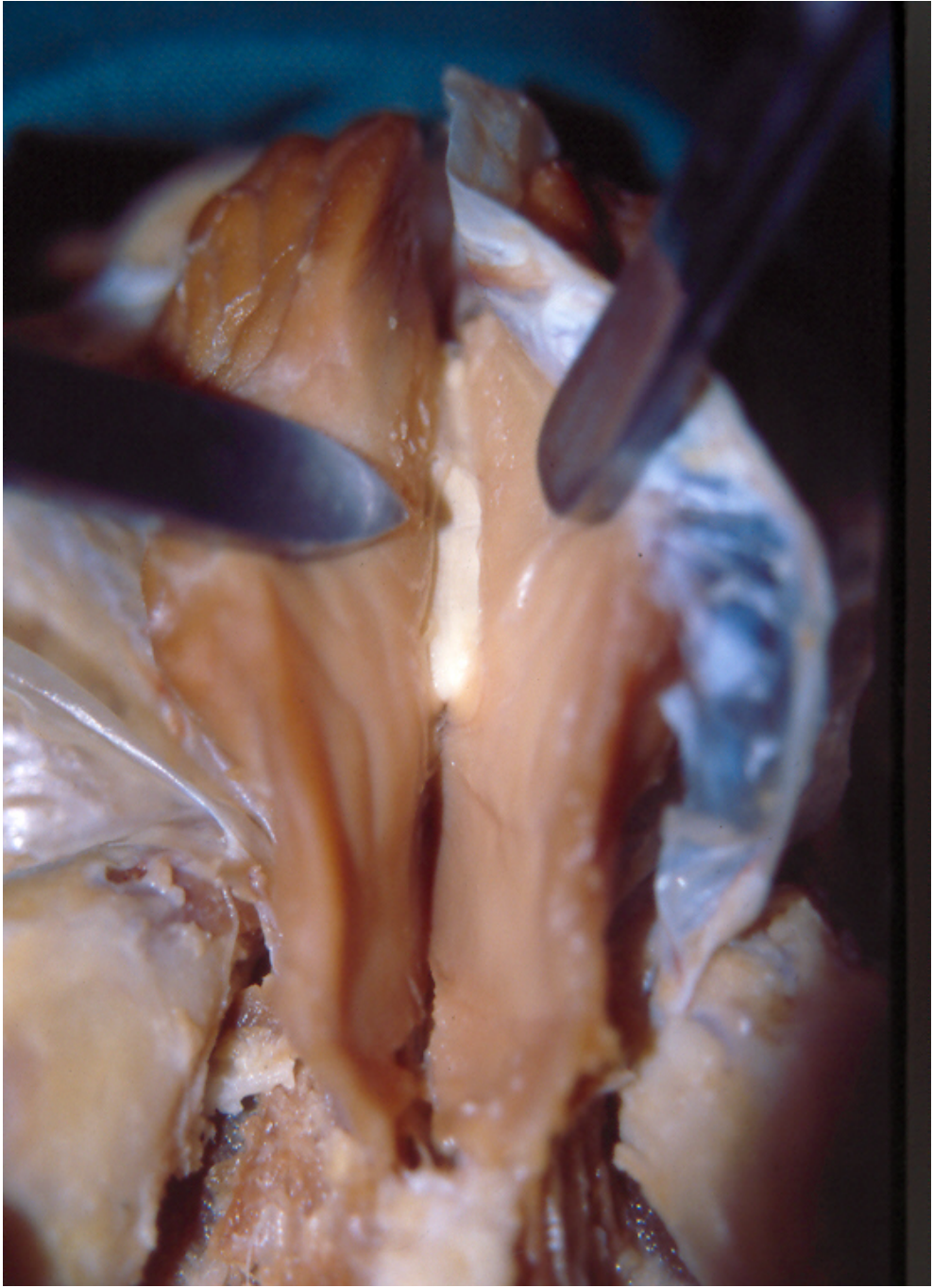


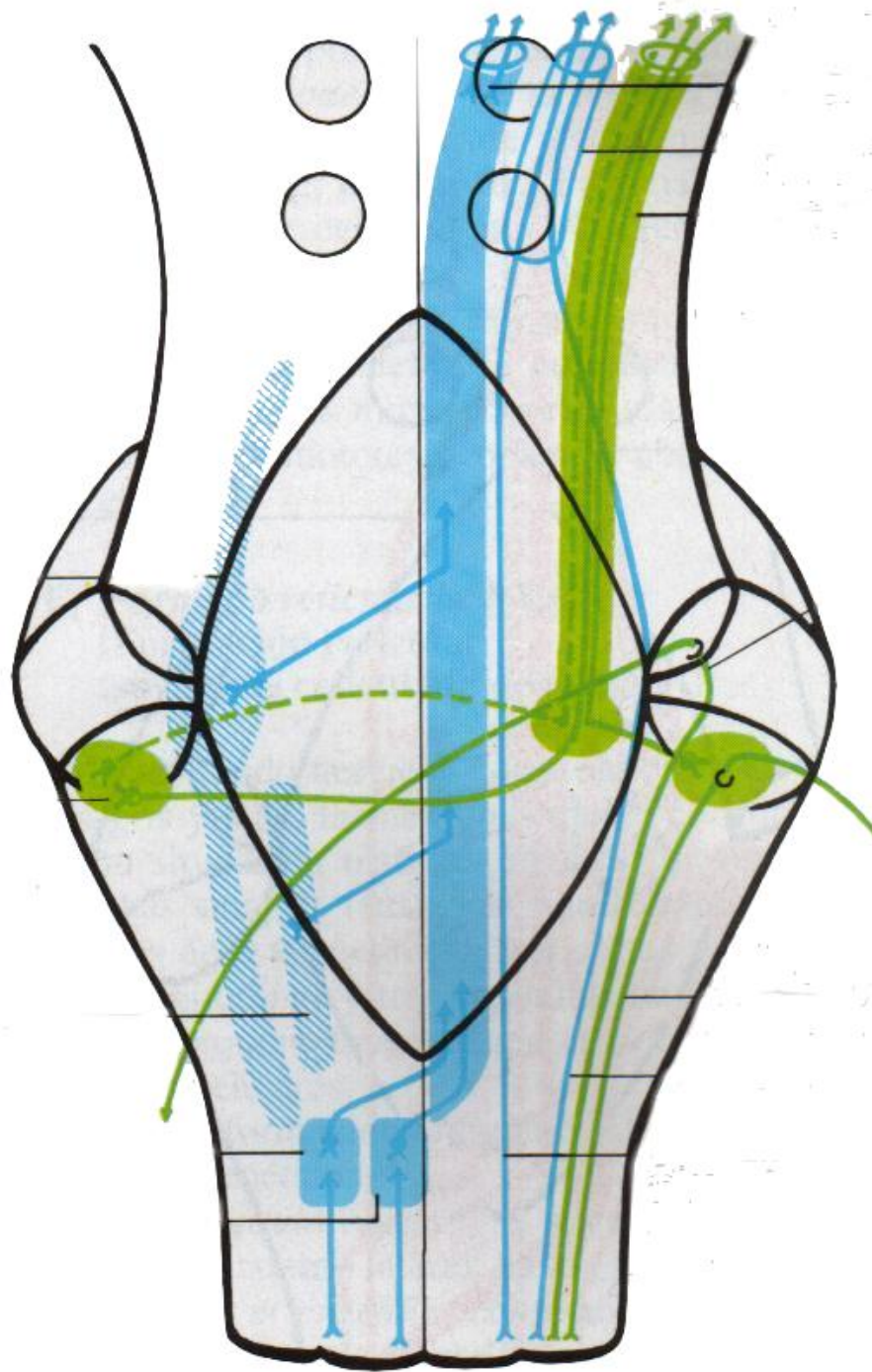
Cuerpo calloso

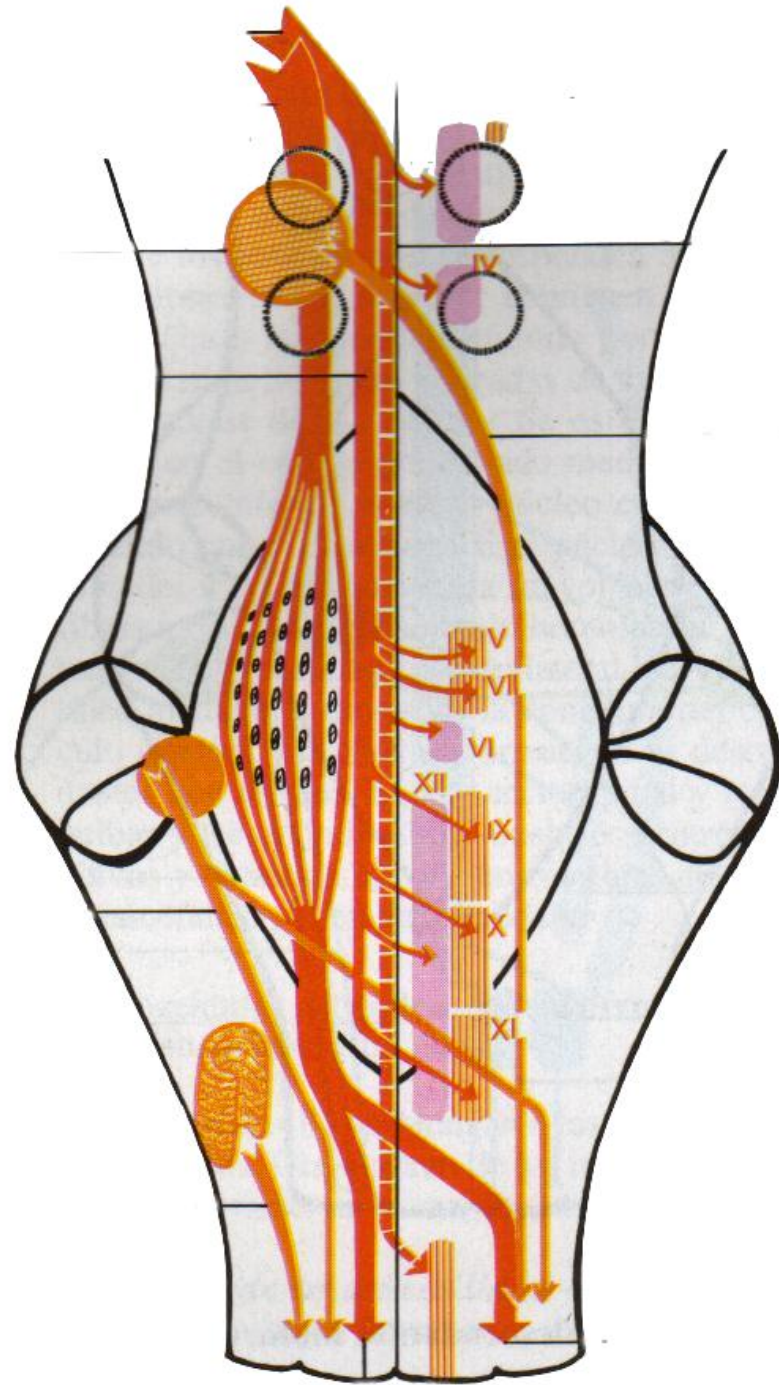
Cápsula interna

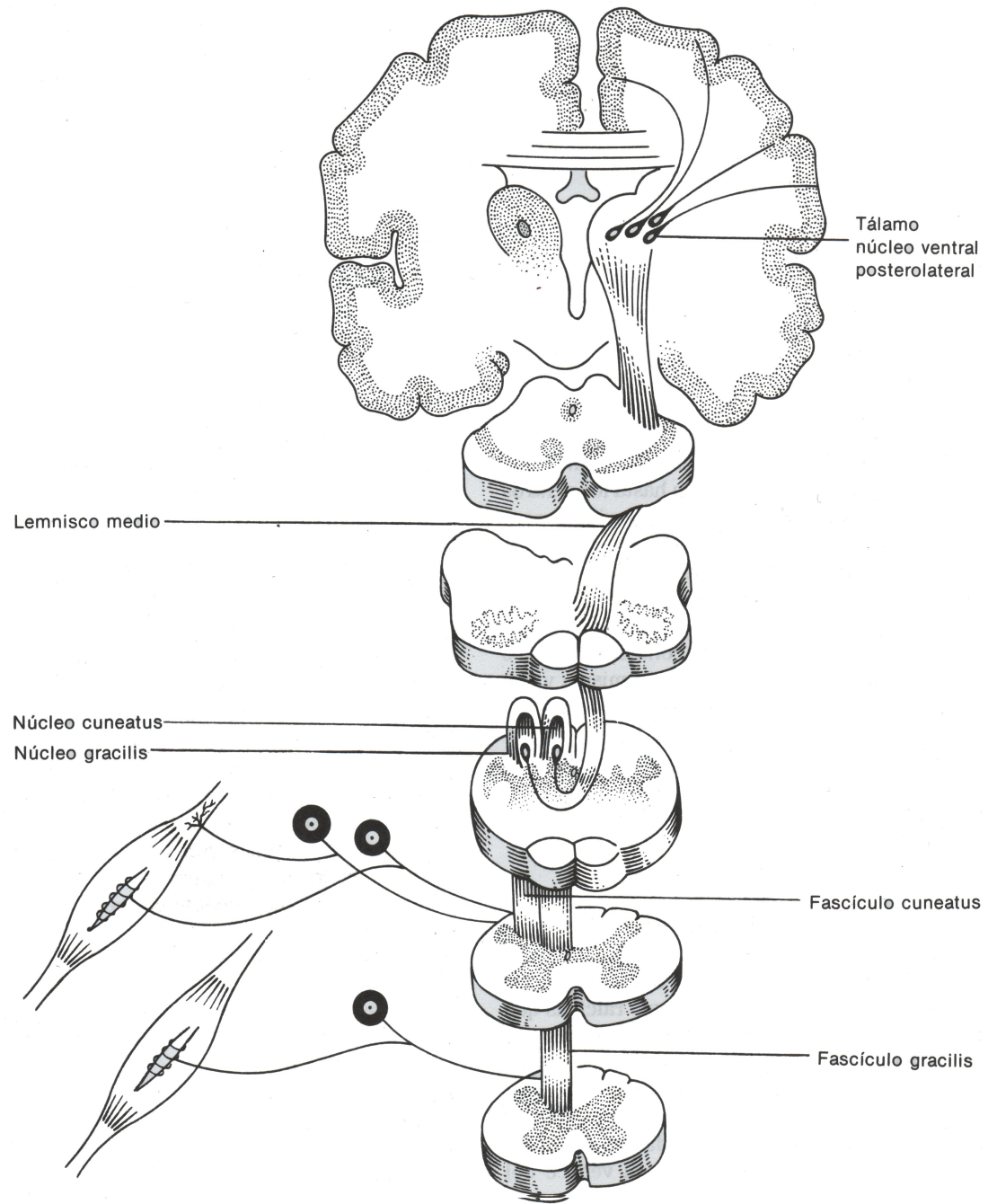
Tálamo









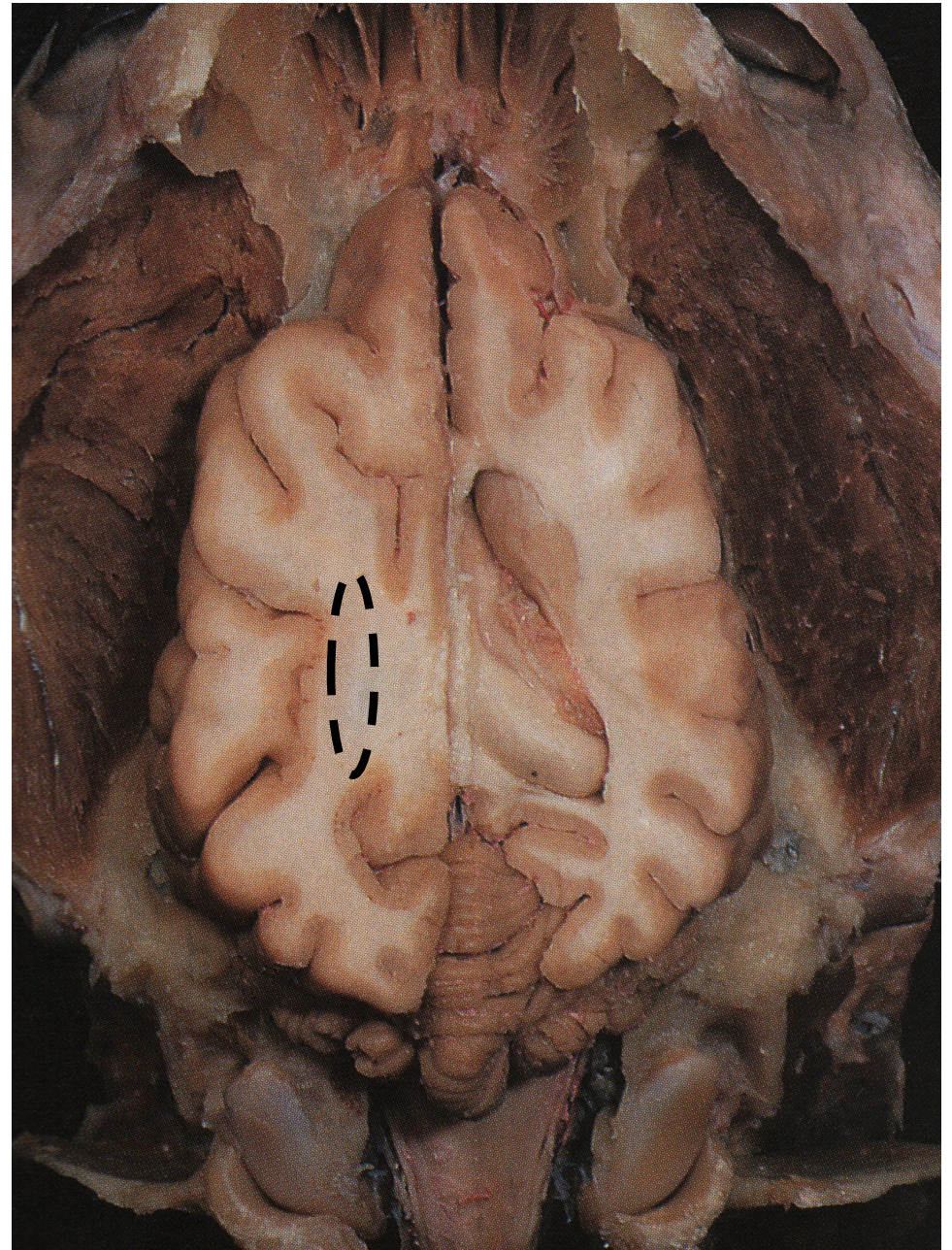


Telencéfalo

Cerebro

II- Cuerpo estriado: núcleos basales

- Relación con corteza motora, tálamo, subtálamo, n. rojo y s. nigra, en la producción de movimientos voluntarios
- Modulación de los movimientos, por inhibiciones selectivas, que de lo contrario resultarían en eferencias masivas e incontroladas



Telencéfalo

Cerebro

Hemisferios

I- Fibras

II- Cuerpo estriado

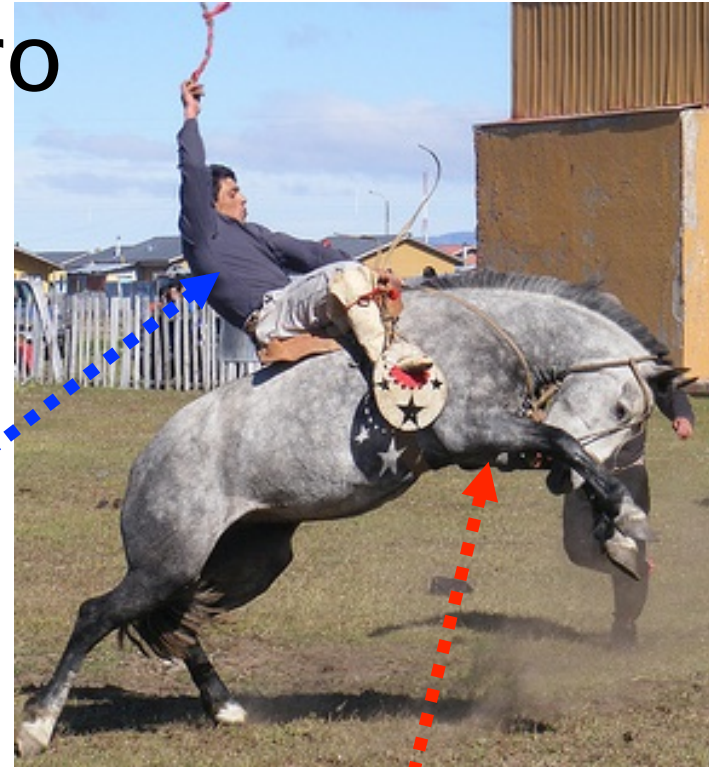
III- Corteza

Giros y surcos

* **Neopallio**

* **Arquipallio**

* **Paleopallio**



Rinencéfalo
p. Límbica

Rinencéfalo basal

Telencéfalo

Cerebro

Rinencéfalo:

- * Porción basal
- * Porción septal
- * Porción límbica

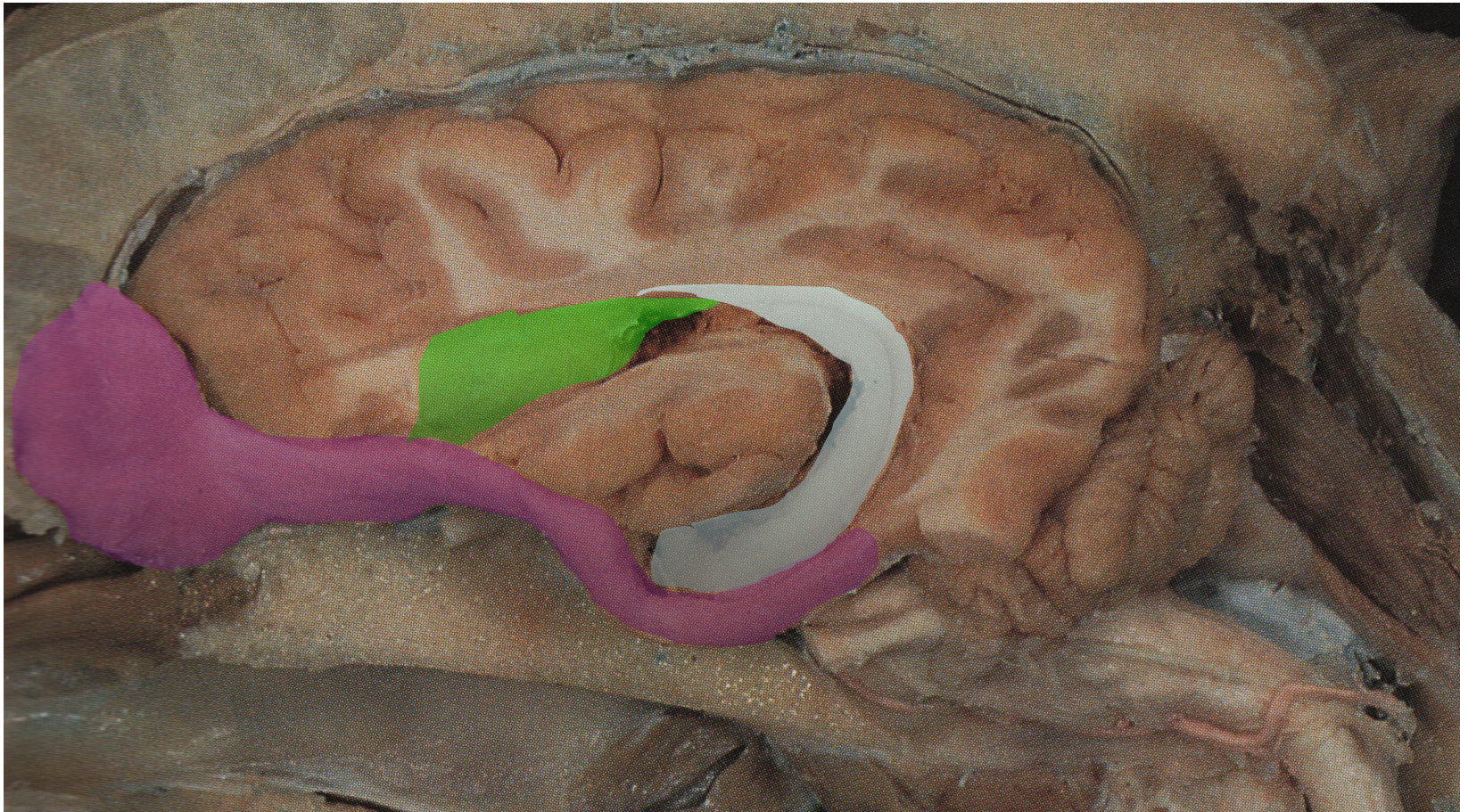


Telencéfalo

Cerebro

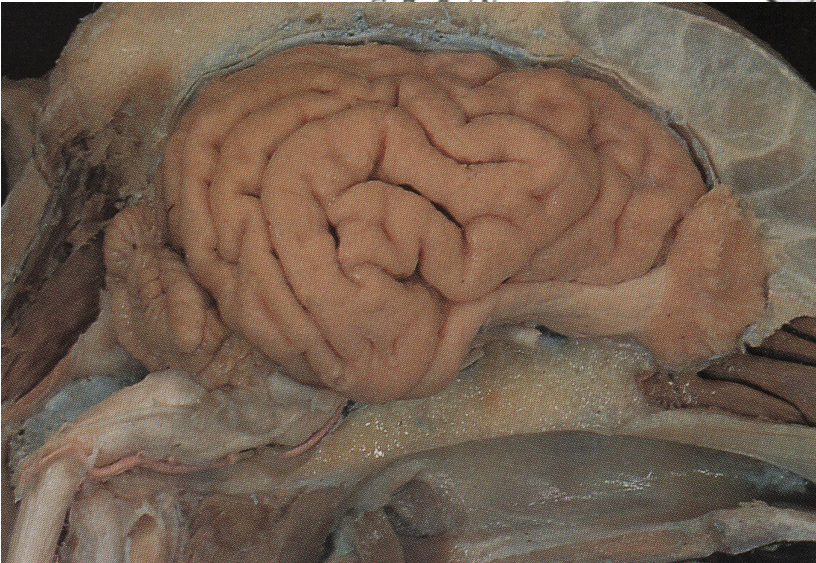
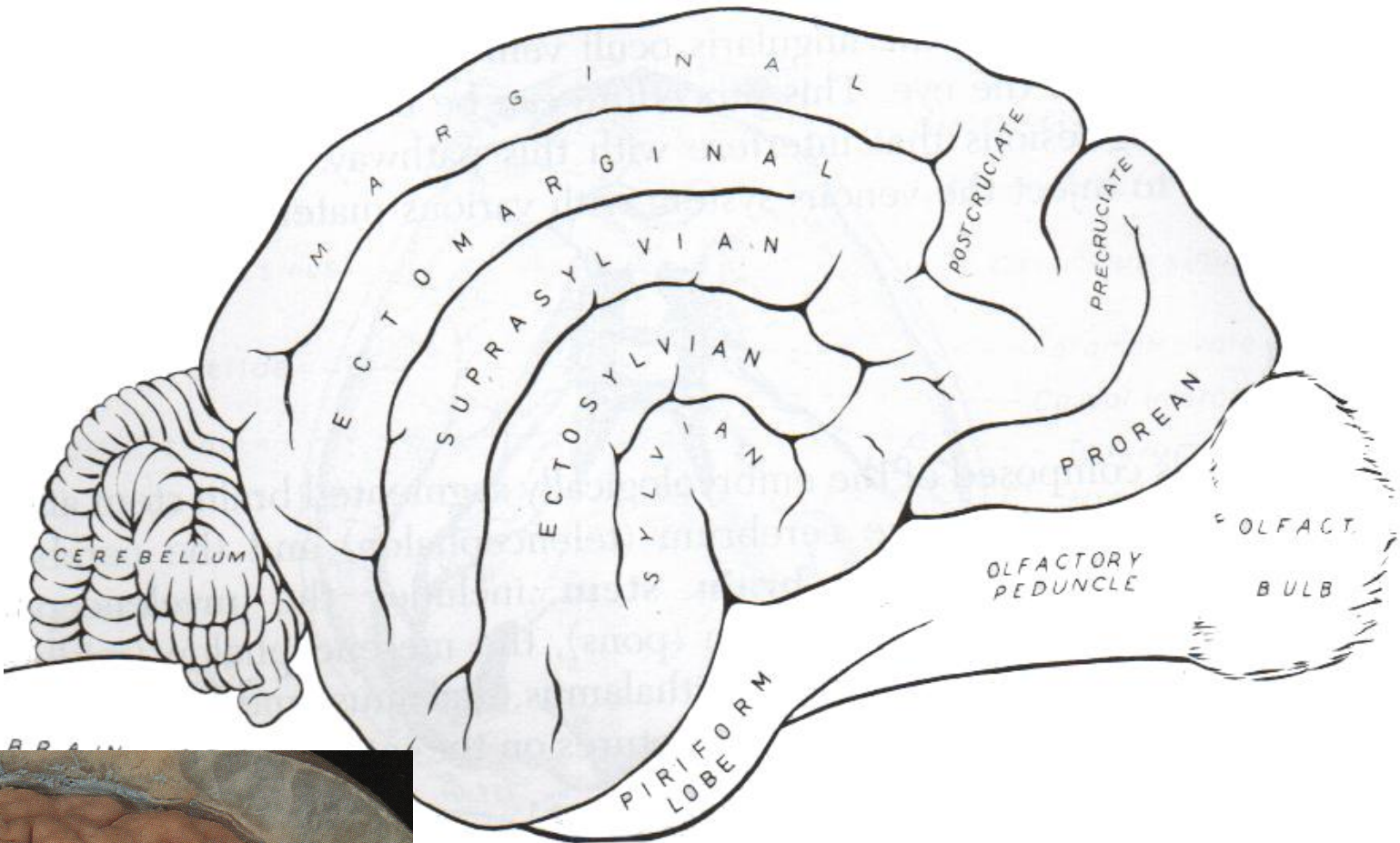
Rinencéfalo:

- * Porción basal
- * Porción septal
- * Porción límbica

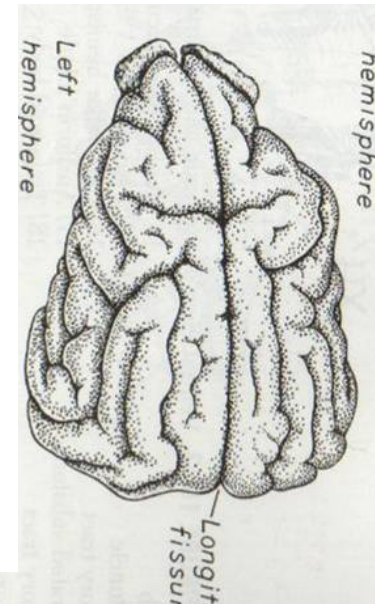
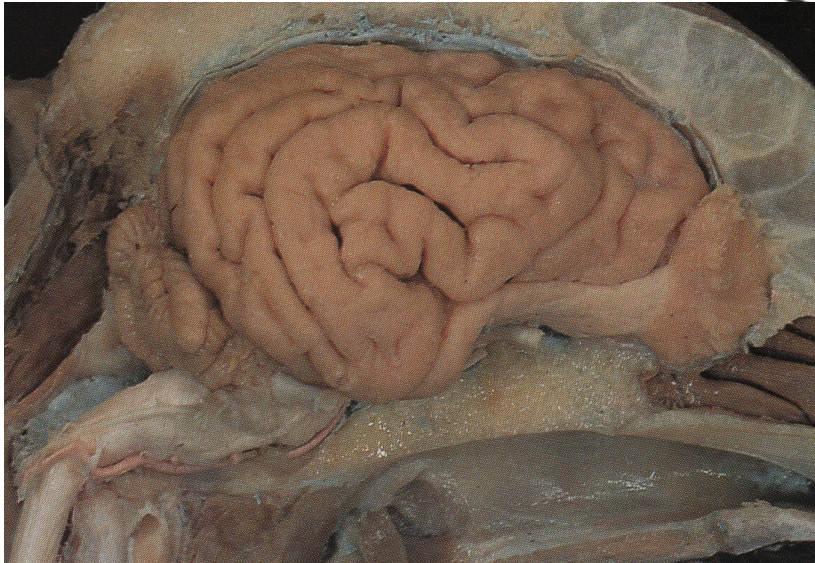
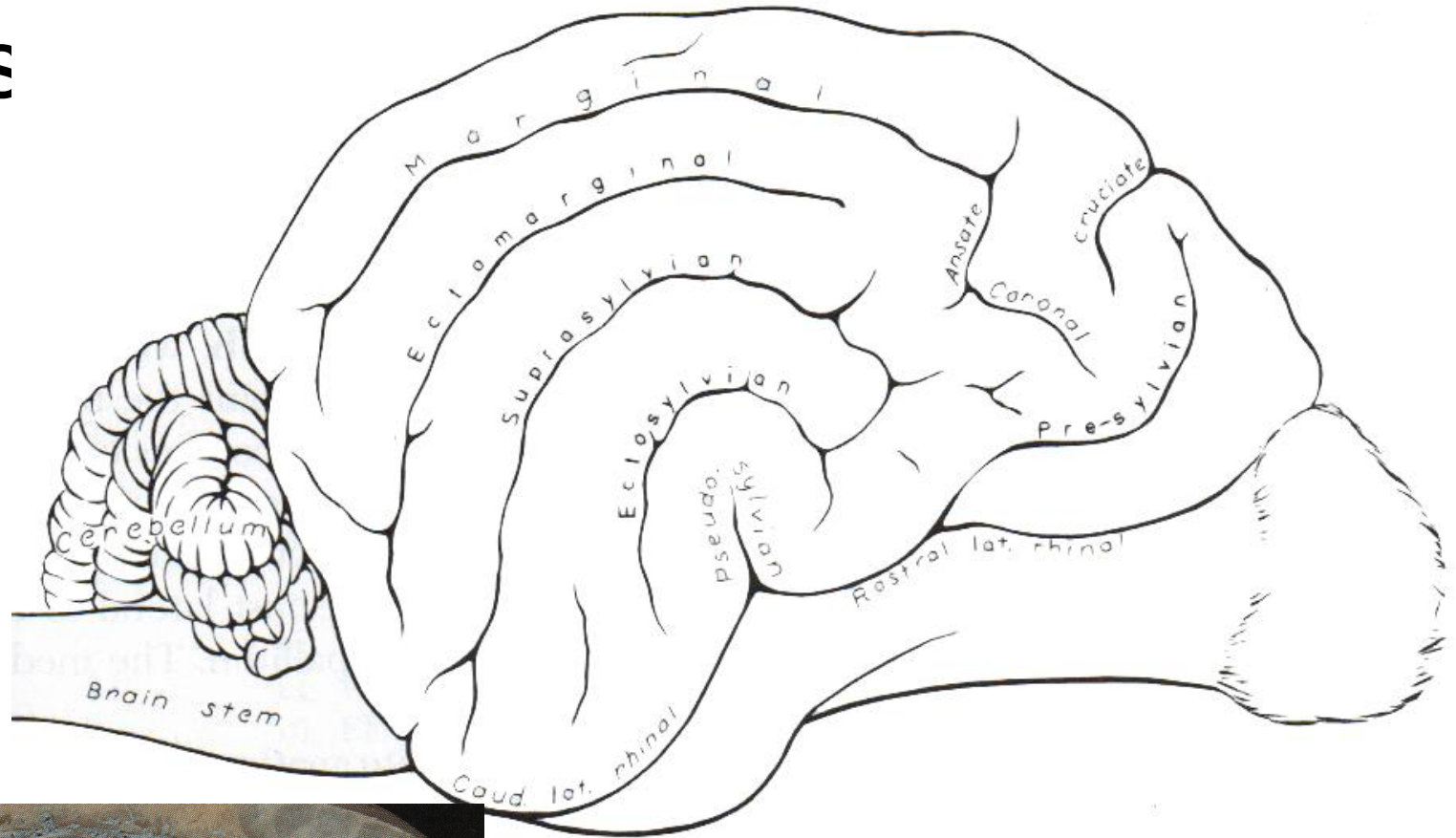




Giros



surcos



Telencéfalo

Cerebro

Neopallio

Corteza motora: Giro pre y post crucial

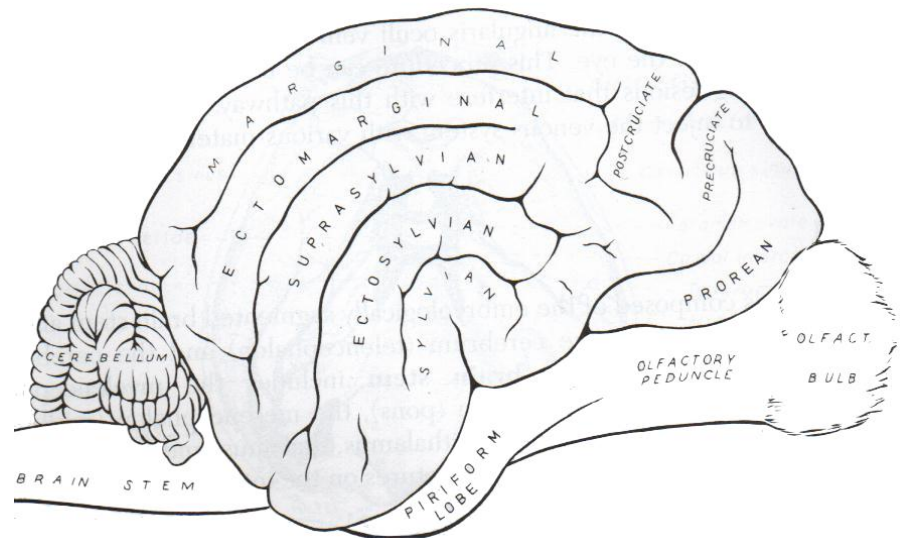
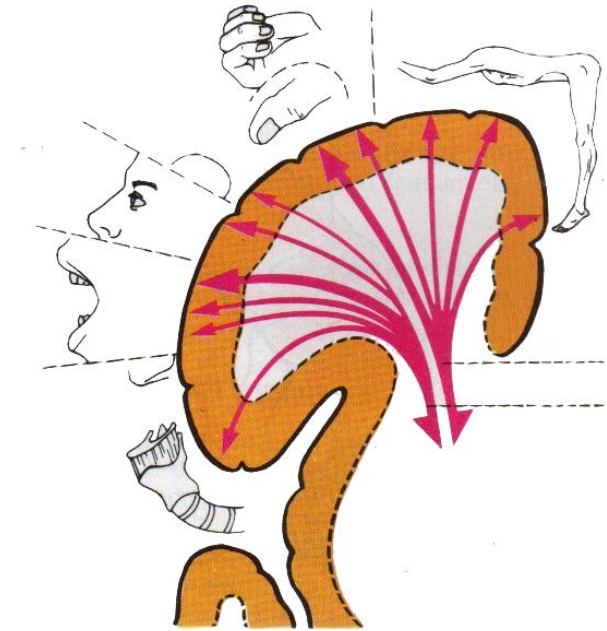
Corteza somestésica: Giro suprasilviano rostral , extremo rostral del giro marginal

Corteza auditiva: Giro silviano rostral (lobo temporal)

Corteza visual: Extremo caudal del giro marginal (lobo occipital)

Corteza olfatoria: Lobo piriforme

Corteza asociativa: lobo frontal (20%)



Neopallio - 6 estratos, giros y surcos

- Aferencias - estrato IV

- Eferencias - estrato V, VI

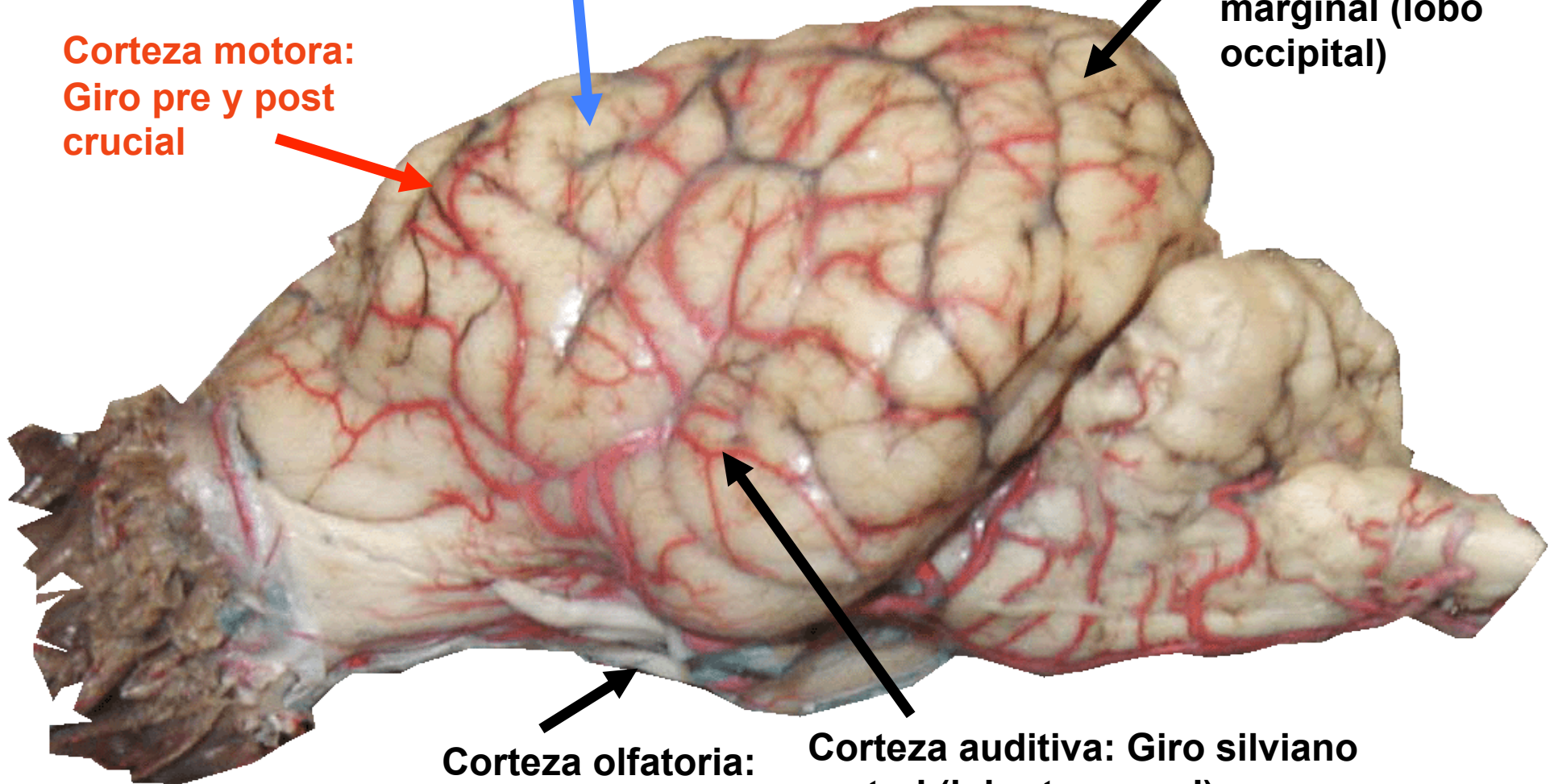
Telencéfalo

Cerebro

Corteza somestésica: Giro suprasilviano rostral ,
extremo rostral del giro marginal)

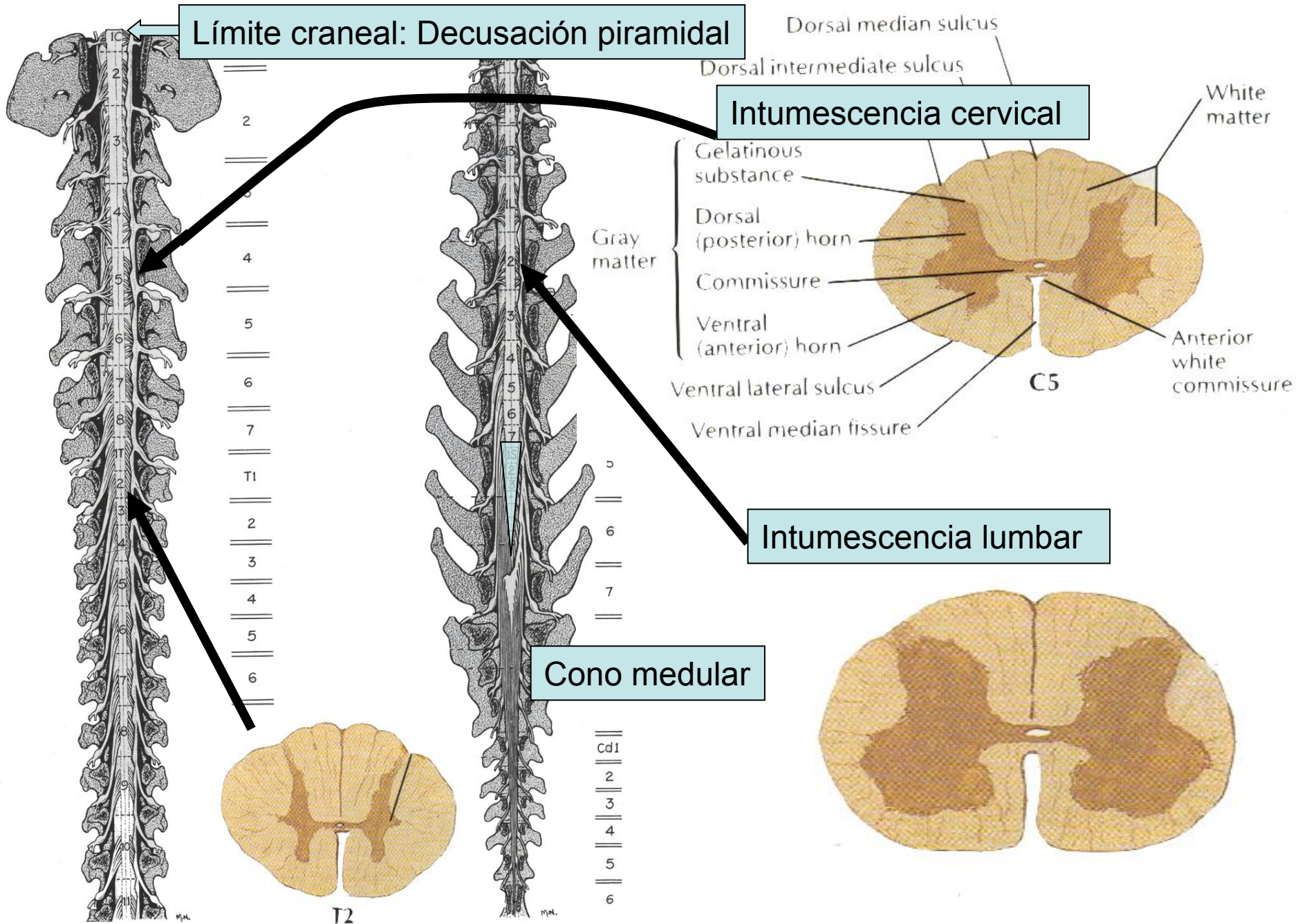
Corteza motora:
Giro pre y post
crucial

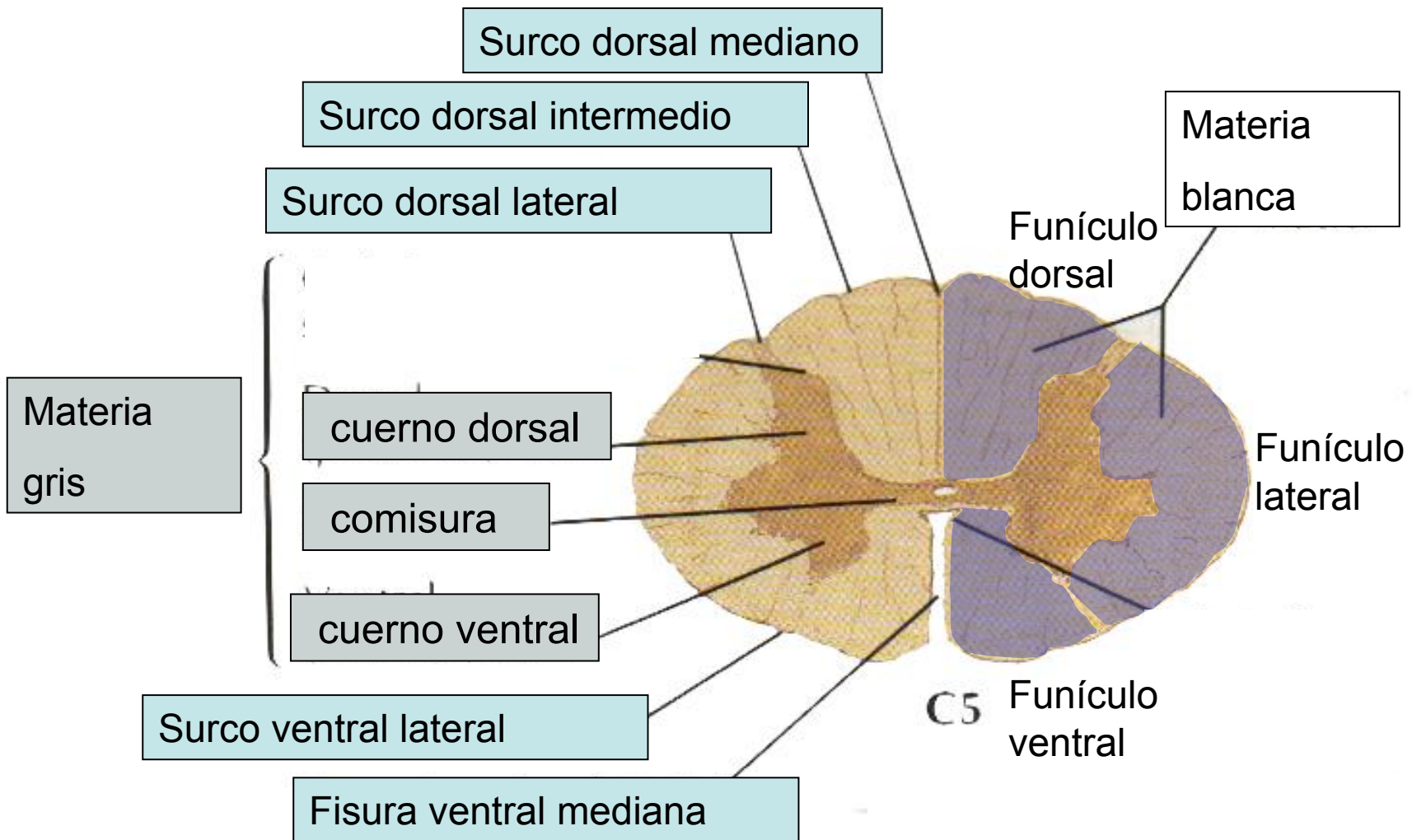
Corteza visual:
Extremo caudal
del giro
marginal (lobo
occipital)

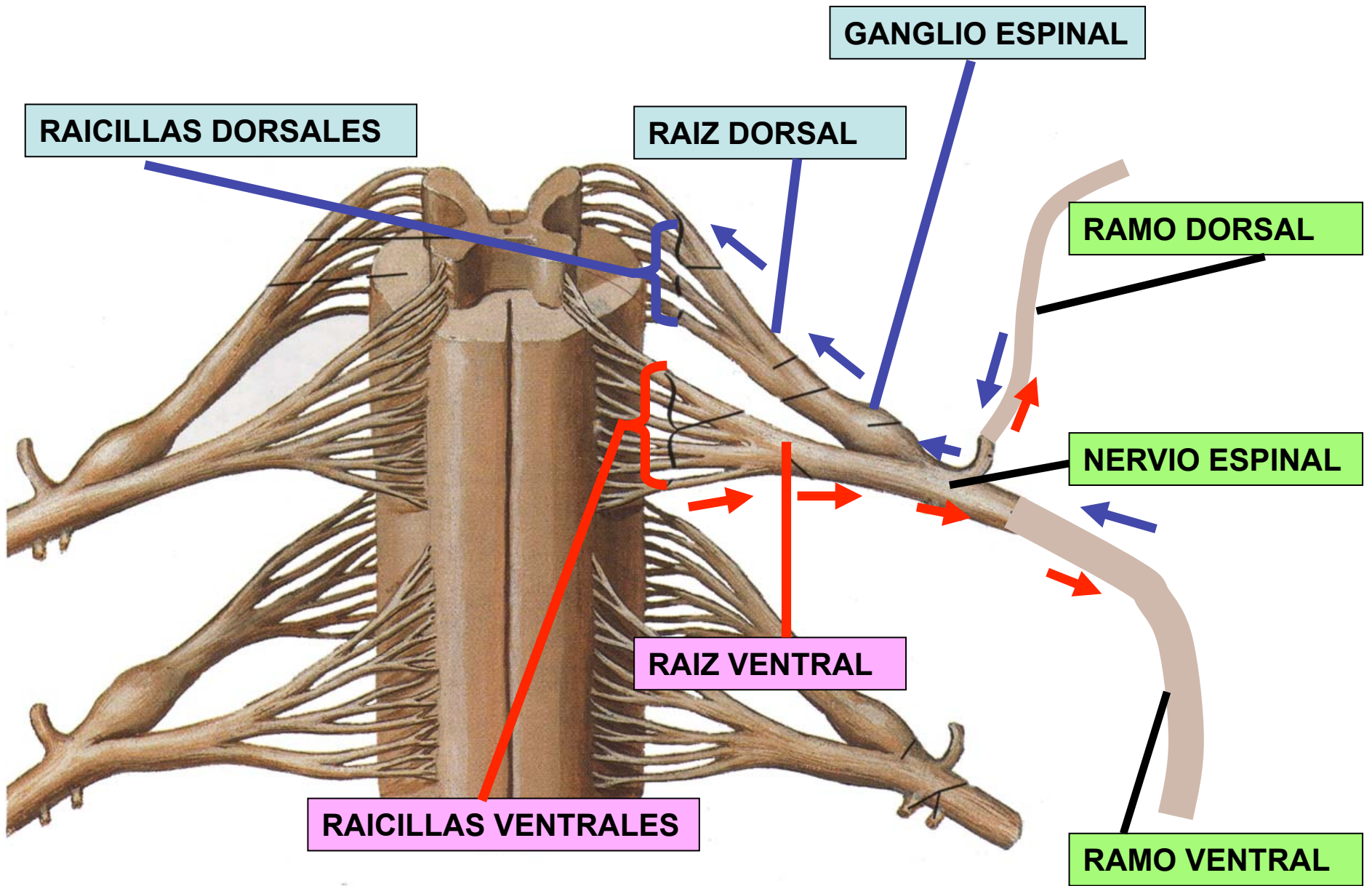


Corteza olfatoria:
Lobo piriforme

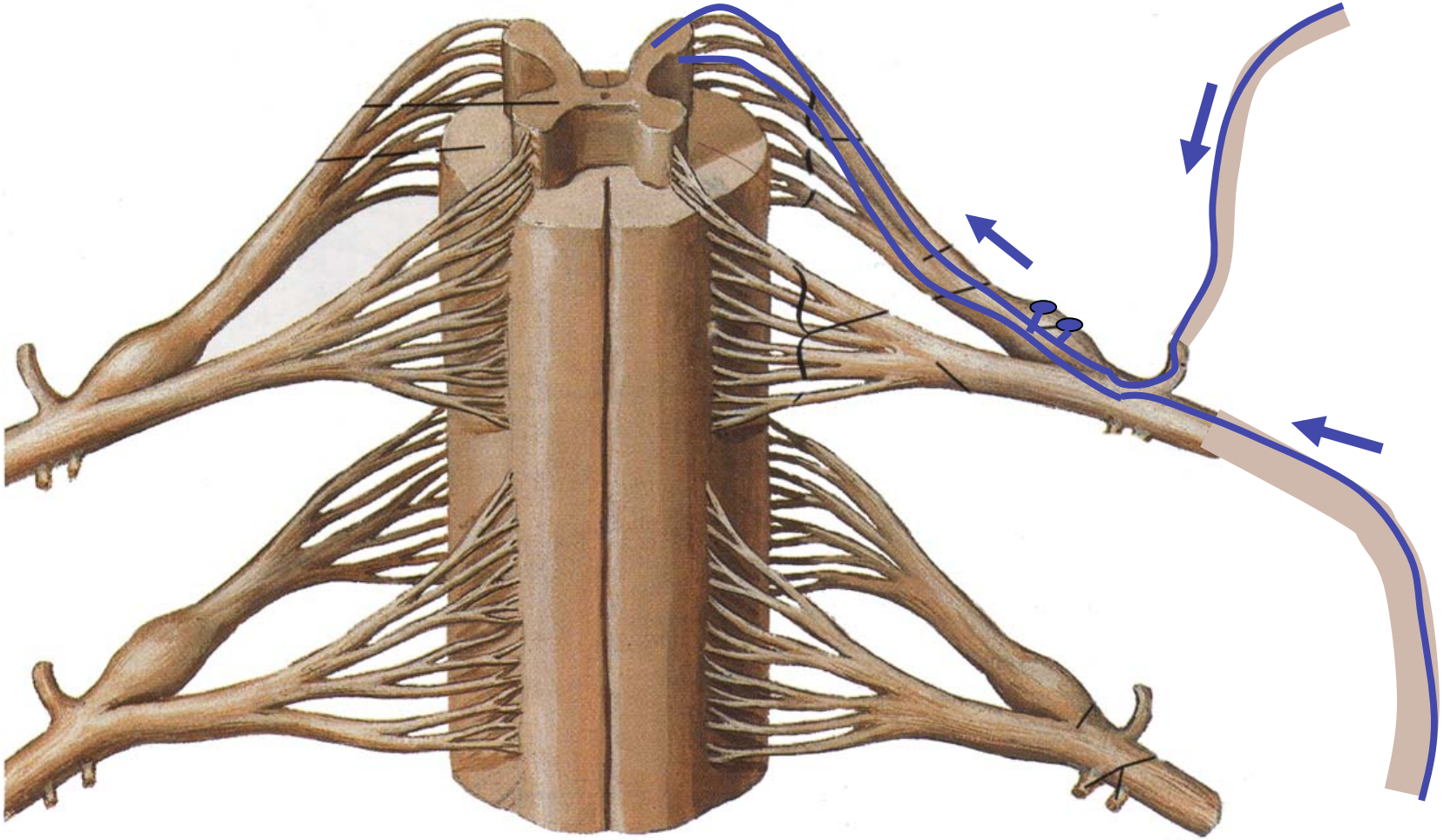
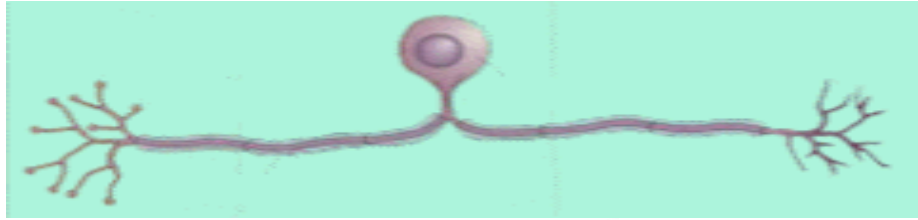
Corteza auditiva: Giro silviano
rostral (lobo temporal)



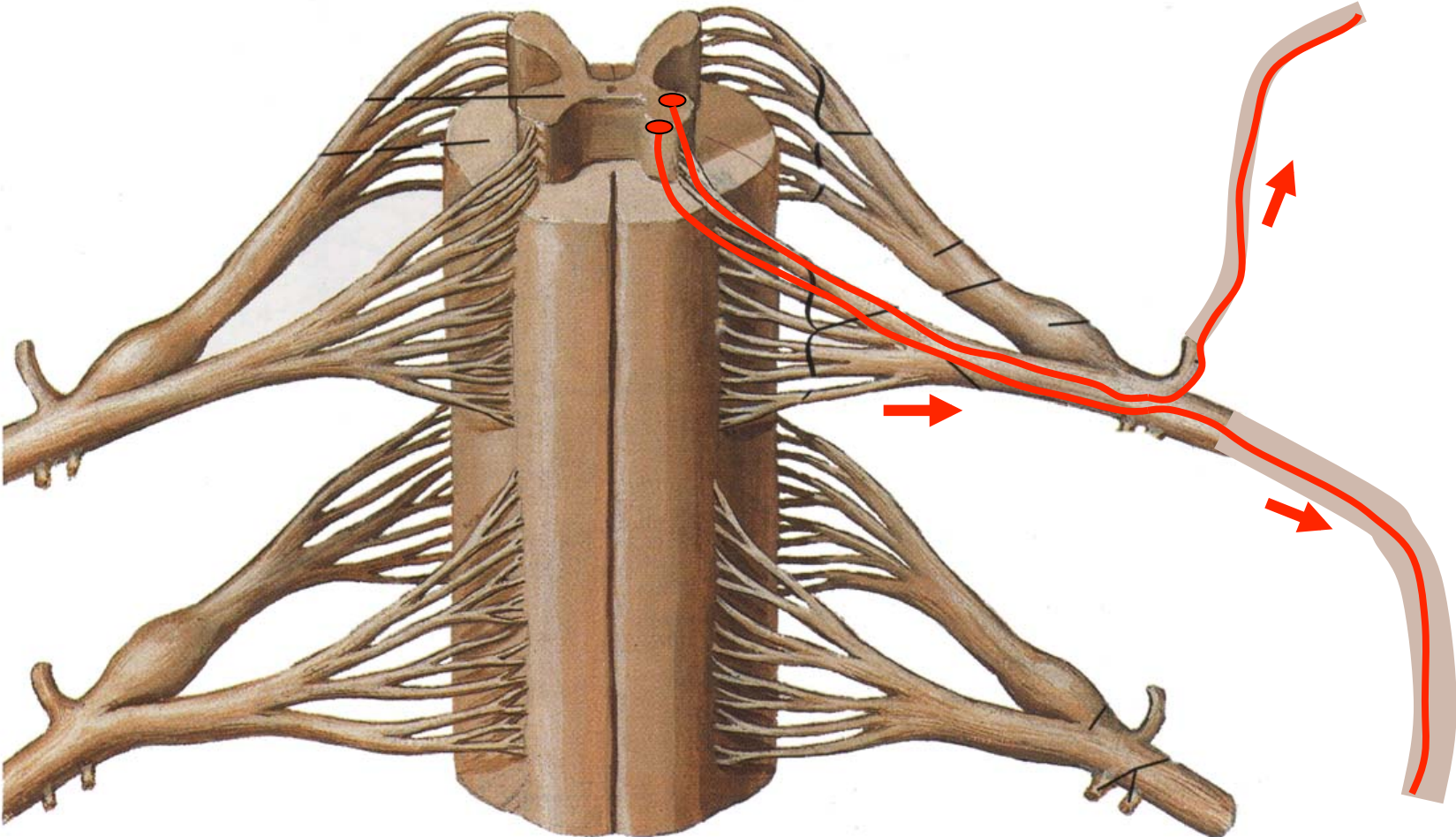


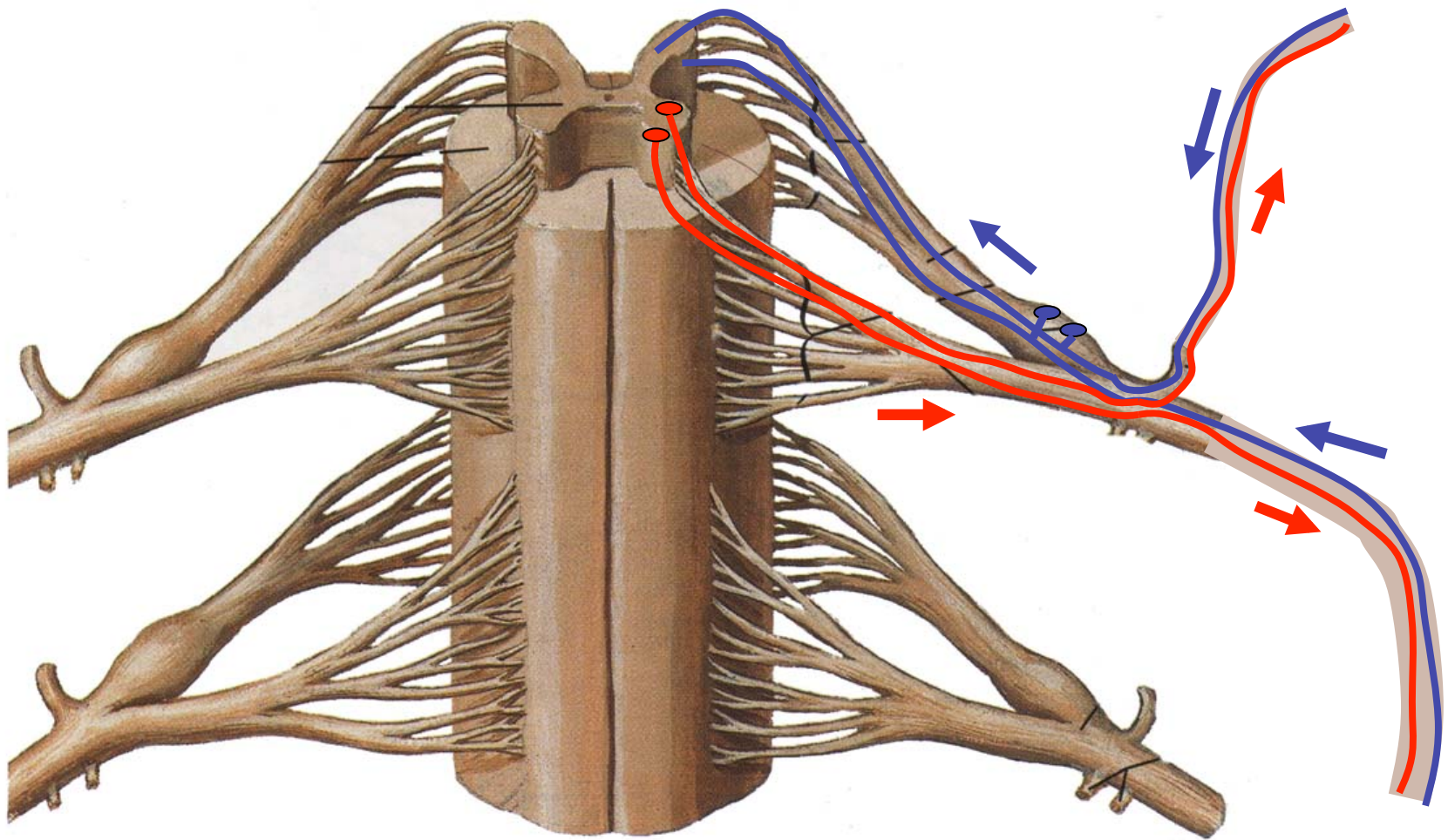


VIAS AFERENTES



VIAS EFERENTES





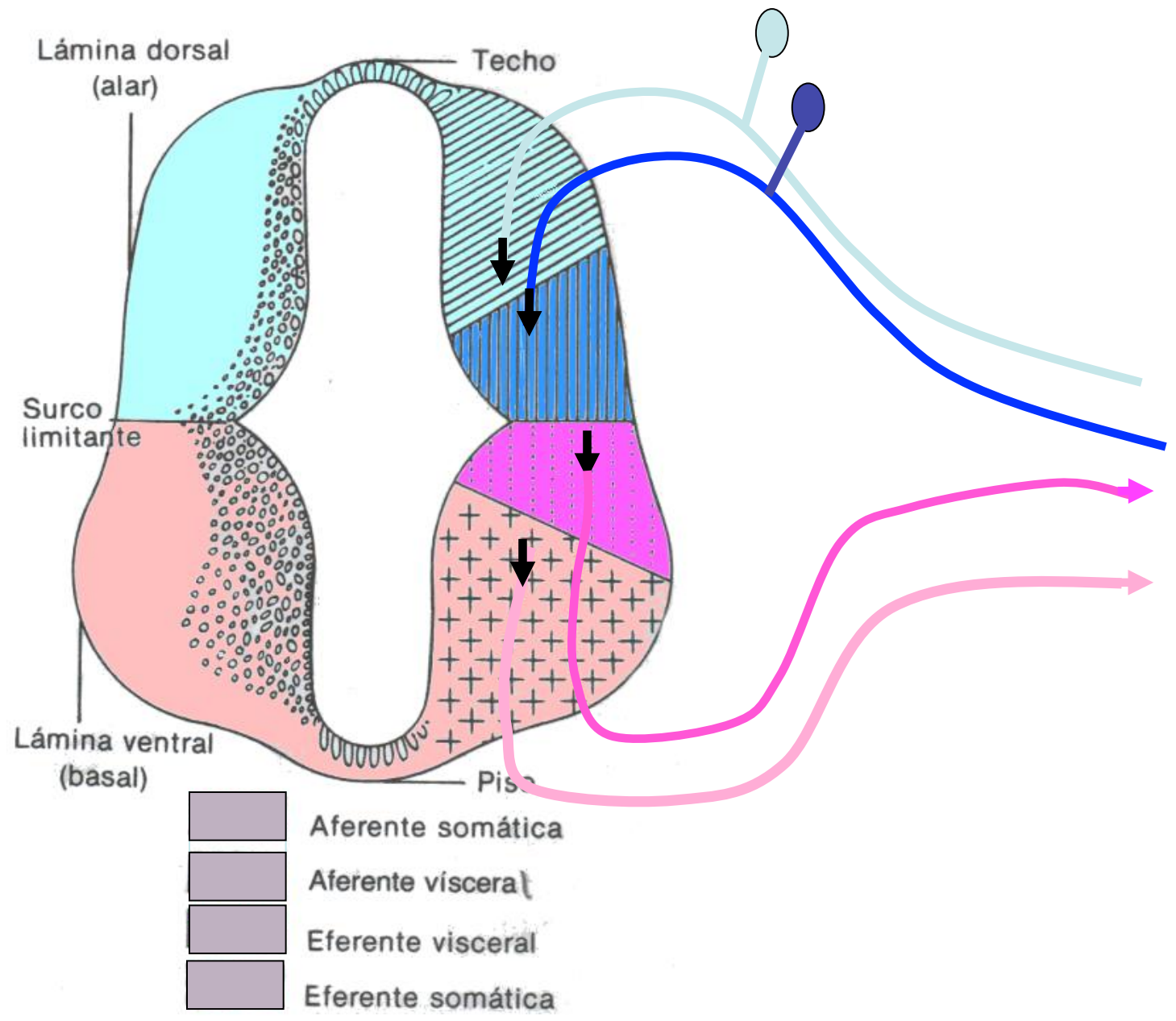


Lámina dorsal (alar)

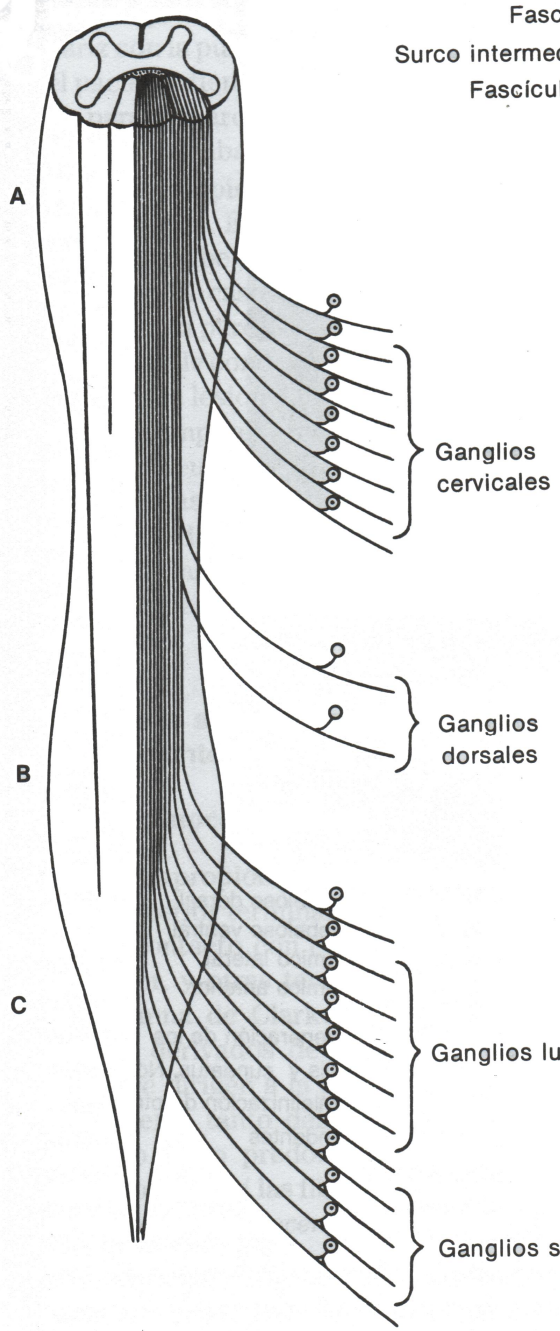
Techo

Surco limitante

Lámina ventral (basal)

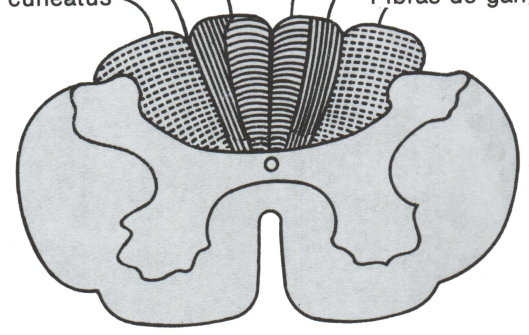
Piso

- Aferente somática
- Aferente visceral
- Eferente visceral
- Eferente somática

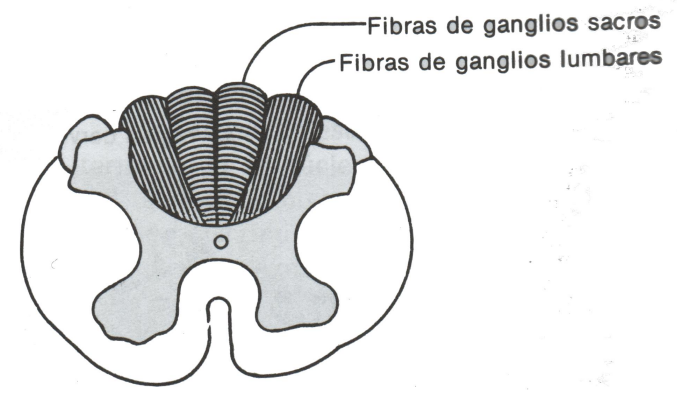


Fascículo gracilis
 Surco intermedio posterior
 Fascículo cuneatus

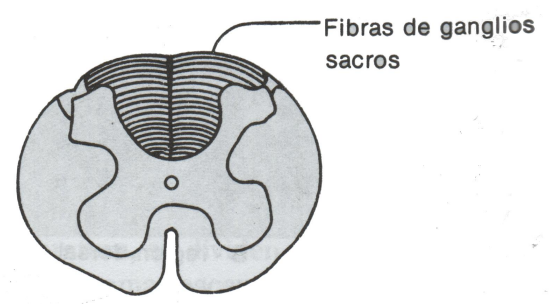
Fibras de ganglios sacros
 Fibras de ganglios lumbares
 Fibras de ganglios cervicales



A - Médula cervical



B - Médula lumbar



C - Médula sacra

Meninges

Paquimeninge

- * Duramadre

Leptomeninge:

- * Aracnoides
- * Piamadre

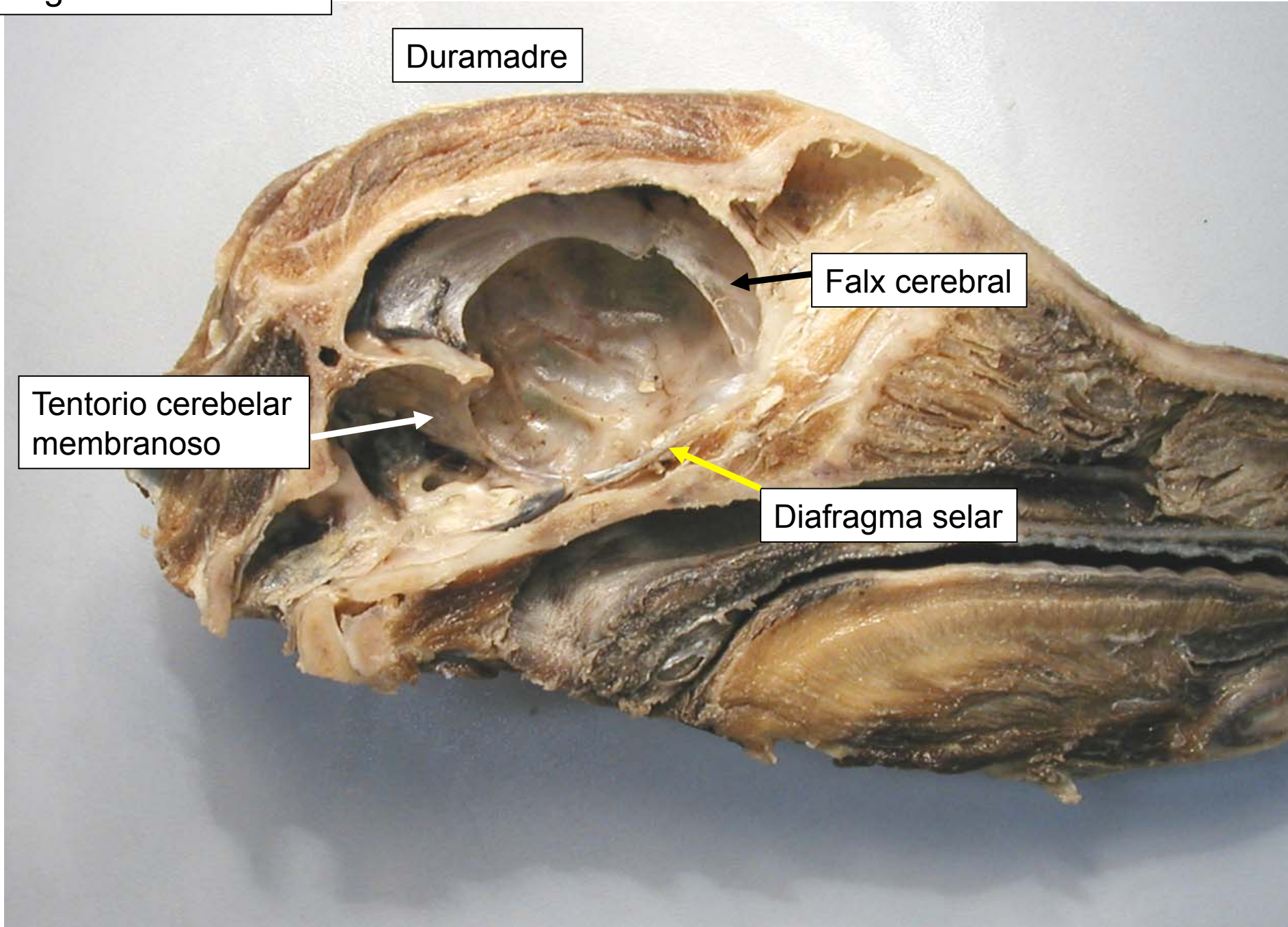
Meninges craneanas

Duramadre

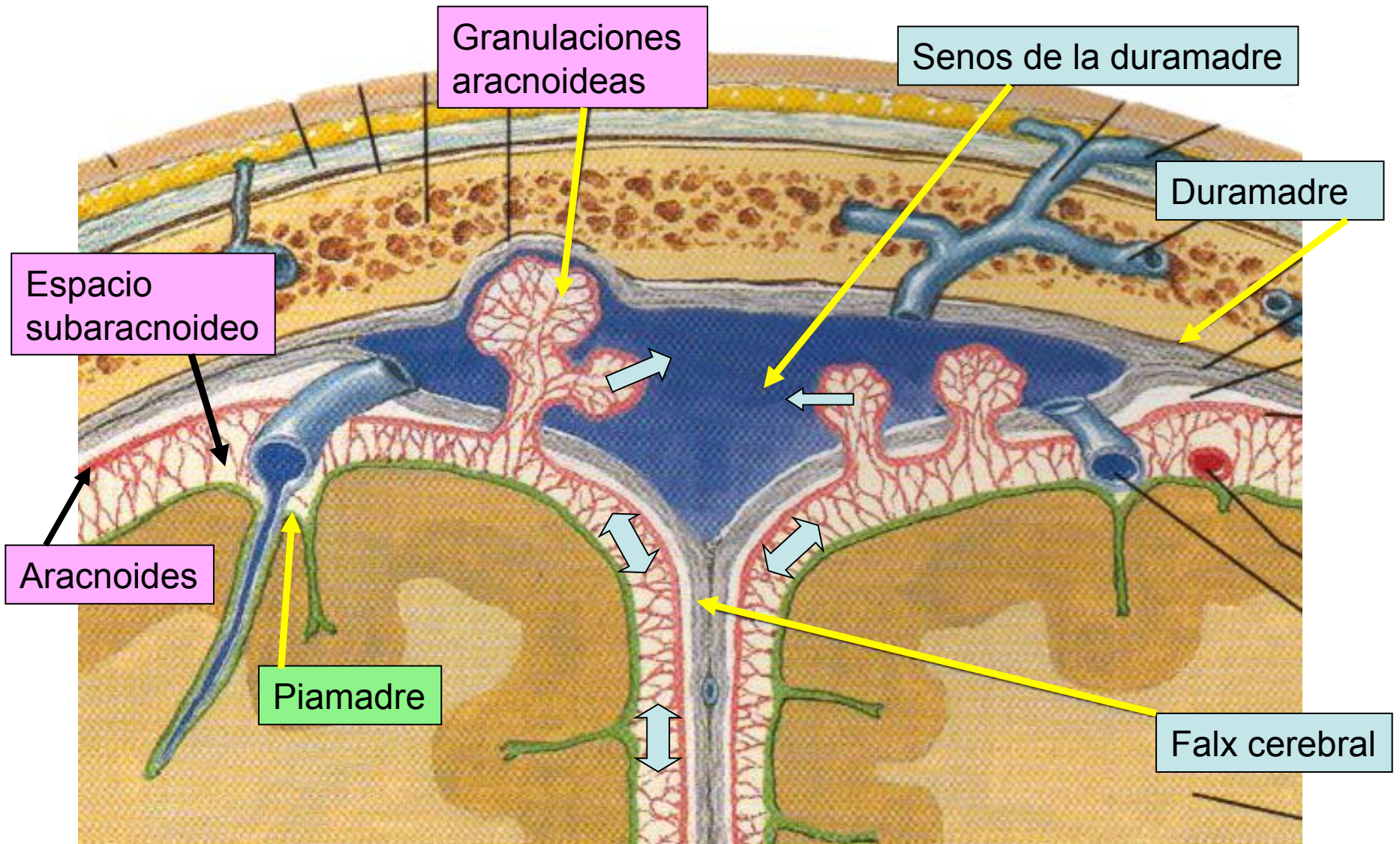
Falx cerebral

Tentorio cerebelar membranoso

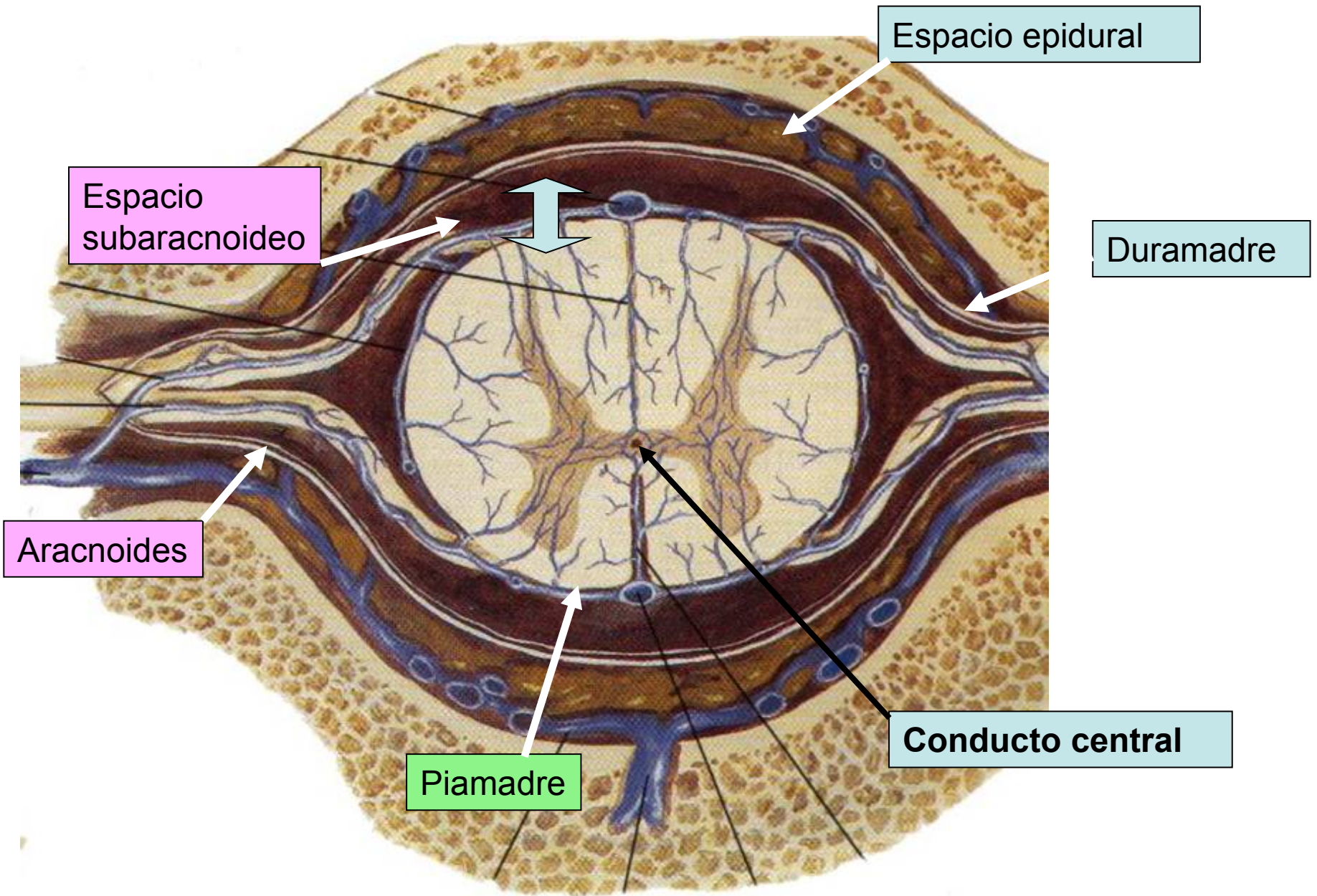
Diafragma selar



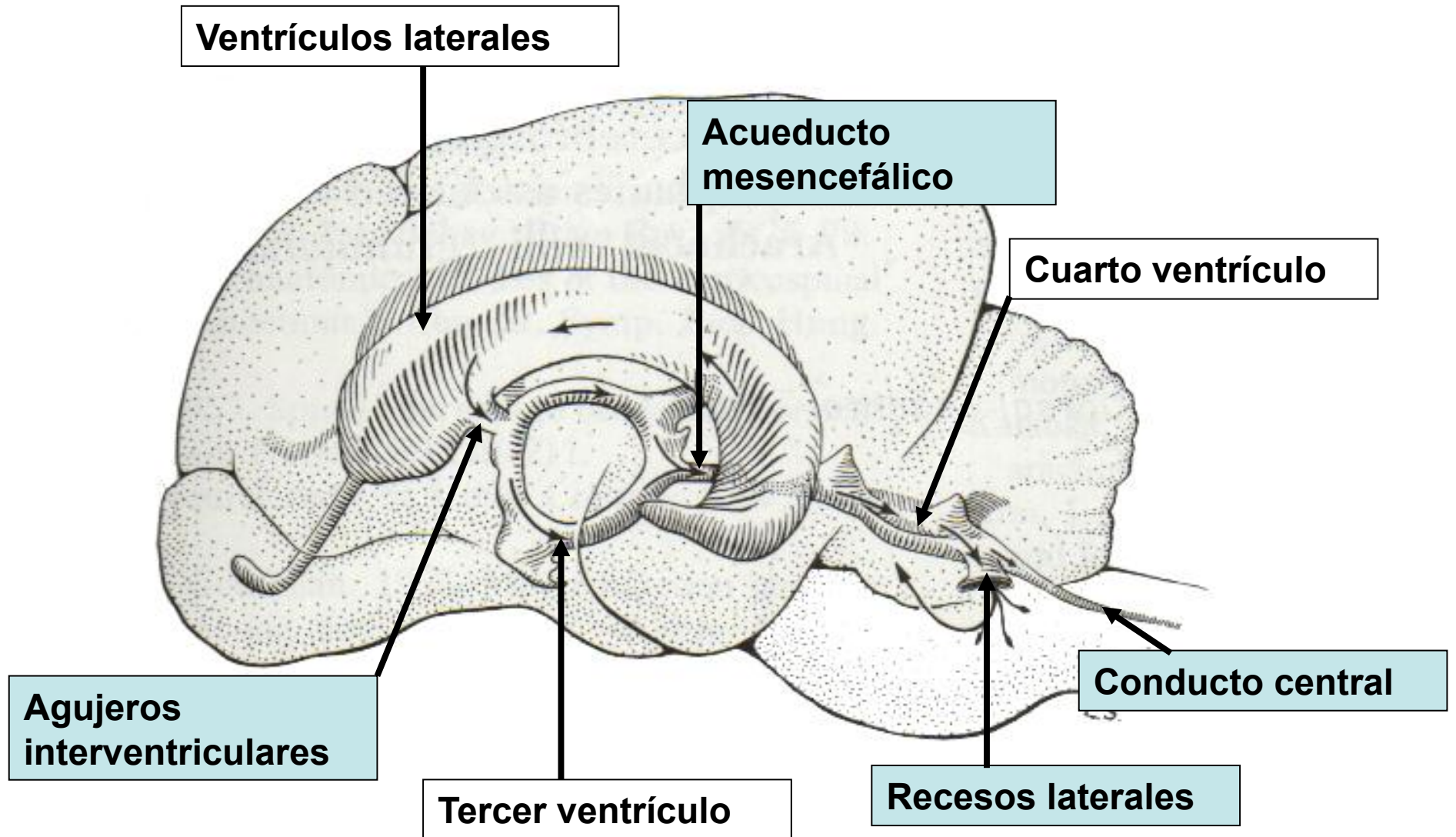
Meninges craneanas



Meninges espinales



Sistema ventricular encefálico y líquido cerebro espinal



Sistema ventricular encefálico y líquido cerebro espinal

