
**Université catholique de Louvain**

*Secteur des Sciences de la Santé*

# Sémiologie radiologique de la pathologie hypophysaire

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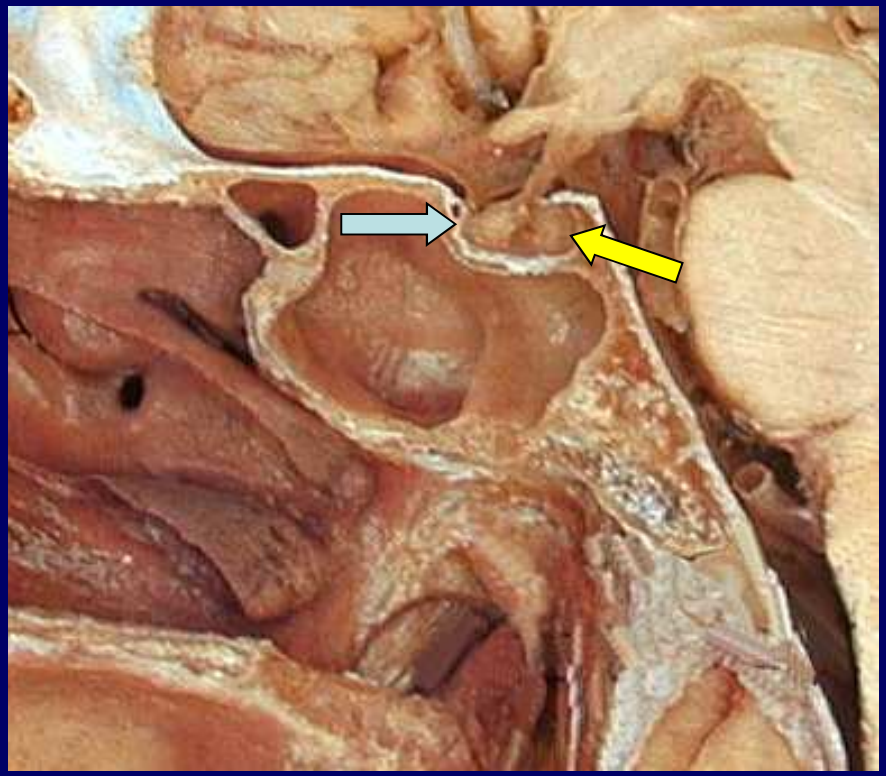
*Chef de Clinique UCL-St-Luc*

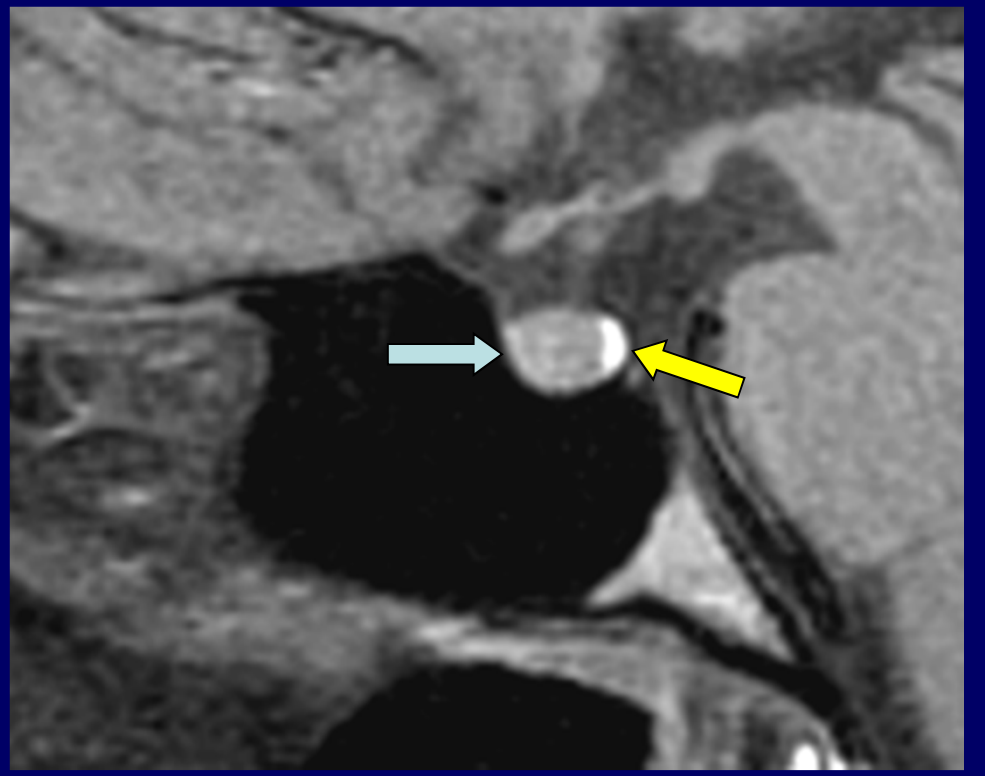
DES RDGN

Cours de spécialité

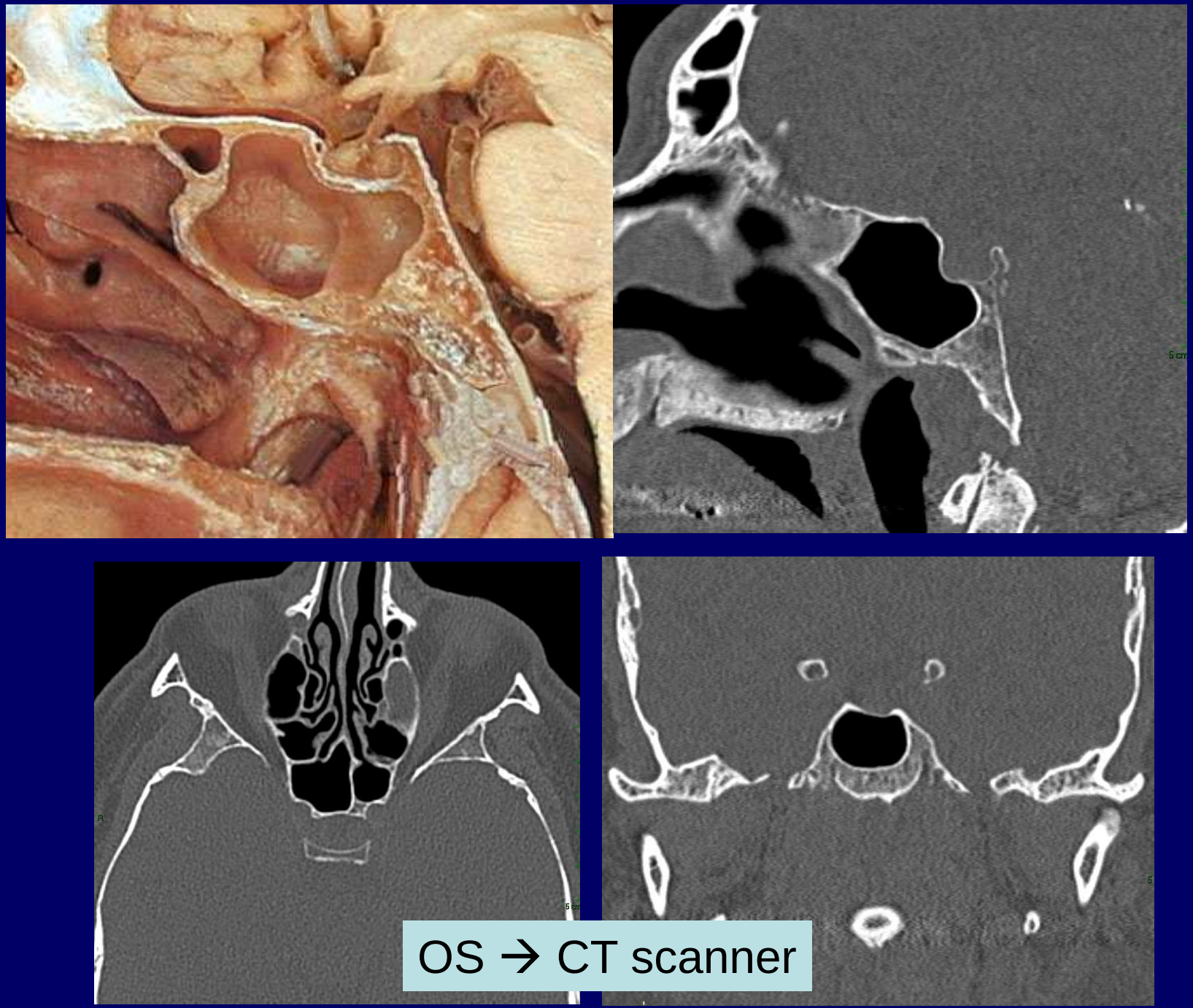
*Neuroradiologie*

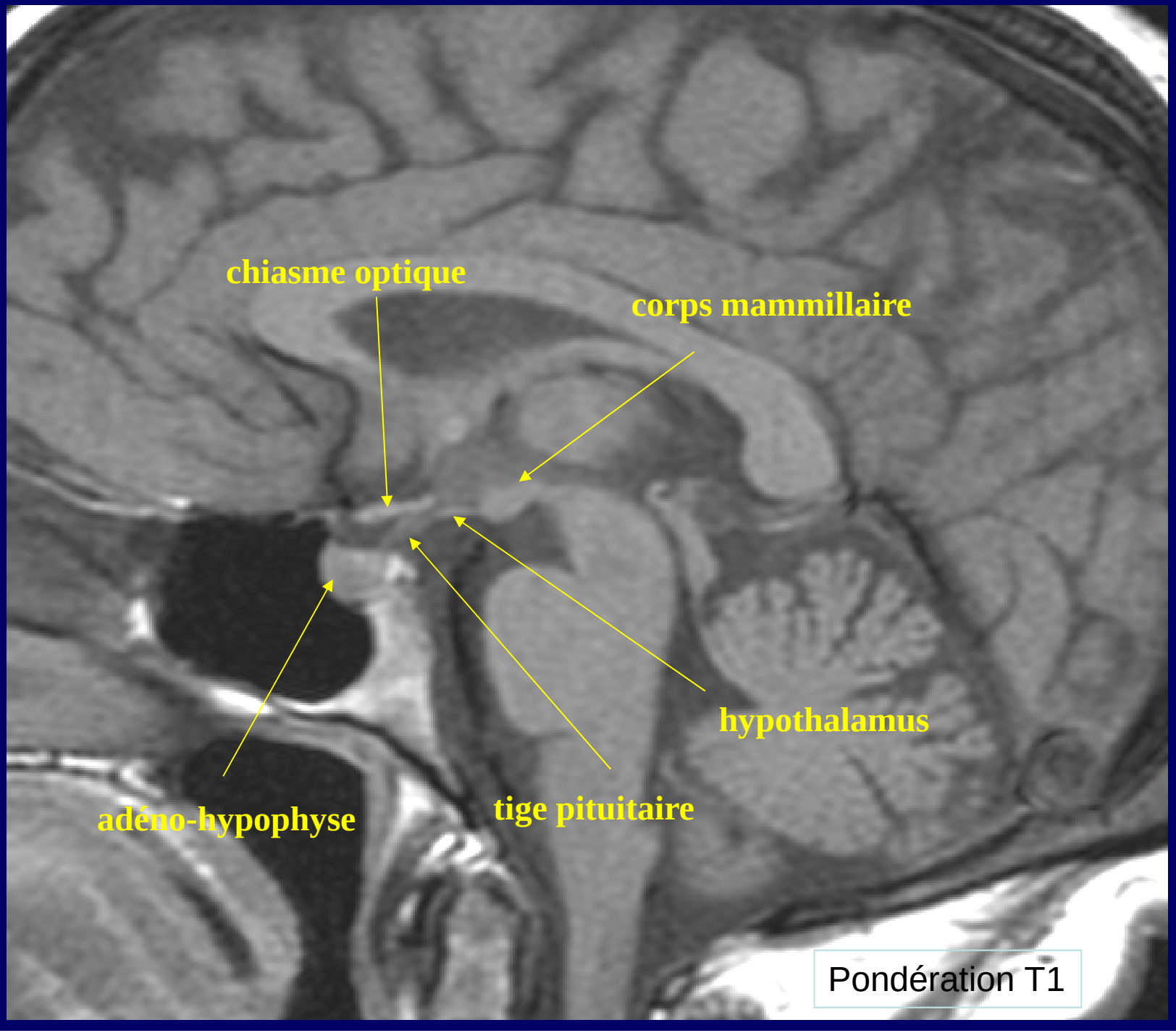
18 novembre 2016





Parenchyme → IRM


OS → CT scanner


chiasme optique
corps mammillaire
hypothalamus
tige pituitaire
adéno-hypophyse
Pondération T1

Pondération T2

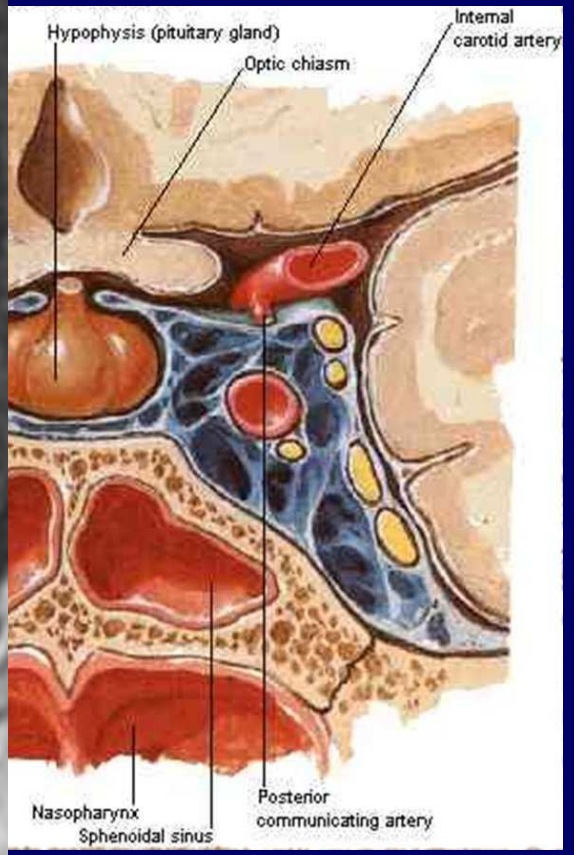
carotide interne

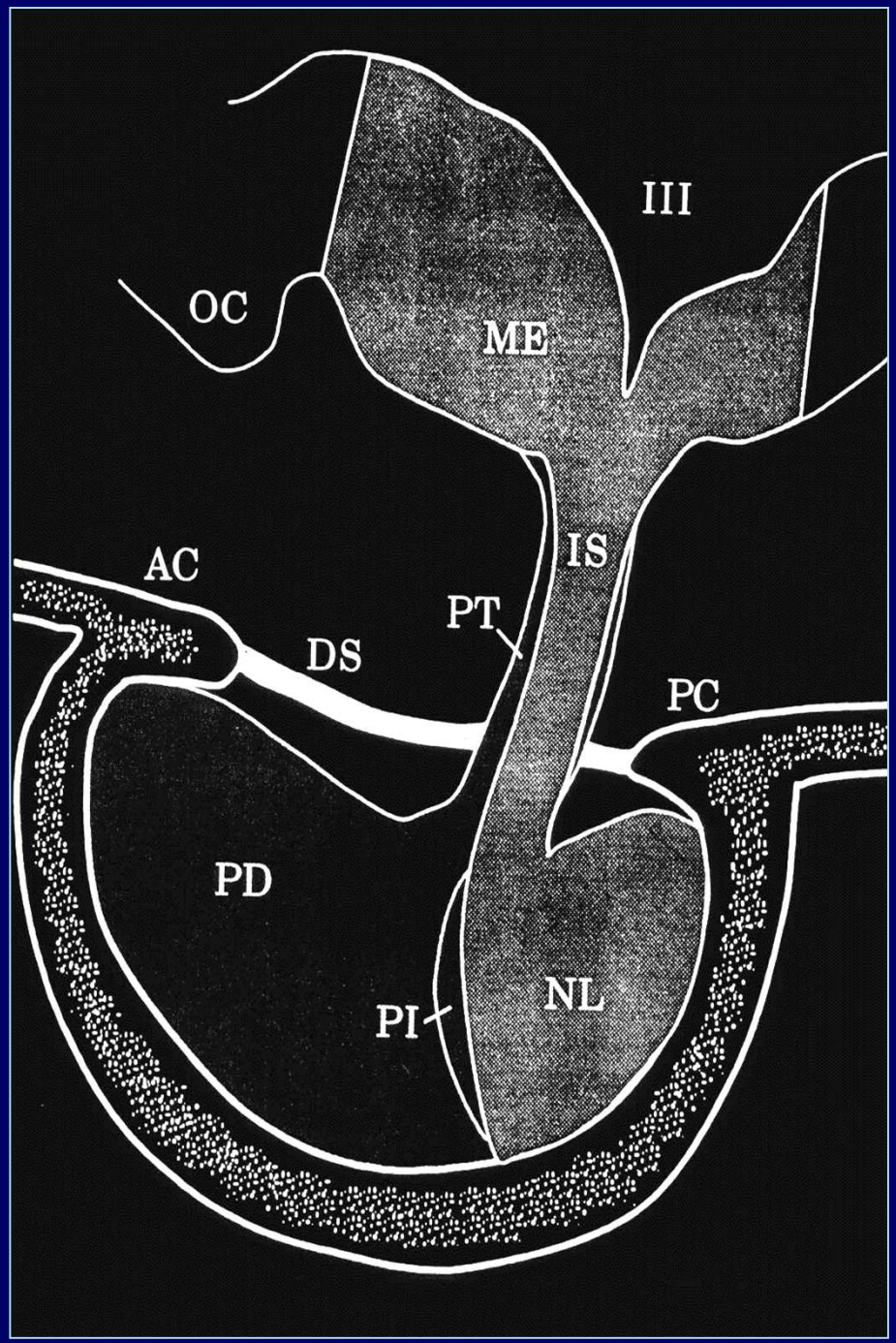
chiasma optique

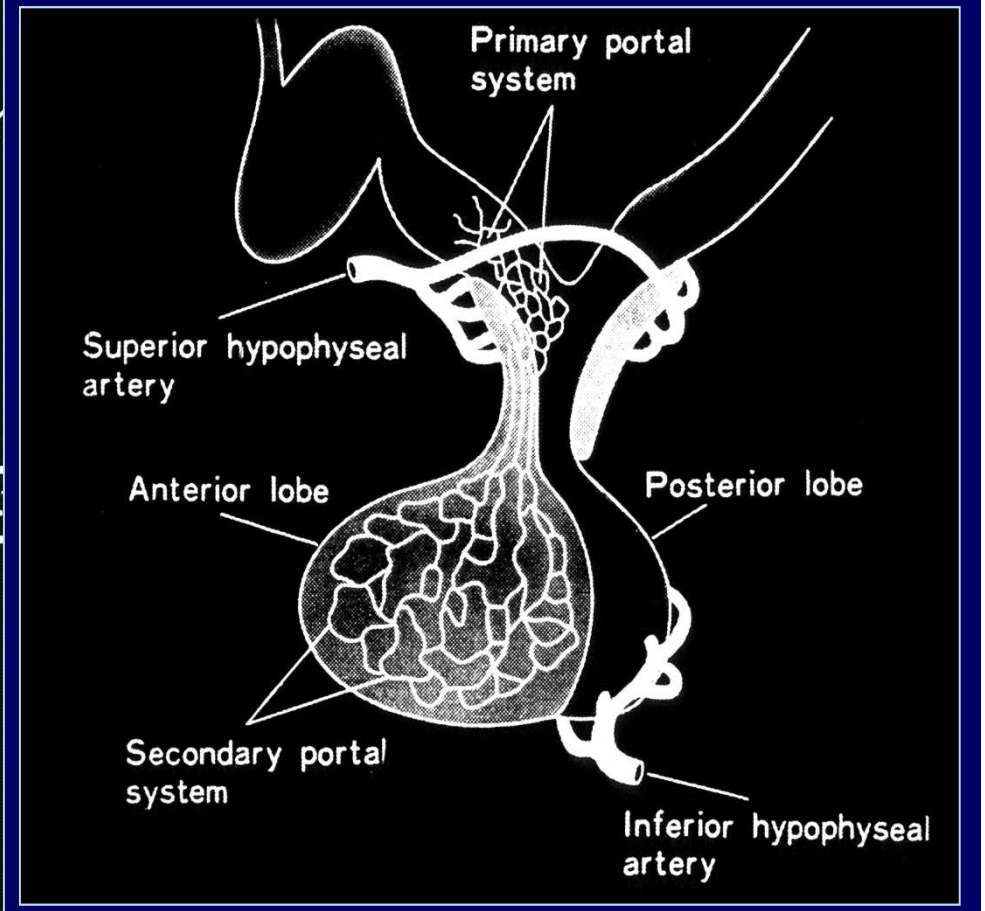
tige pituitaire

hypophyse

Sinus caverneux :
Carotide
Plexus veineux
III
IV
V1
V2
VI



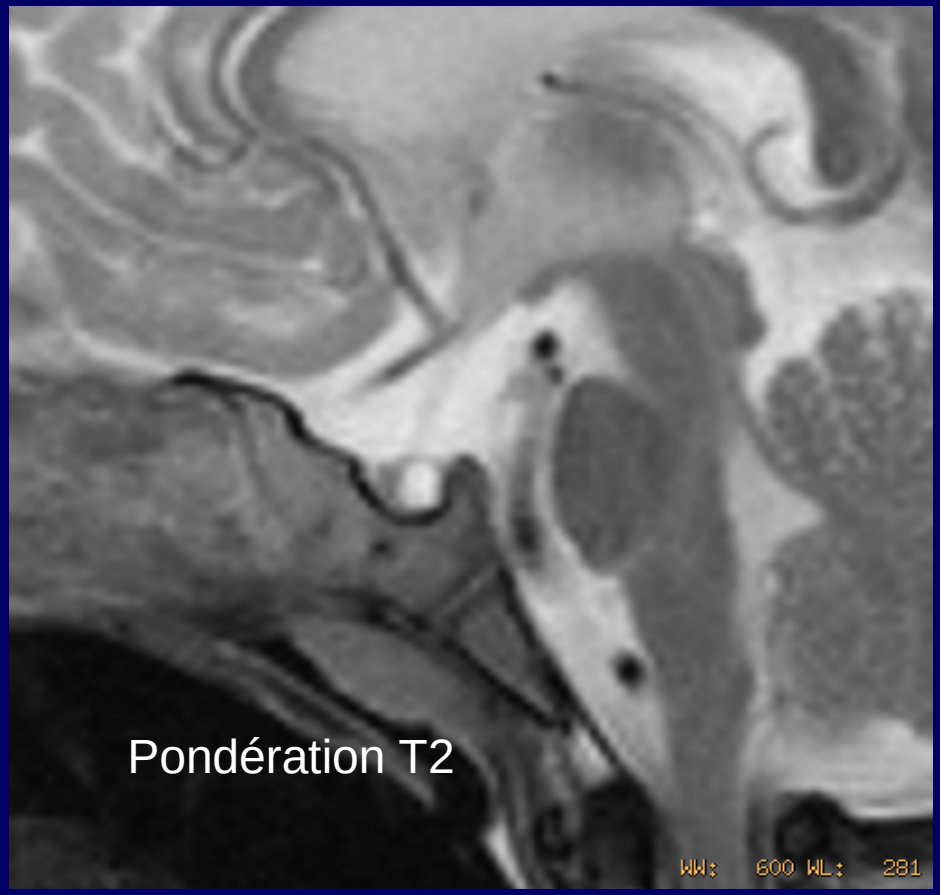

III
OC
ME
IS
AC
PT
DS
PC
PD
NL
PI


Primary portal system
Superior hypophyseal artery
Anterior lobe
Posterior lobe
Secondary portal system
Inferior hypophyseal artery

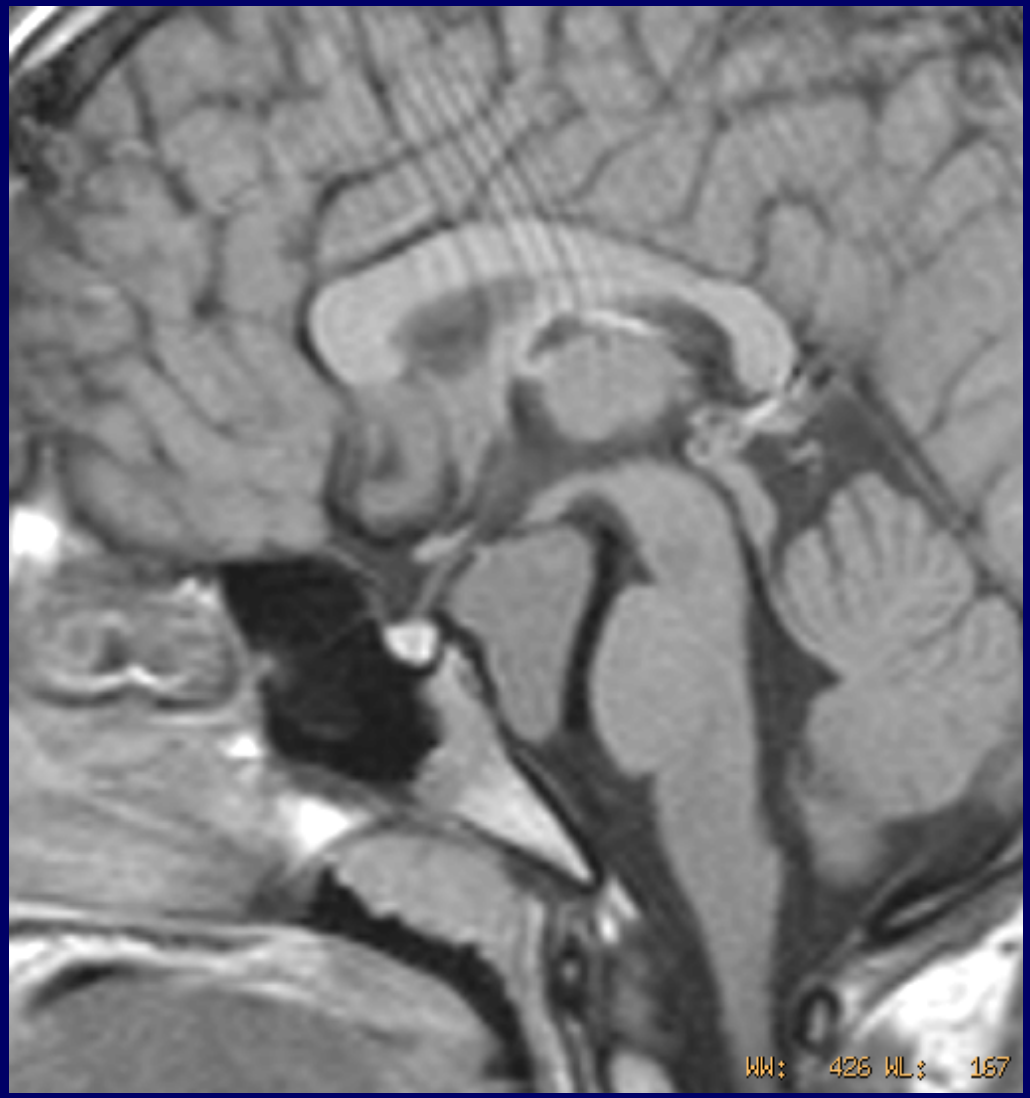
# Pathologies développementales

- Kyste de la *Pars intermedia*
- Hamartome du *Tuber cinereum*
- Nanisme hypophysaire (*pituitary dwarfism*)

# Kyste de la *pars intermedia*

# Hamartome du *tuber cinereum*
## hamatome hypothalamique

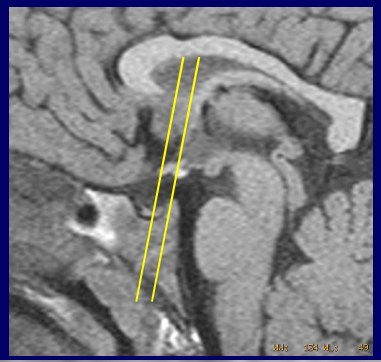



= ectopie *dysembryoplasique*

(non polymitotique)

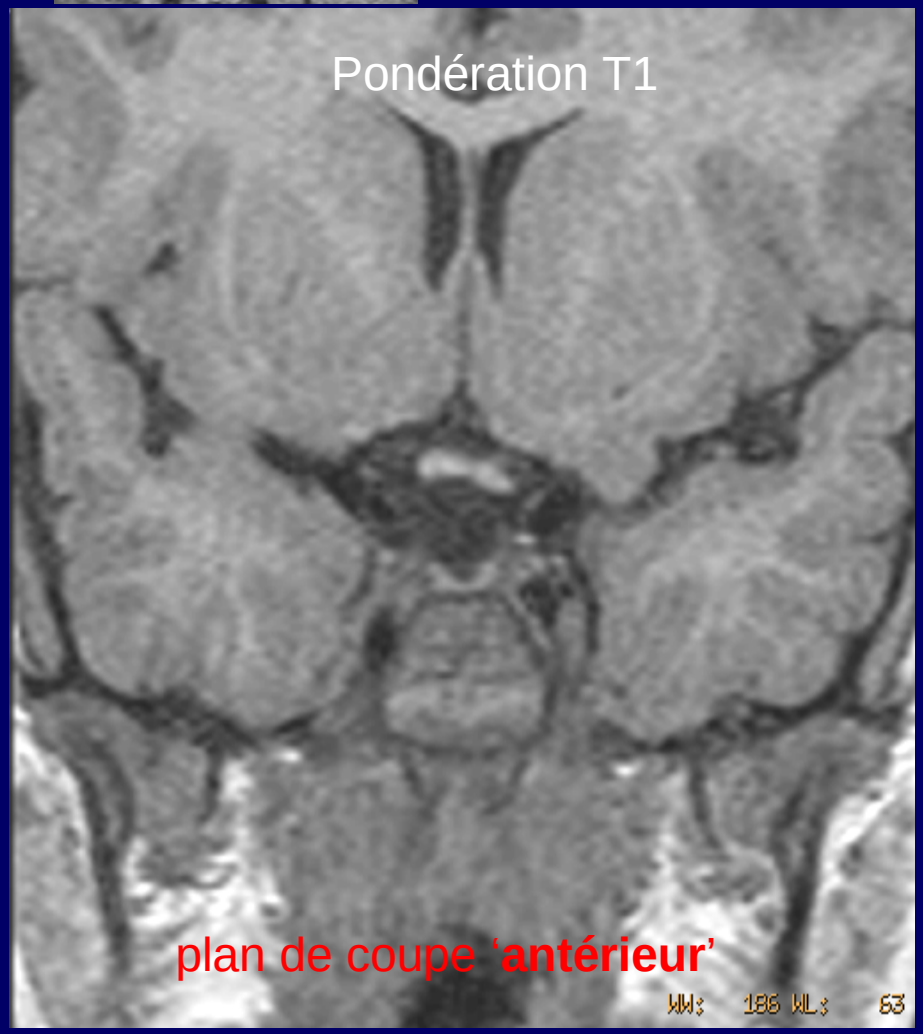
* puberté précoce
* E. partielle complexe

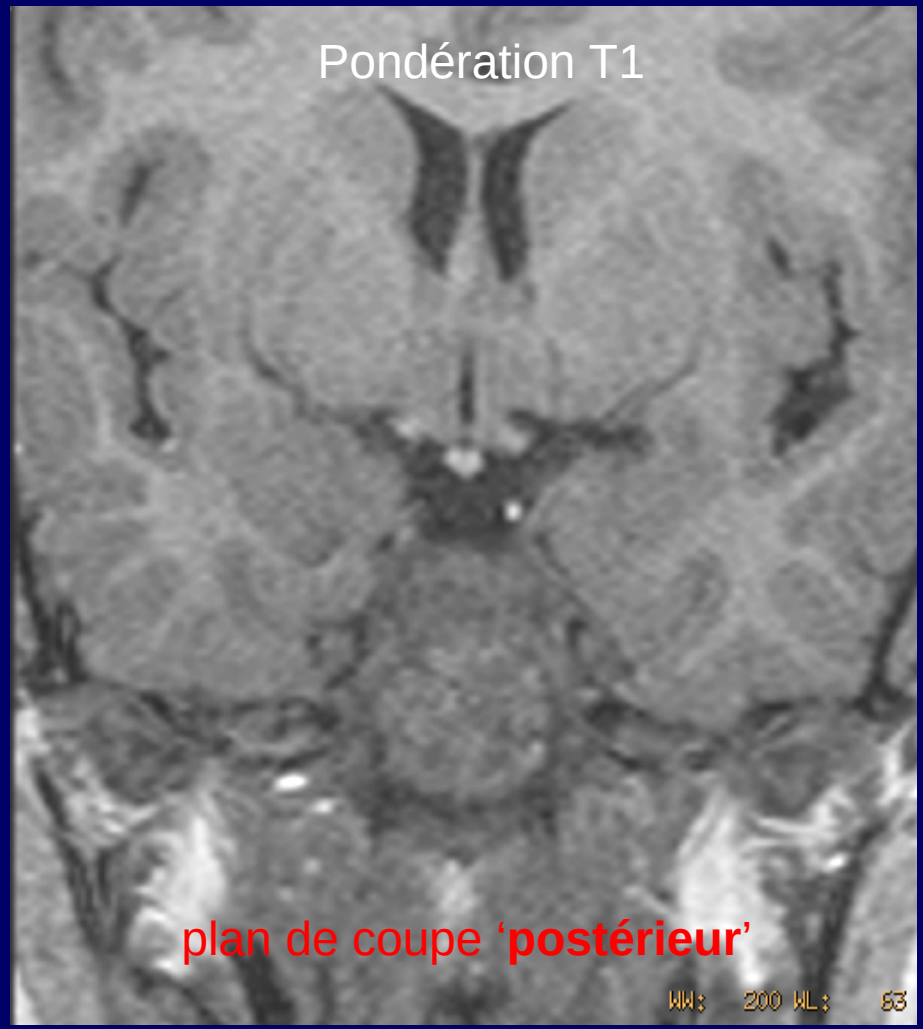
(crises gélastiques)



# Nanisme hypophysaire

(‘pituitary dwarfism’)



# Nanisme hypophysaire


post-hypophyse ectopique
('bright spot')

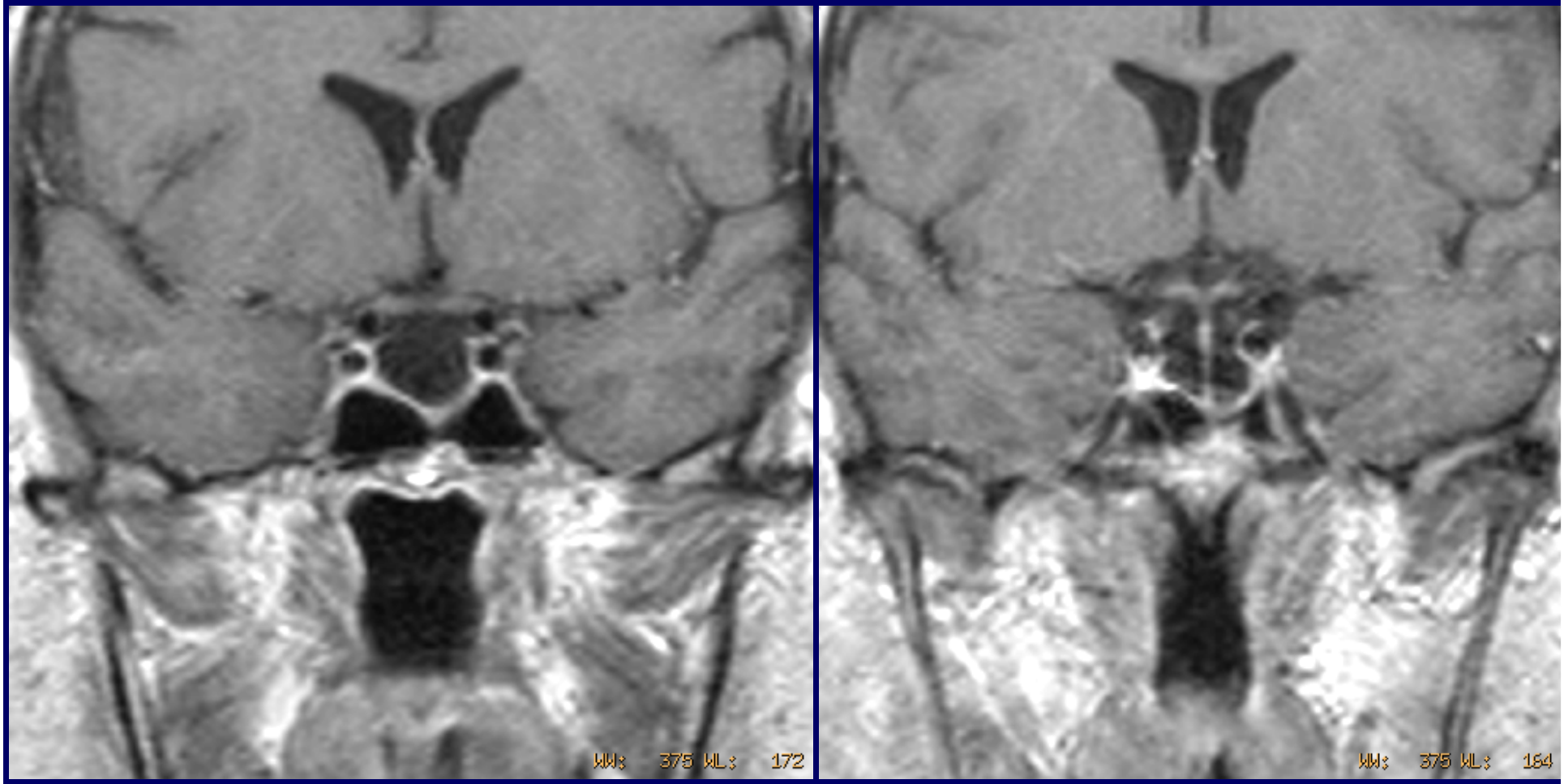
absence de tige pituitaire

hypoplasie de l'adéno-hypophyse

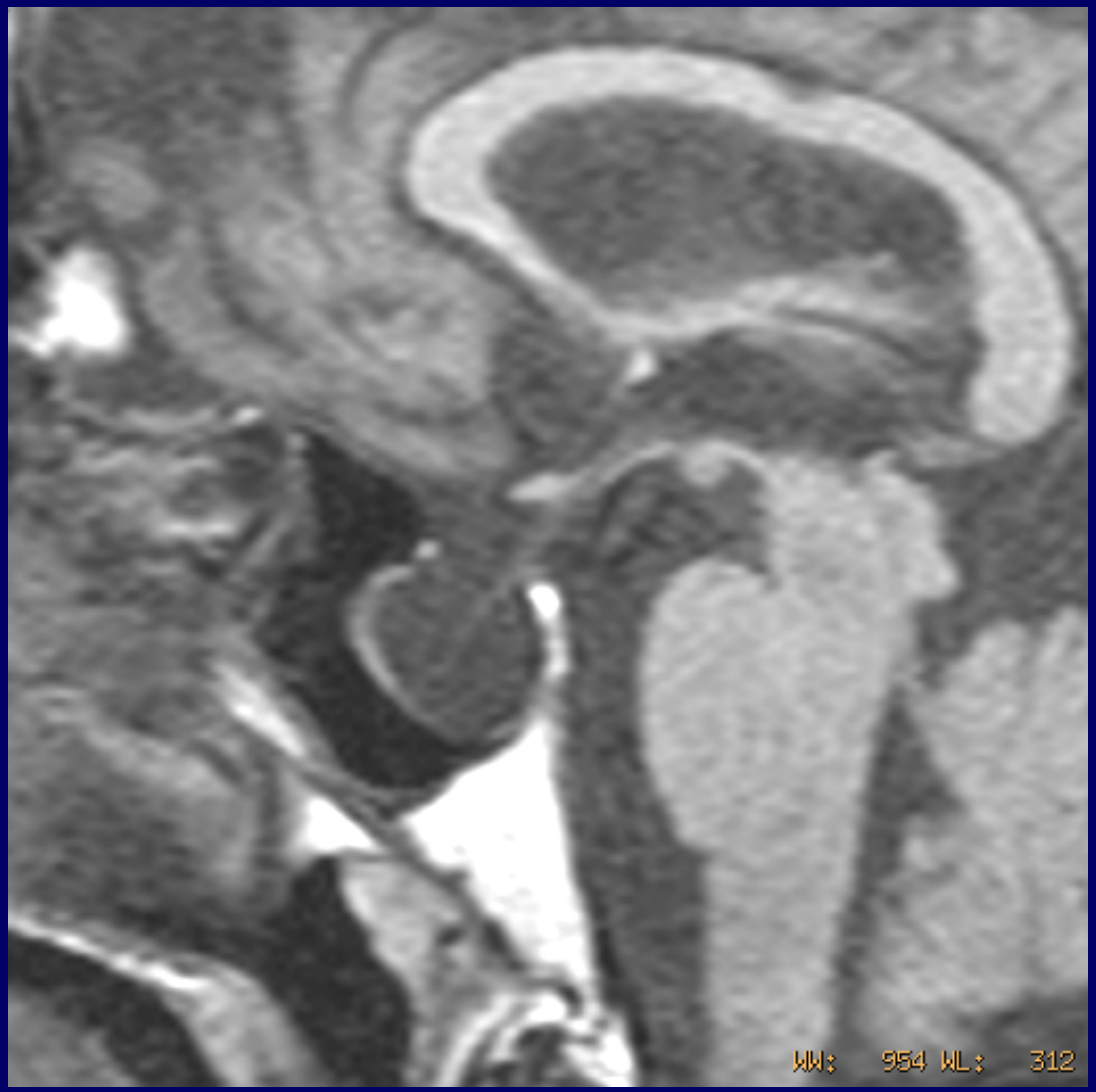
# Pathologies acquises non parenchymateuses

- selle turcique ‘vide’ non expansive
- selle turcique ‘vide’ expansive
- procidence carotidienne

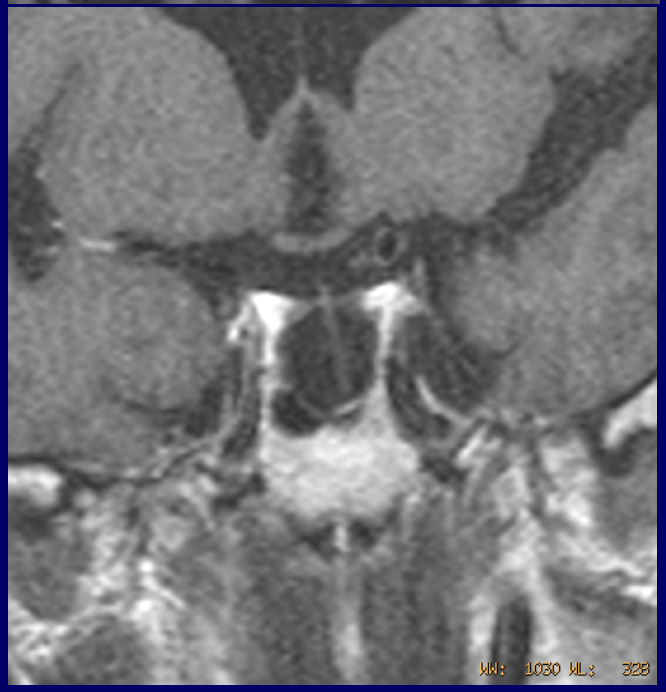
# selle ‘vide’ peu expansive



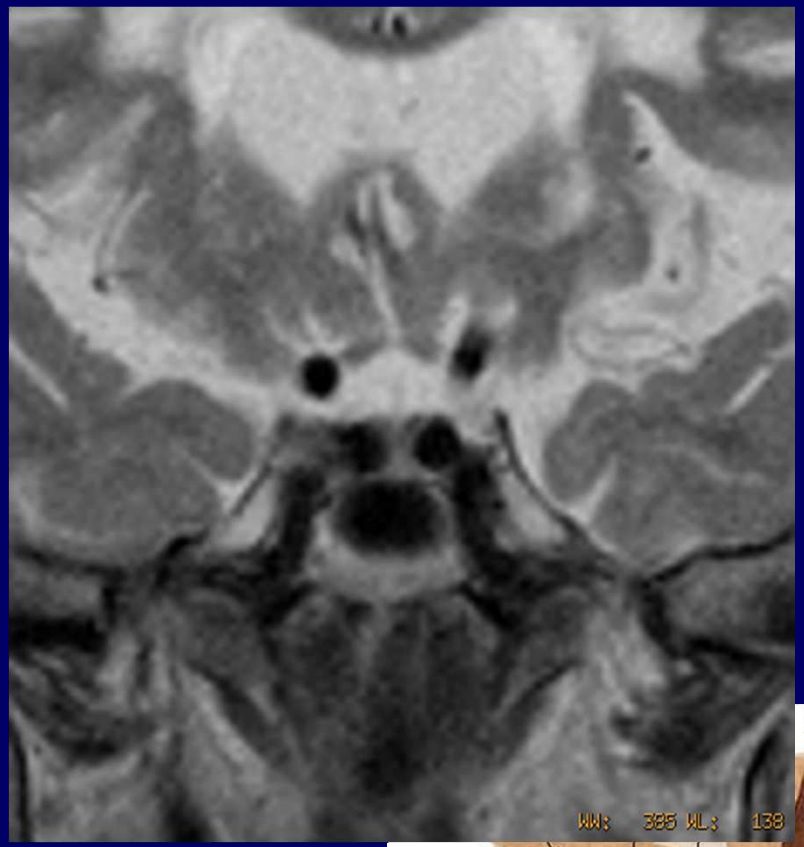

T1 post C+



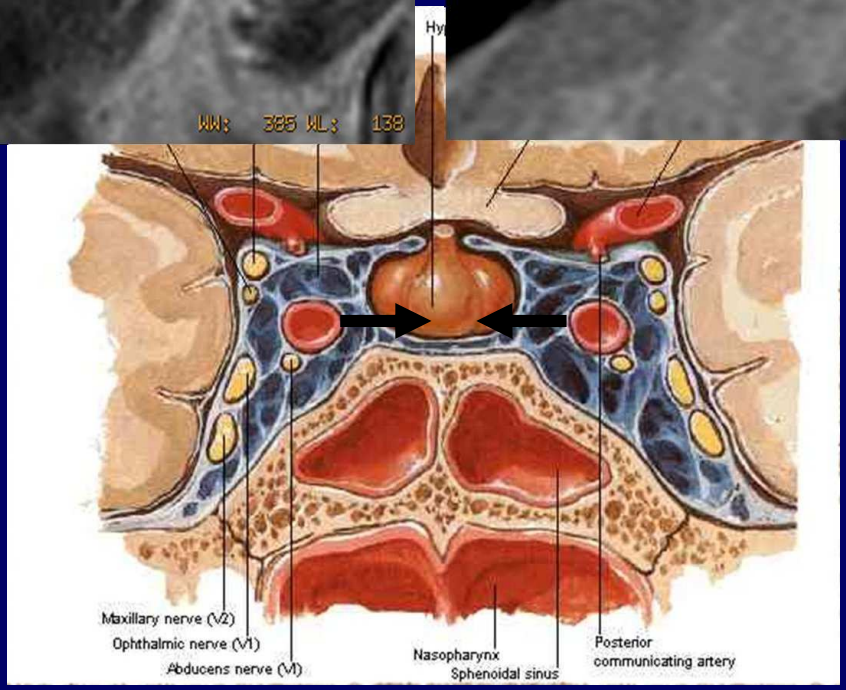





Selle ‘vide’ très expansive



Procidence carotidienne




‘Kissing ICAs’

# Pathologie tumorale bénigne

Adénome hypophysaire

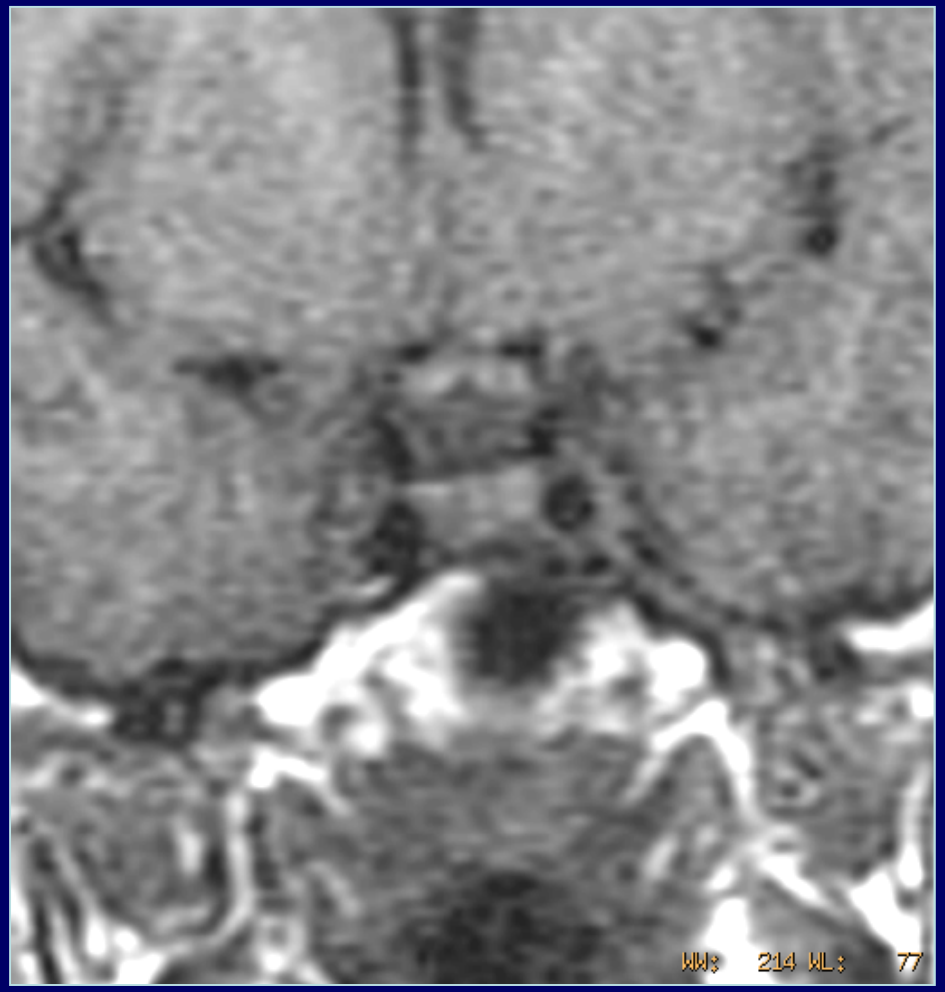
> 90% des lésions tumorales de l'hypophyse

bénigne >>> maligne

« macro-adénome » = « >10 mm »

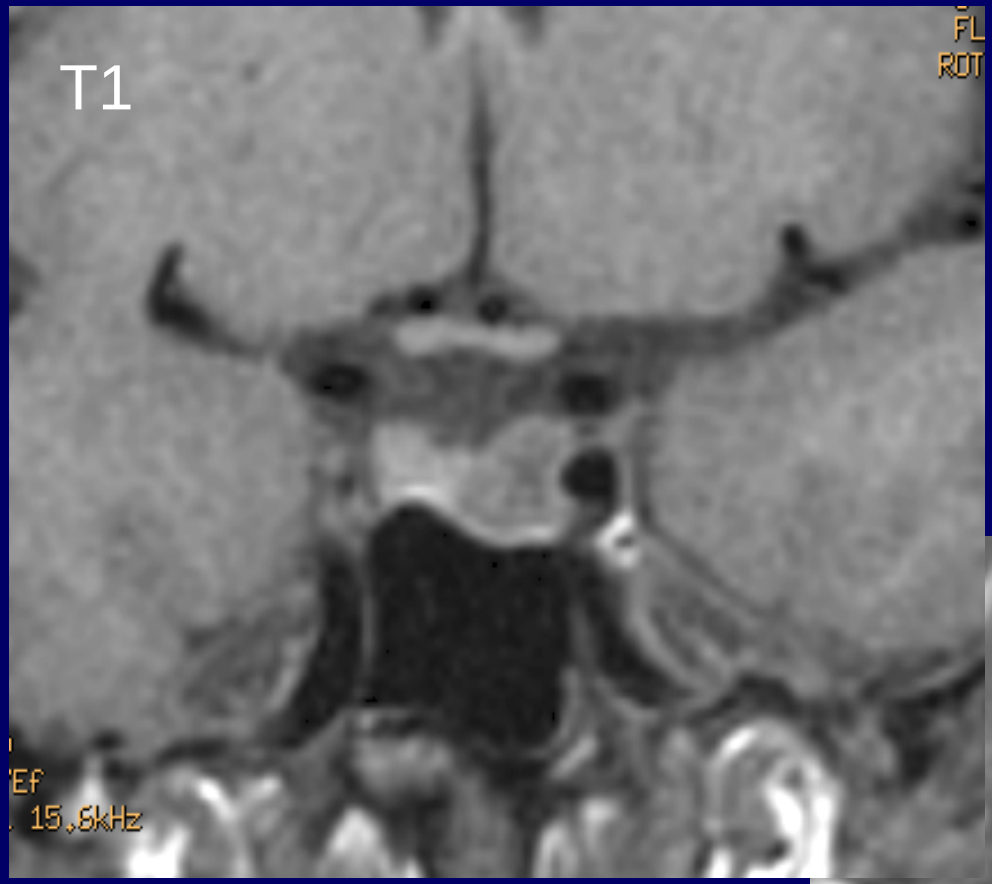
Sécrétants → Δ MICRO

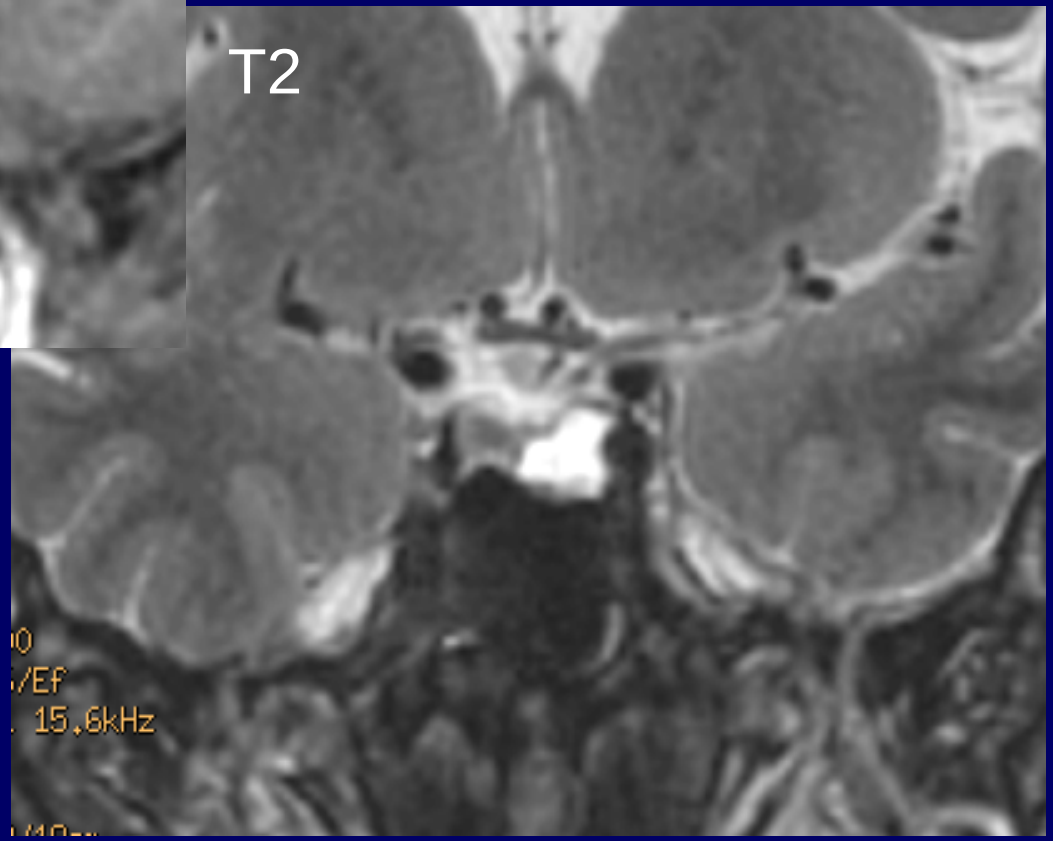
Non sécrétants → Δ MACRO

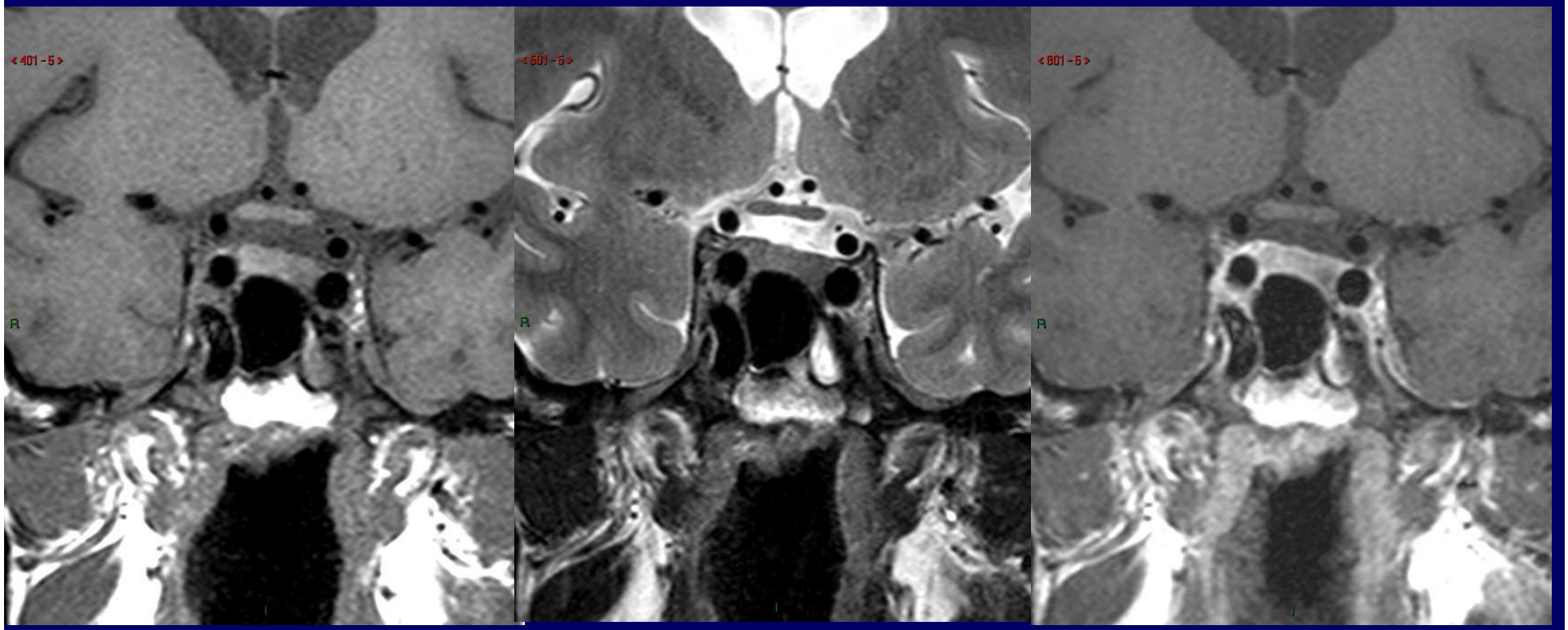



T1 sans C+


T2


T1
FL
ROT
Ef
15.8kHz


T2
0
/Ef
15.6kHz


« 401 - 5 »
R
« 501 - 5 »
R
« 801 - 5 »
R


< 701 - 15 >
R

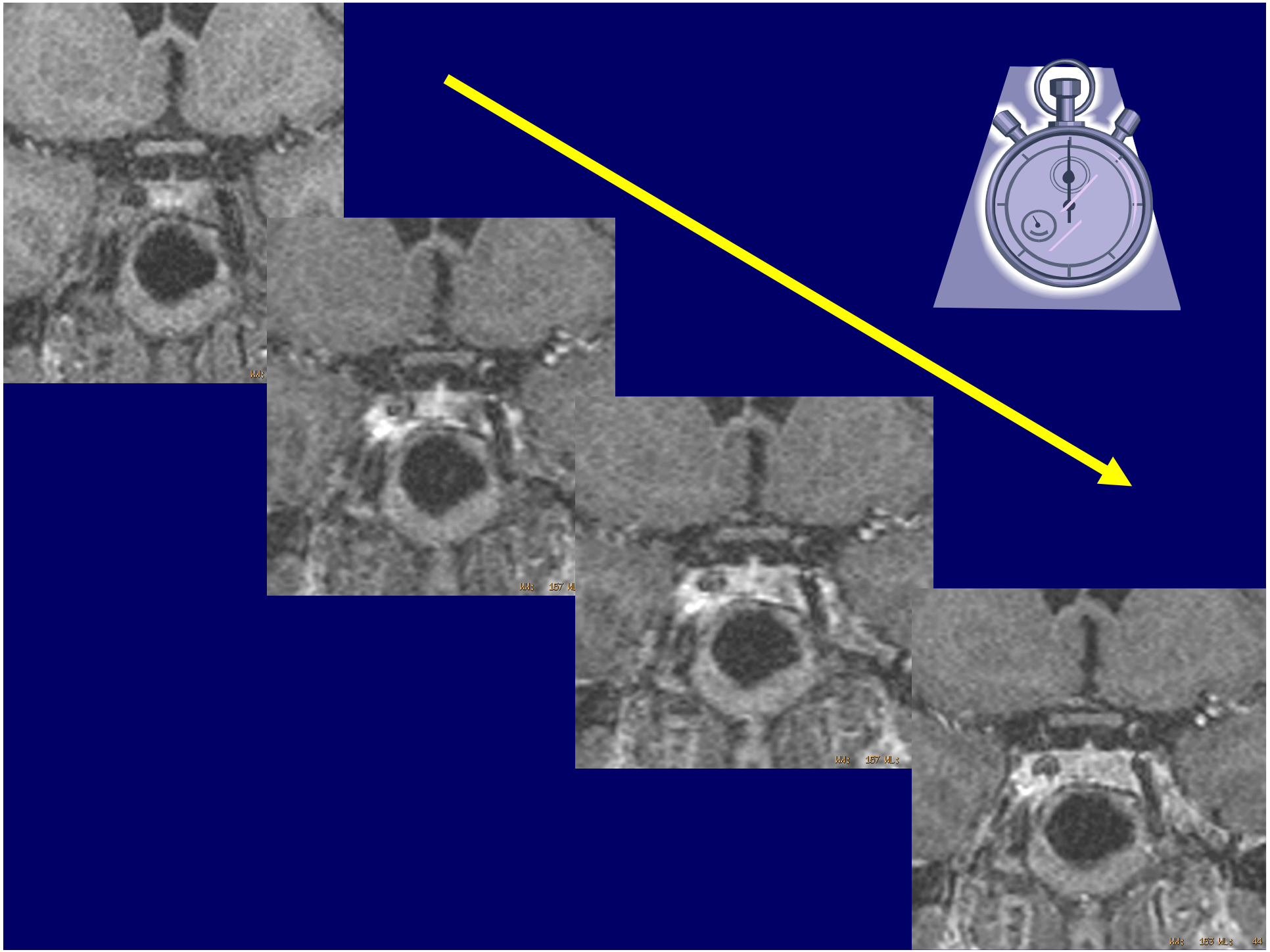

< 701 - 16 >
R


< 701 - 17 >
R

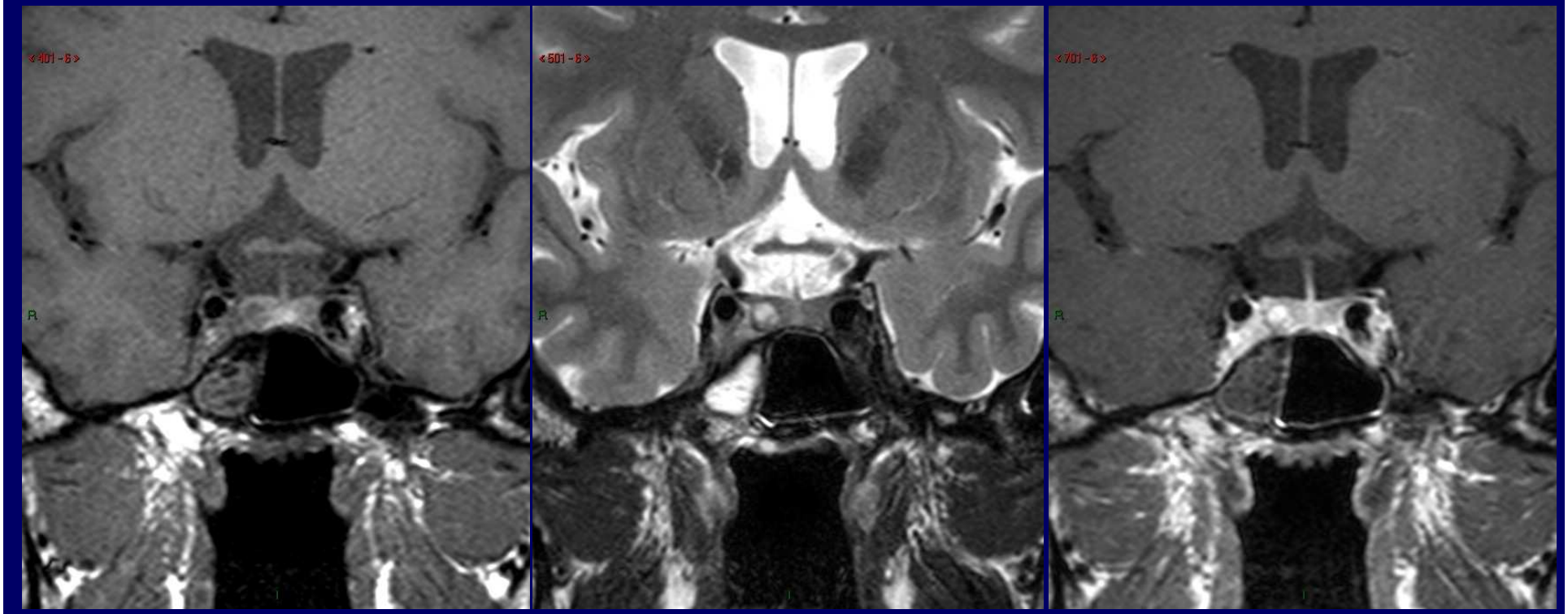

< 701 - 18 >
R


< 701 - 18 >
R

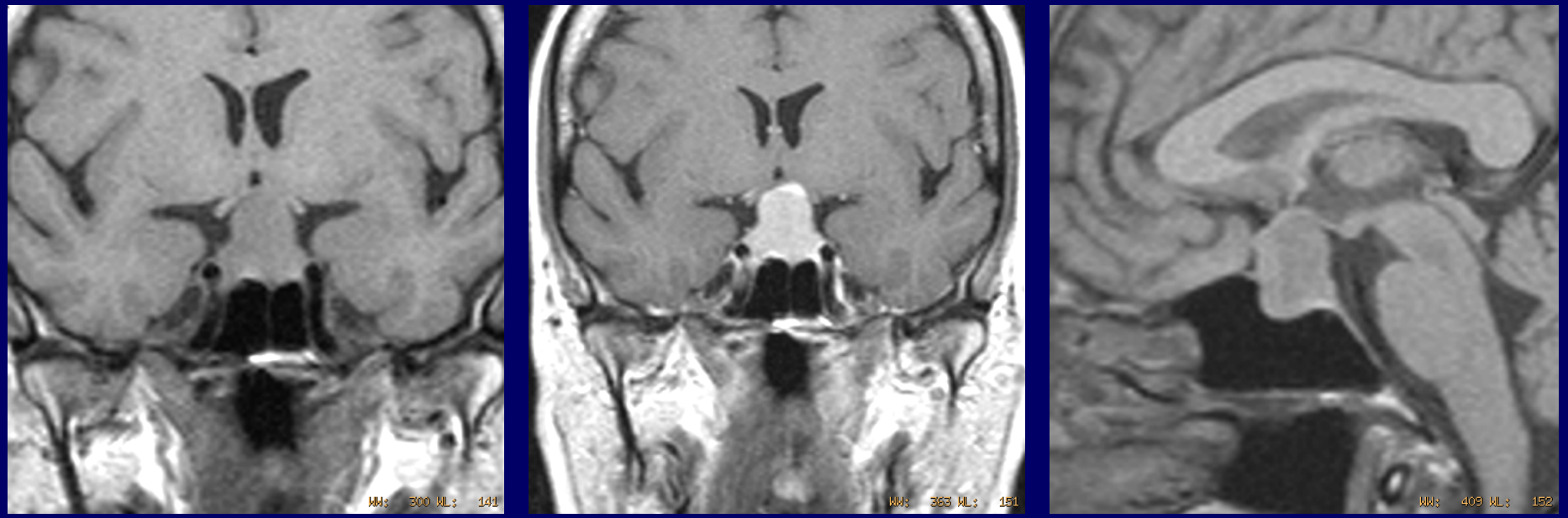

< 701 - 21 >
R



# Forme rare de micro-adénome: hyperrehaussant

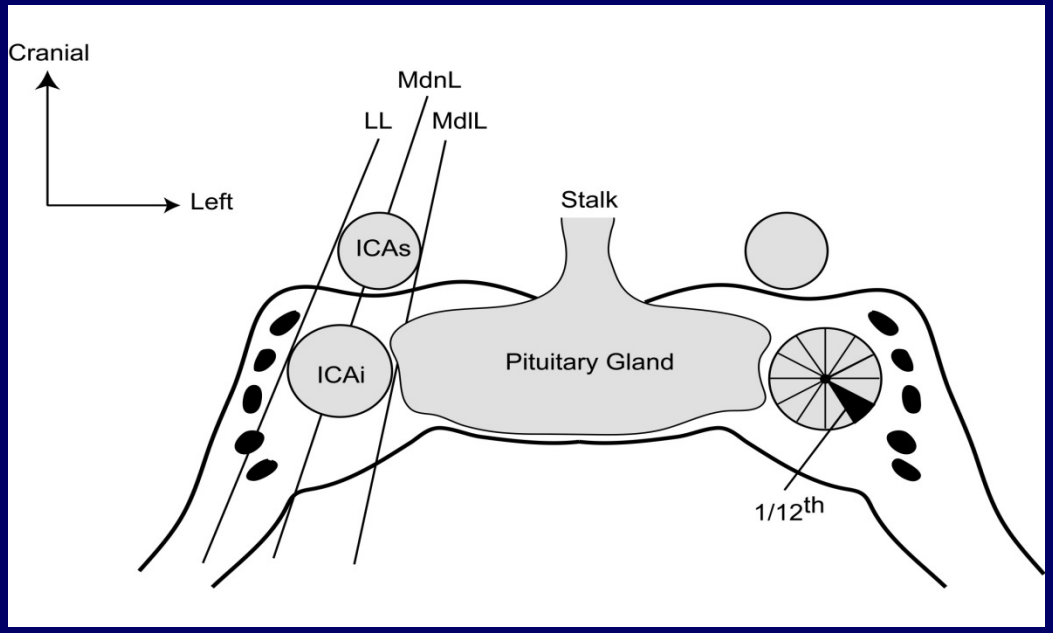


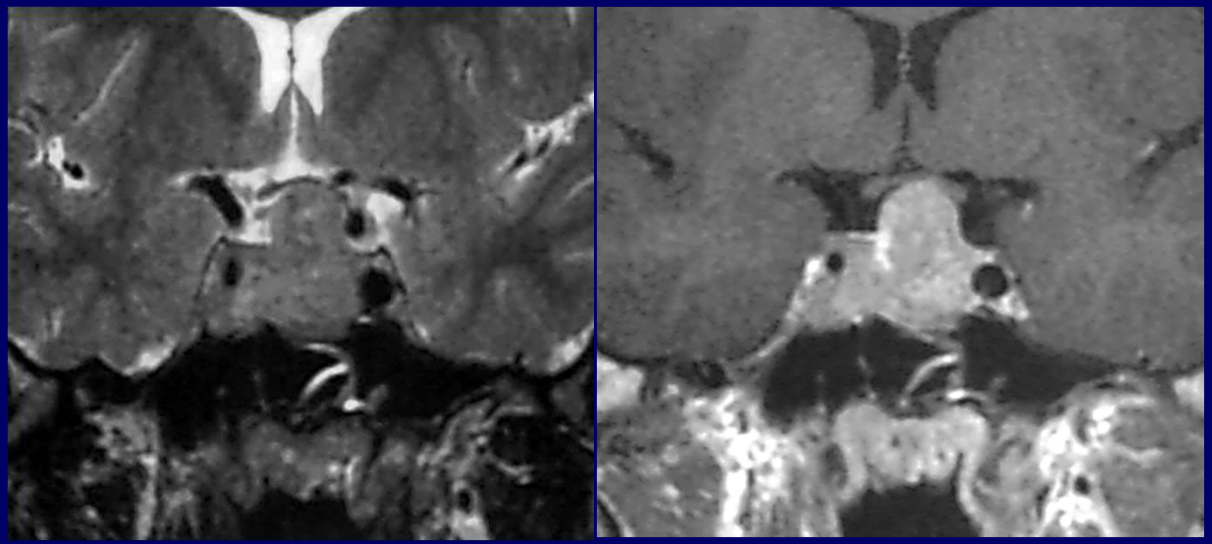
# Macro-adénome hypophysaire:



**1. Compression optique**

# 2. Envahissement du sinus caverneux

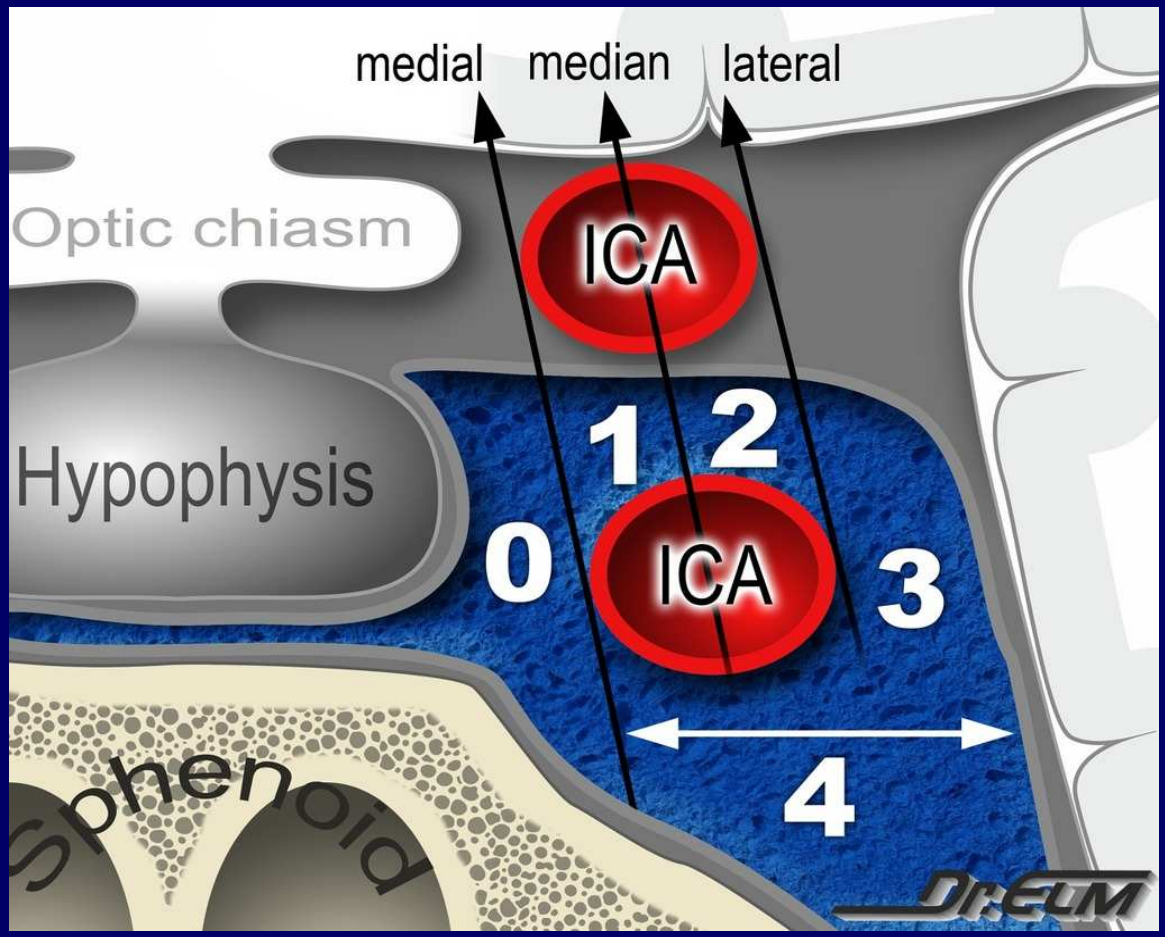


# Knosp

Neurosurgery 1993

0-1: pas d'invasion
2: invasion sauf 1
3-4: tous envahis

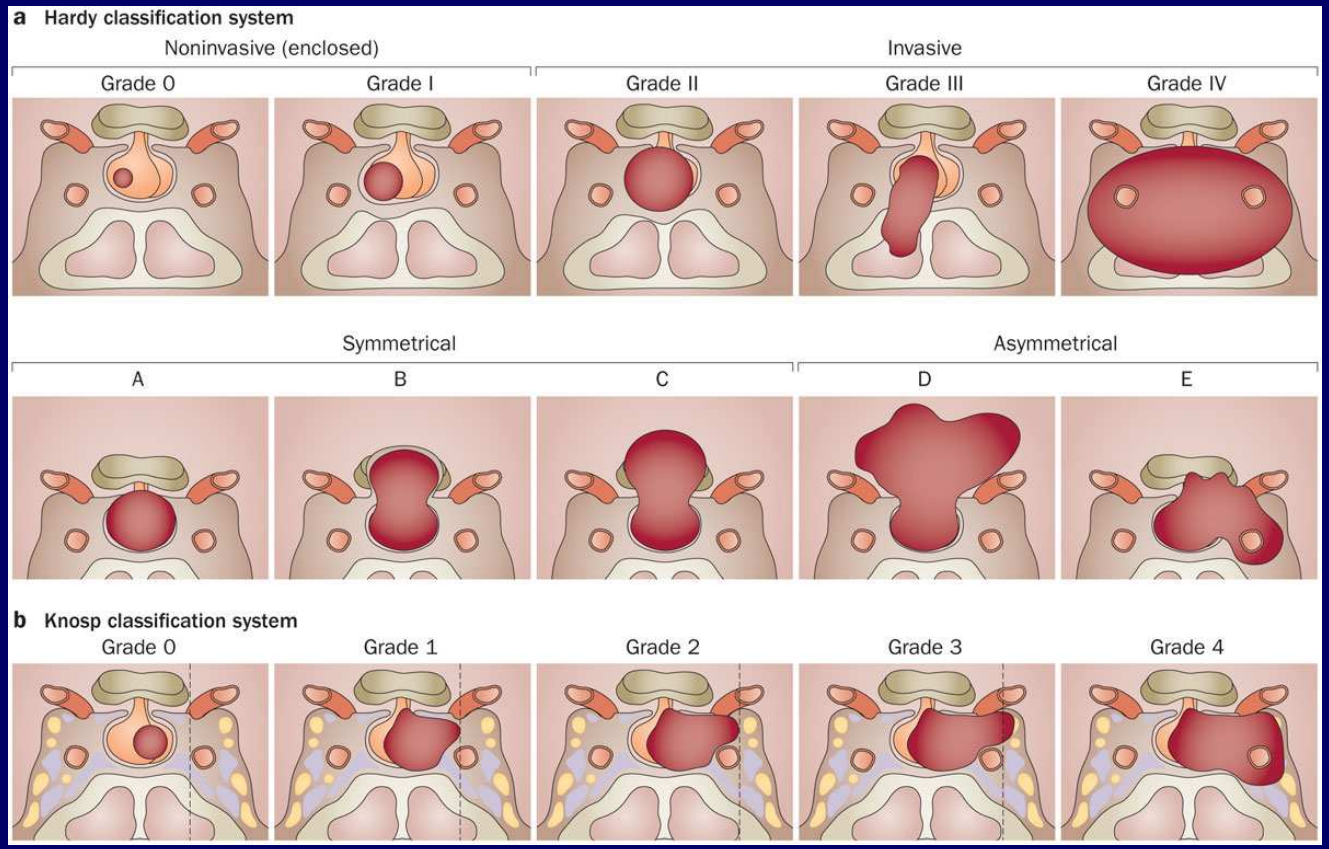



// entre grade et l'agressivité tumorale

*%KI67

*Résistance au traitement agoniste

**Figure 3** Classification systems used to characterize pituitary adenomas




Di Ieva, A. *et al.* (2014) Aggressive pituitary adenomas—diagnosis and emerging treatments
*Nat. Rev. Endocrinol.* doi:10.1038/nrendo.2014.64

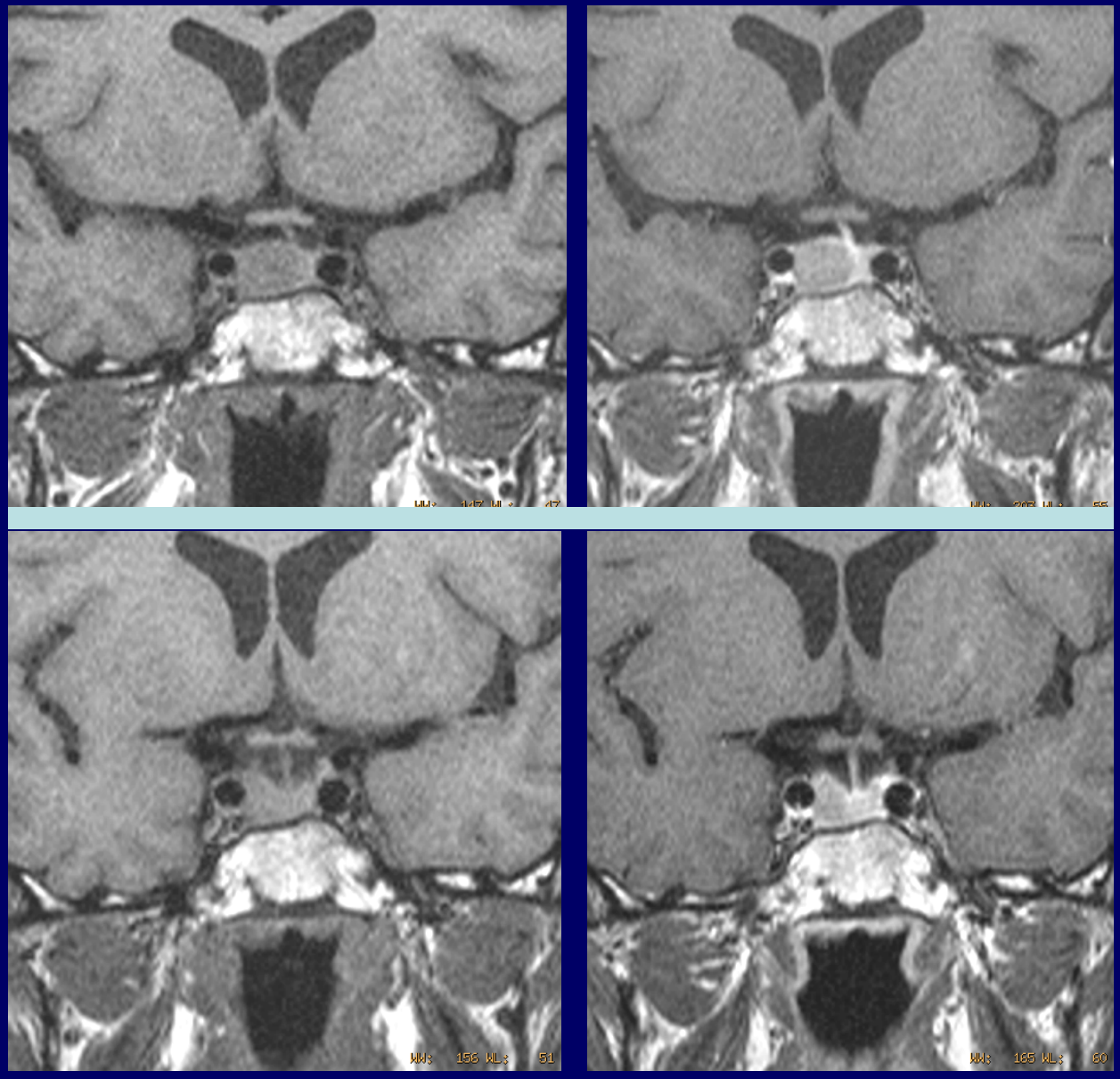
nature REVIEWS ENDOCRINOLOGY

Ann Endocrinol (Paris). 2000
Sep;61(3):269-74.
**[MRI diagnosis of cavernous sinus invasion by pituitary adenomas].**
[Article in French]
Cottier JP[1], Destrieux C, Vinikoff-Sonier C, Jan M, Herbreteau D.

## Incarcération Carotide Interne intra-caverneuse

>66% → envahi
<25% → non envahi
25→66% → tracer les lignes de Knosp et signes accessoires

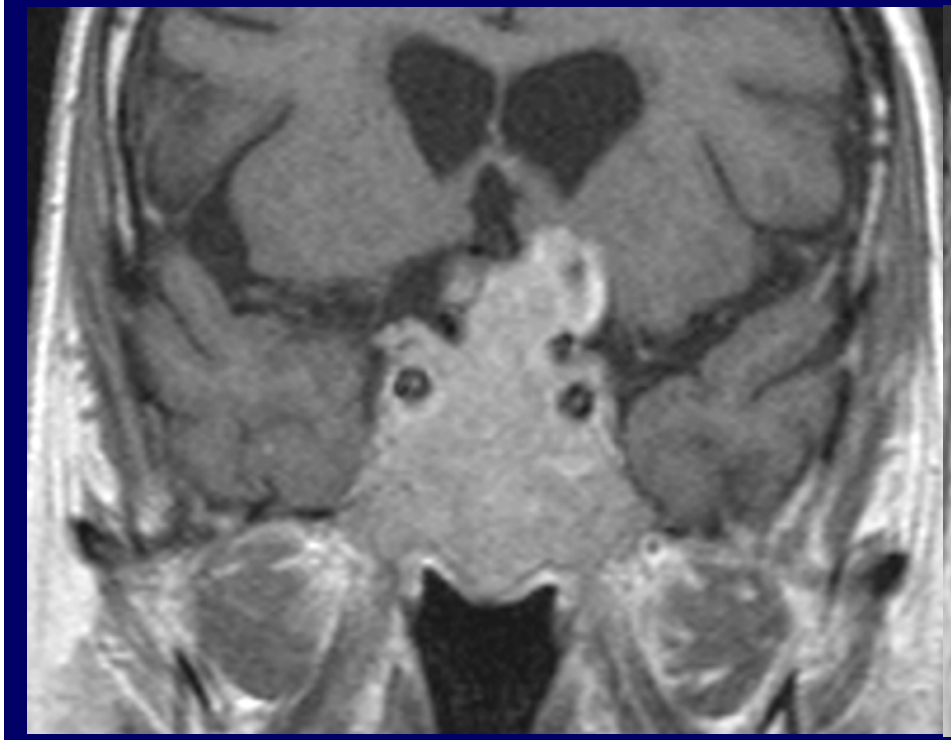
# F/U micro-adénome traité médicalement



**Avant R/**

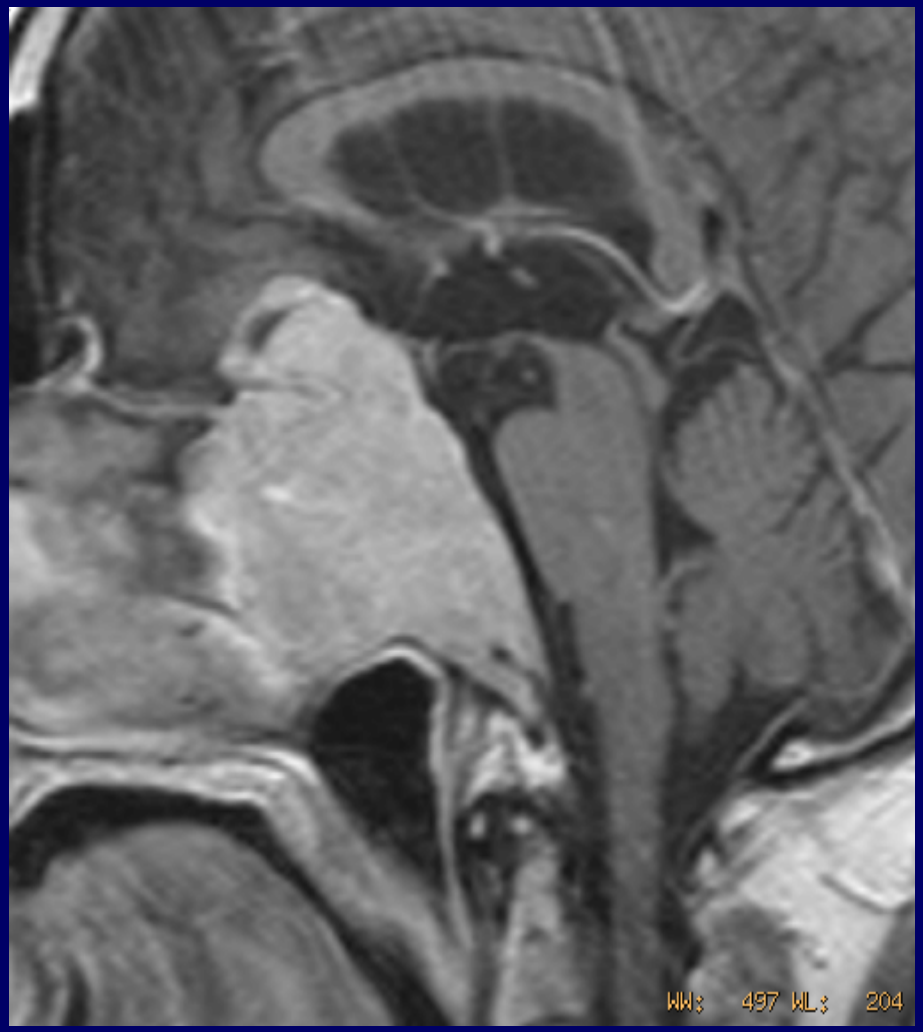
**6 mois**

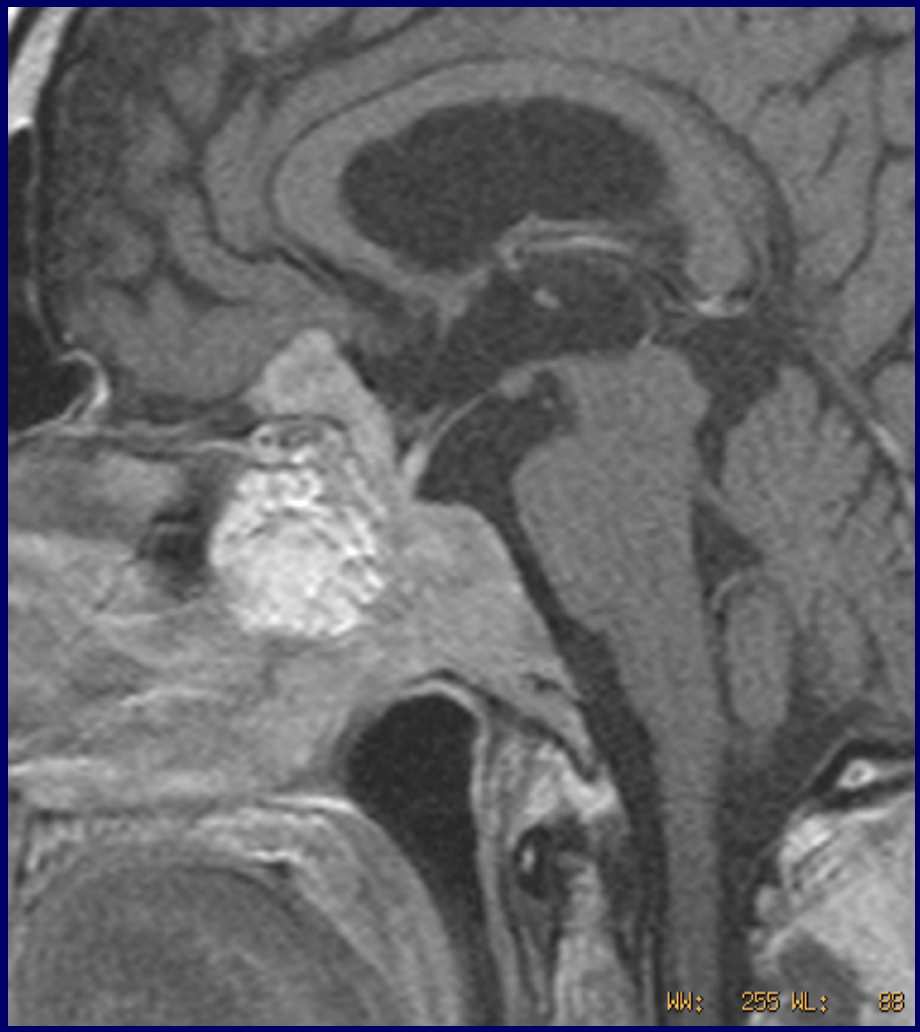
# F/U macro-adénome traité chirurgicalement



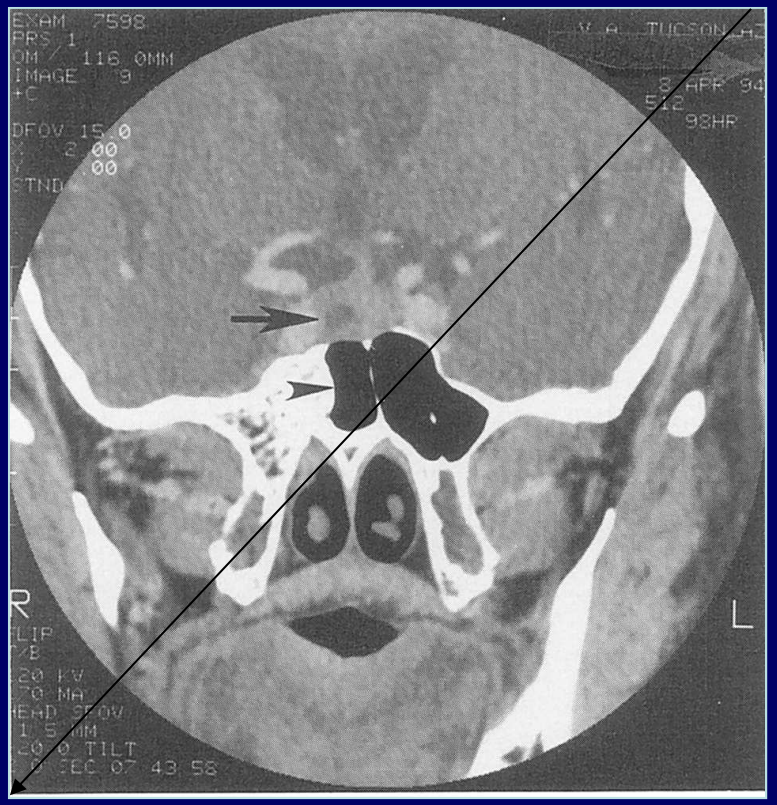
**pré-chir.**

**post-chir.**


WW: 497 WL: 204


WW: 255 WL: 88

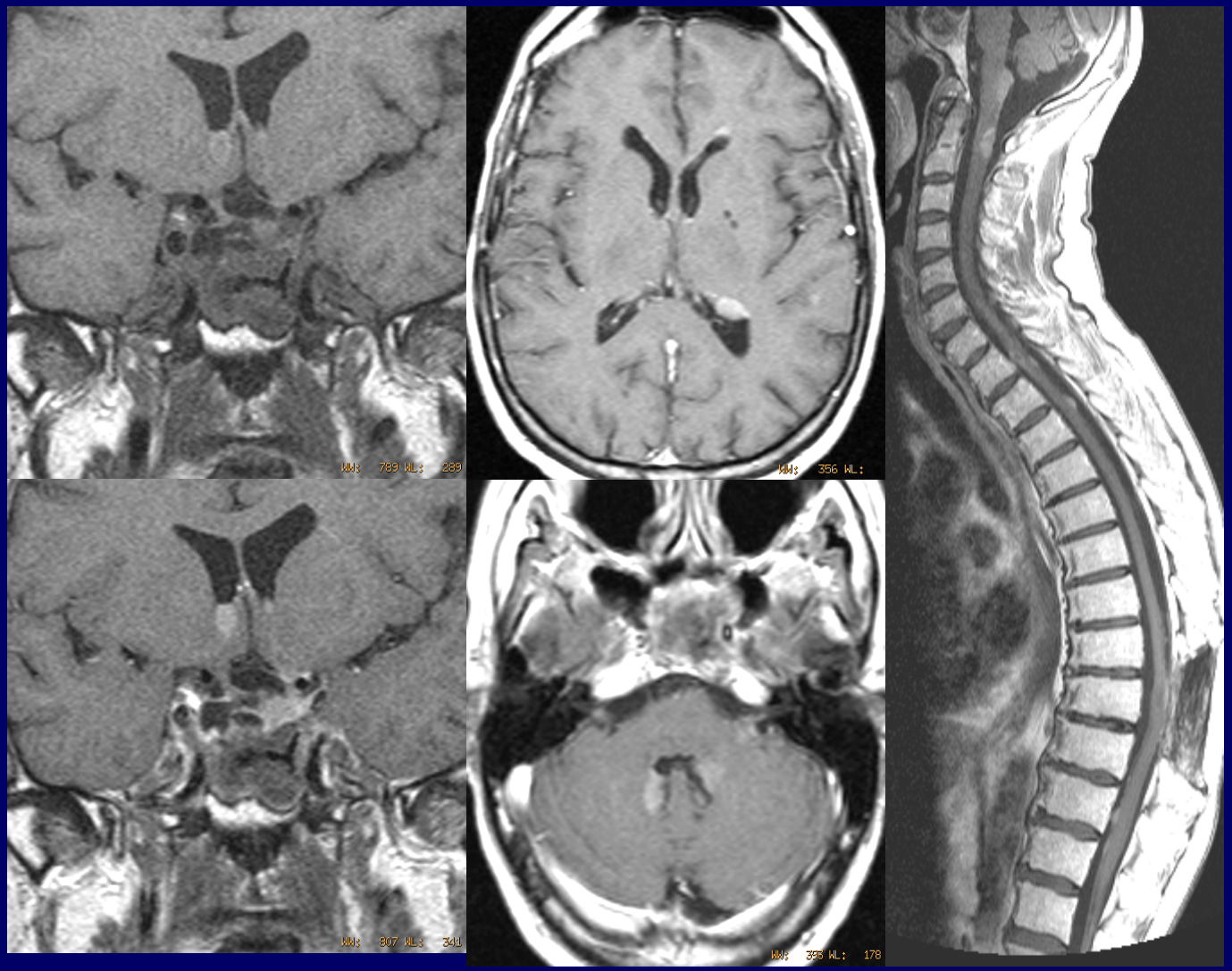
# Indications du CT dans l'adénome hypophysaire

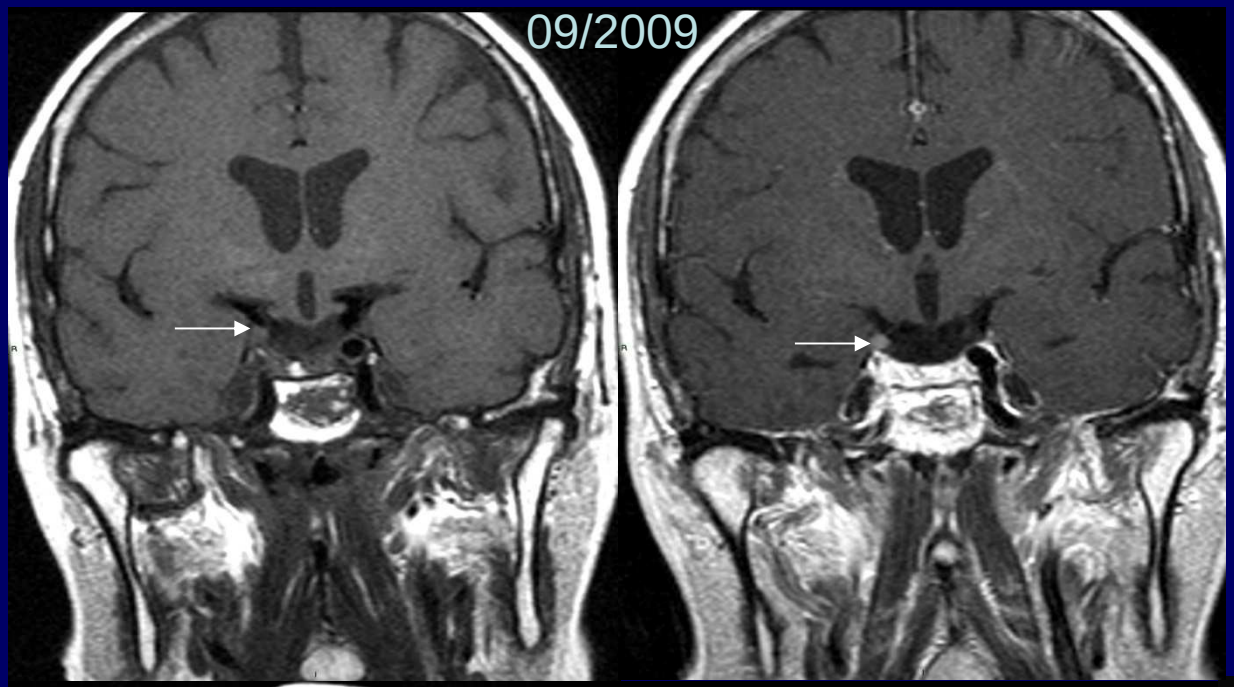


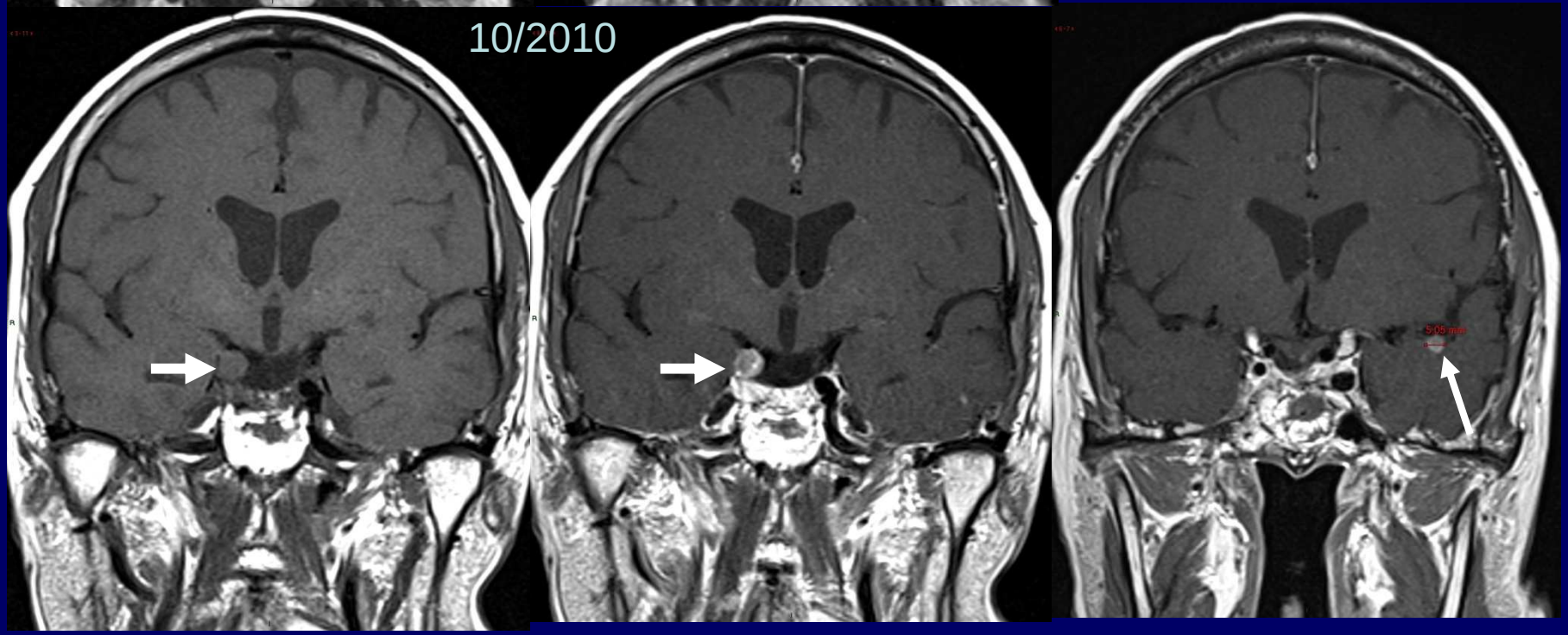

→ contre-indications de l'IRM

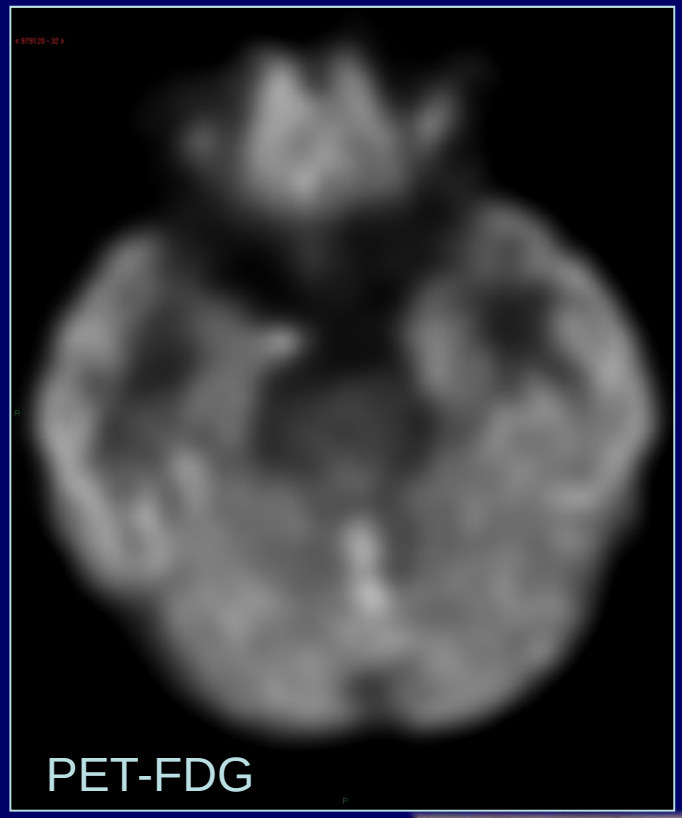
# adénocarcinome hypophysaire

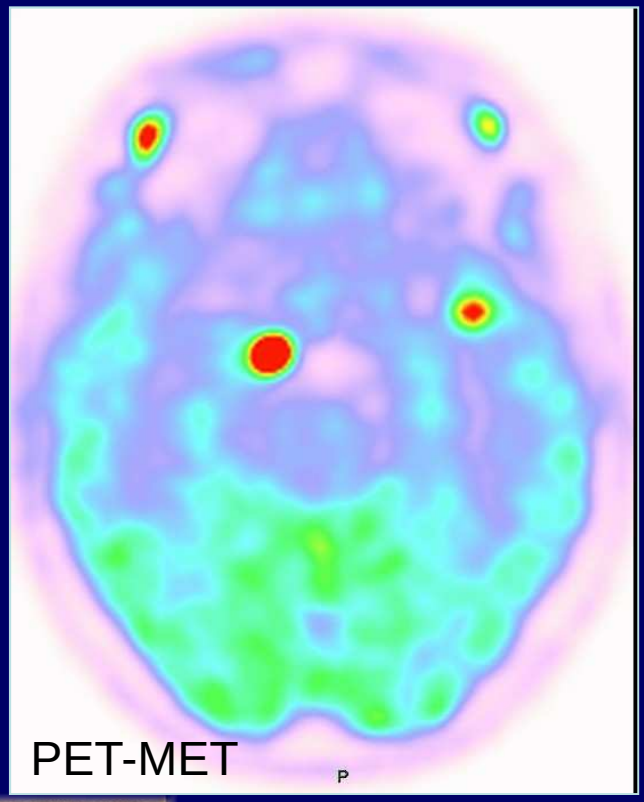
1997

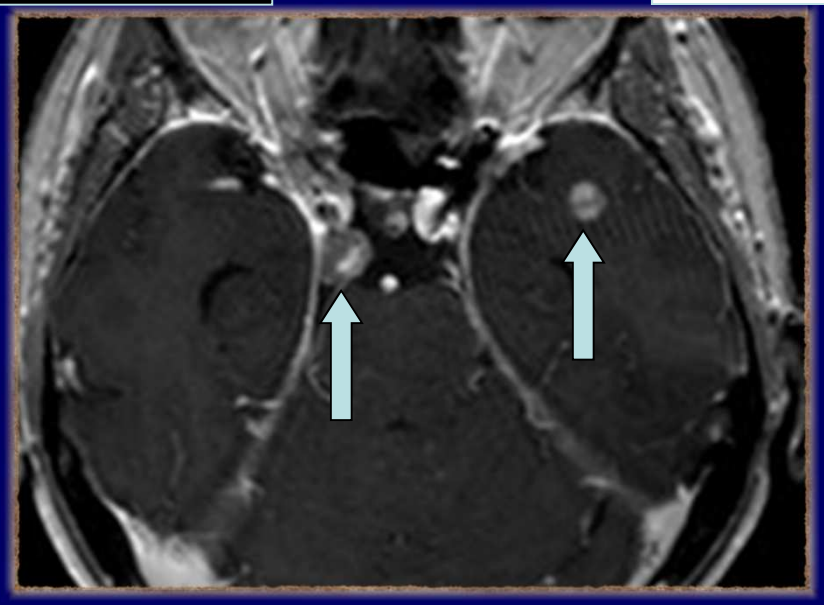


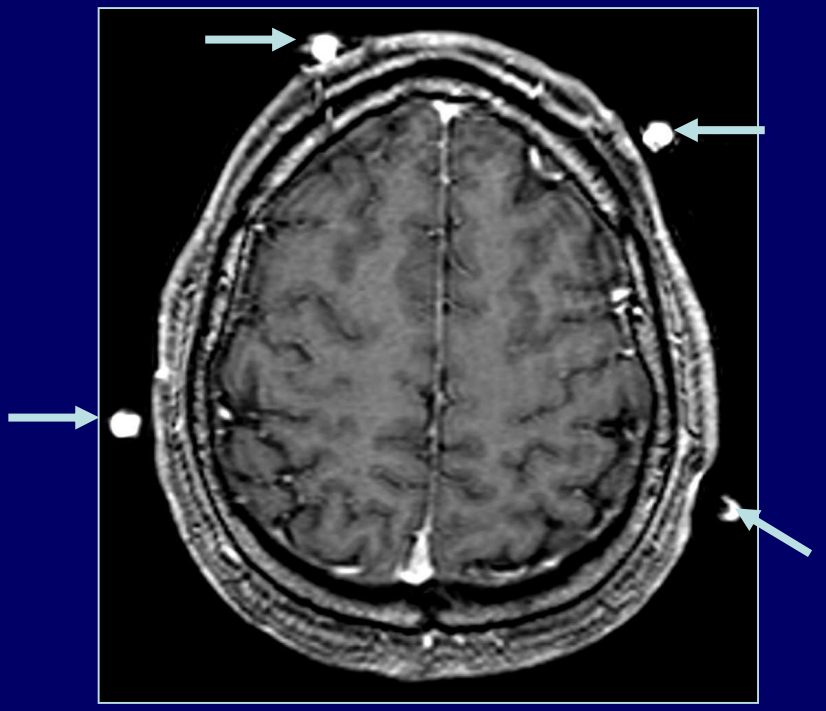

09/2009

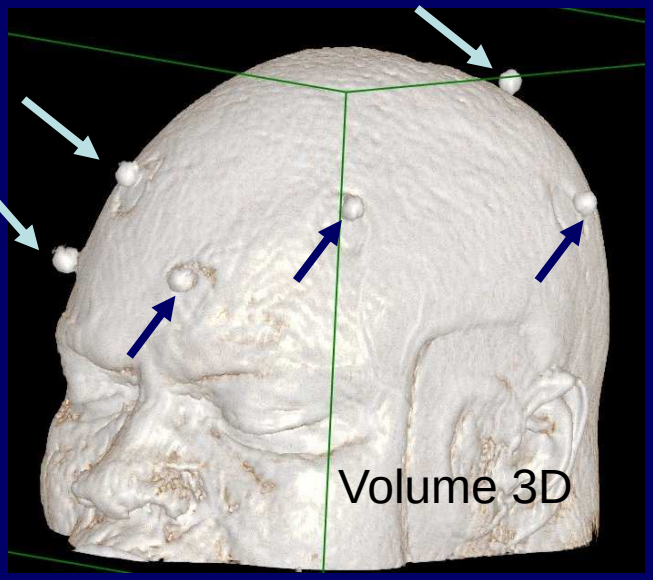

10/2010

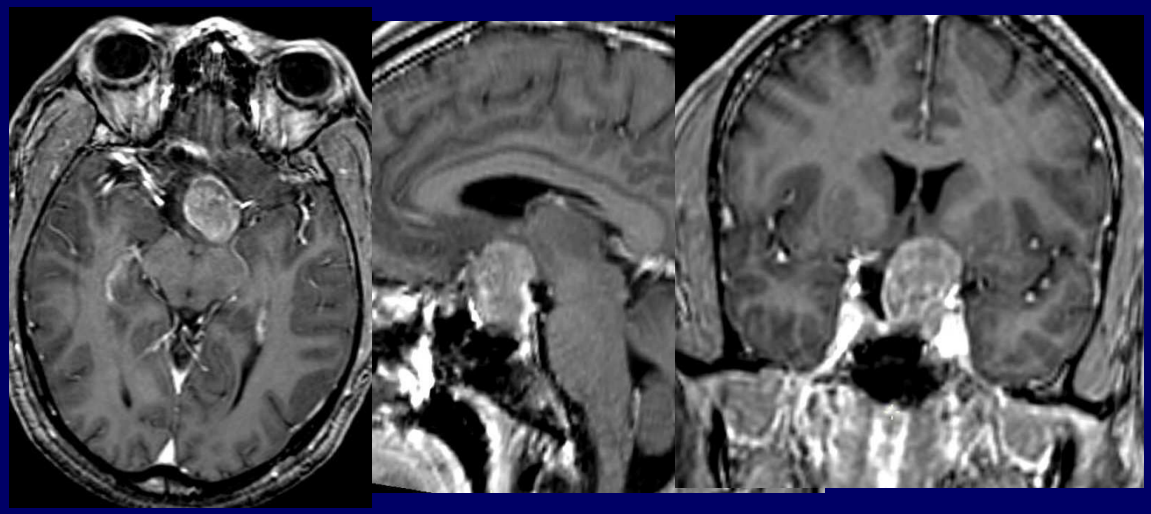

PET-FDG


PET-MET



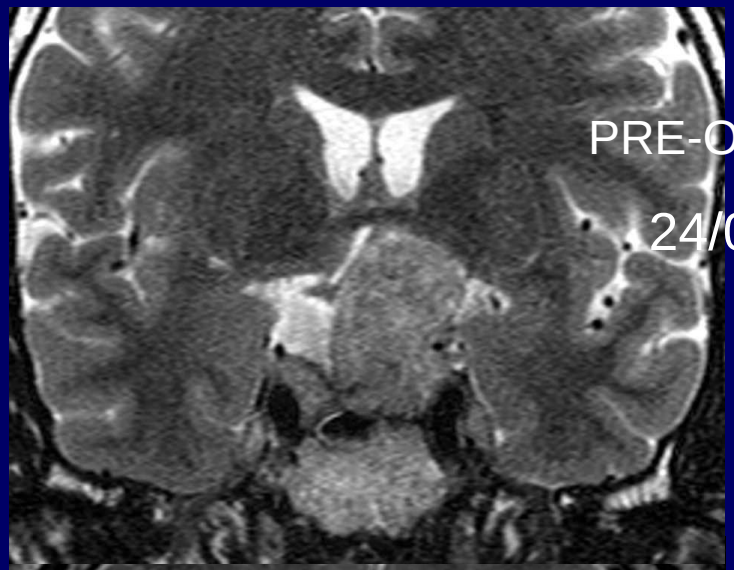




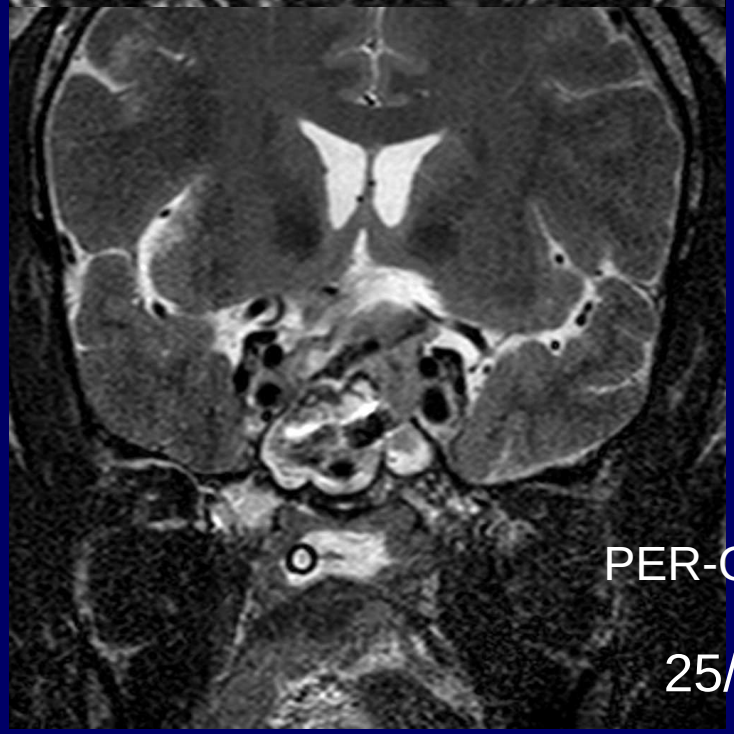
MPRs

24/04/2012



PRE-OPERATOIRE

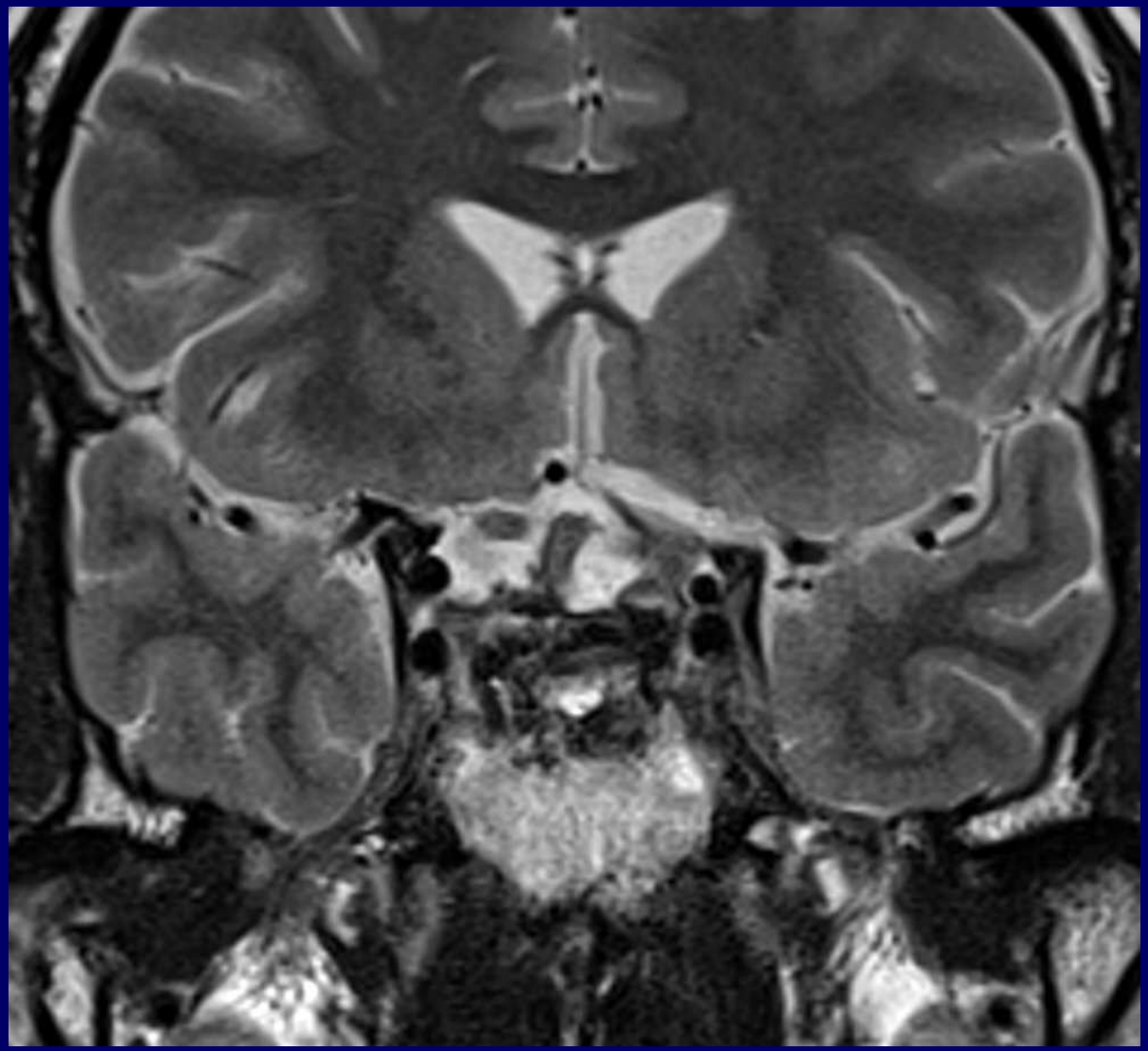
24/04/2012



PER-OPERATOIRE

25/04/2012

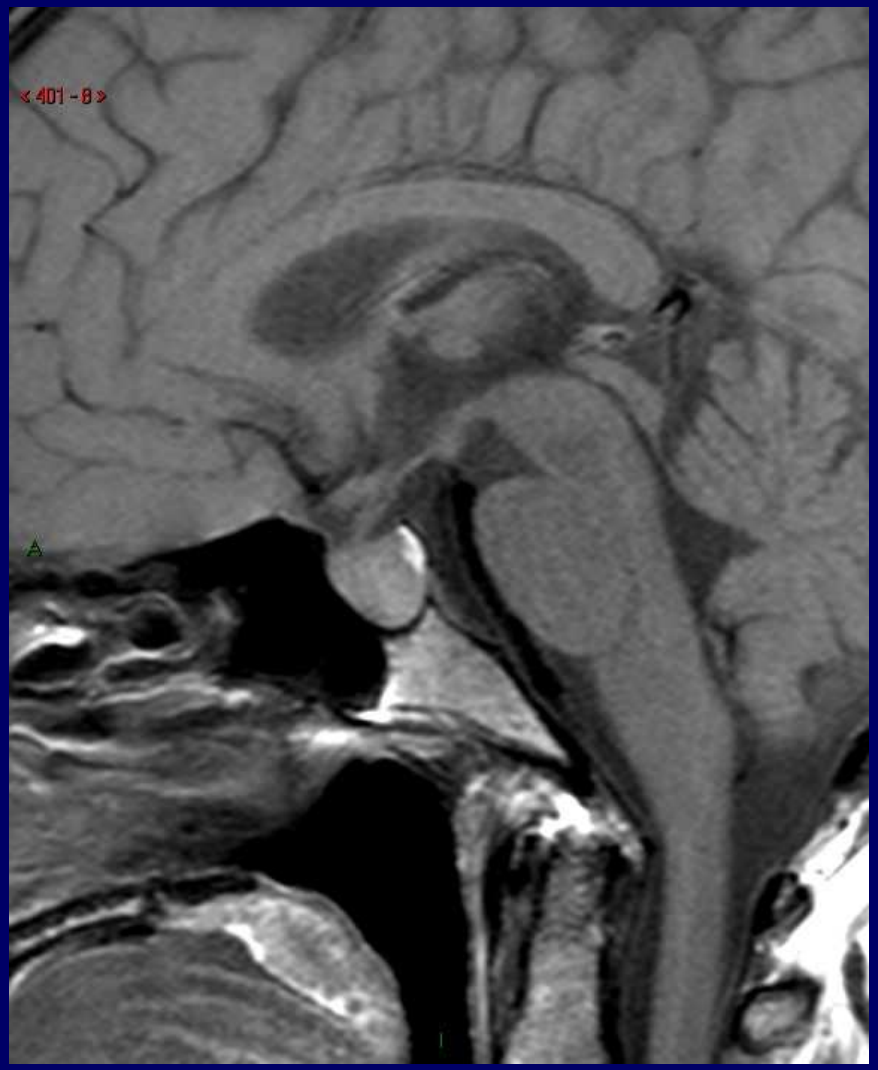
POST-OPERATOIRE

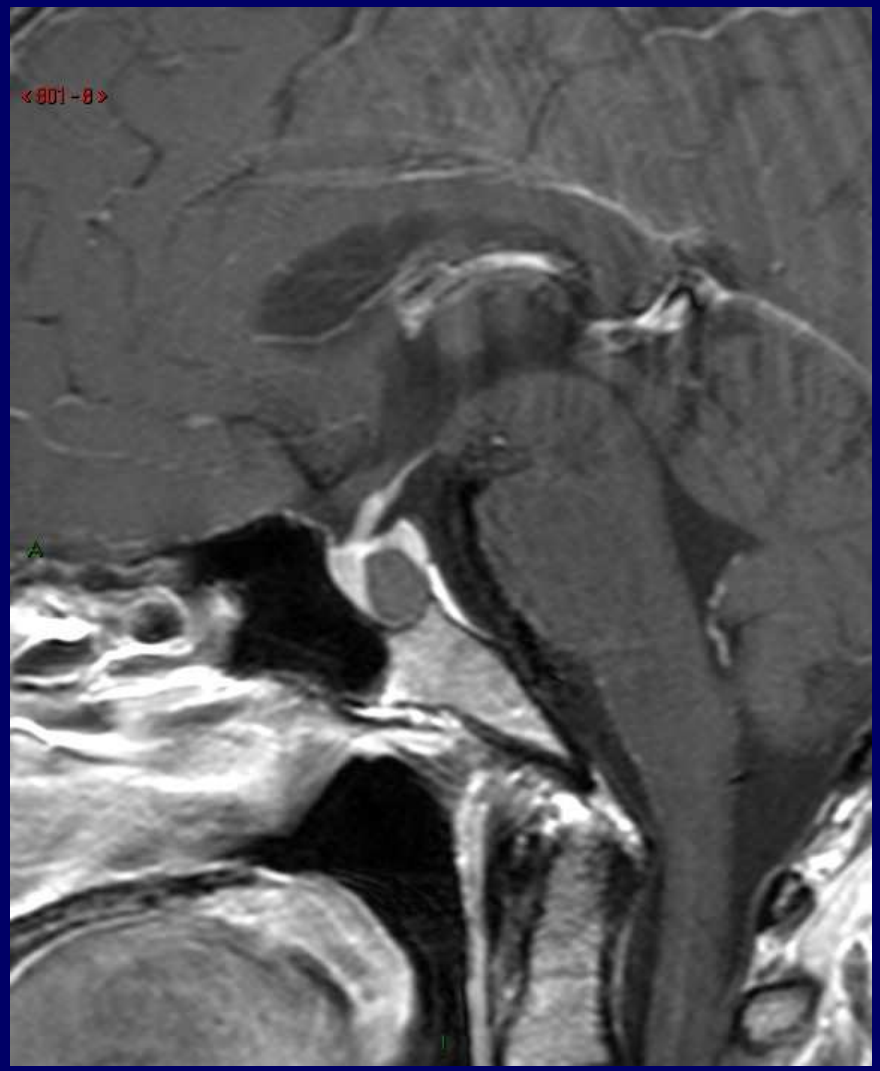


30/04/2012

# Kyste de la *Pars Intermedia*


# Kyste de la poche de Rathke



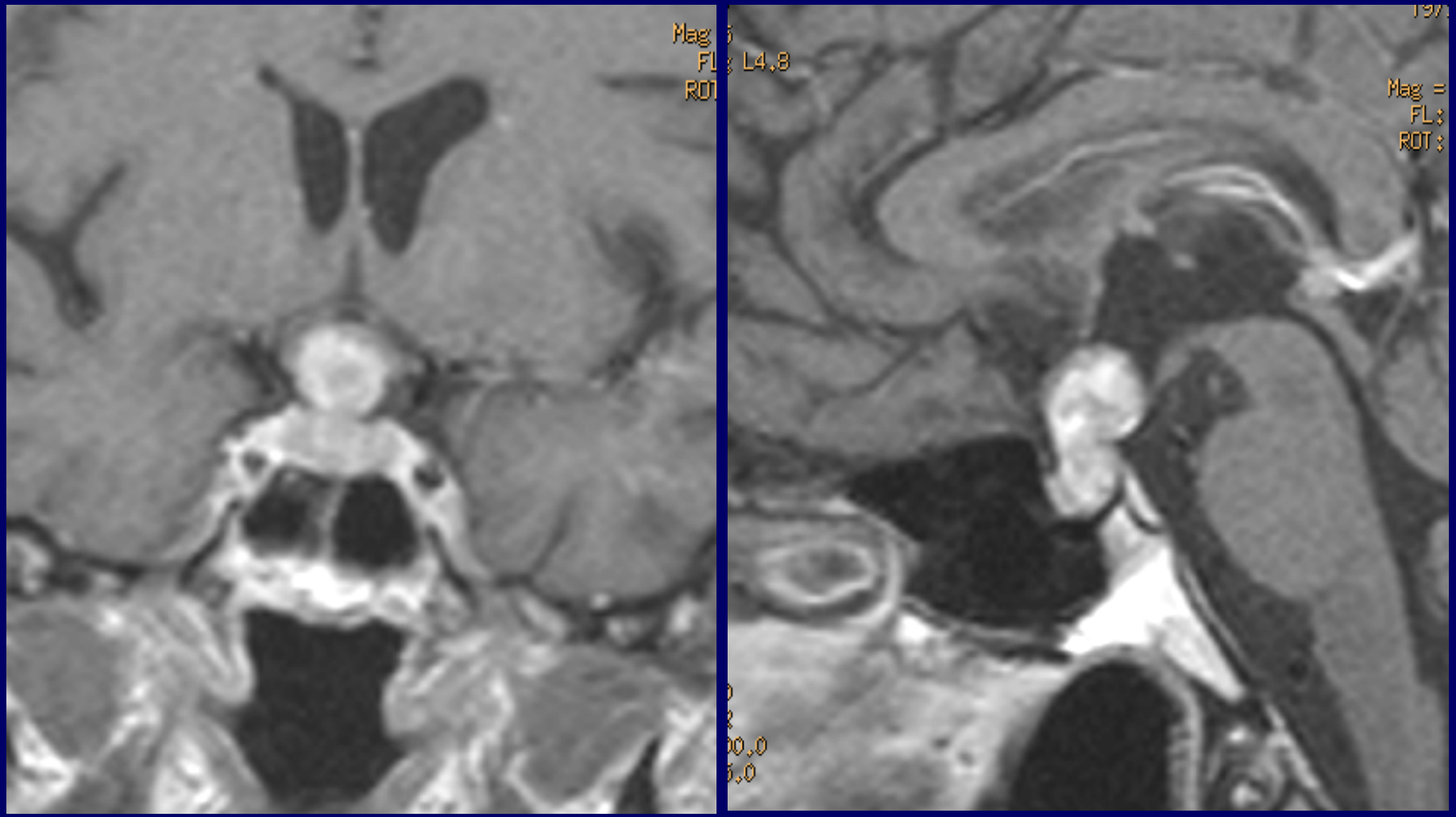



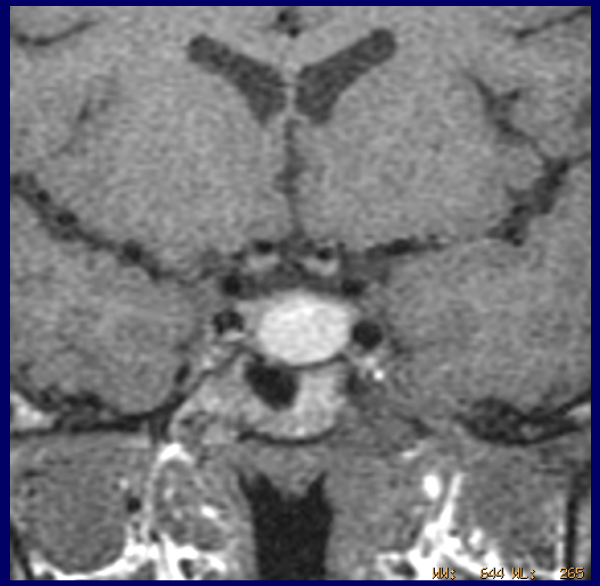
# Crâniopharyngiome

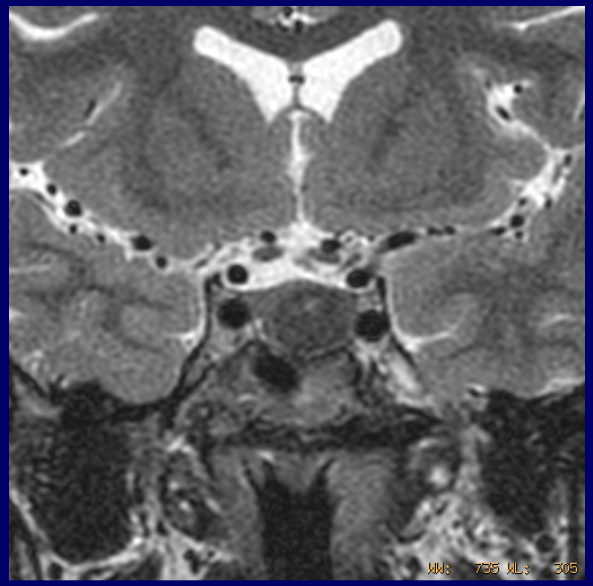


[T] = $Ca^{++}$ en CT scanner

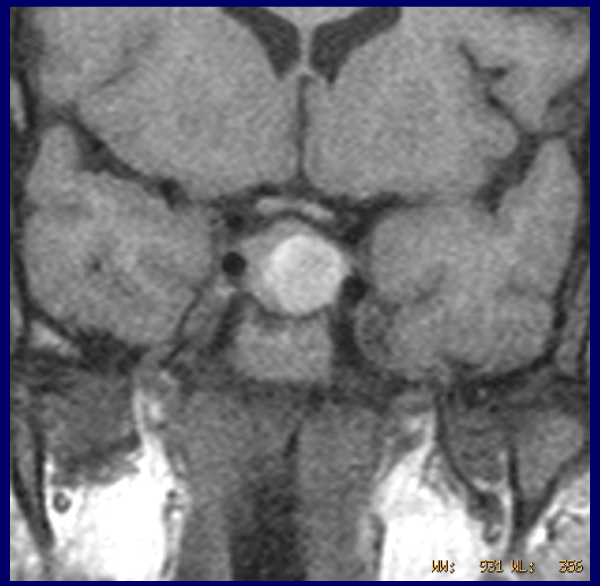
# Métastase hypophysaire

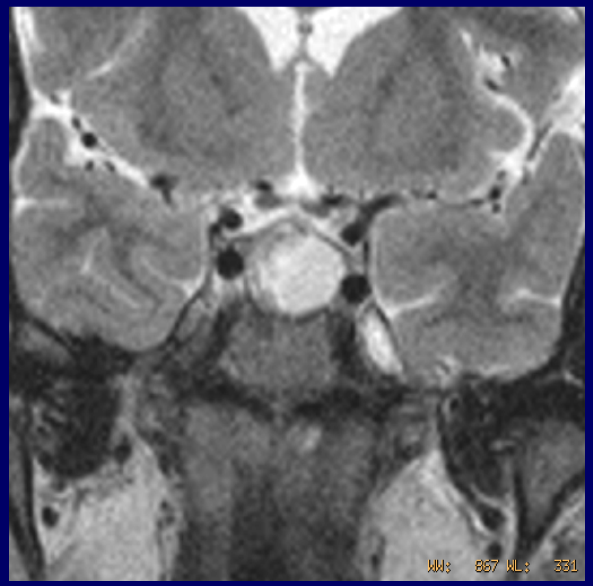






qques jours

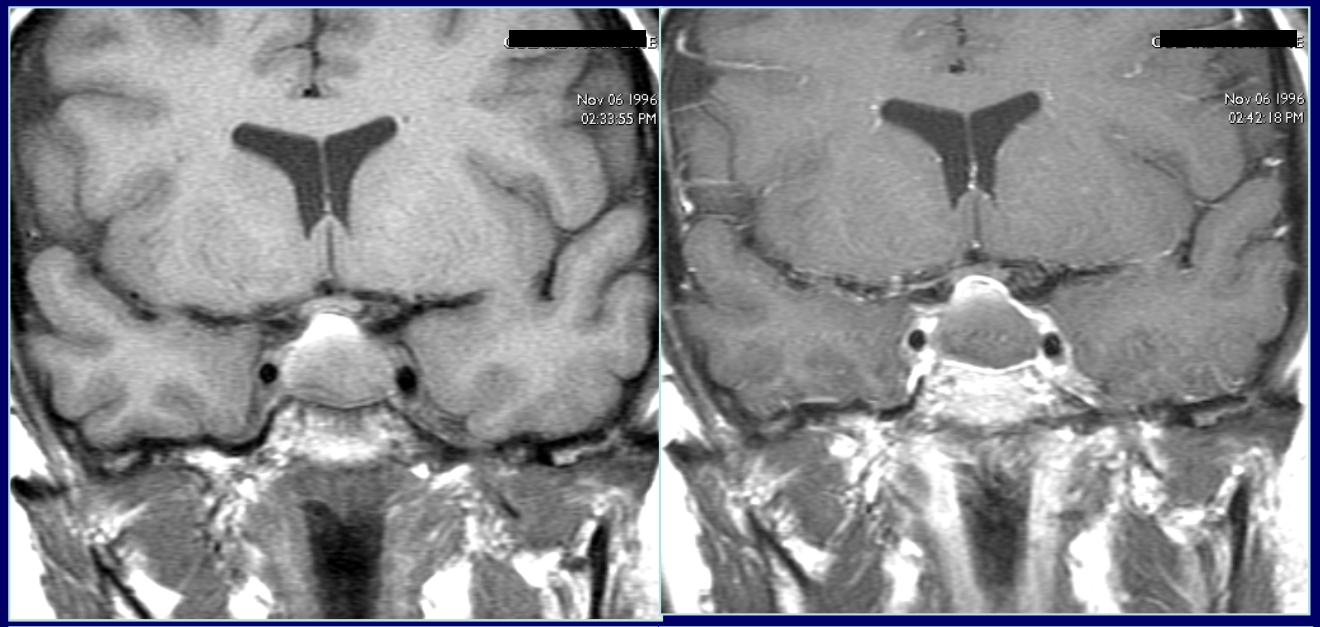


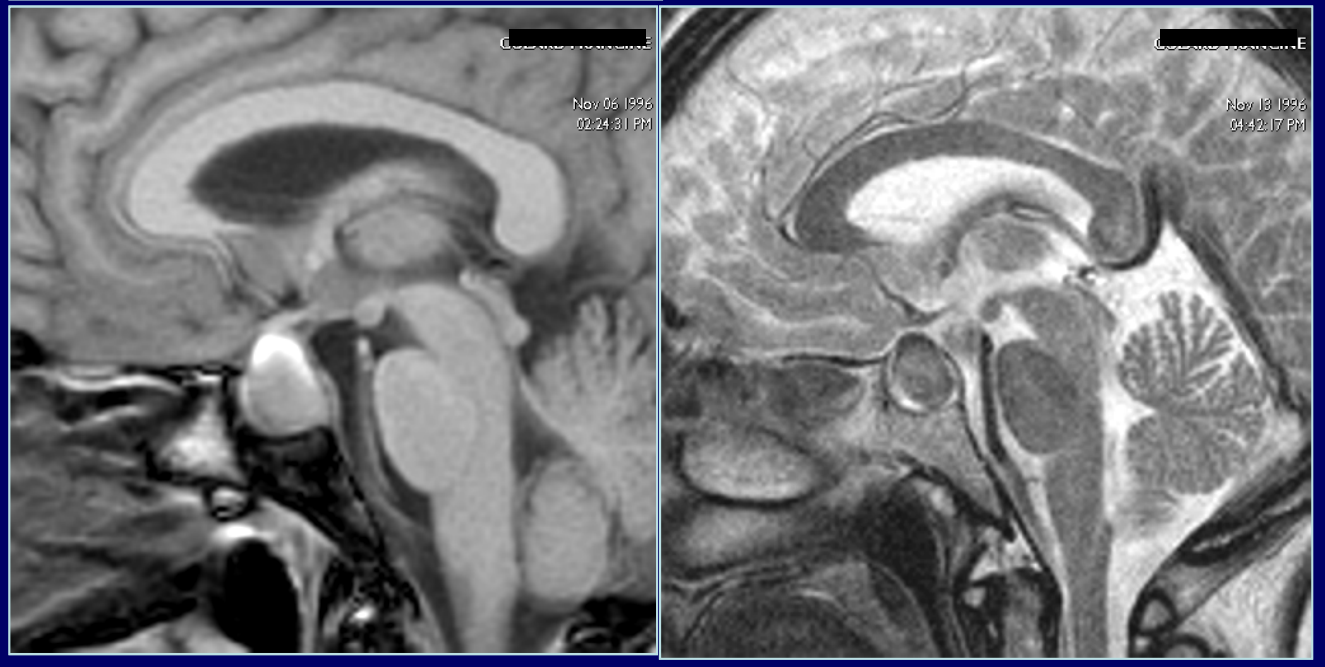


> une semaine

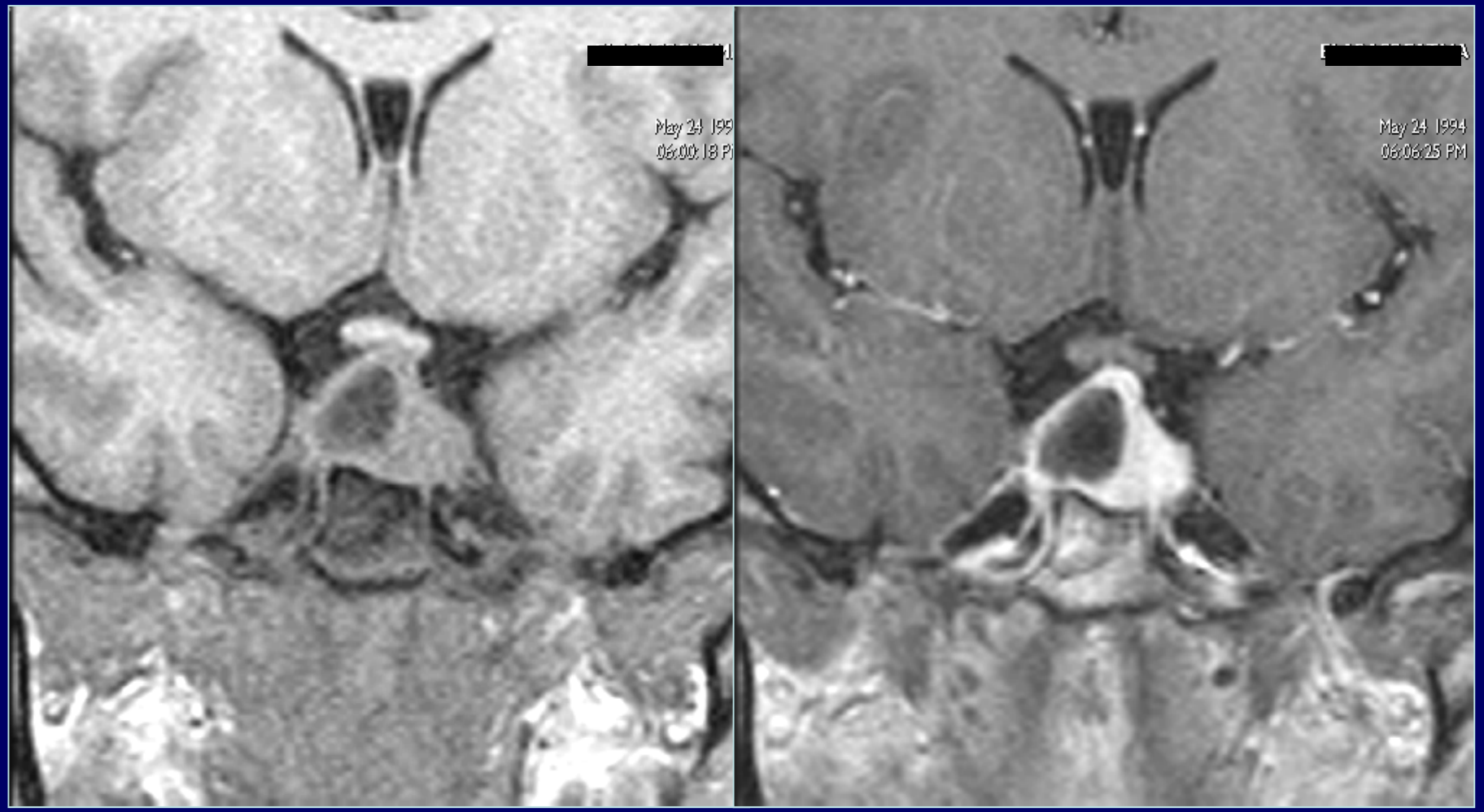
Hématome pituitaire

# Apoplexie pituitaire

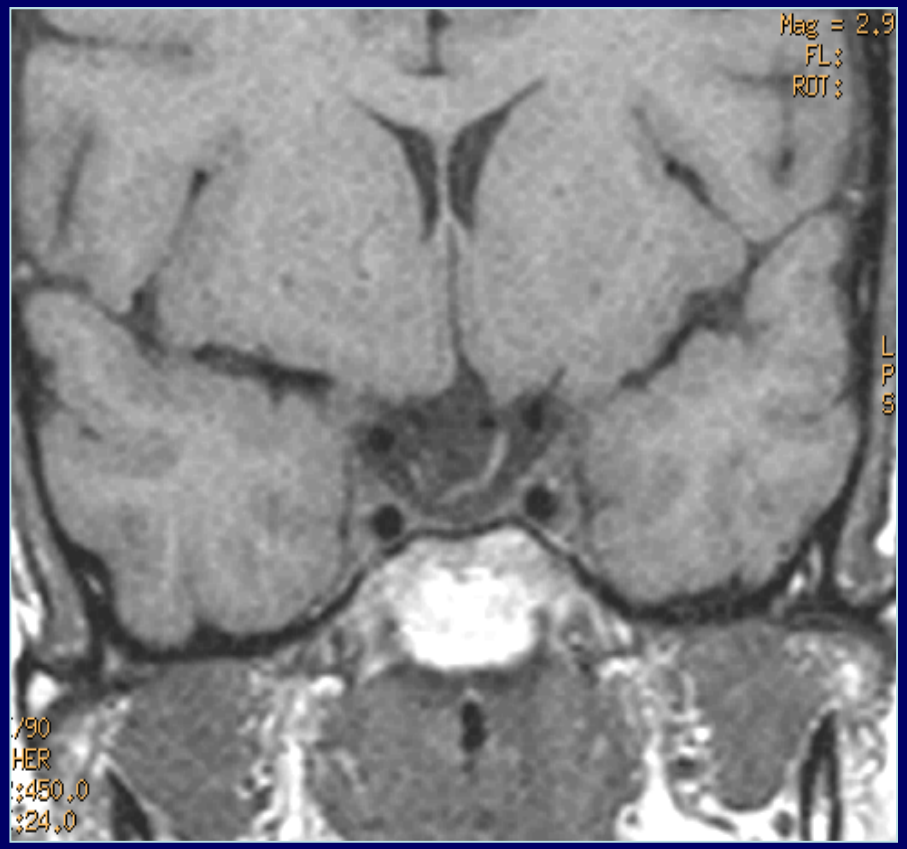



Phase aiguë




Hyperplasie de la grossesse





Attraction chiasmatique

# Diabète insipide

**D.D.** *Potomanie*

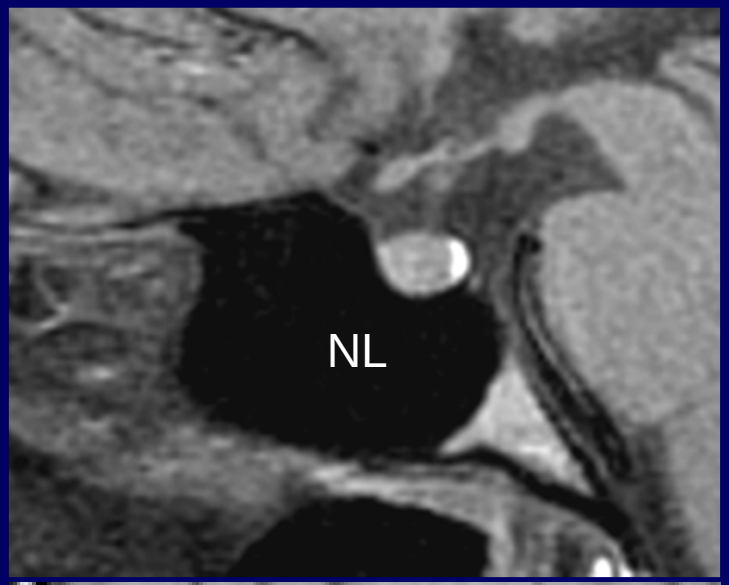
Diurèse excédentaire diluée + hémoconcentration secondaire

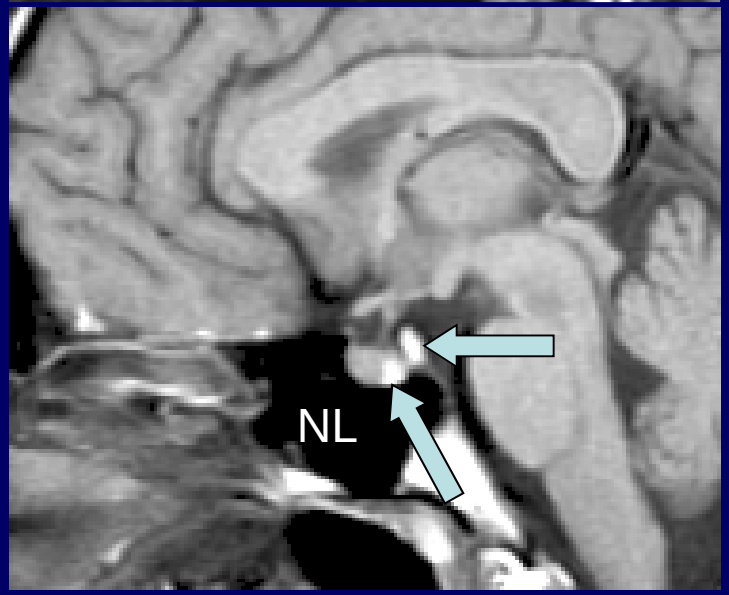
2 situations:

* **central** : déficit de sécrétion en ADH
* **périphérique**: résistance à l'ADH

*DIC*: 1/3 « ***idiopathiques*** »
2/3 secondaires

Idiopathique: * tout est normal sauf la neuro-hypophyse
qui perd son **hypersignal T1 spontané**
* cette perte de signal s'observe dans **10 à 15%** des examens
chez sujets normaux

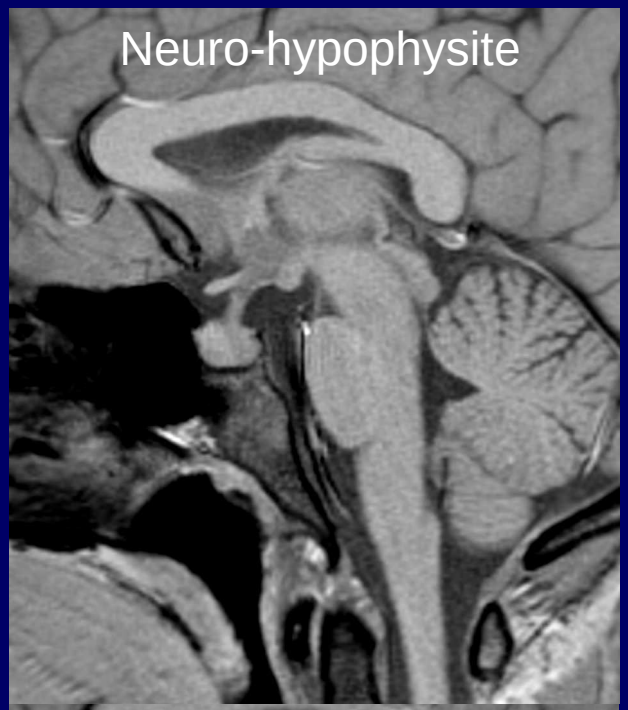



DIC primaire

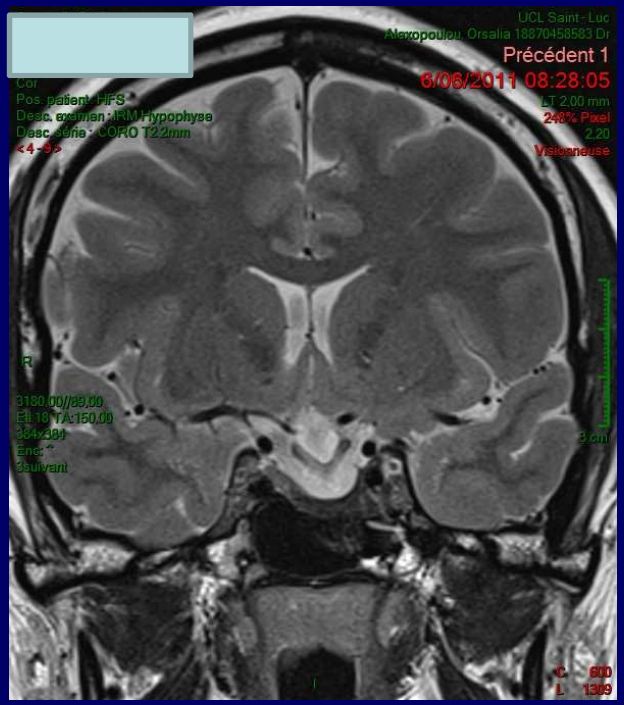
Ventriculostomie du V3

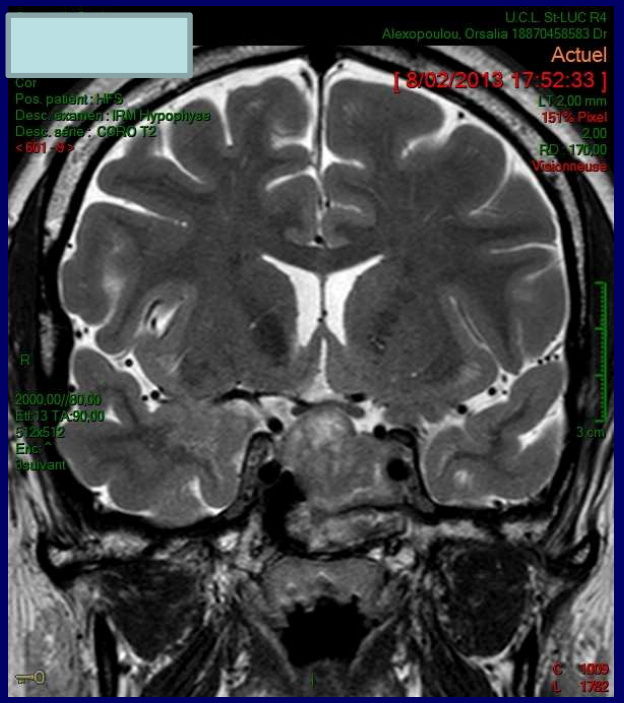
Neuro-hypophysite

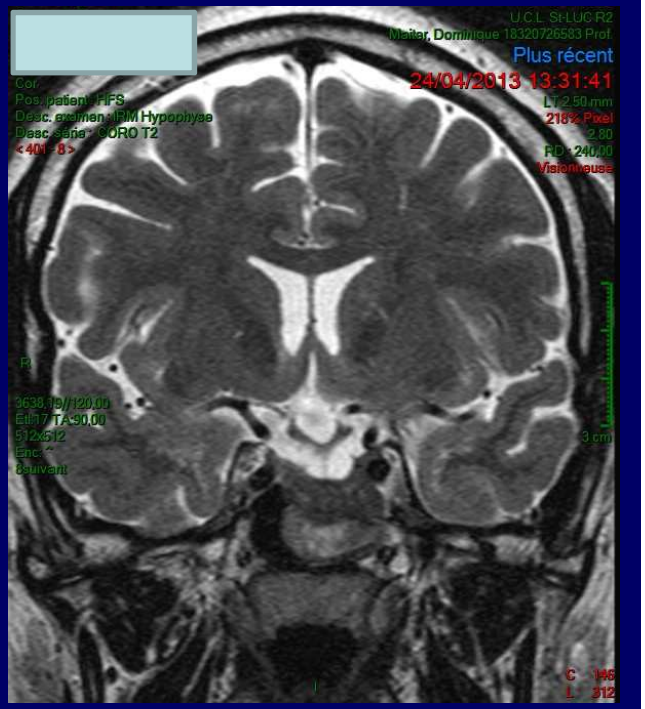



Métastase pituitaire

# QUIZZ : CAS 1



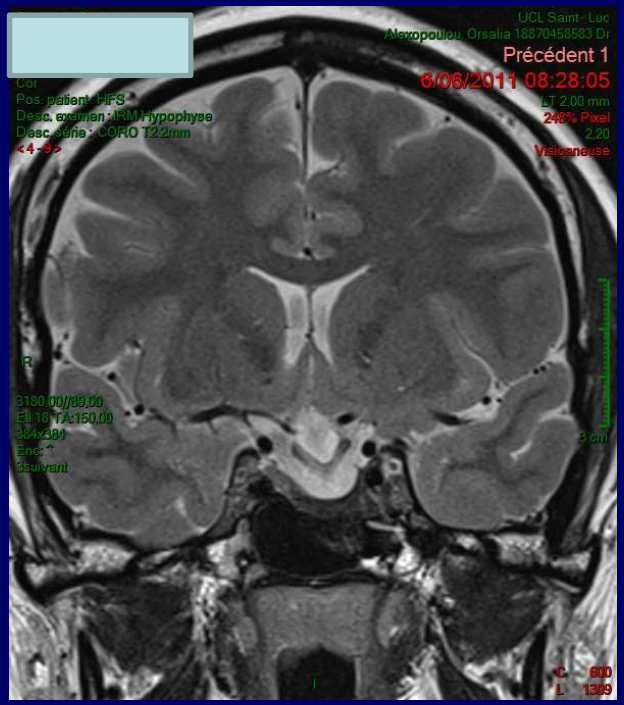

06.2011

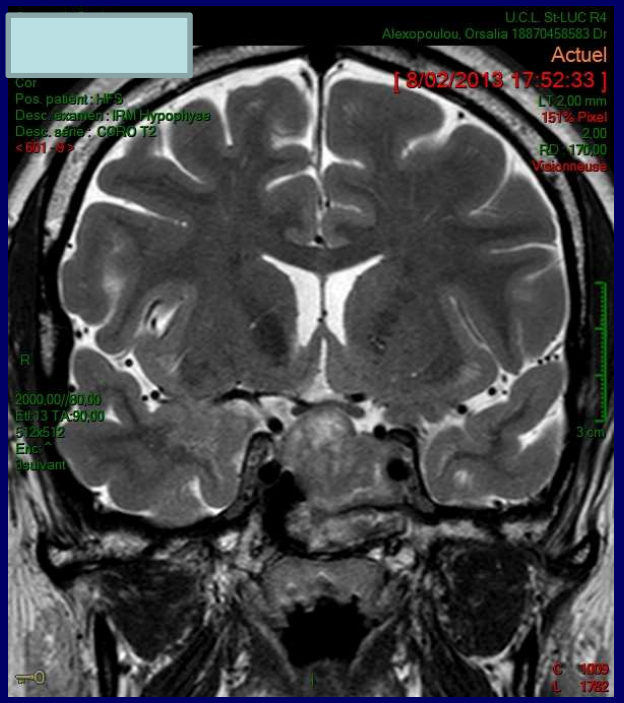
02.2013

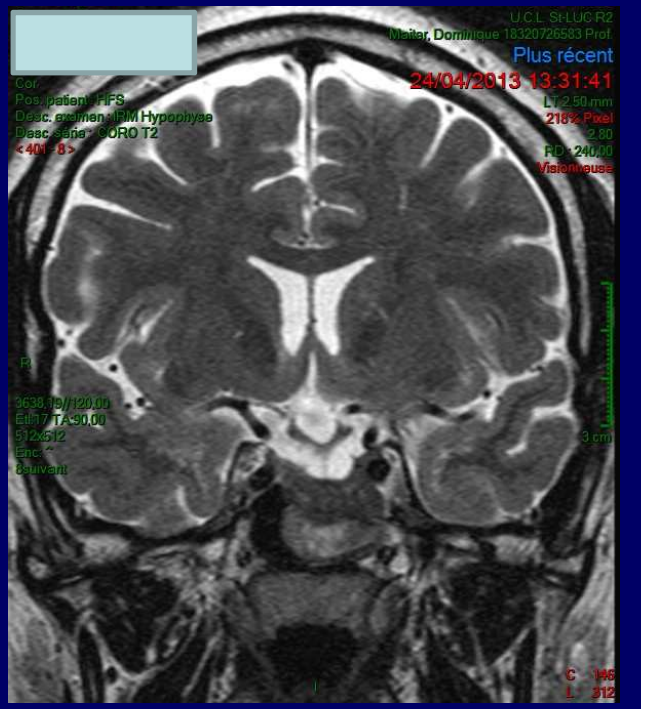
04.2013

Que s’est –il passé ?

# QUIZZ : CAS 1




06.2011

02.2013

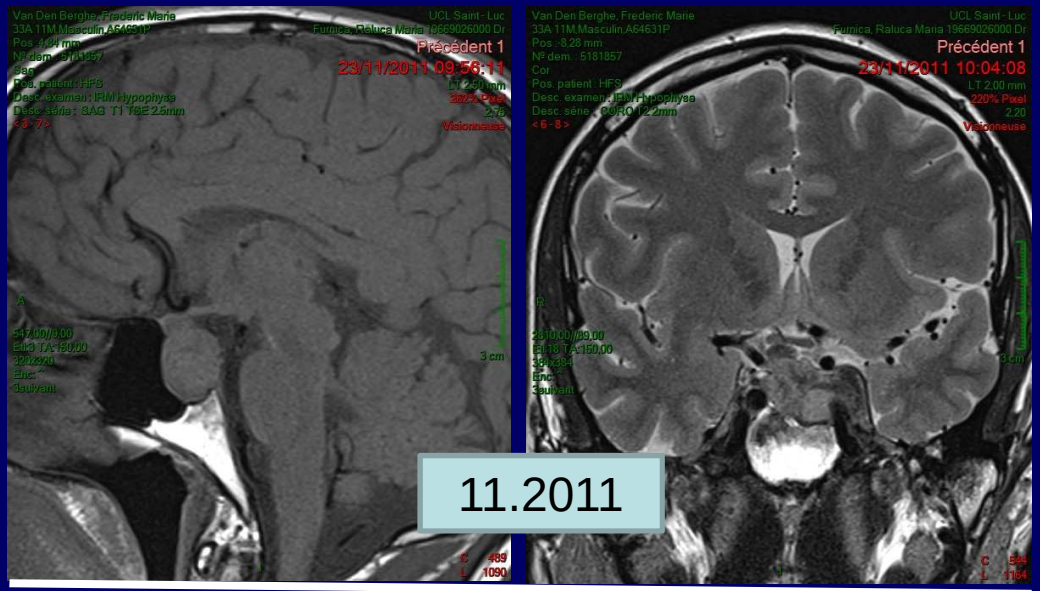
04.2013

Que s'est –il passé ?

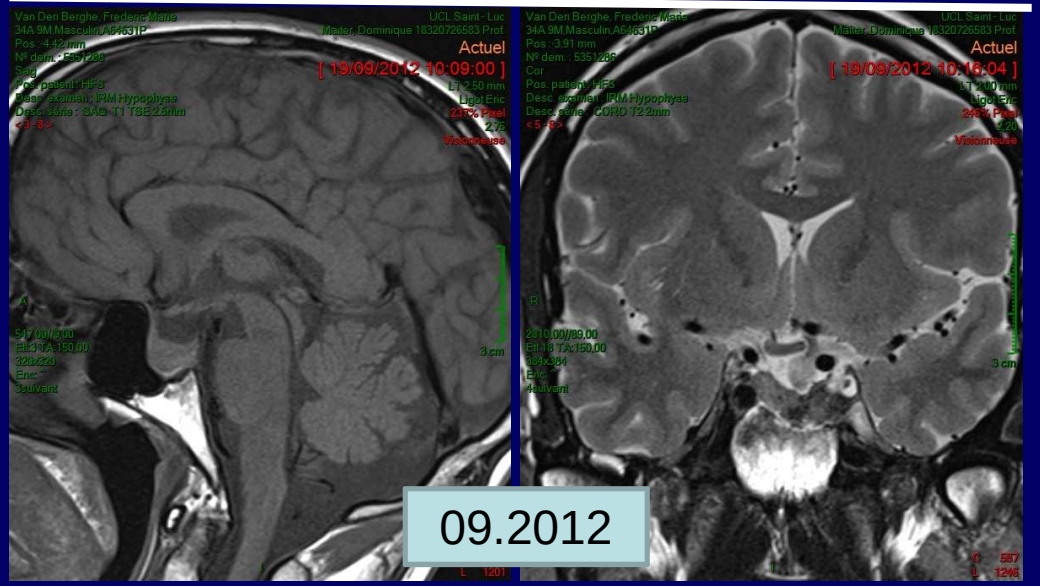
Grossesse

Accouchement

# QUIZZ : CAS 2



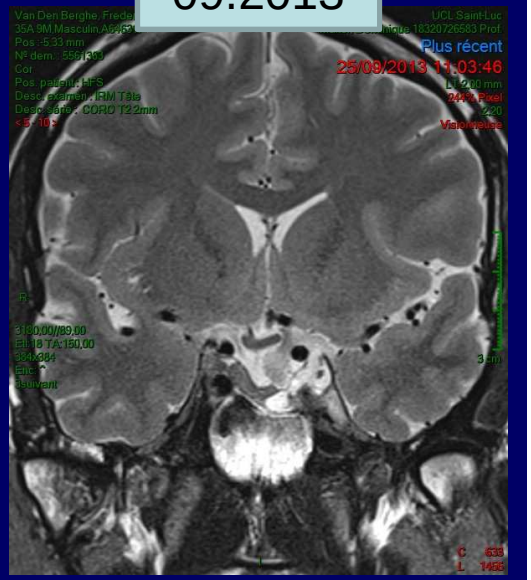

11.2011



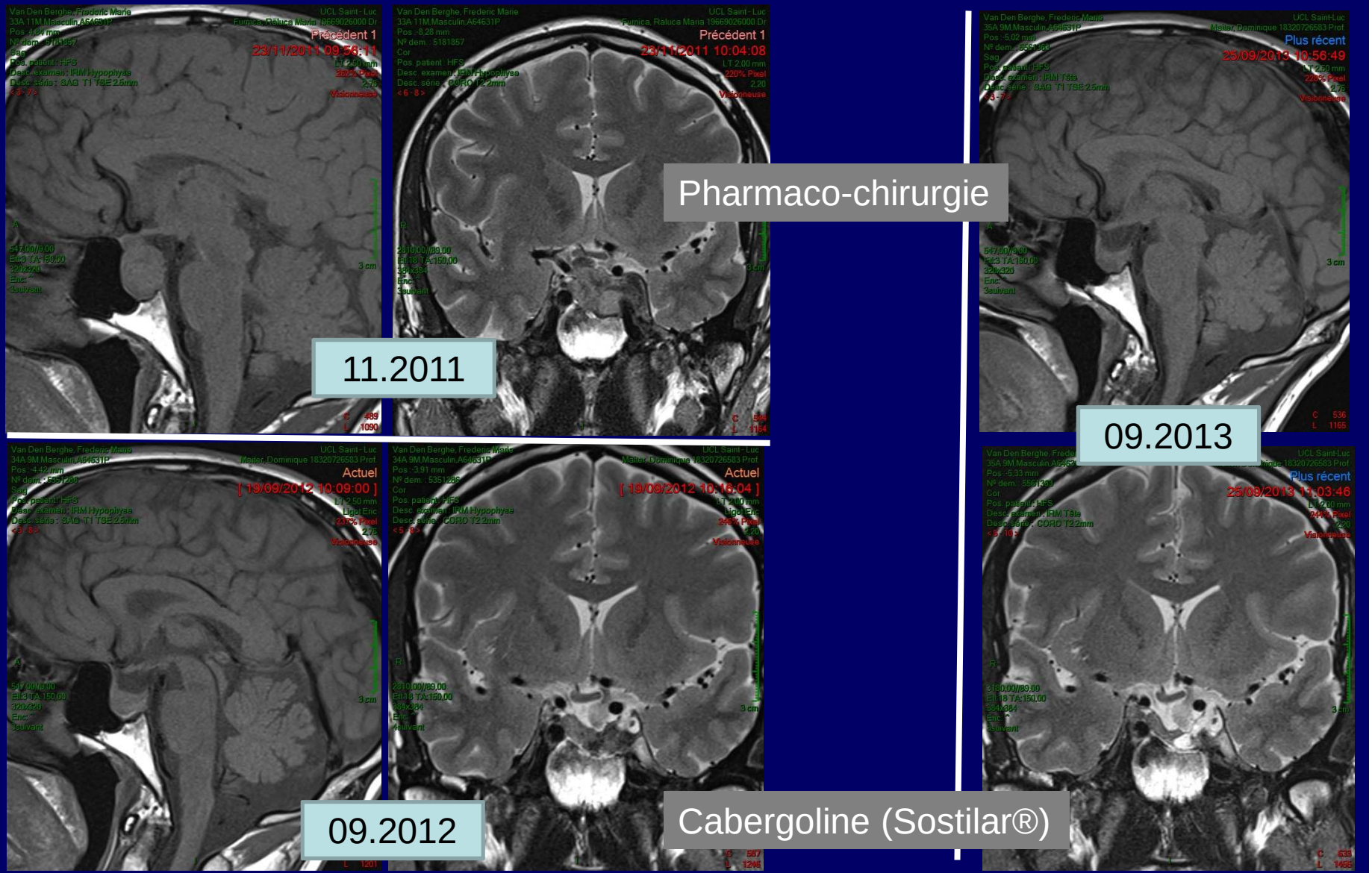

09.2012

Que s'est-il passé ?

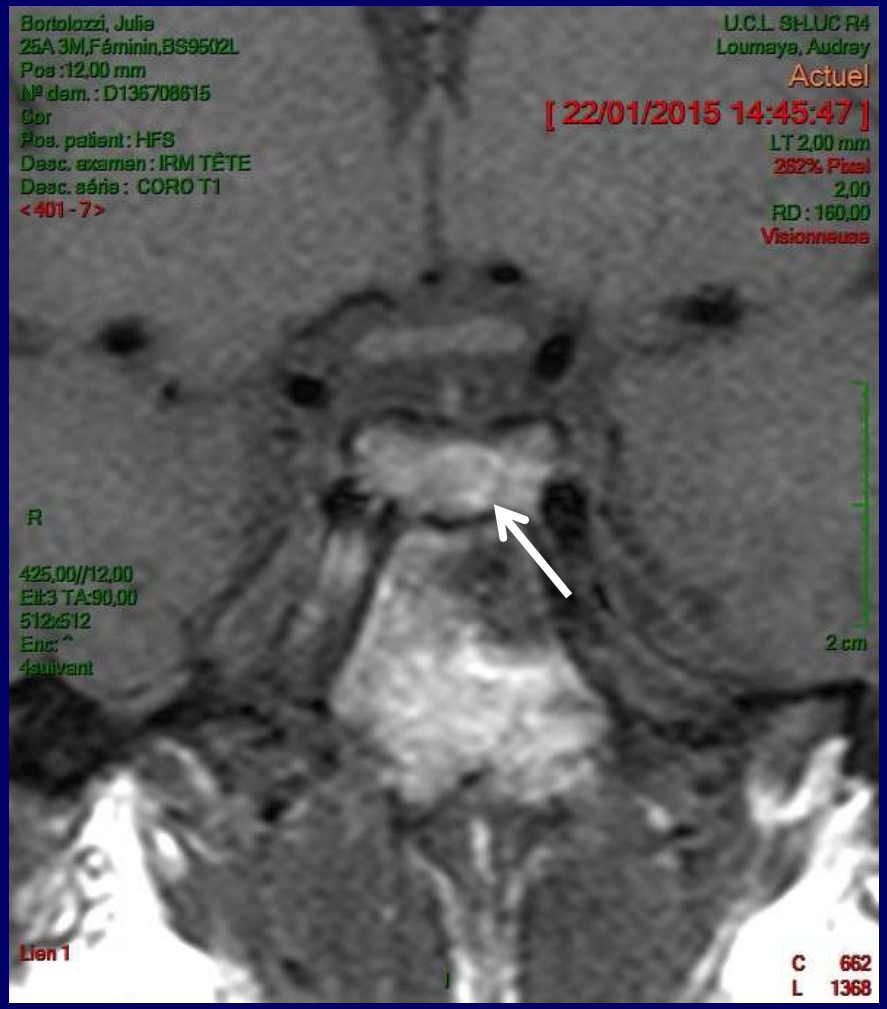

09.2013

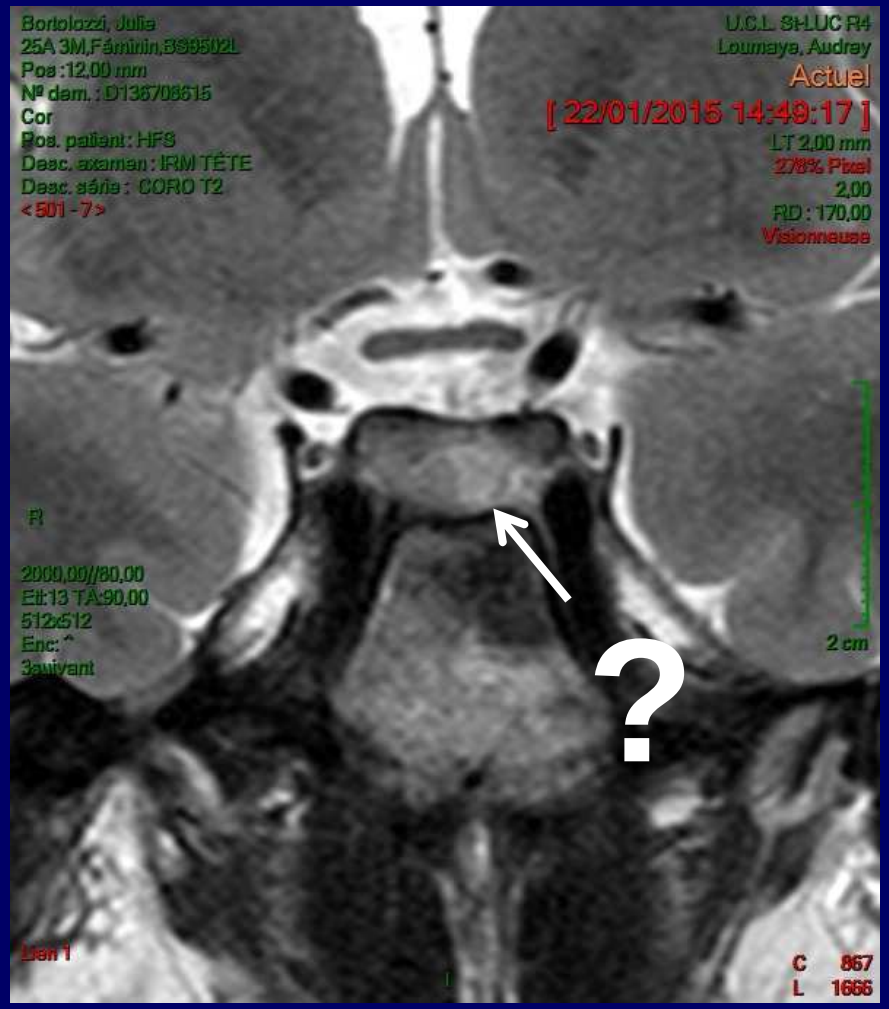


# QUIZZ : CAS 2

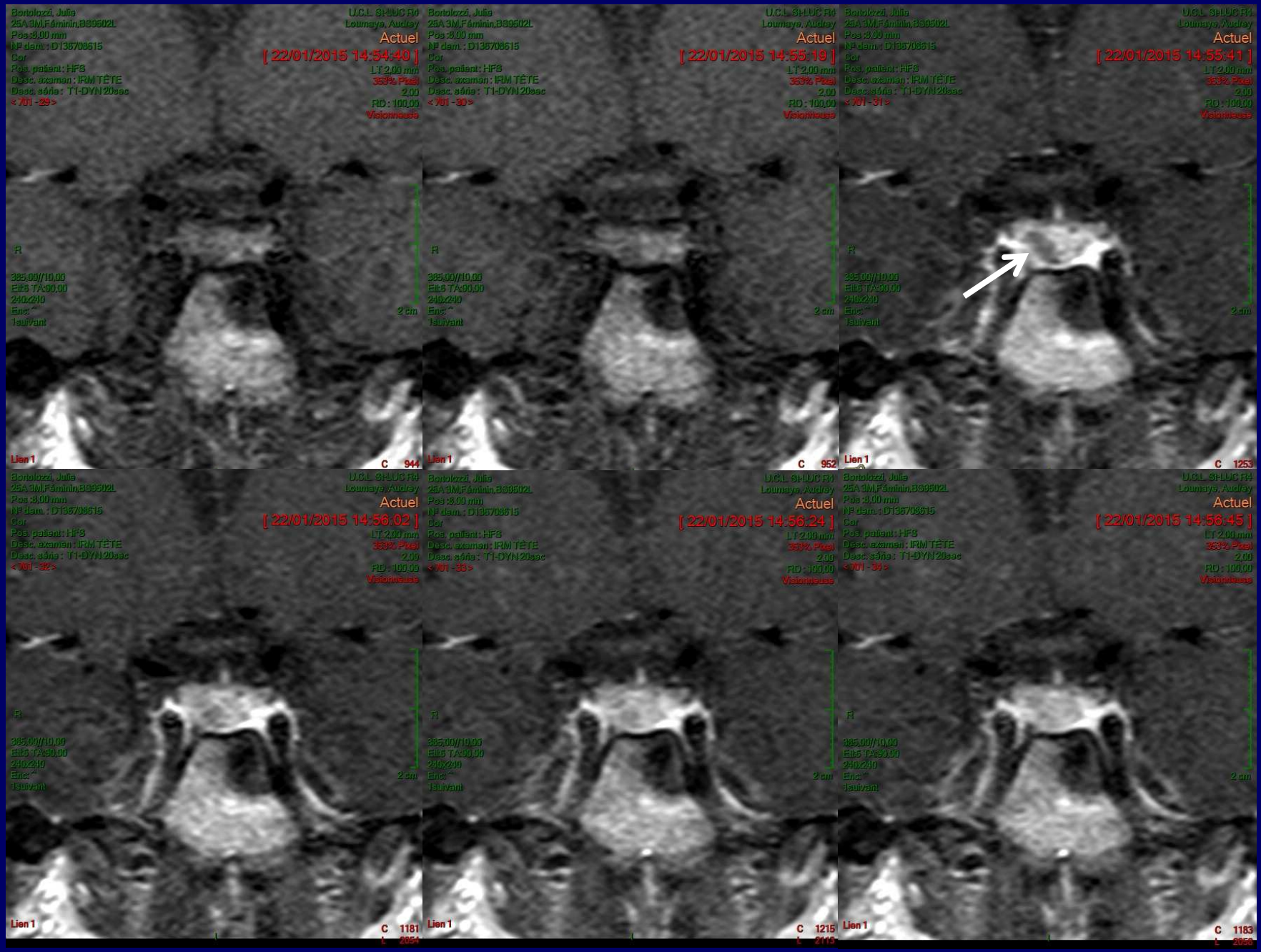

Pharmaco-chirurgie
11.2011
09.2013
09.2012
Cabergoline (Sostilar®)

# QUIZZ : CAS 3




*De quel côté se trouve l'adénome ?*


Bortolozzi, Julie
25A 3M,Féminin,B69502L
Pos:8.00 mm
N° dem. : D136708615
Cor
Pos. patient: HFS
Desc. examen : IRM TÊTE
Desc. série : T1-DYN 20sec
< 701 - 29 >
U.C.L. St-LUC R4
Loumaye, Audrey
Actuel
[ 22/01/2015 14:54:40 ]
LT 2.00 mm
353% Pixel
2.00
RD : 100.00
Visionneuse
385.00//10.00
Ellis TA:90.00
240x240
Enc: ^
1suivant
2 cm
Lien 1
C 944
Bortolozzi, Julie
25A 3M,Féminin,B69502L
Pos:8.00 mm
N° dem. : D136708615
Cor
Pos. patient: HFS
Desc. examen : IRM TÊTE
Desc. série : T1-DYN 20sec
< 701 - 30 >
U.C.L. St-LUC R4
Loumaye, Audrey
Actuel
[ 22/01/2015 14:55:19 ]
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353% Pixel
2.00
RD : 100.00
Visionneuse
385.00//10.00
Ellis TA:90.00
240x240
Enc: ^
1suivant
2 cm
Lien 1
C 952
Bortolozzi, Julie
25A 3M,Féminin,B69502L
Pos:8.00 mm
N° dem. : D136708615
Cor
Pos. patient: HFS
Desc. examen : IRM TÊTE
Desc. série : T1-DYN 20sec
< 701 - 31 >
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Loumaye, Audrey
Actuel
[ 22/01/2015 14:55:41 ]
LT 2.00 mm
353% Pixel
2.00
RD : 100.00
Visionneuse
385.00//10.00
Ellis TA:90.00
240x240
Enc: ^
1suivant
2 cm
Lien 1
C 1253
Bortolozzi, Julie
25A 3M,Féminin,B69502L
Pos:8.00 mm
N° dem. : D136708615
Cor
Pos. patient: HFS
Desc. examen : IRM TÊTE
Desc. série : T1-DYN 20sec
< 701 - 32 >
U.C.L. St-LUC R4
Loumaye, Audrey
Actuel
[ 22/01/2015 14:56:02 ]
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353% Pixel
2.00
RD : 100.00
Visionneuse
385.00//10.00
Ellis TA:90.00
240x240
Enc: ^
1suivant
2 cm
Lien 1
C 1181
Bortolozzi, Julie
25A 3M,Féminin,B69502L
Pos:8.00 mm
N° dem. : D136708615
Cor
Pos. patient: HFS
Desc. examen : IRM TÊTE
Desc. série : T1-DYN 20sec
< 701 - 33 >
U.C.L. St-LUC R4
Loumaye, Audrey
Actuel
[ 22/01/2015 14:56:24 ]
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353% Pixel
2.00
RD : 100.00
Visionneuse
385.00//10.00
Ellis TA:90.00
240x240
Enc: ^
1suivant
2 cm
Lien 1
C 1215
Bortolozzi, Julie
25A 3M,Féminin,B69502L
Pos:8.00 mm
N° dem. : D136708615
Cor
Pos. patient: HFS
Desc. examen : IRM TÊTE
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Loumaye, Audrey
Actuel
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353% Pixel
2.00
RD : 100.00
Visionneuse
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240x240
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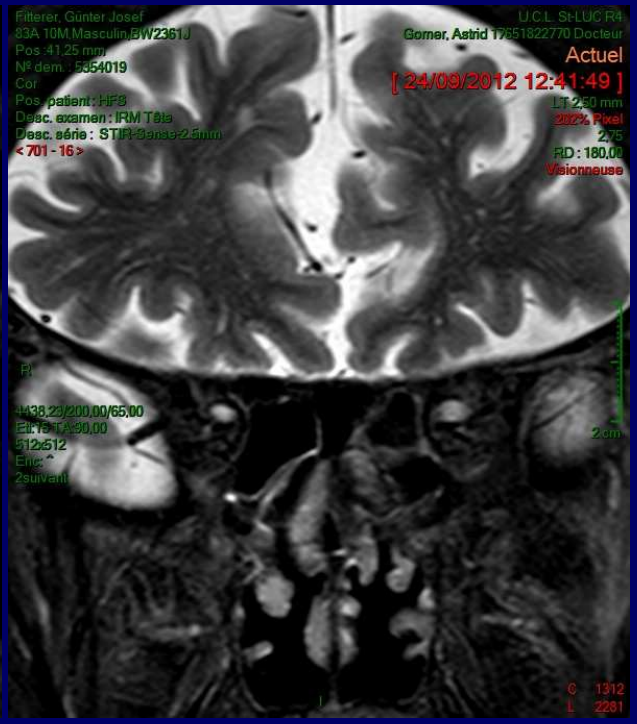
2 cm
Lien 1
C 1183

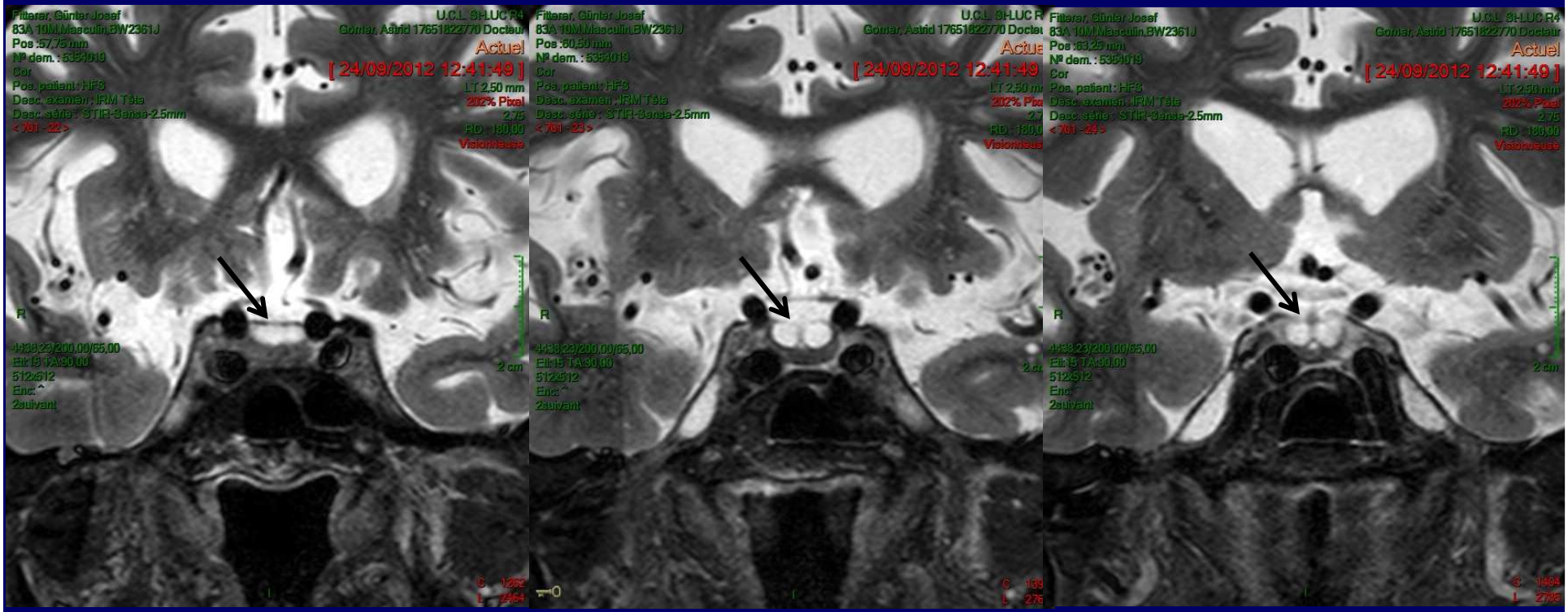
# QUIZZ : CAS 4



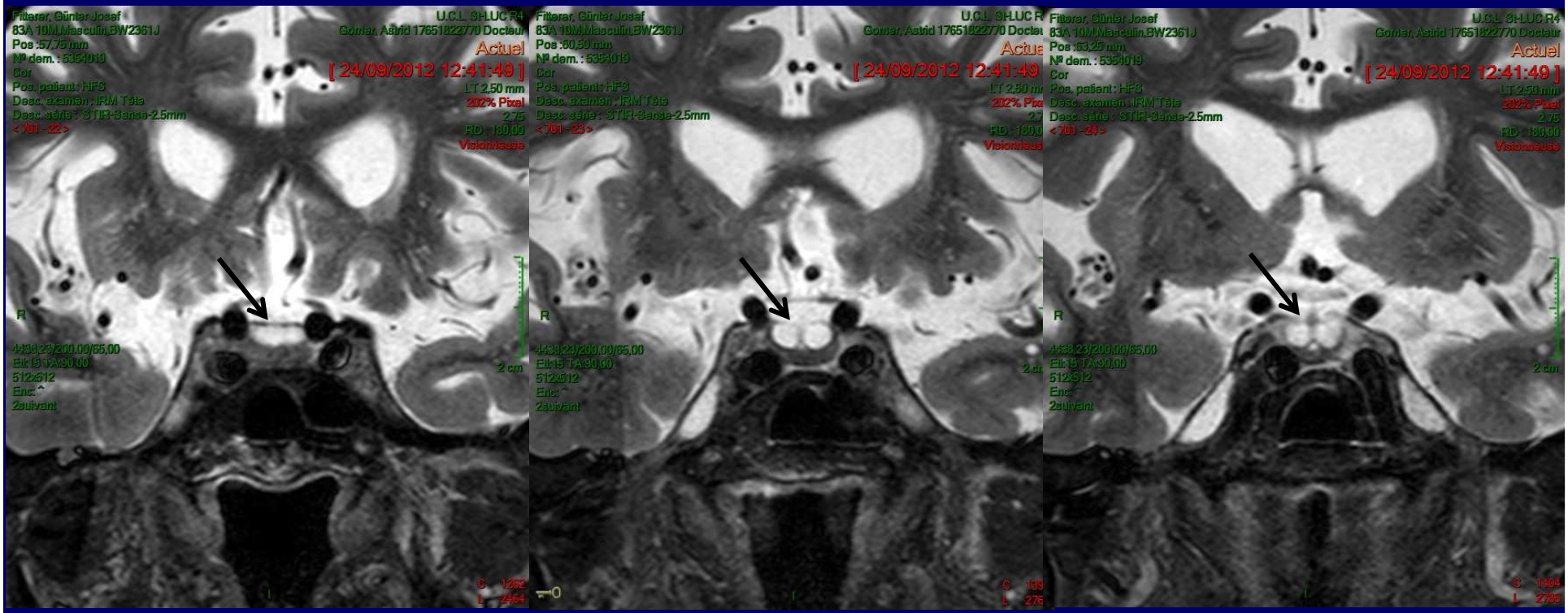



Hypertension intra-crânienne ‘bénigne’ (‘sine materia’)

# Quelle structure anatomique ?

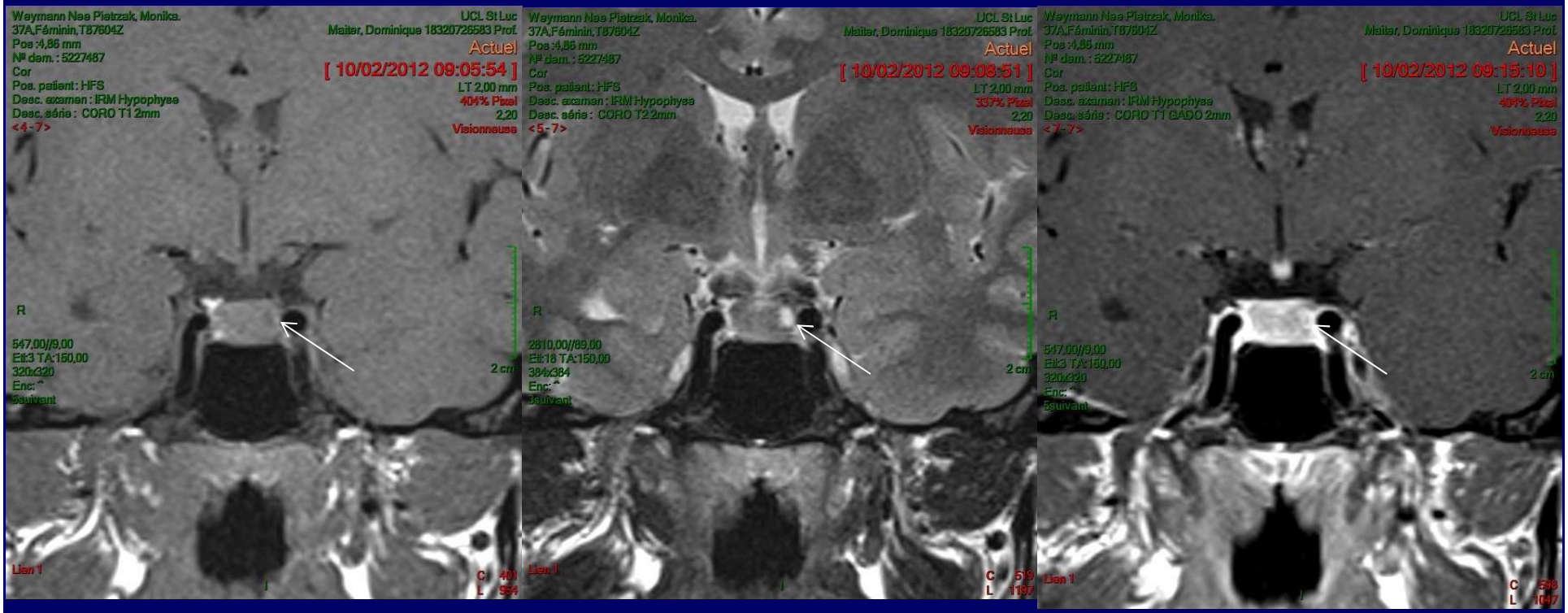


# Quelle structure anatomique ?



**Diaphragme sellaire**

# QUIZZ : CAS 5

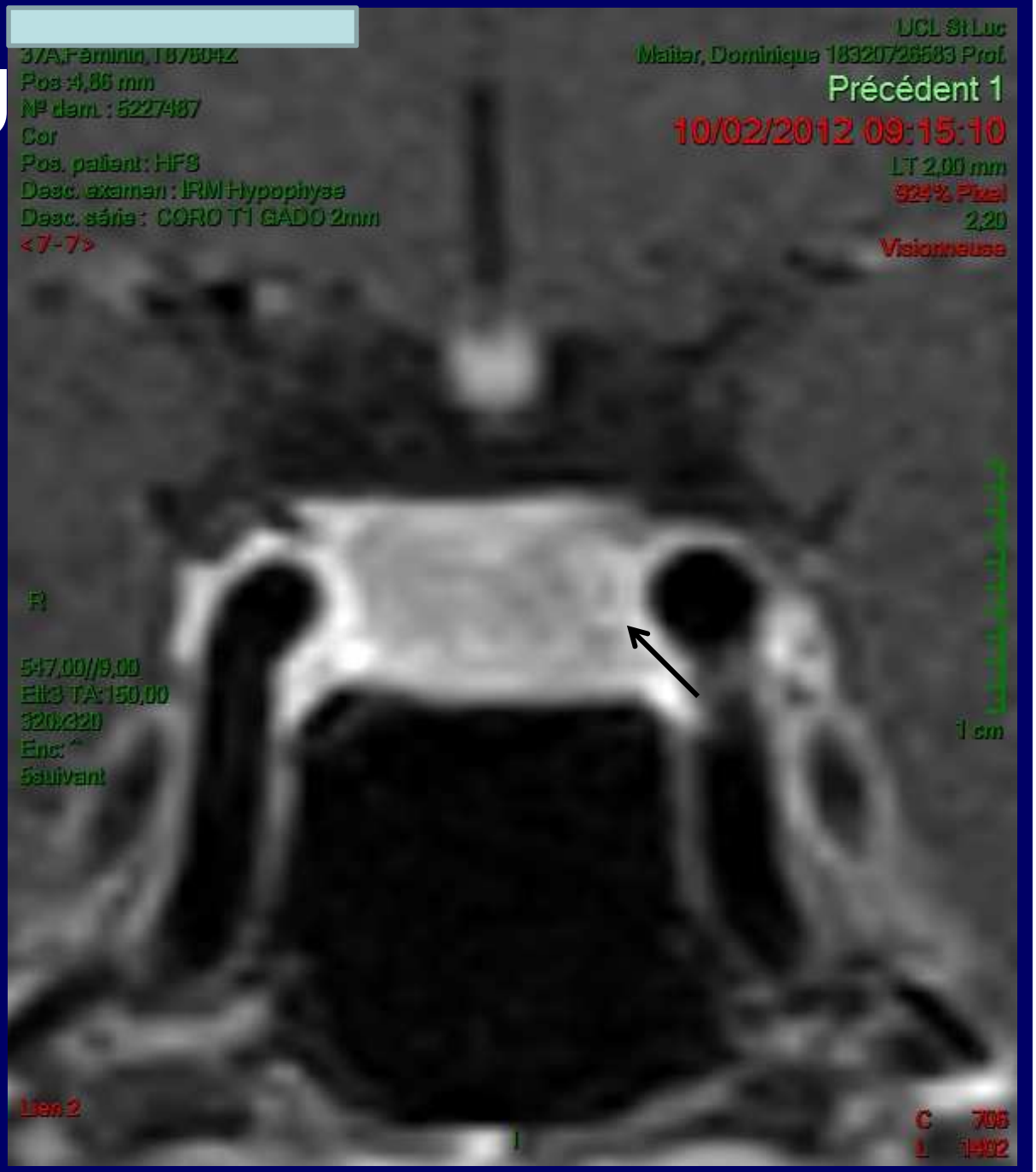



*De quoi s'agit-il ?*

# QU

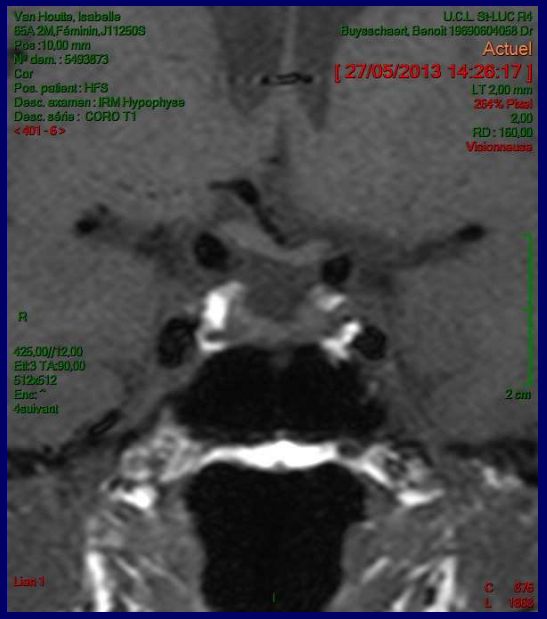
*De quoi s'agit-il ?*

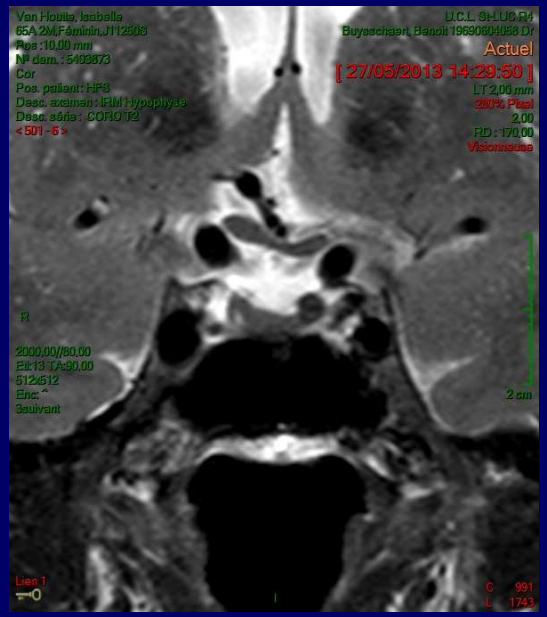
Adénome 'inflammatoire'



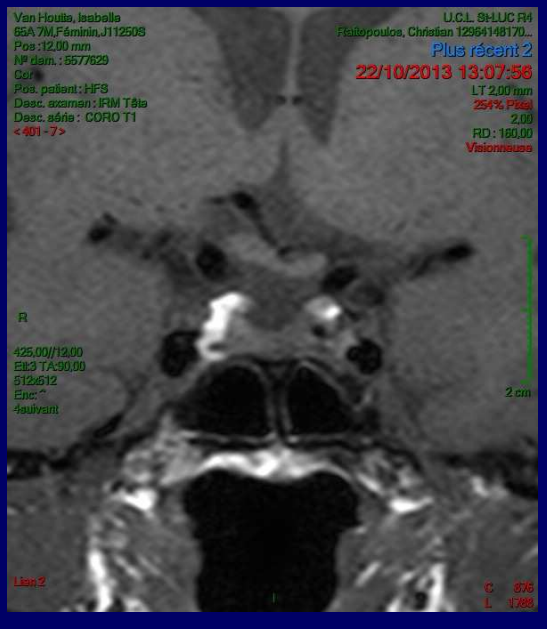
# QUIZZ : CAS 6

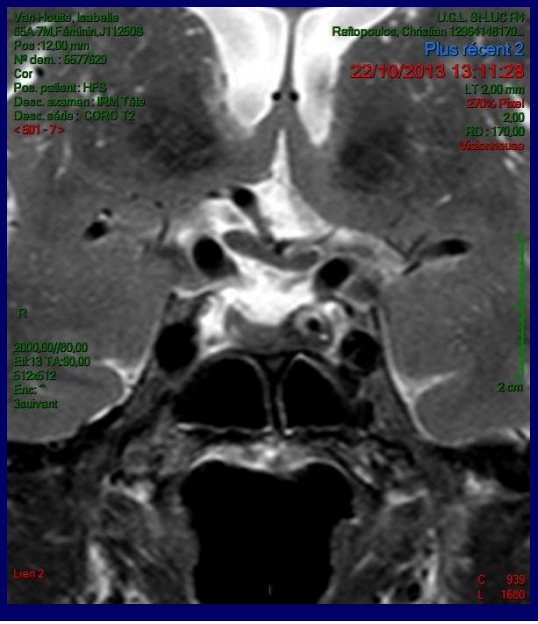
Que s'est-il passé?

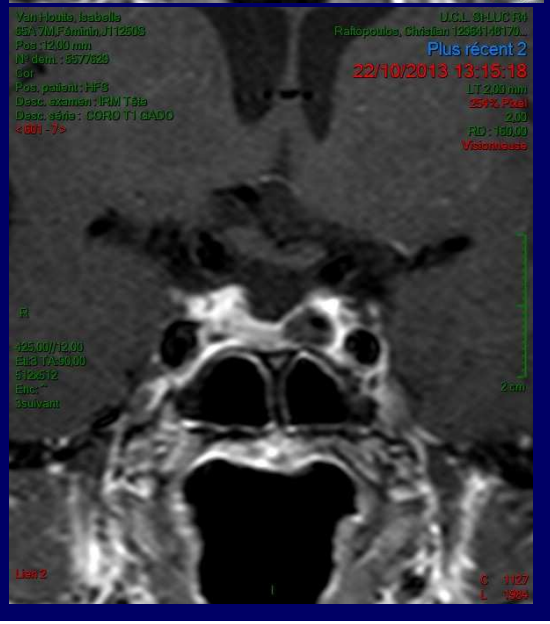


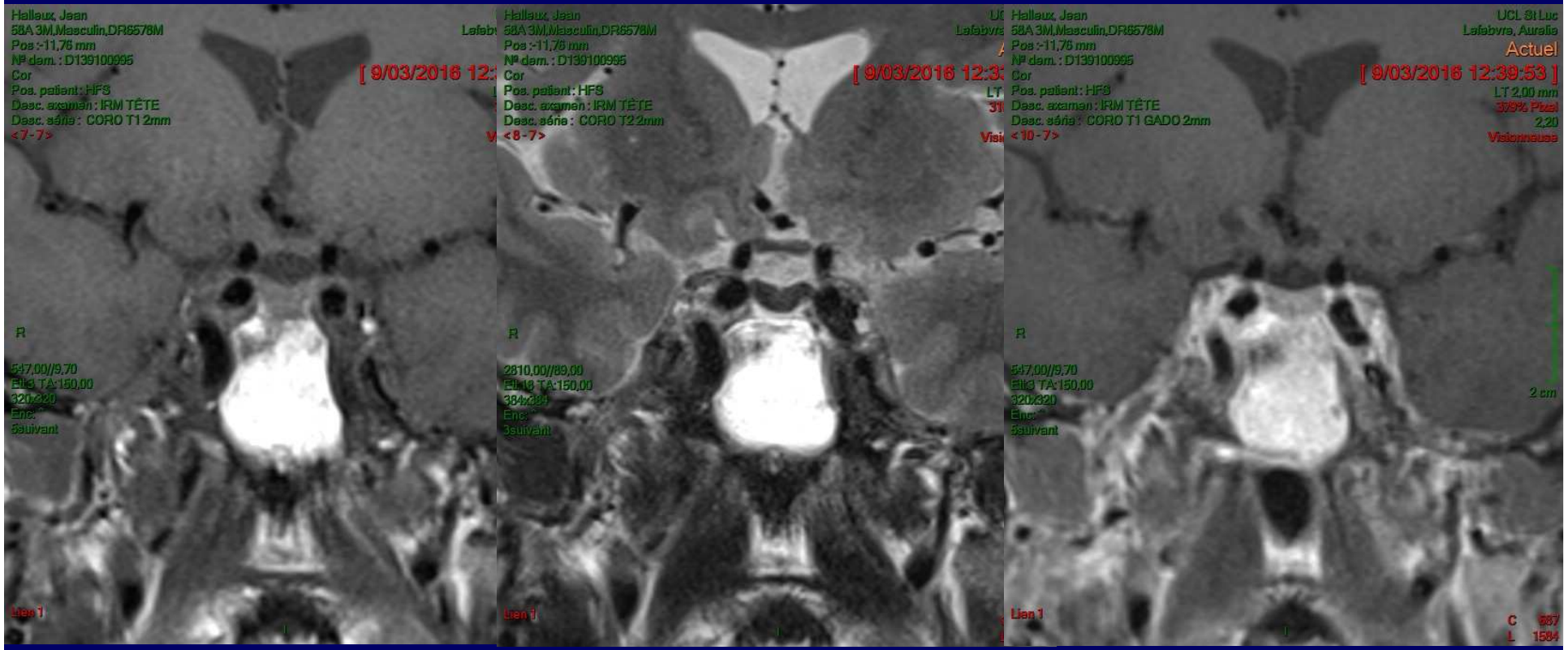




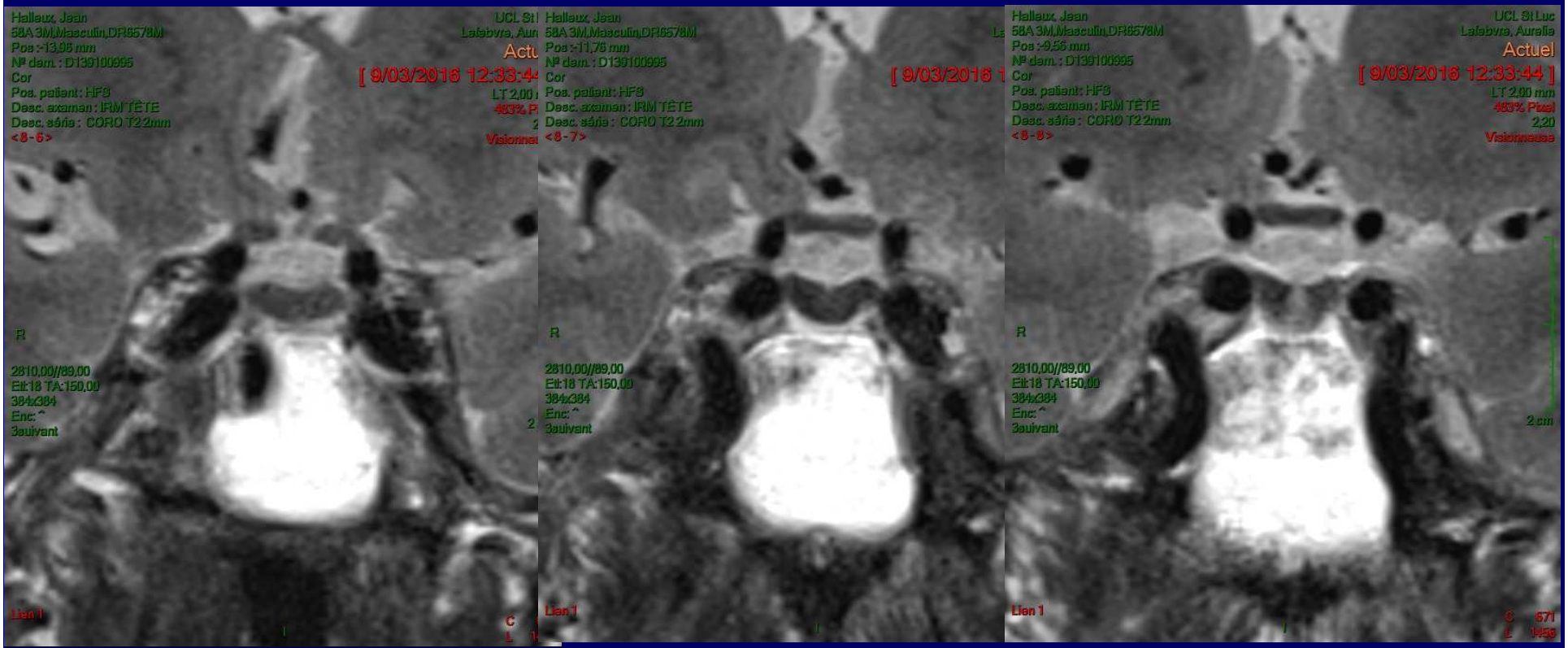



# QUIZZ : CAS 7




Hypogonadisme

# QUIZZ : CAS 7




hémochromatose