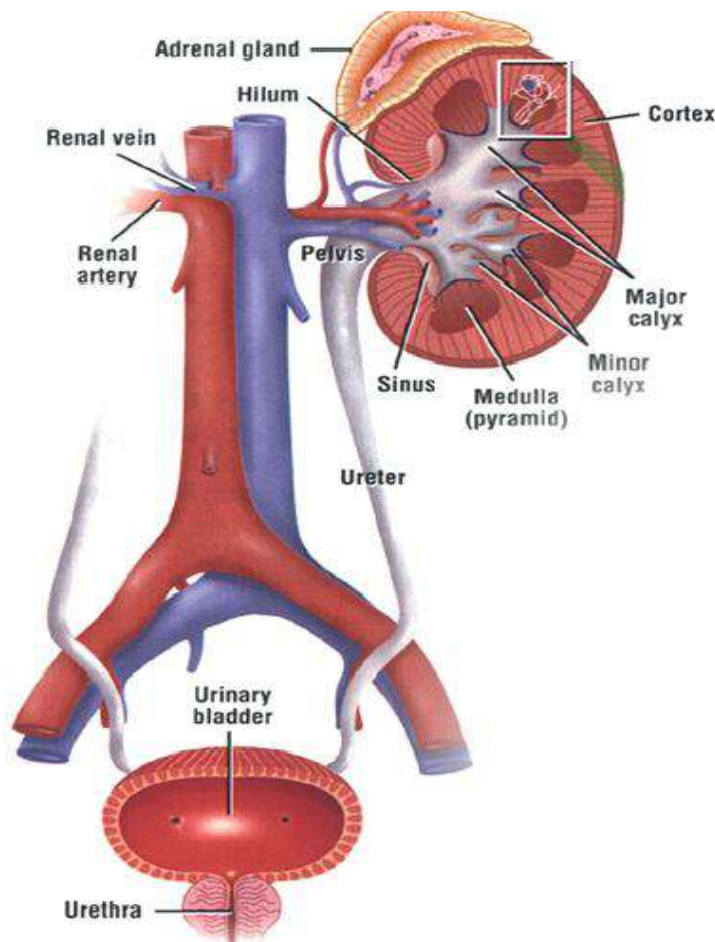


Urinary system

Components:-

- 1- Two Kidneys. Highly vascular organ (25% cardiac out put)
Contain the uriniferous tubules, which consist of nephrons and a system of collecting ducts; filter blood and produce urine(water , electrolytes ,urea, uric acid , creatinine).
- 2-Two Ureters. Muscular tubes that collect urine output from the kidney and carry it to the urinary bladder.
- 3- Urinary bladder. Hollow muscular organ that stores urine.
- 4- Urethra. Tube that drains urine from urinary bladder to the exterior.



Macroscopic Organization of the Kidney :-

From the gross structure of the kidney found Renal hilum ,pelvis ,capsule, cortex and Renal medulla. The renal cortex:- its the region immediately beneath renal capsule and composed of two region cortical labyrinth and medulla labyrinth . The renal medulla :- located immediately beneath renal cortex consist of triangular block of tissue

called pyramids .Renal columns are strands of cortical tissue that extend down between adjacent pyramids .

The renal tubule :-

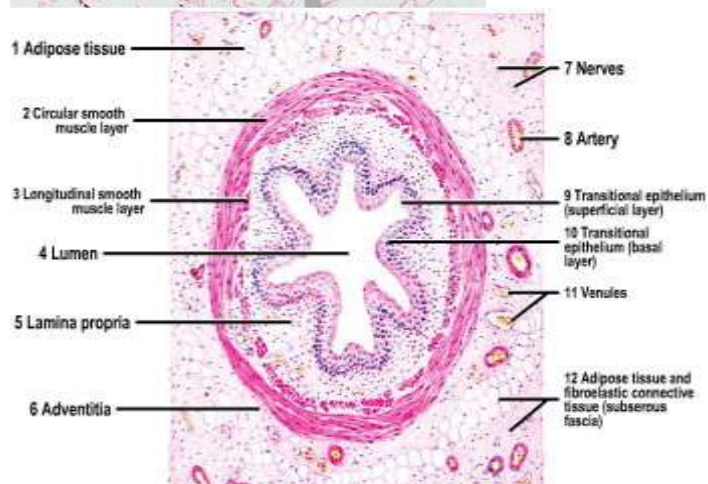
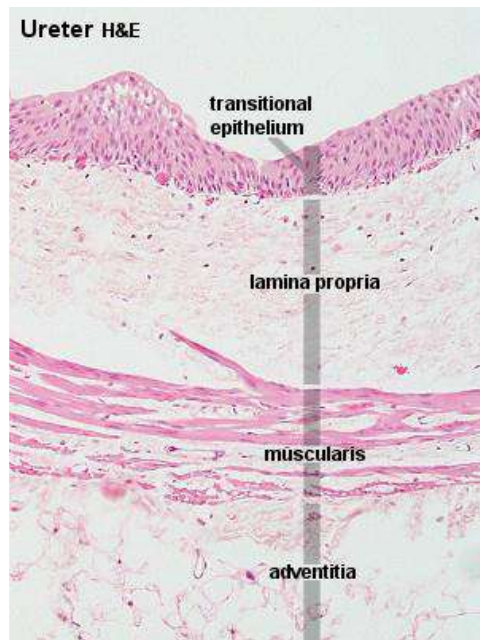
continues from Bowman's capsule and consists of the following parts: proximal convoluted tubule, loop of Henle, and distal convoluted tubule . The distal convoluted tubules from several nephrons empty into a collecting tubule. Several collecting tubules then unite to form a papillary duct that empties urine into a calyx of the renal pelvis.

Ureter :-

The wall of ureter consists of 1- mucosa :- consists of transitional epithelium and wide lamina propria .

2-muscularis externa :- consists of inner ,longitudinal smooth muscle layers and circular smooth muscle layers.

3-adventitia :-consists of fibroblastic connective tissue and adipose tissue and numerous of arteries , venules and small nerves.Ureter



Urinary Bladder:

The wall of urinary bladder consists of :

1. **Mucosa** :- consists of transitional epithelium and Lamina propria wider than the Lamina propria of ureter .
2. **Muscularis externa** consists of a thick three layers as smooth muscle bundles .
3. **Serosa**

