OSPE Anatomy Revision Reproductive Block

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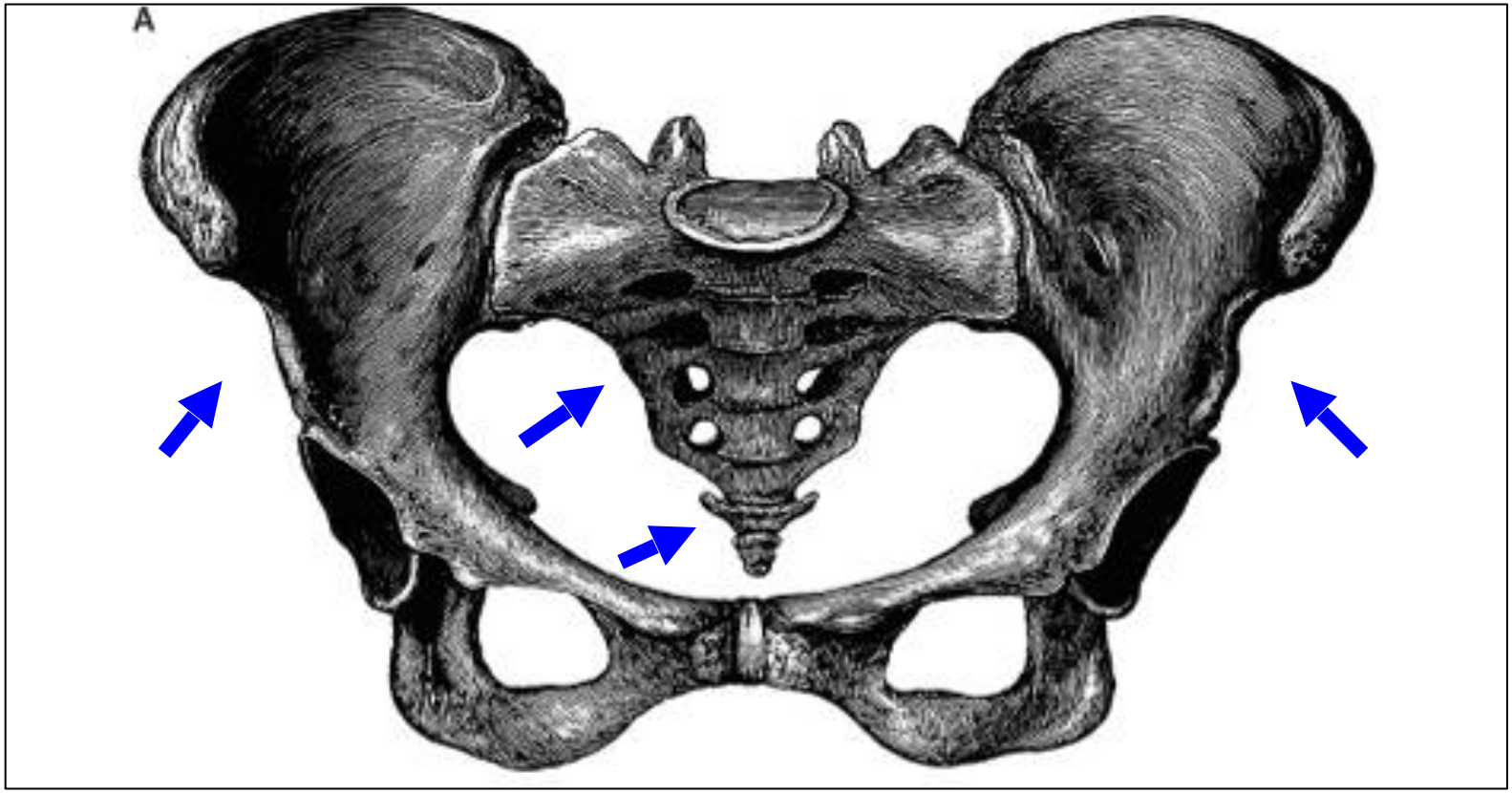
Thanks to Reema Alanezi
And 430 team

 = team slides



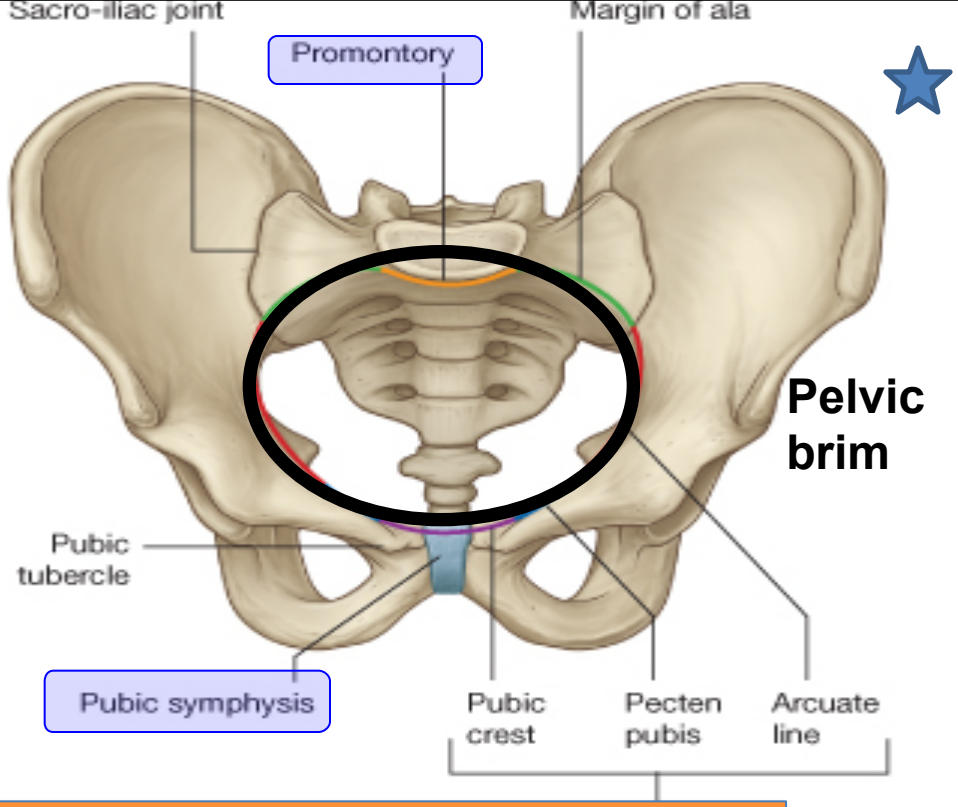
The bony pelvis is composed of four bones:

- Two hip bones, which form the anterior and lateral walls.
- Sacrum and coccyx, which form the posterior wall.

And four joints:

- Anteriorly: Symphysis pubis (cartilaginous joint)
- Posteriolateraly: Two Sacroiliac joints. (Synovial joins)
- Posteriorly: Sacrococcygeal joint (cartilaginous)

The pelvis is divided into two parts by the **pelvic brim.**
Above the brim is the **False or greater pelvis,**which is part of the abdominal cavity.
Below the brim is the **True or lesser pelvis.**



The False pelvis is **bounded** by:
Posteriorly:
Lumbar vertebrae.
Laterally:
Iliac fossae and the iliacus muscle.
Anteriorly:
Lower part of the anterior abdominal wall.
It supports the abdominal contents.

PELVIC OUTLET

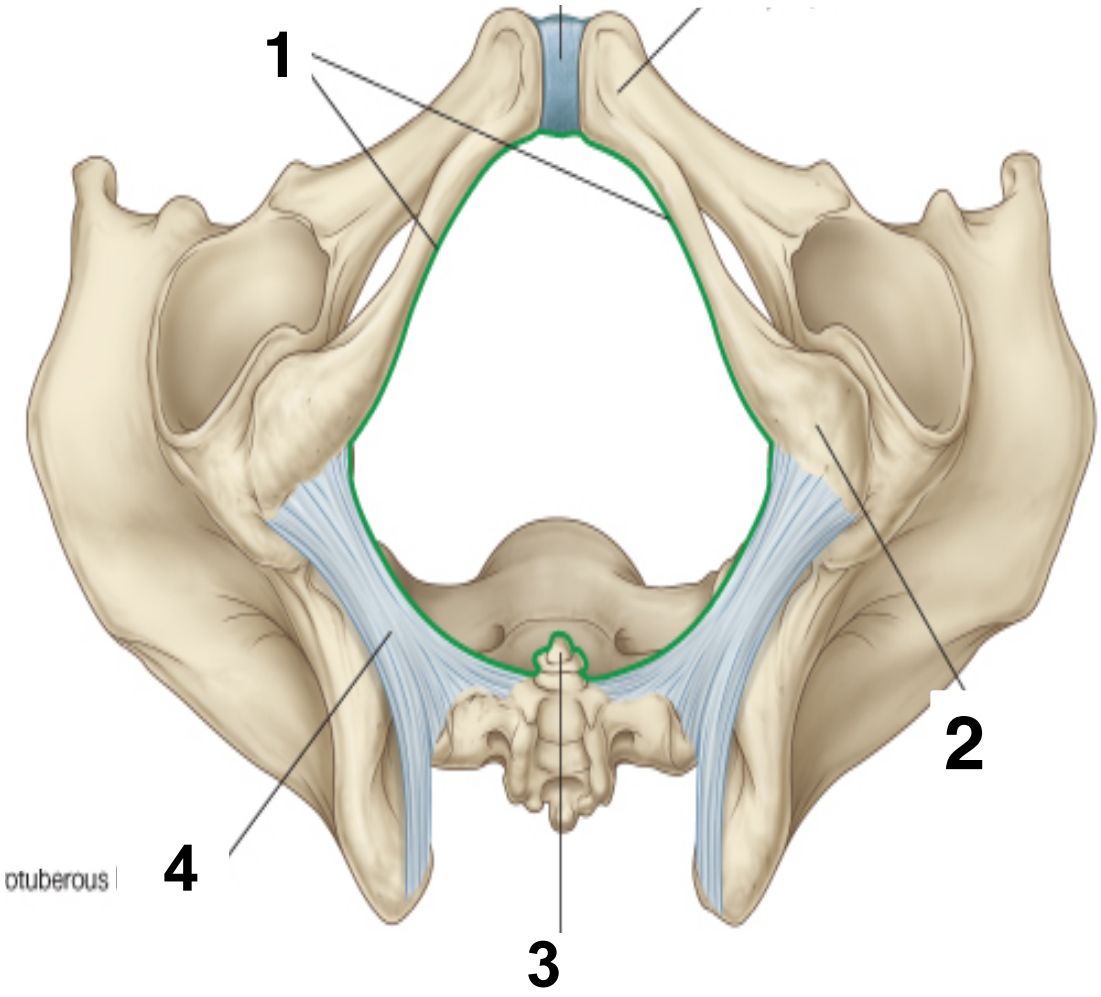
Identify the labeled structures.

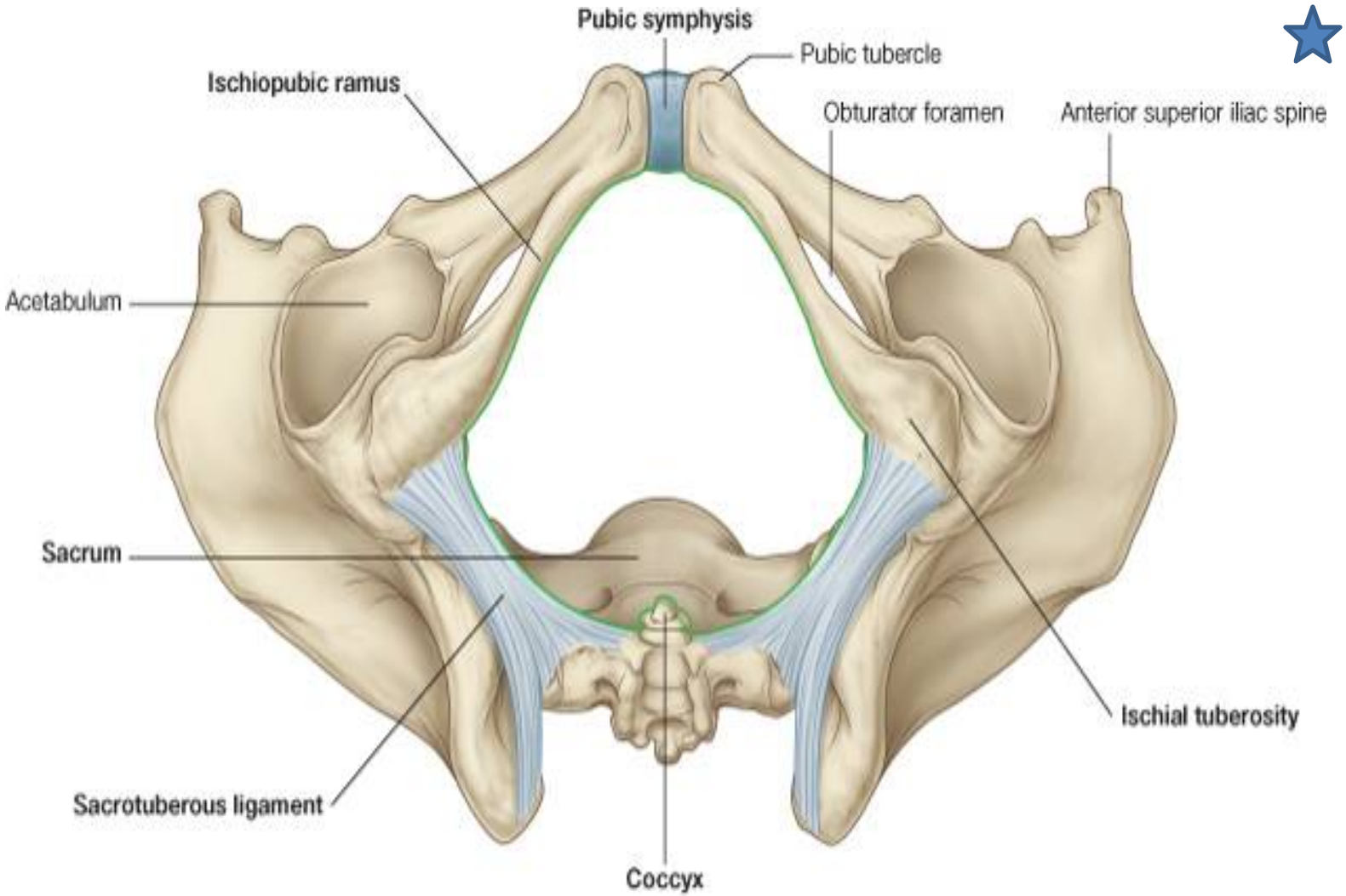
1—Ischiopubic arch.

2---Ischial tuberosity.

3—Coccyx.

4---Sacrotuberous ligament.





RELATIONS:

Anteriorly:Symphysis pubis.

Posteriorly: Coccyx

Anterolaterally:ischiopubicramus

Posterolaterally:Sacrotuberousligament

PELVIC INLET

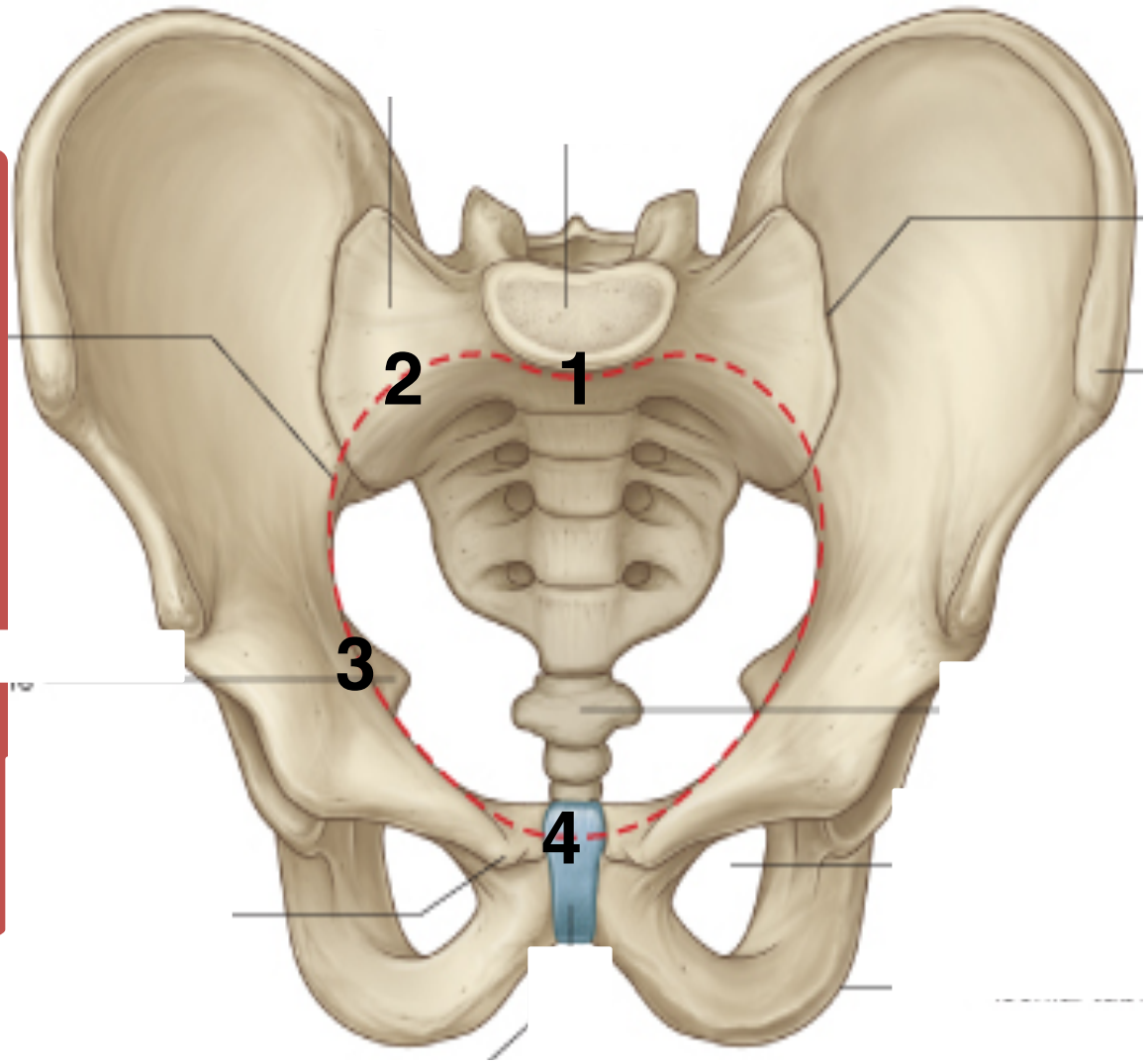
Identify the 4 structures of the pelvic inlet:

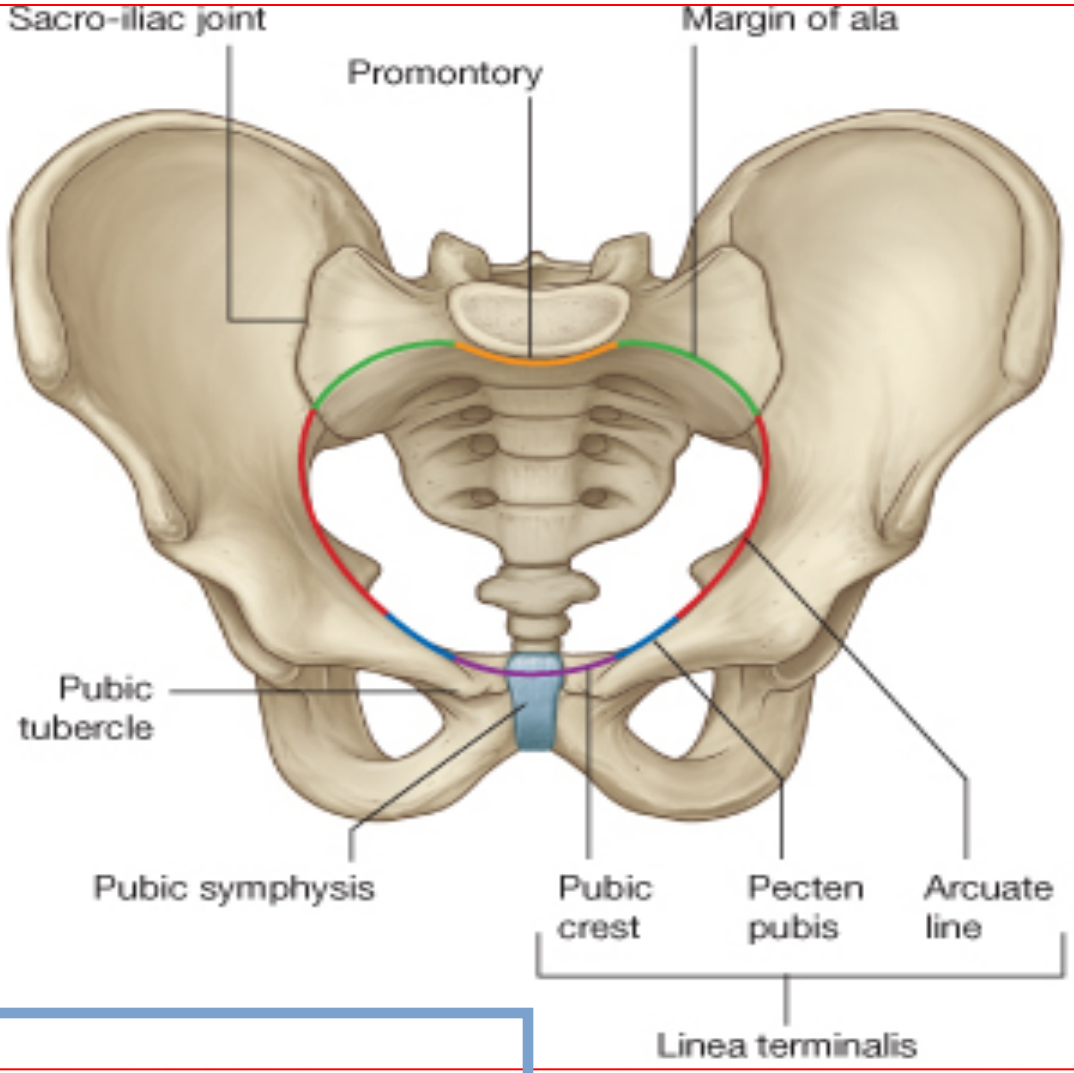
1—Promontry of sacrum.

2—Ala of sacrum

3—Iliopectineal line.

4- Symphysis pubis





RELATIONS:

Anteriorly:Symphysis pubis.

Posteriorly: Promontory of sacrum, ala of sacrum.

Laterally: Ileopectineal (arcuate) lines.

Identify the labeled structures:

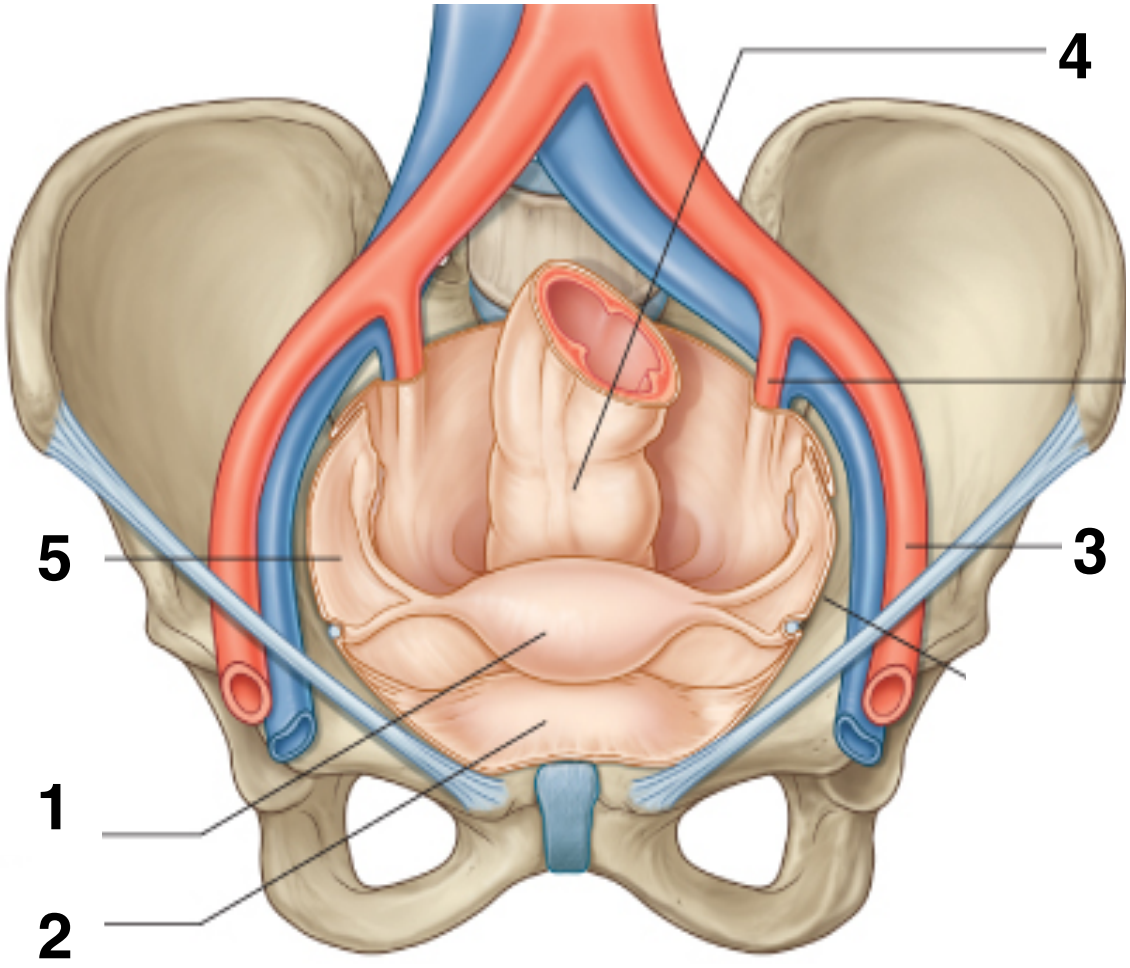
1—Uterus.

2—Urinary bladder.

3—External iliac artery.

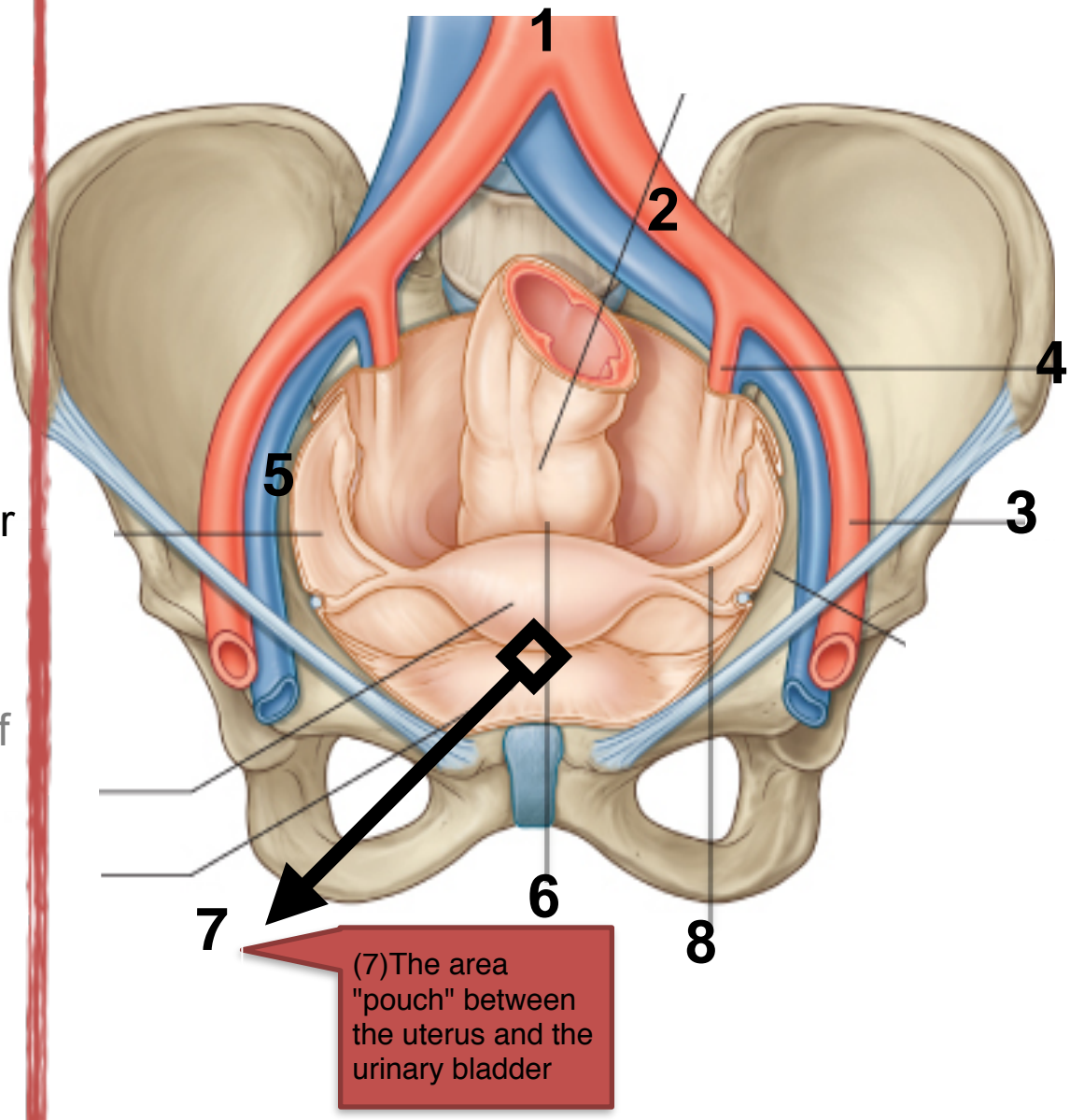
4—Rectum.

5—Broad ligament.



Q:- Identify the labeled structures:

1- Abdominal Aorta
2- Common iliac Artery
3- External iliac Artery:
(passes deep to the inguinal ligament and enters the thigh then continues asFemoral Artery.)
4- Internal iliac artery
5- External iliac vein
6-Douglas pouch(recto uterine or recto vaginal pouch):
(reflection of peritoneum from the middle third of the rectum to upper part of posterior surface of vagina)
7- Utero vesical (vesico uterine) pouch:
(reflection of peritoneum from uterus to the upper surface of urinary bladder)
8- Uterine (fallopian) tube



Q- Compare between the male and female pelvic :-

Female pelvis	Male pelvis	
-pelvic inlet is more or less circular or Horizontally oval .	- Inlet is Contracted horizontally - it is Heart –shaped . - The ischial spine is more pojecting inward	INLET
Wider in proportion to its length . So “it is thicker and shorter than the male sacrum”	Long and narrow	Sacrum
Wide pubic arch almost Right angle (80-85)	Acute angle (50-60)	ANGLE OF PUBIC ARCH

Types of Female Bony Pelvis:

Gynaecoid ”most common”, anthropoid, android and platypelloid.

Identify the labeled structures:

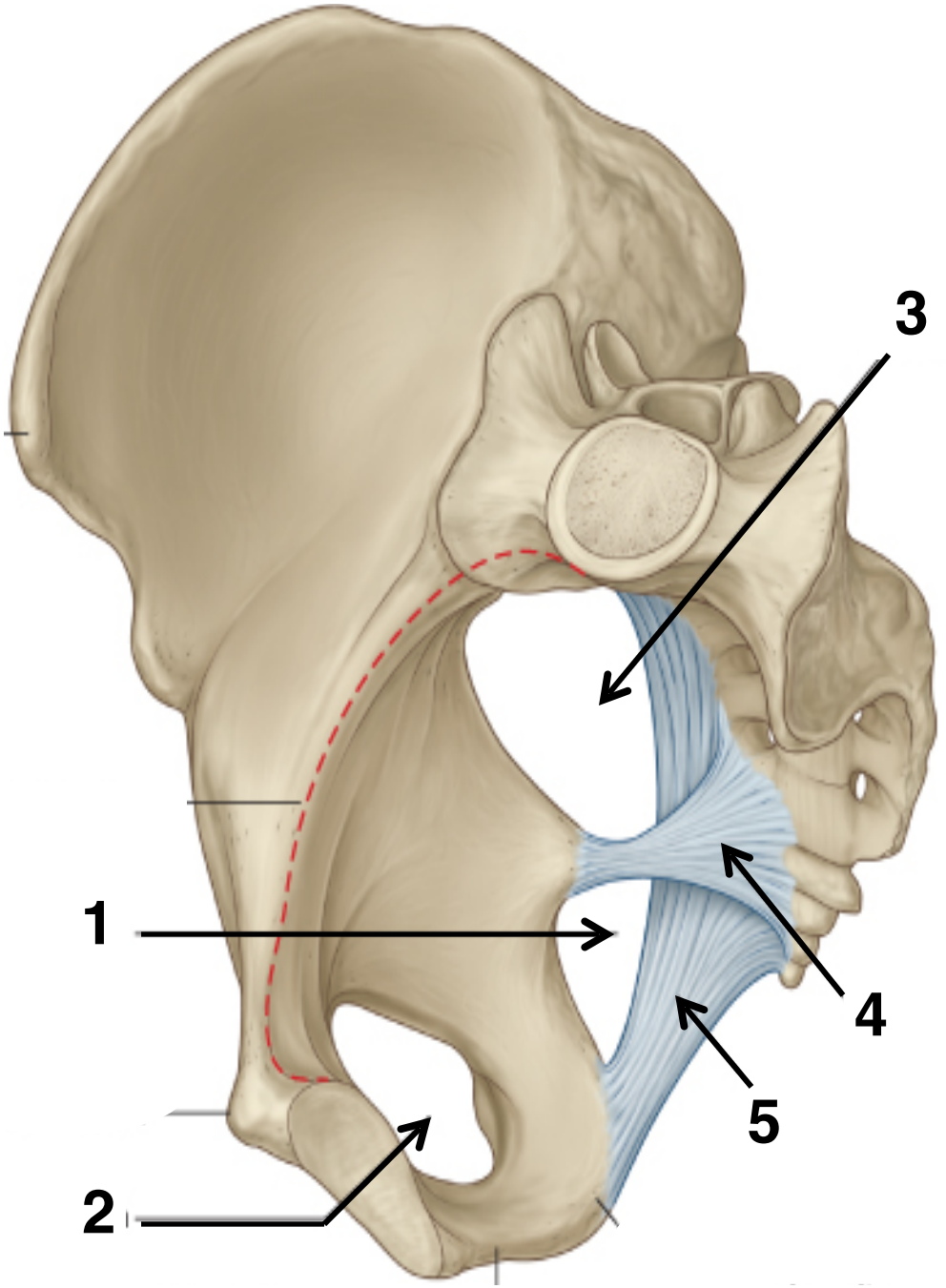
1— Lesser sciatic foramen

2— Obturator foramen

3—Greater sciatic foramen.

4—Sacrospinous ligament

5—Sacrotuberous ligament.



(lateral pelvic wall)

Identify the labeled structures:

1— Lesser sciatic foramen

2— Obturator foramen

3—Greater sciatic foramen.

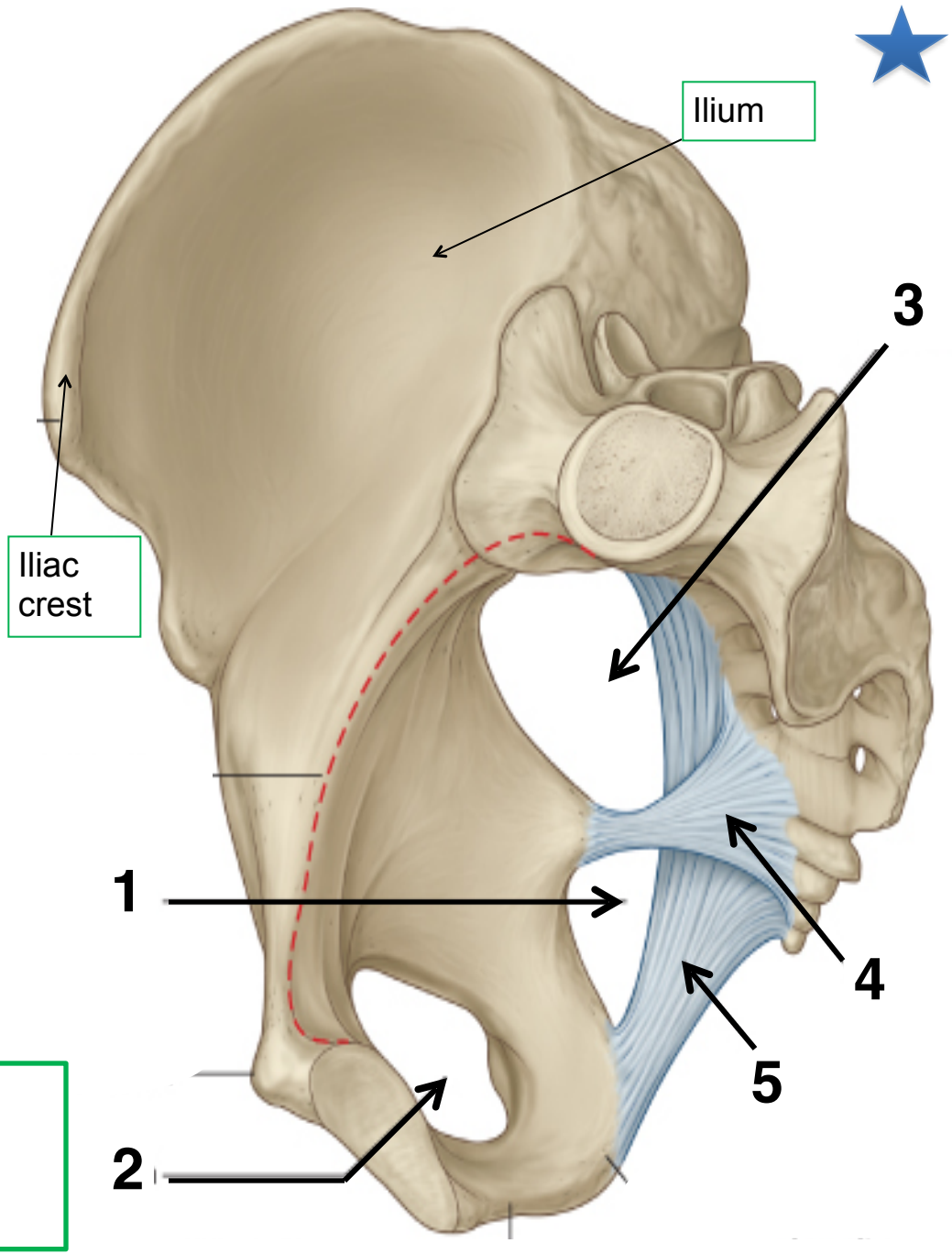
4—Sacrospinous ligament

(From sacrum to the ischial spine).

5—Sacrotuberous.

ligament

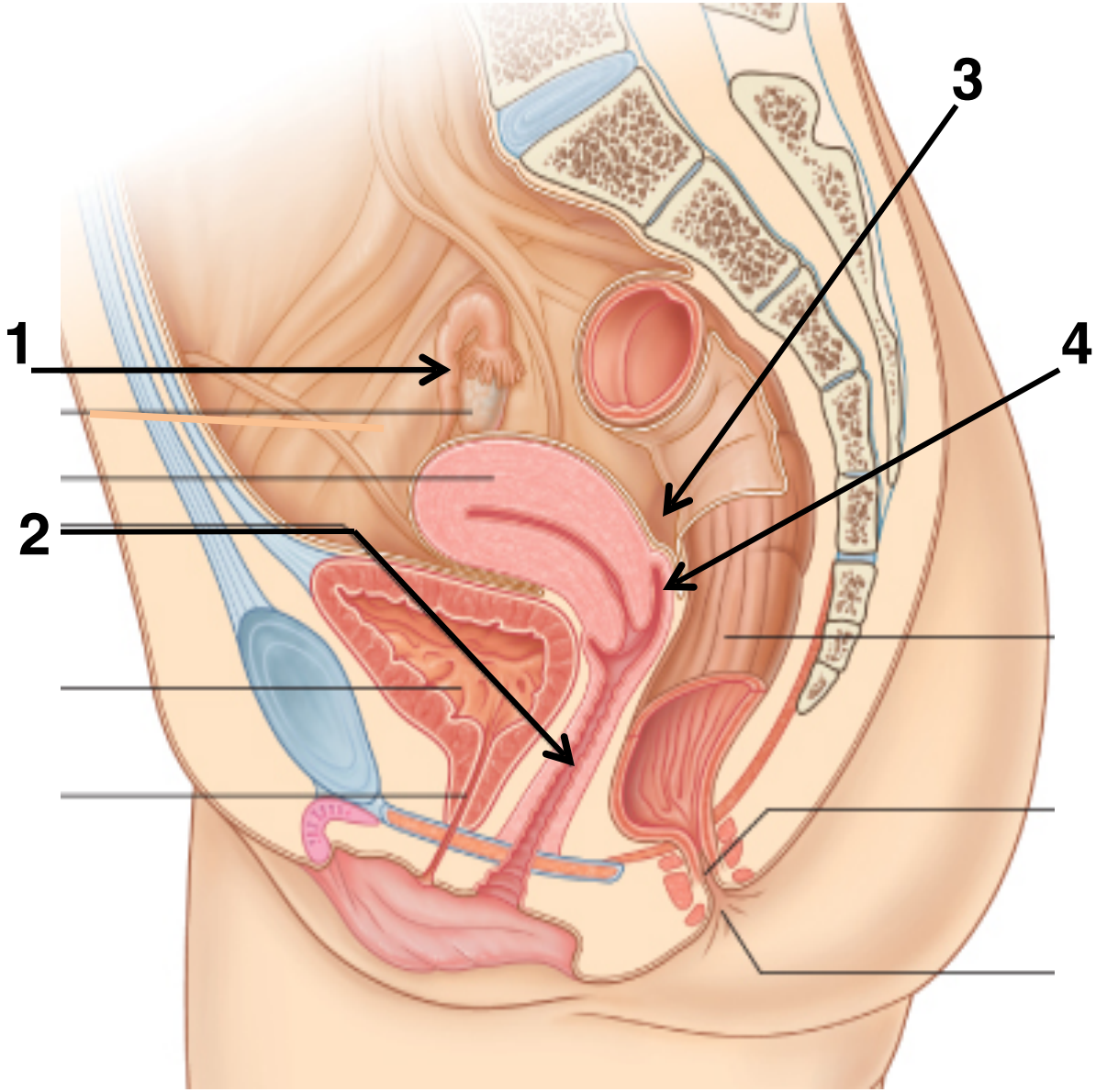
(Connects three Margins From Sacrum To The Ischial Tuberosity).



Note;. These Two Ligaments Have Changed The Notches into Foramena.

Identify the labeled structures:

1—Fallopian tube
2—Vagina.
3—Rectovaginal or Douglas pouch.
4—Posterior vaginal fornix.



Identify the labeled structures:

1—Fallopian tube

2—Vagina.

3—Rectovaginal or rectouterine, Douglas pouch : (Reflection of peritoneum from rectum to upper part of posterior surface of vagina).

4—Posterior vaginal fornix.

5- Ovary.

6- Fimbriae (finger-like processes)

7- Anterior fornix of vagina .

8-Uterovesical (vesicouterine) pouch: Reflection of peritoneum from uterus to upper surface of urinary bladder

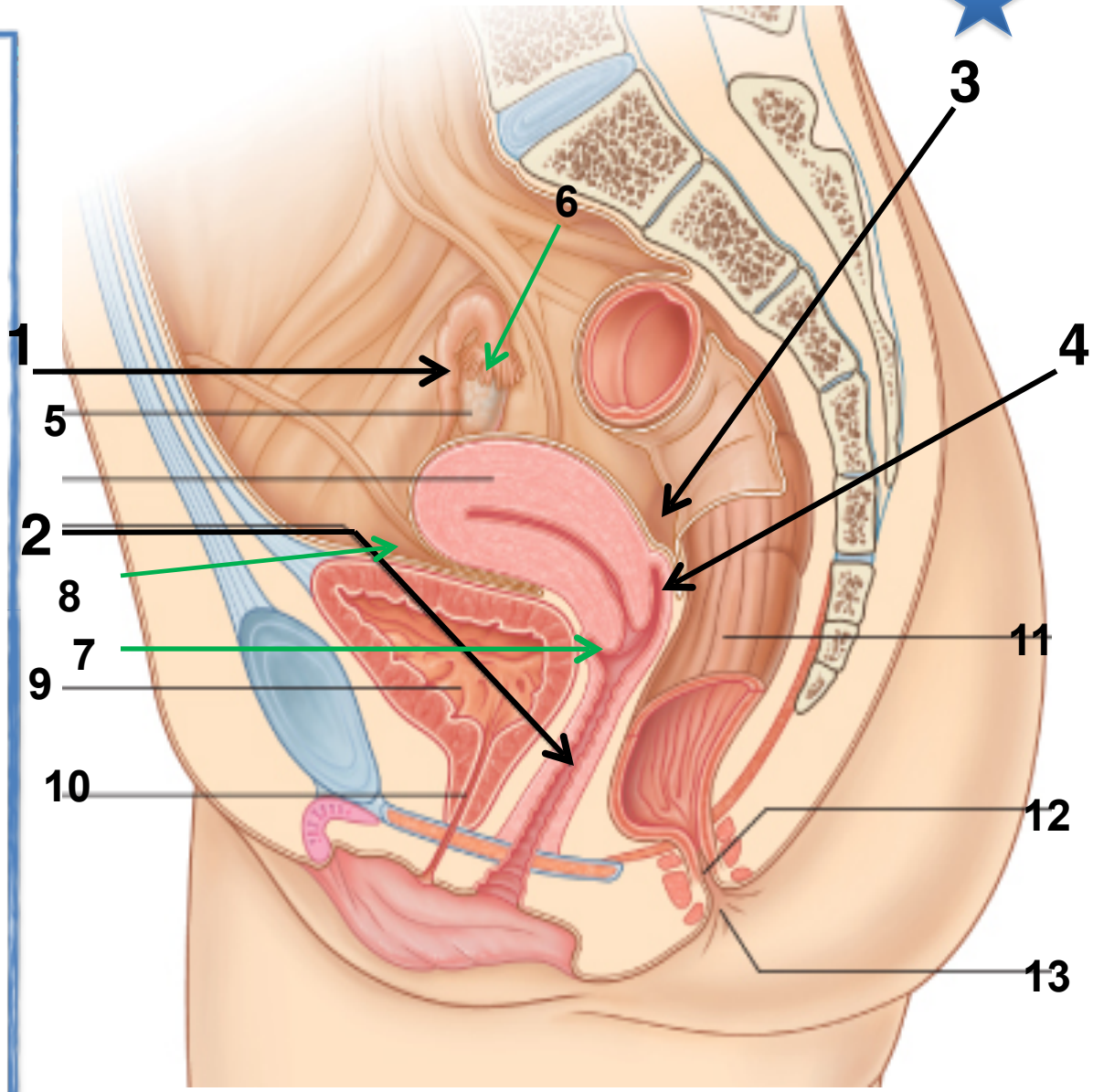
9- urinary bladder

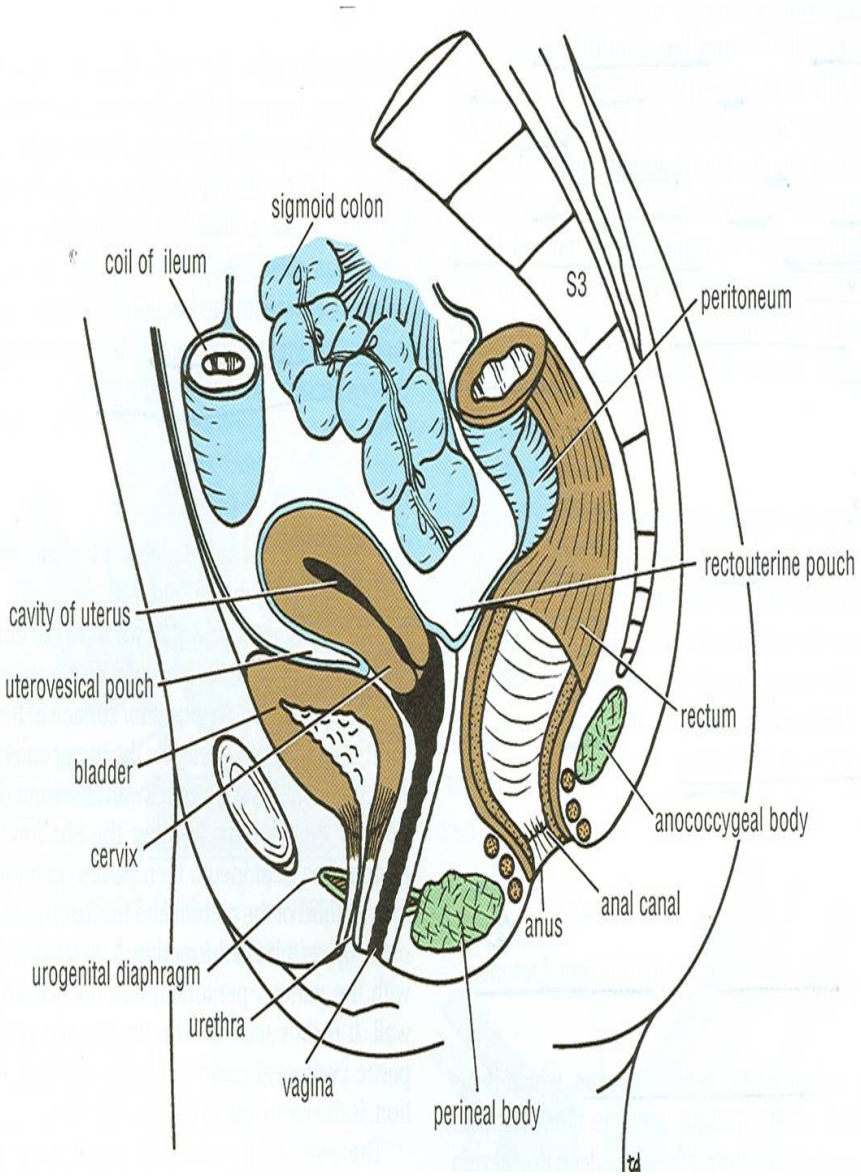
10- urethra

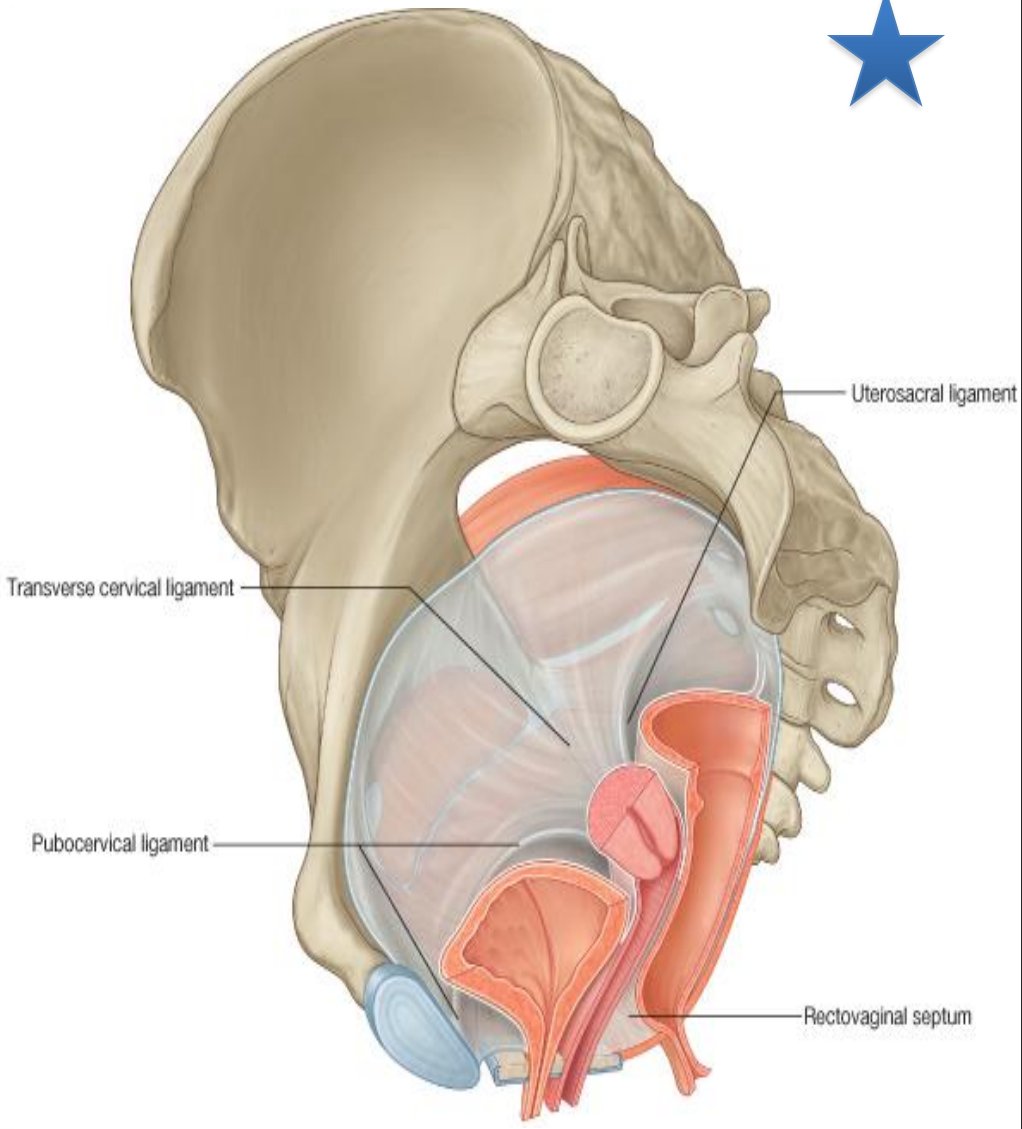
11- rectum

12- anal canal

13- anus



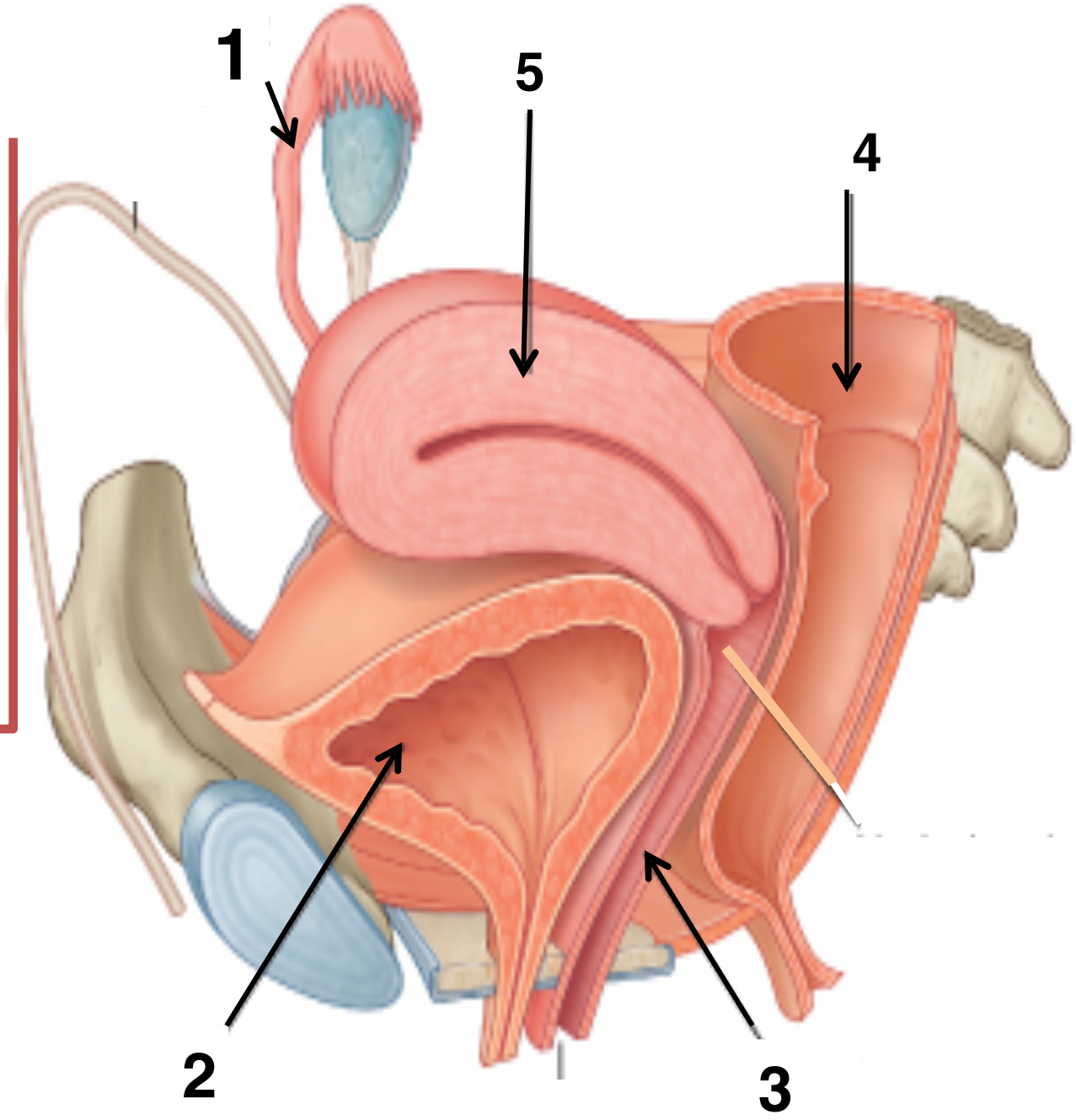




USUAL POSITION OF UTERUS:
ANTEVERTED ANTEFLEXED UTERUS

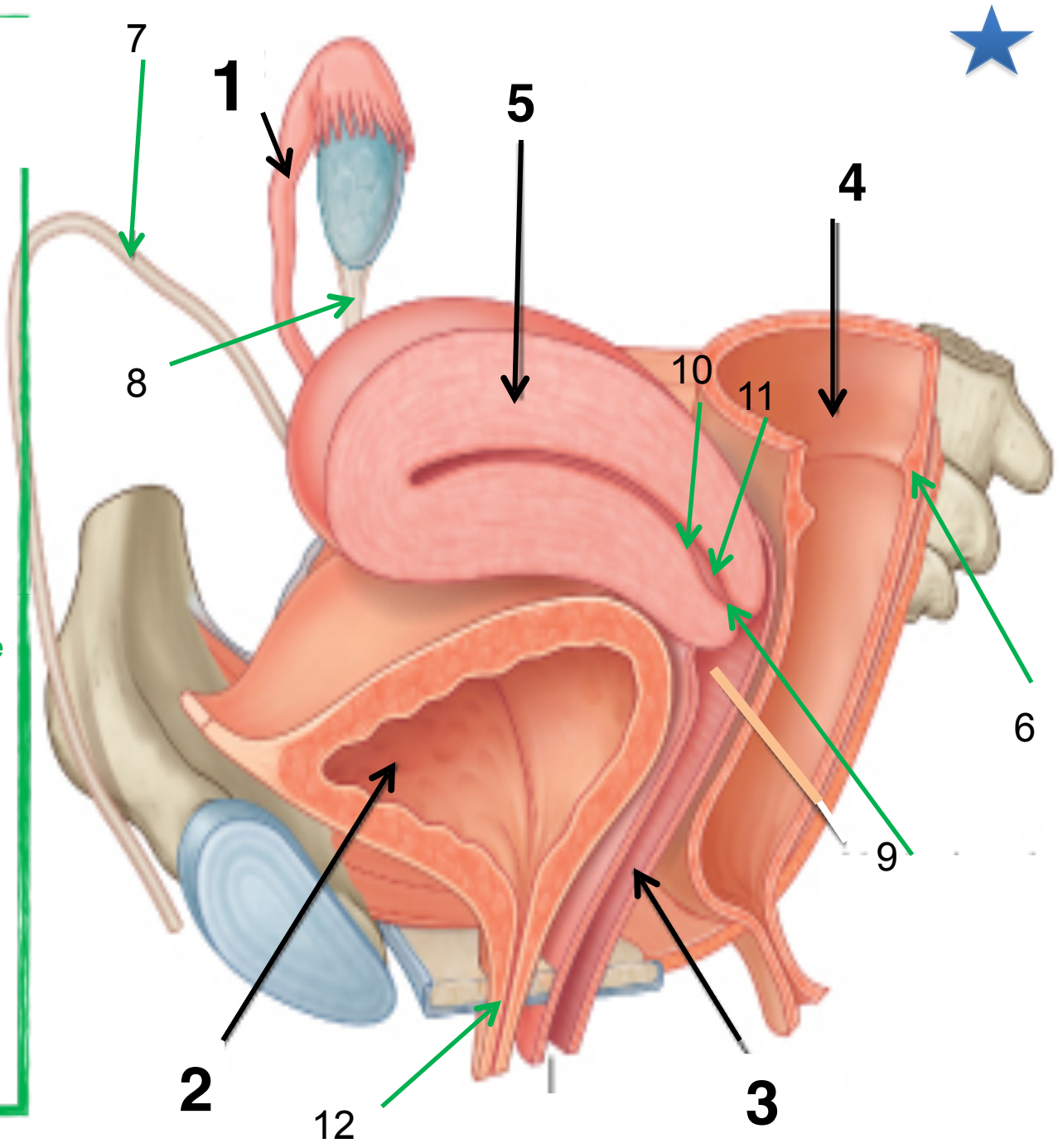
Identify the labeled structures:

1—Fallopian tube.
2—Urinary bladder.
3—Vagina.
4—Rectum.
5—Uterus.



identify the labeled structures:

1—Fallopian tube= Uterin tube.
2—Urinary bladder.
3—Vagina.
4—Rectum.
5—Uterus.
6-Transverse folds of rectum
7-Round ligament of uterus (originates at the uterine horns and leaves the pelvis via the deep inguinal ring, passes through the inguinal canal and continues on to the labia majora)
8-ligament of ovary
9-External Os .
10-Internal Os.
11-Cervical Canal.
12-Female Urethra.



Identify the labeled structures:

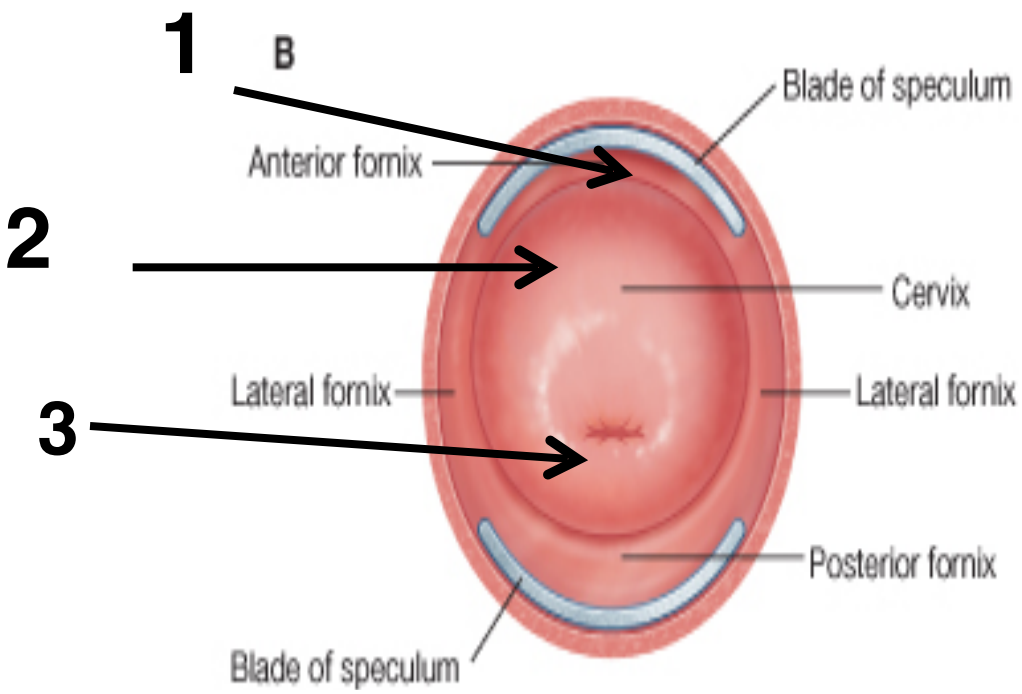
1—Anterior vaginal fornix

2—Cervix.

3—External os.

According to pregnancy, What description you give to this female?

<u>Nulliparous.</u>



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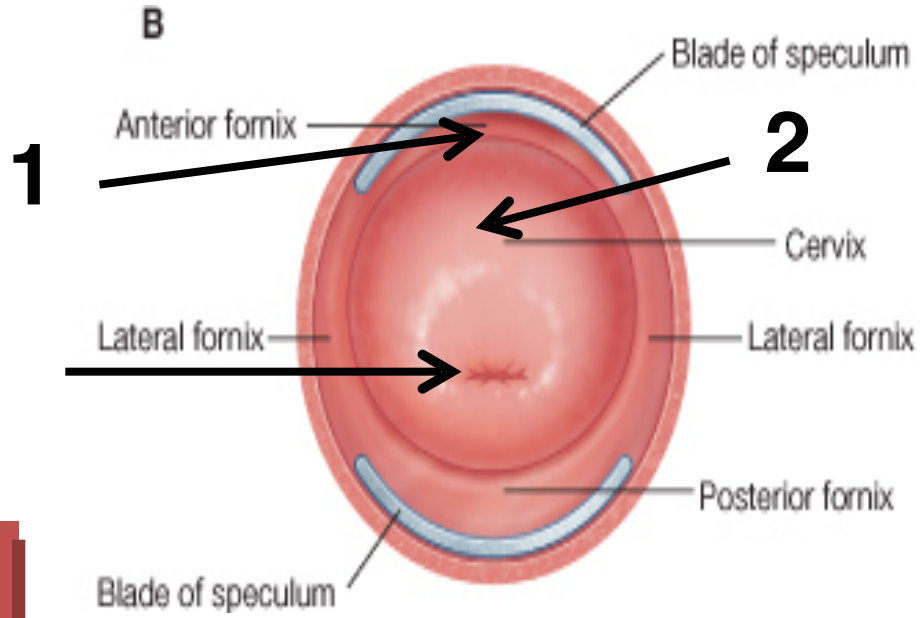


Doctor abualmkarm said : if you write multiparous or nulliparous both are correct because the picture is not clear

In a nulliparous woman: external os appears circular. While In a multiparous woman: external os appears as a transverse slit with an anterior & a posterior lip.

Nulliparous

Multiparous

RELATIONS OF UTERUS:

-FUNDUS + BODY + SUPRAVAGINAL PART OF CERVIX:

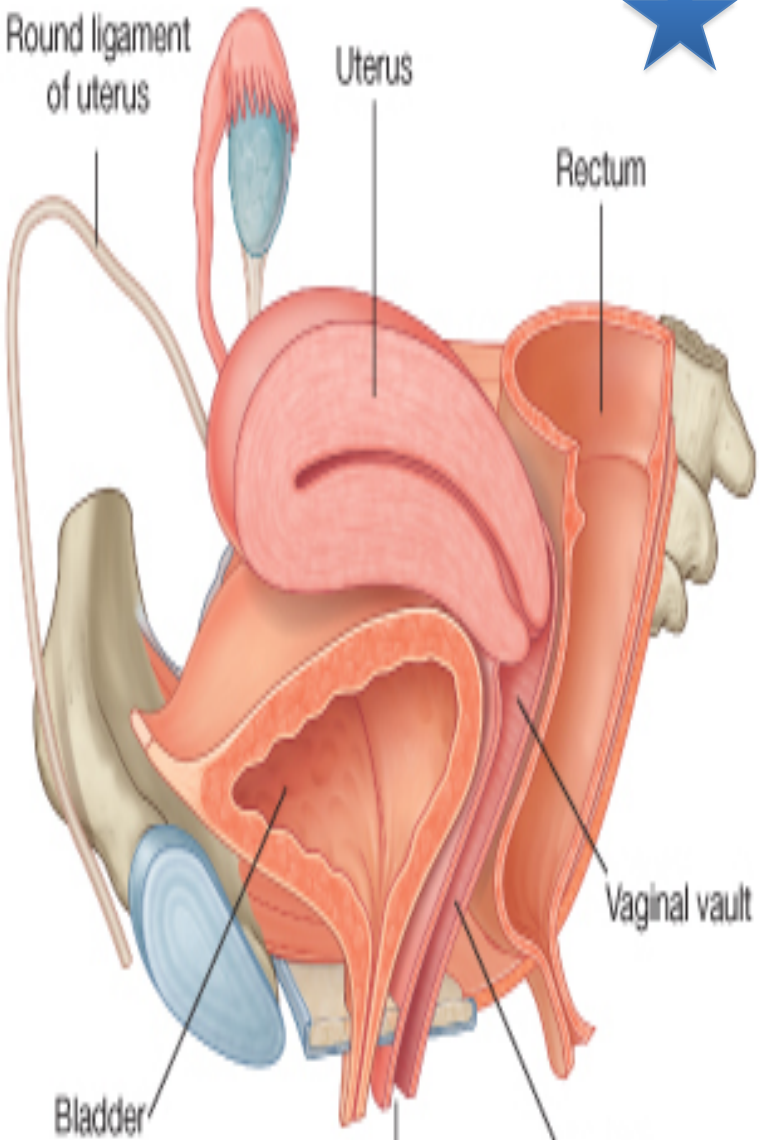
Anterior: superior surface of urinary bladder
Posterior: sigmoid colon
Lateral: uterine artery

-VAGINAL PART OF CERVIX: surrounded by vaginal fornices

Anterior: anterior fornix of vagina
Posterior: posterior fornix of vagina
Lateral: lateral fornices of vagina

RELATIONS OF VAGINA

Anterior: Urinary bladder (in pelvis) & urethra (in perineum)
Posterior: Rectum (in pelvis) & anal canal (in perineum)
Lateral: ureters (in pelvis)



Obturator Internus :

Origin: Inner surface of the obturator membrane and the hip bone.

Insertion: It leaves the pelvis through the lesser sciatic foramen to be inserted into the greater trochanter of the femur.

Action: **L**ateral rotator of the femur at the hip joint.

Nerve supply: Nerve to obturator internus.

Piriformis :

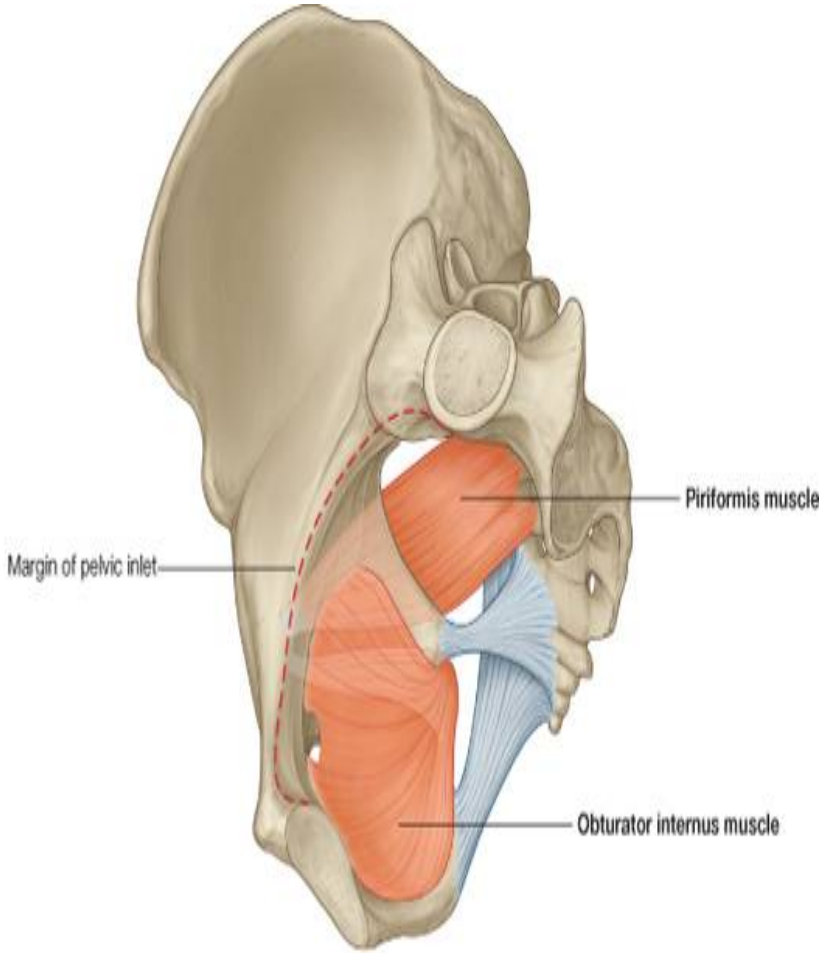
Origin: Pelvic surface of the middle **3** sacral vertebrae.

It leaves the pelvis through the greater sciatic foramen.

Insertion: Greater trochanter of the femur.

Action: Lateral rotator of the femur at the hip joint.

Nerve supply: Sacral plexus.



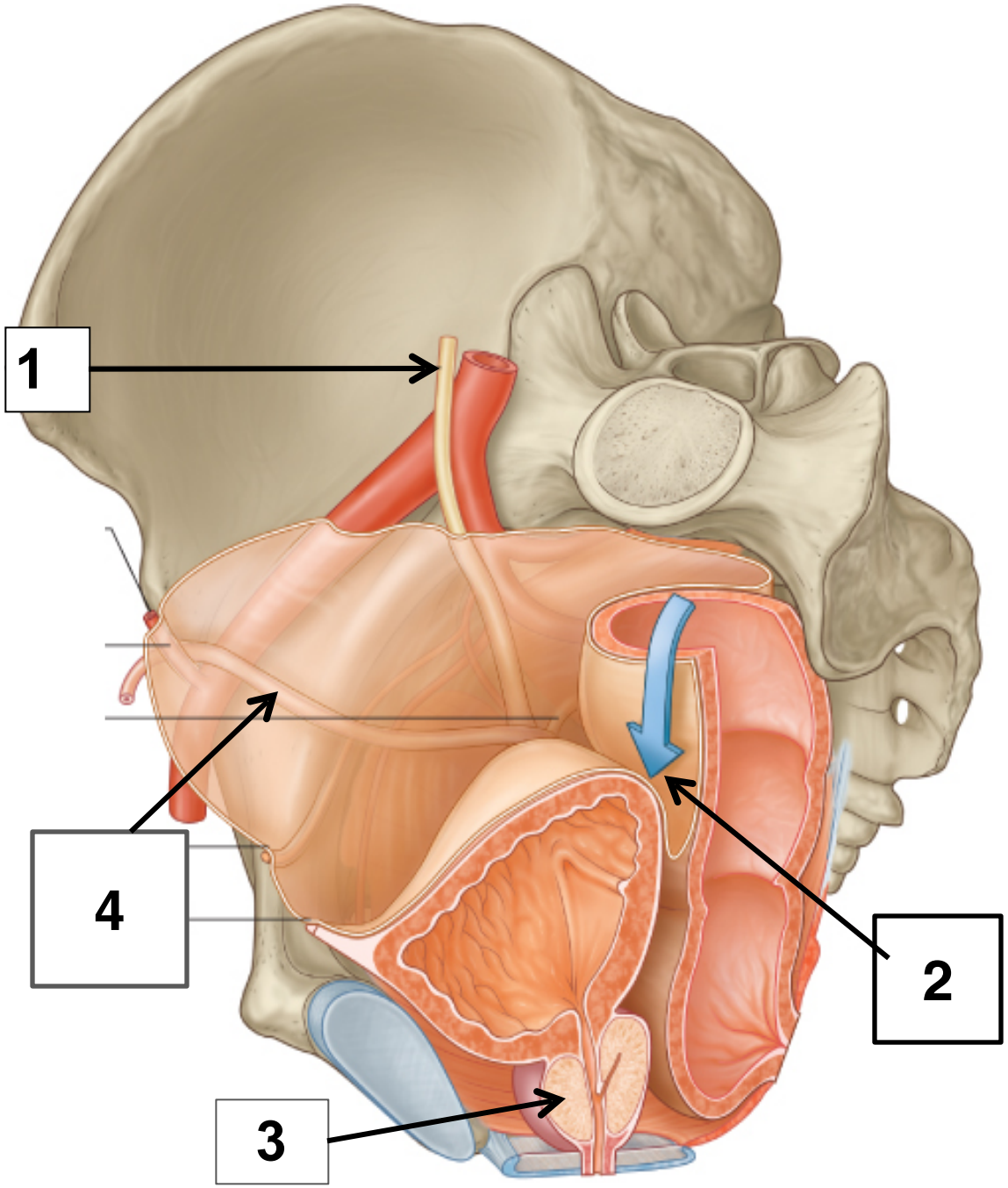
Identify the labeled structures:

1—Ureter.

2—Rectovesical pouch.

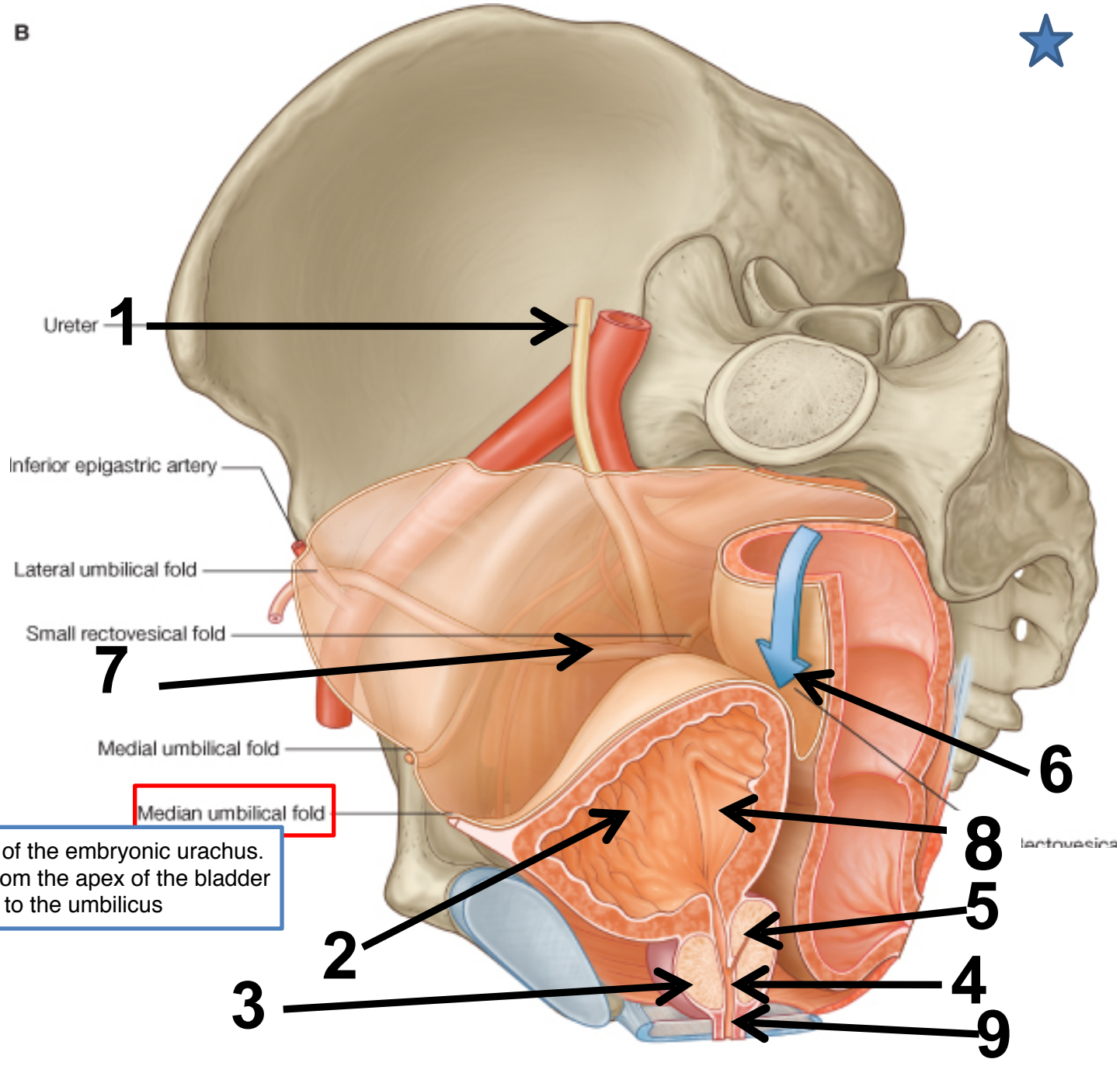
3—Prostate gland.

4—Vas deference.



Q :- Identify the labeled structures :-

1- Ureter
2- urinary bladder
3- Prostatic gland
4- prostatic part of the urethra
5- ejaculatory duct
6- Rectovesical pouch (between rectum and urinary bladder)
7- vas deference
8- Trigone of the urinary bladder
9- Membranous part of the urethra



Remnant of the embryonic urachus. Extends from the apex of the bladder to the umbilicus

Prostate Gland Relations

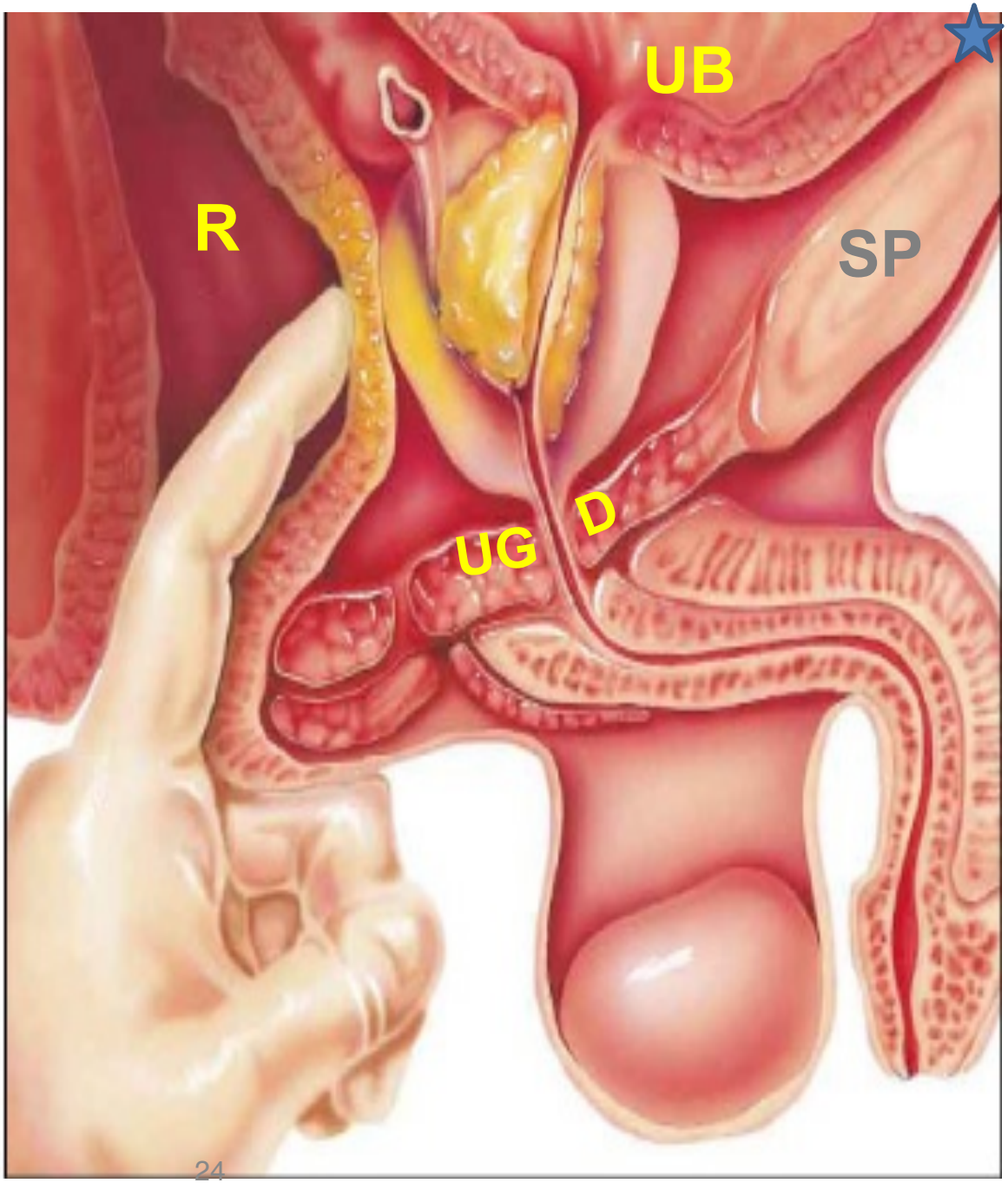
Anterior: Symphysis pubis (SP).

Superior : Neck of urinary bladder.

Posterior :Rectum ® (important for PR Examination)

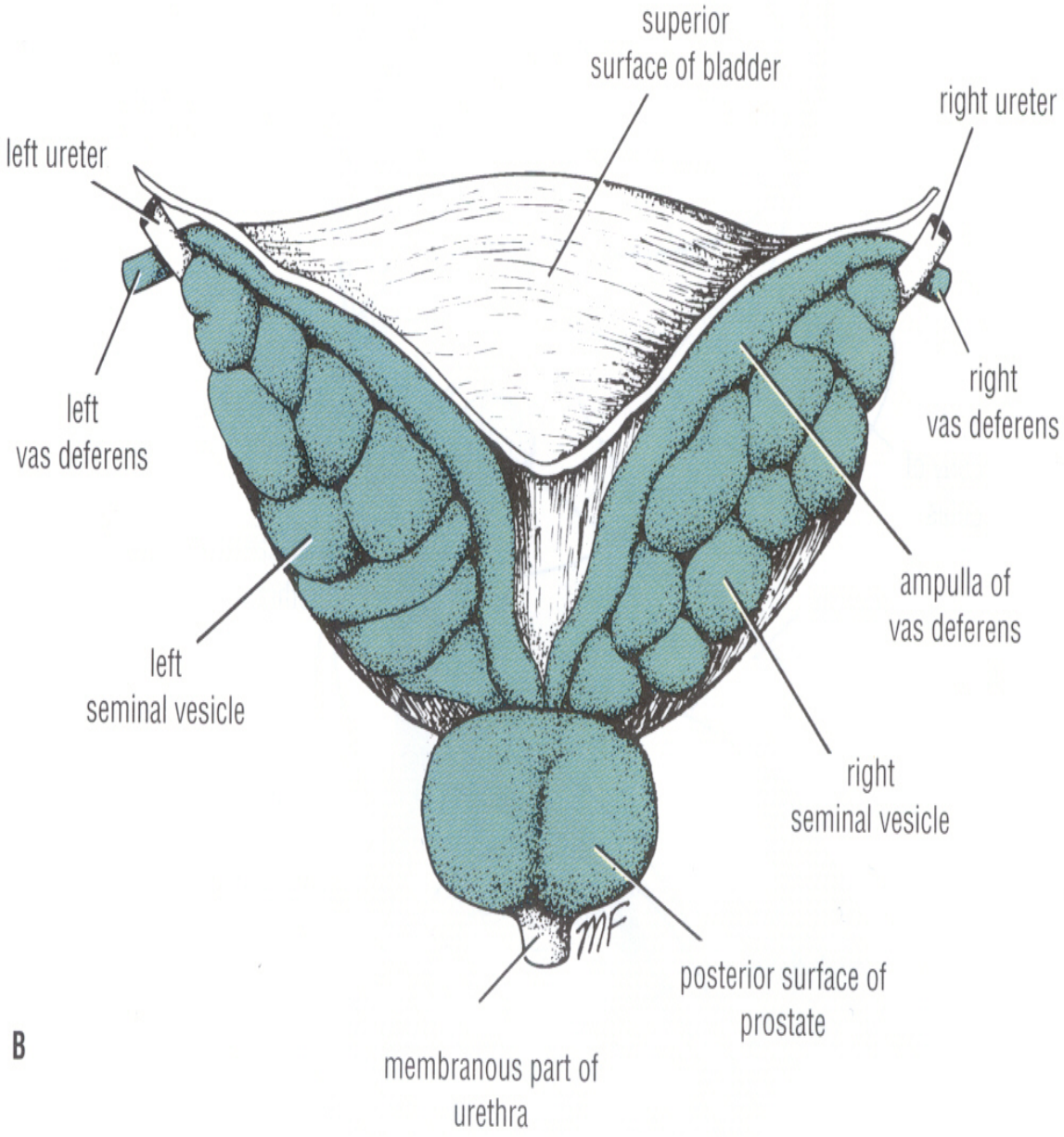
Inferior: Urogenital diaphragm, (UGD).

Lateral: Medial margins of levator ani muscles (levator prostate)



Vas Deferens

- A Muscular tube 45 cm long.
- Carries sperms from the Epididymis to pelvic cavity.
- Passes through the inguinal canal
- It crosses the ureter
- Its terminal part is dilated to form the Ampulla of the vas
- It joins the urethra in the prostate



Identify the labeled structures:

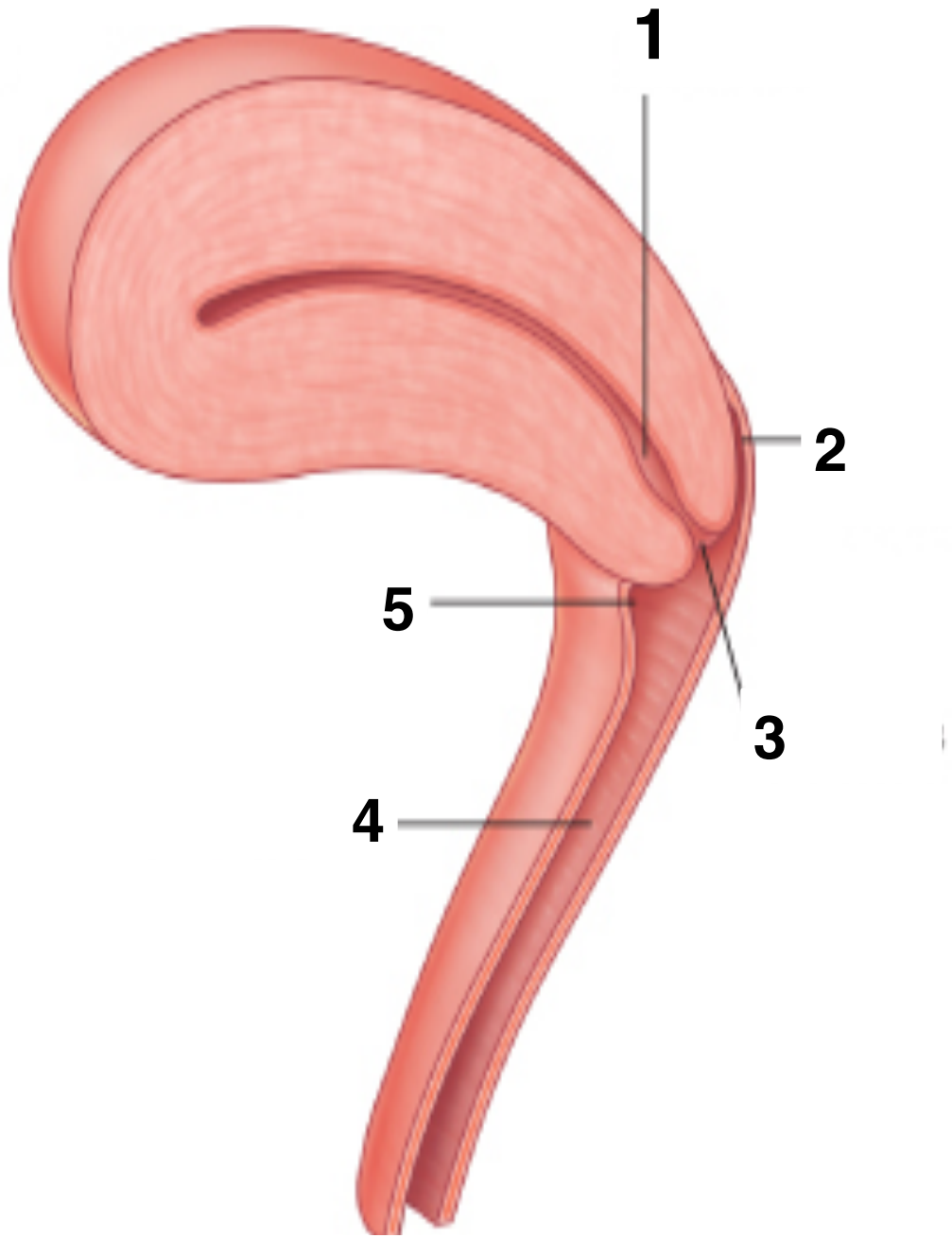
1—Cervial canal.

2—Posterior fornix.

3—External os.

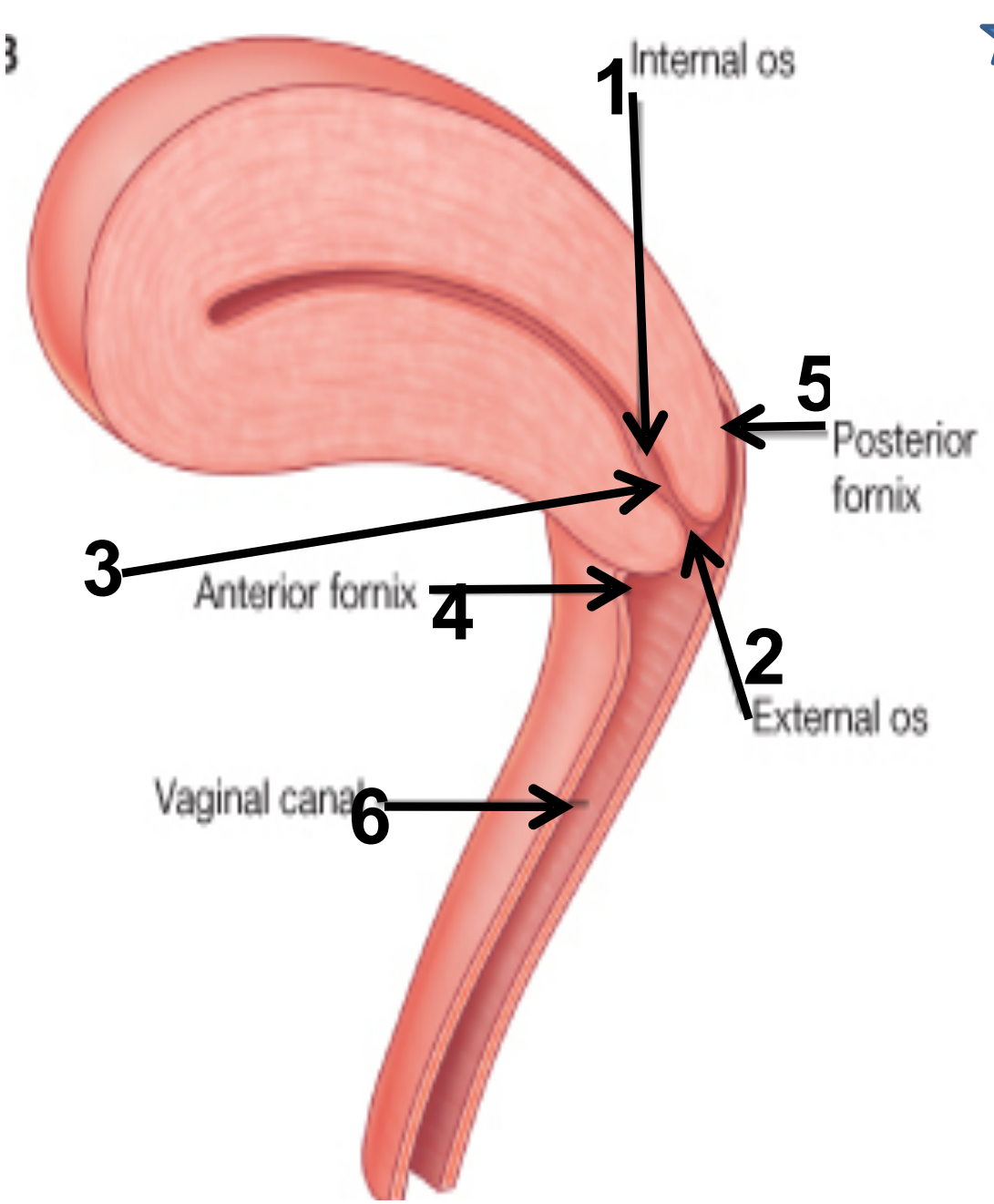
4—vagina.

5— Anterior fornix.



Q:-Identify the labeled structures :-

1- internal OS of cervix
2- external OS of cervix
3- cervical canal
4- Anterior fornix
5- posterior fornix
6- Vaginal canal



Identify the labeled structures:

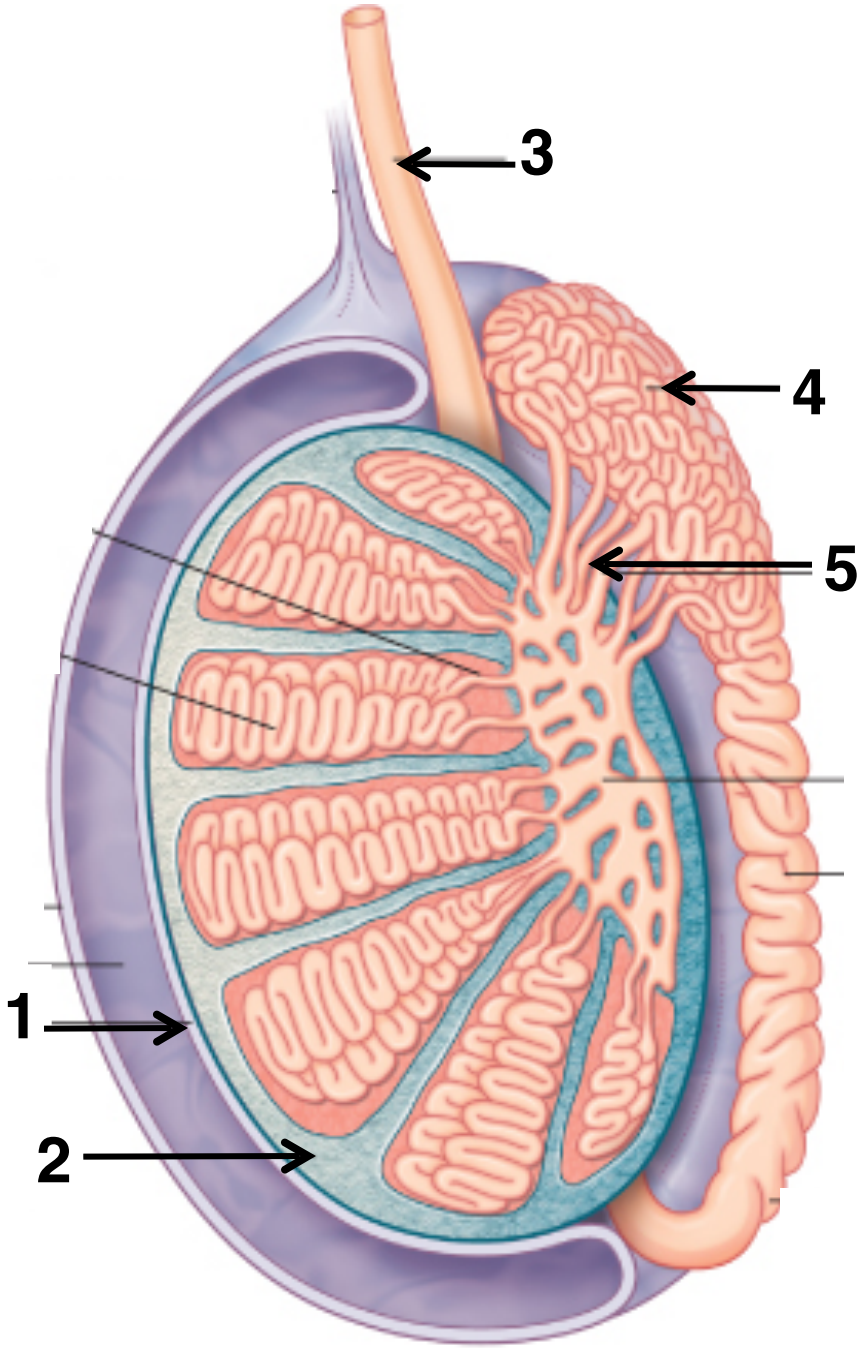
1—Tunica vaginalis.

2—Tunica albuginea.

3—Vas deference.

4—Head of the epididymis.

5—Efferent ductules (vasa efferentia).



Q:-Identify the labeled structures:-

1- Tunica Vaginalis or cavity of tunica vaginalis. It is Peritoneal covering, formed of parietal and visceral layers.

2- Tunica Albuginea (posterior aspect of testis and thickened to make septa that separates the testis into around 250 lobules. Each lobule contains 1-3 seminiferous tubules (60 cm) which are the sites of spermatogenesis .

3- Vas deference

4 -Head of epididymis (superior wall of testis)

5- Vasa efferentia or efferent ductules

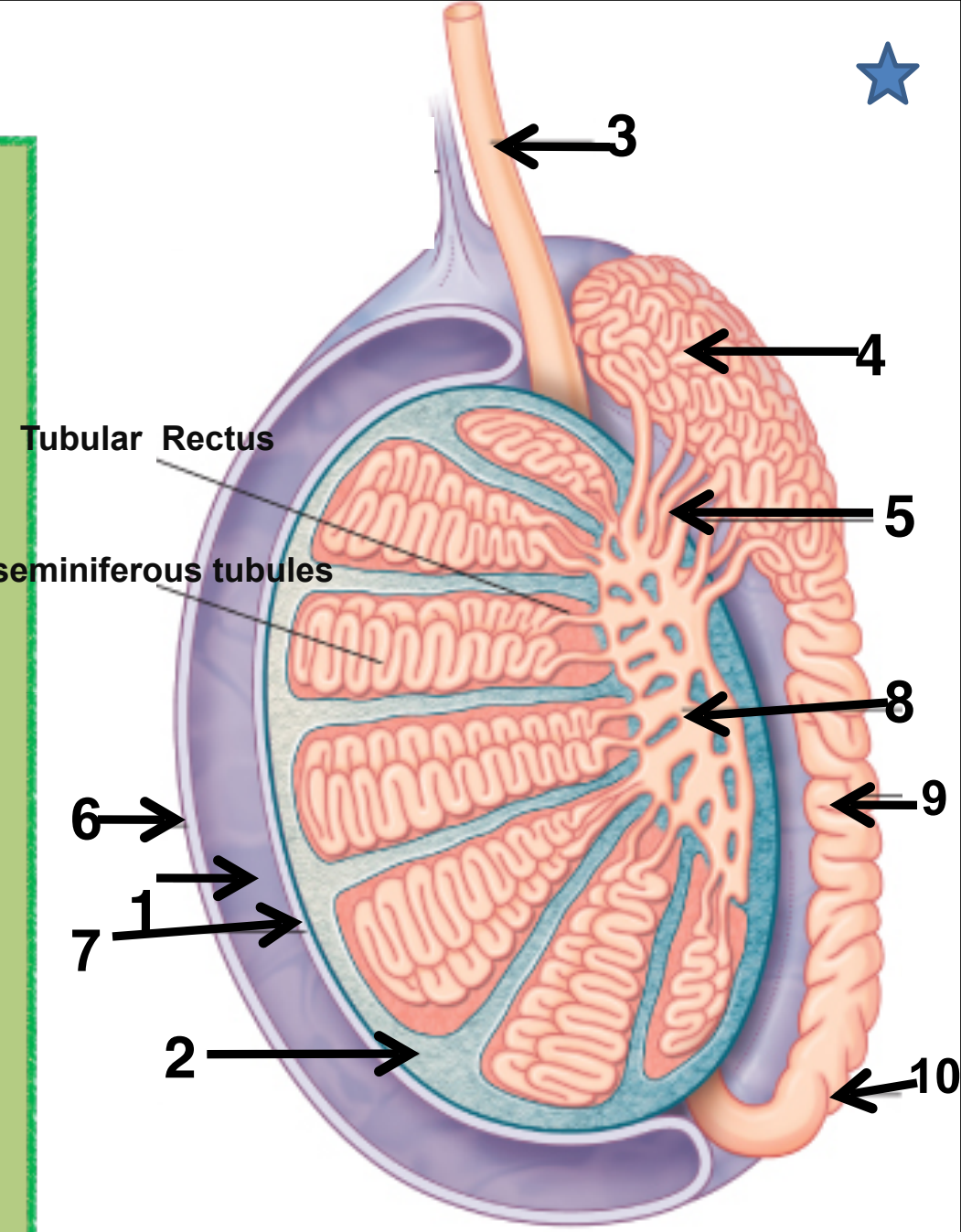
6- Parietal layer of Tunica Vaginalis

7- Visceral layer of Tunica Vaginalis

8- Rete testis

9- Body of epididymis

10- tail of epididymis



Cremasteric reflex:

Nerve involved: Genitofemoral nerve (GFN), (L1,2)
Sensory: femoral branch of (GFN) & Ilioinguinal N.
Motor: genital branch of (GFN).

- Length of epididymis (6 M long)
- seminiferous tubules are the site of the spermatogenesis "around 200 million sperms daily"

Identify the labeled structures:

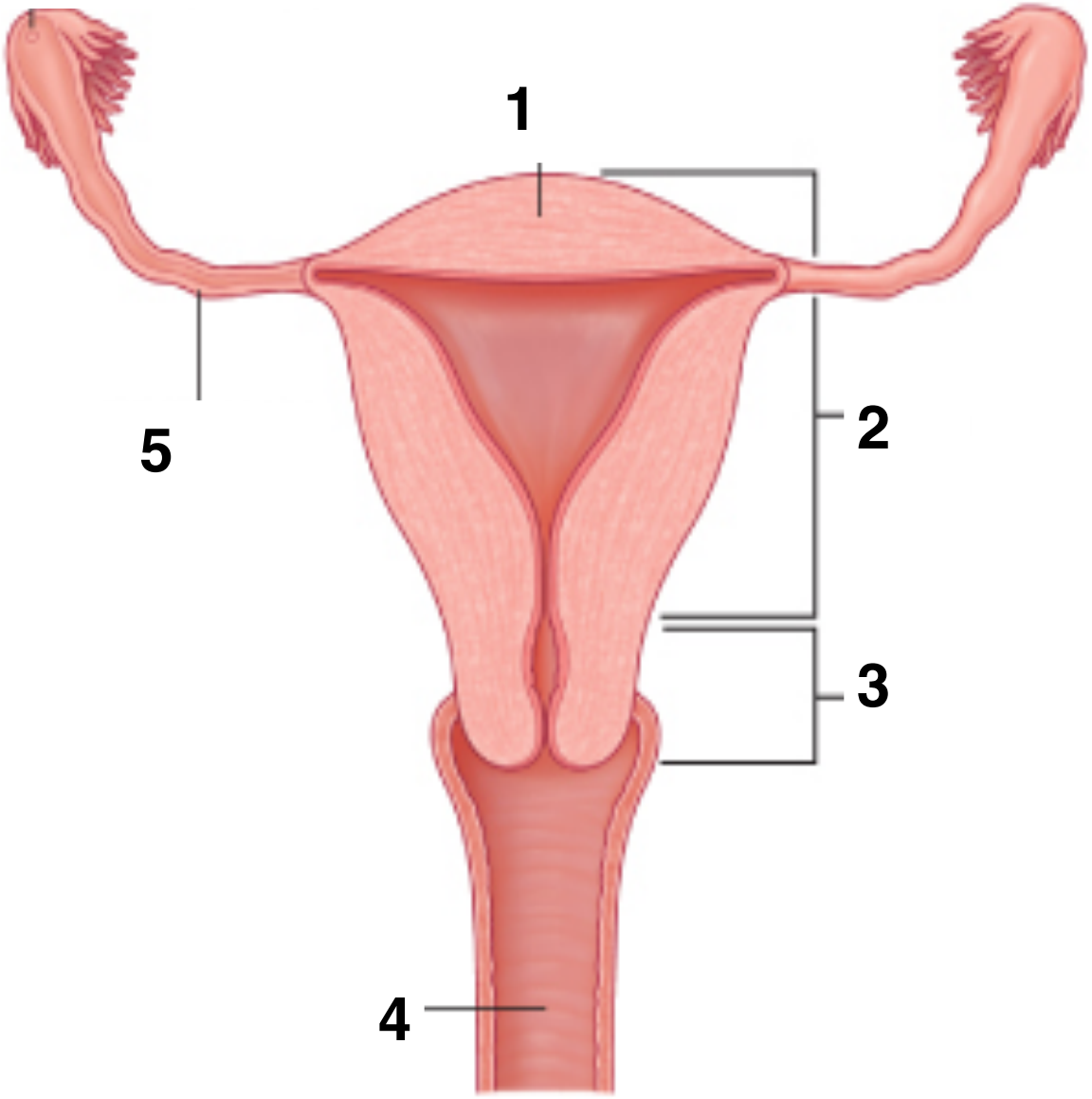
1—Fundus.

2—Body.

3—Cervix.

4—Vagina.

5—Fallopian tube.



Coronary section of the uterus

1- fundus

2- body of the uterus

3- cervix

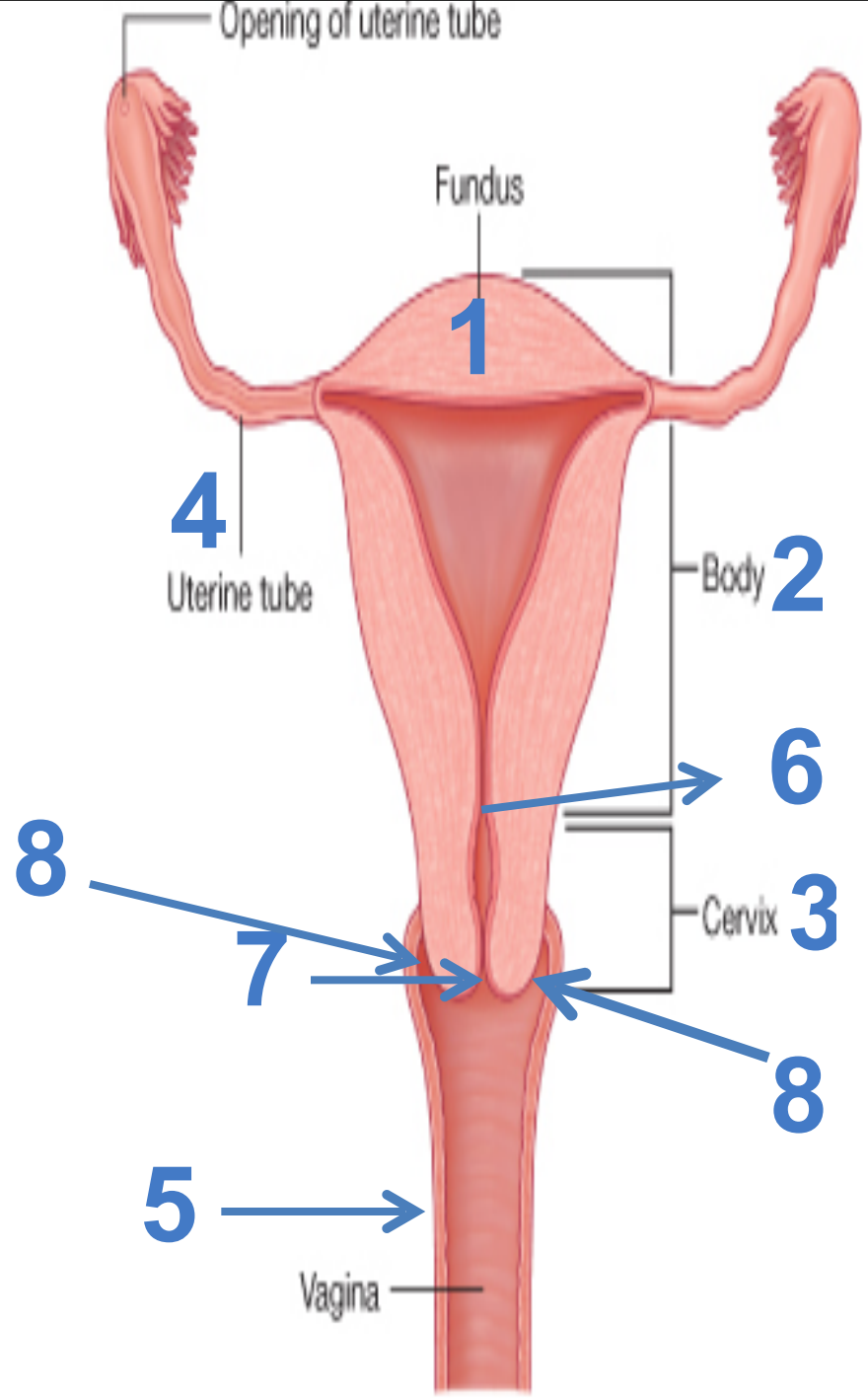
4-uterine tube (10cm)

5 vaginal wall

6- internal OS

7- external OS

8- lateral fornix



Summery of Blood Supply

organ	Artery	Vein
Testis	*Testicular A (from Abdominal Aorta)*	*Pampiniform plexus of veins > Testicular veins:* *Rt into IVC* *Lt into LRV*
Prostate	Inferior Vesical A (from Internal iliac A)	Prostatic Venous Plexus into IIV It is continuous **superiorly** with the vesical venous plexus and **posteriorly** to the internal vertebral venous plexus
Ovary	*Ovarian A (from Abdominal Aorta)*	*Ovarian V.* *Rt into IVC* *Lt into LRV*
Uterine Tube	Ovarian A + Uterine A	Ovarian V + Uterine V
Uterus	*Uterine A (from IIA)*	*Uterine V (IIV)*
Vagina	Vaginal A (from Internal iliac A) Vaginal branch of the uterine A	Vaginal Plexus (into IIV)
Upper half of Anal Canal	*Sup. Rectal A (continuation of Inf. mesentric A)*	*Sup. Rectal V > Inf. Mesentric V (portal circulation)*
Lower half of Anal Canal	Inf. Rectal A (branch of Internal Pudendal A)	Inf. Rectal V > Internal Pudendal V (systemic circulaton; site of portal-systemic anastomosis)

Renal block

Male urethra is 3 part:

Prostatic urethra

Membranous urethra

Penile (spongy) urethra

The longest one is penile urthra

Superior surface:

In males: coils of ileum or sigmoid colon

In females: uterus

Urter :

Near its termination, is crossed by the vas deferens

Base (Posterior surface)of the urinary bladder :

In males: vas deferentia and seminal vesicles

In females: vagina

The neck of the urinary bladder In male, rests on the upper surface of prostate