

**ANATOMIA
MULTIPLANARE
DELL'ENCEFALO**

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SEGNALE RM DELL'ENCEFALO

- varia in relazione al *tipo di sequenza* ed all' *intensità del campo magnetico*
- dipende dalle diverse componenti macromolecolari che caratterizzano la *sostanza bianca* e la *sostanza grigia*

- 
- minore contenuto idrico (- 12 %)
 - elevato contenuto lipidico (composizione lipoproteica della mielina, 70-80% di lipidi)

SEGNALE RM DELL'ENCEFALO

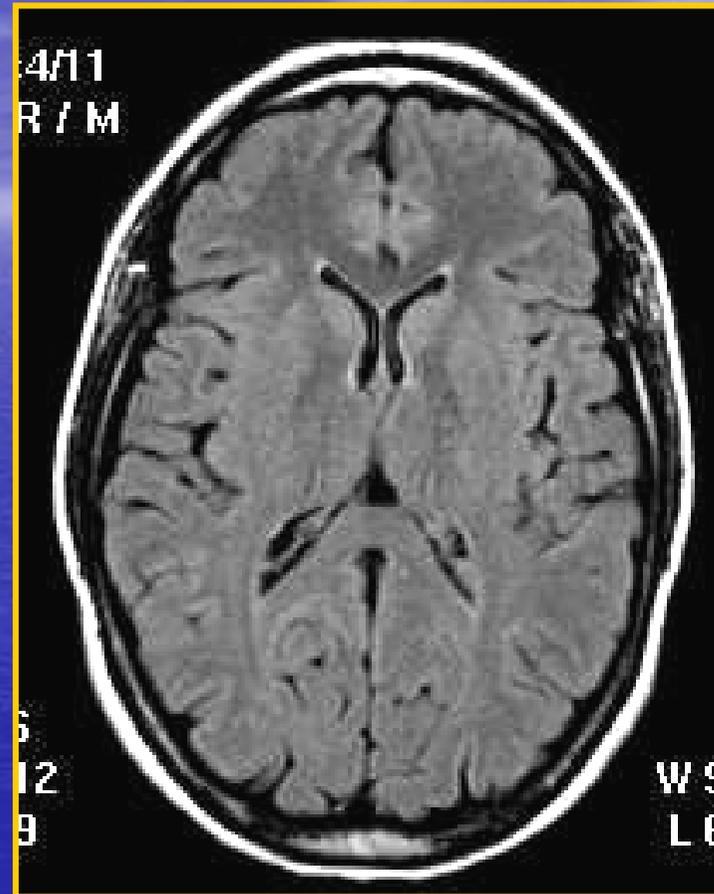
SEQUENZE

T2



s.b. < s.g.

s.b. *mielinizzata* ↓



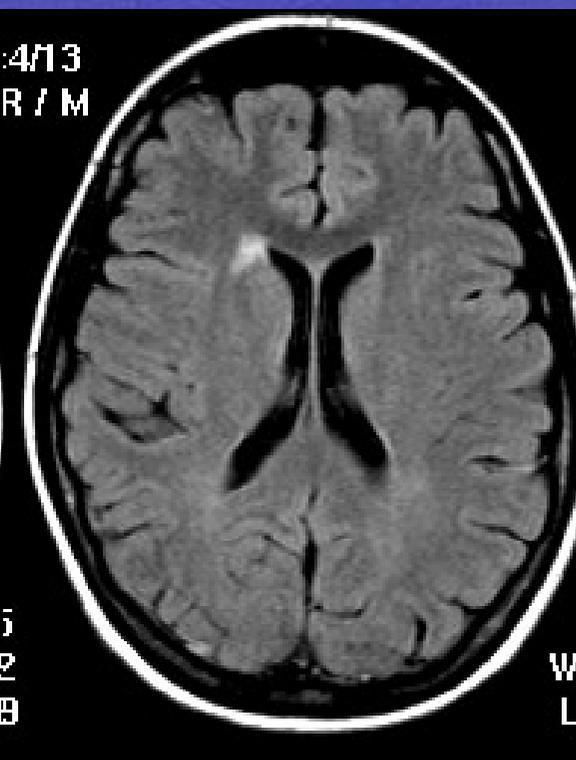
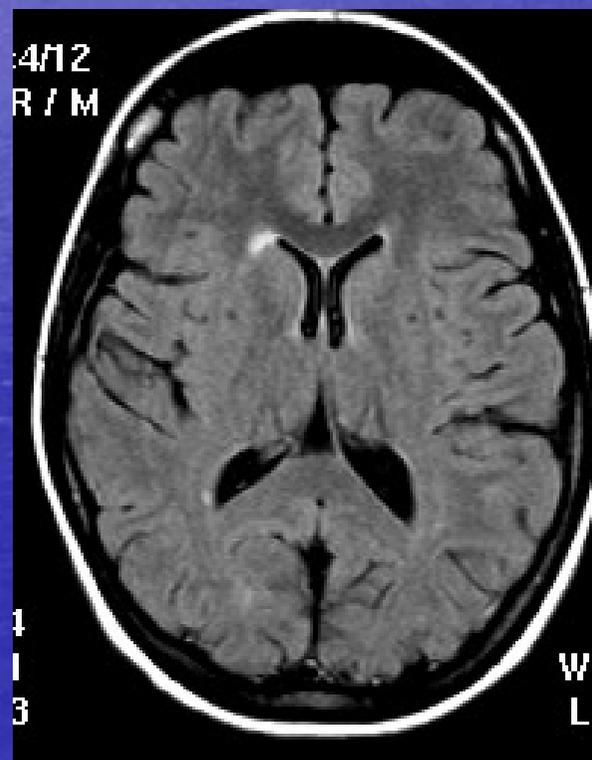
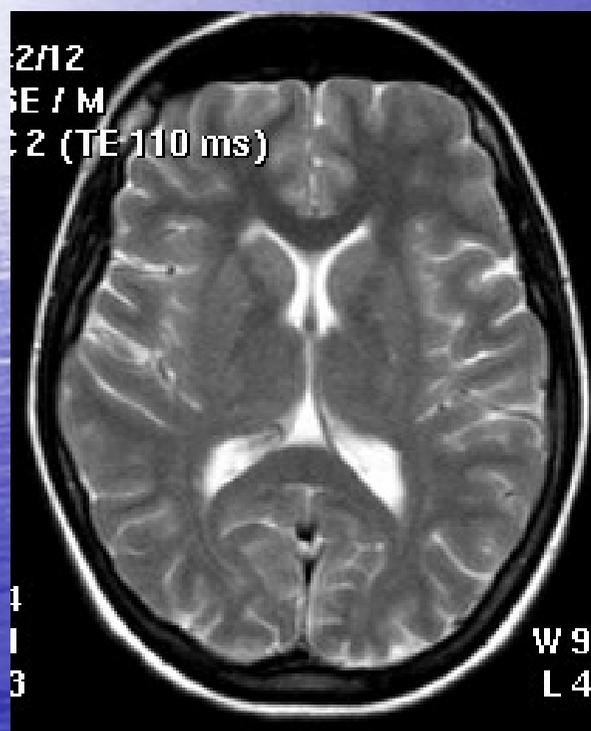
FLAIR

T2-w , ↓ ↓ liquor

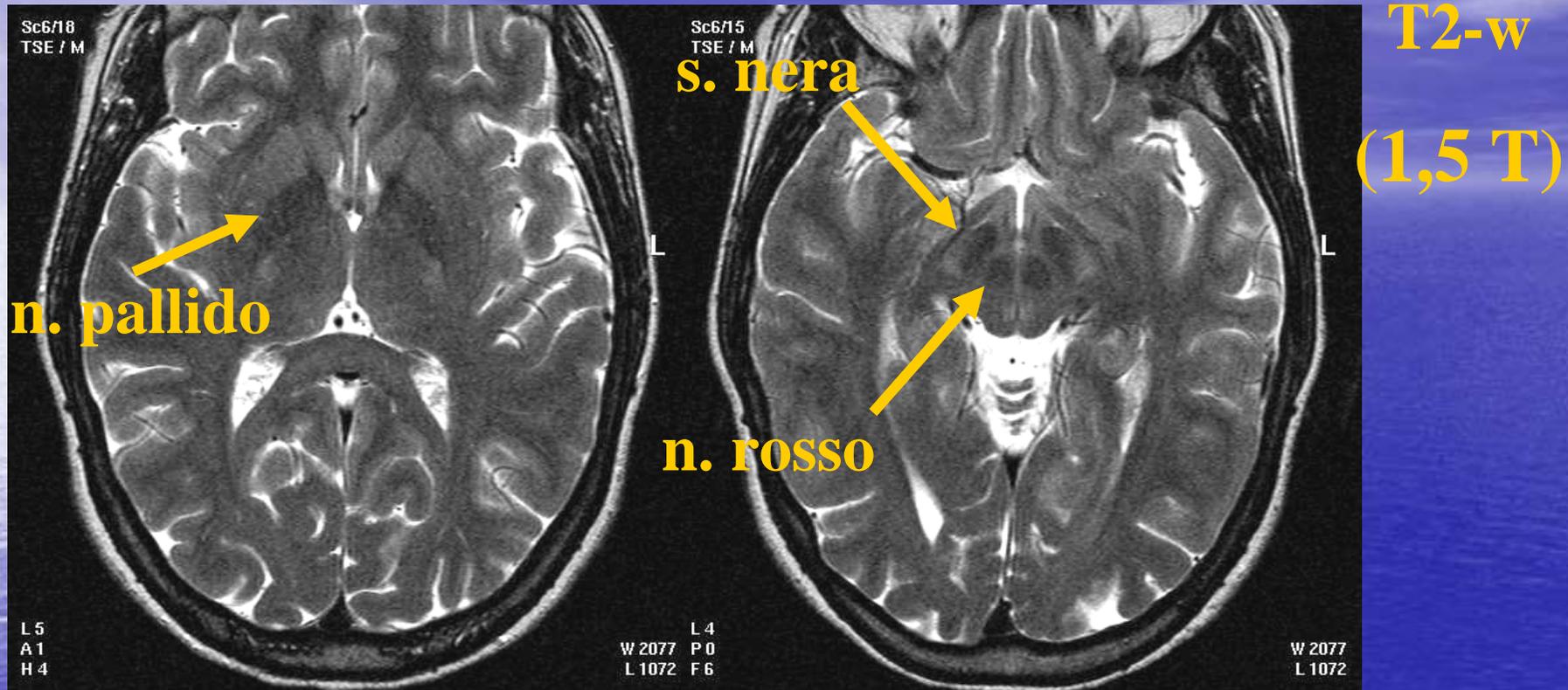
SEQUENZE FLAIR

Fluid-Attenuated Inversion Recovery

Patologia demielinizzante



SEGNALE RM DELL'ENCEFALO



Per l'effetto di **SUSCETTIBILITÀ MAGNETICA** (proporzionale all'intensità del campo magnetico) le strutture che fisiologicamente contengono **FERRO** sono ipointense nelle sequenze T2-w ad alto campo

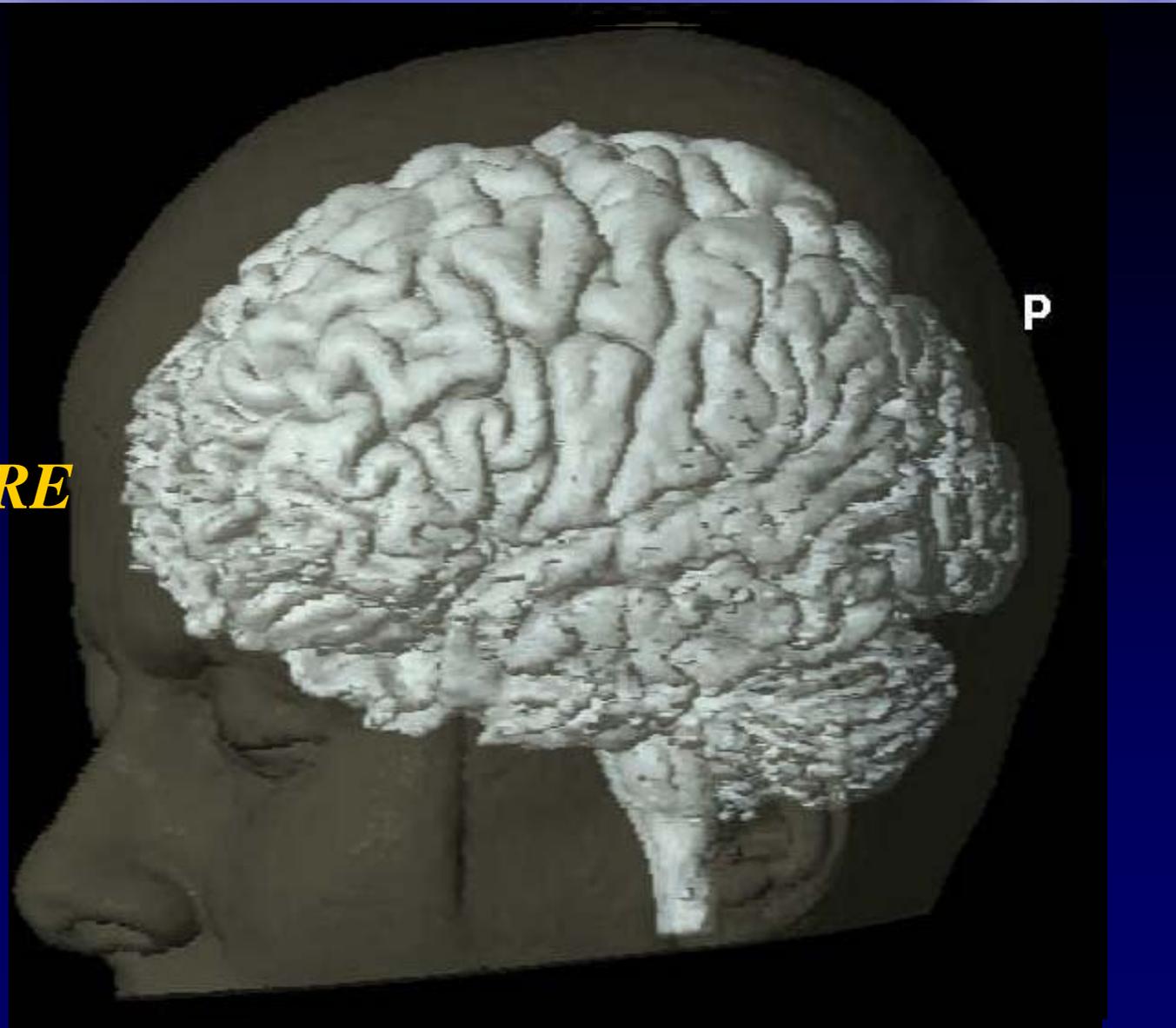
ANATOMIA DELL'ENCEFALO

OSSA

DURA

ARAC

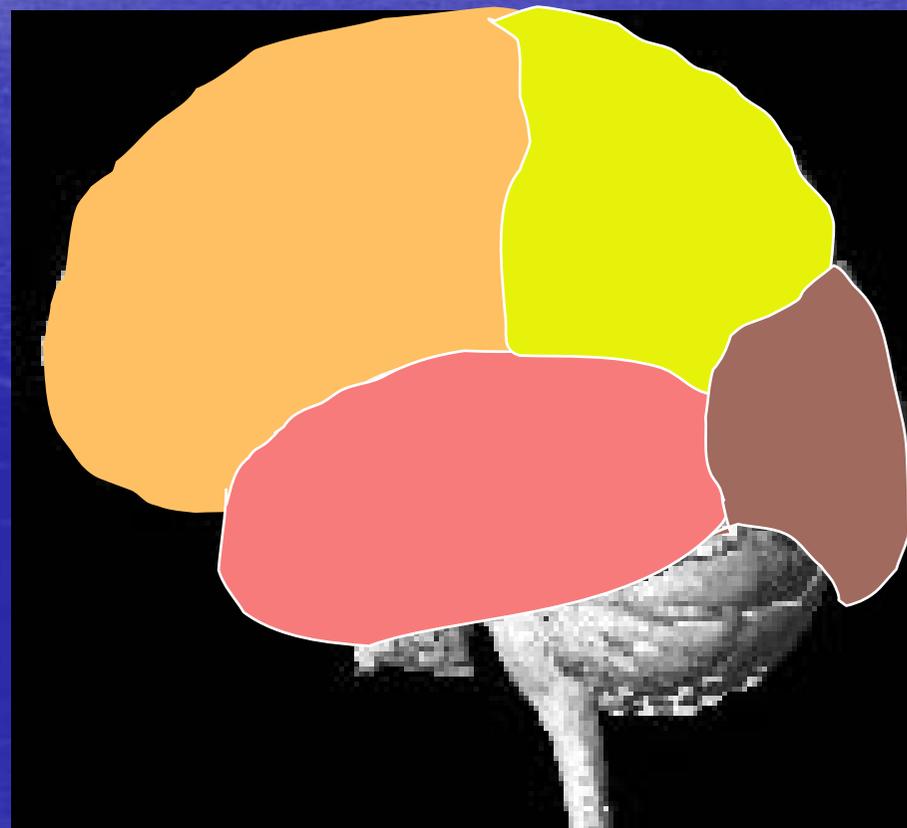
PIA MADRE



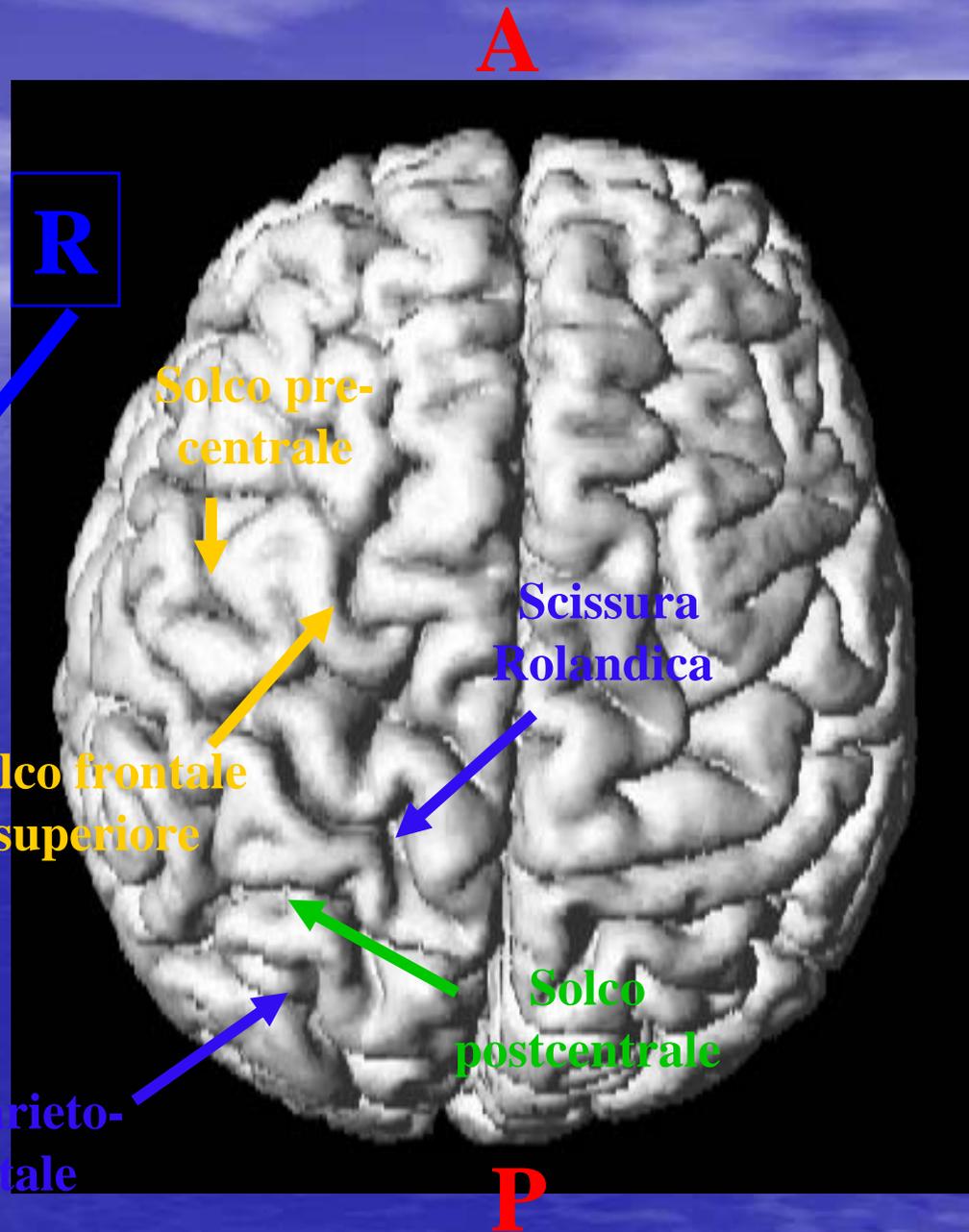
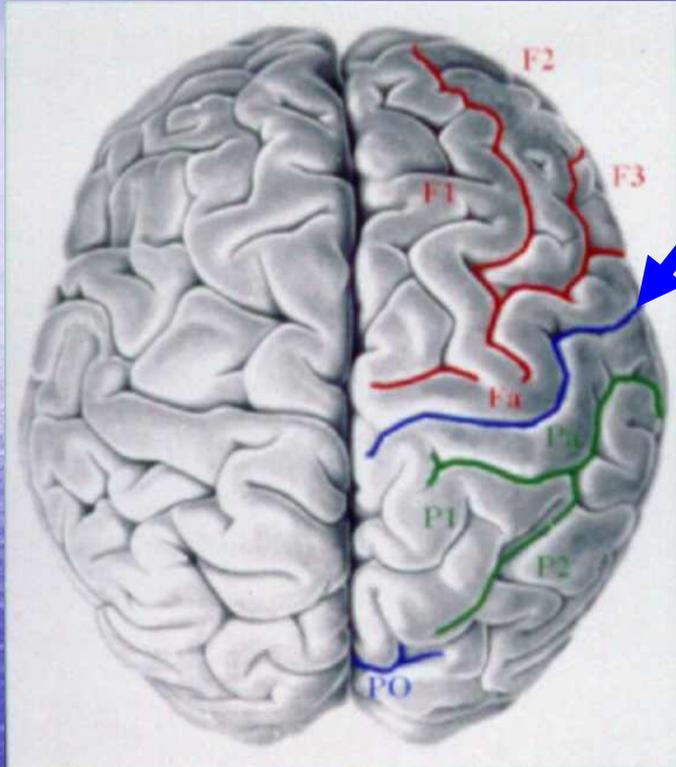
ANATOMIA DELL'ENCEFALO

5 LOBI CEREBRALI:

- *Lobo frontale*
- *Lobo parietale*
- *Lobo occipitale*
- *Lobo temporale*
- *Lobo insulare*

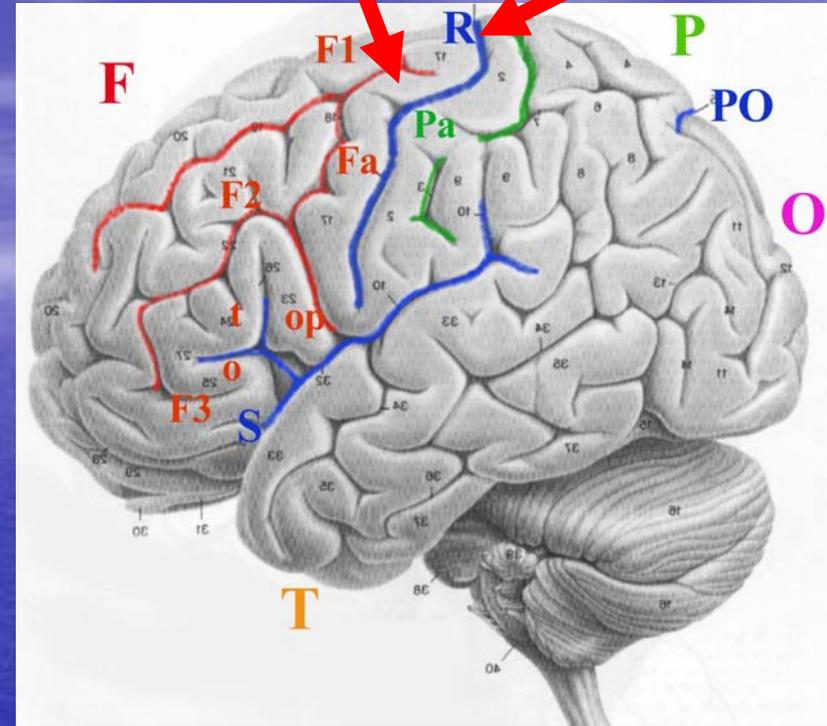


CORTECCIA superficie superiore



CORTECCIA superficie laterale

- Il **giro precentrale (Fa)** decorre obliquo in direzione postero-superiore ed il solco precentrale lo separa dai giri frontali superiore (F1), medio (F2) ed inferiore (F3)
- La **scissura centrale (di Rolando)** divide il lobo frontale dal lobo parietale e decorre postero-superiormente separando il giro pre-centrale (Fa) dal giro post-centrale (Pa)



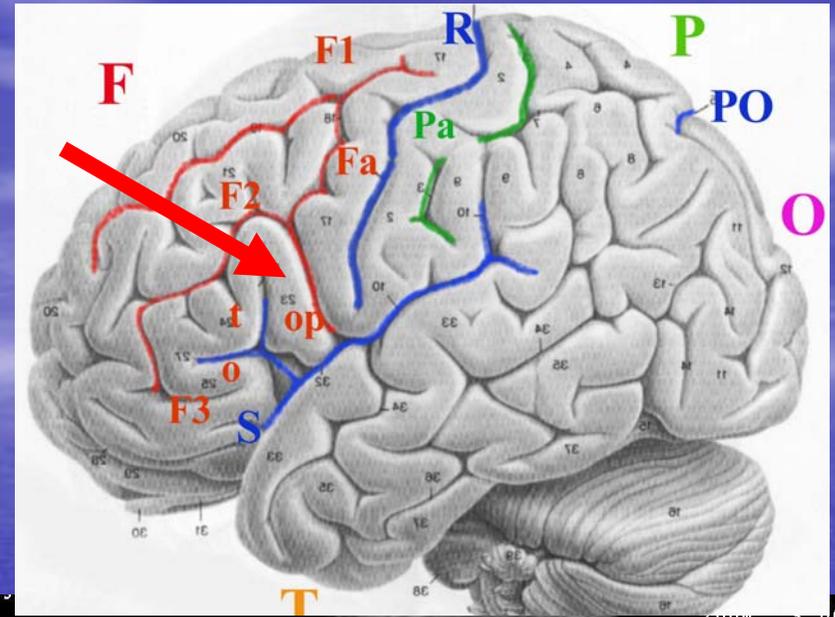
L'identificazione dei solchi e delle circonvoluzioni è importante per la localizzazione di lesione al fine della pianificazione del trattamento.

è possibile individuare dei punti di riferimento anatomici !

- **Utilizzando piani di scansione più profondi (i rapporti anatomici sono più costanti che in superficie!)**
- **Ricercando dei punti di repere anteriormente (dove la variabilità individuale è minore!) e identificando poi ciascun giro in senso A-P**

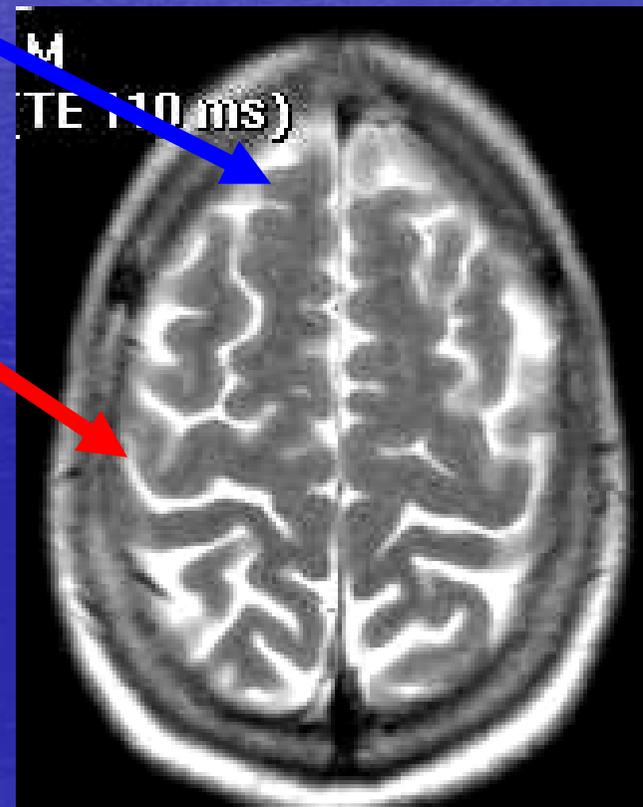
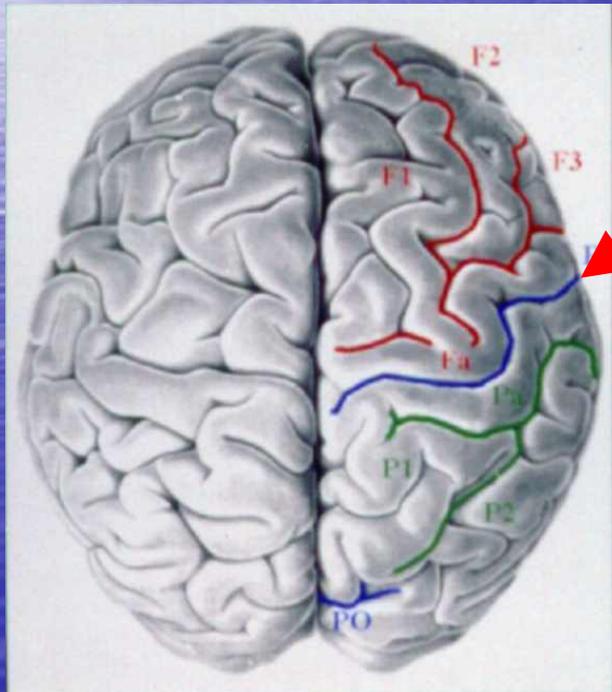
RAPPORTI ANATOMICI A LIVELLO DELLA CONVESSITA' MEDIO-INFERIORE

La "**pars opercularis**"
costituisce la porzione
posteriore del giro
frontale inferiore (F3)
ed il suo margine
inferiore è un processo a
forma di uncino che è in
contatto posteriormente
con il giro pre-centrale
(Fa)



RAPPORTI ANATOMICI DEI SOLCHI DELLA CONVESSITÀ

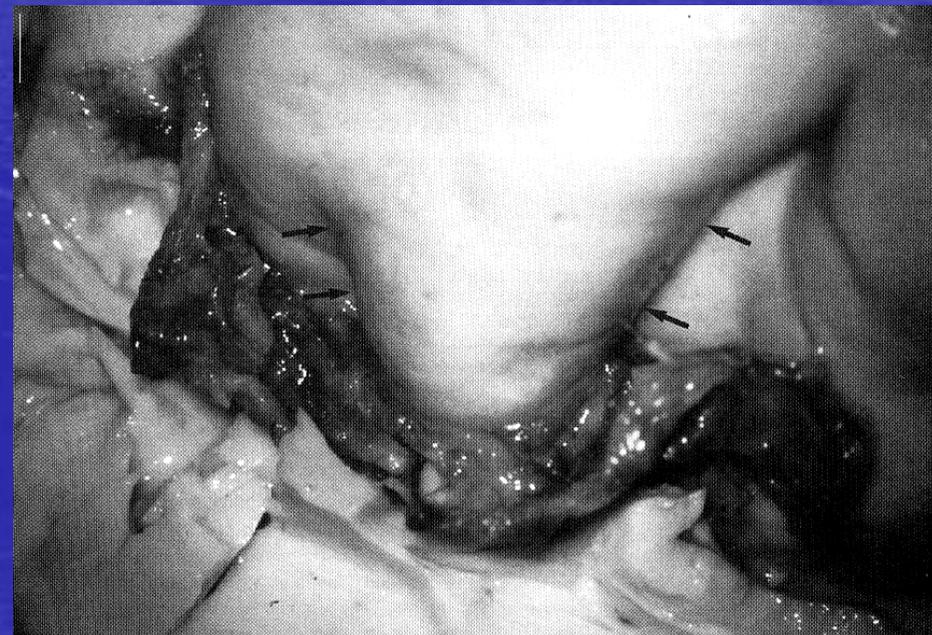
- Il **solco centrale (R)**, nelle scansioni più craniali, è il più lungo e quasi raggiunge la scissura interemisferica
- divide Fa da Pa (più sottile !)
- F1 termina posteriormente a livello del solco precentrale



RAPPORTI ANATOMICI DEI SOLCHI DELLA CONVESSITÀ

Il "bottone" della mano

- Nella porzione più profonda del **ginocchio medio del giro pre-centrale (Fa)** sono presenti due piccole incisure dirette anteriormente e non visibili in superficie



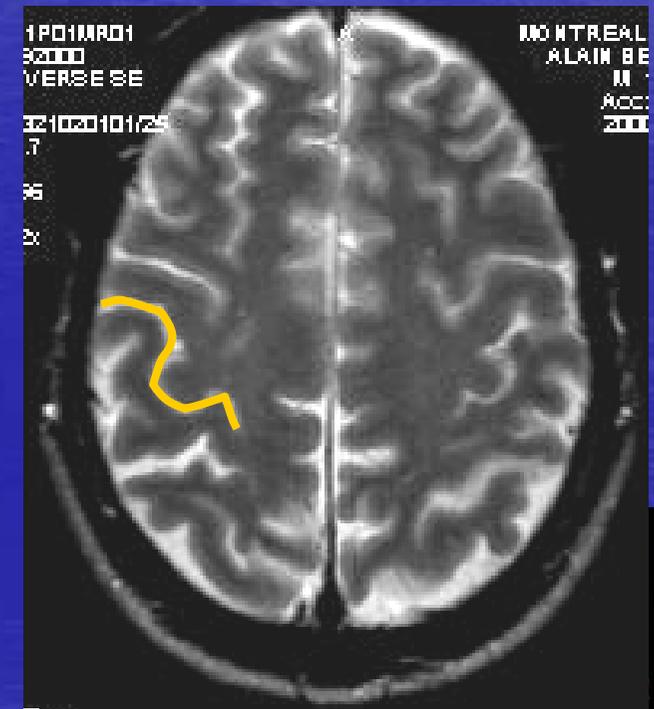
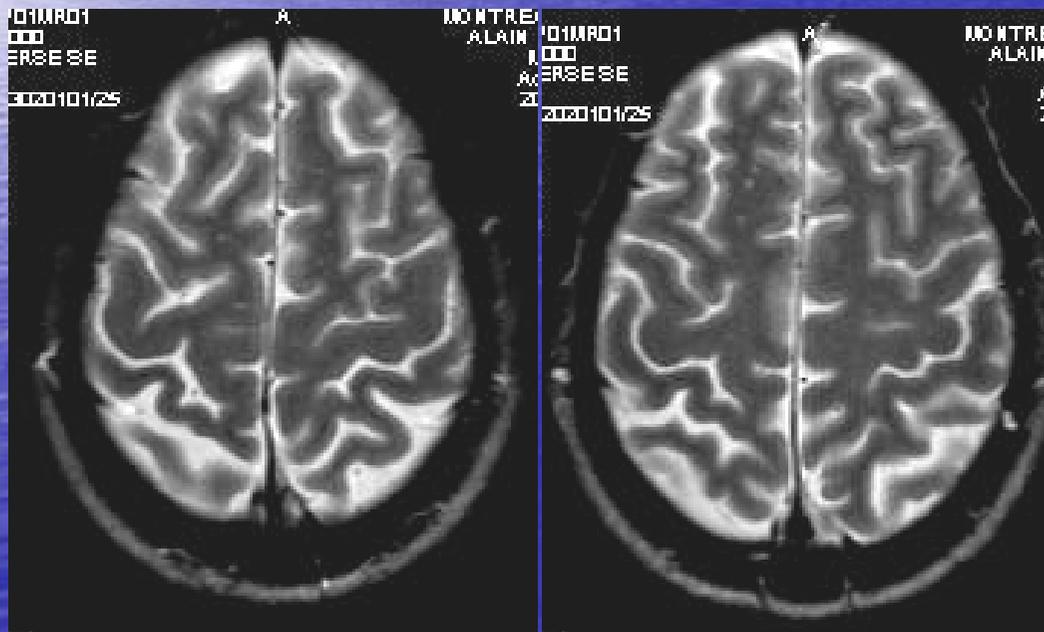
RAPPORTI ANATOMICI DEI SOLCHI DELLA CONVESSITÀ

Il "bottono" della mano

segno dell' Ω

superficie

profondità

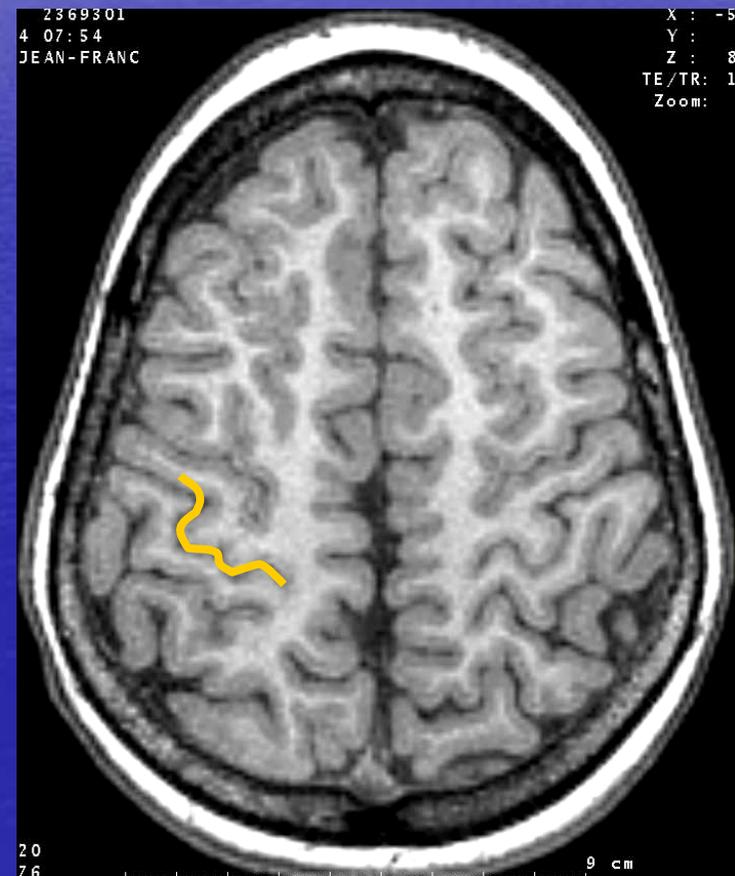


RAPPORTI ANATOMICI DEI SOLCHI DELLA CONVESSITÀ

Il "bottone" della mano

- Nel 10% dei casi, per la presenza di una terza incisura nel ginocchio medio, il "bottone" della mano presenta una ulteriore segmentazione assumendo la forma di una ε orizzontale

segno dell' ε

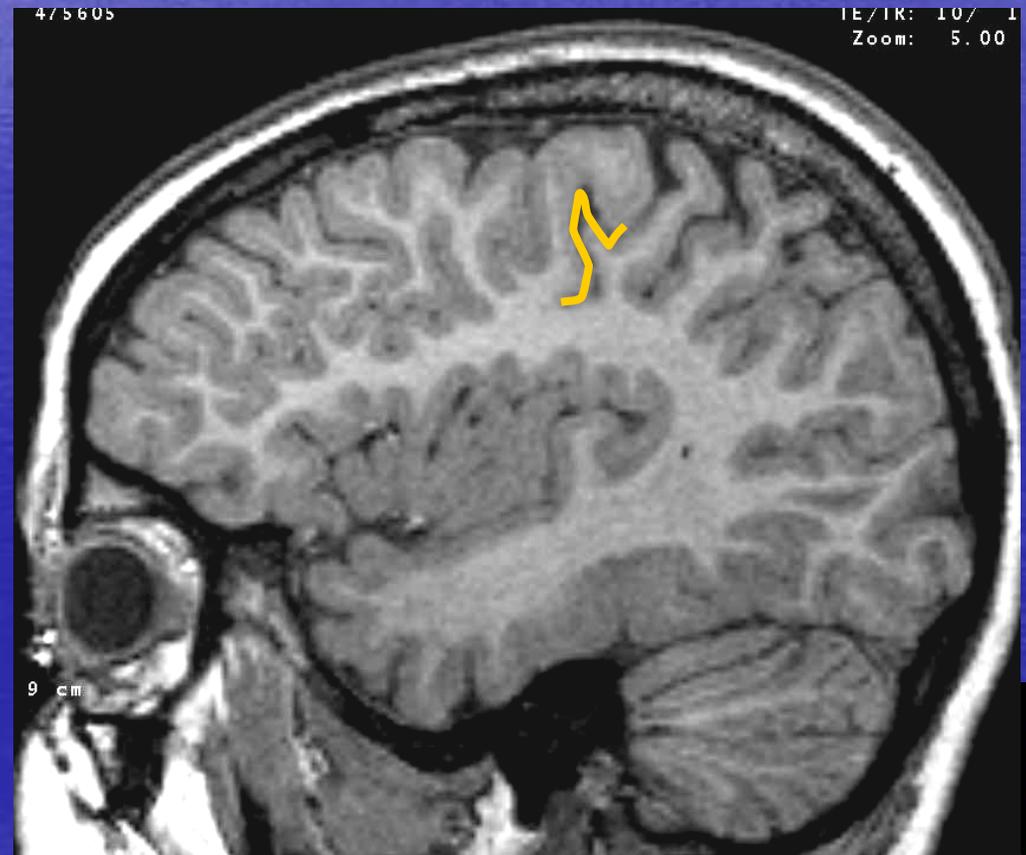


RAPPORTI ANATOMICI DEI SOLCHI DELLA CONVESSITÀ

Il "bottone" della mano

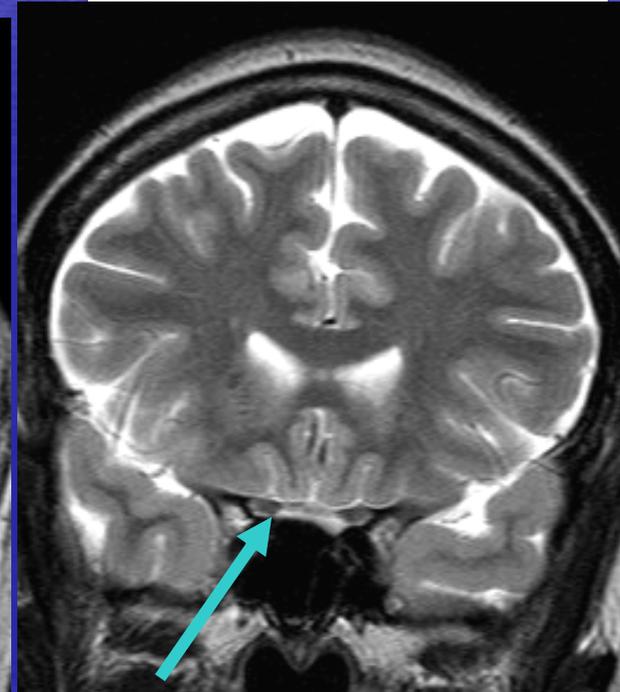
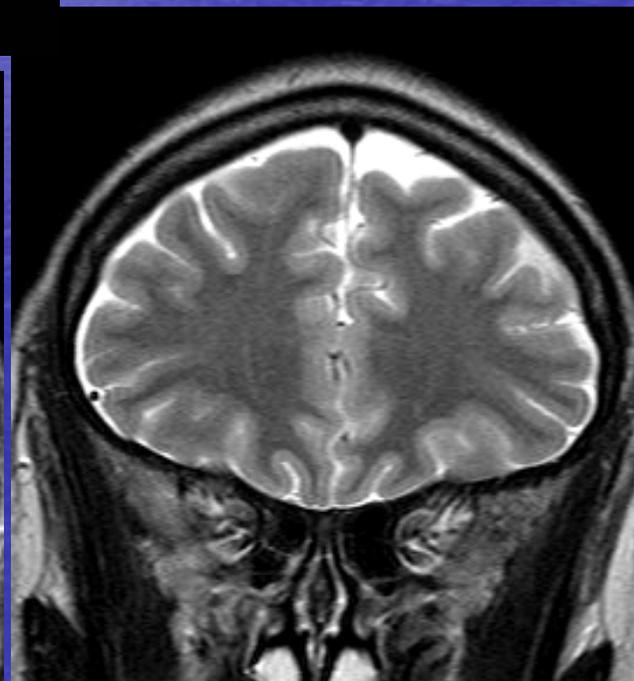
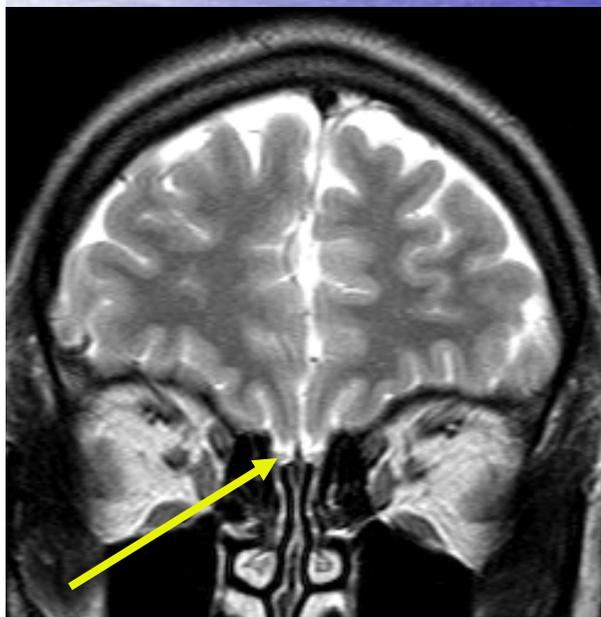
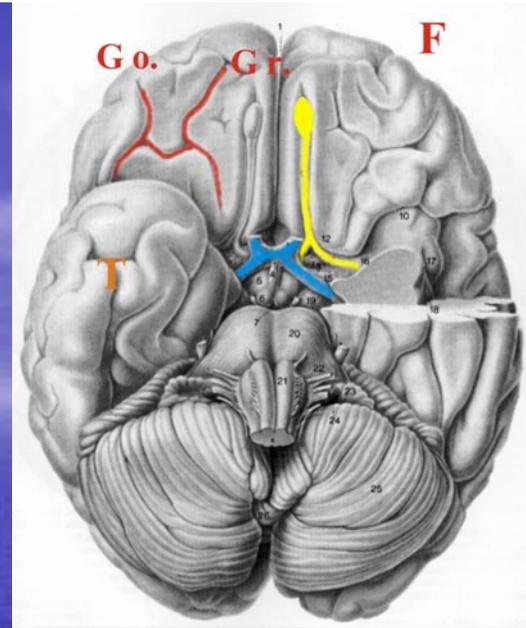
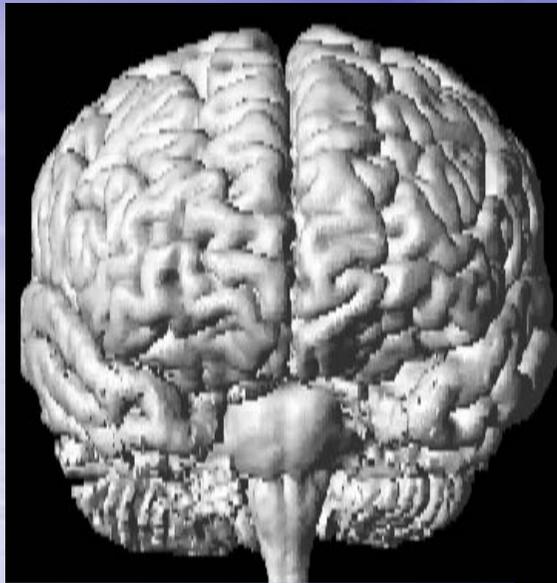
segno dell' uncino

- Nelle scansioni sagittali laterali il "bottone" della mano ha la forma di un uncino rivolto posteriormente



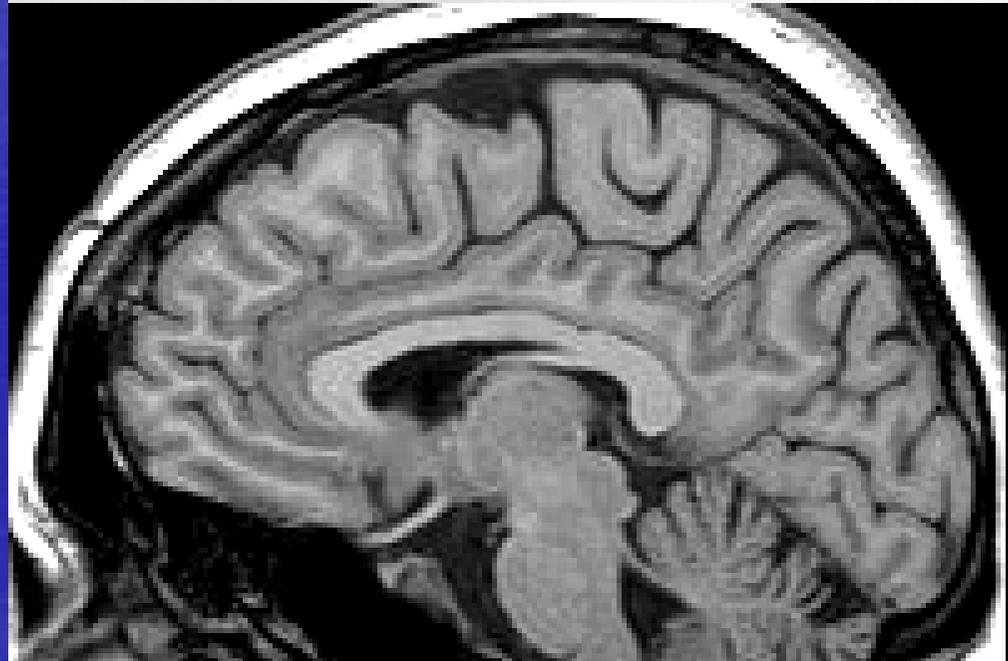
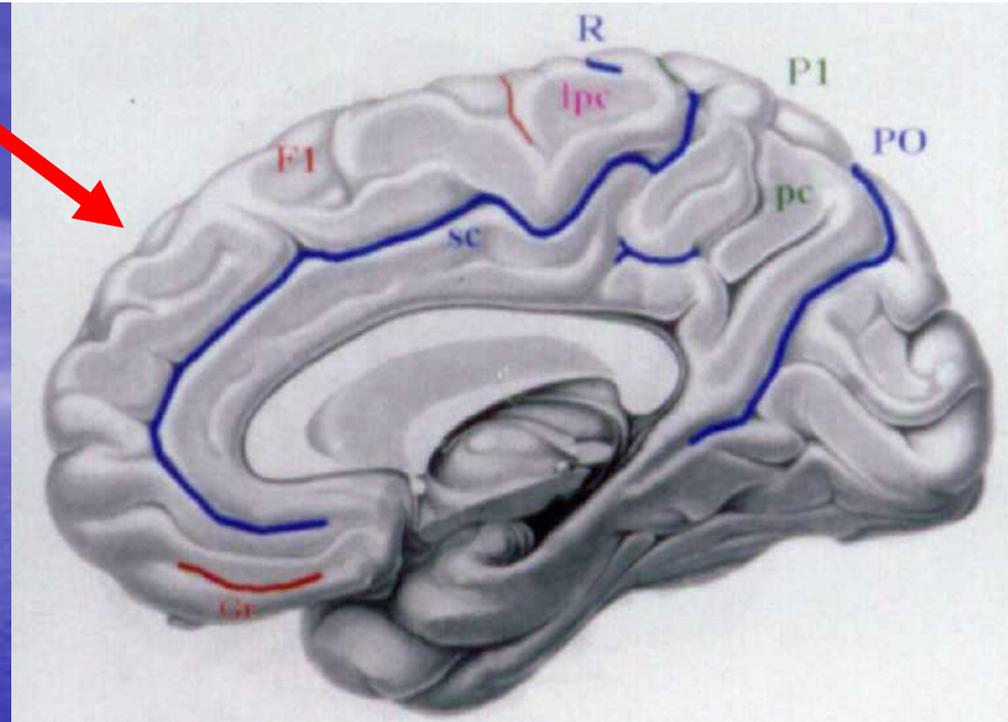
CORTECCIA

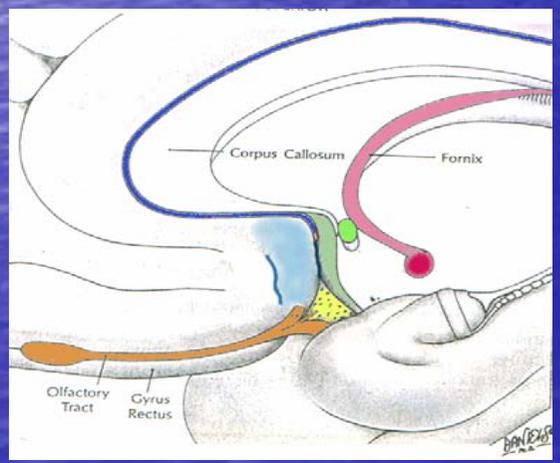
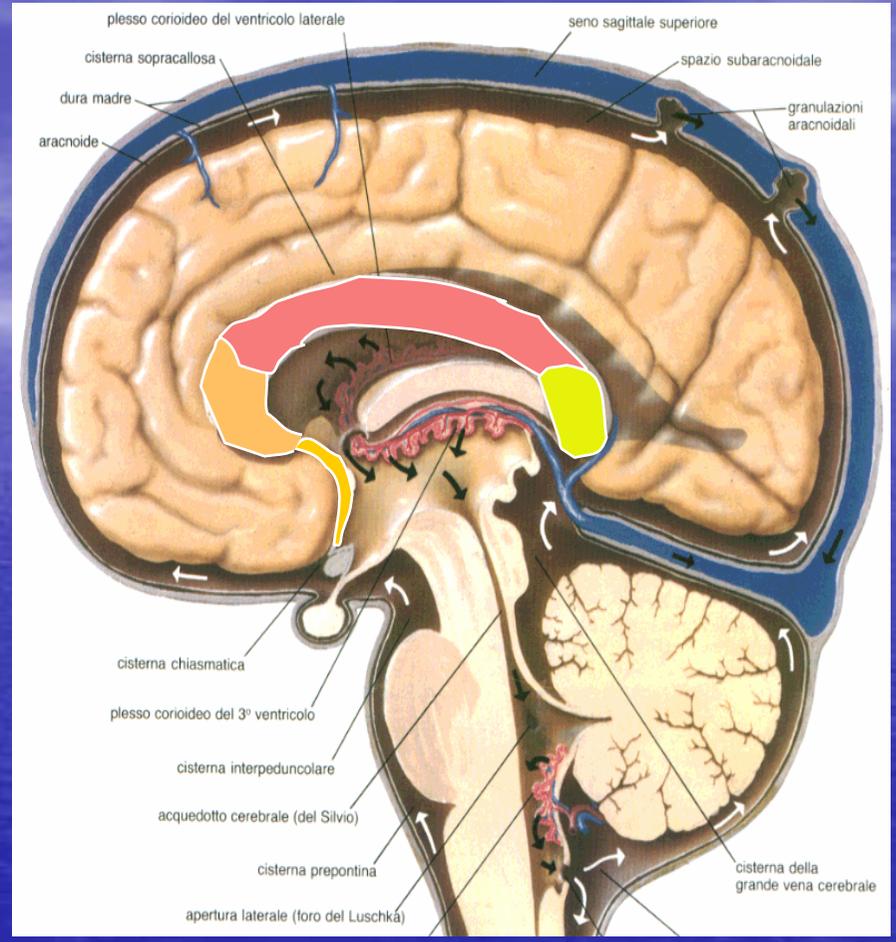
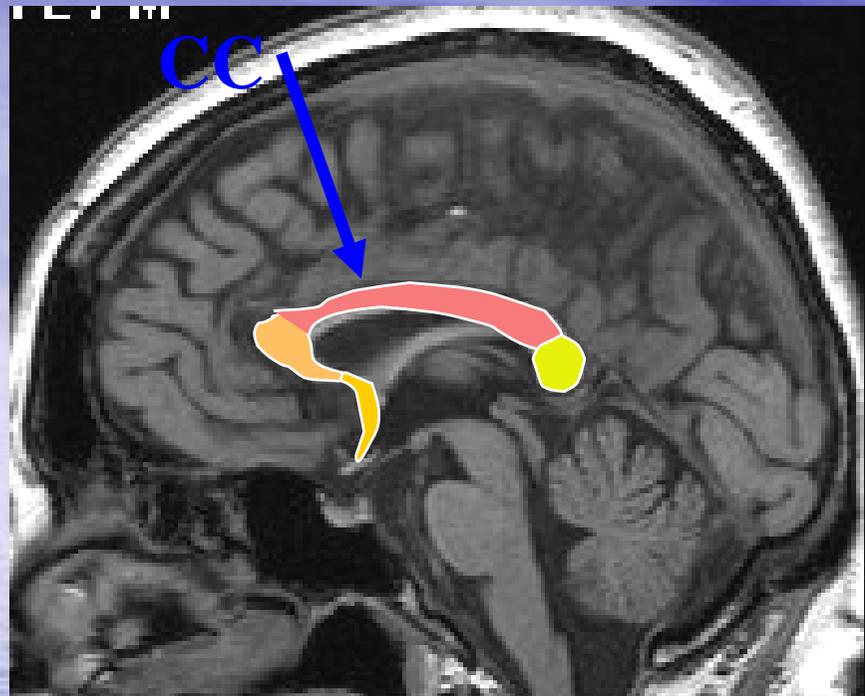
superficie inferiore



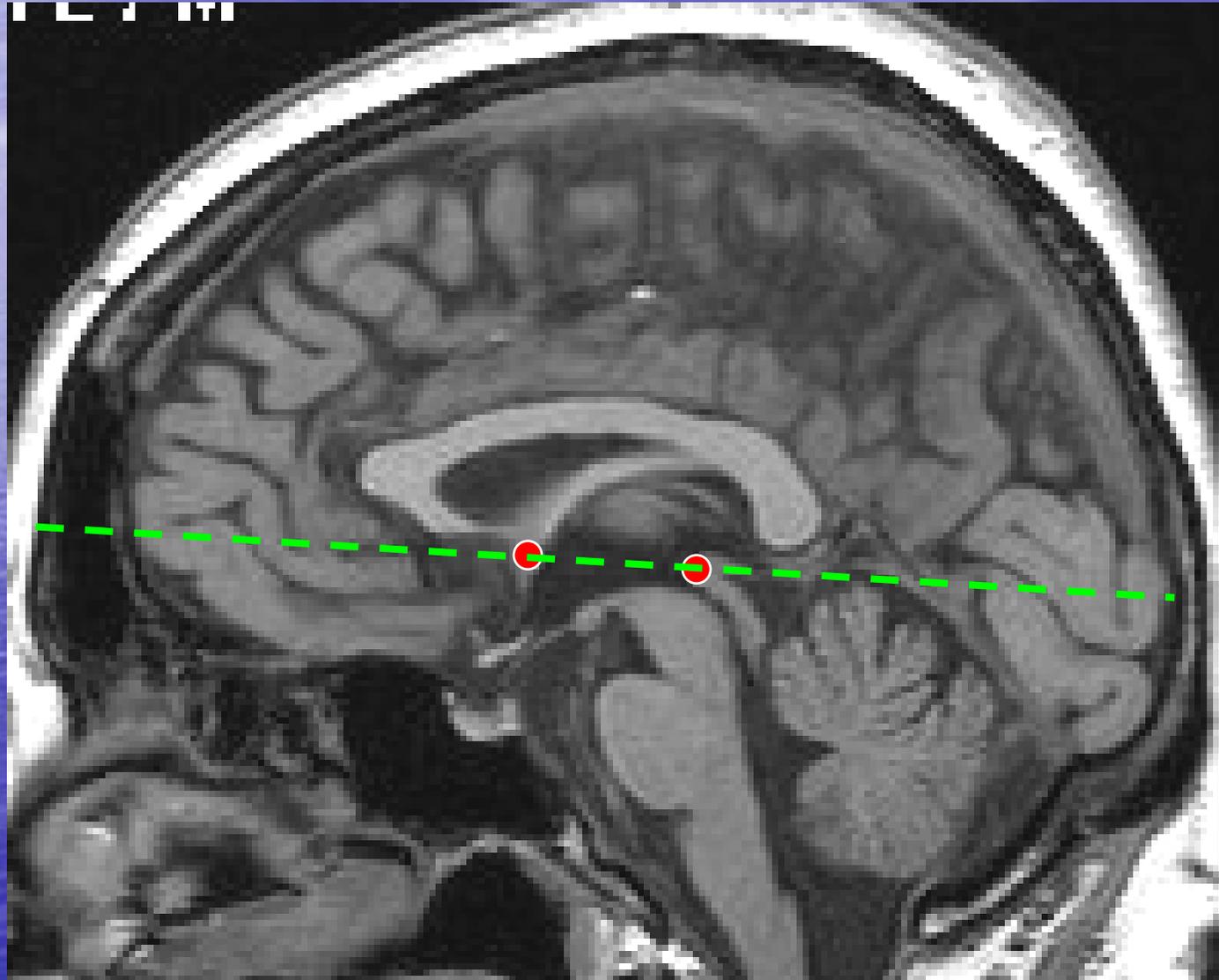
CORTECCIA superficie mediale

- Il **giro frontale superiore (F1)** decorre in senso antero-posteriore sul piano sagittale dal polo frontale al solco precentrale



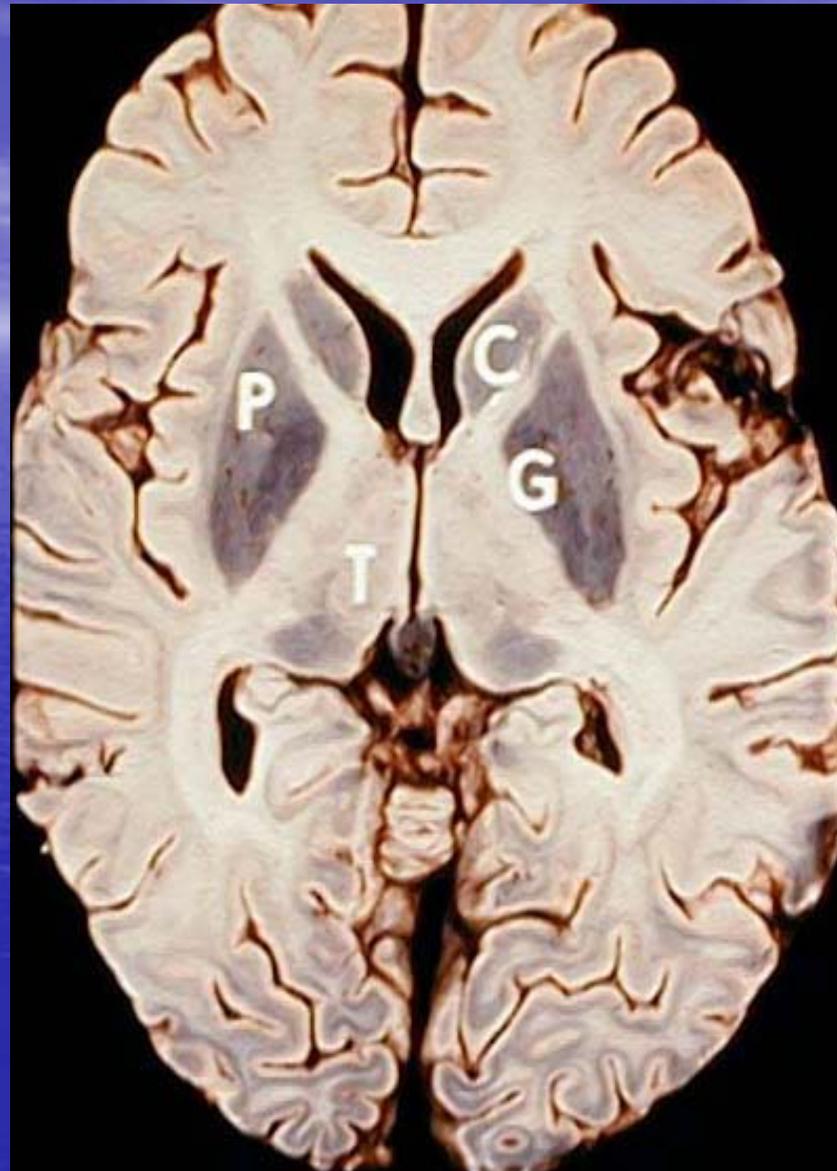
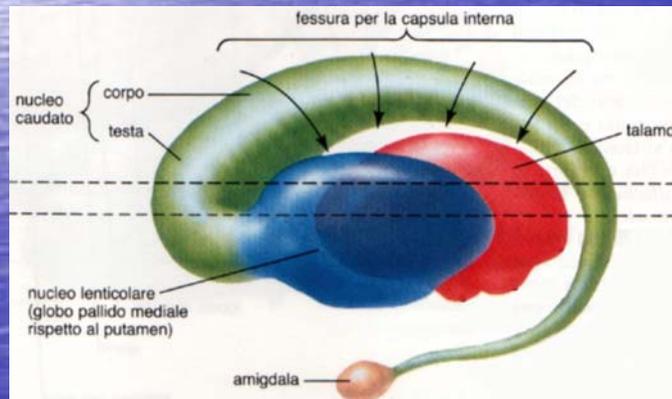


LINEA BICOMMISSURALE (di Talairach)

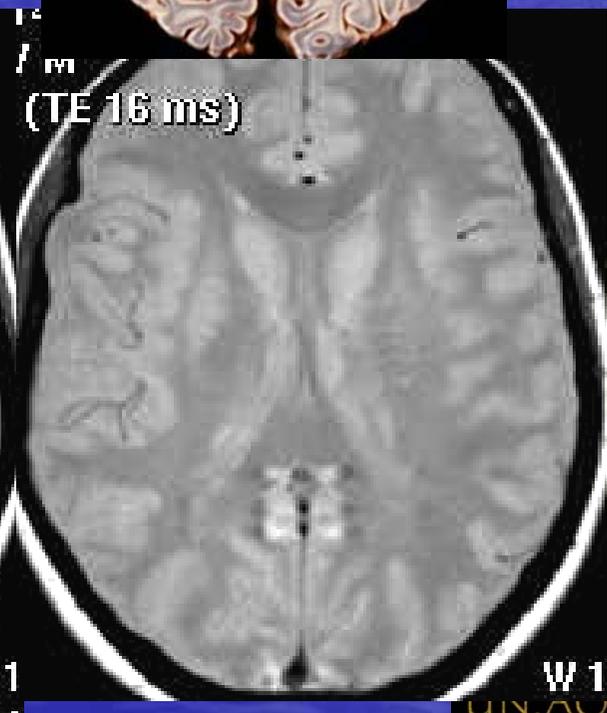
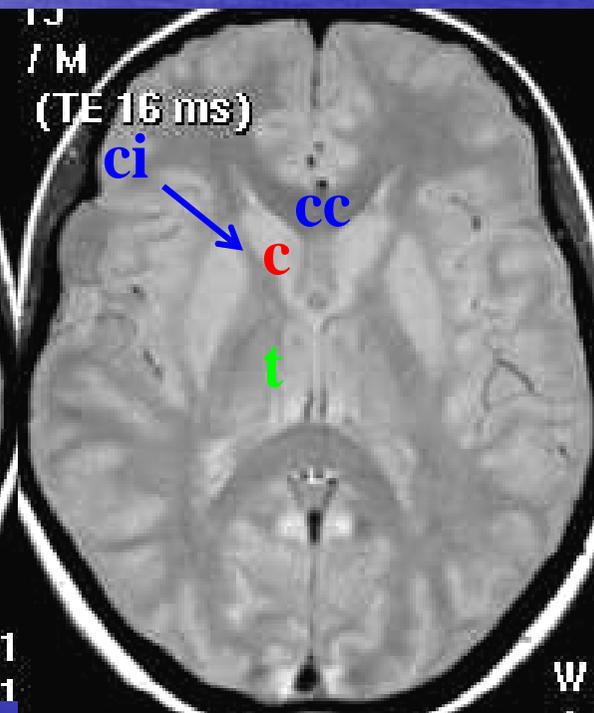
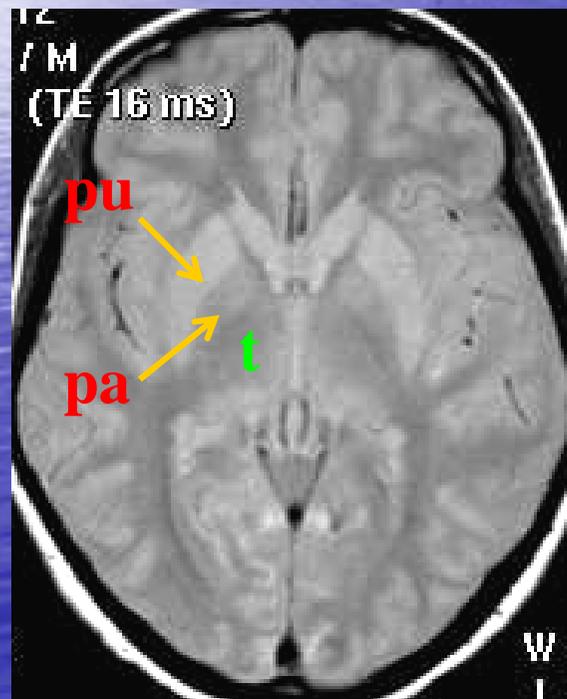
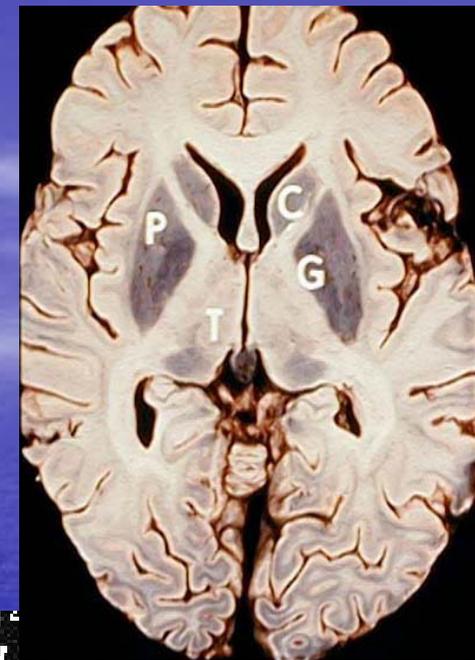


NUCLEI DELLA BASE

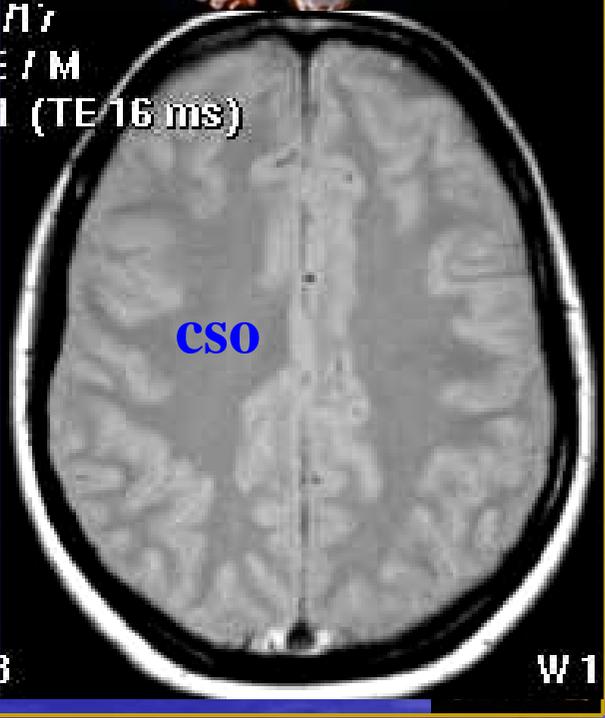
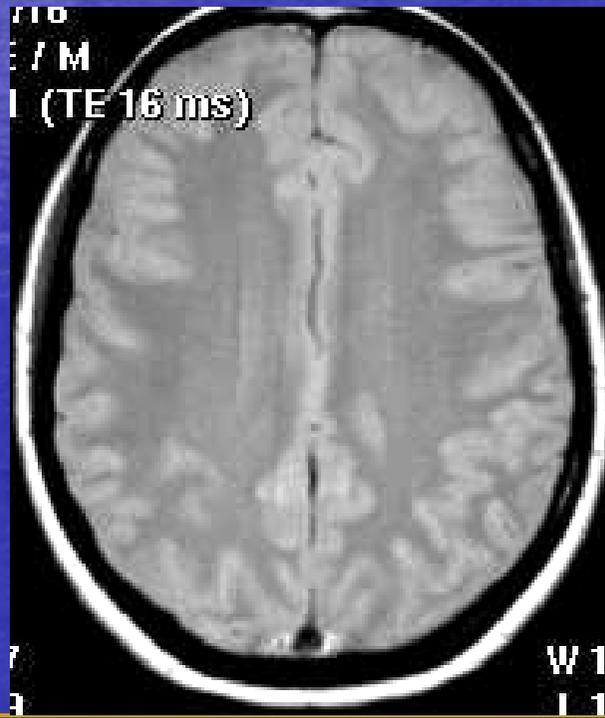
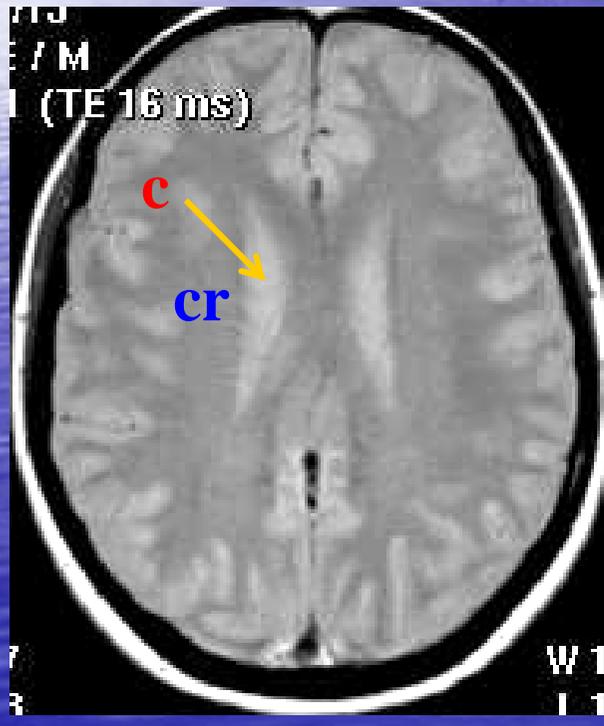
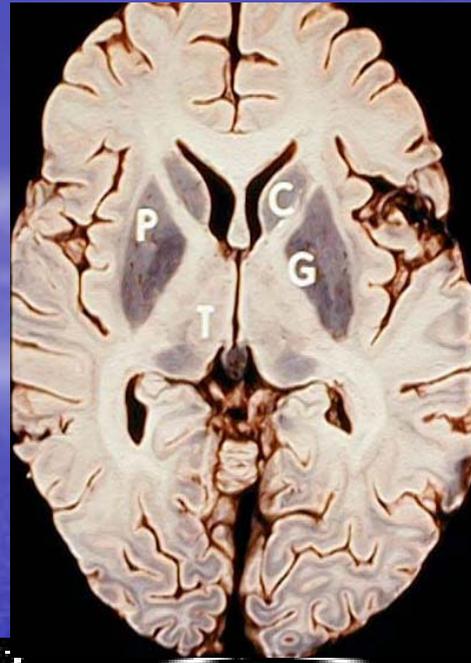
- **n. lenticolare:**
putamen (lat.)
e pallido (med.)
- **n. caudato**



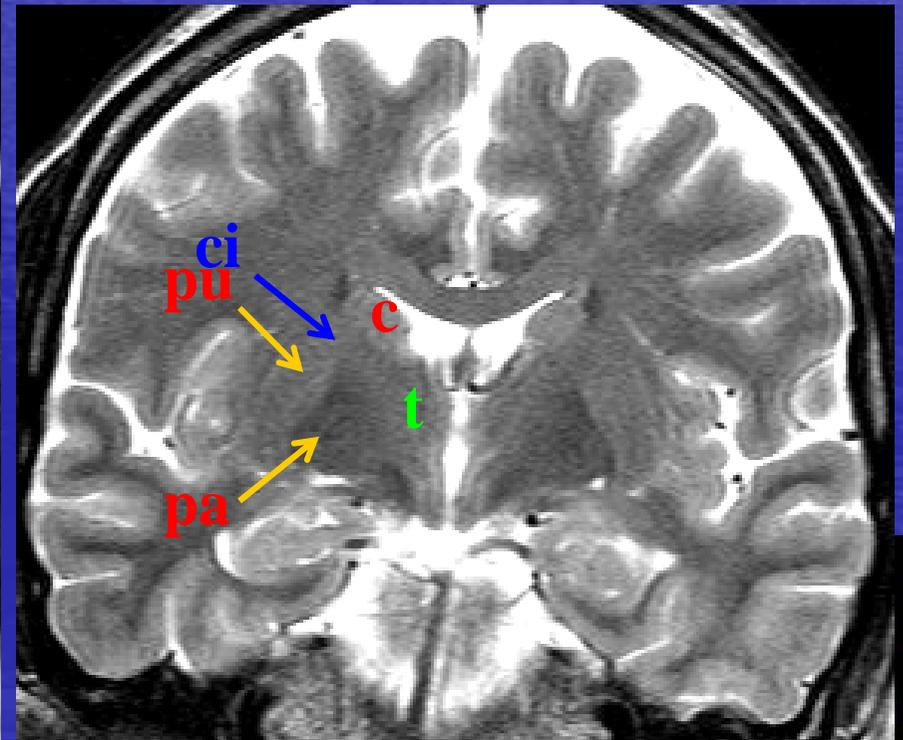
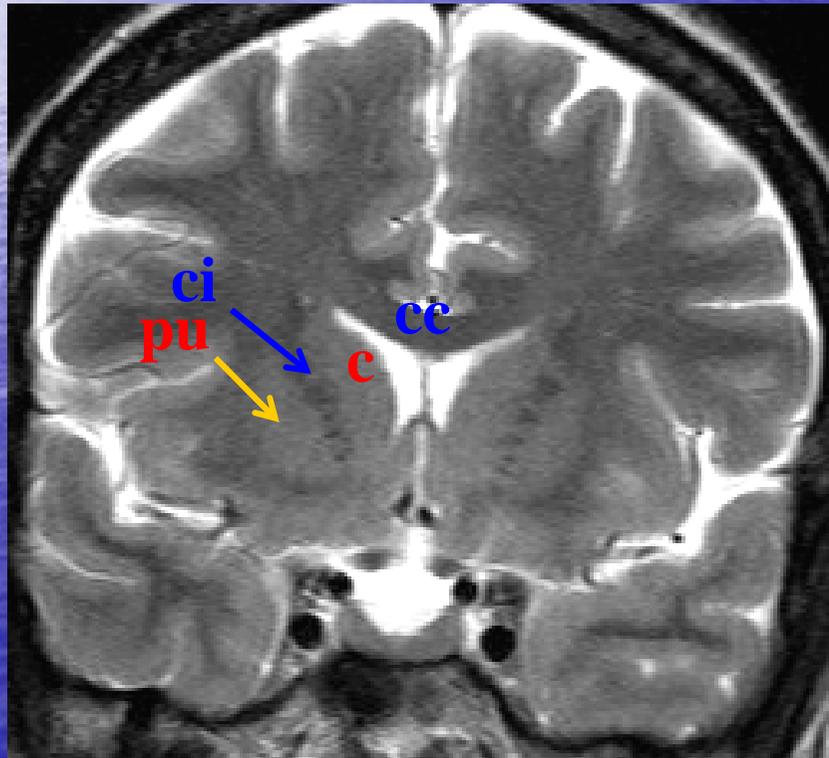
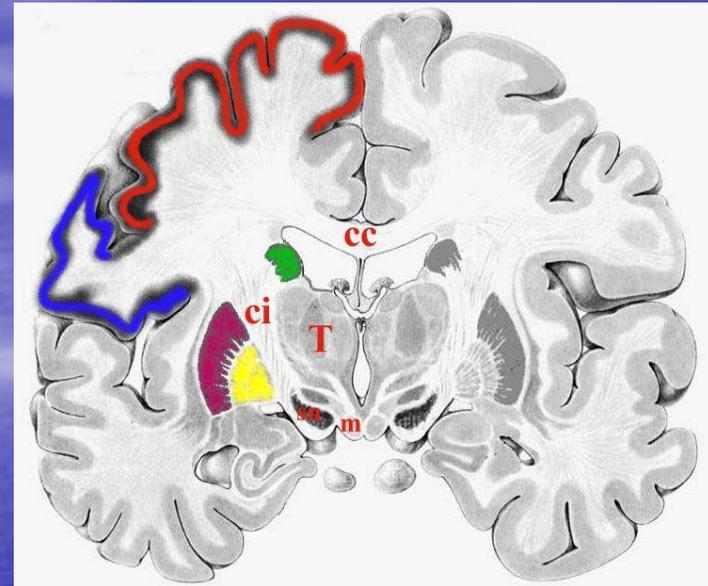
NUCLEI DELLA BASE



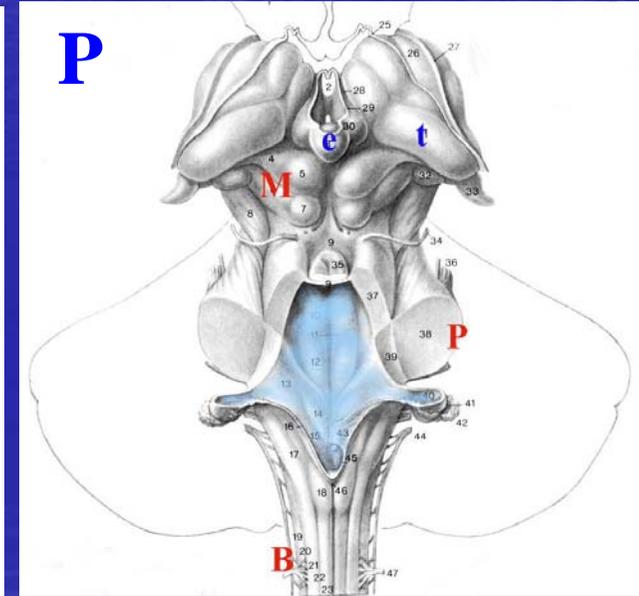
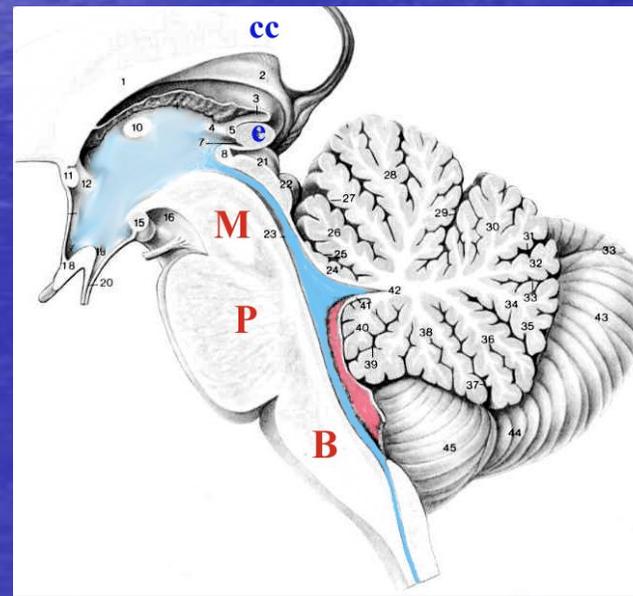
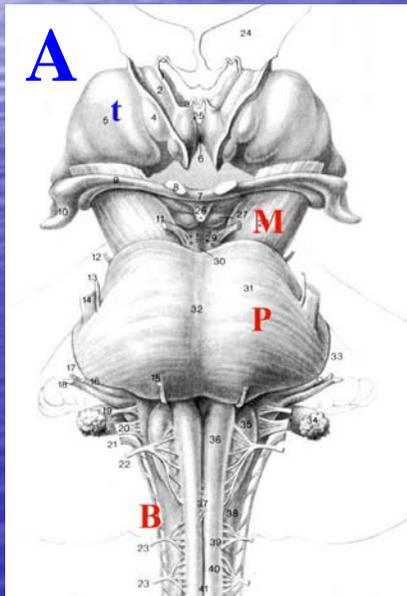
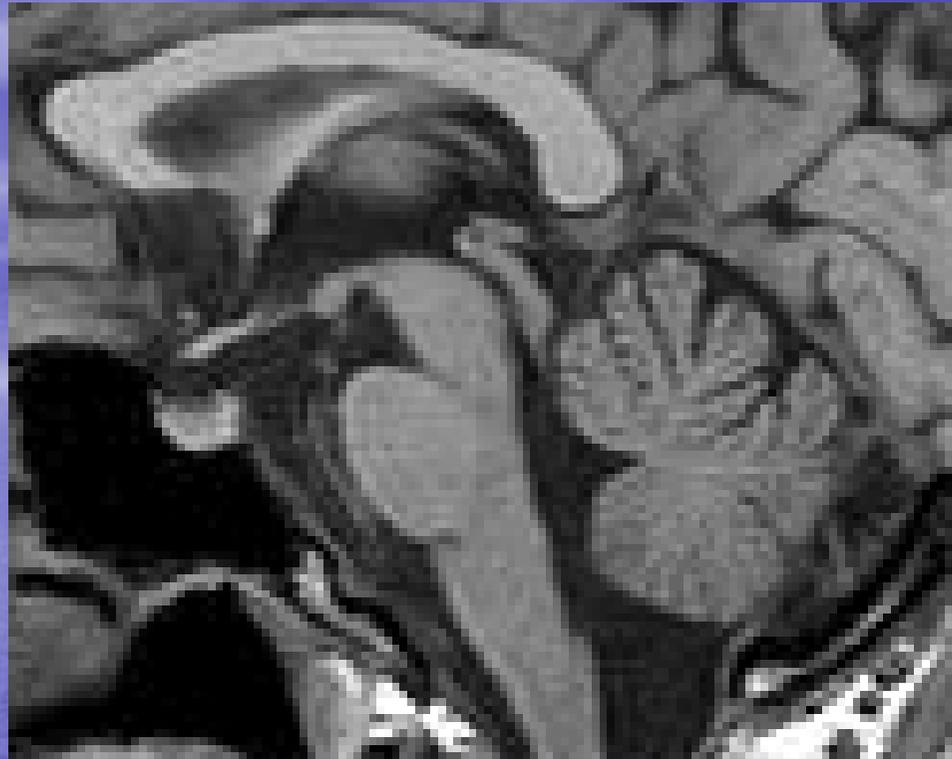
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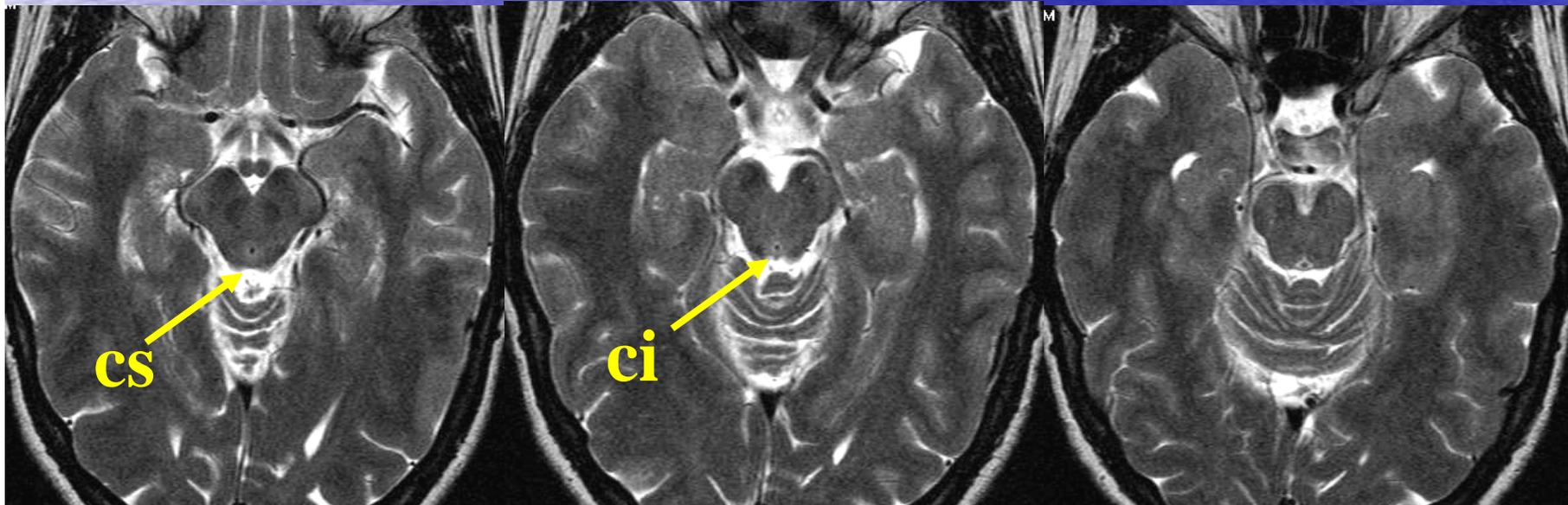
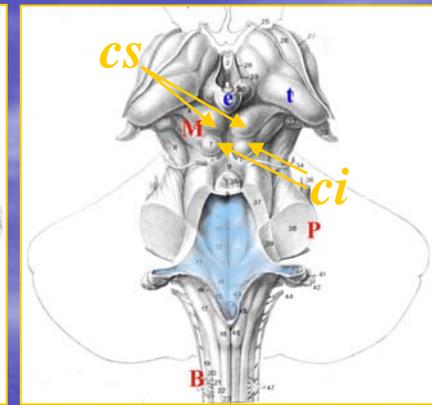
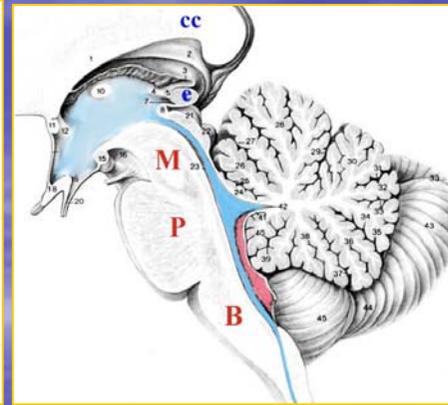
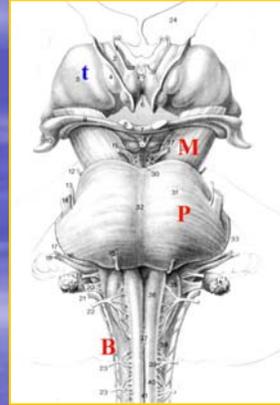
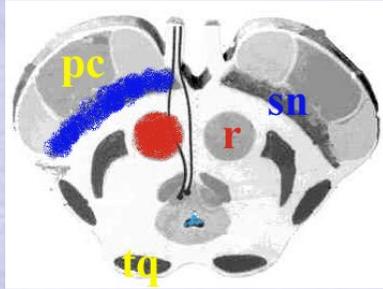
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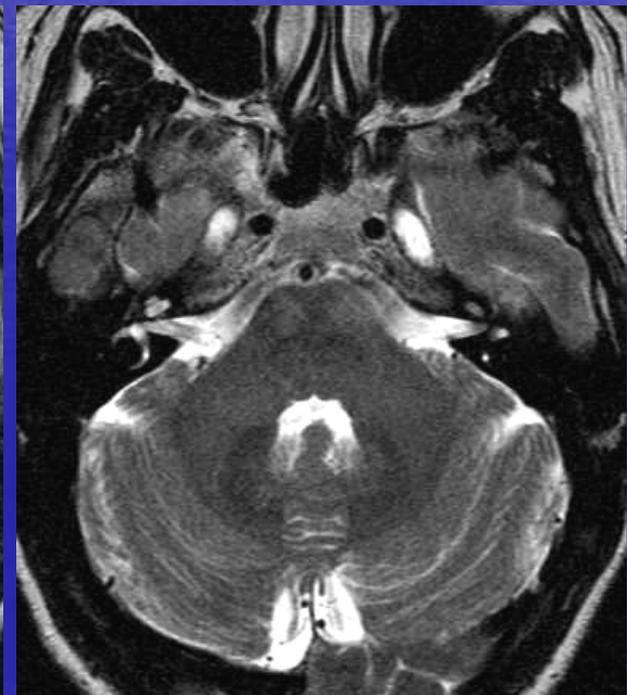
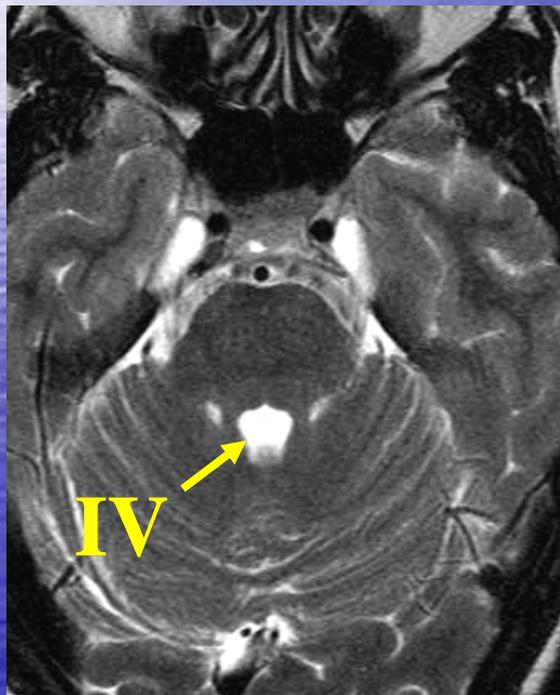
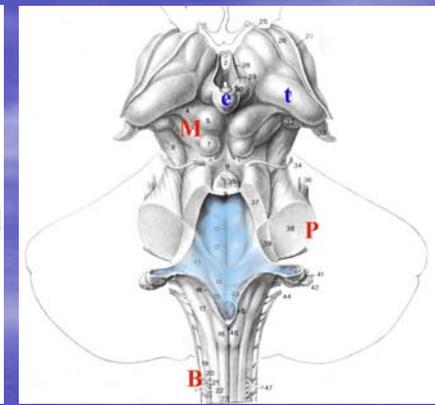
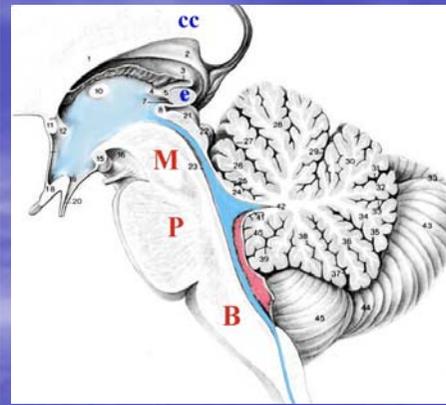
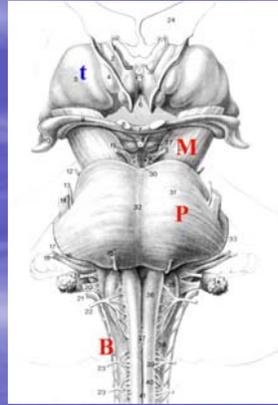
TRONCO



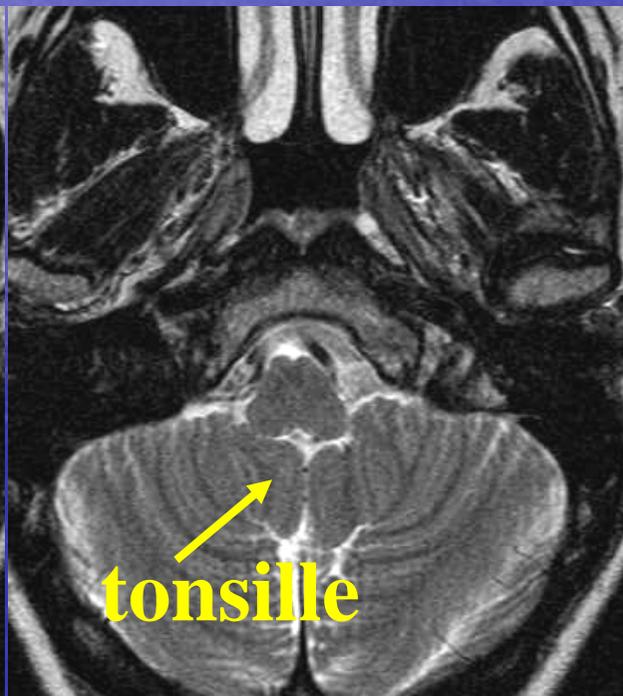
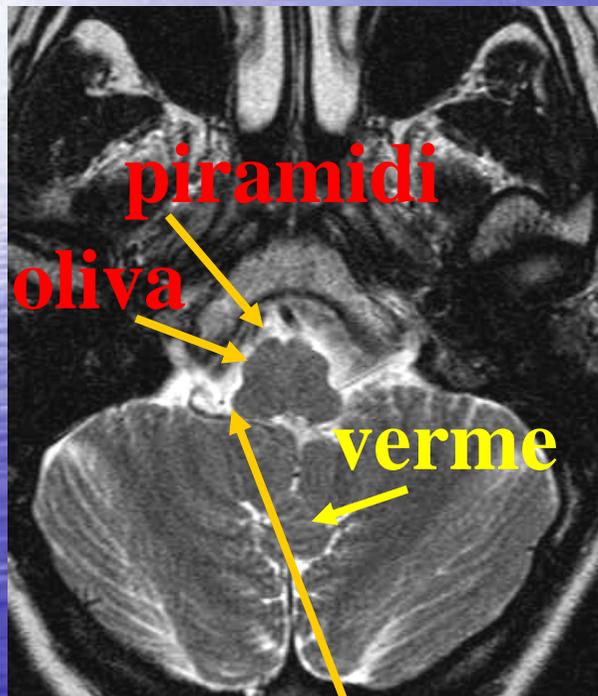
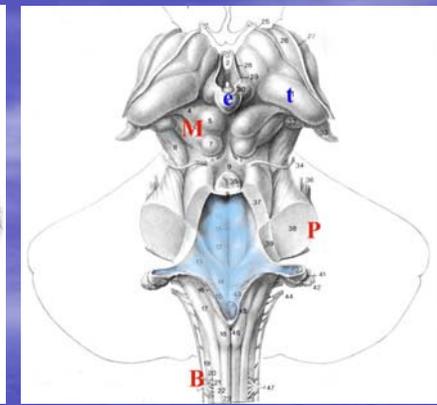
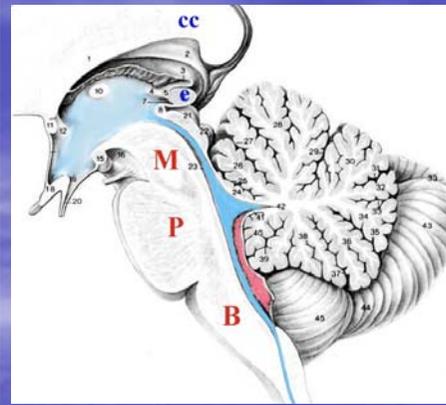
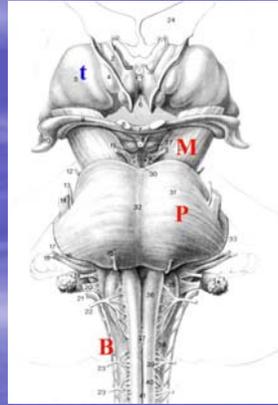
TRONCO mesencefalo



TRONCO ponte

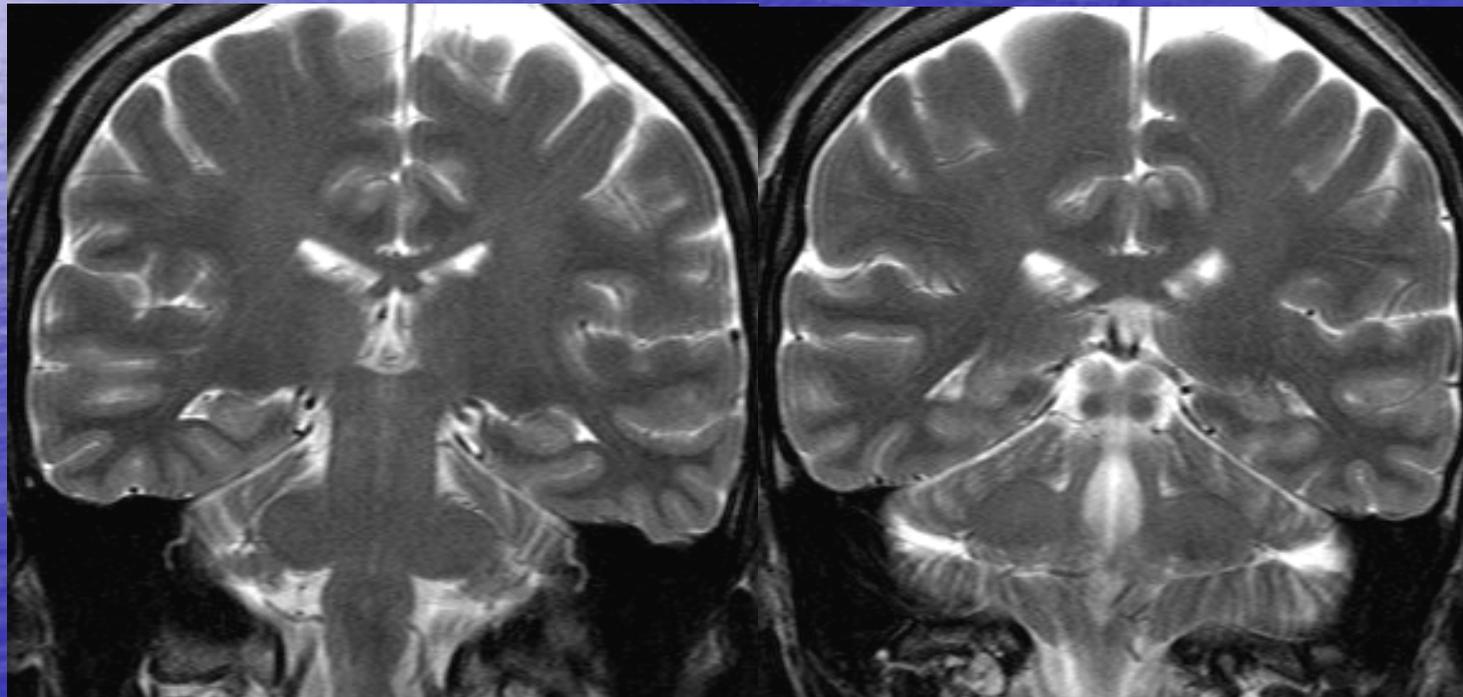
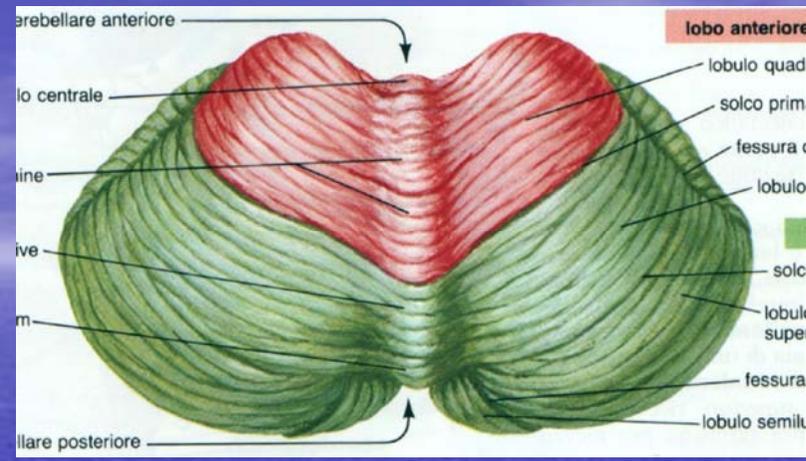
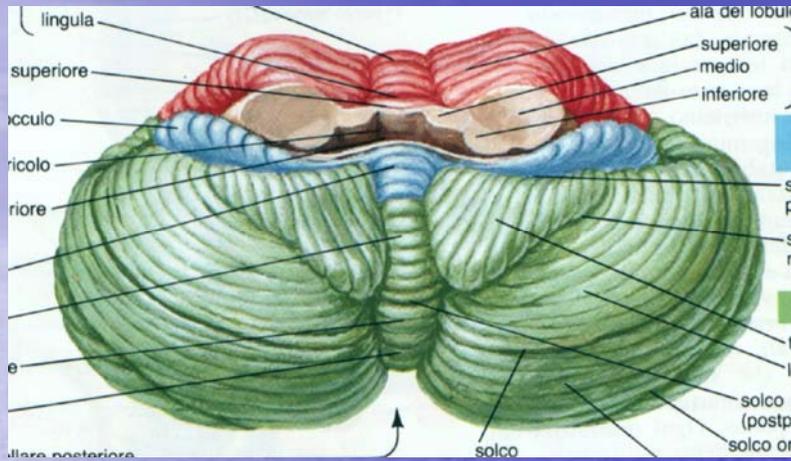


TRONCO bulbo

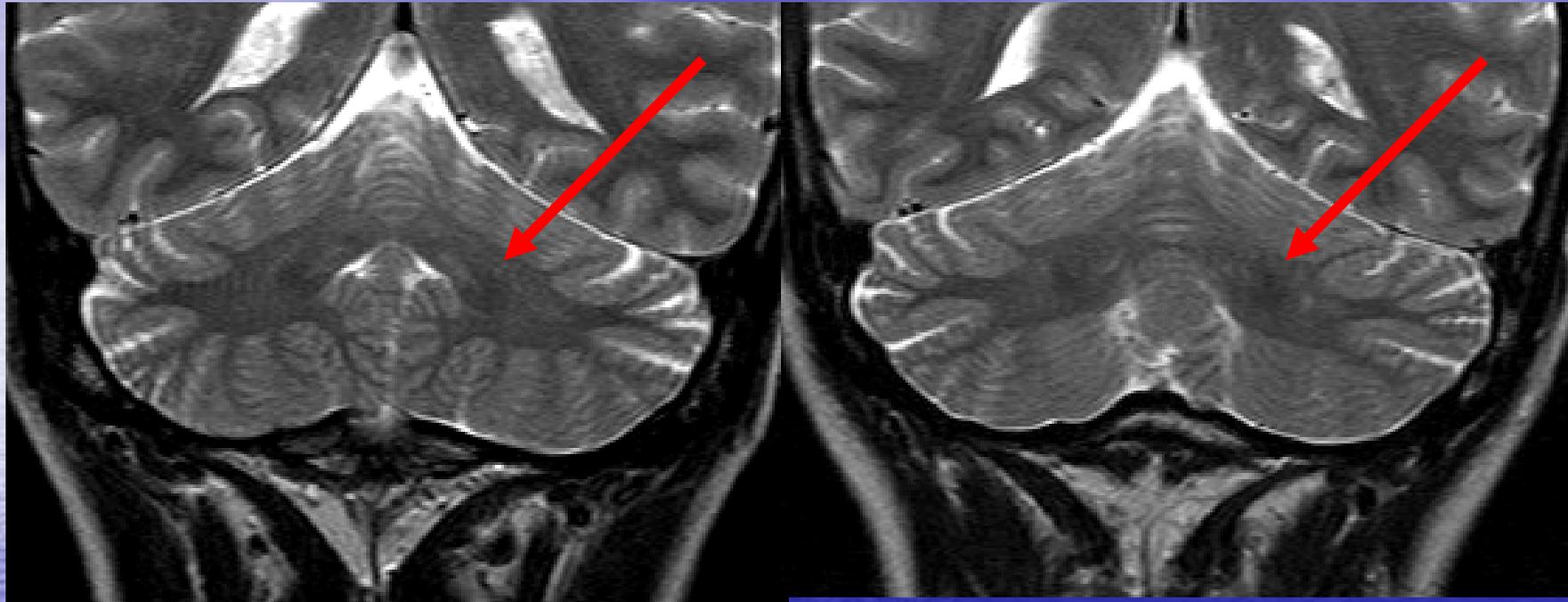


Peduncoli cerebellari inferiori

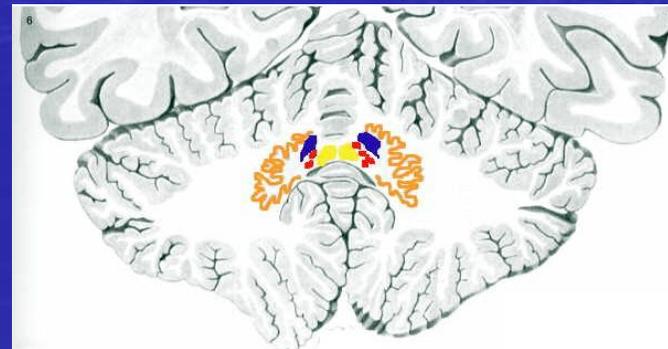
CERVELLETTO



CERVELLETTO



- n. del tetto
- n.globoso
- **n. dentato**
- n. emboliforme



CERVELLETTO

verme

