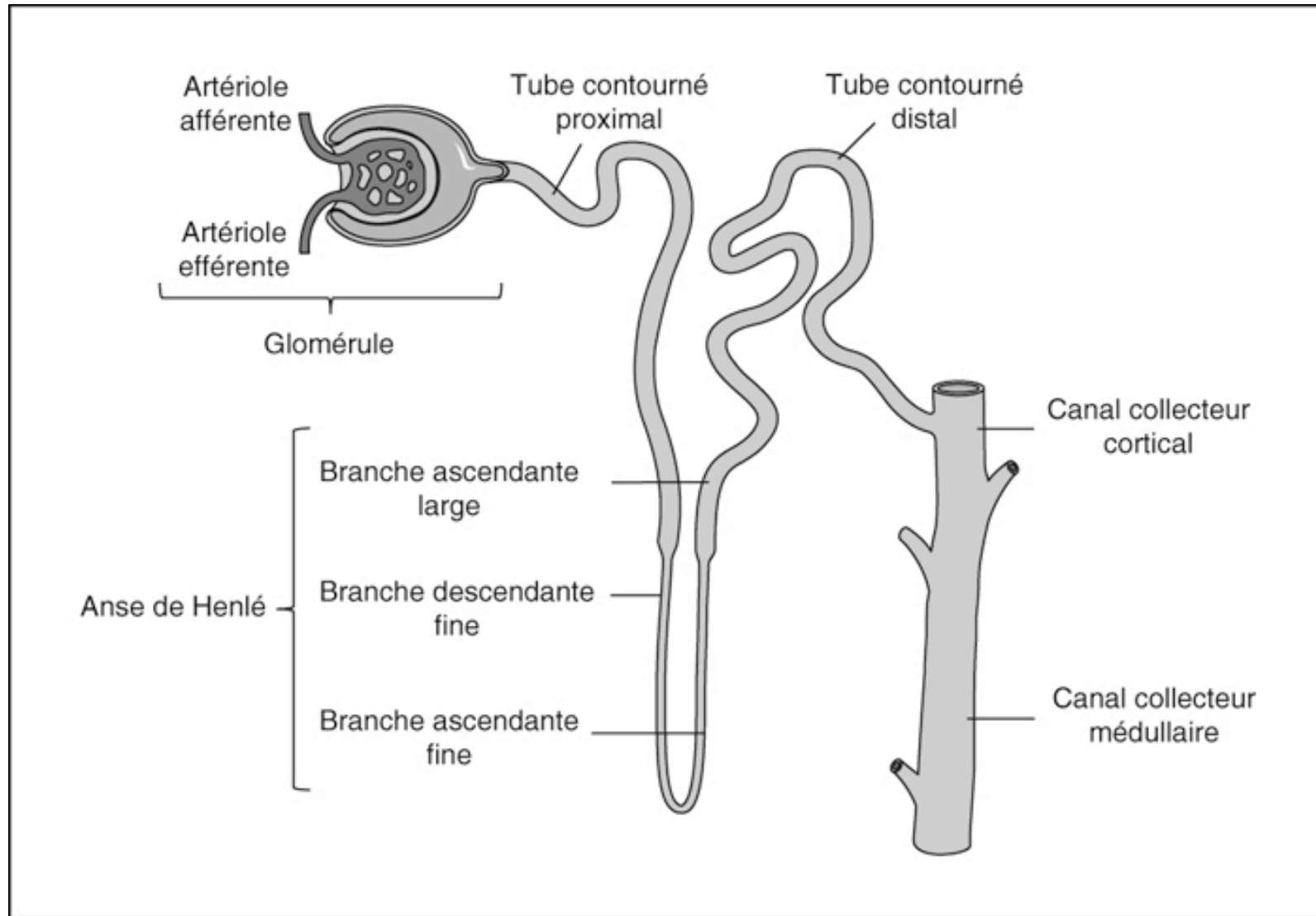


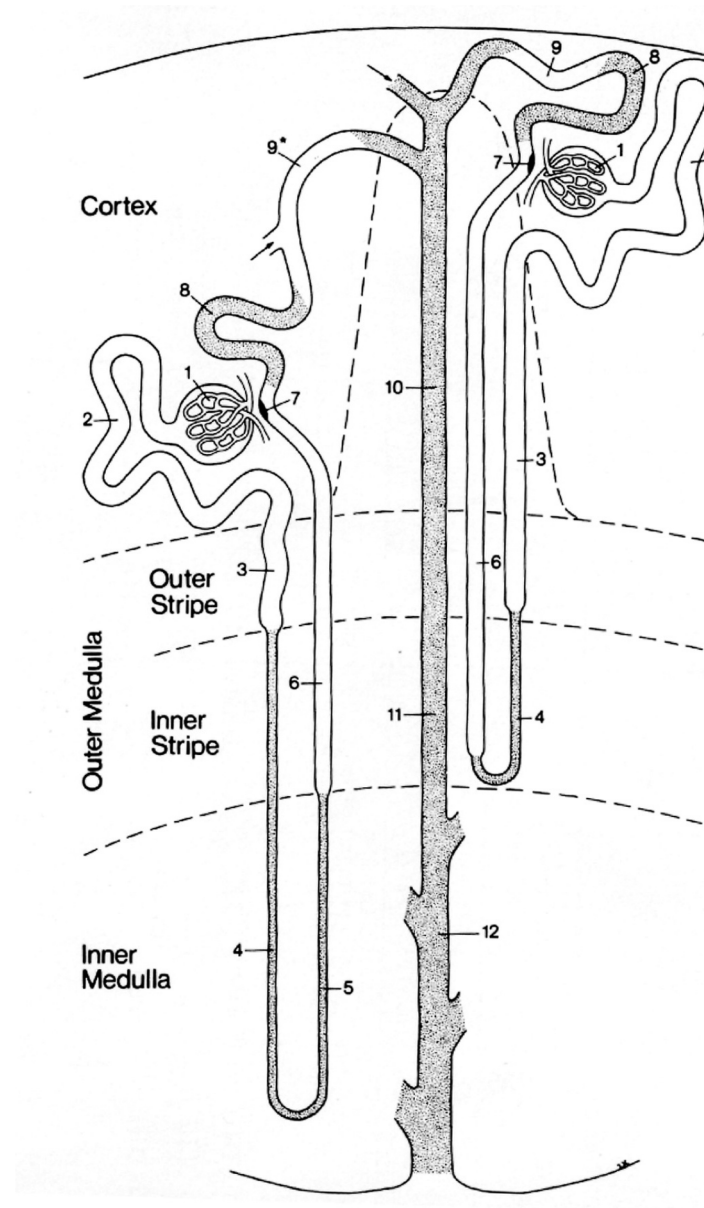
Danger : schéma à ne pas utiliser



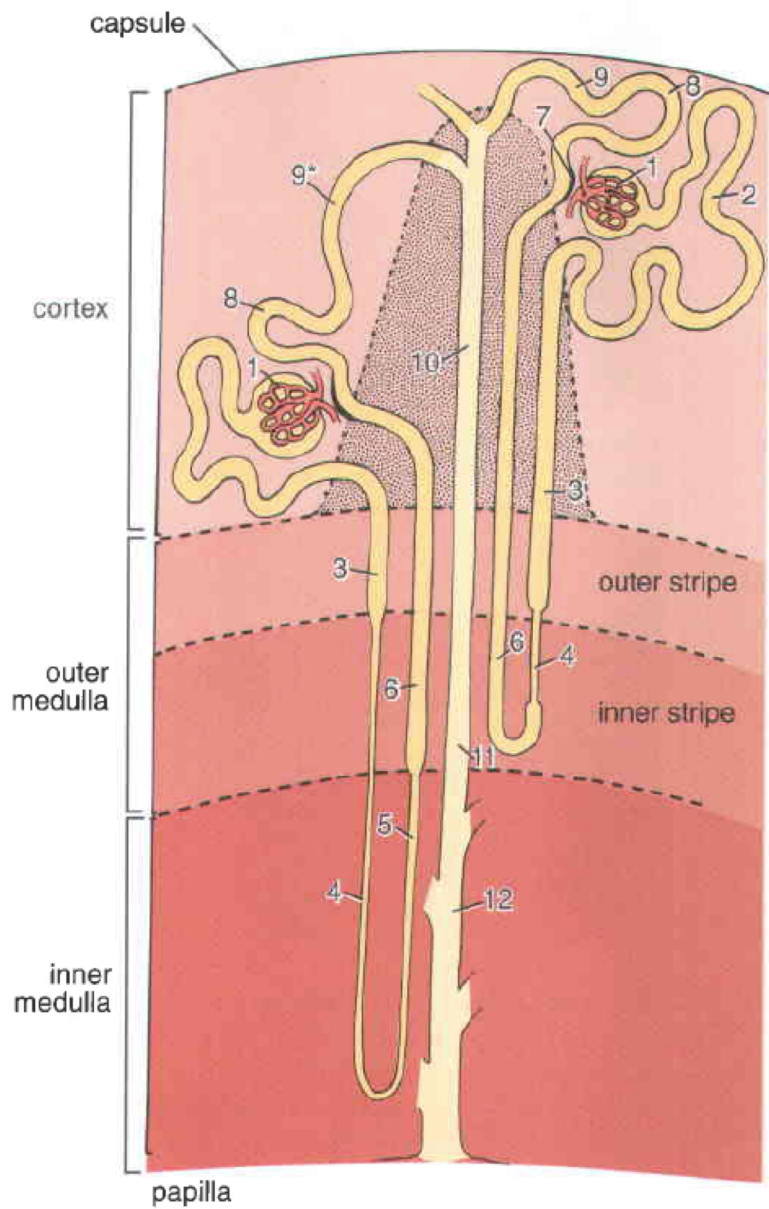
Diversités des néphrons

Segments des néphrons

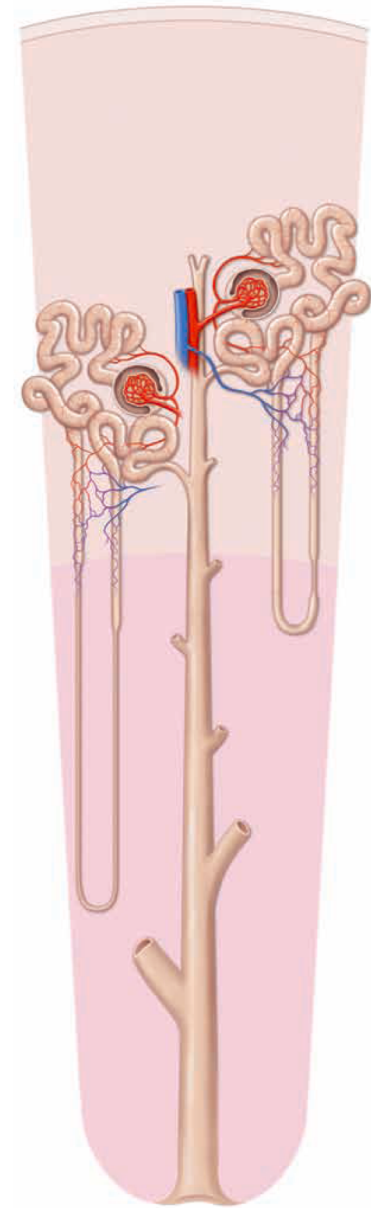
Néphron juxta-médullaire



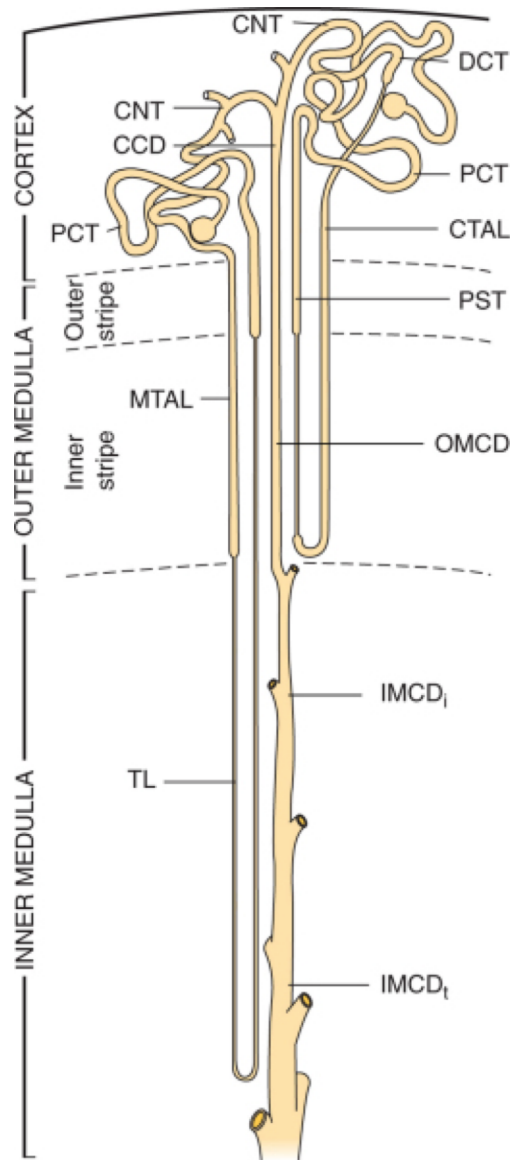
Néphron cortical



- 1, renal corpuscle including the glomerulus and Bowman's capsule
- 2, proximal convoluted tubule;
- 3, proximal straight tubule;
- 4, descending thin limb;
- 5, ascending thin limb;
- 6 thick ascending limb (distal straight tubule);
- 7, **macula densa** located in the final portion of the thick ascending limb;
- 8 distal convoluted tubule;
- 9 connecting tubule;
- 9*, collecting tubule that forms an arch (arched collecting tubule);
- 10, cortical collecting duct;
- 11, outer medullary collecting duct;
- 12, inner medullary collecting duct

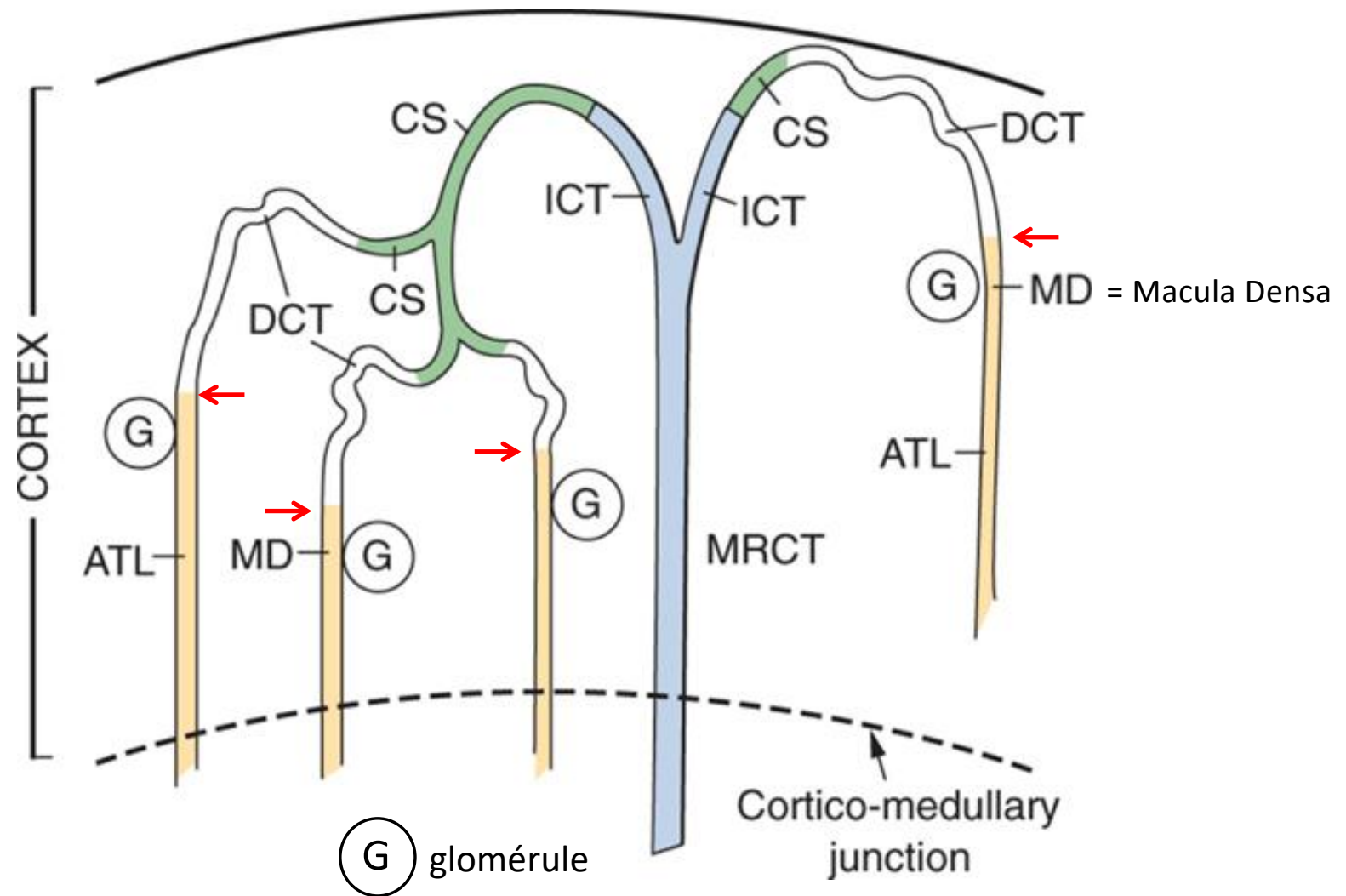


Nouvelle
édition

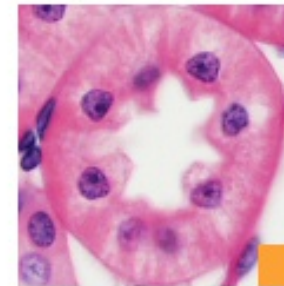
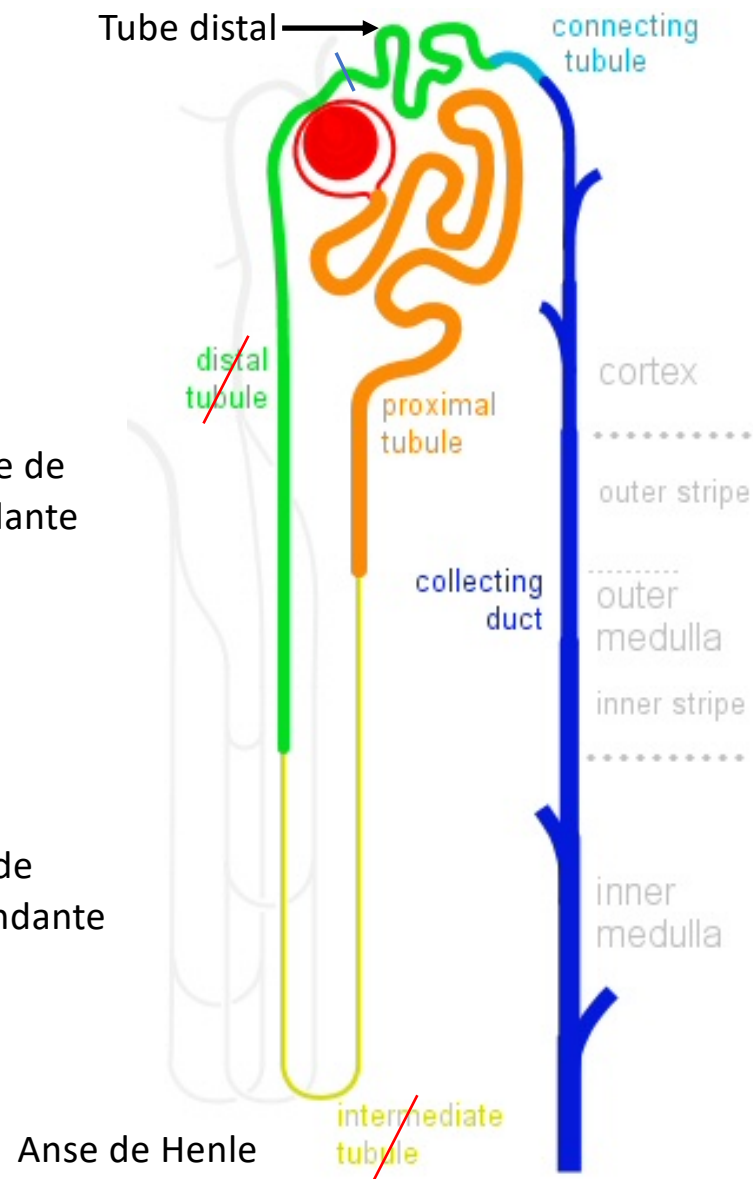


CCD, cortical collecting duct;
 CNT, connecting tubule;
 CTAL, cortical thick ascending limb;
 DCT, distal convoluted tubule;
 IMCD_i, initial inner medullary collecting duct;
 IMCD_t, terminal inner medullary collecting duct;
 MTAL, medullary thick ascending limb;
 OMCD, outer medullary collecting duct;
 PCT, proximal convoluted tubule;
 PST, proximal straight tubule;
 TL, thin limb of loop of Henle.

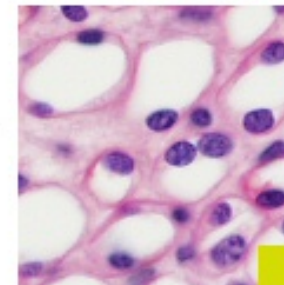
Transition anse acendante épaisse / tube distal contourné



Attention :
ce schéma n'est pas
à jour



Tube proximal



Anse de Henle



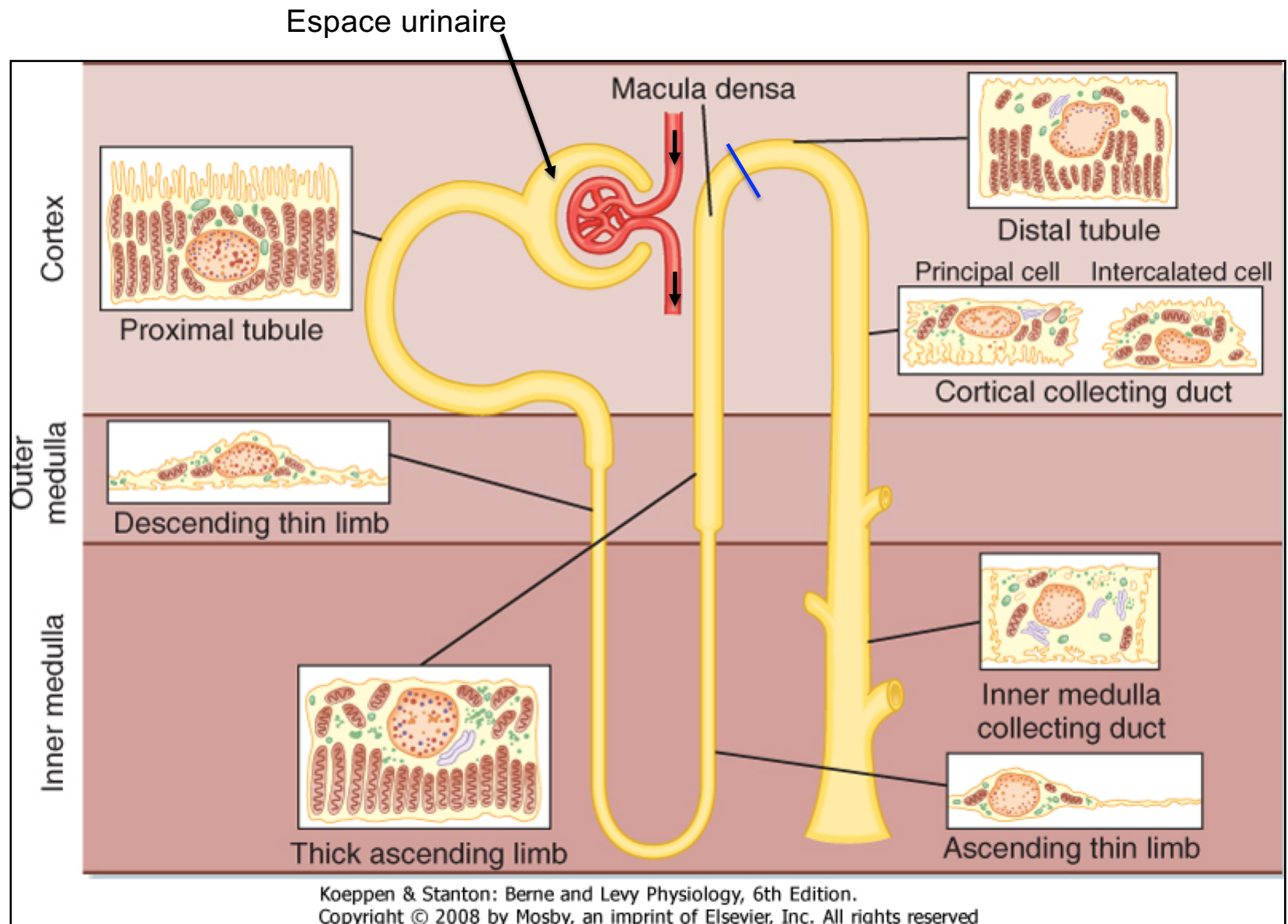
Tube distal



Tube collecteur
contour cellulaire
bien marqué

Un néphron

schéma simplifié



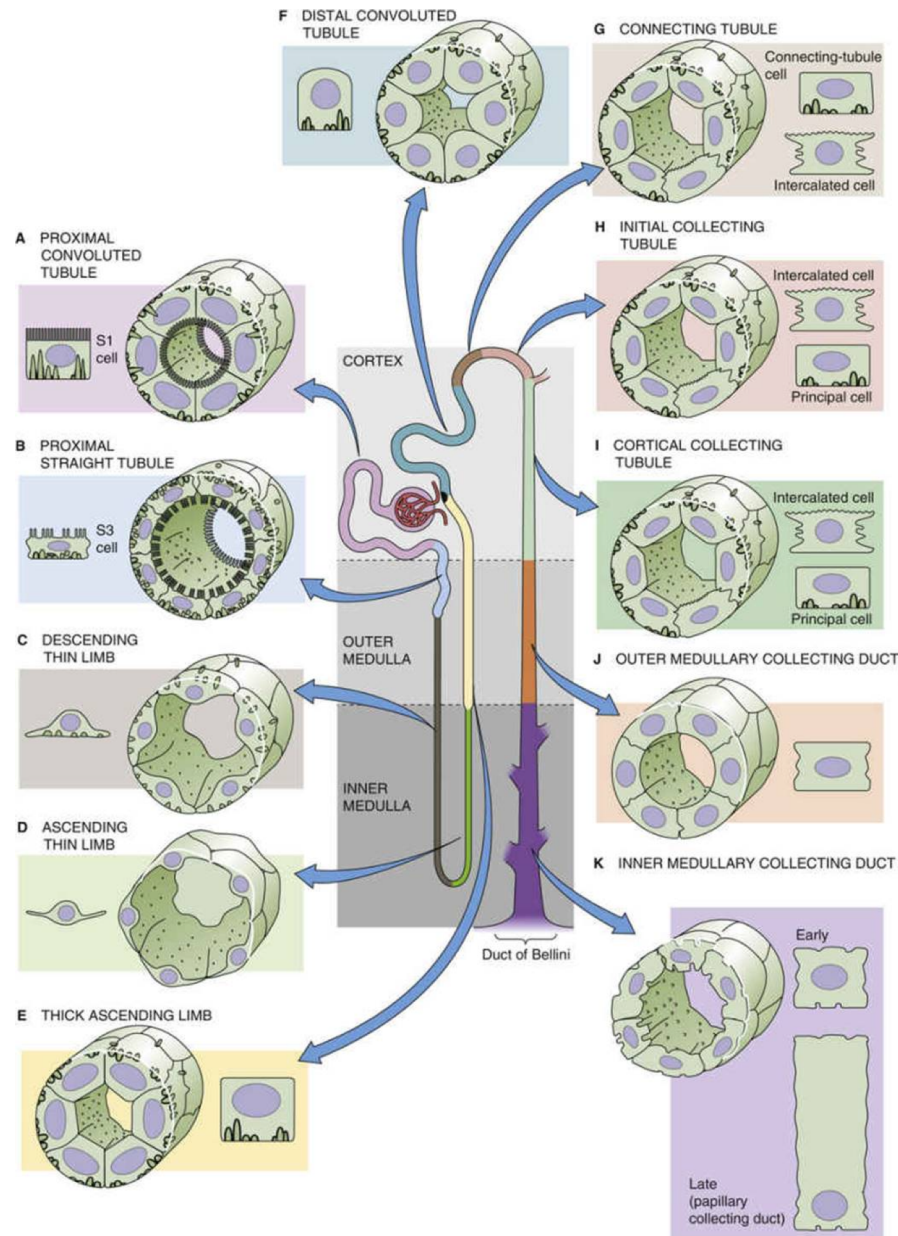
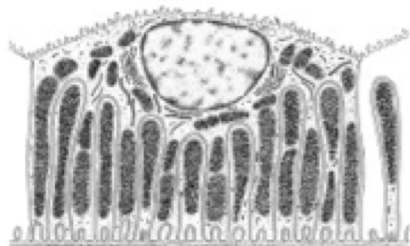
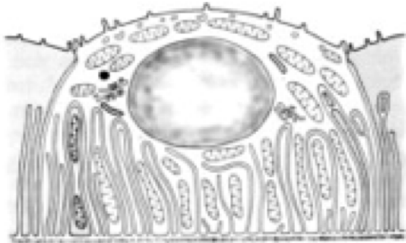


Figure 3.11. Cells of the distal nephron.

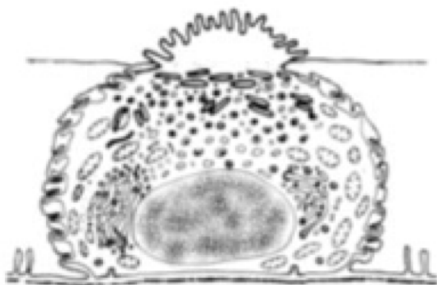


Distal tubular cell



Connecting tubule cell

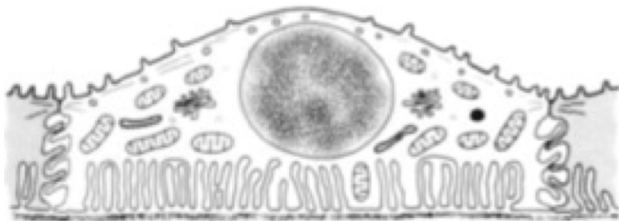
Cellules intercalées



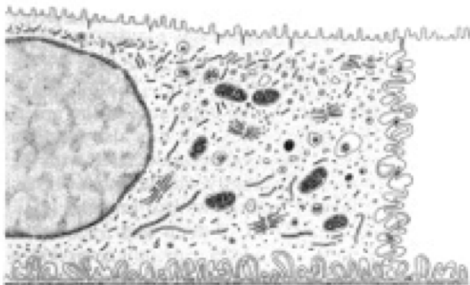
Intercalated cell (A type)



Intercalated cell (B type)



Principal cell



IMCD cell

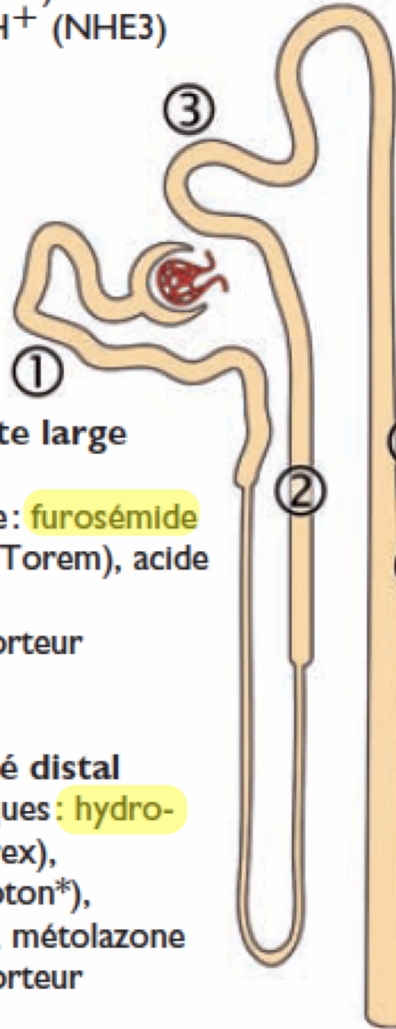
Inner Medulla Collecting Tube

Sites d'action des diurétiques

① **Tube contourné proximal**
Inhibiteur de l'anhydrase carbonique:
acétazolamide (Diamox)
Cible l'antiport Na/H^+ (NHE3)

② **Anse ascendante large
de Henle**
Diurétiques de l'anse: furosémide
(Lasix), torasémide (Torem), acide
éthacrynique
Inhibent le cotransporteur
 $\text{Na}/\text{K}/2\text{Cl}$ (NKCC2)

③ **Tube contourné distal**
Diurétiques thiazidiques: hydro-
chlorothiazide (Esidrex),
chlortalidone (Hygroton*),
indapamide (Fludex), métolazone
Inhibent le cotransporteur
 Na/Cl (NCC)



④ **Tube collecteur
(cellules principales)**
Diurétiques d'épargne
potassique: spironolactone
(Aldactone), épléronone
(Inspra), amiloride**
Bloquent le récepteur de
l'aldostérone ou le canal
sodique apical (ENaC)

⑤ **Tube collecteur
(cellules principales)**
Inhibiteurs du récepteur V2
de la vasopressine:
tolvaptan***
Ciblent l'activation apicale du
canal hydrique aquaporine 2
(AQP2)

* N'est plus commercialisé
en monothérapie.

** N'existe en Suisse qu'en
traitement combiné
(Moduretic).

*** Pas encore commercialisé
en Suisse.

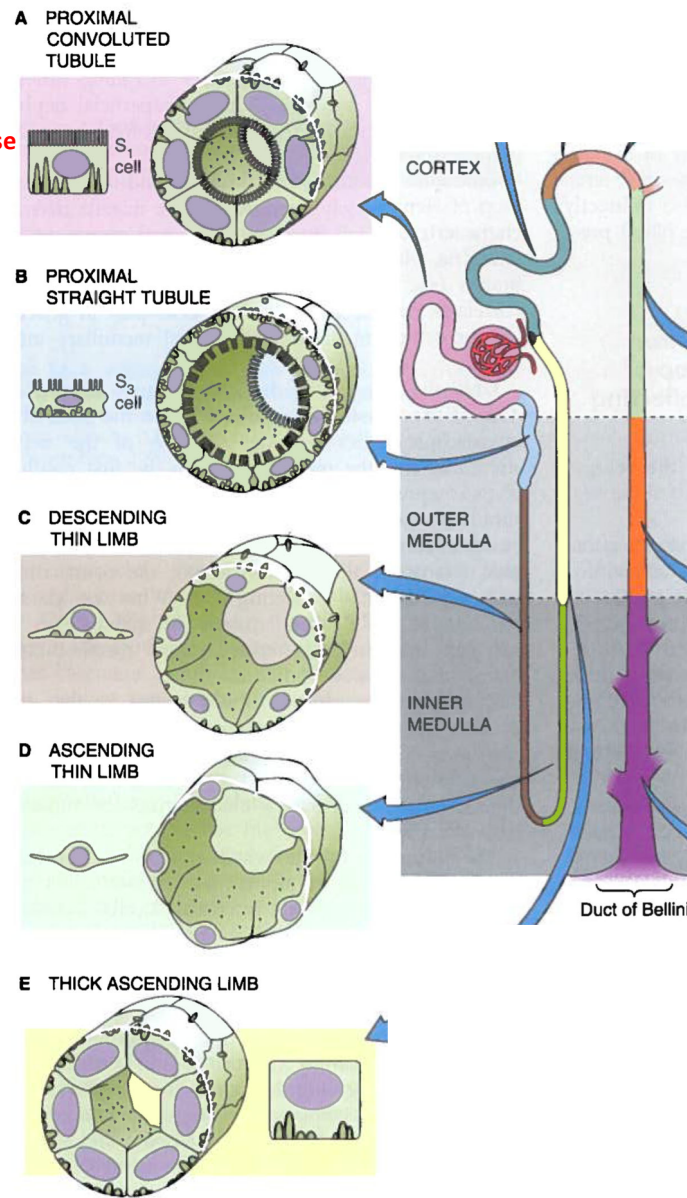
Tube proximal :

◇ S1

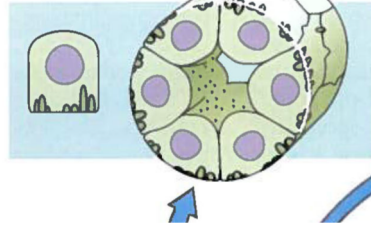
◇ S2

◇ S3

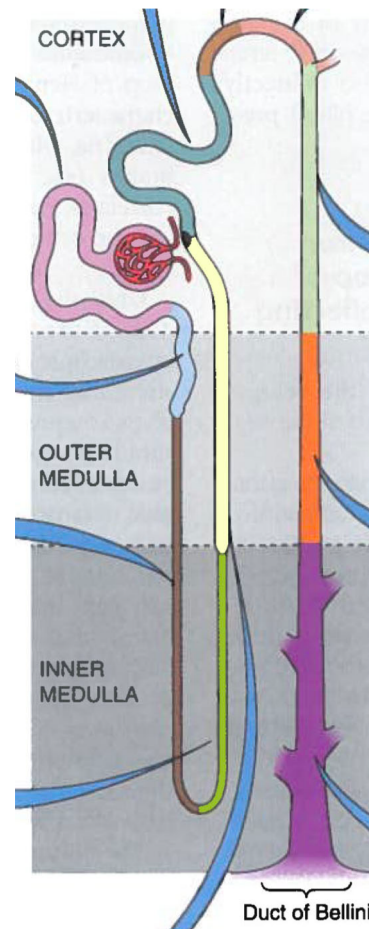
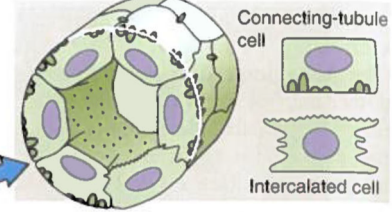
Bordure en brosse

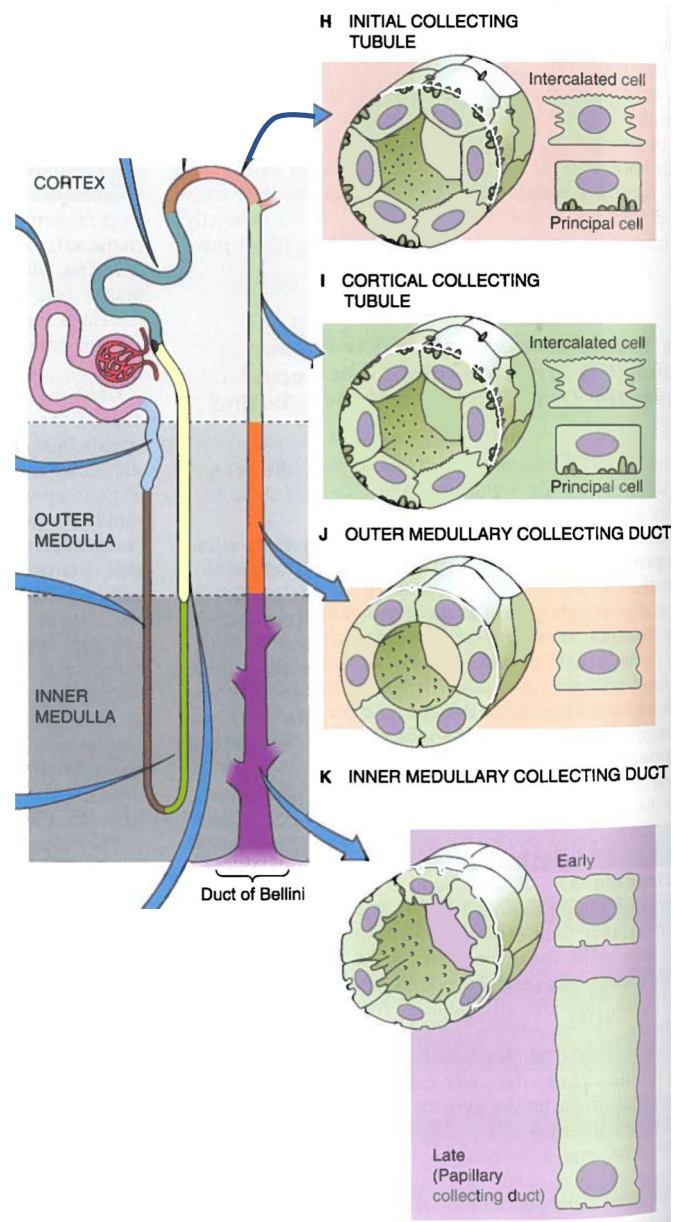


F DISTAL CONVOLUTED TUBULE



G CONNECTING TUBULE



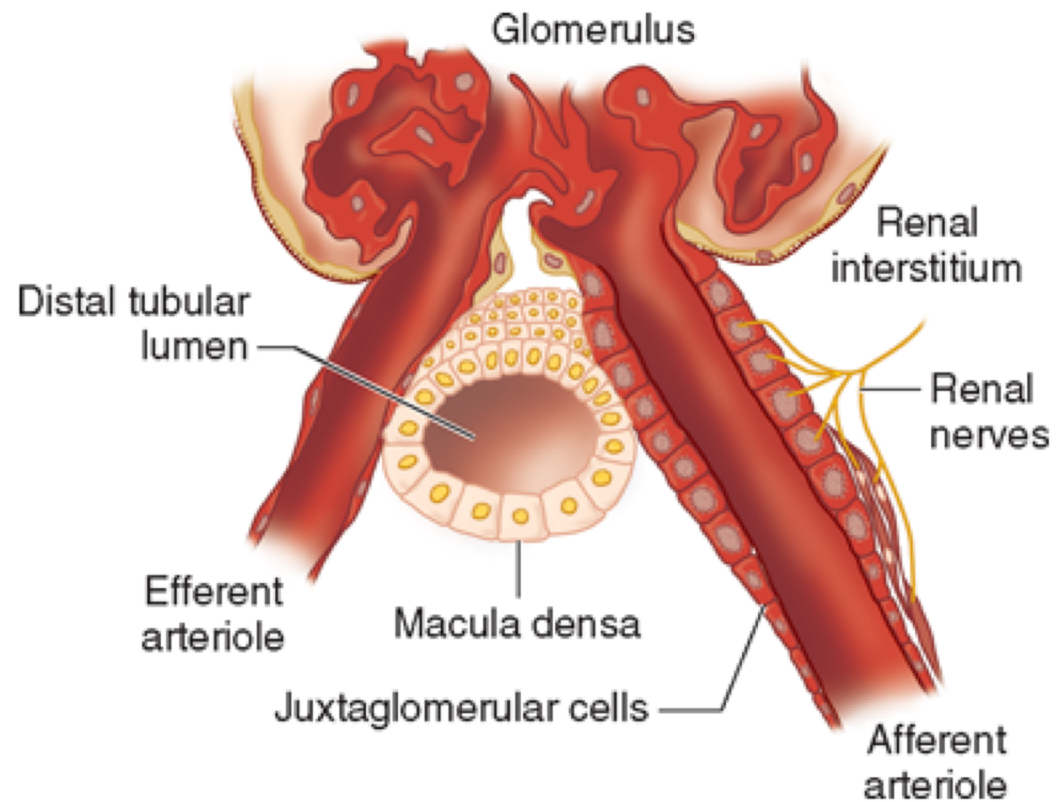


Tubule collecteur



- 2 types cellulaires :
- cellules principales
 - cellules intercalées
 - type A
 - type B

2 artérioles :
afférente
efférente



sympathique

NorE → β_1

Source: Butterworth JF, Mackey DC, Wasnick JD: *Morgan & Mikhail's Clinical Anesthesiology*, 5th Edition: www.accessmedicine.com

La flèche montre une **macula densa**.

