Identify the following structures

I-Kidney

1. Medulla (pyramids)
2. Cortex
3. Renal column
4. Renal papillae
5. Minor calyces
6. Major calyces
7. Renal pelvis
8. Renal lobe
9. Renal lobule
10. Segmental artery
11. Lobar artery
12. Inter-lobar artery
13. arcuate artery
14. interlobular artery
15. Renal artery
16. Renal Vein
17. Relation of the kidneys
18. Peritoneal covering of the kidneys

II -Ureter

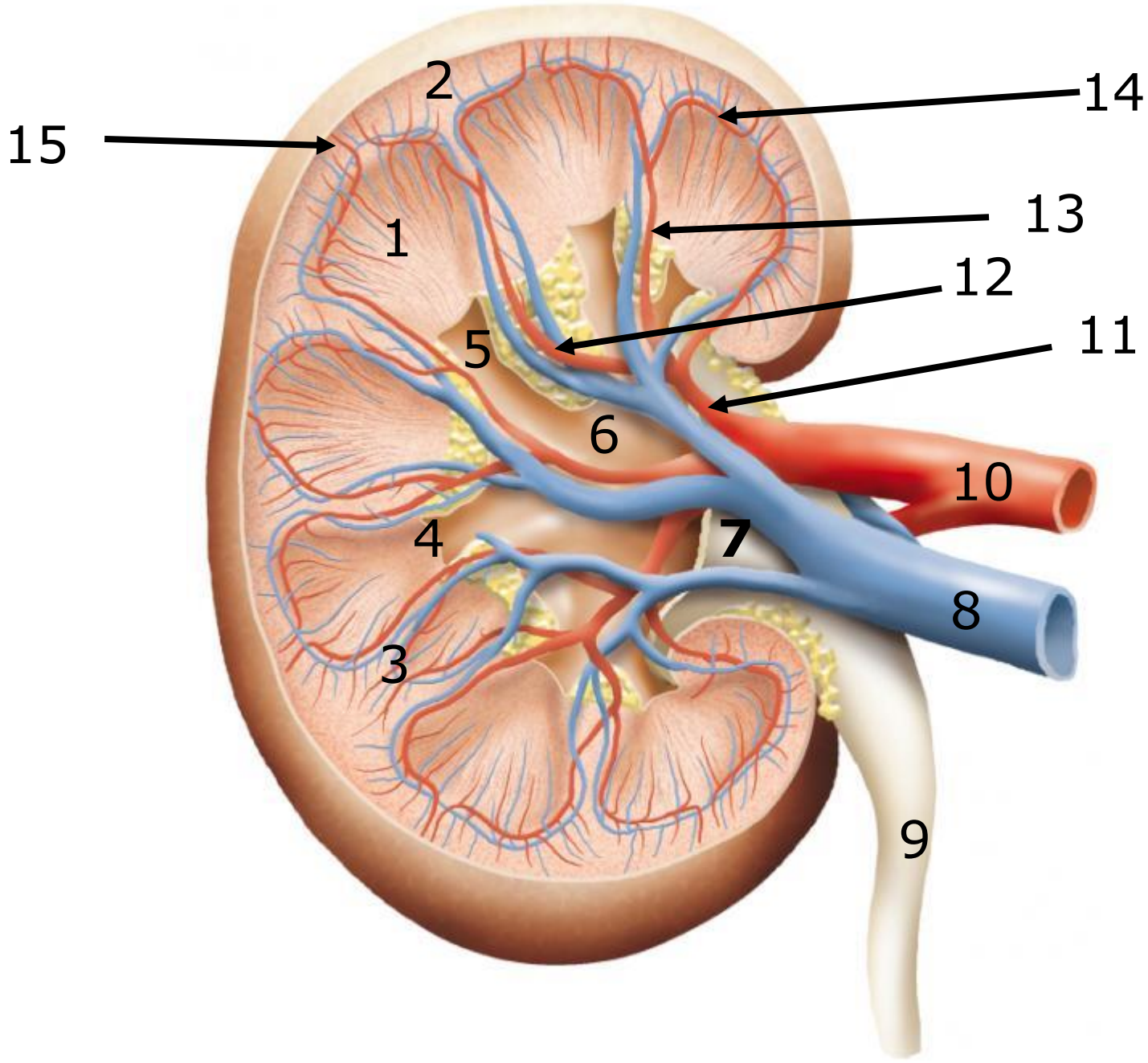
19. Ureter with its relations
20. Site of normal constrictions of the ureters

III-Urinary Bladder

21. Surfaces and relations of the urinary bladder
22. Interior of urinary bladder
23. Ligaments of urinary bladder

IV- Urethra

24. Parts of male urethra and its features



1. Medulla (pyramids)
2. Cortex
3. Renal column
4. Renal papillae
5. Minor calyces
6. Major calyces
7. Renal pelvis
8. renal vein
9. Ureter
10. Renal artery
11. Segmental A.
12. Lobar A.
13. Interlobar A.
14. Arcuate A.
15. Interlobular A.

Label the Diagram

1. Right Suprarenal gland
2. Liver (Rt. Lobe)
3. Duodenum (2nd part)
4. Hepatic flexure of colon
5.coils of small intestines
6. Left suprarenal gland
7. Spleen
8. Stomach
9. Pancreas
10. Descending colon
11. Coils of small intestines

AREAS FOR:

1

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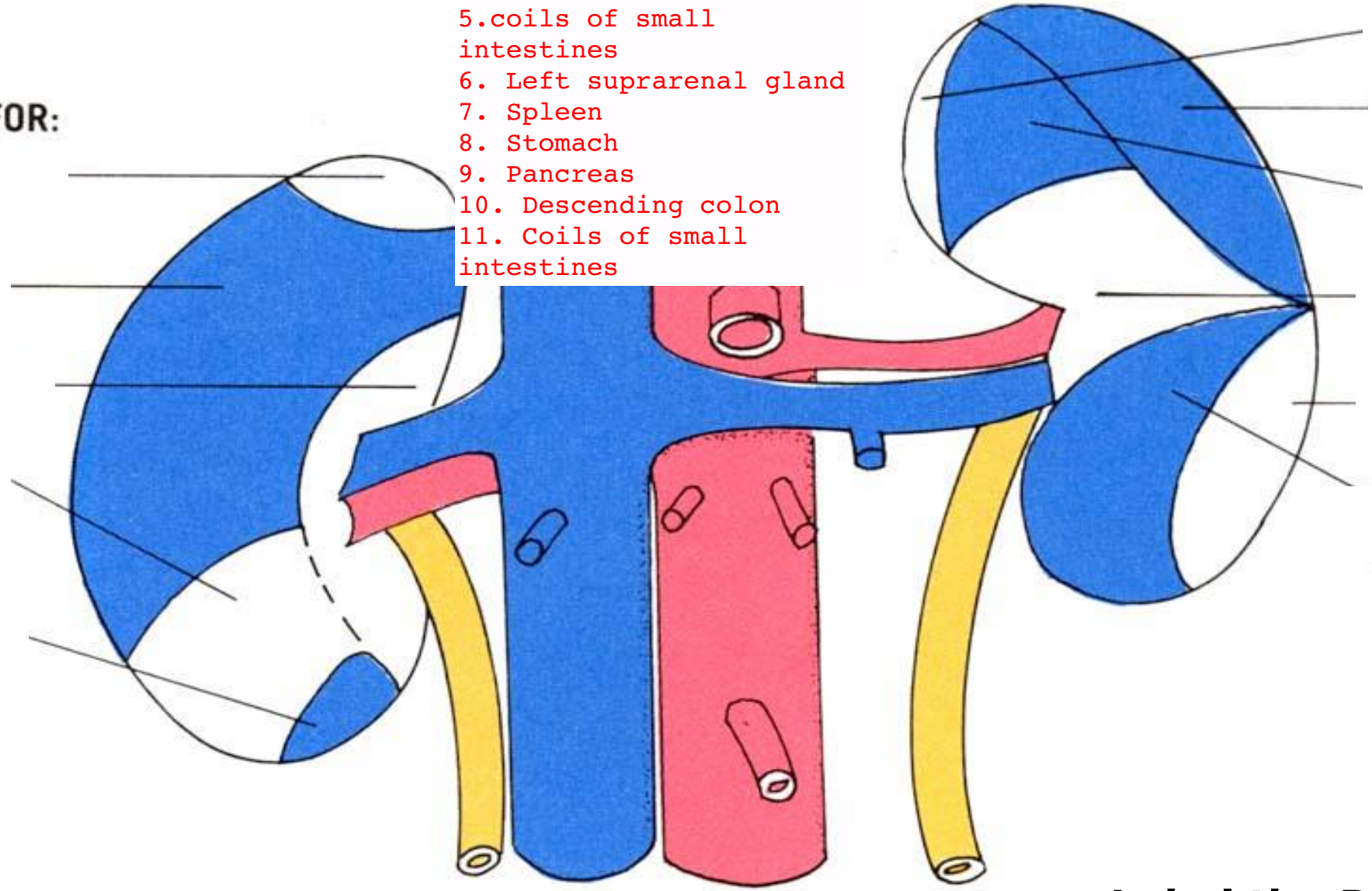

AREAS FOR:

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11

Label the Diagram

Draw a Diagram of right and left kidneys showing anterior and posterior relation

Relation of the Kidneys

Posterior relations; are nearly similar for both kidneys

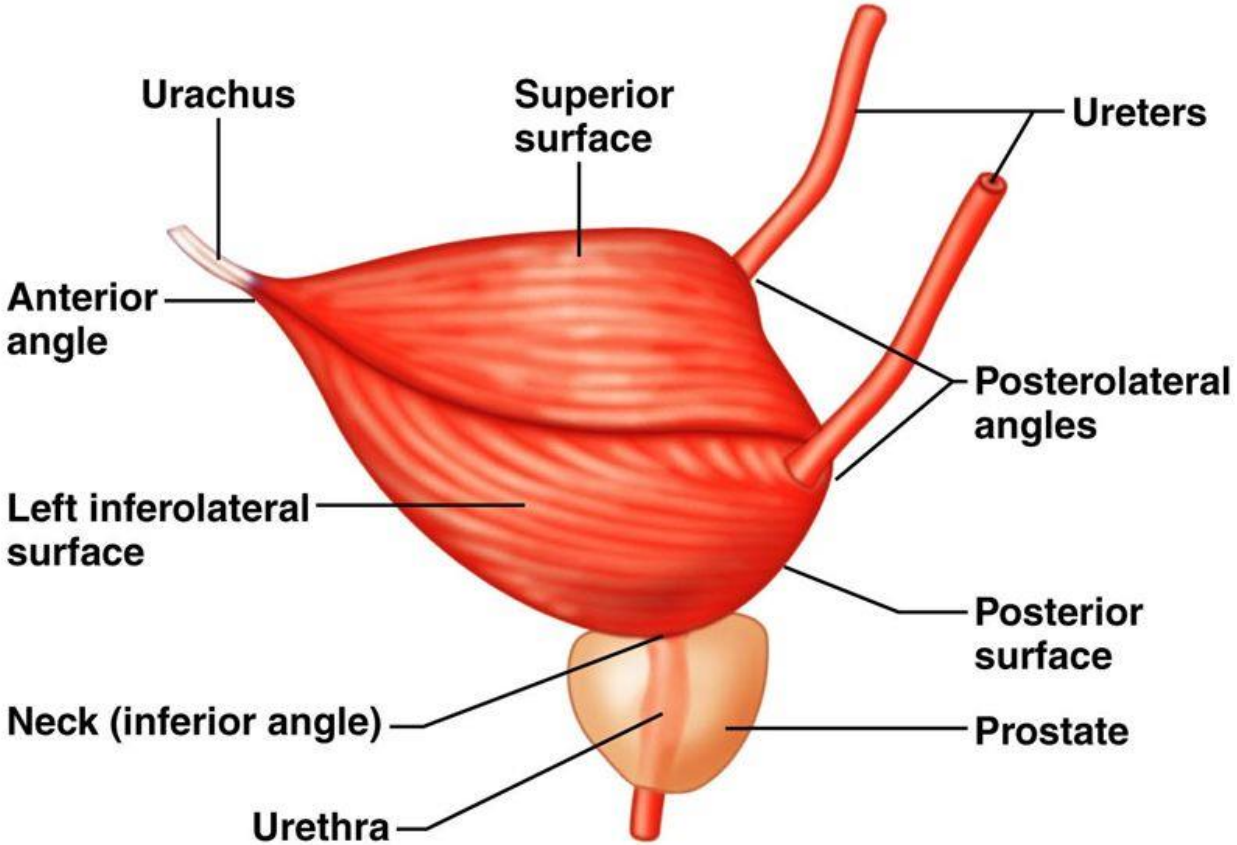
1- *Four muscles*, diaphragm (superiorly), psoas major, quadratus lumborum and transversus abdominis.

***2-Four neurovascular structures*;** subcostal vessels, and subcostal, ilioohypogastric, and ilioinguinal nerves.

***3-Pleura and ribs*,** the diaphragm separates the upper part of each kidney from the costodiaphragmatic recess of the pleura and 12th rib on right side and 11^{th} and 12^{th} ribs on left side.

Anterior relations

Right Kidney	Left Kidney
Right suprarenal gland	Left suprarenal gland
Second part of duodenum	Spleen with lienorenal ligament, Body of pancreas with splenic vessels
Right lobe of liver (with **hepatorenal pouch** in between)	Posterior surface of stomach **(with lesser sac** in between**)**
Right colic flexure (hepatic flexure)	Descending colon
Coils of the small intestine	Coils of the small intestine
Ascending branch of right colic artery	ascending branch of left colic artery



Mention the relation of urinary bladder In Male and Female

Description and Relations of the Urinary Bladder :

• The empty bladder has; Apex, base, 3 surfaces (superior, right and left inferolateral) and neck .

1- Apex of the bladder:

- Is continuous with the median umbilical ligament which raises the median-umbilical fold of peritoneum.
- The ligament is the remnant of the embryonic urachus.

2- Base of the bladder (fundus) :

- It is directed posteroinferiorly
- Its superolateral angles receive the ureters
- **Relations** :

Male	female
• Base is related to **rectum**, but separated from it by ▪ Rectovesical pouch ▪ 2 seminal vesicles ▪ Ampullae of the deferent ducts (vas)	The base is related to upper part of anterior wall of **vagina.**

3-Superior Surface:

is covered by peritoneum and is related to

Male	female
❖ Sigmoid colon, ❖ Loops if ileum	❖Vesical surface of uterus. ❖ Supravaginal part of cervix with uterovesical pouch in between

4-Inferolateral surface:

It is ***not*** covered by peritoneum. It is related to:

- ✓ Body of pubis with retropubic pad of fat in the retropubic space of Retzius.
- ✓ Levator ani.
- ✓ Obturator internus.

5-Neck of the bladder:

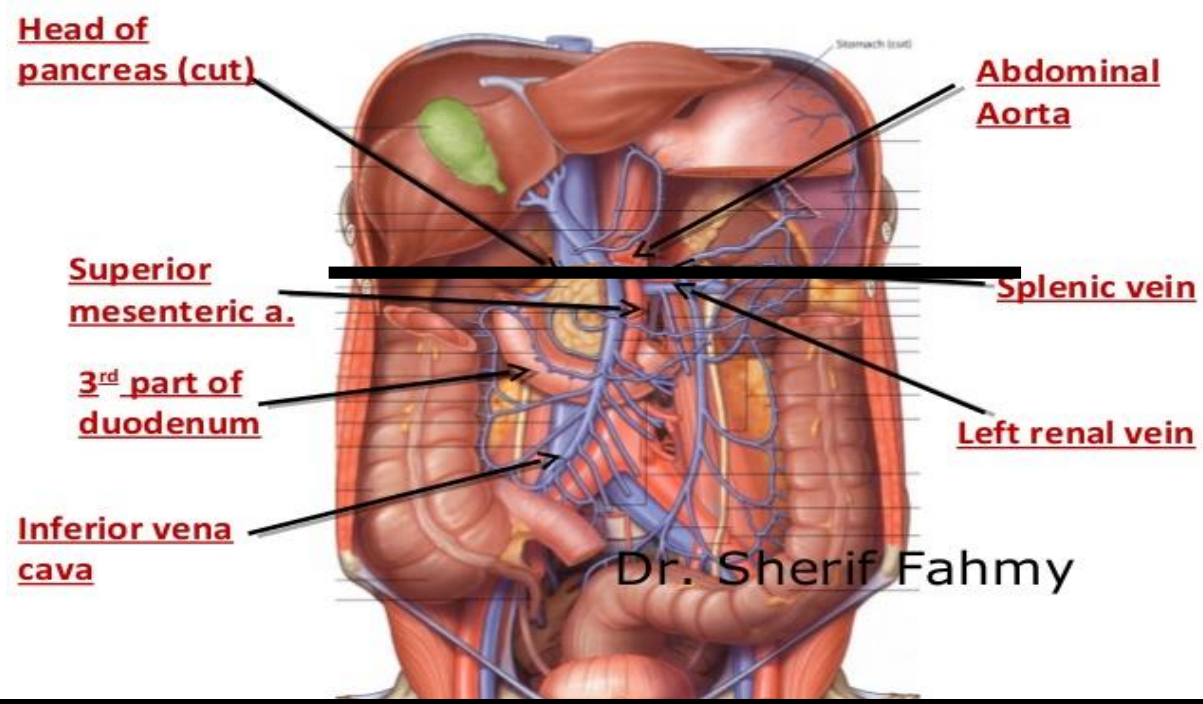
It is the lowest and most fixed pan of the bladder.

- In the **male**: it is continuous with the urethra at the internal ureteral meatus and rests on the upper surface of the prostate.
- In **female**: it is continuous with the urethra and rests in the pelvic fascia which surrounds the urethra.

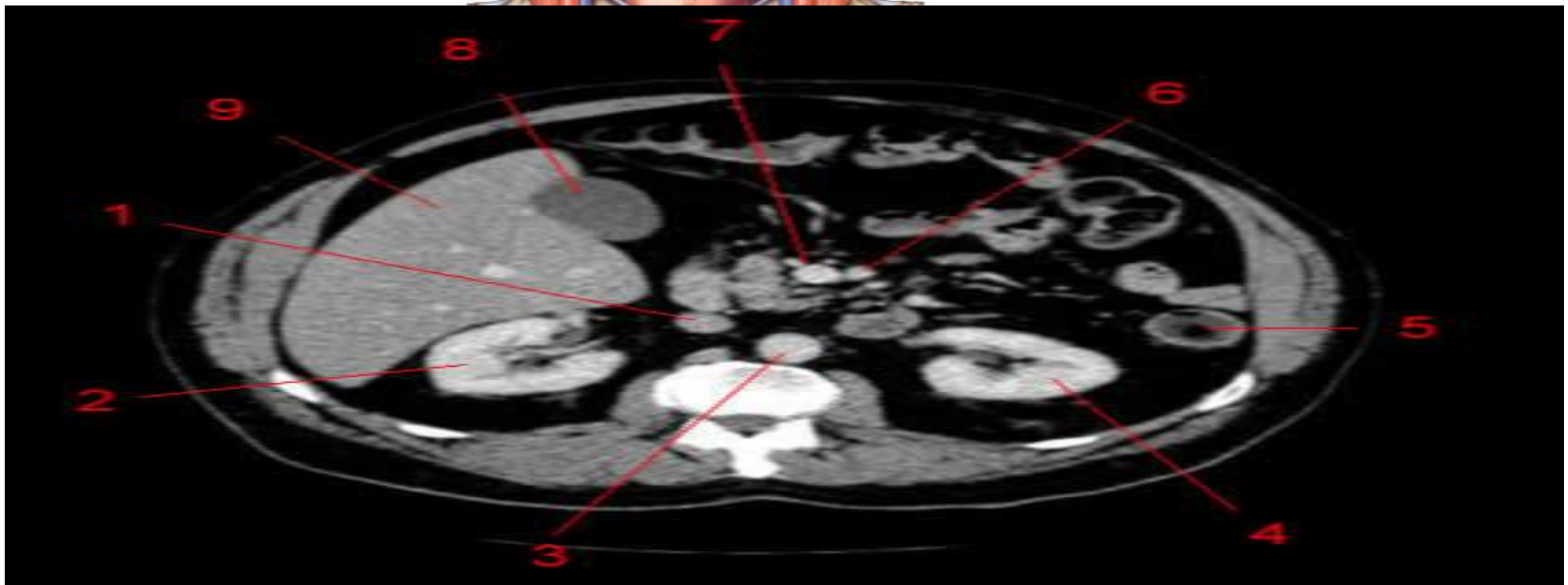
At the junction of the neck and urethra, sphincter vesicae is present.

Muscular coat of the bladder

is composed of smooth muscle and is arranged as three layers known as the detrusor muscle.



1. Inferior Vena cava
2. Rt. Kidney
3 Abdominal aorta
4. Lt. kidney
5. Descending colon
6. Superior mesenteric artery
7. Superior mesenteric vein
8. Gallbladder
9. Liver

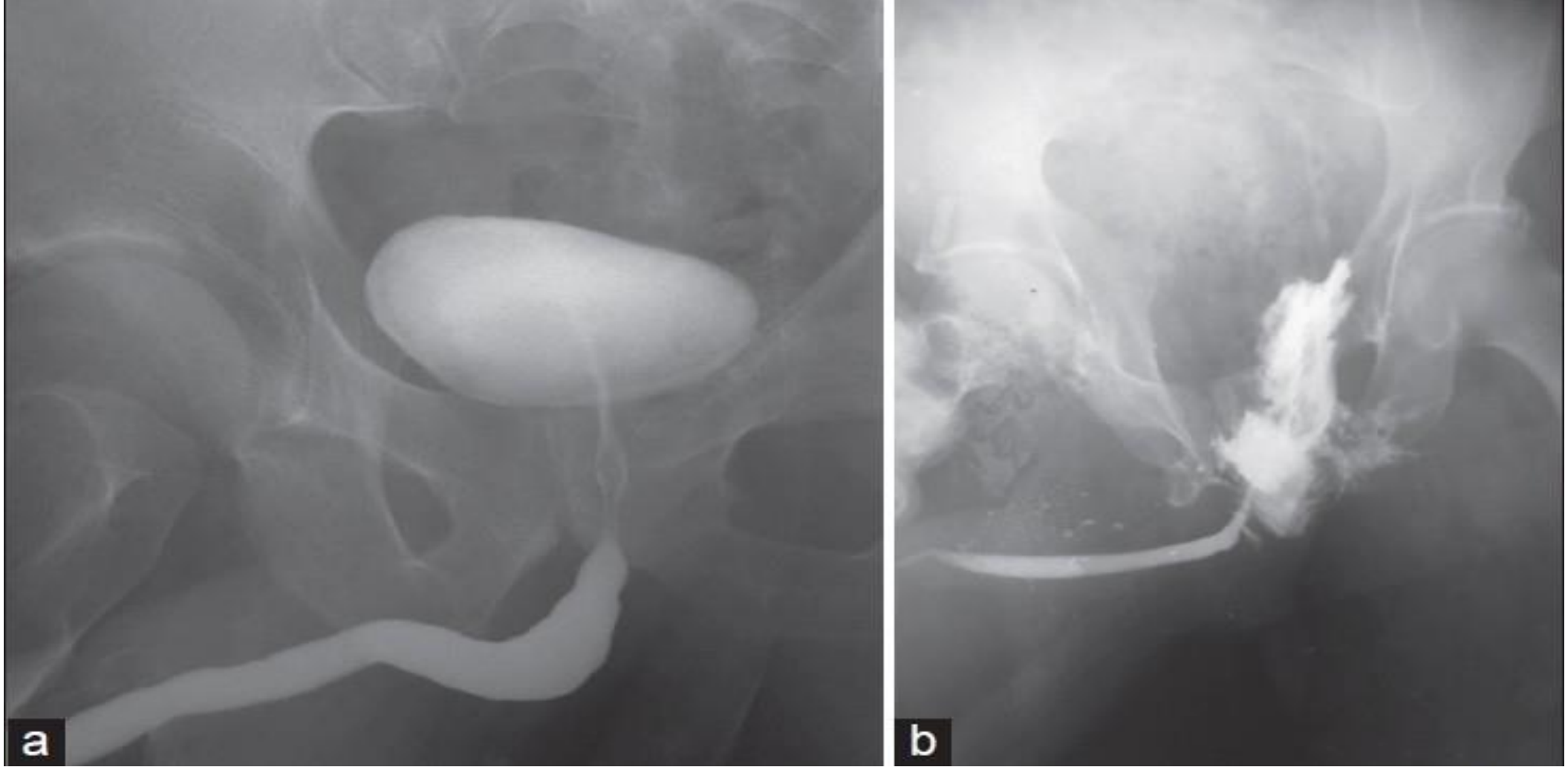


1. What is the type of this radiograph ?
2. Where is the location of the stone ?
3. Mark sites of ureteric constriction

1. KUB X-ray (kidney, ureter and bladder)
2. At the tip of L4 transverse process
3. (Next page)

Constrictions of the ureters

Site of constriction	Corresponding bony Level
At pelvi-ureteric junction	Near the tip of the transverse process of L2 vertebra
At pelvic brim	In front of sacroiliac joint.
In the wall of the urinary bladder **(it is the *narrowest point* of the whole ureter)**	Just medial to the ischial spine.



Which is abnormal urethrogram and why ?

B is abnormal, injected material is not filling the bladder, it’s leaking which indicates a rapture