Renal Block

Histology Team

Histology Practical:
Histology of the Kidney

By:

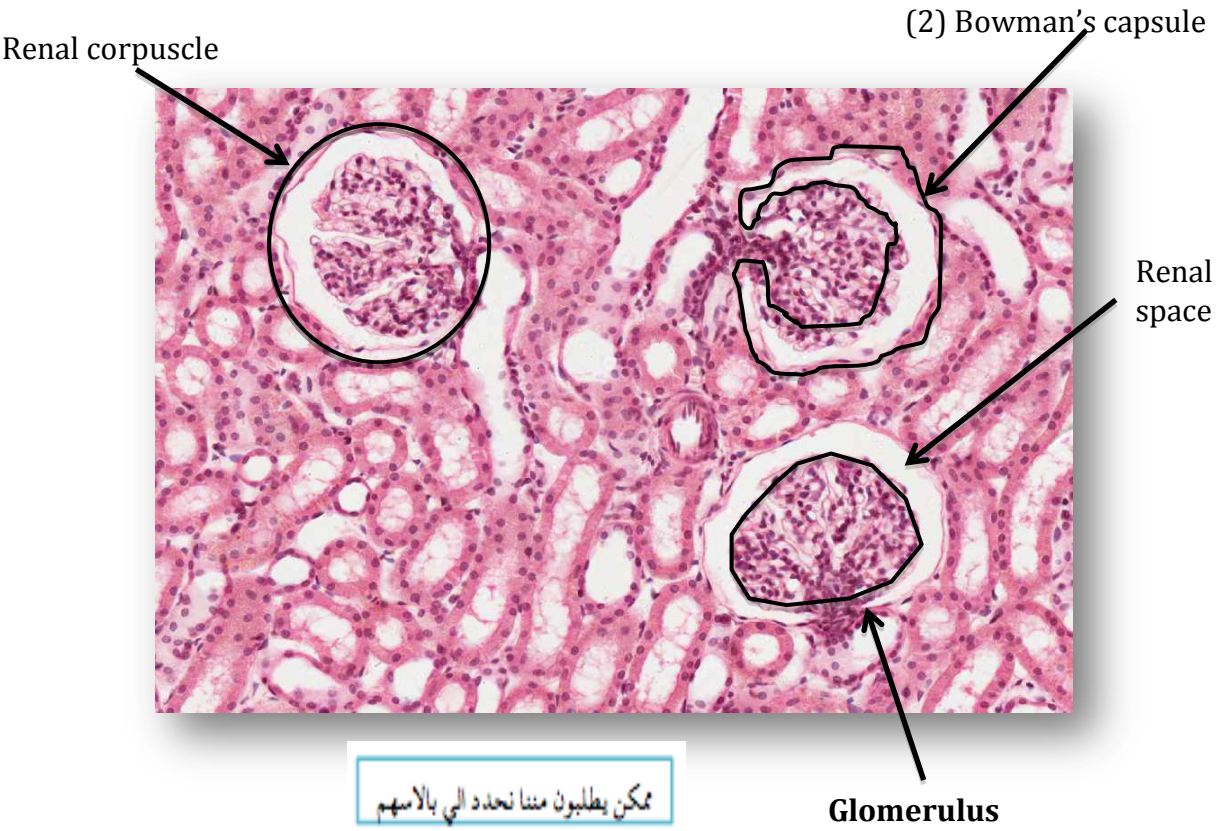
Mohammad Adel
Nada Alouda
Rana Al Ohaly
Moudi AlDegether

Contents:

Means not likely to come in exam

432histologyteam@gmail.com

Kidney (Cortex)



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Features:

(Renal Corpuscle) :-

1- **Glomerulus** : tufts fenestrated capillaries without diaphragm .
2- **Bowman's capsule (Bowman's space OR renal space)**:
   A- *Parietal layer* : simple squamous epithelium .
   B- *Visceral layer* (Podocytes) : simple squamous epithelium
3- **Mesangial cells** : intra-glomerular cells .
4- **Endothelial wall of glomerular capillaries**: simple squamous endothelium

Q1: Identify:

Cortex of the kidney

Q2 Characteristic features of cortex:

1-Renal Corpuscle
2-tubules
3- Juxtaglomerular apparatus

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Important

Kidney (Cortex)

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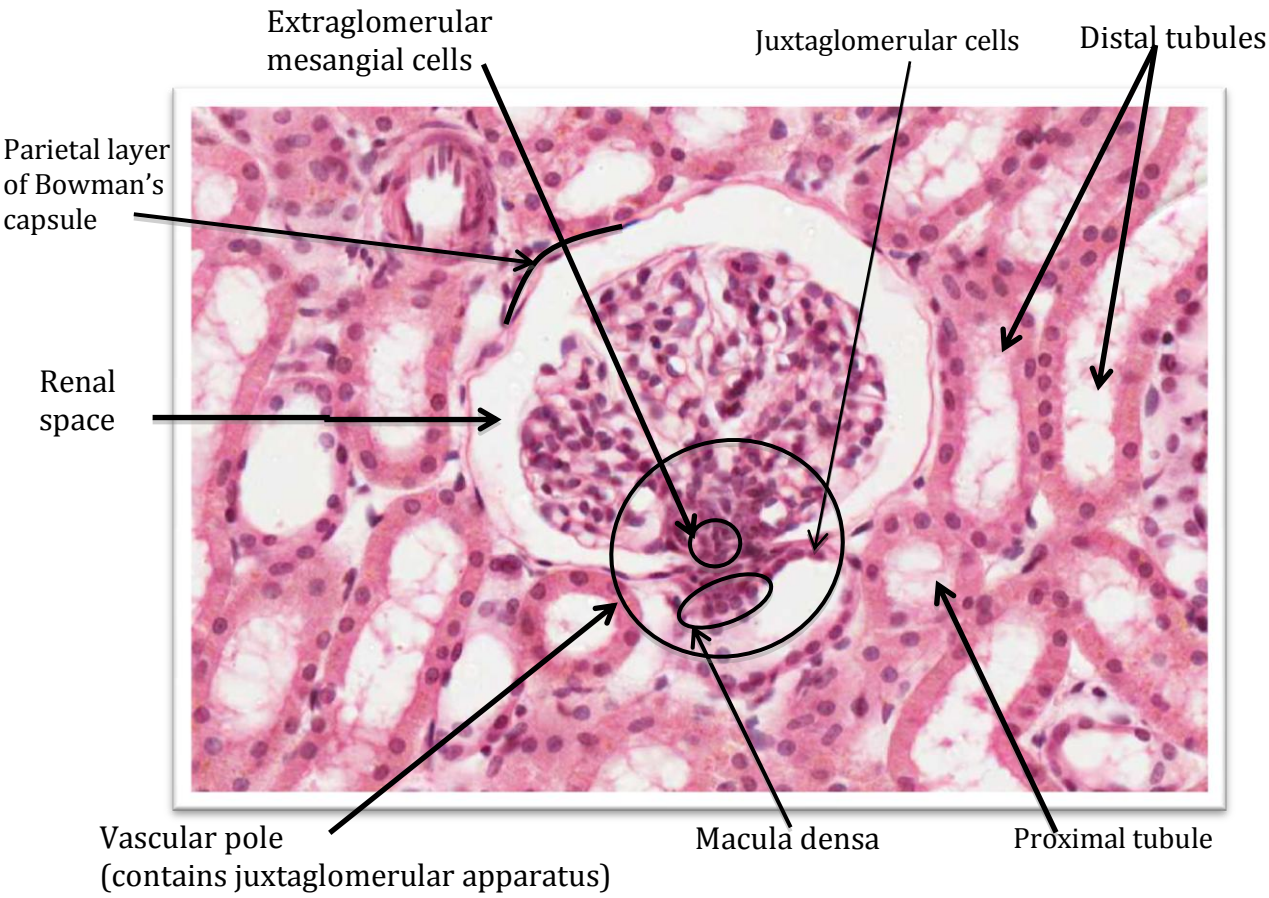

Features:

1- **Proximal convoluted tubule (PCT)**: simple cuboidal epithelium (We can know PCT from brush border of the cells which makes its lumen appear smaller & "dirty-looking" of the lumen)
   - Most of the cortex is proximal convoluted tubules.
2- **Distal convoluted tubule** (DCT) : low cuboidal epithelium (We know DCT from the larger lumen and its "clean" appearance because there is no brush border).
3- **Juxtaglomerular apparatus** , composed of :
   A- Macula densa .
   B- Juxtaglomerular cells .
   C- The extraglomerular mesangial cells.

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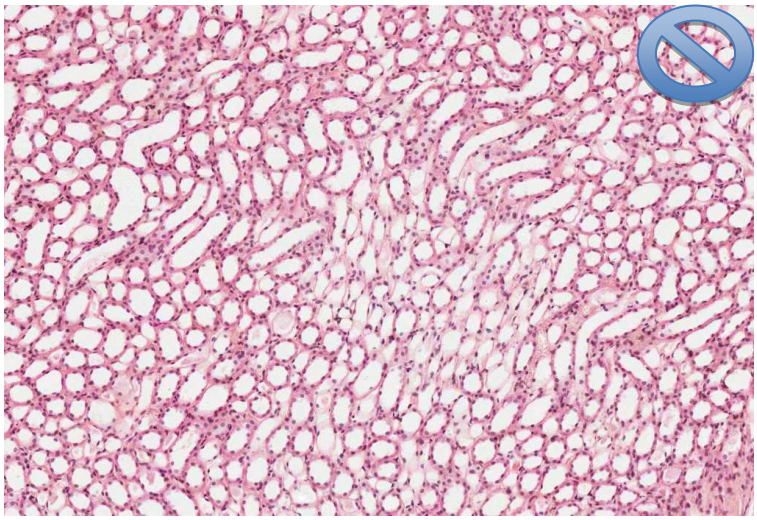
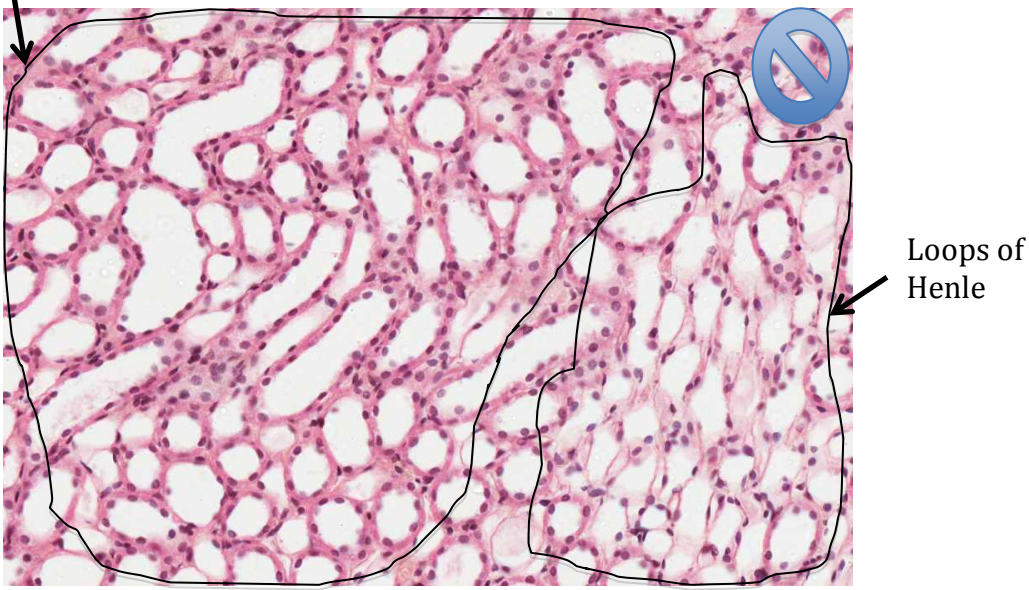
Kidney (Medulla) (most likely not coming in exam)





Features :

1- **Thin Limbs of Henle's Loop ,** <u>Composed of</u> **simple squamous epithelium .** Has 3 regions **:**
   - **A-** Descending thin limb
   - **B-** Crest of Henle's loop
   - **C-** Ascending thin limb

We can tell that the left part contains collecting tubules because the epithelium is cuboidal (thicker) than the left part that shows the simple squamous epithelium (thinner) loops of Henle.