

Notions de radiologie abdominale

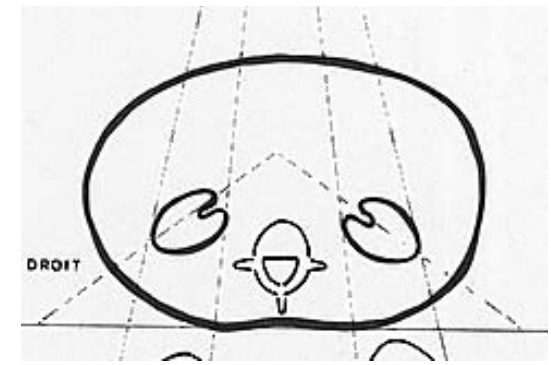
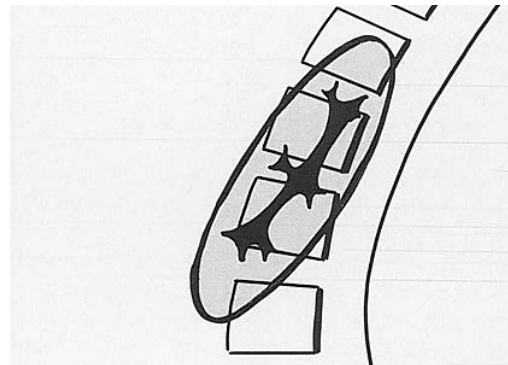
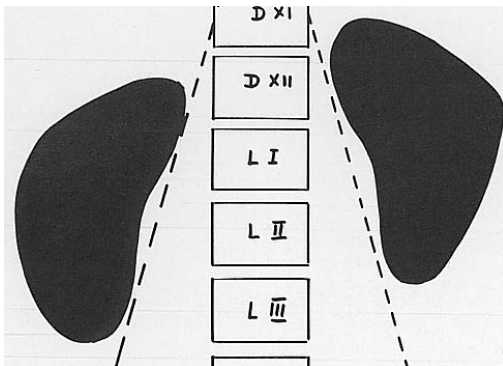
Bac 13

Voies urinaires

- Radiologie
 - Sans contraste
 - Par voie prograde
 - Par voie rétrograde
- Echographie
 - Transcutanée
 - Par voie endocavitaire
- Scanner
 - Sans ou avec injection IV d'iode
- IRM

Reins

- Situés dans la région lombaire D12-L2
- Diamètres : 12 x 6 x 3 cm
- Triple obliquité
- Rein gauche est situé plus haut que le droit
- Empreinte splénique sur le contour supéro-externe du rein gauche

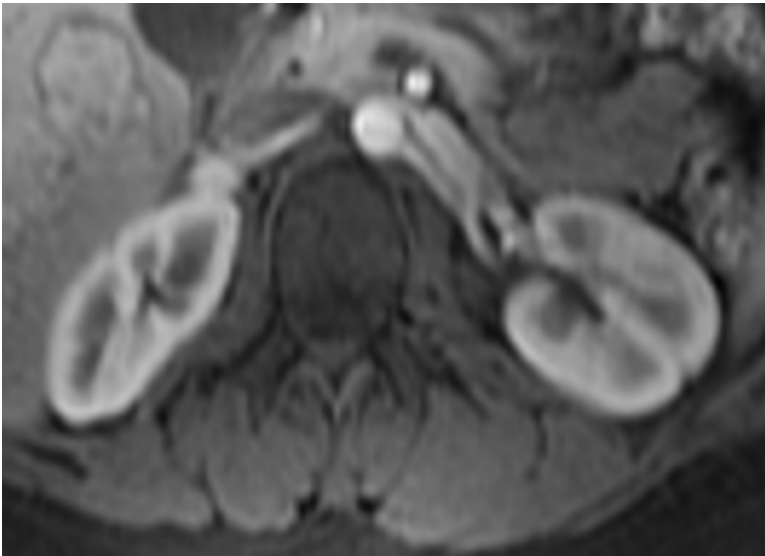


Rappel anatomique

Reins : Organes rétropéritonéaux

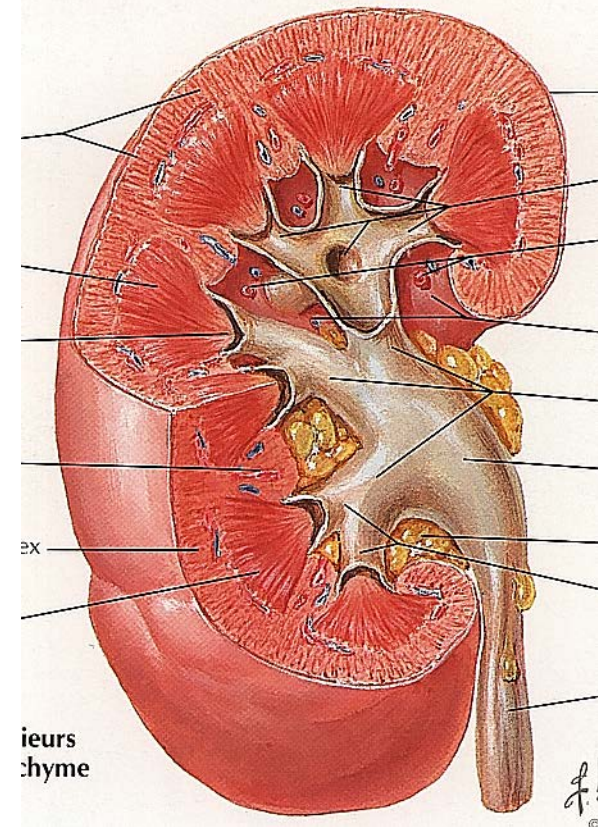
Hauteur 12 cm

Triple obliquité



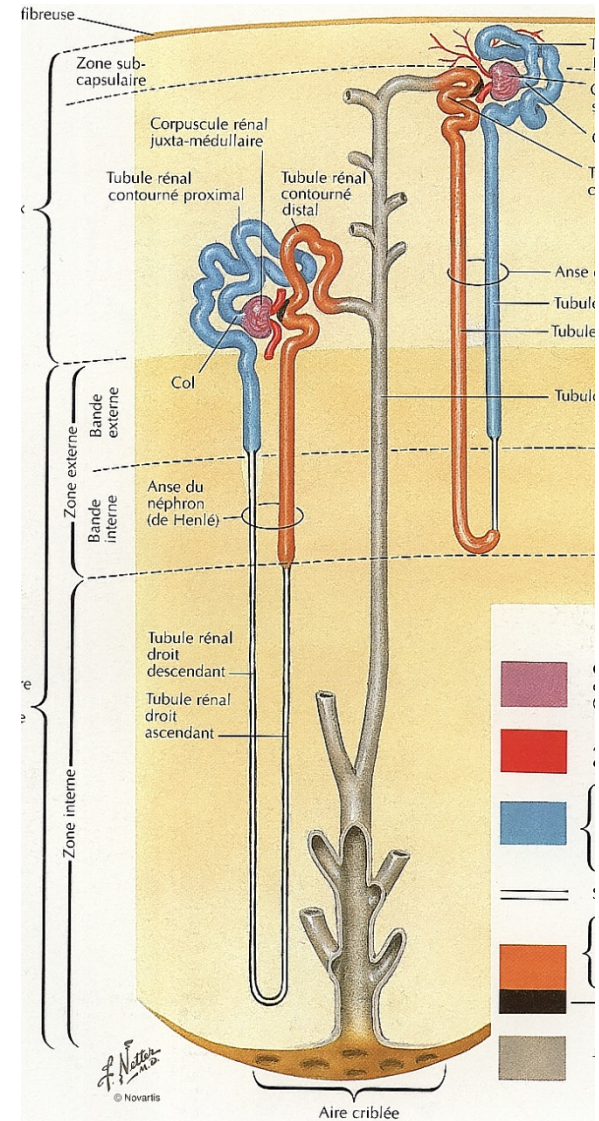
Structure interne des reins

- Cortex : périphérie et colonnes de Bertin
- Médullaire : pyramides de Malpighi
- Papille : partie interne des pyramides faisant protrusion dans le sinus
- Lobe : pyramide et cortex adjacent

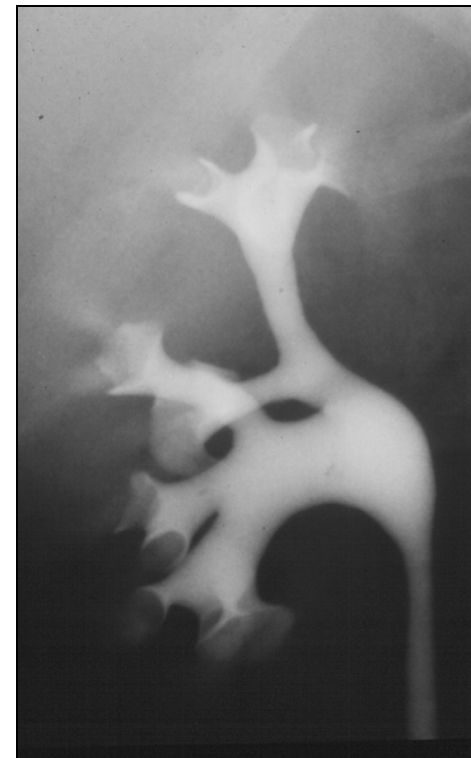
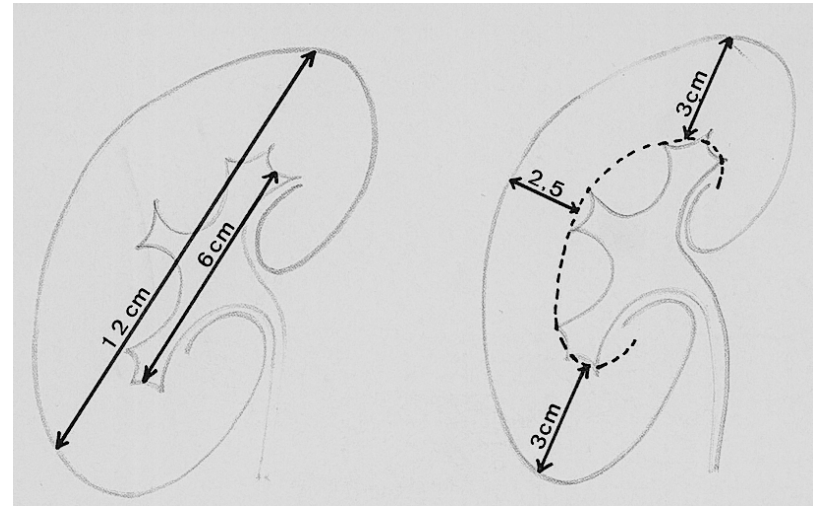


Néphron

- Cortex
 - Corpuscule
 - Glomérule
 - Capsule de Bowman
 - Tubes contournés proximal et distal
- Médullaire
 - Anse du néphron (anse de Henlé)
 - Tube collecteur

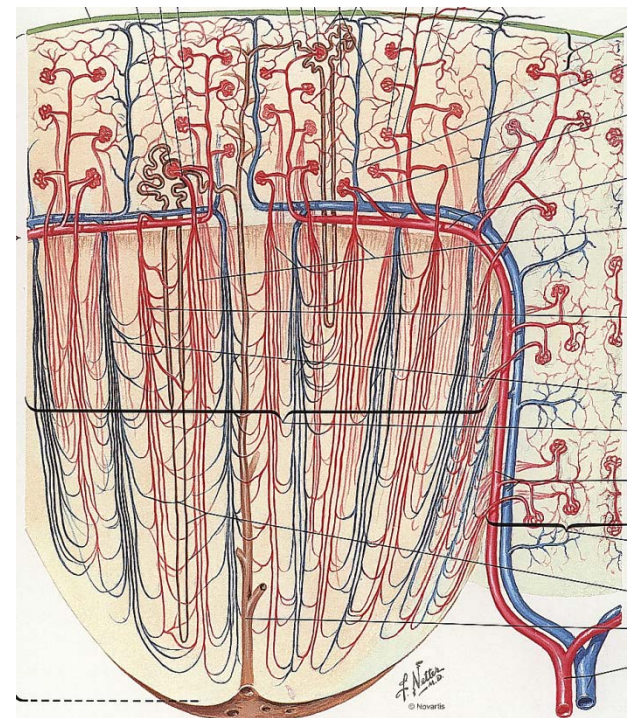
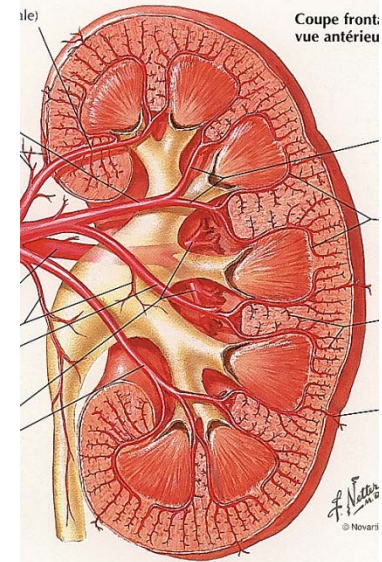


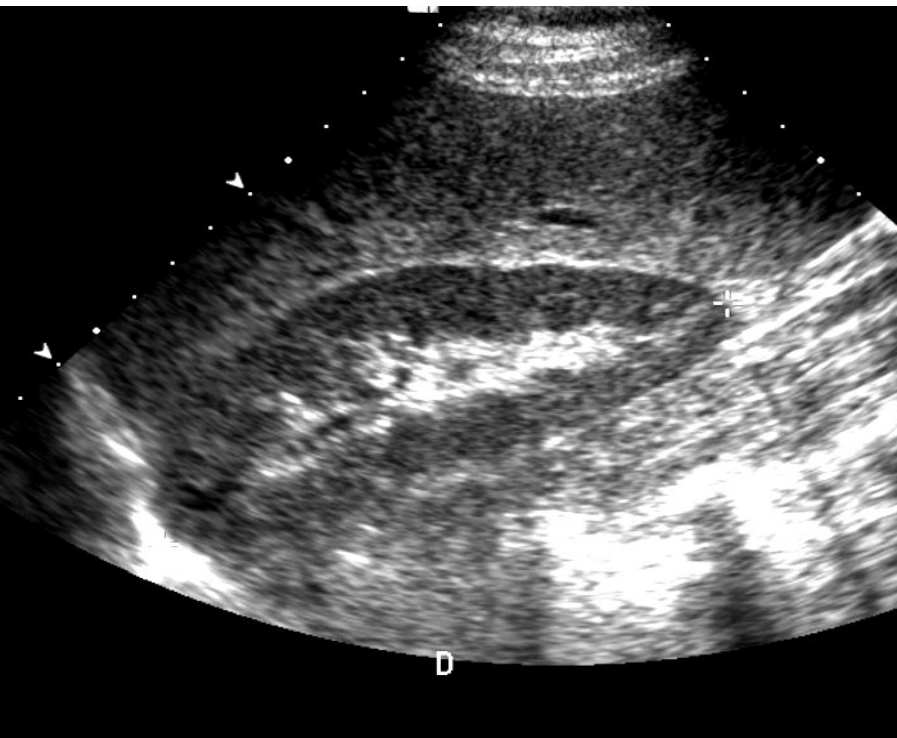
- Sinus
 - Veine rénale
 - Artère rénale
 - Cavités pyélocalicielles
 - Calices mineurs
 - Calices majeurs ou tiges calicielles
 - Bassinet
- Calices mineurs sont situés à une distance plus ou moins constante du contour latéral du rein (2.5 cm et 3 cm au niveau des pôles) : ligne de Hodson

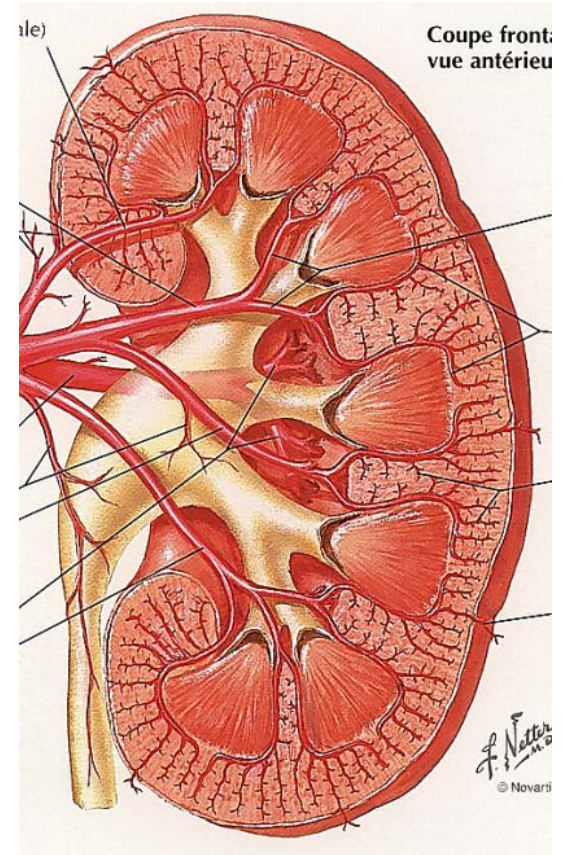
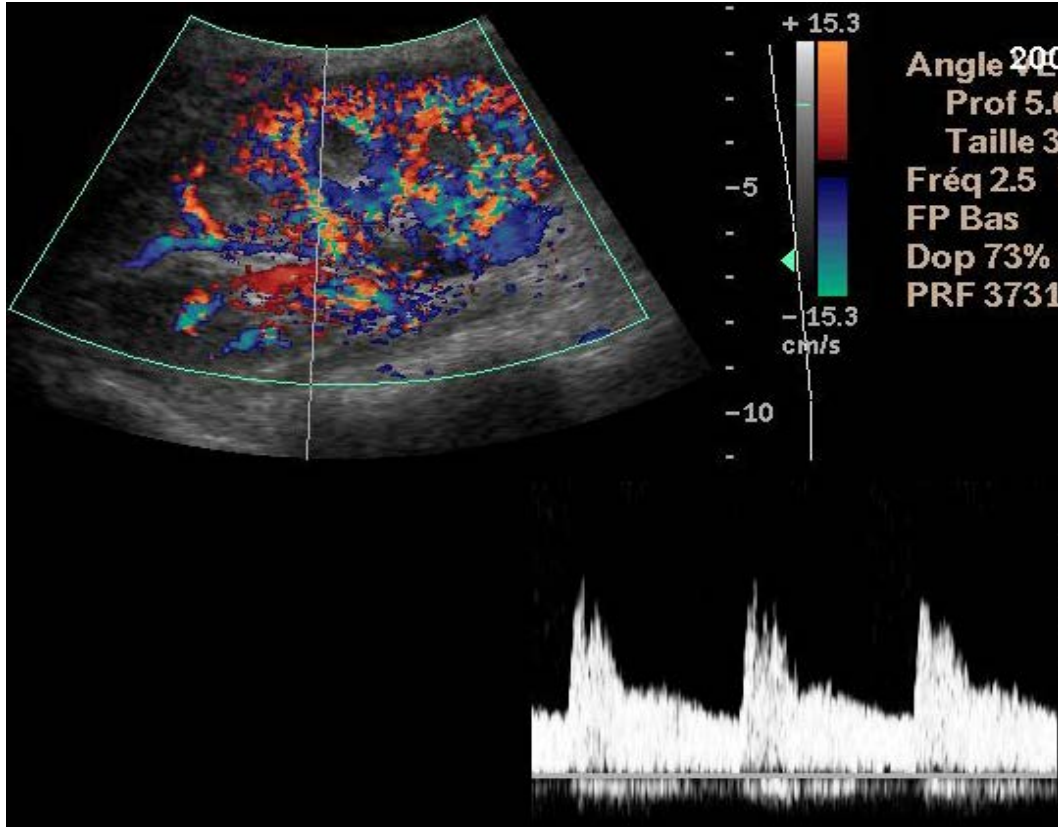


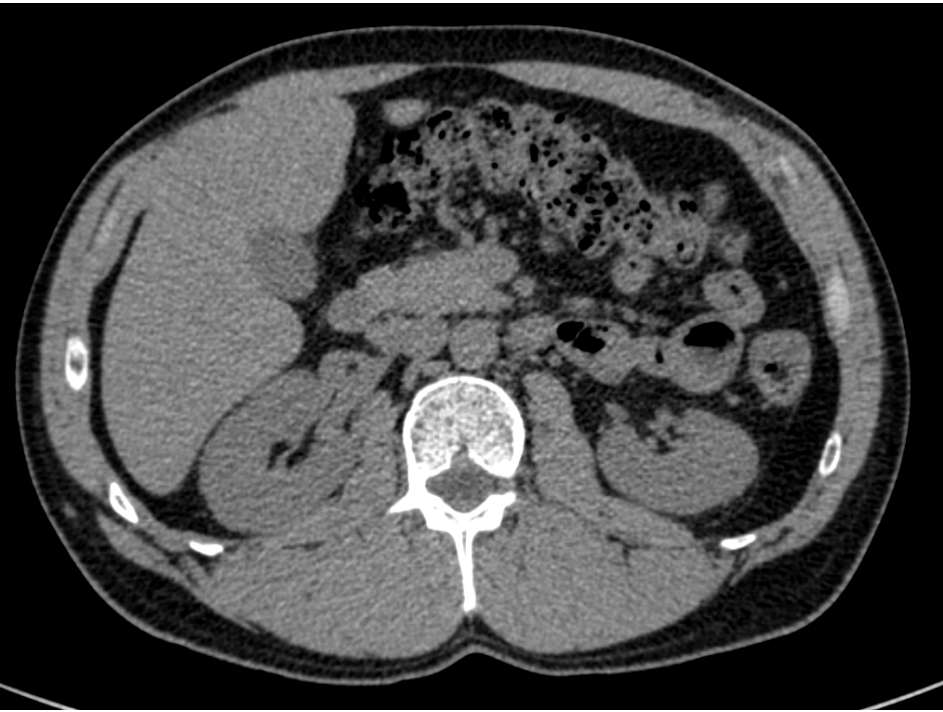
Vascularisation artérielle rénale

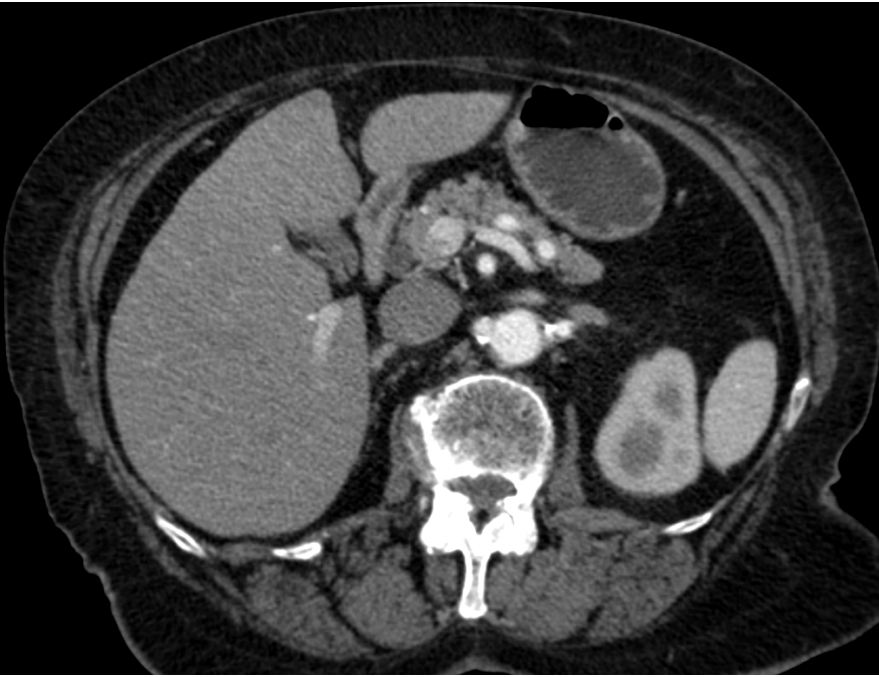
- Artère rénale venant de l'aorte
- Artère rénale surnuméraire dans 30% des cas
- Artères pré et rétropyélique
- Artères segmentaires
- Artères interlobaires
- Artères arquées : jonction cortico-médullaire
- Artères interlobulaires
- Artères afférentes
- Glomérules
- Artères efférentes
- Vaisseaux droits

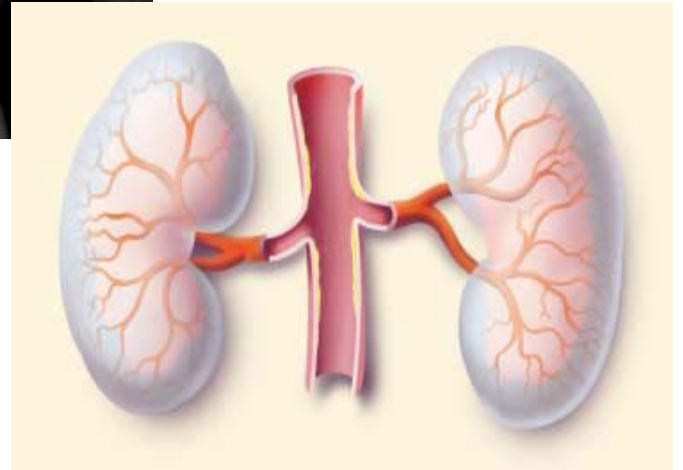
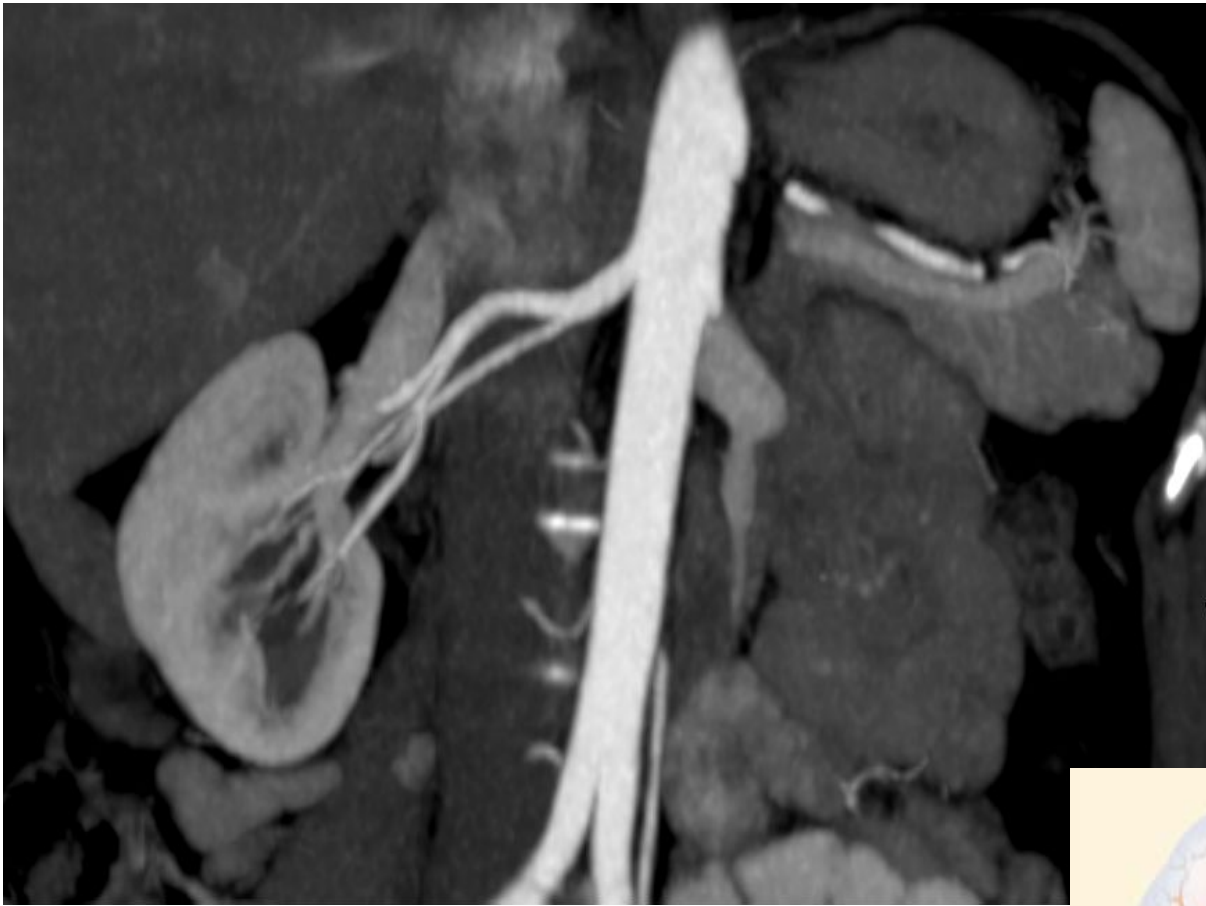






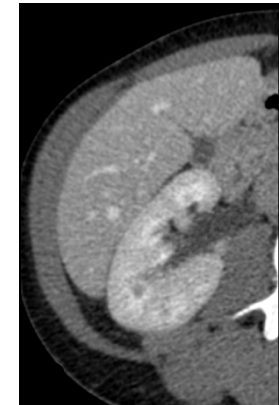
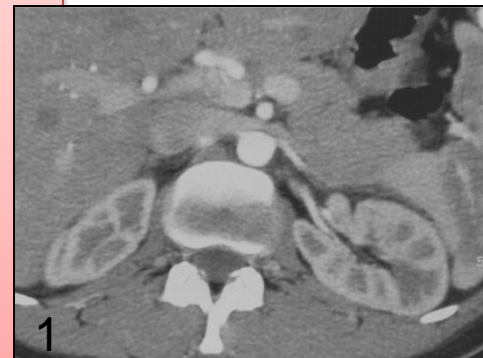
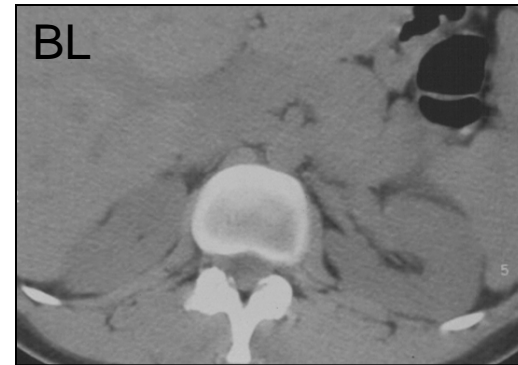






CT-scanner (tomodensitométrie)

1. Phase de néphrographie vasculaire et corticale : 15 - 90 s
2. Phase de néphrographie tubulaire : 30 s – 10 min
 - Optimum : 90 – 150 s
3. Phase urinaire : après 3 min
 - Opacification des cavités pyélocalicielles

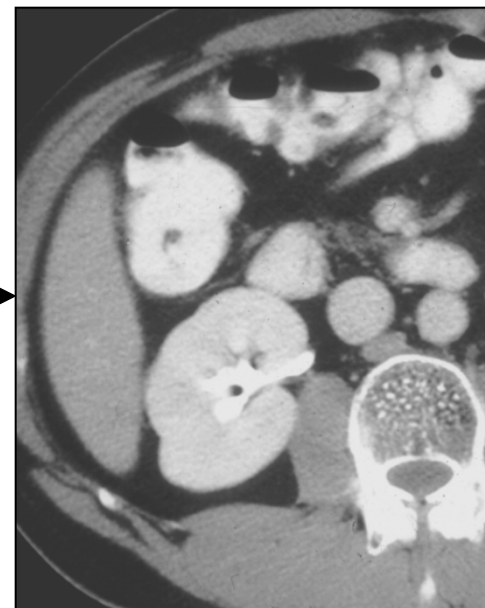
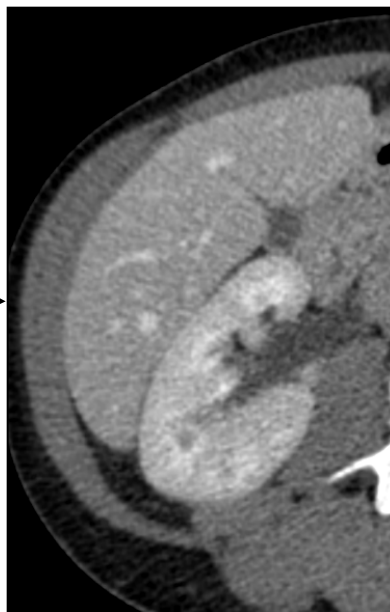
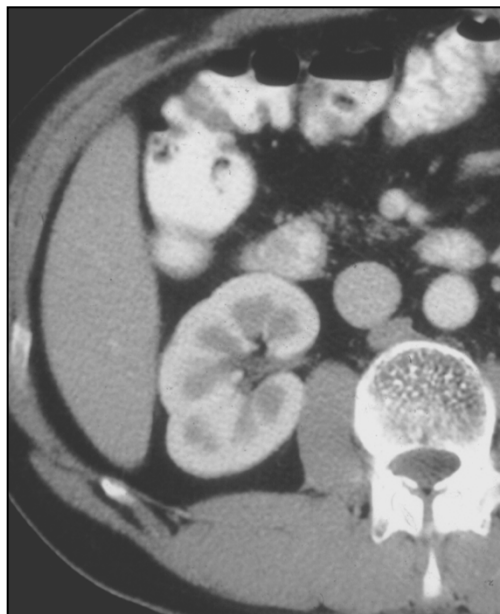


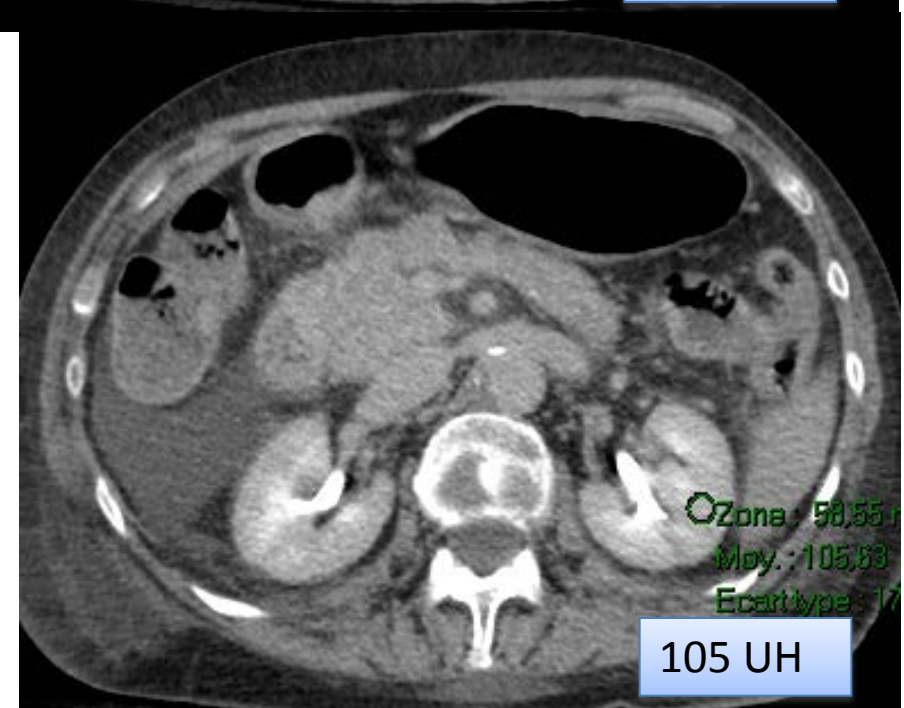
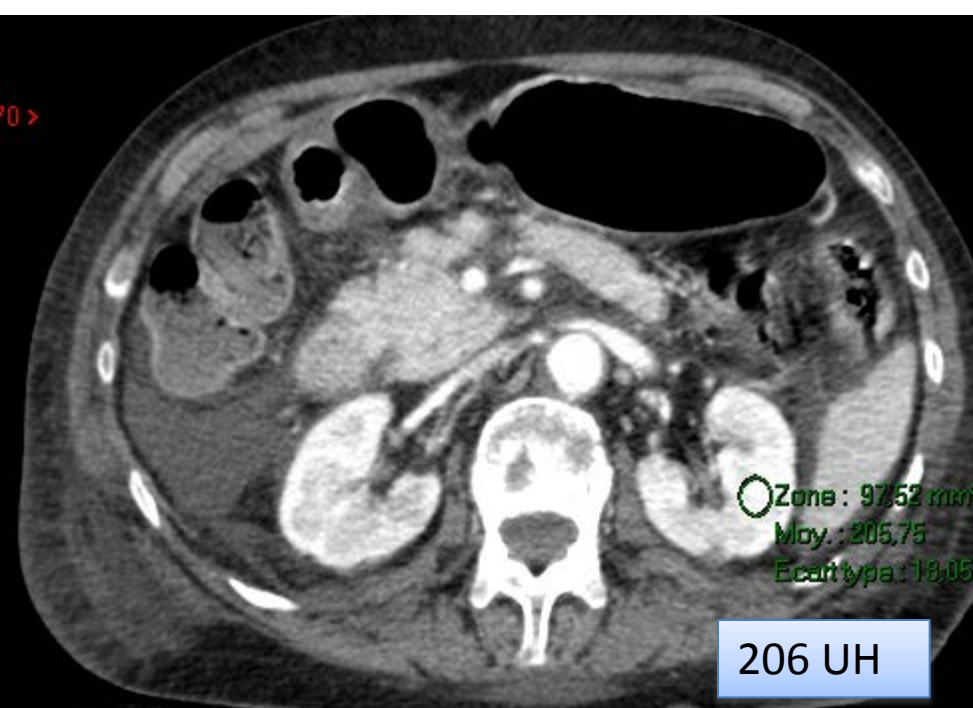
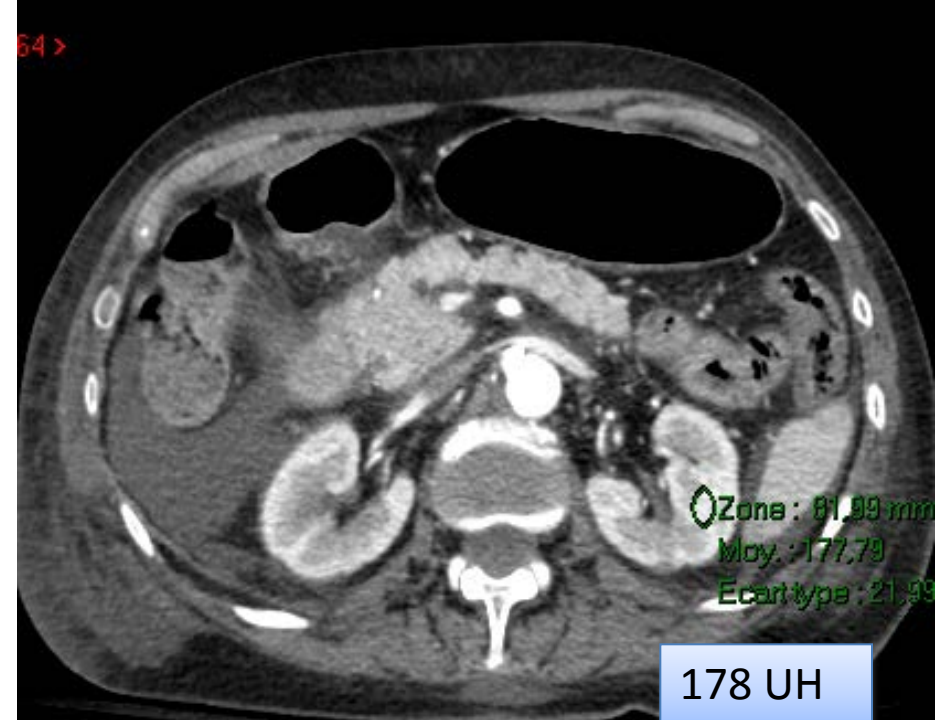
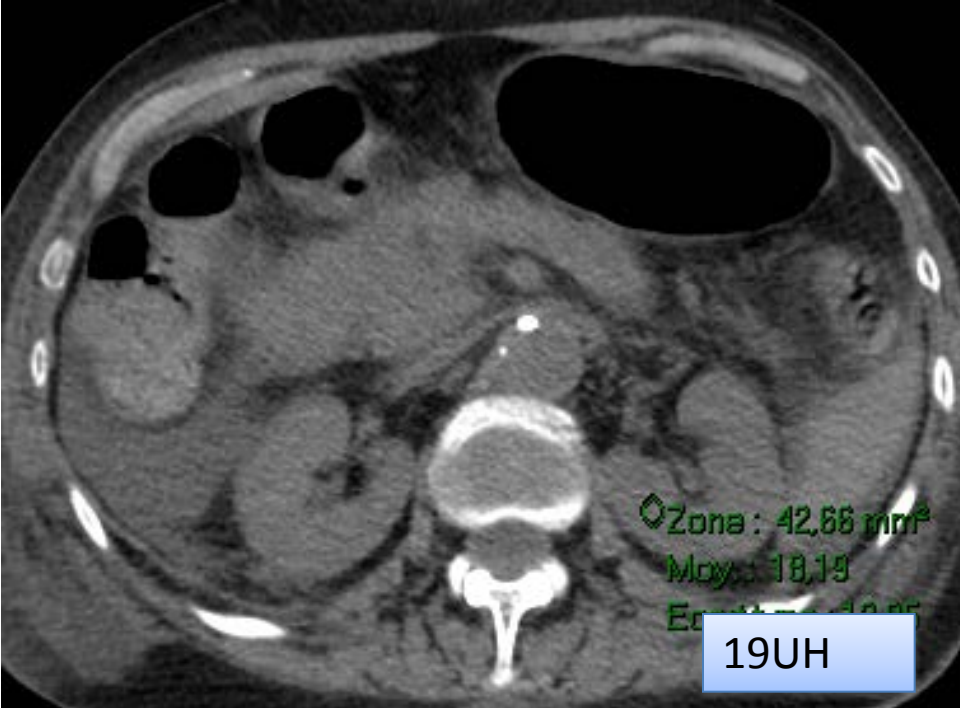
Néphrographie

corticale-vasculaire

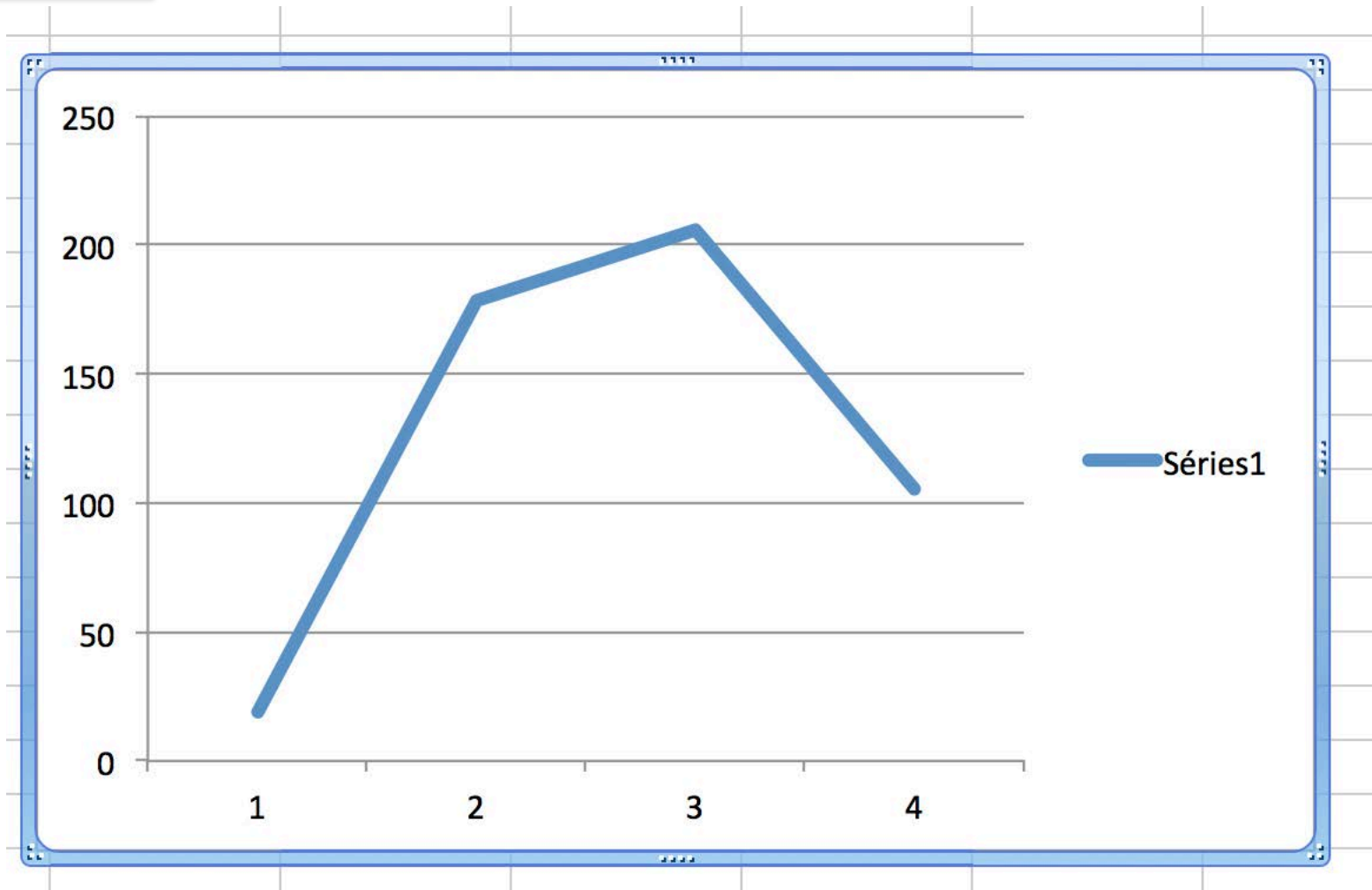
Tubulaire

urinaire





UH



TPS 0..... 35 sec.....90 sec.....180 sec....

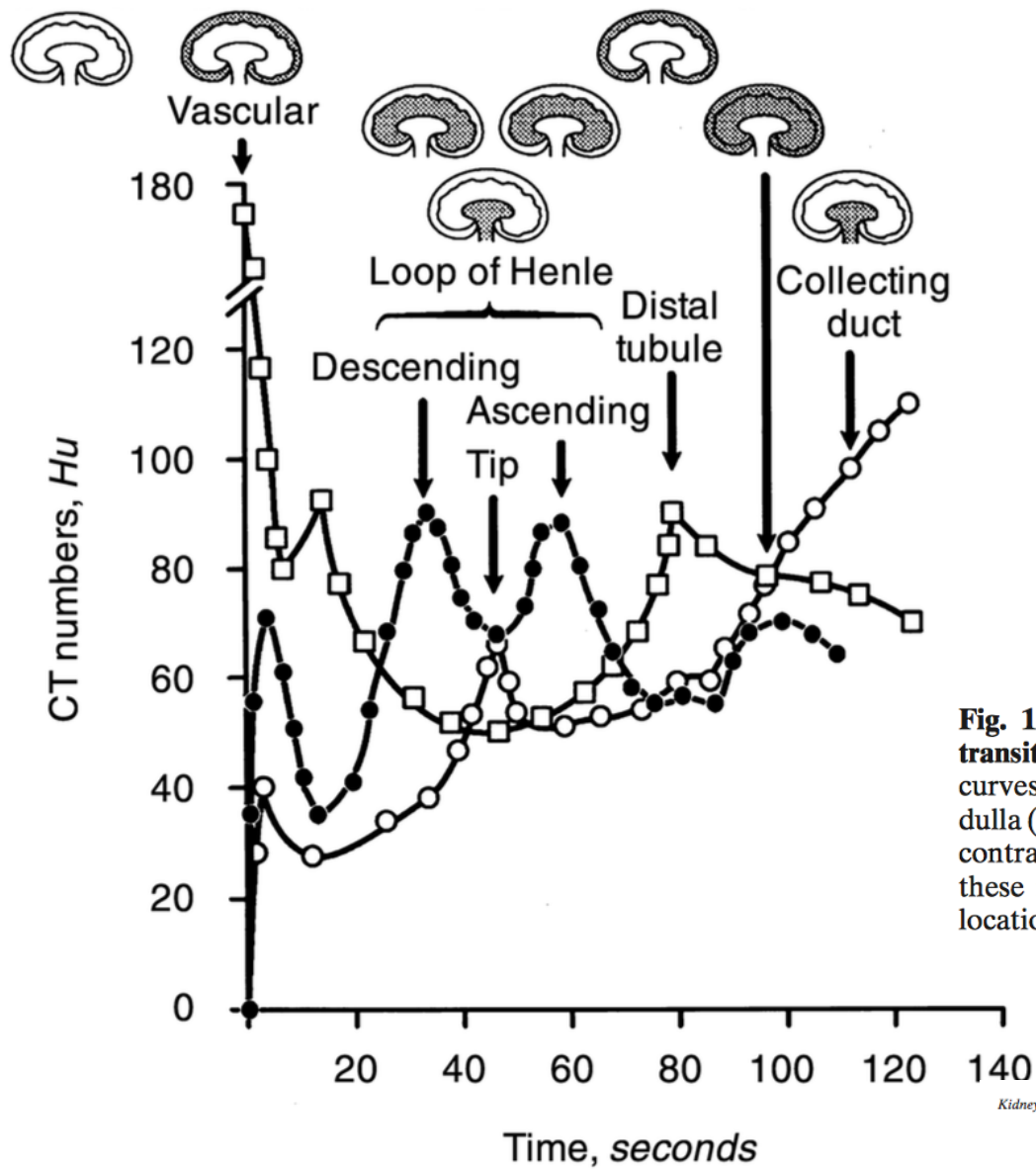
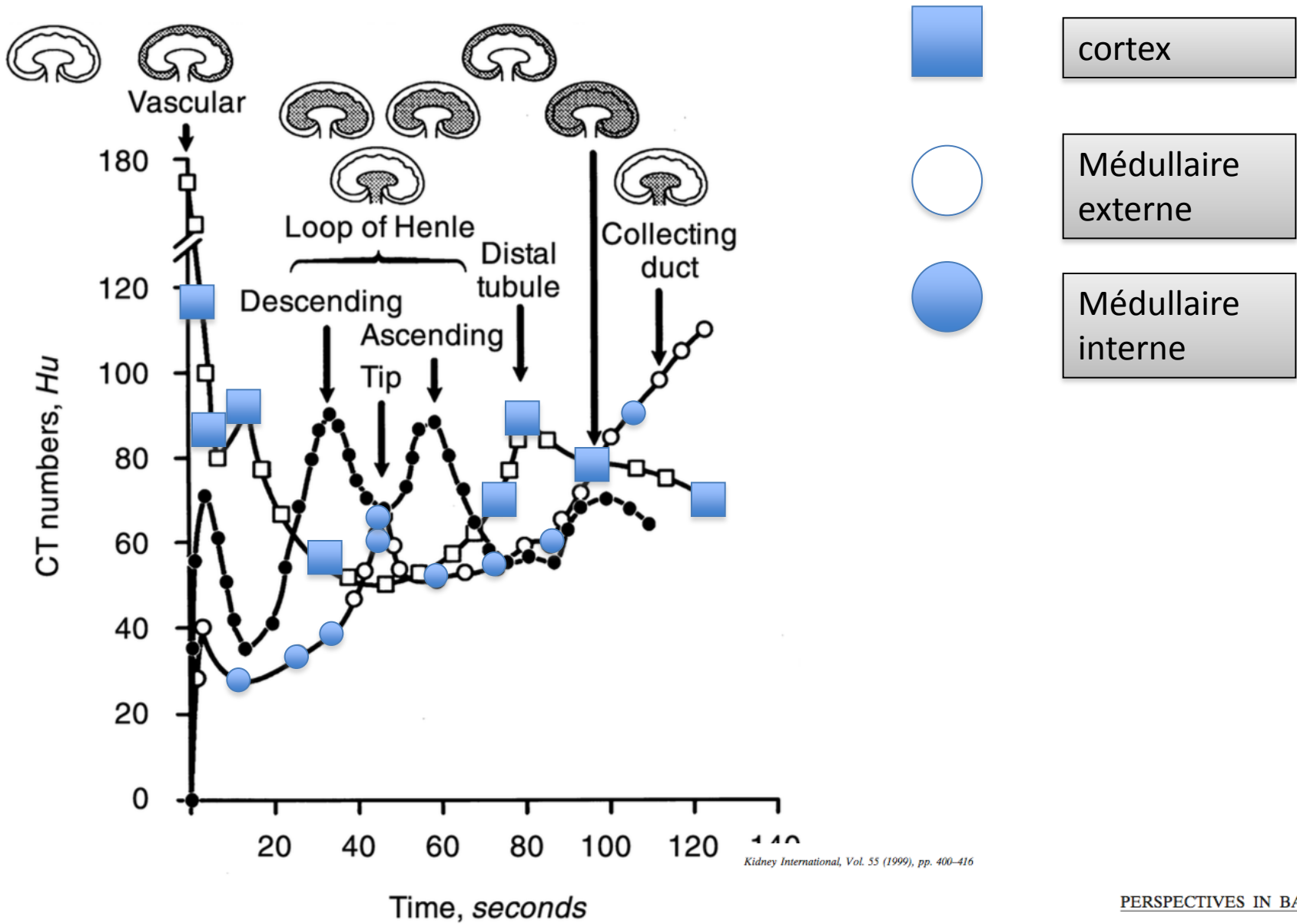
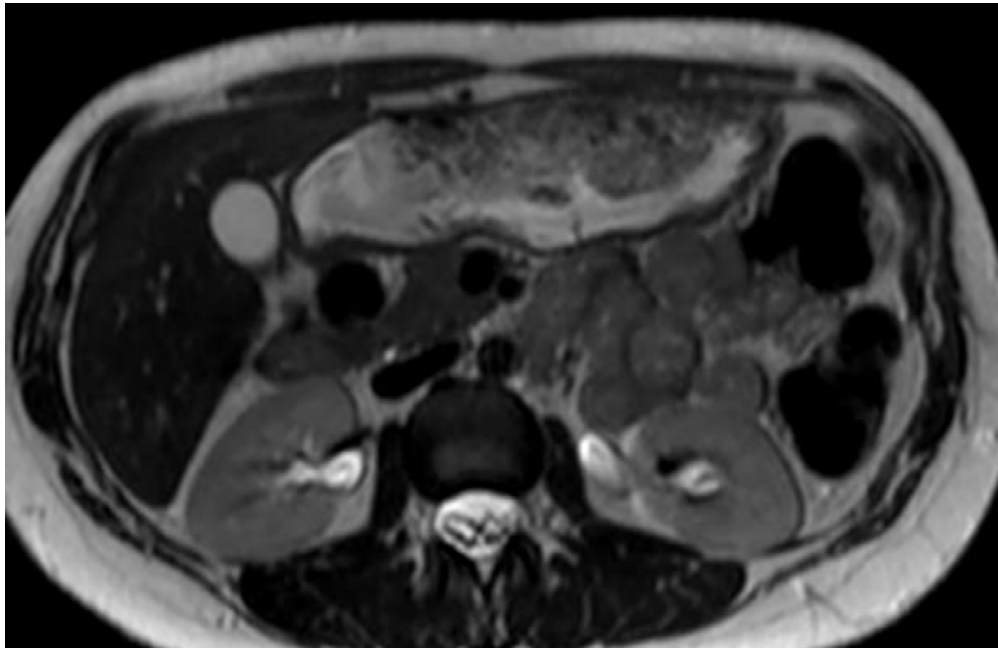


Fig. 10. Time-density curves obtained in a canine kidney during the transit of a bolus of a filterable contrast medium (iopamidol). The curves were obtained separately from the renal cortex (□), outer medulla (●), and inner medulla (○), and each peak represents intratubular contrast sequentially transverseing the nephron segments contained in these regions. At the top of the figure, the corresponding anatomic location of the contrast in the renal cross-sectional regions is illustrated.

Kidney International, Vol. 55 (1999), pp. 400-416

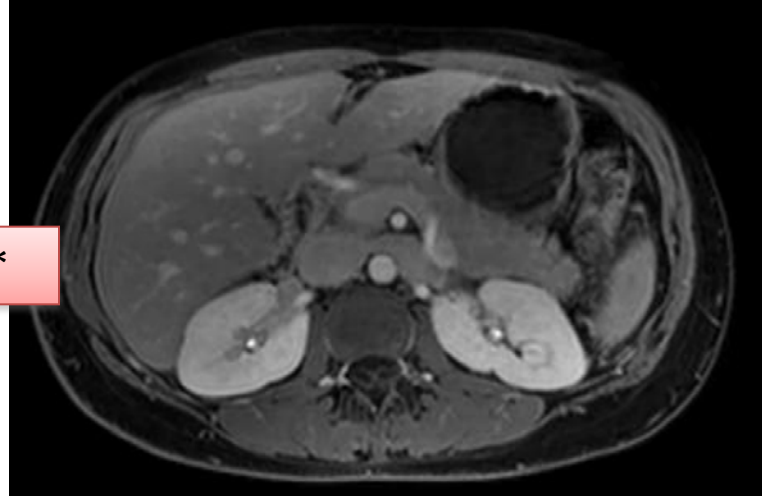
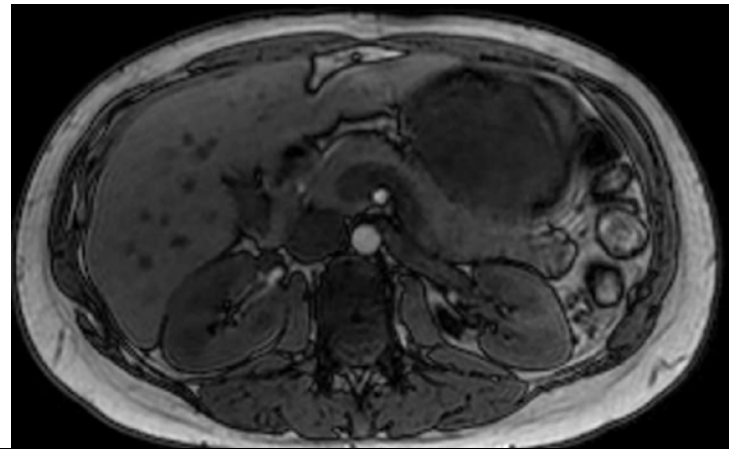


Kidney International, Vol. 55 (1999), pp. 400-416



T2

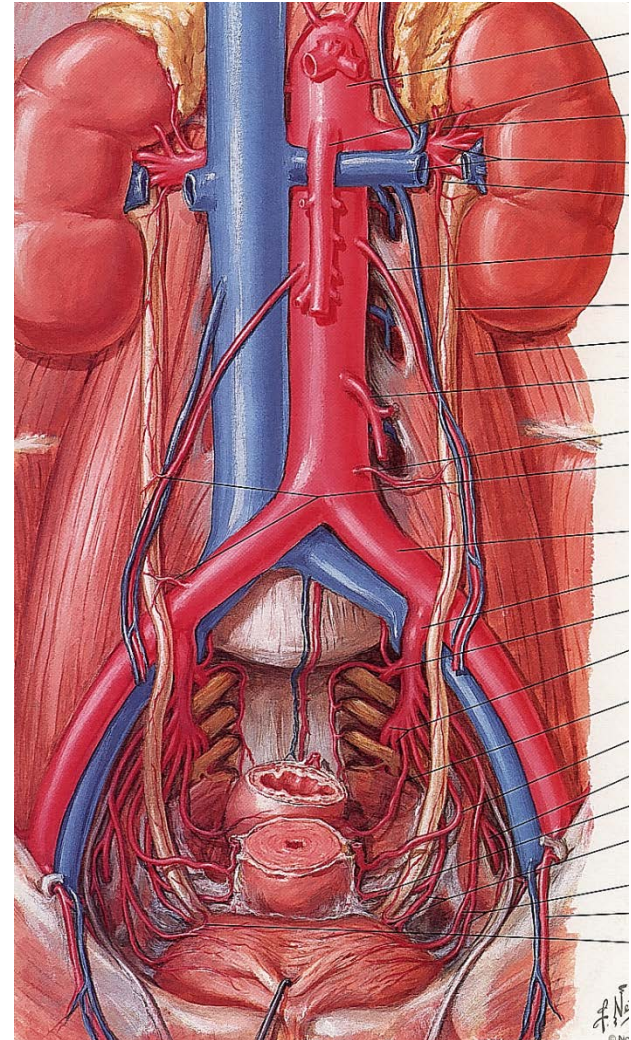
T1 + C*



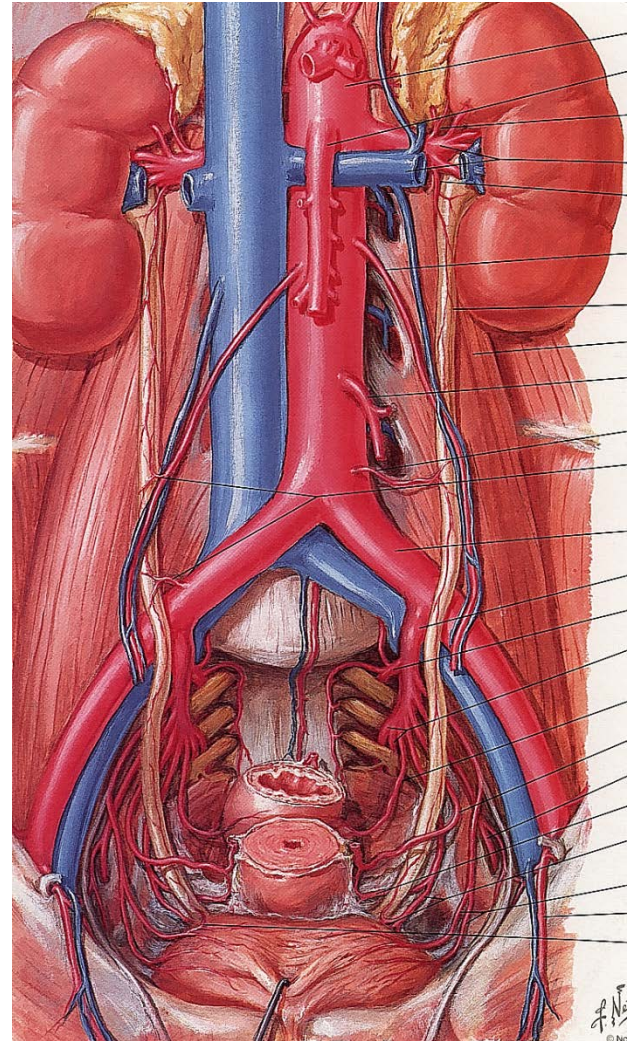
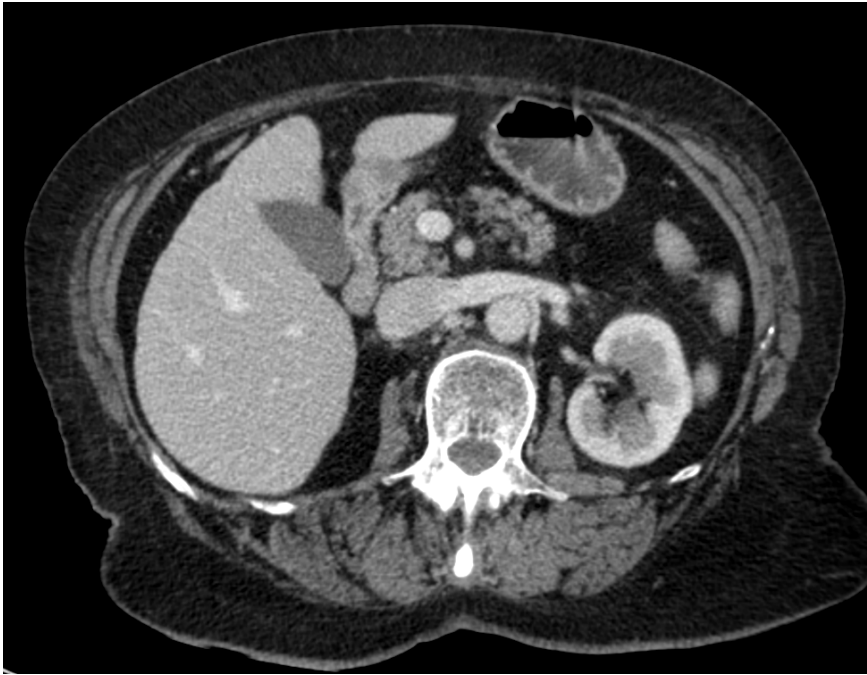


Veines rénales

- Veine rénale gauche passe entre l'aorte et l'artère mésentérique supérieure
- Veine testiculaire ou ovarique se jette dans la veine cave inférieure à droite et dans la veine rénale à gauche : explique varicocèle gauche

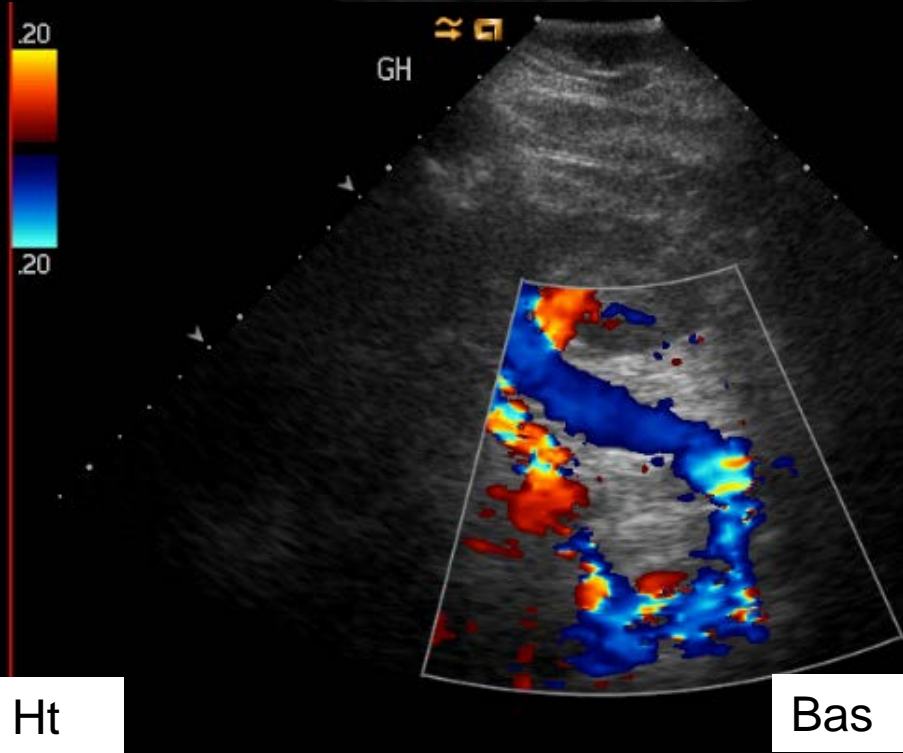
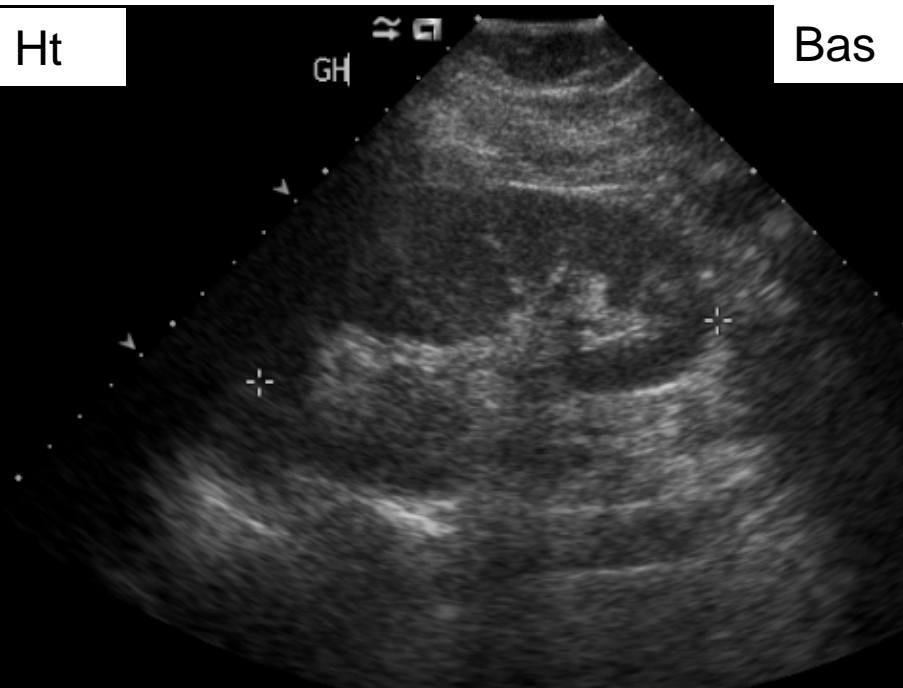


Veines rénales



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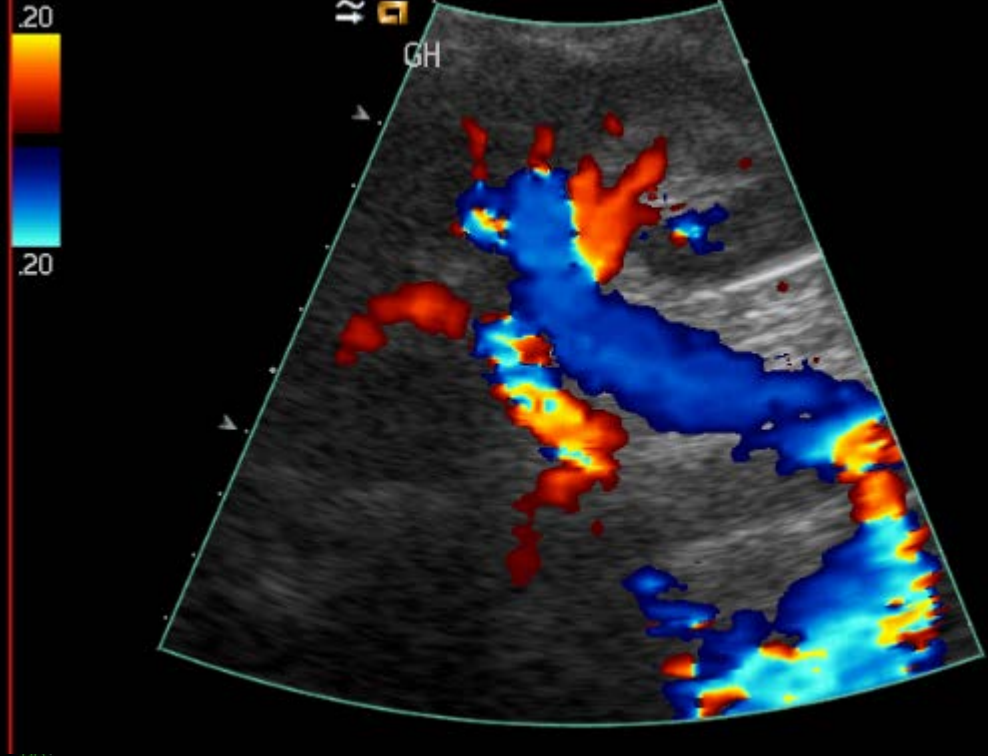
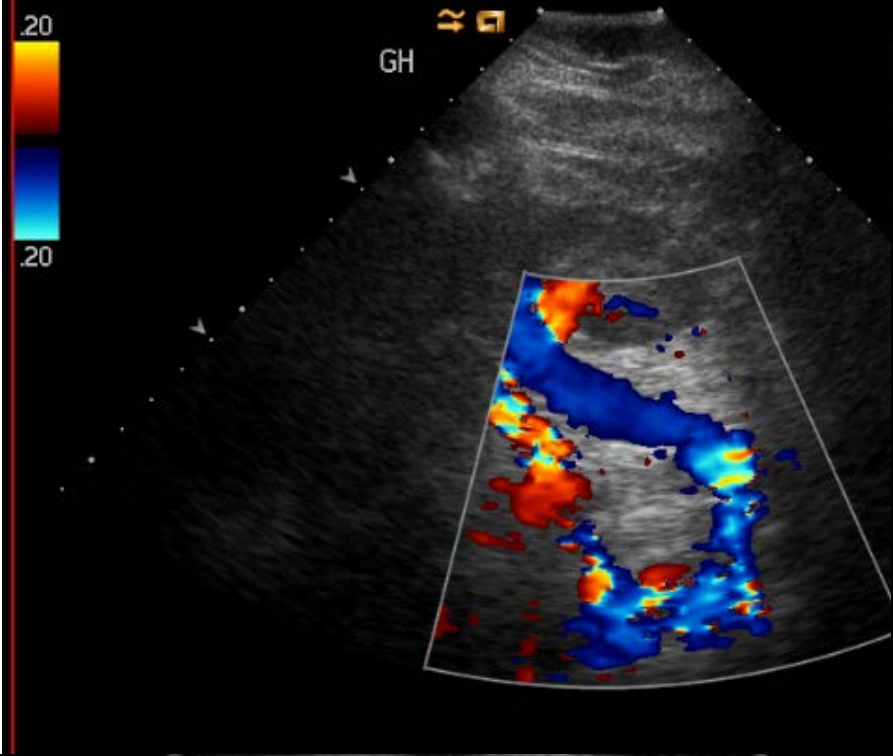




REIN GAUCHE

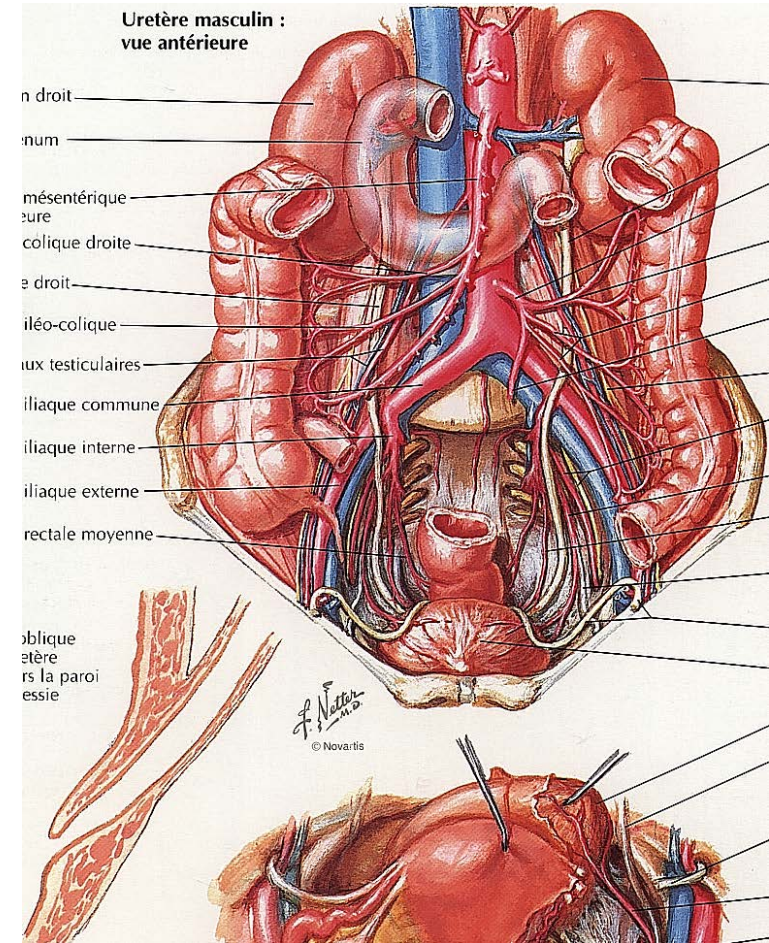


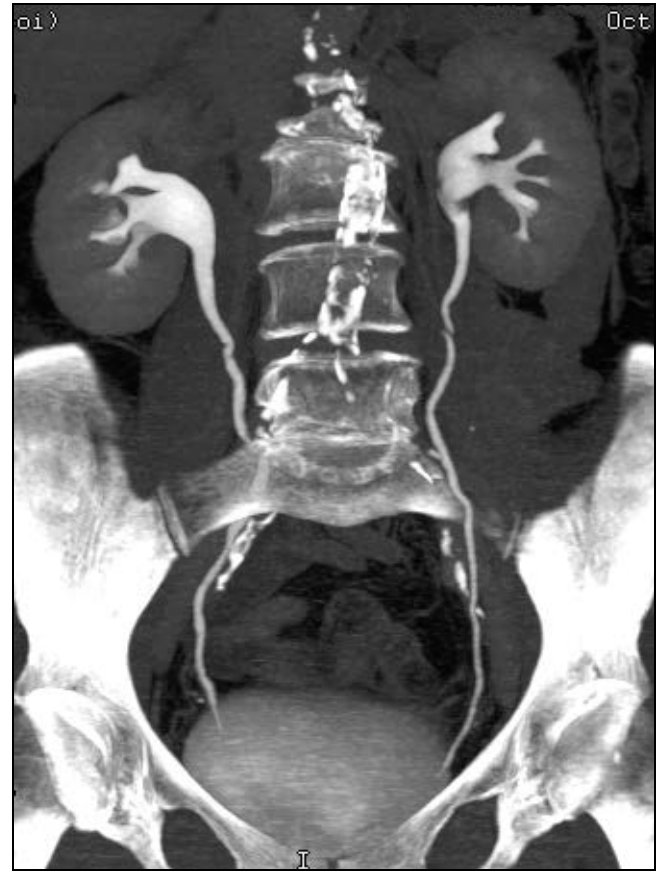
T



Uretères

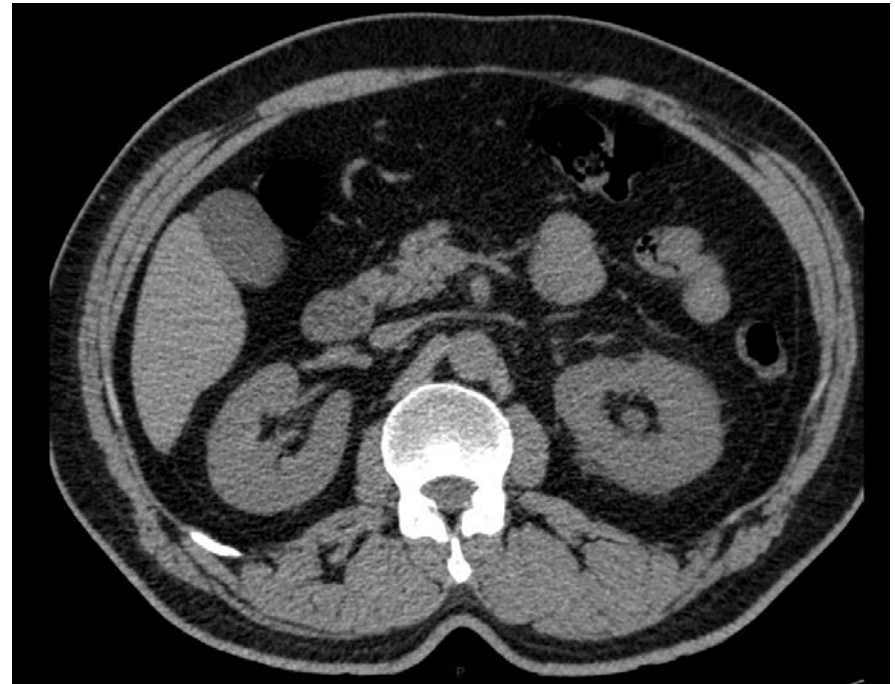
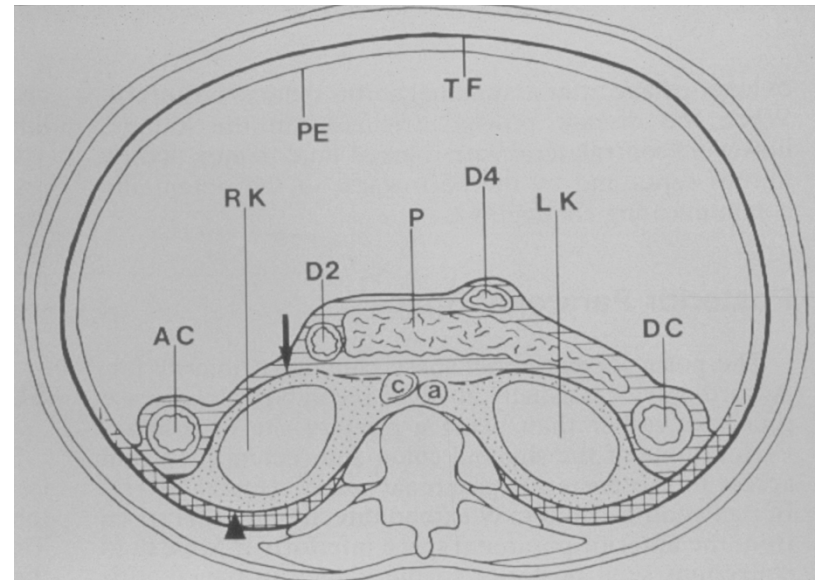
- Trois rétrécissements relatifs
 - Jonction pyélo-urétérale
 - Croisement des vaisseaux iliaques
 - Jonction urétéro-vésicale
- Les uretères ont un trajet oblique à travers la paroi de la vessie

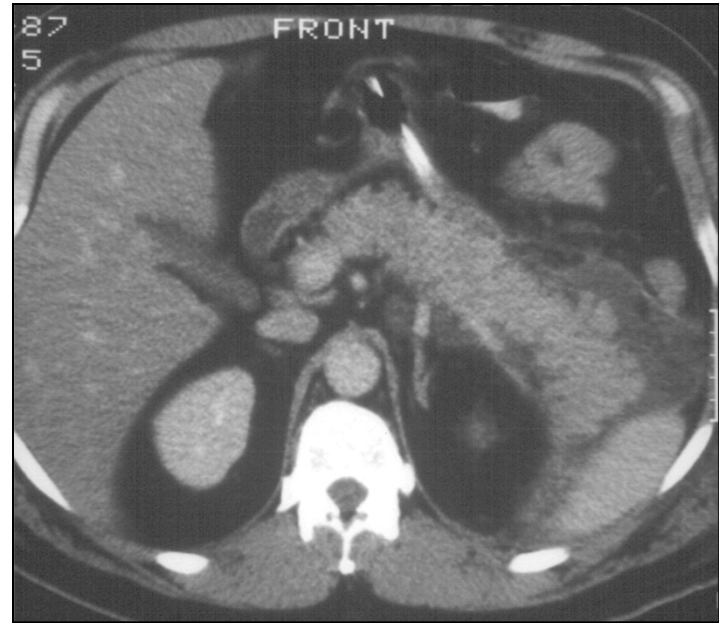
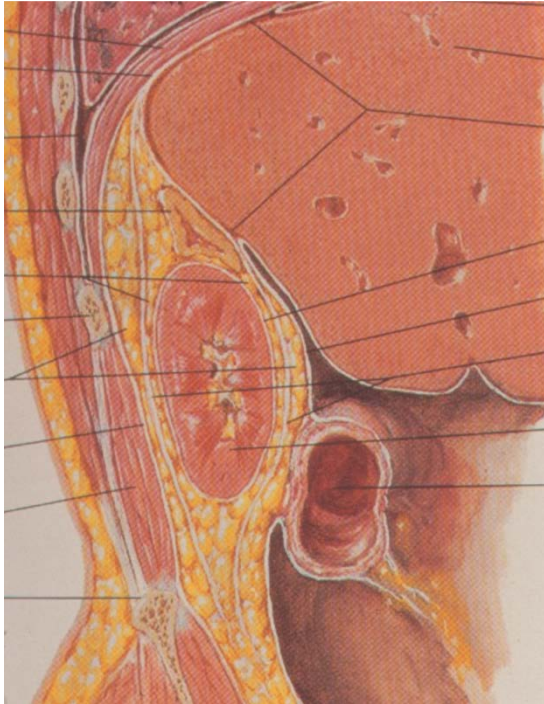




Fascia rénale

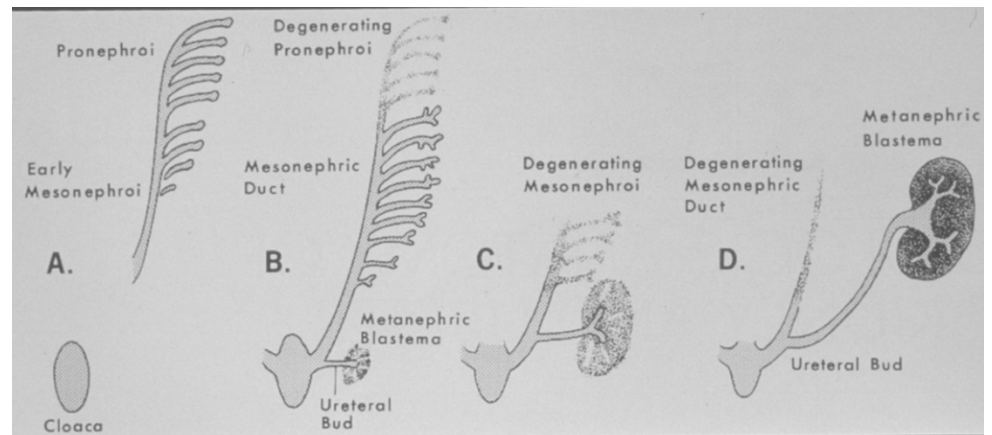
- Divise le rétropéritoine en 3 compartiments
 - L'espace pararénal antérieur
 - Côlon ascendant
 - Côlon descendant
 - Duodénum
 - Pancréas
 - L'espace périrénal
 - Reins
 - Ouvert vers le bas
 - Espace pararénal postérieur

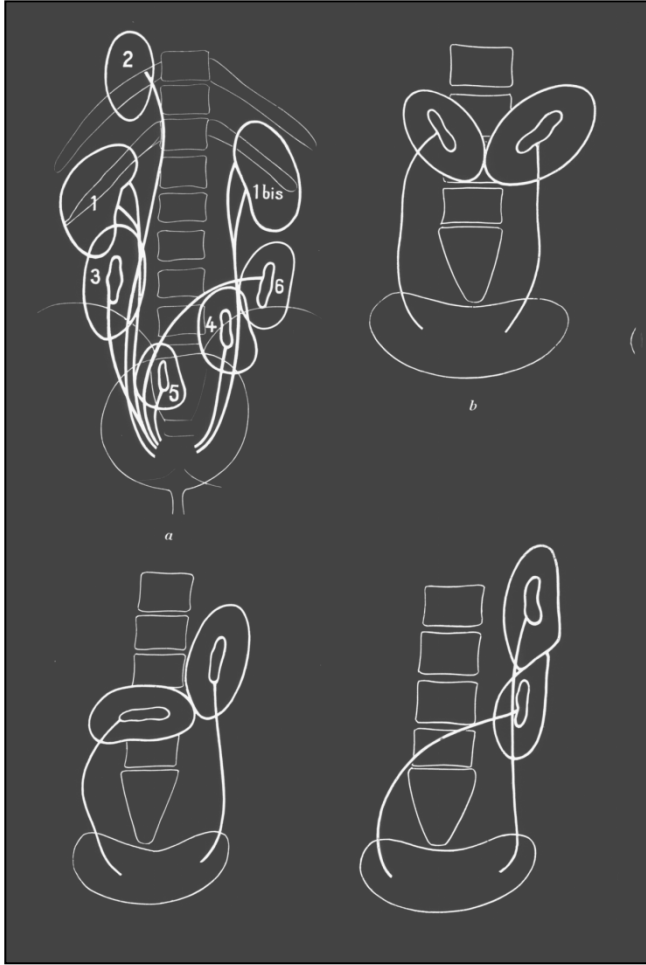


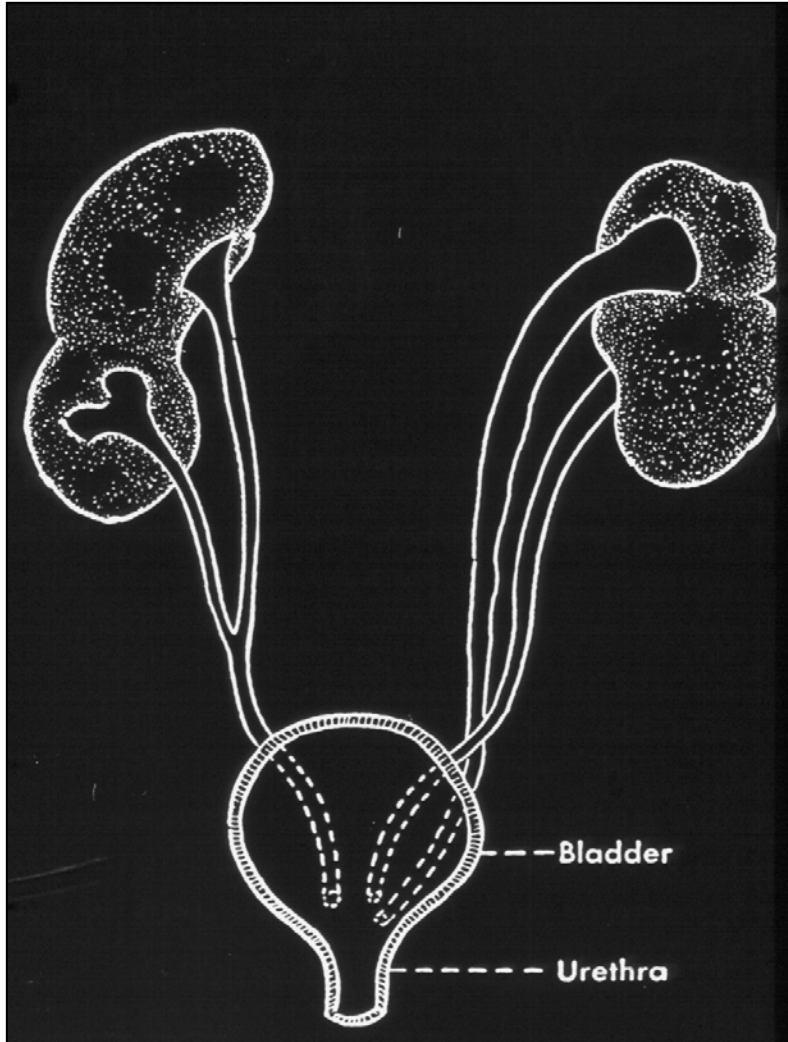


Embryologie du rein

- L'ébauche rénale définitive (métanéphros) se situe dans le pelvis
- Les cavités s'implantent sur sa face antérieure
- Mouvement d'ascension et de rotation
- Variantes
 - Ectopie simple : rein iliaque, pelvien
 - Ectopie croisée, fusionnée
 - Défaut de rotation
 - Reins en fer à cheval
 - Duplication urétérale partielle ou totale



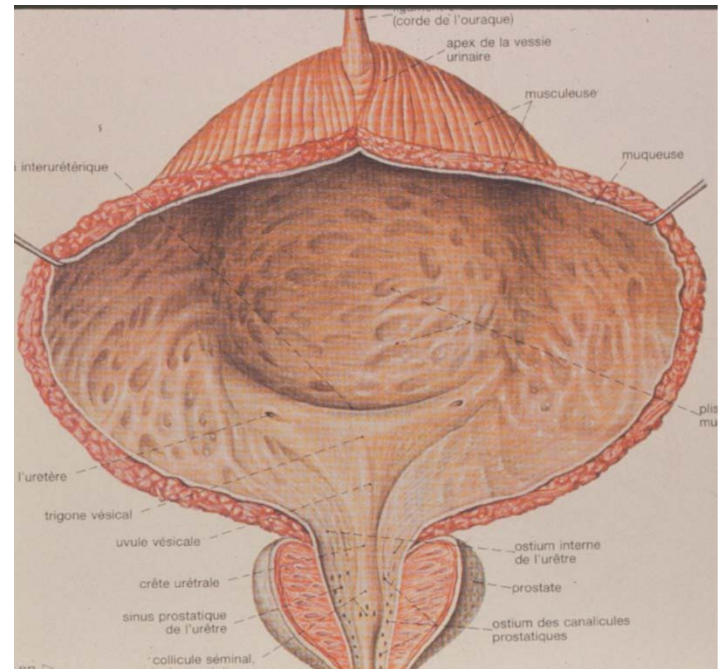




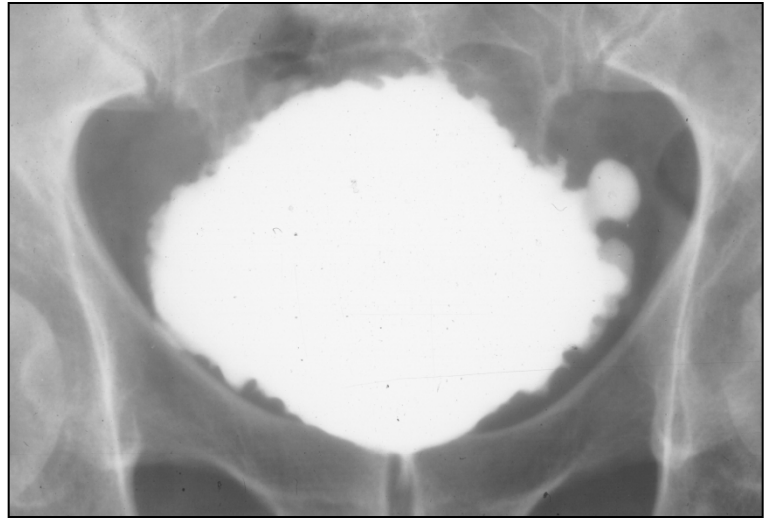
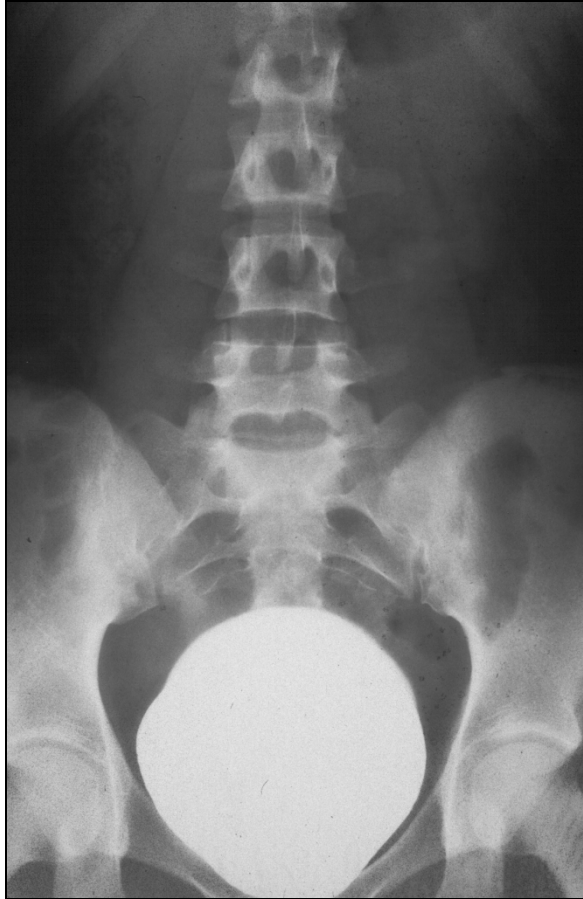
Duplication : Partielle : bifidité

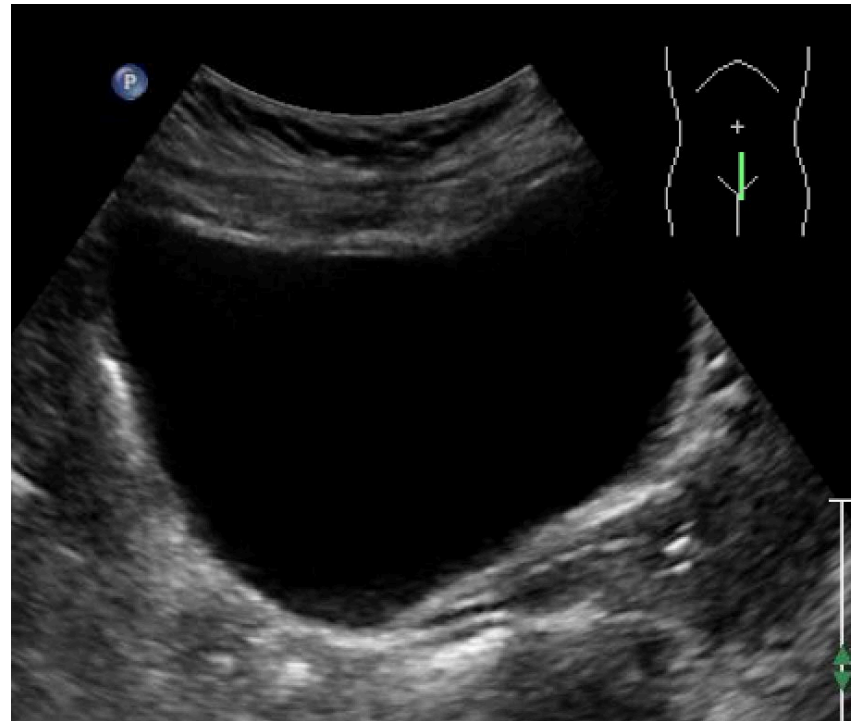
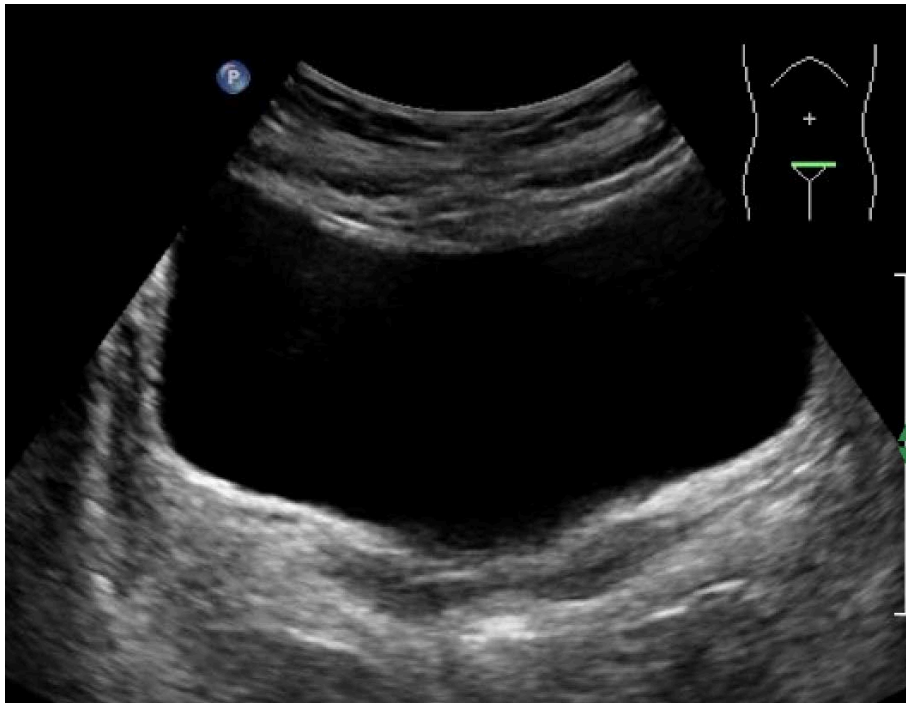
Vessie

- Tétraèdre
 - Base : postéro-inférieure, triangulaire, délimitée par l'urètre en bas et les uretères en haut (trigone)
 - Apex : donne insertion à l'ouraque, cordon vestigial de l'allantoïde
- Musculeuse
 - Externe : fibres longitudinales
 - Moyenne : fibres circulaires
 - Interne : fibres longitudinales formant un réseau de colonnes et de cellules

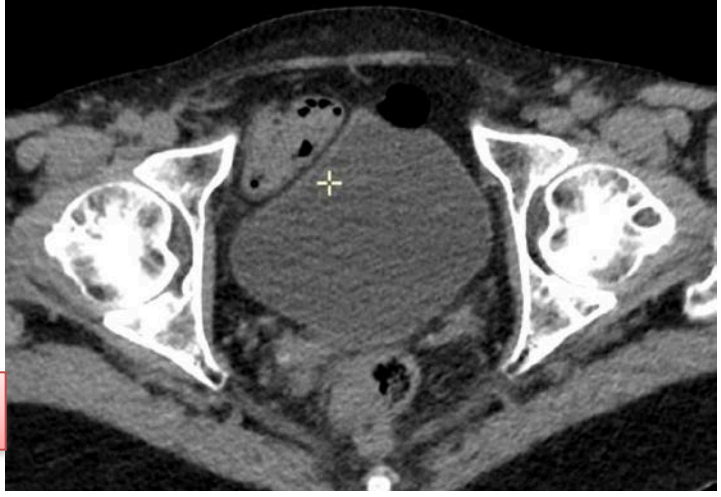


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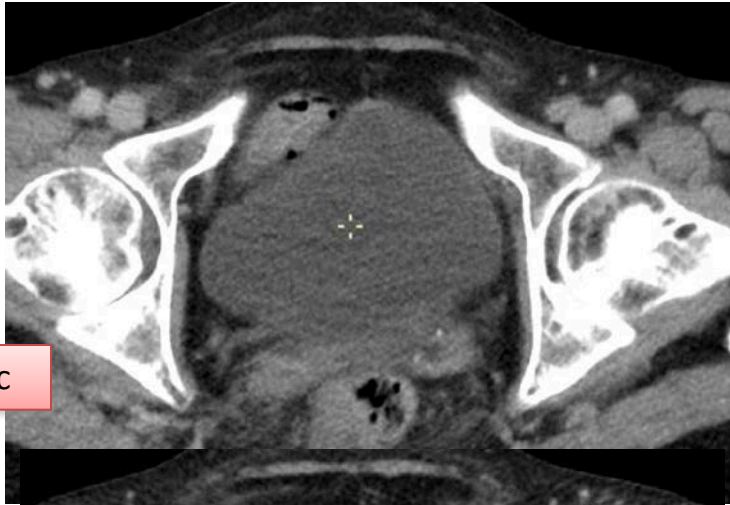




BL



70-90 sec



180 sec



Urètre chez l'homme

Trois parties

Prostatique

Membranacée : au niveau du
diaphragme uro-génital

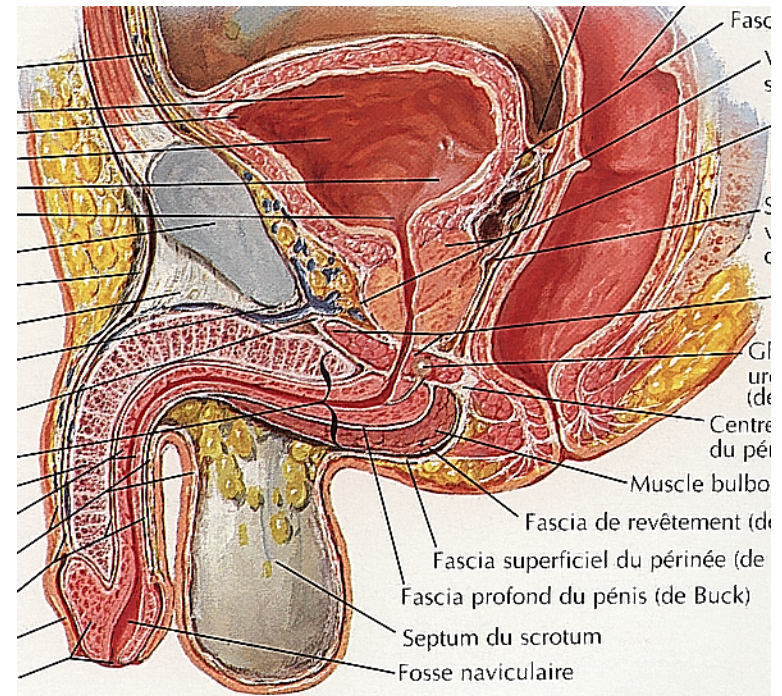
Spongieuse

Bulbaire

Pénienne

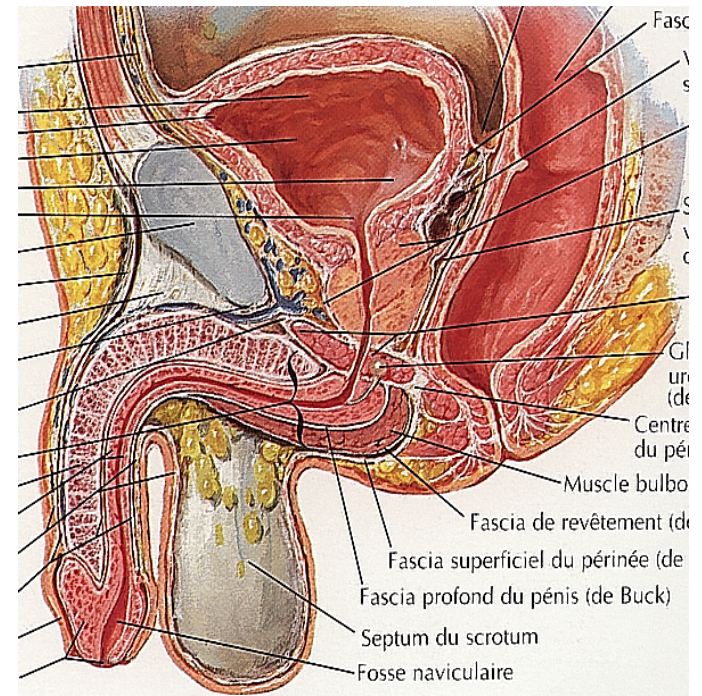
Sphincter interne : autour de la portion
initiale de l'urètre prostatique

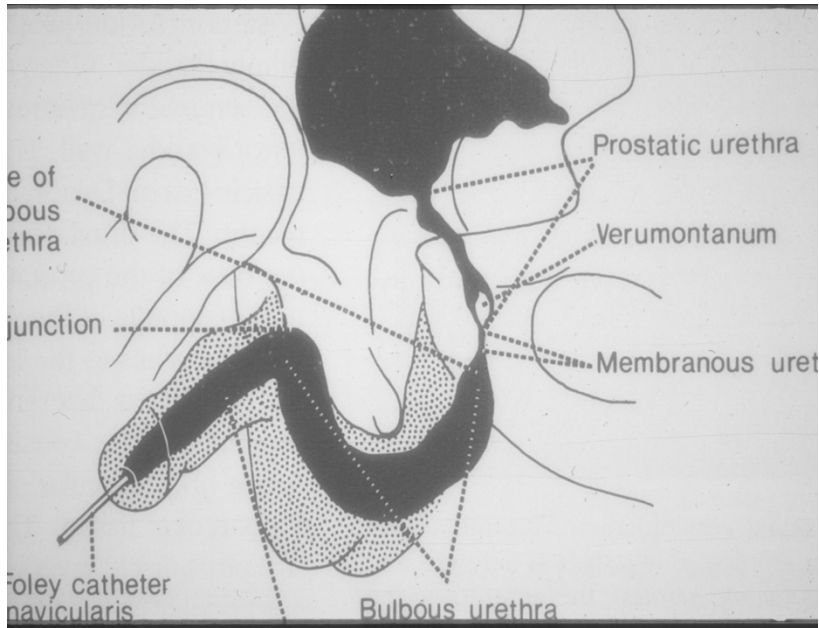
Sphincter externe strié : urètre
membranacé



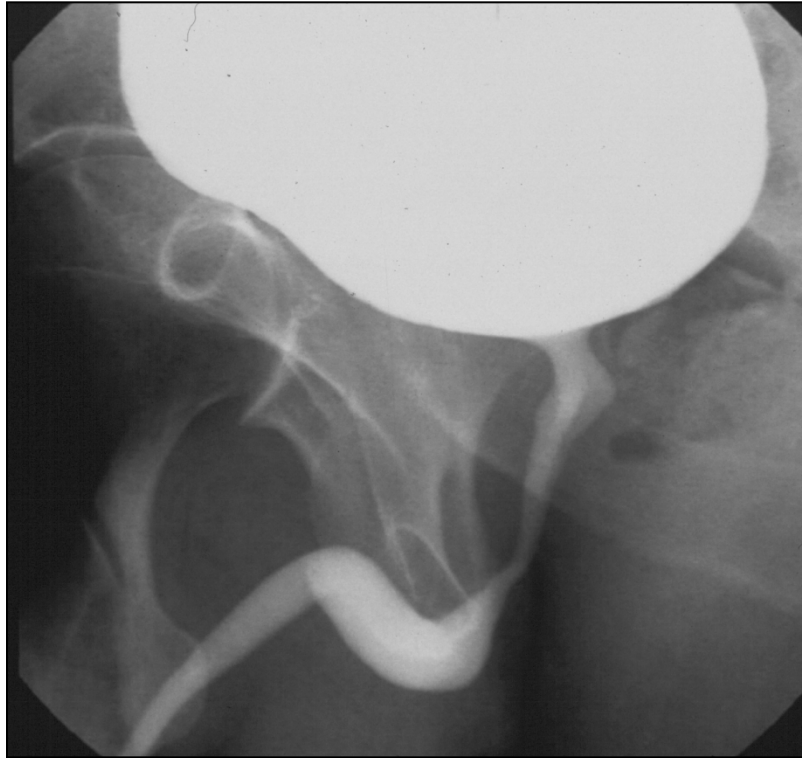
Anatomie de l'urètre chez l'homme

- Urètre postérieur
 - urètre prostatique
 - veru montanum : 3 orifices
 - utricule : reste de canal de Muller
 - canaux éjaculateurs
 - urètre membraneux : sphincter externe
- Urètre antérieur (spongieux)
 - urètre bulbaire
 - urètre pénien





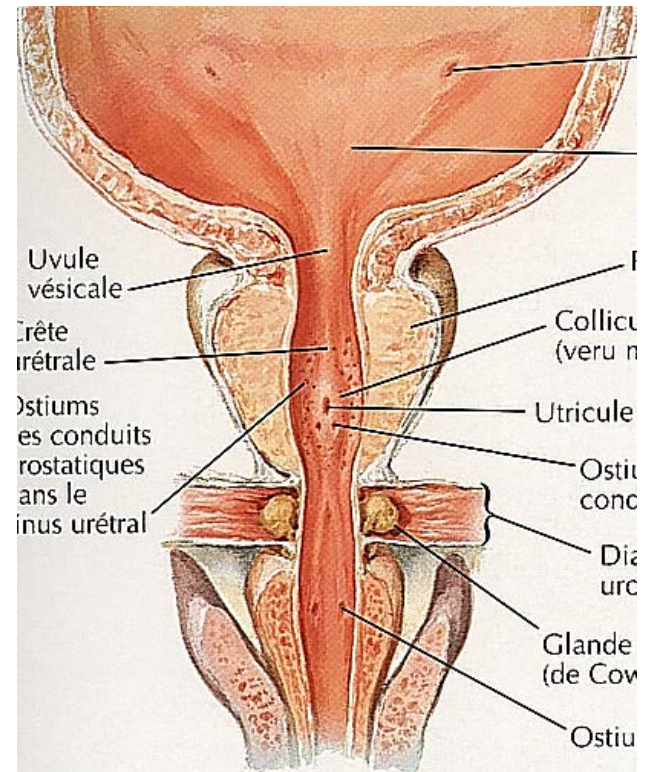
Voie rétrograde



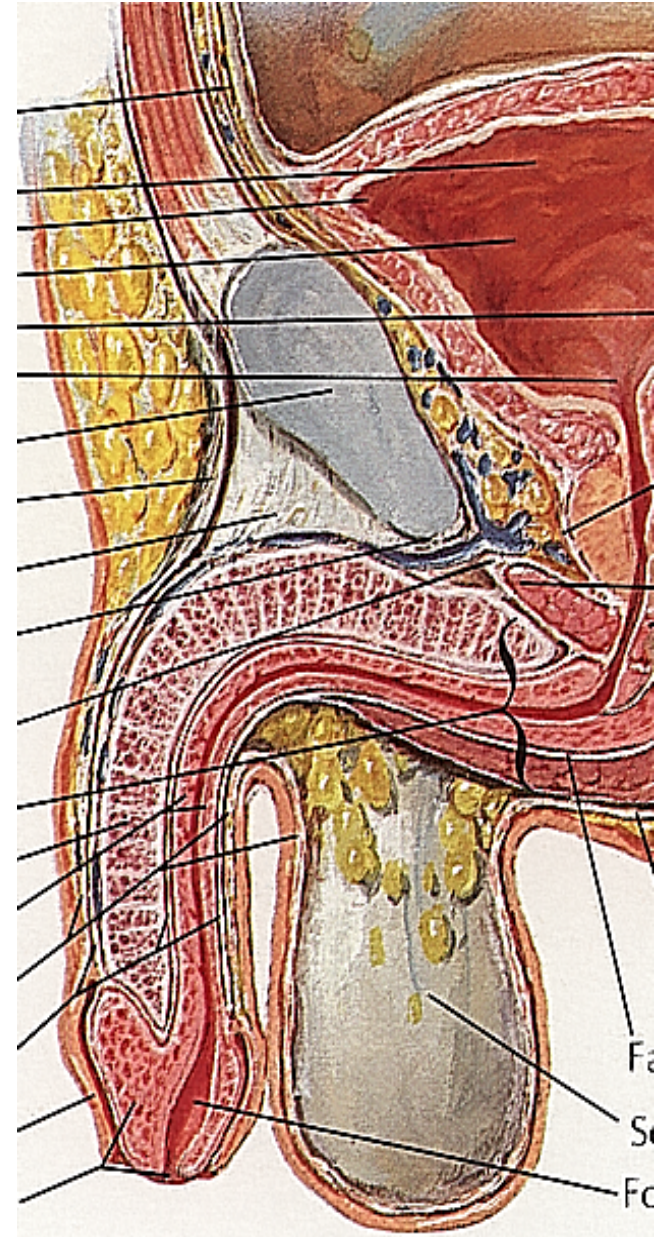
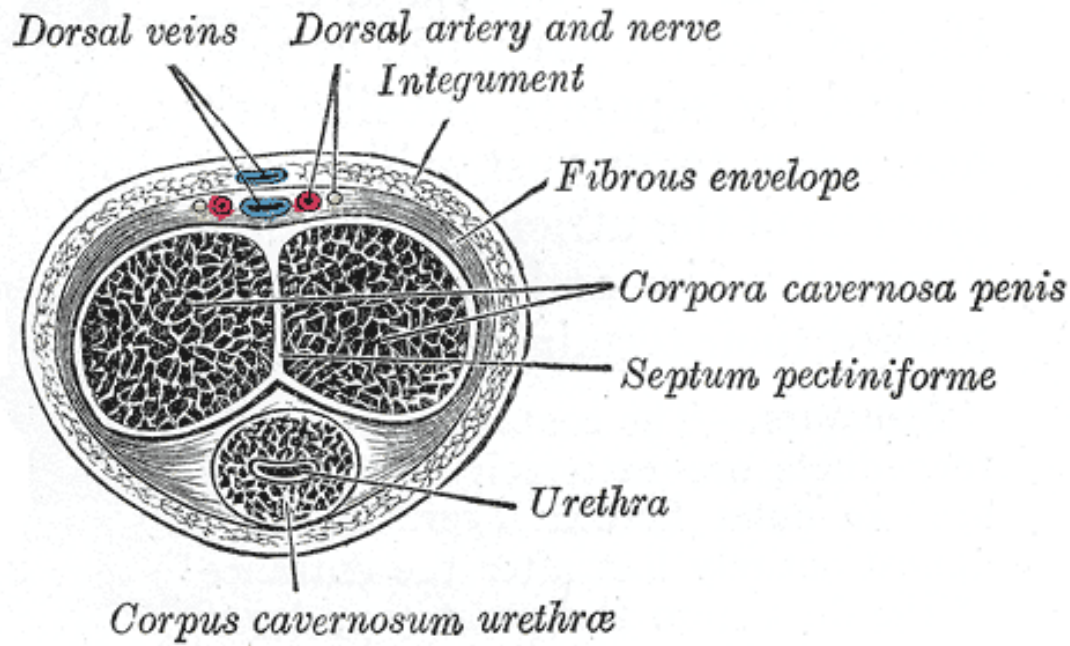
Voie prograde

Urètre prostatique

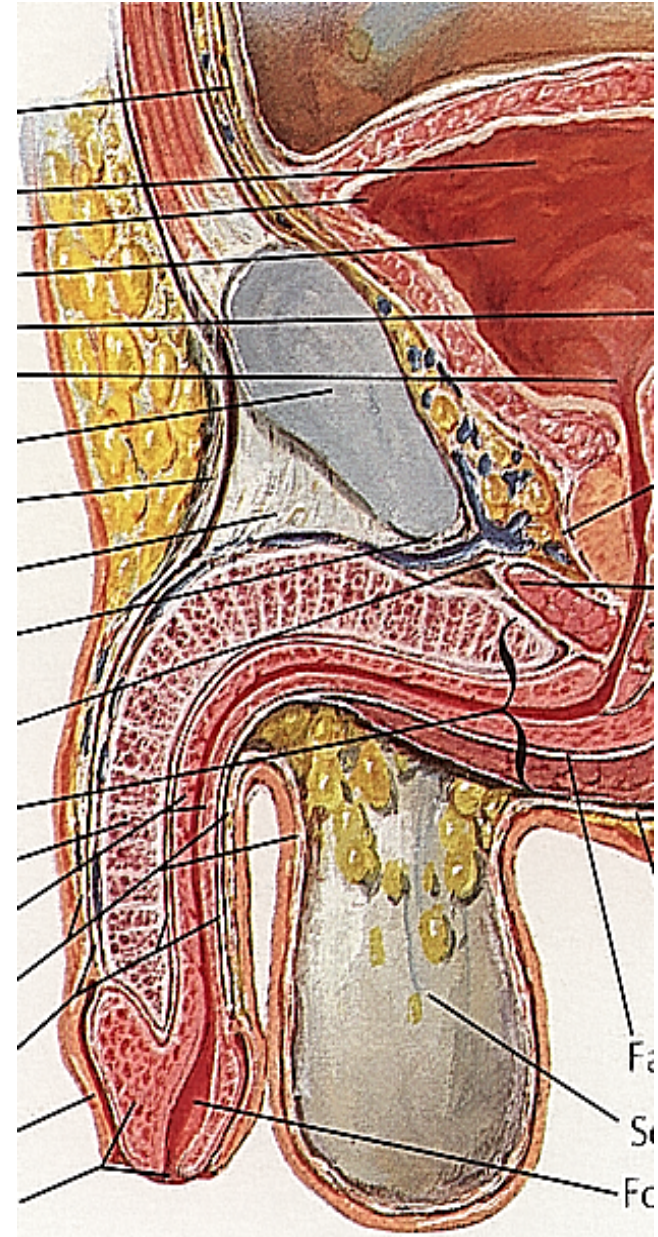
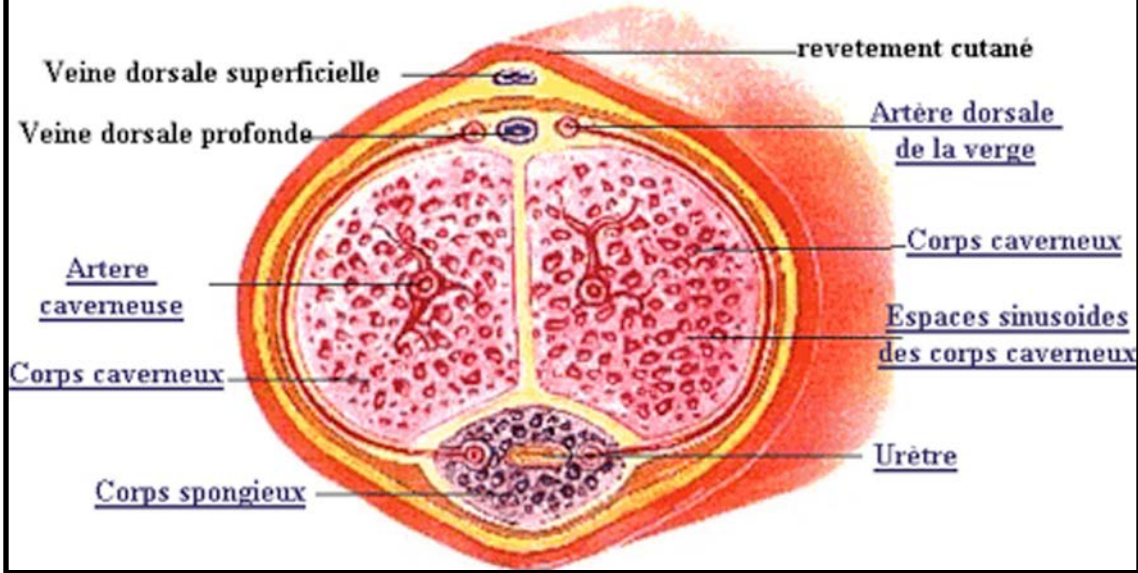
- Saillie postérieure : collicule ou veru montanum
 - Utricule
 - Canaux éjaculateurs
- Sillons latéraux : rigoles
 - Canaux excréteurs de la prostate

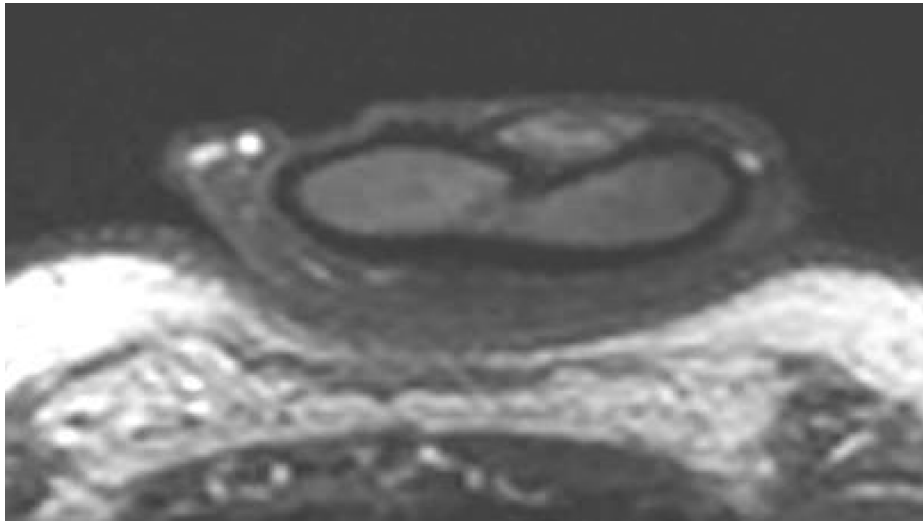
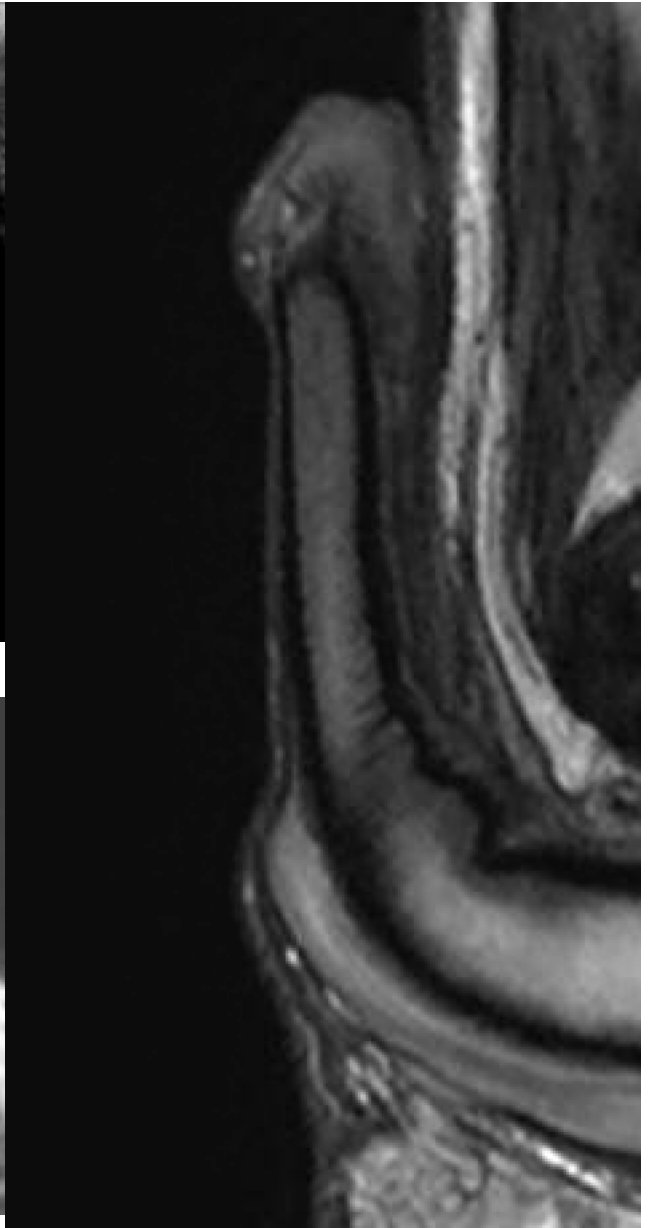
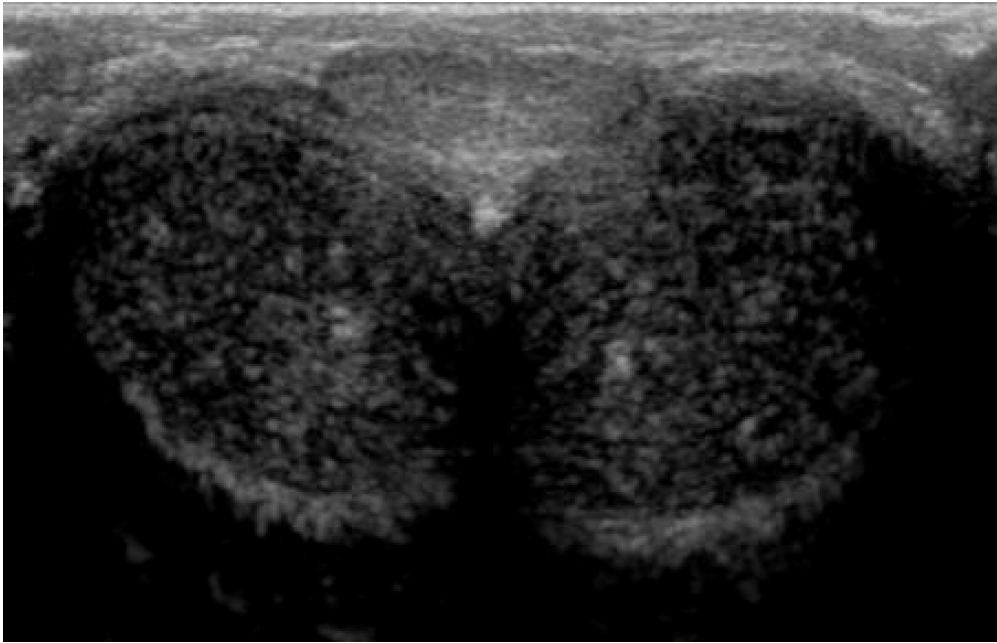


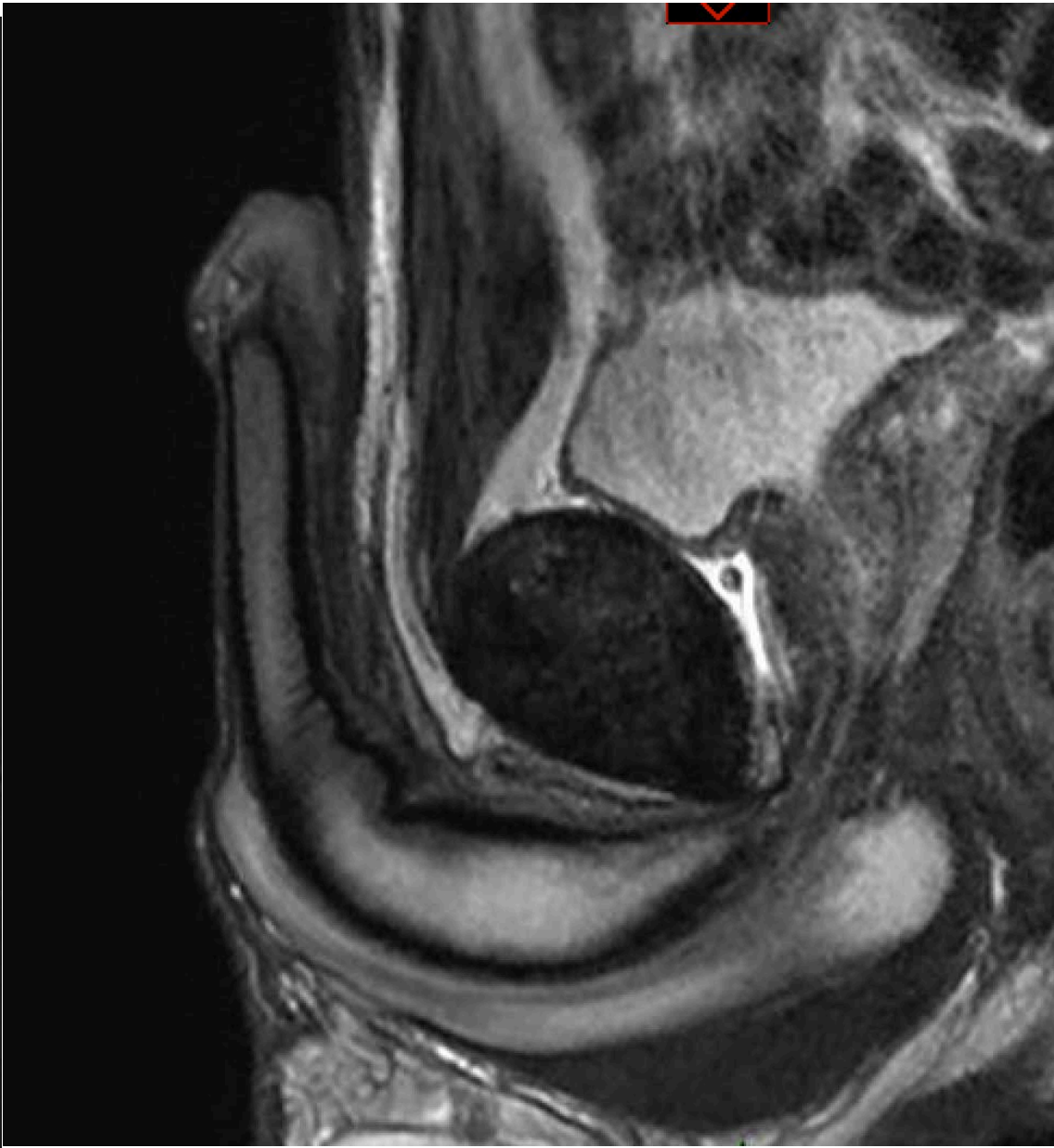
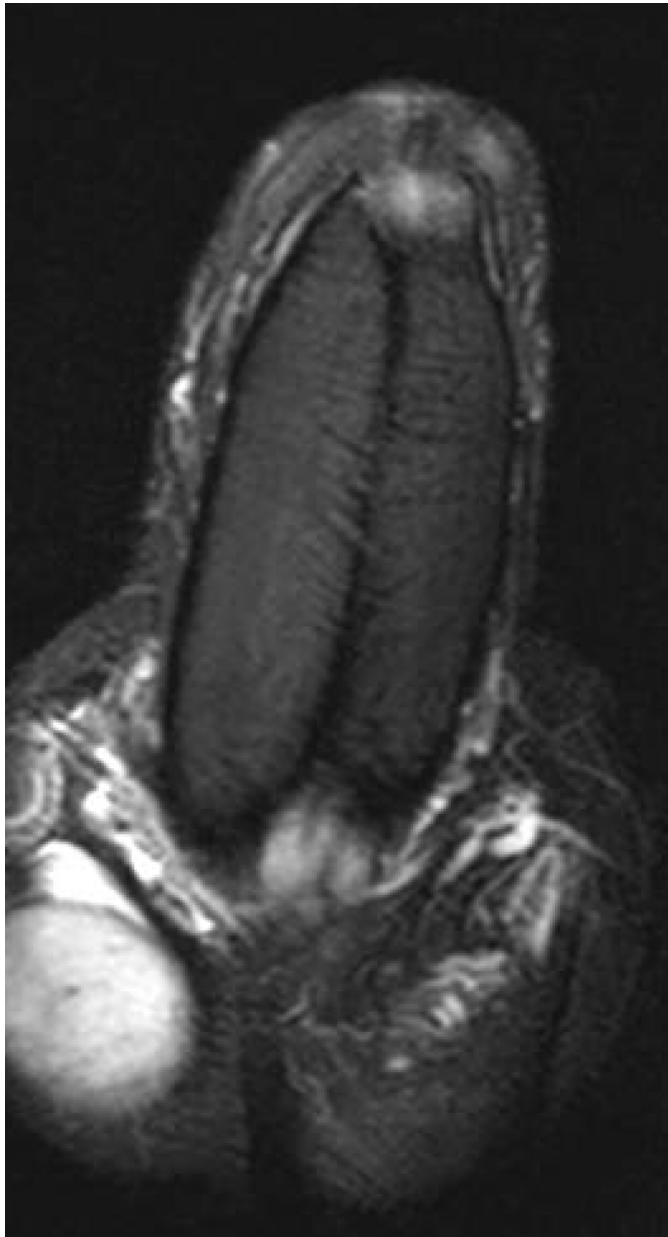
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Coupe transversale de la verge







Urètre chez la femme

- Partie intrapelvienne
- Partie extrapelvienne
 - Limite : diaphragme urogénital



Imagerie des organes génitaux

- Prostate et vésicules séminales
Echographie, CT, IRM
- Testicules et épiddidymes
Echographie



Imagerie des organes génitaux

Prostate et vésicules séminales

IRM

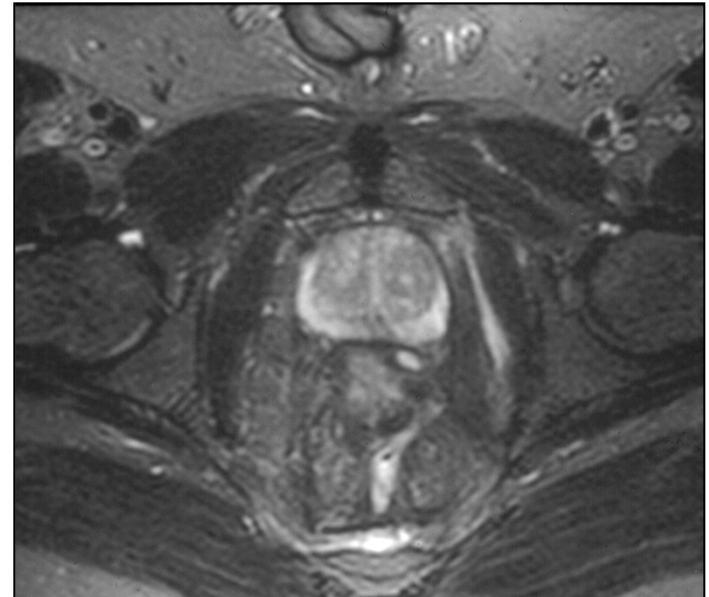
Prostate

4 x 3 x 2.5 cm

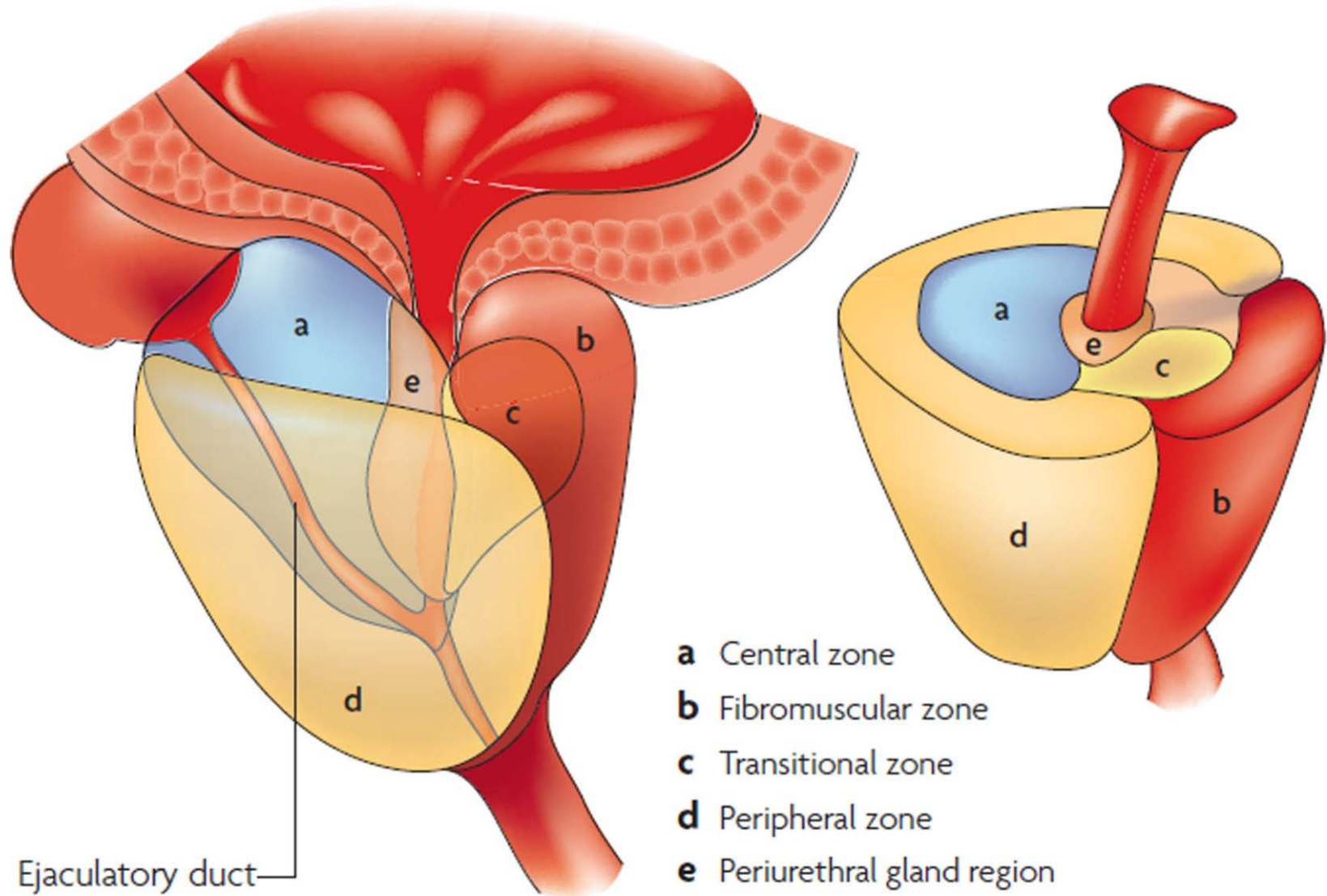
Zone périphérique :
hyperintense en T2

Zone centrale :
hypointense en T2

Vésicules séminales :
hyperintenses en T2



Prostate zones



Prostate et vésicules séminales

IRM

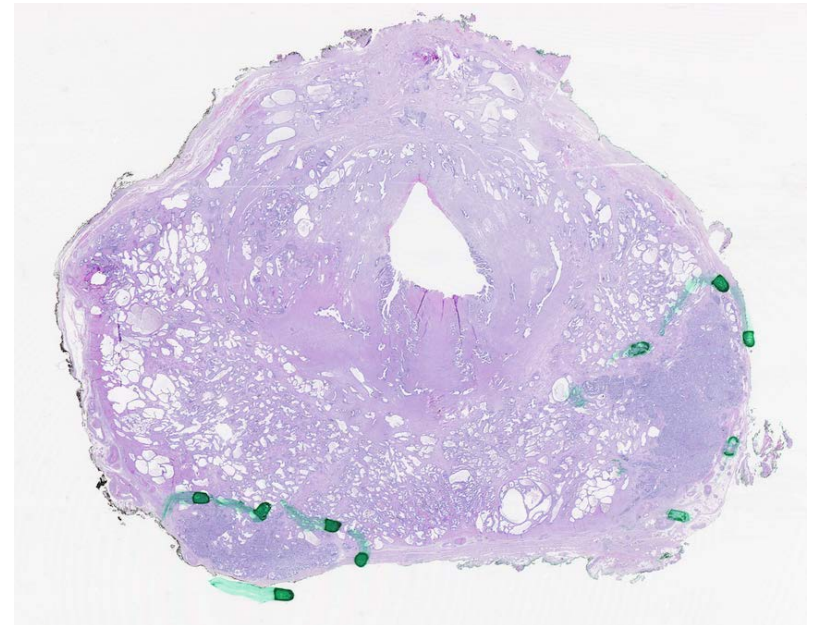
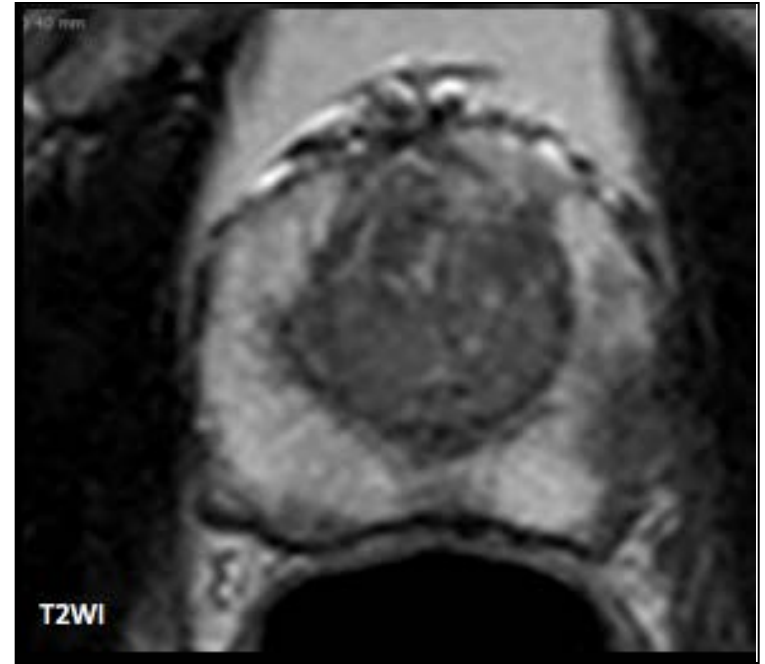
Prostate

4 x 3 x 2.5 cm

Zone périphérique :
hyperintense en T2

Zone centrale : hypointense
en T2

Vésicules séminales :
hyperintenses en T2



Prostate et vésicules séminales

IRM

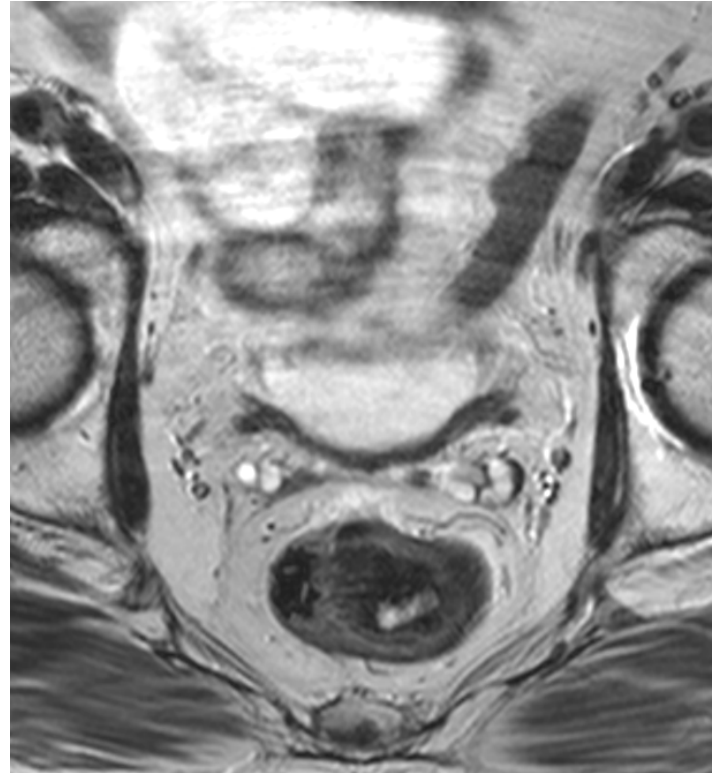
Prostate

4 x 3 x 2.5 cm

Zone périphérique :
hyperintense en T2

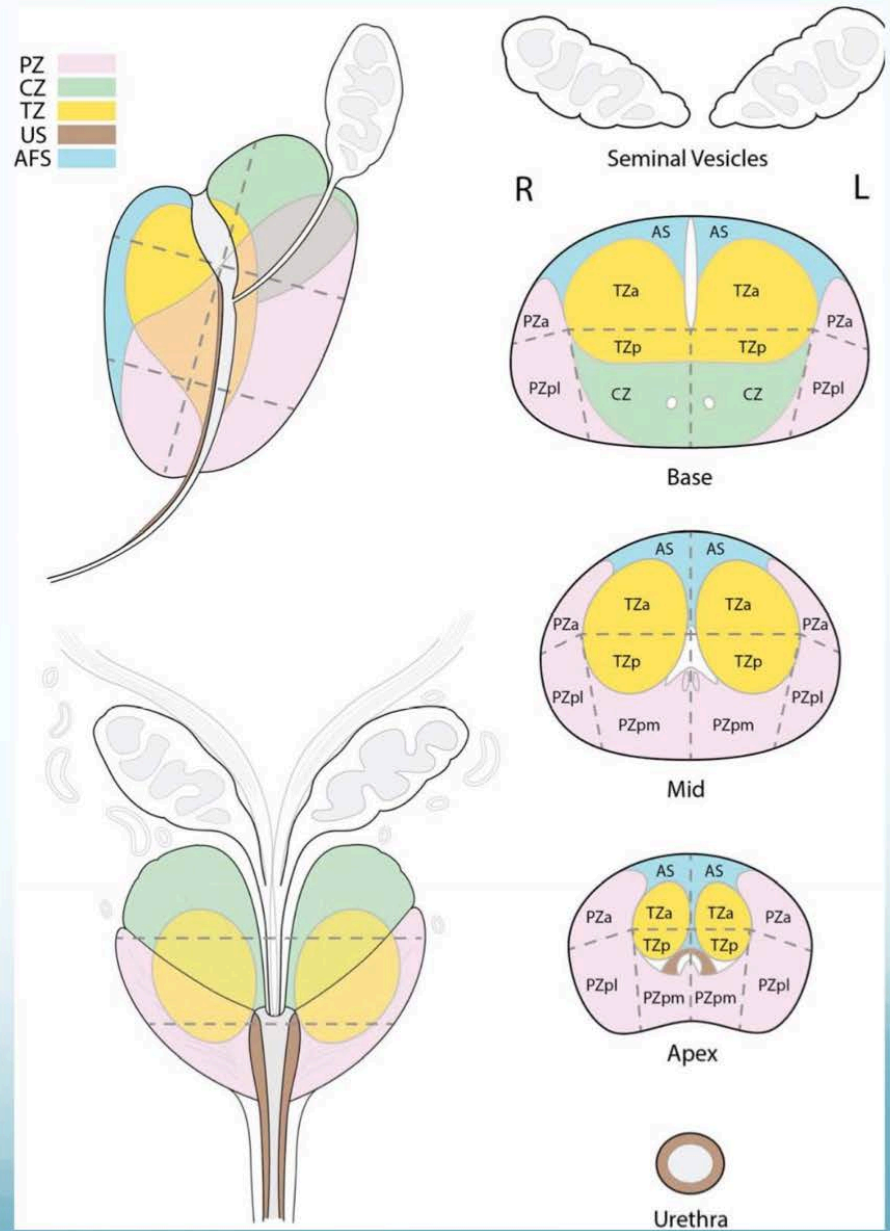
Zone centrale : hypointense
en T2

Vésicules séminales :
hyperintenses en T2



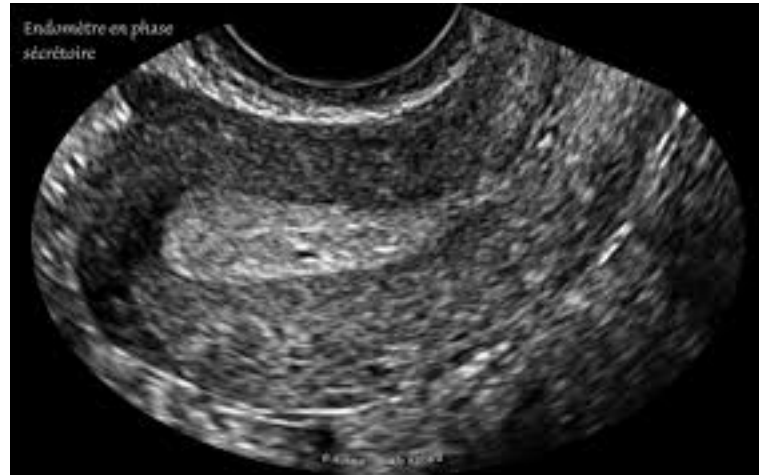
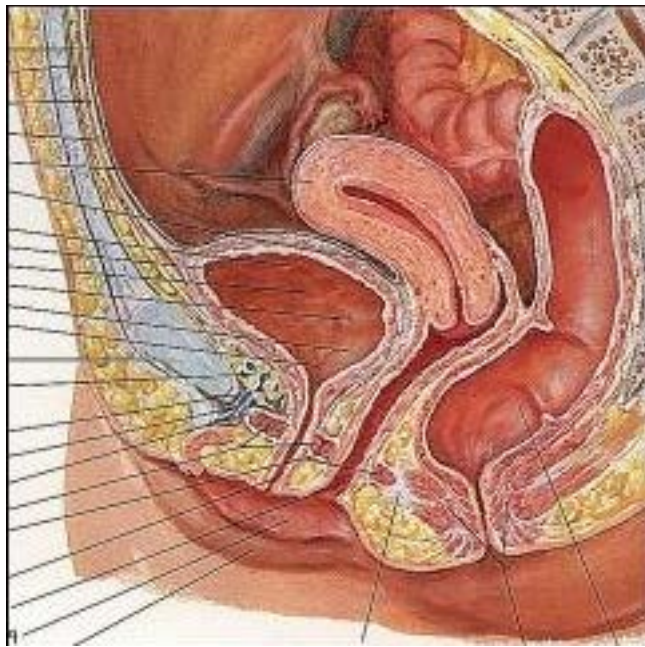
Carte sectorielle

- 39 secteurs
 - 36 prostate
 - 2 vésicules séminales
 - 1 sphincter externe de l'urètre
- Relations entre la tumeur et la surface de la glande et les structures adjacentes (él. neuro-vascu., sphincter ext. de l'urètre, col de la vessie)



Utérus et ovaires

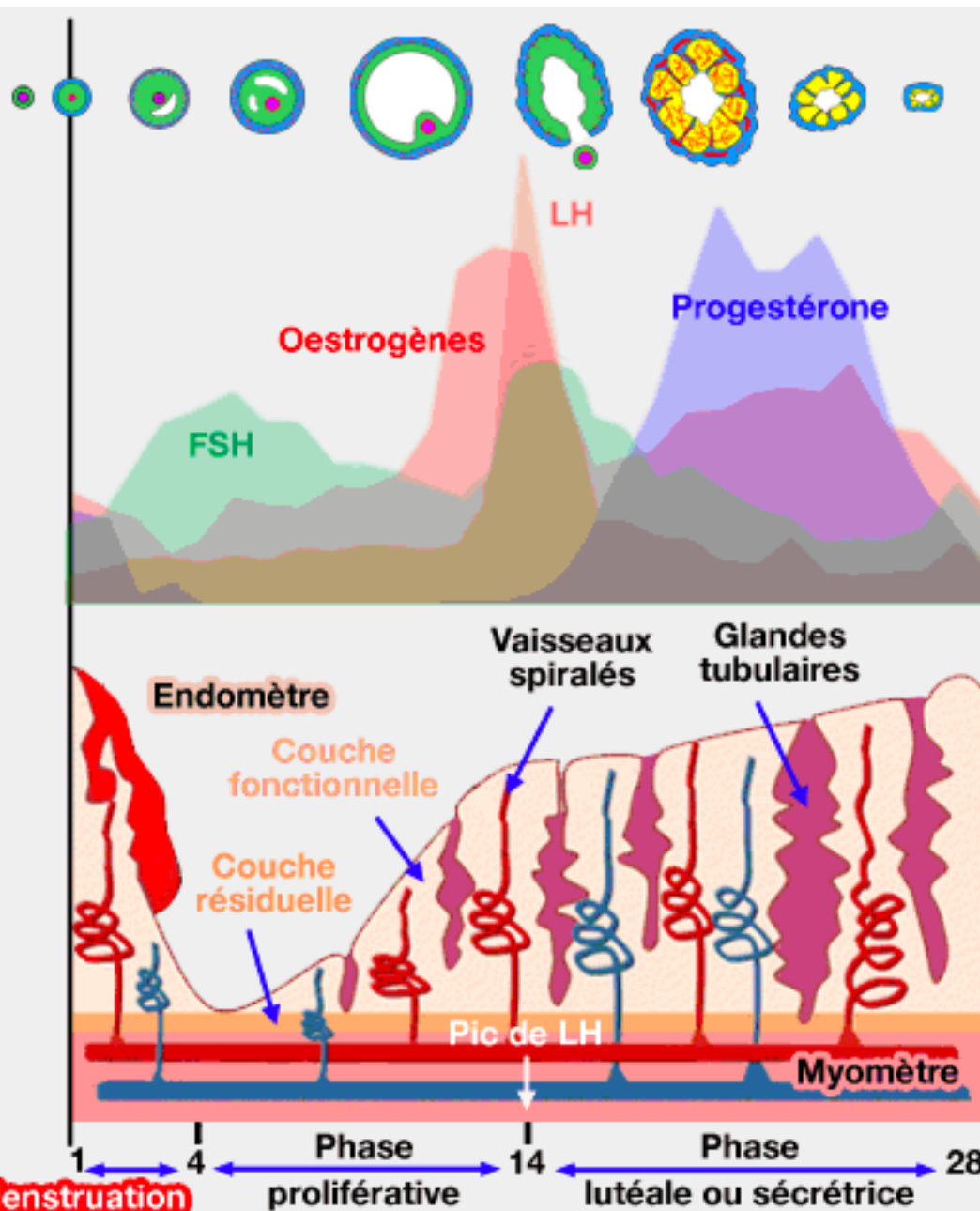
- Echographie et IRM
- Utérus : trois parties
 - Corps
 - Isthme
 - Col
 - Endomètre : hyperintense en T2
 - Zone jonctionnelle : partie interne du myomètre : hypointense en T2
 - Myomètre : signal intermédiaire
- Ovaires
 - 3 x 1.5 x 1.2 cm
 - Hyperintenses en T2

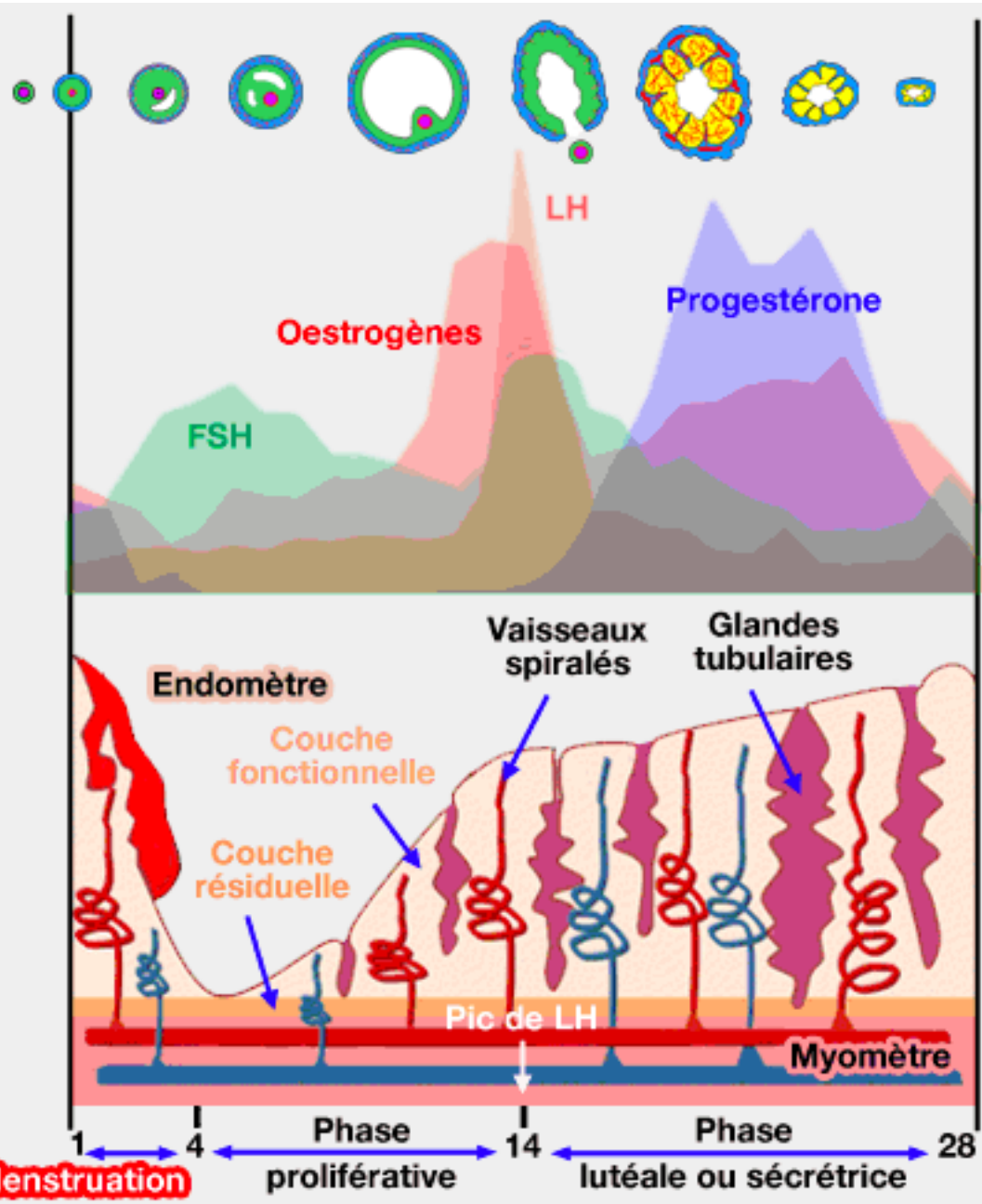


https://www.google.be/search?q=ut%C3%A9rus+%C3%A9chographie&tbm=isch&source=iu&ictx=1&fir=oo_K1rOmVnKMjM%253A%252Cqxl13hYZHQKU1M%252C_&usg=__EPqH6_InM5H-_P1cR2ncN1UQe6w%3D&sa=X&ved=0ahUKEwjt4If4mulXAhuUQ5KQKH3yChMQ9QEIMDAB#imgrc=r1uiAMd1z5EEvM:



In Netter, Atlas d'anatomie humaine, 4^{ème} édition, 2007

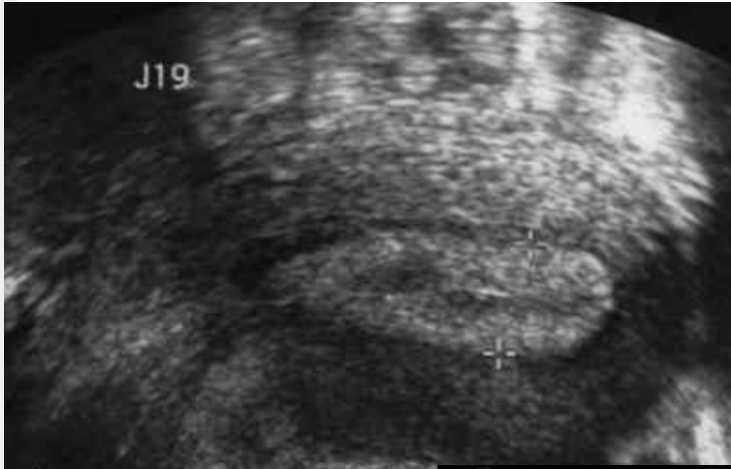




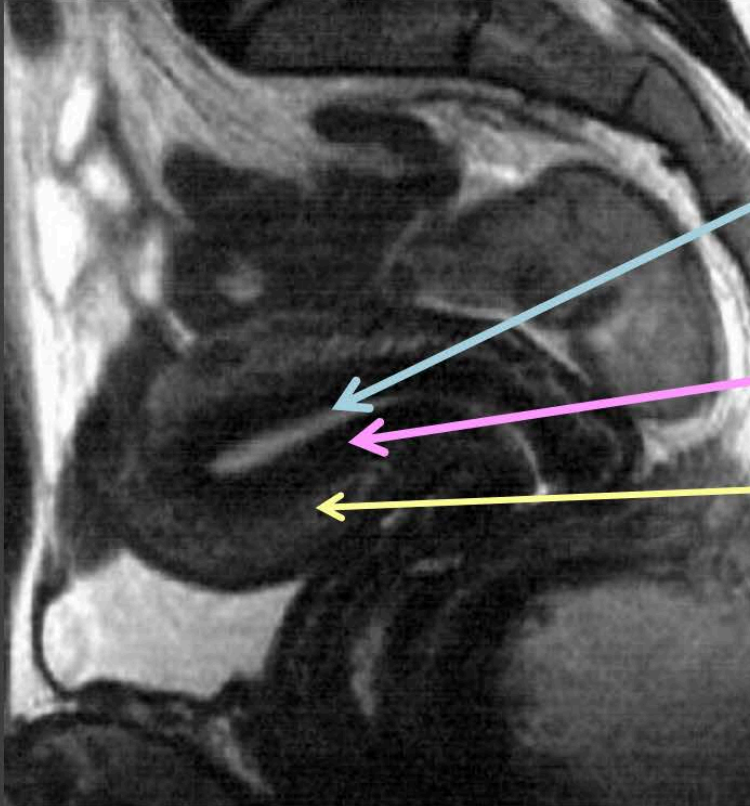
Phase proliférative



Phase lutéale



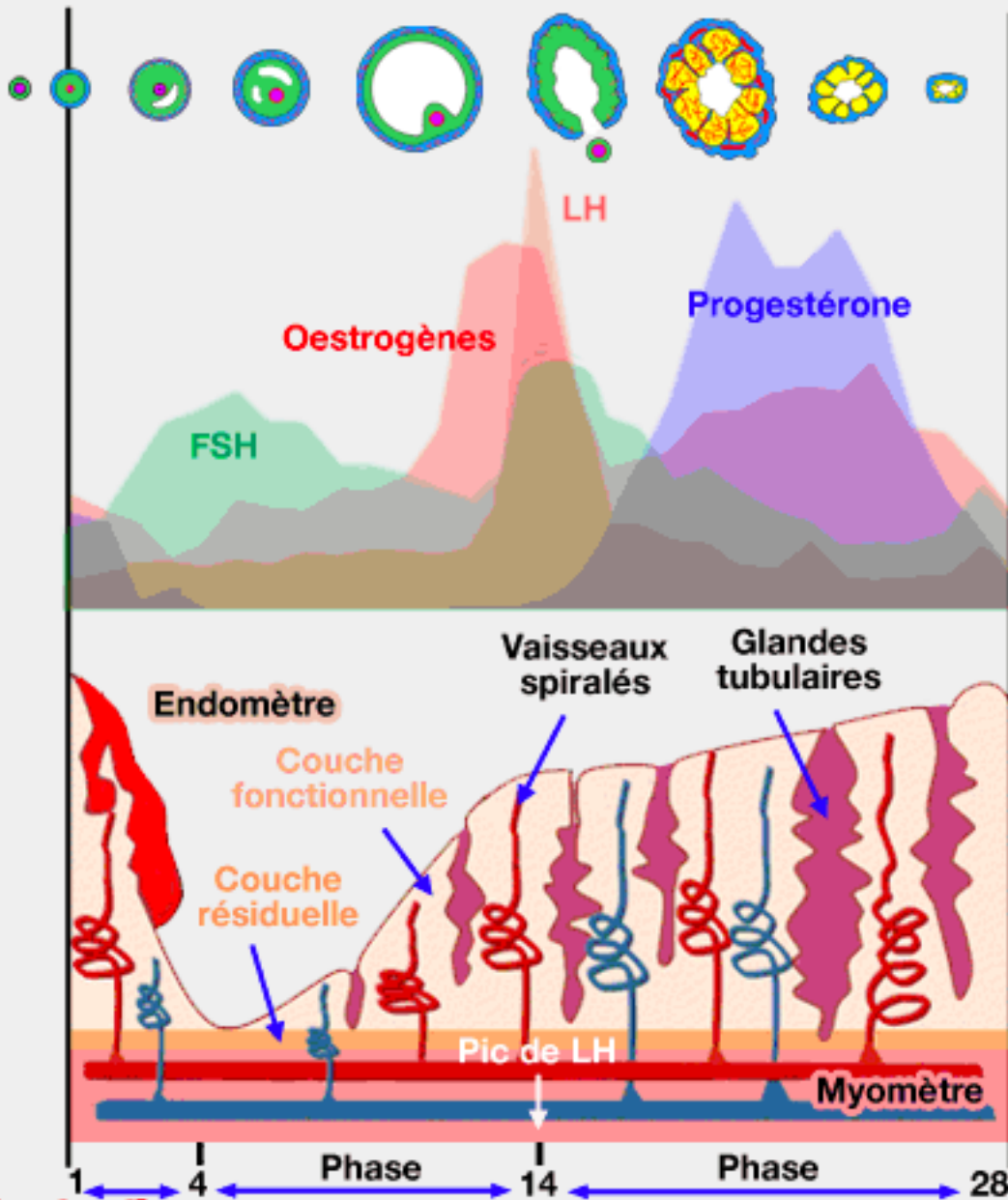
Utérus en IRM



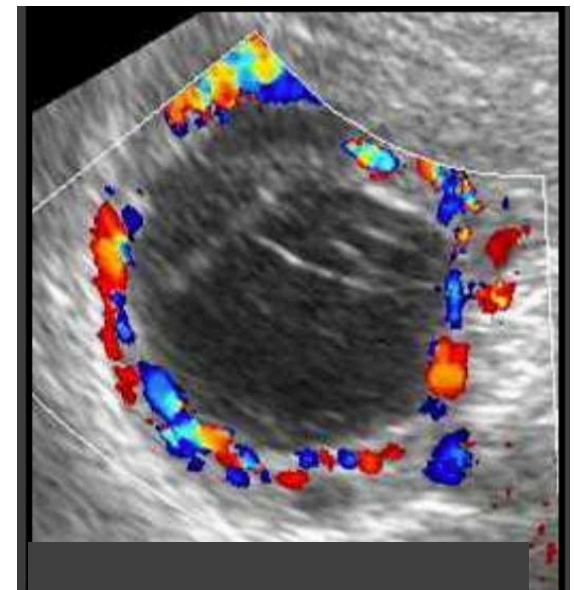
Blanc: endomètre

Noir : zone jonctionnelle = myomètre interne

Gris : myomètre externe



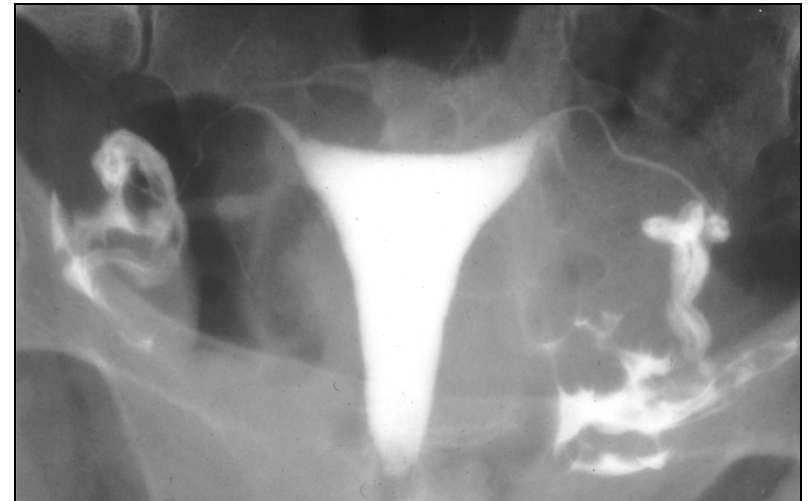
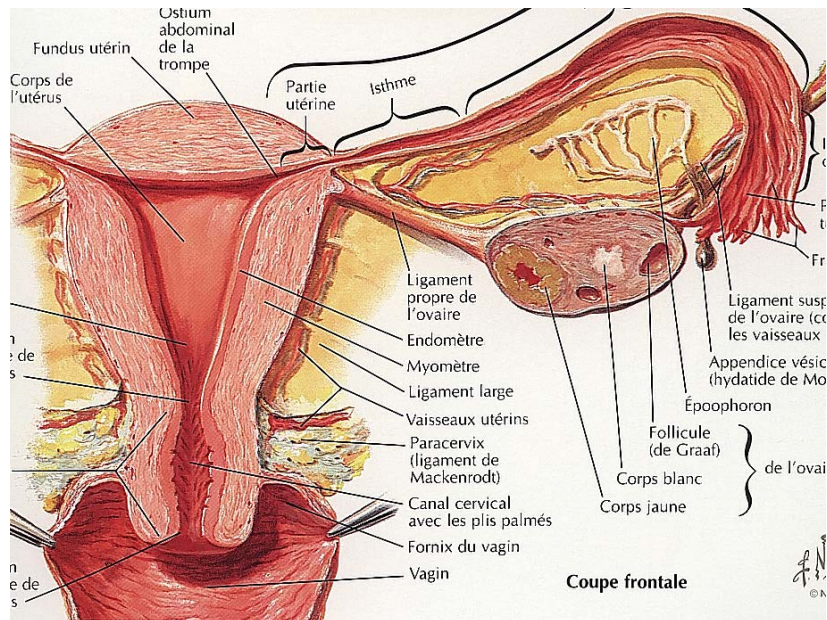
Phase folliculaire



Phase lutéale

Trompes

- Hystérosalpingographie



In Netter, Atlas d'anatomie humaine, 4^{ème} édition, 2007

TESTICULE

- ovoïde
- 5 x 3.5 x 3 cm
- echostructure homogène, fine

SCROTAL SONOGRAPHY: CURRENT USES*

- Evaluation of the location and characteristics of scrotal masses
- Detection of an occult primary tumor in patients with known metastatic disease
- Follow-up of patients with testicular microlithiasis
- Follow-up of patients with previous testicular neoplasms, leukemia, or lymphoma
- Evaluation of extratesticular pathology
- Evaluation of the acute scrotum
- Evaluation of scrotal trauma
- Localization of the undescended testis
- Detection of varicoceles in infertile men
- Evaluation of testicular ischemia with color flow and power mode Doppler sonography

*References 1-7.

Rumack et Wilson, Diagnostic Ultrasound, Mosby, 2004

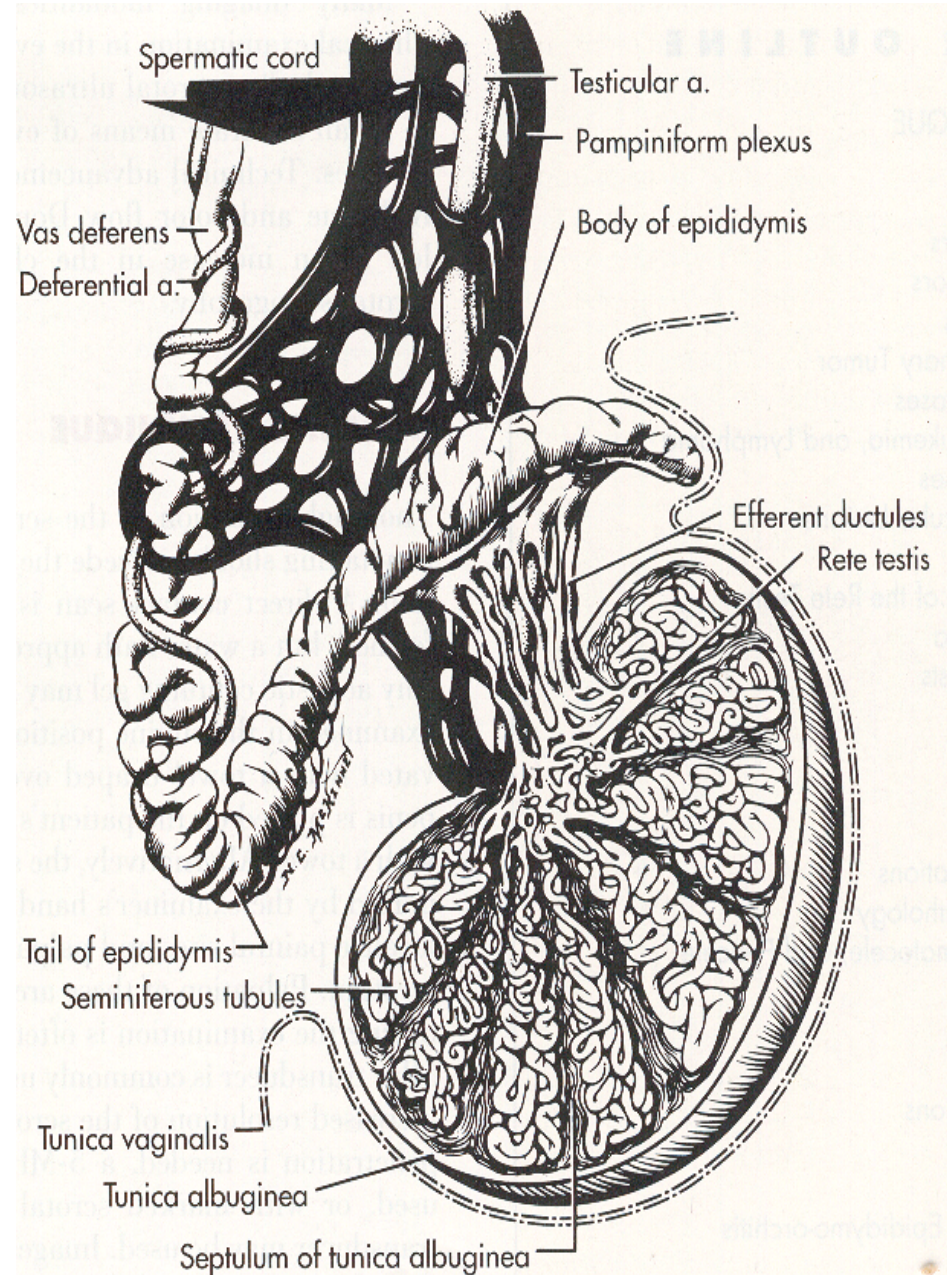
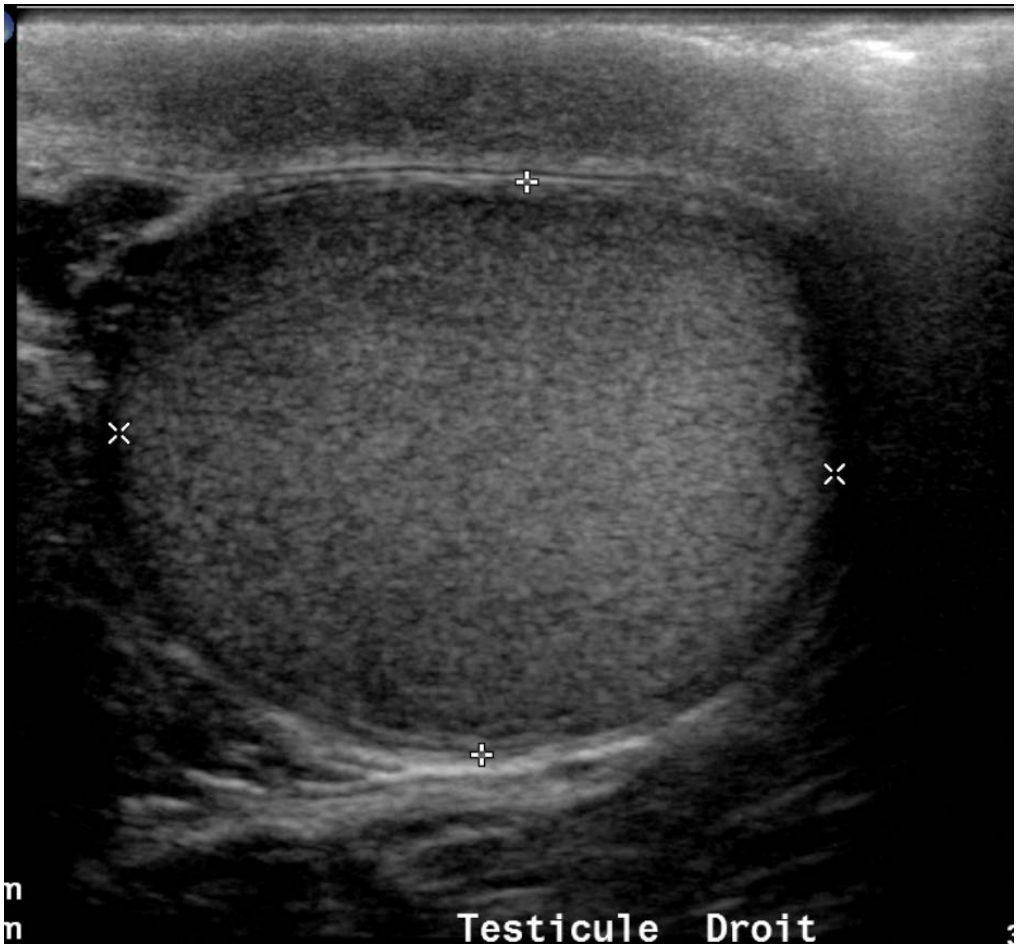
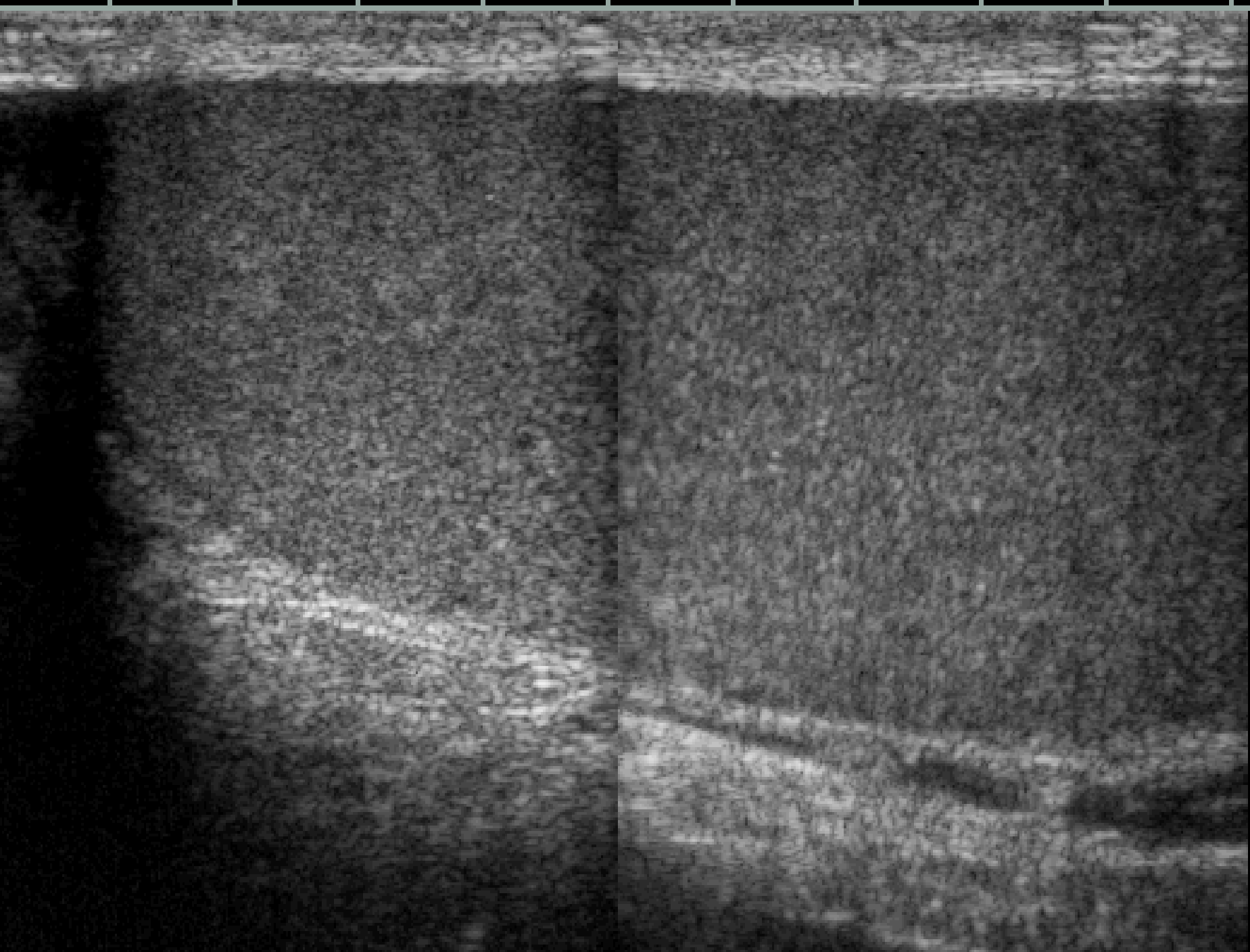
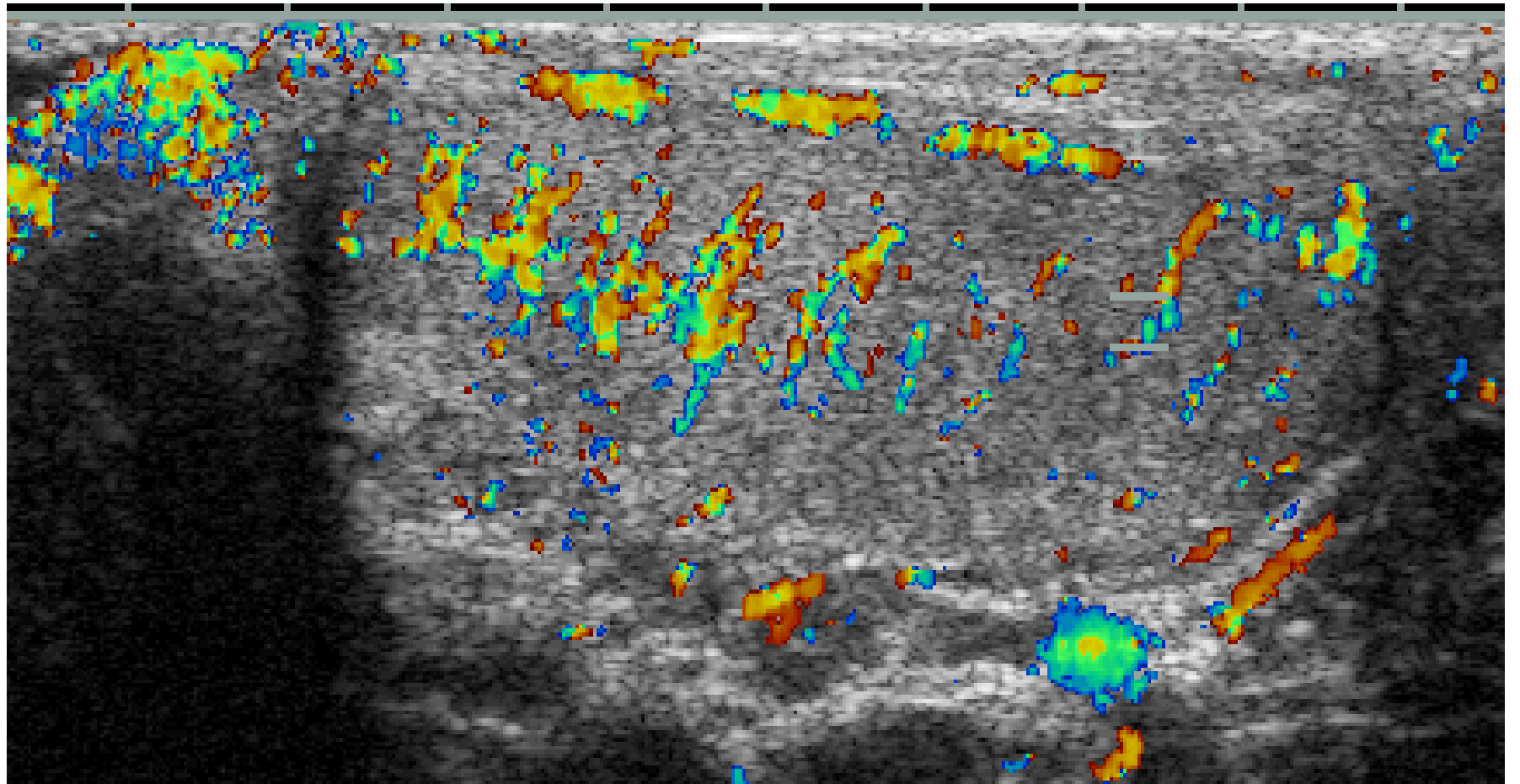
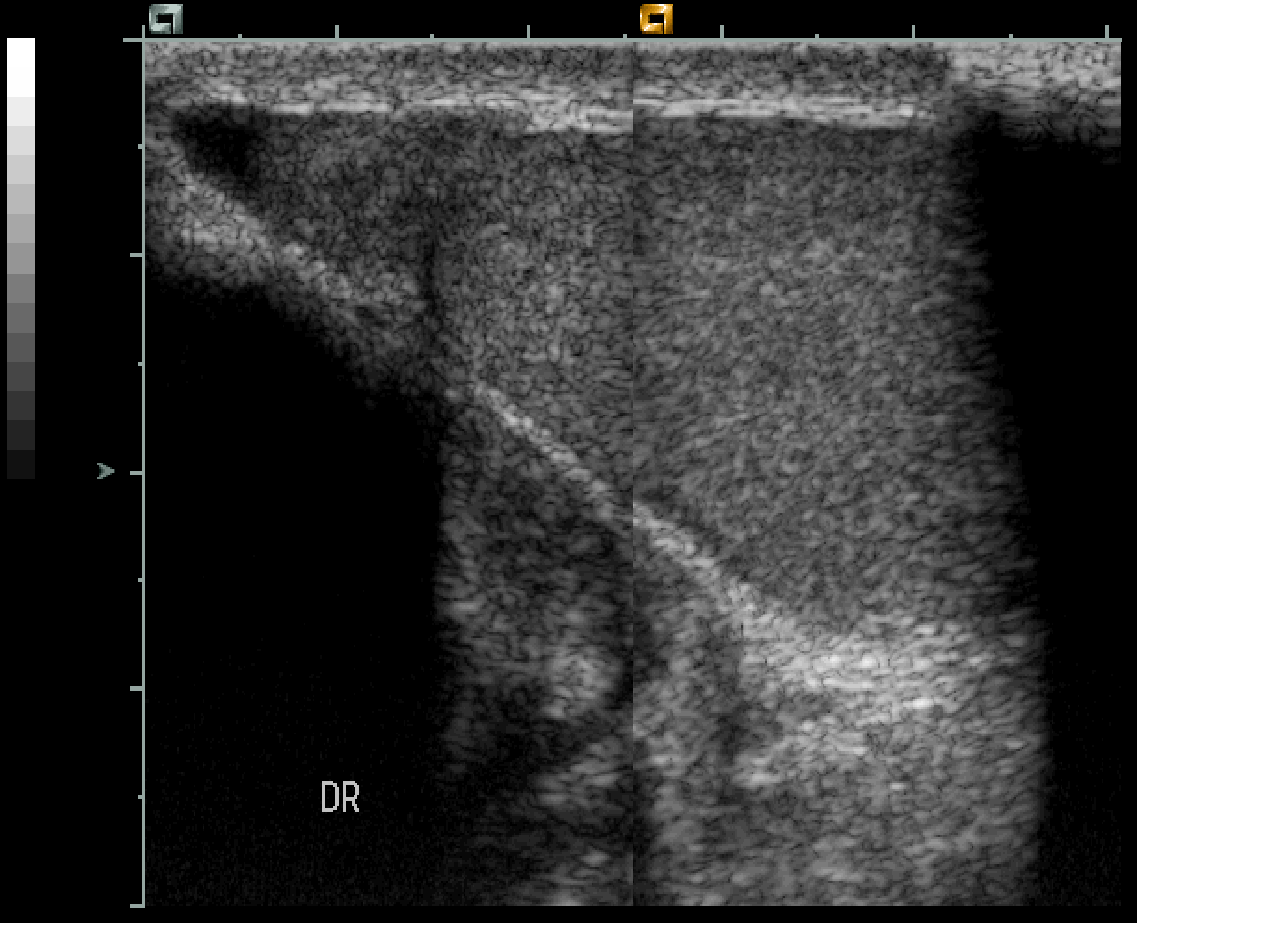


FIG. 24-1. Normal intrascrotal anatomy.









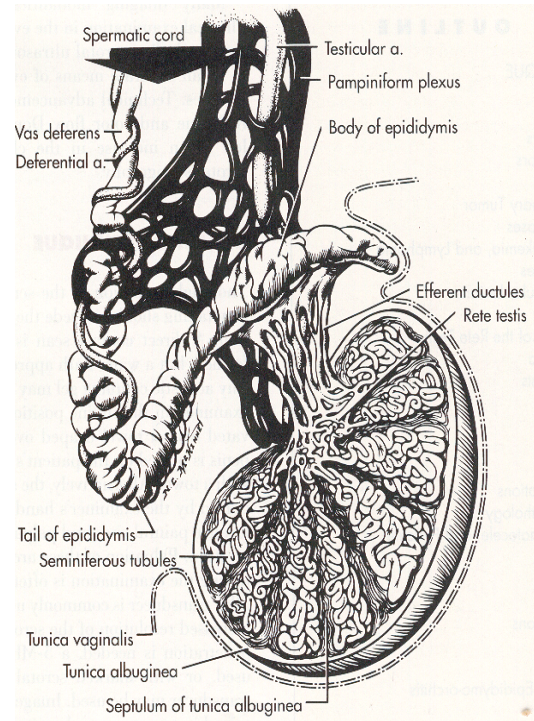


FIG. 24-1. Normal intrascrotal anatomy.

