Urinary Track

Suprarenal Glands(adrenal gland)

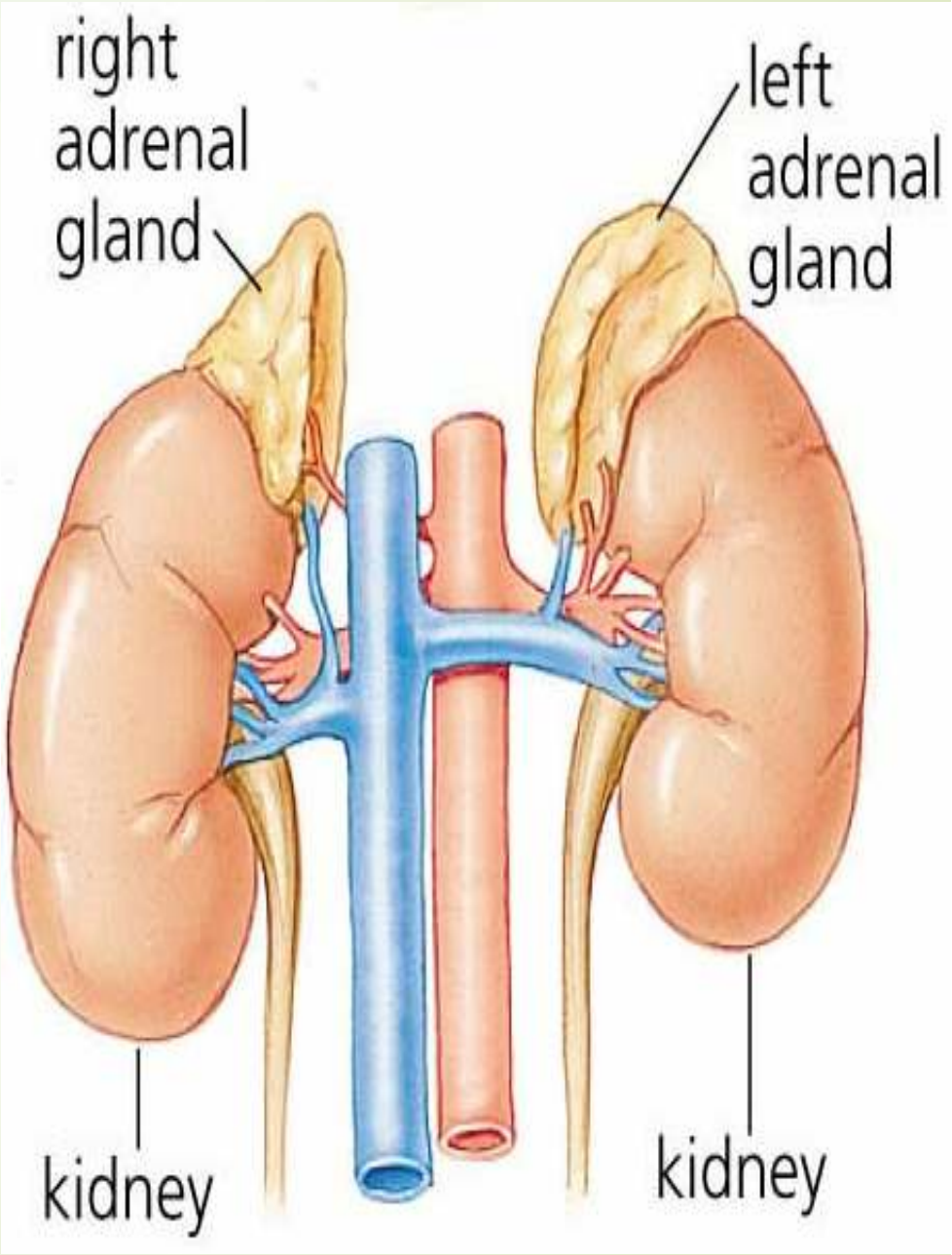
Location

- It retroperitoneal organs that

lie on upper poles of kidneys.

RT suprarenal gland :is pyramid

shaped

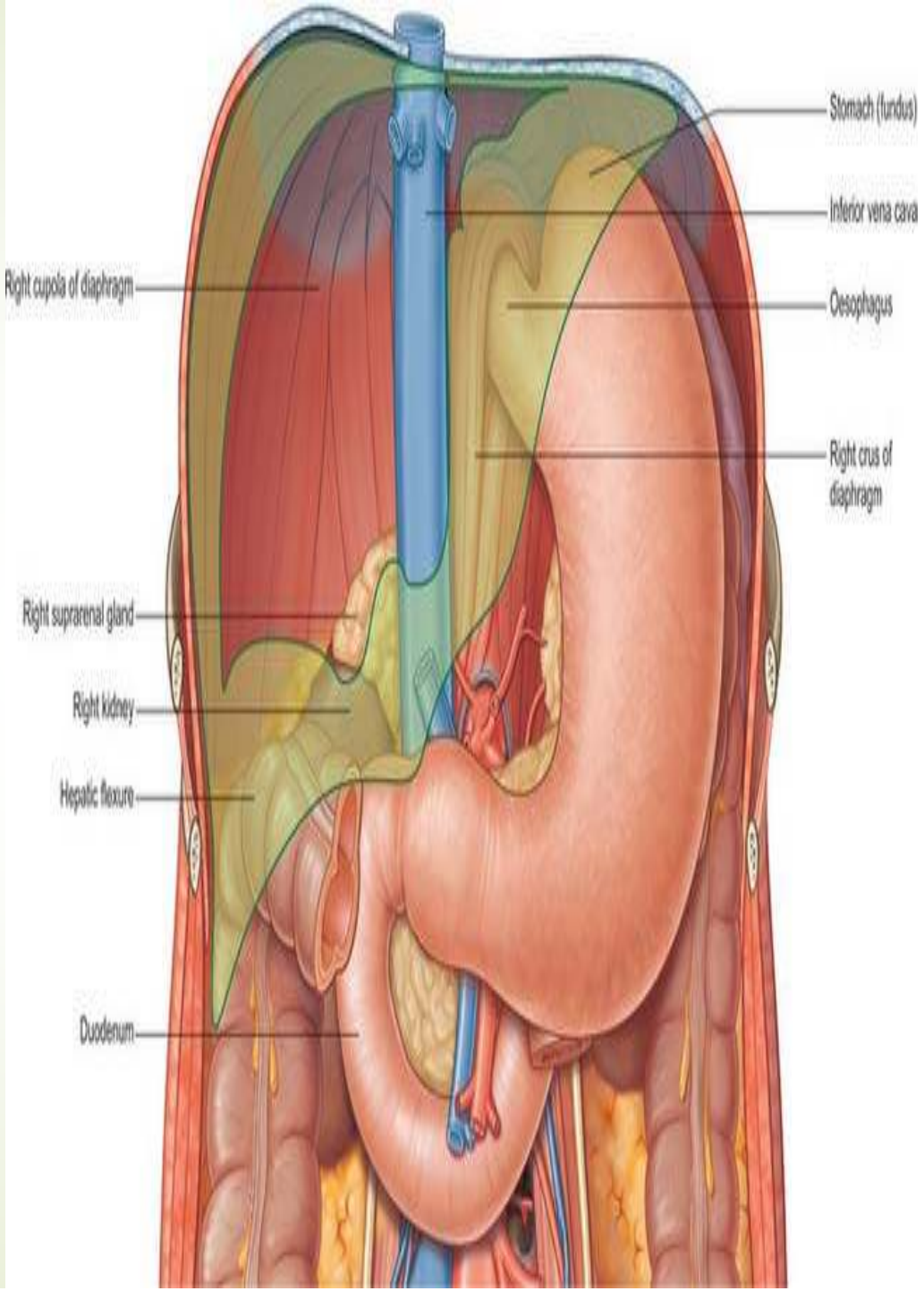


Anterior relation :

- RT lobe of liver
- inferior vena cava.

Posterior relation:

diaphragm.



LT suprarenal gland:

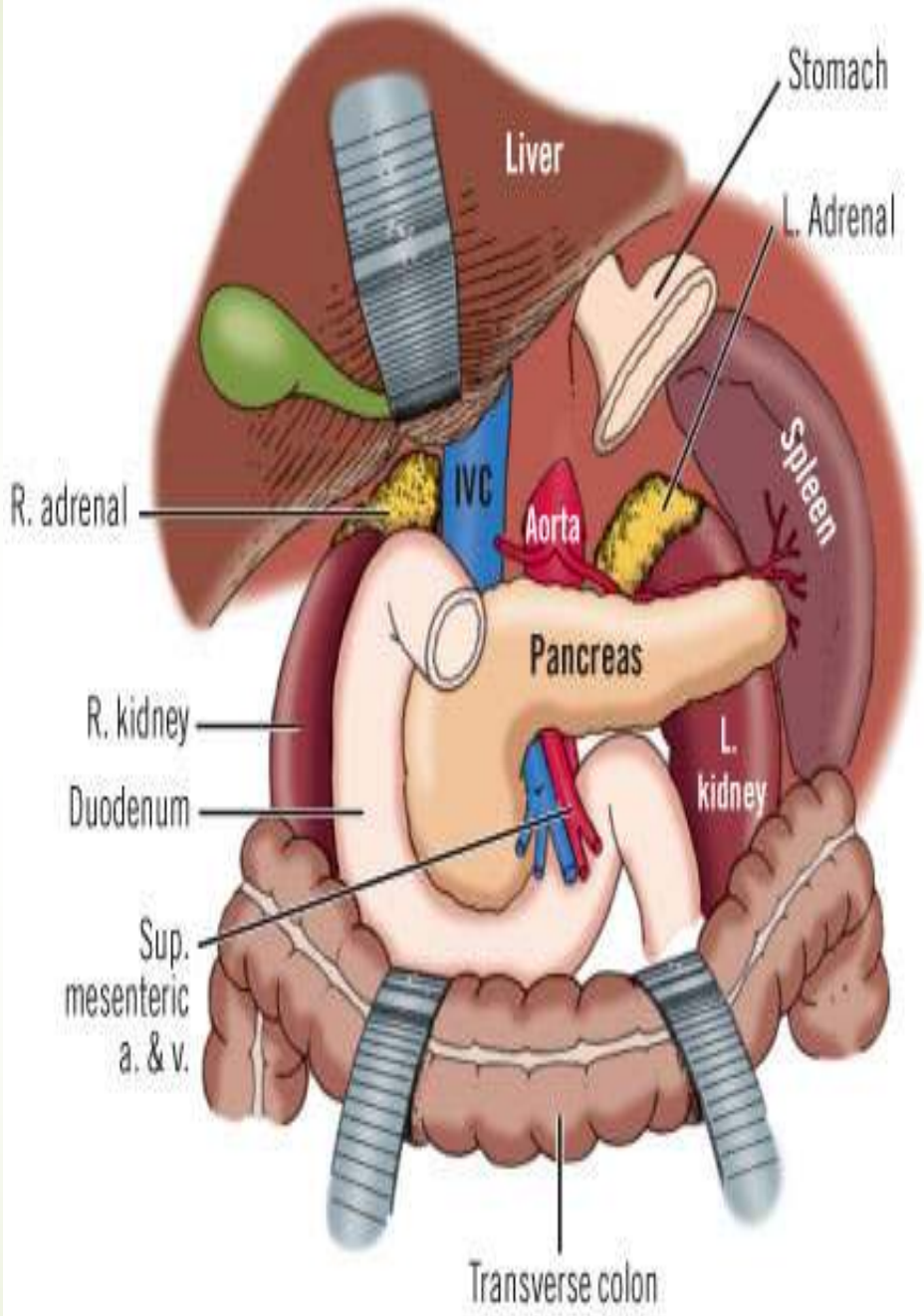
it is crescentic in shape.

Anterior relation :

- stomach
- pancreas

posterior relation:

diaphragm.



Blood Supply

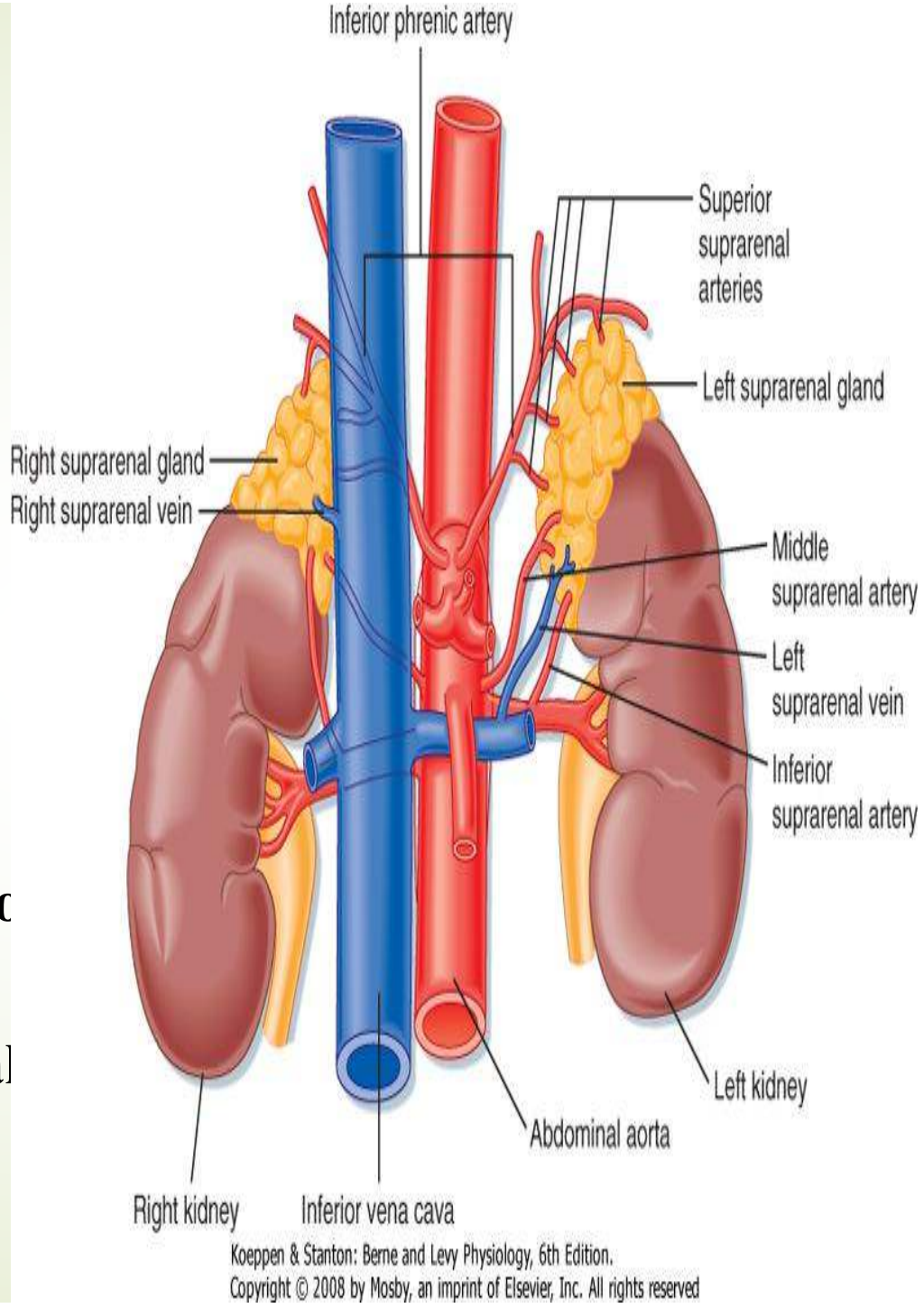
Arteries

- Inferior phrenic artery.
- Aorta.
- Renal artery.

Veins

A single vein emerges from hilum of each gland :

- **On the right drains into inferic vena cava**
- **On the left drain into LT renal vein.**

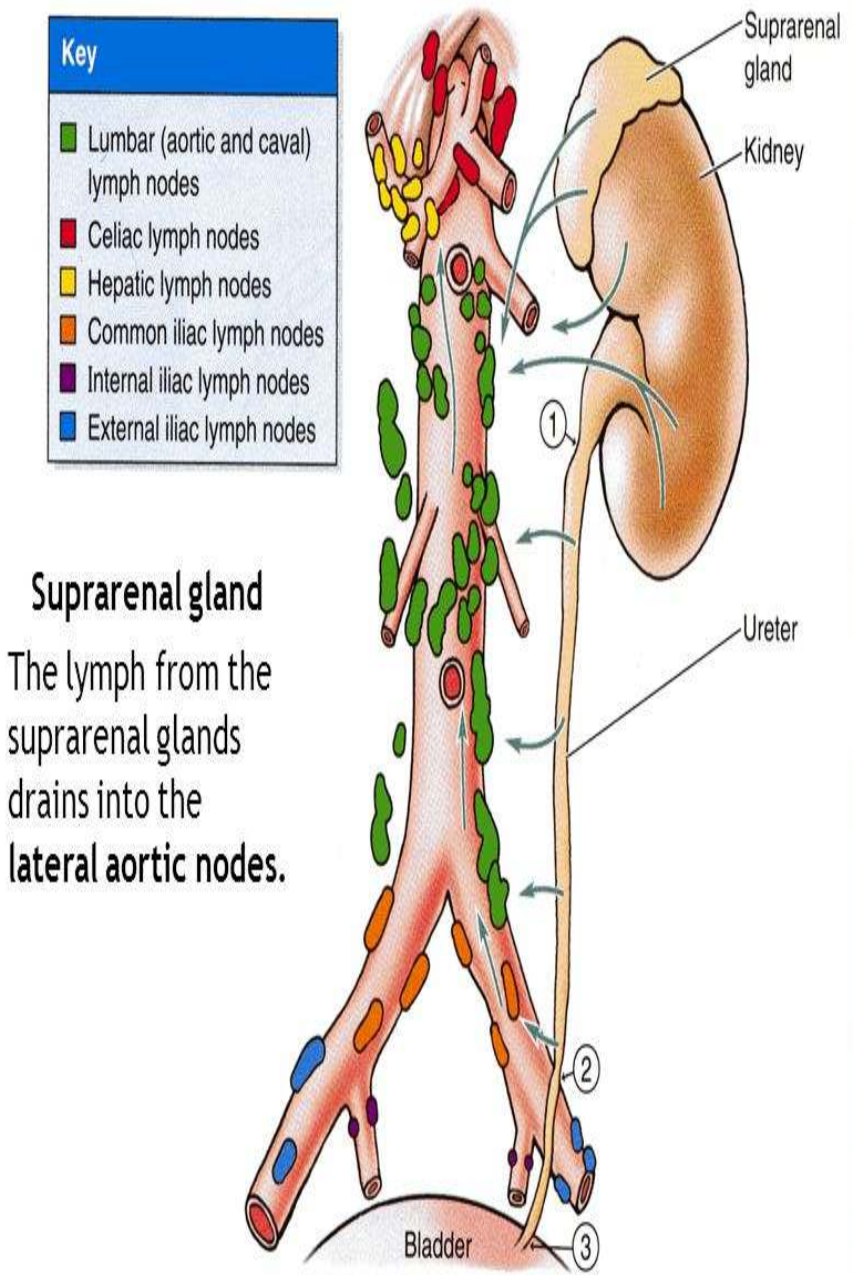


Lymph Drainage:

Aortic Nodes.

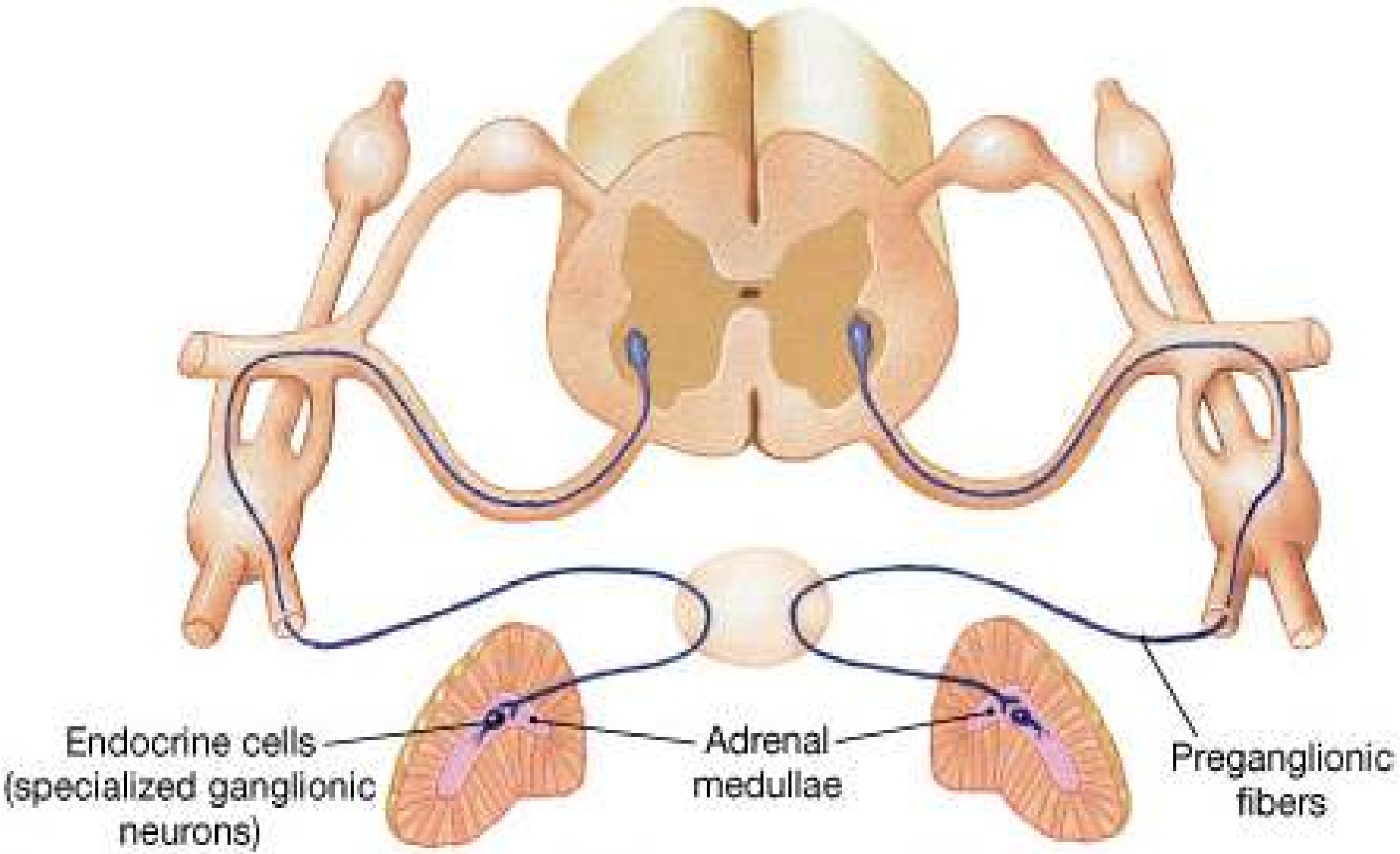
Nerve Supply:

Preganglionic sympathetic fibers .



Suprarenal gland

The lymph from the suprarenal glands drains into the **lateral aortic nodes.**



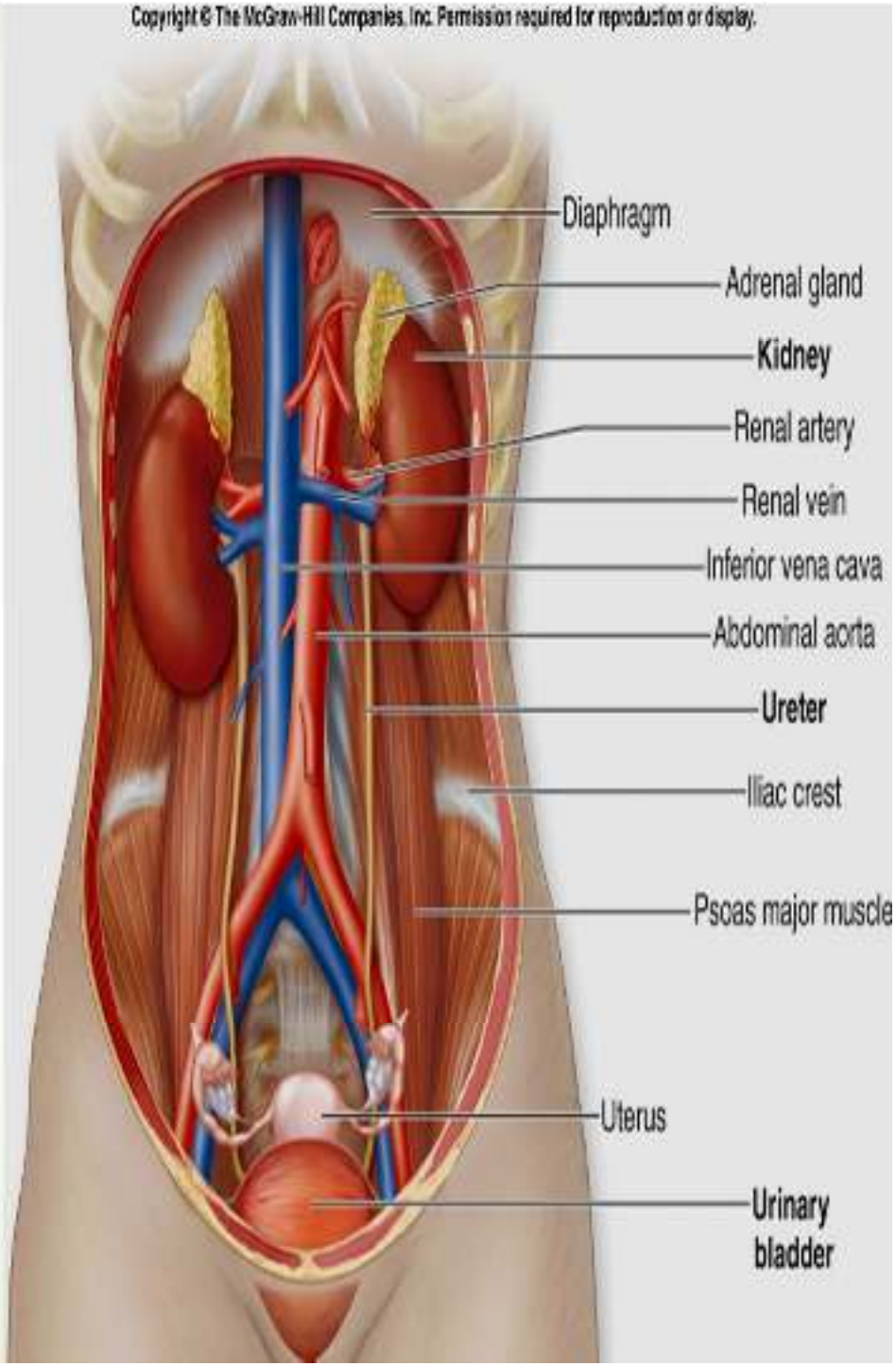
(c) The adrenal medullae

Secretes neurotransmitters into general circulation

Kidney

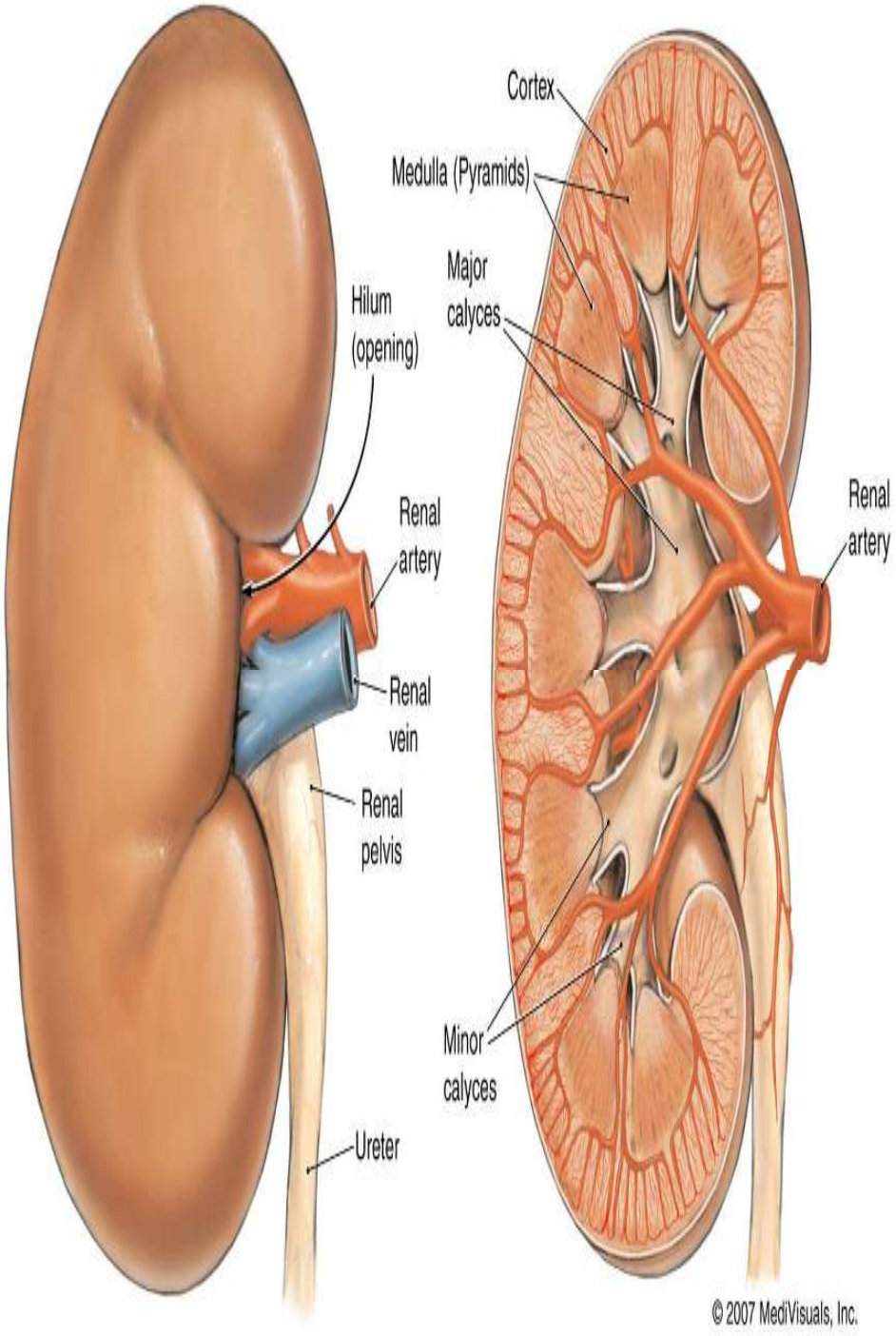
Location:

- Lie behind peritoneum on posterior abdominal wall.
- RT kidney lies slightly lower than LT kidney because of large size of RT lobe of liver.



Description:

- It is reddish brown.
- On medial concave border of kidney has Hilum.
- The hilum transmits from front backward (renal vein, two branches of renal artery, ureter & third branch of renal artery) with Lymph vessels & sympathetic fibers.



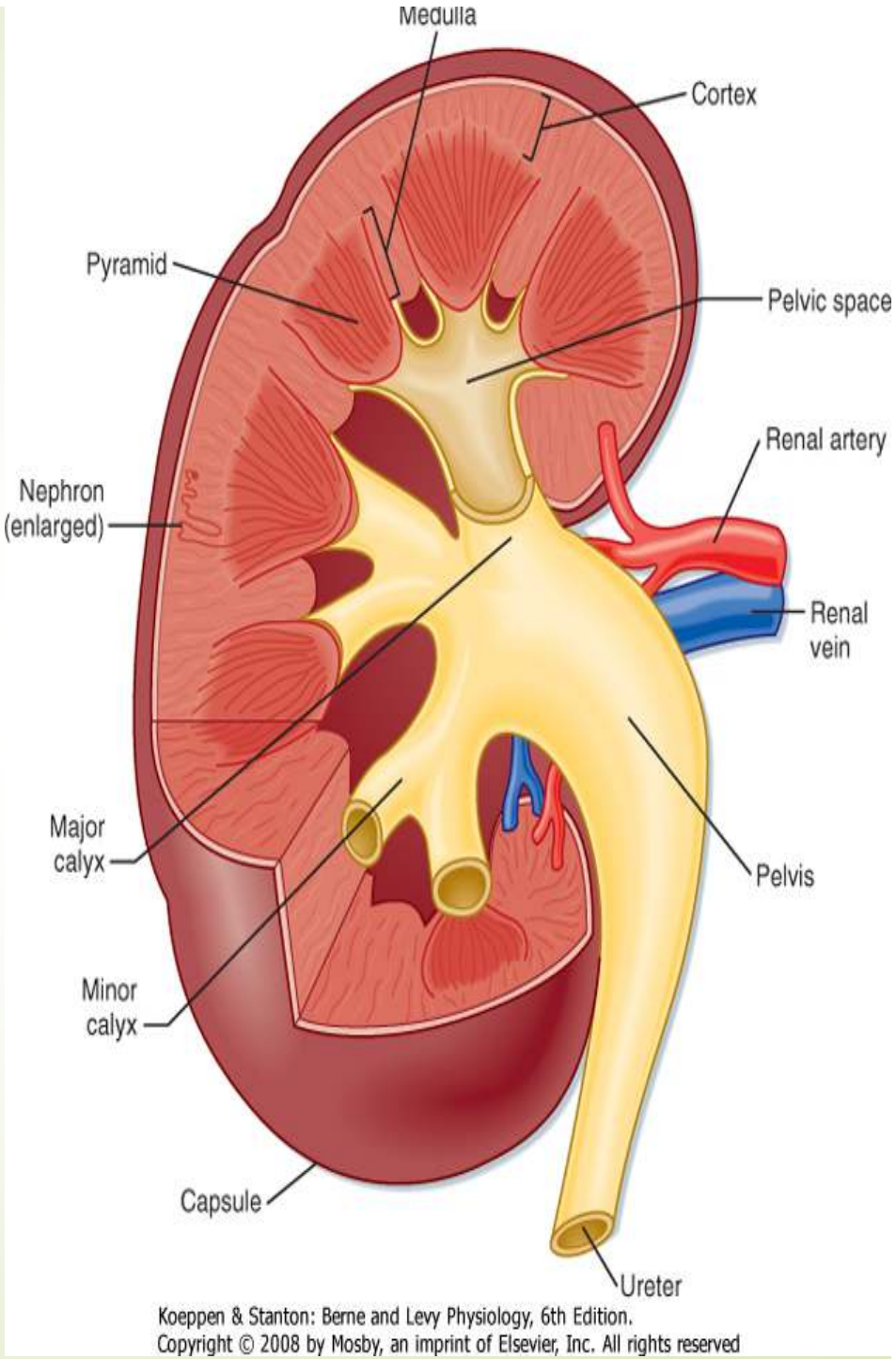
Renal Structure:

1) Outer ----cortex .

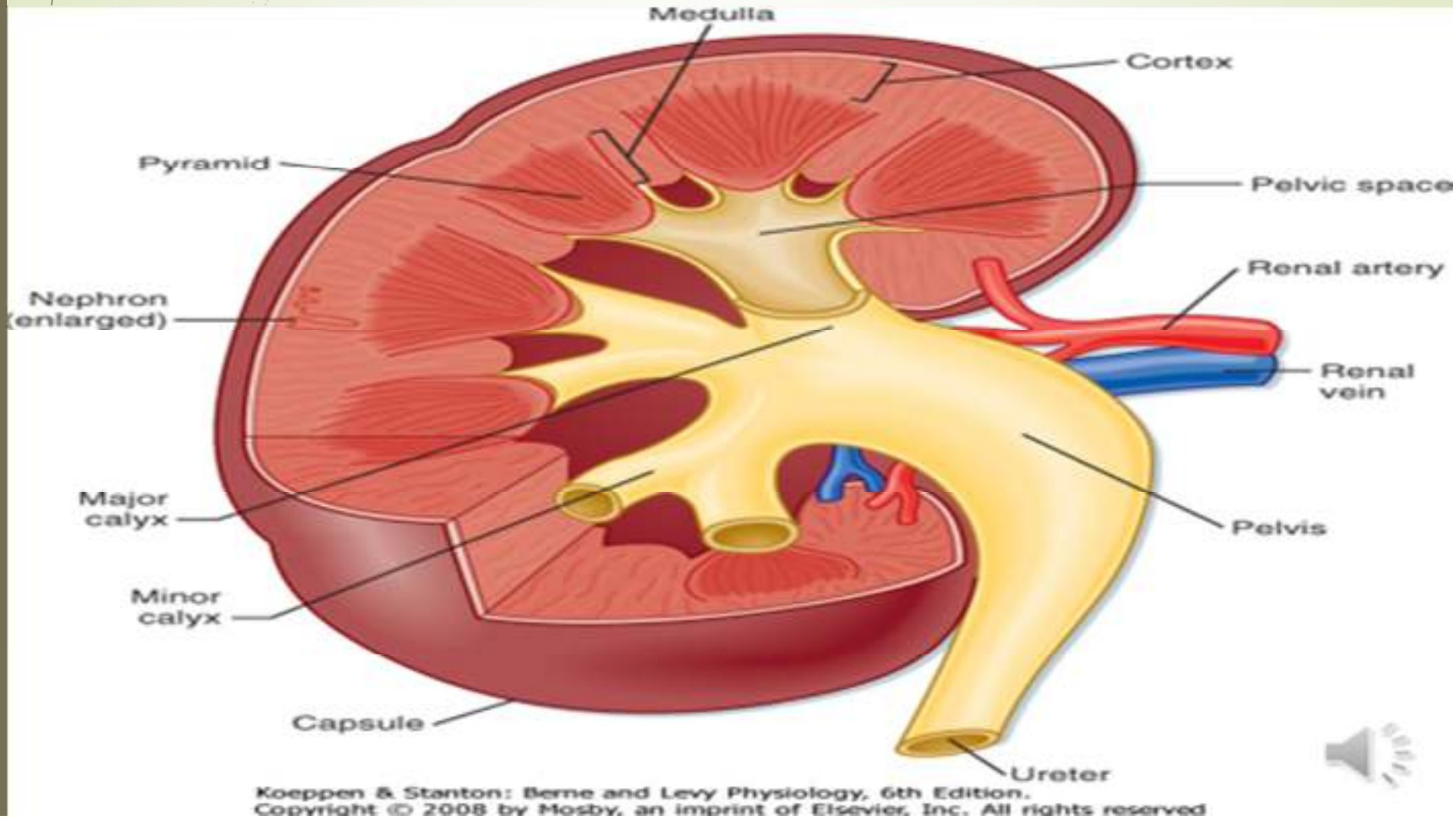
2) Inner ---- medulla.

Medulla is composed of renal pyramids, its base oriented toward cortex & its apex called renal papilla .

Cortex extends between adjacent pyramids as renal columns. Extending from bases of the renal pyramids into cortex are striations known as medullary rays.



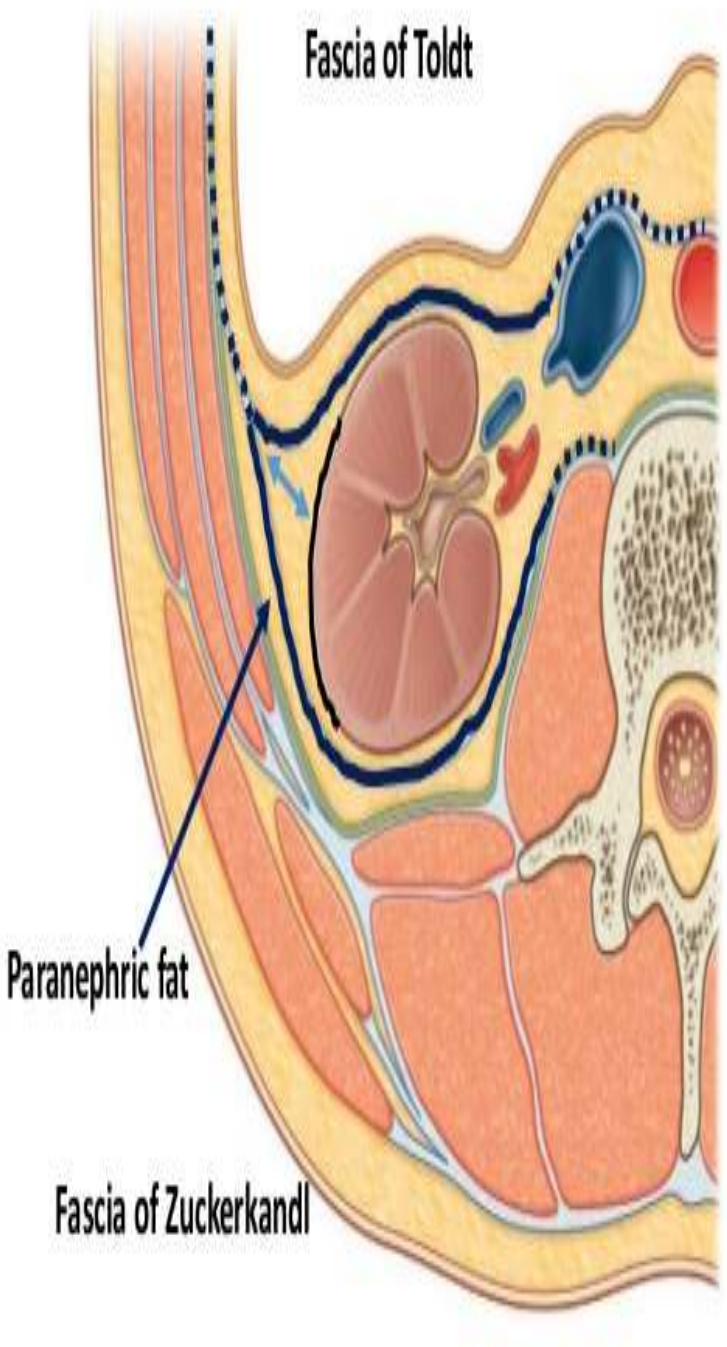
The upper expanded end of ureter called renal pelvis. This divides into two or three major calyces, each of which divides into two or three minor calyces . Each minor calyx is indented by renal papilla.



Coverings of kidney:

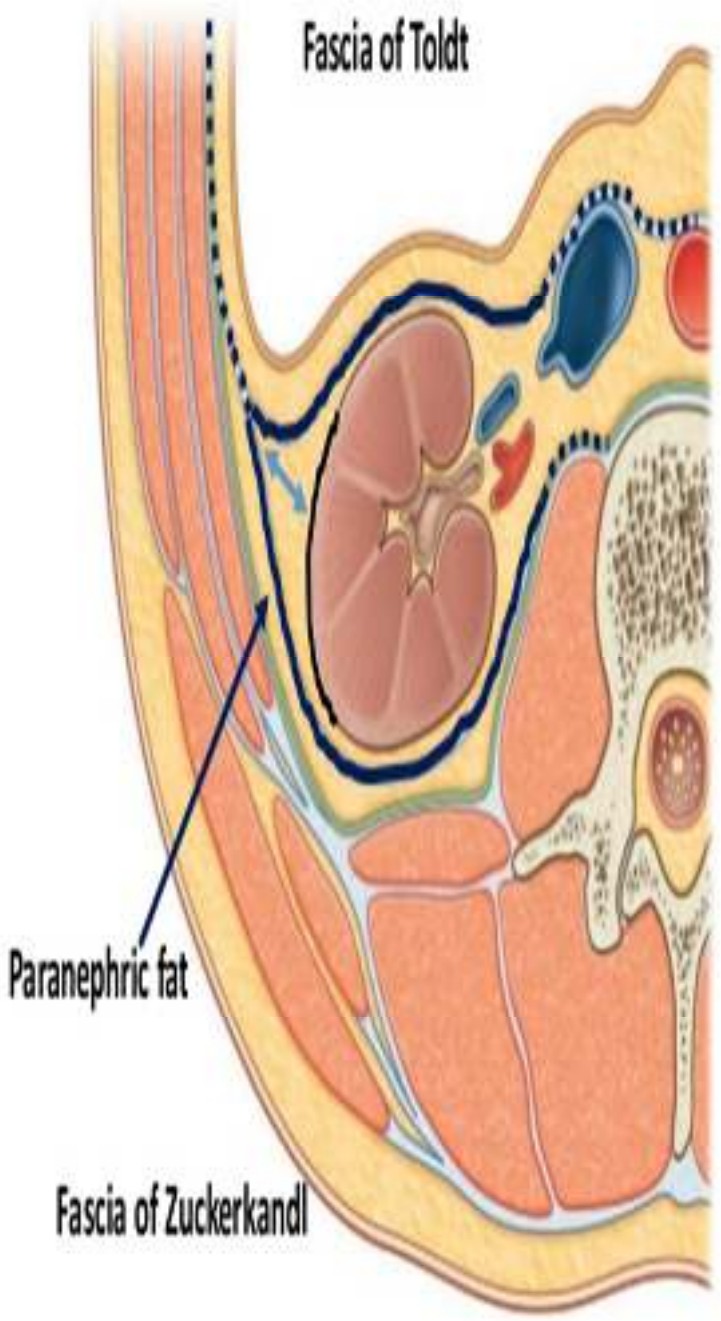
1) Fibrous capsule: it closely surrounds kidney.

2)Perirenal fat: it covers fibrous capsule.



3)Renal fascia: that encloses kidneys & suprarenal glands and it continuous with transversalis fascia

4)Pararenal fat: lies external to renal fascia and is often in large quantity.



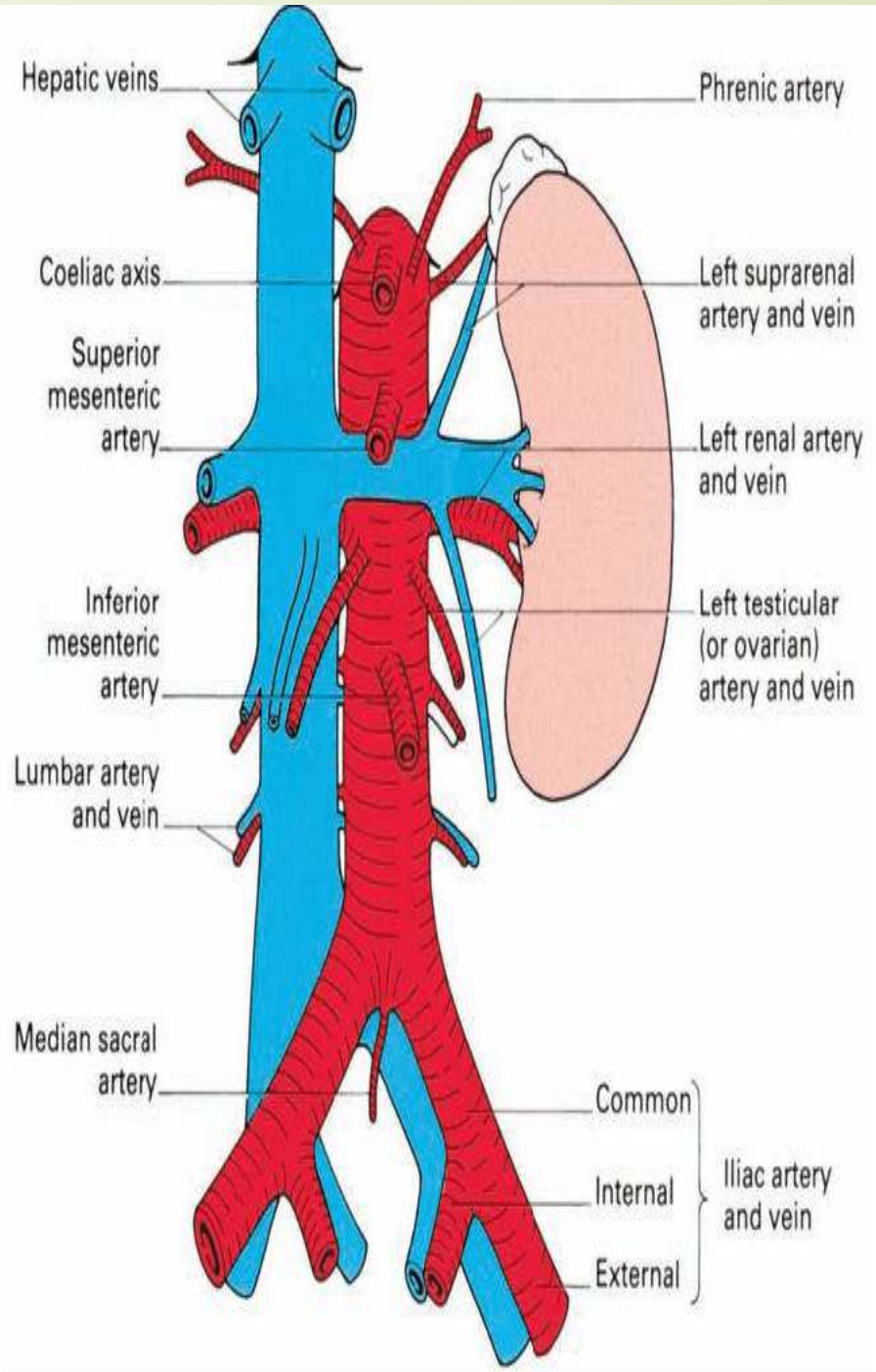
Blood Supply

Arteries

Aorta--- right & left renal artery .

Veins:

Renal veins and drain into inferior vena cava.

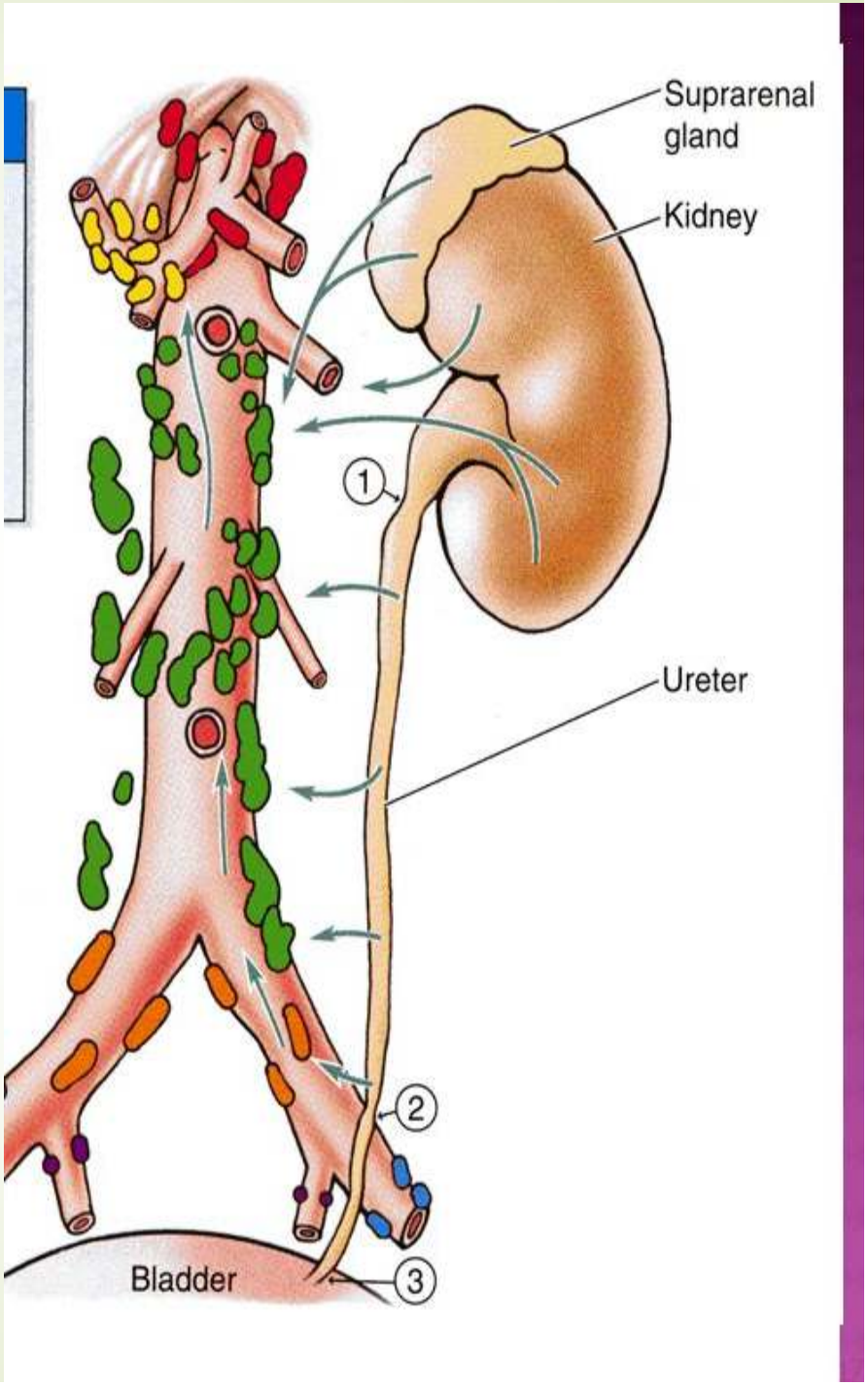


Lymph Drainage:

aortic lymph nodes.

Nerve Supply:

- renal sympathetic plexus (10th, 11th and 12th thoracic nerves).



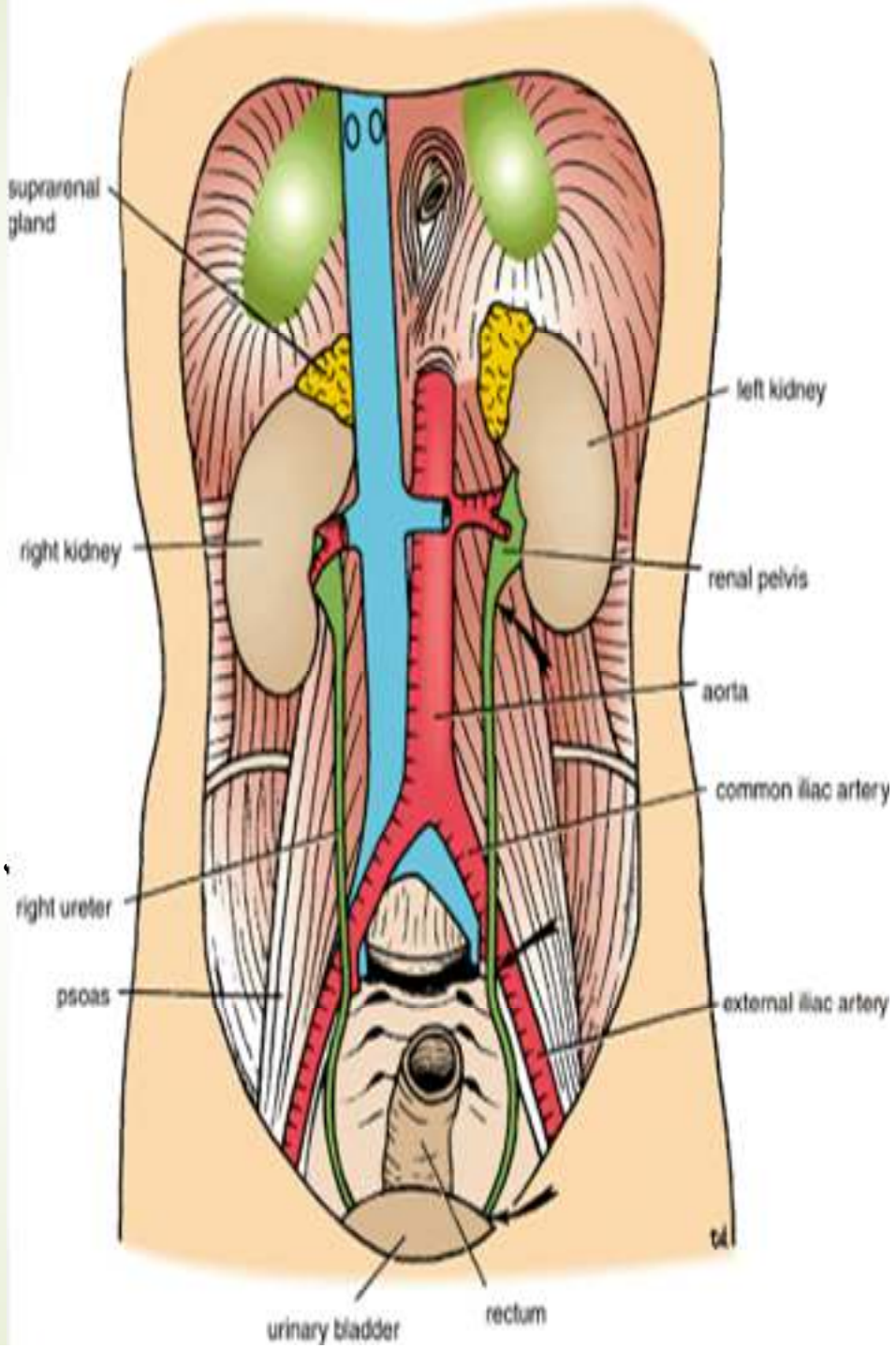
Ureters

location:

They are muscular tubes that extend from kidneys to the urinary bladder .

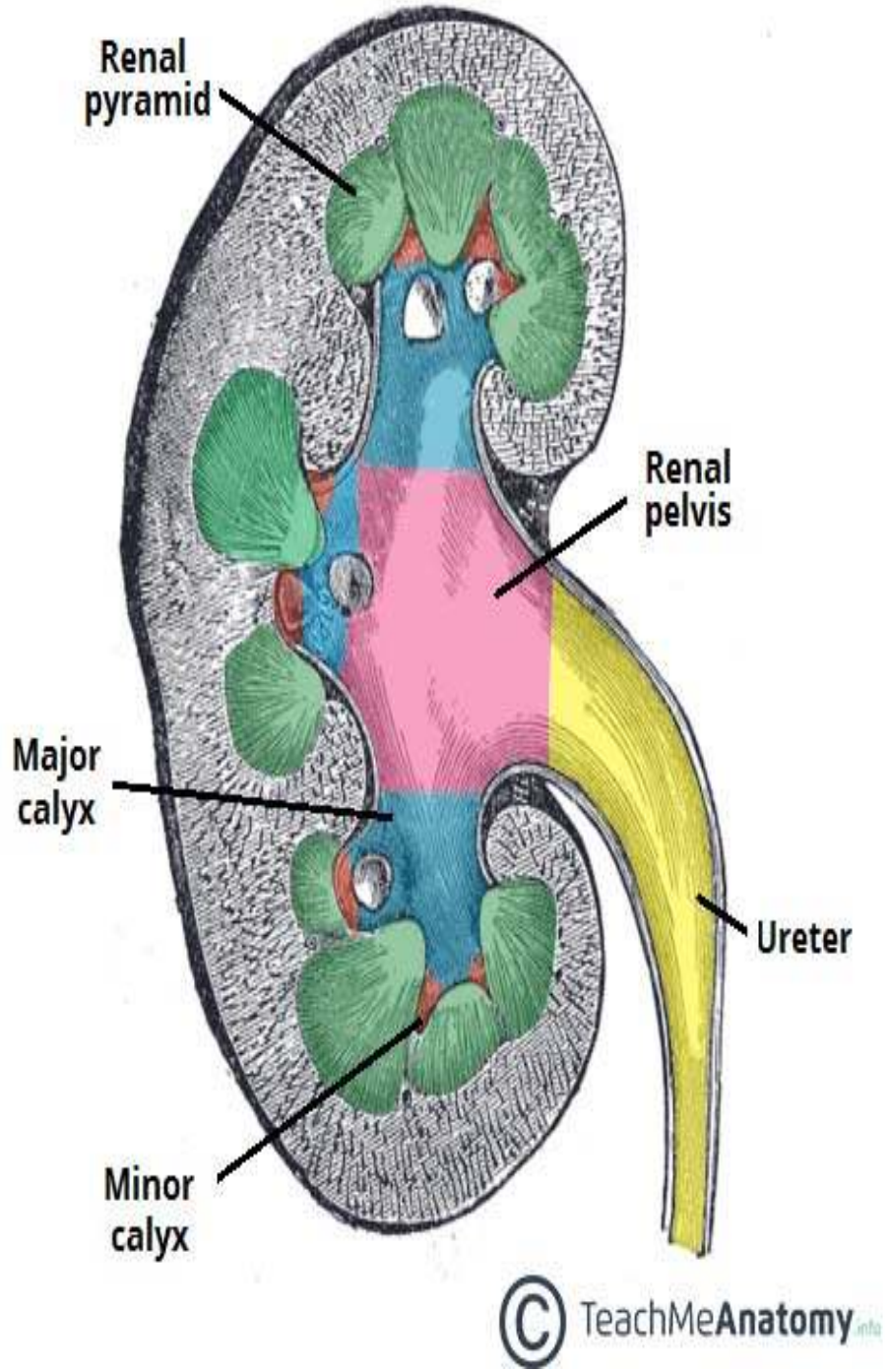
Description:

- Each ureter measures about 25 cm long .
- Three constrictions along its course:



- renal pelvis joins ureter.
- where it is kinked as it crosses pelvic brim.
- where it pierces bladder wall.

➢ The renal pelvis is the funnel-shaped expanded upper end of the ureter.



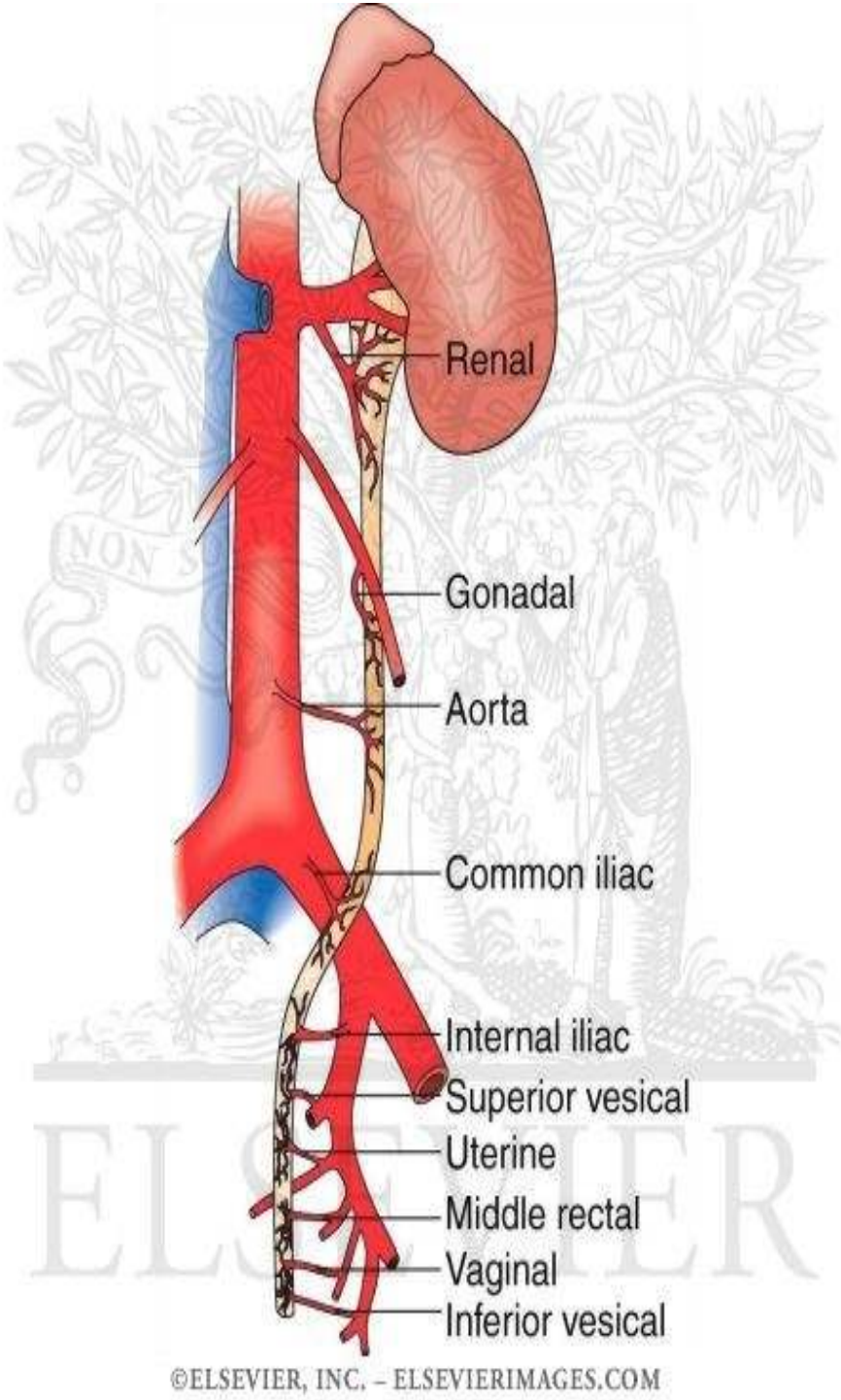
Blood Supply

Arteries

- Upper end ---- renal artery.
- Middle portion ---- testicular or ovarian artery.
- In the pelvis ---- common iliac and internal iliac arteries

Veins:

Venous blood drains into veins that correspond to the arteries.



Lymph Drainage

Aortic nodes & iliac lymph nodes.

Nerve Supply:

- **Renal and hypogastric plexuses(1st & 2nd lumbar) --Sympathetic nerves.**
- **Parasympathetic – pelvic splanchnic plexues.**