

UROGENITAL SYSTEM

PELVIC ARTERIES

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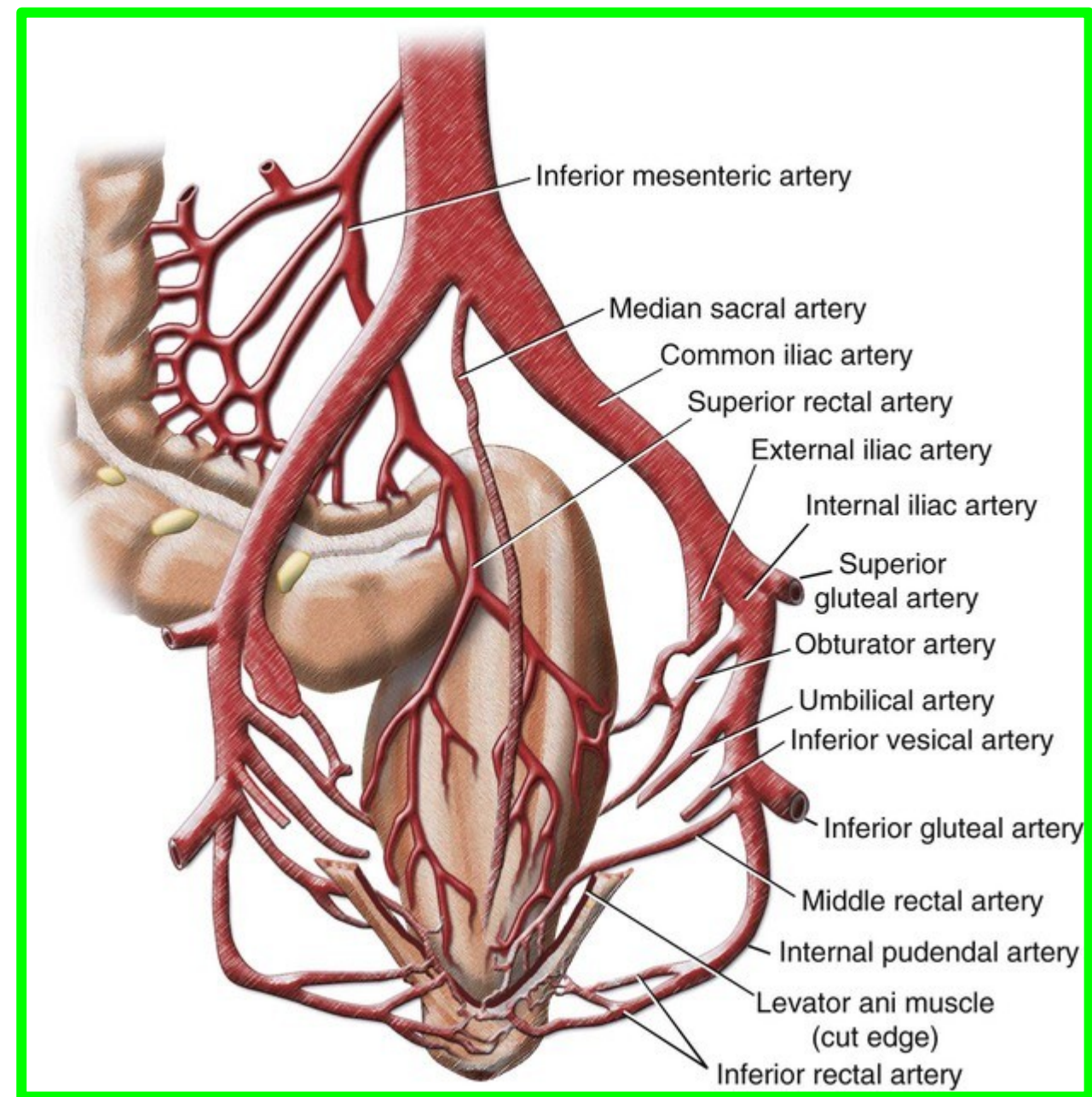
2024-2025

Monday 19 May 2025

PELVIC ARTERIES

Six main arteries enter the lesser pelvis of females:

- ✓ The paired **internal iliac**
 - ✓ The paired **Ovarian arteries**
 - ✓ The unpaired **median sacral**
 - ✓ The unpaired **superior rectal arteries.**
- ❖ Since the **testicular arteries** do not enter **the lesser pelvis**, only **four main arteries** enter the lesser pelvis of males.

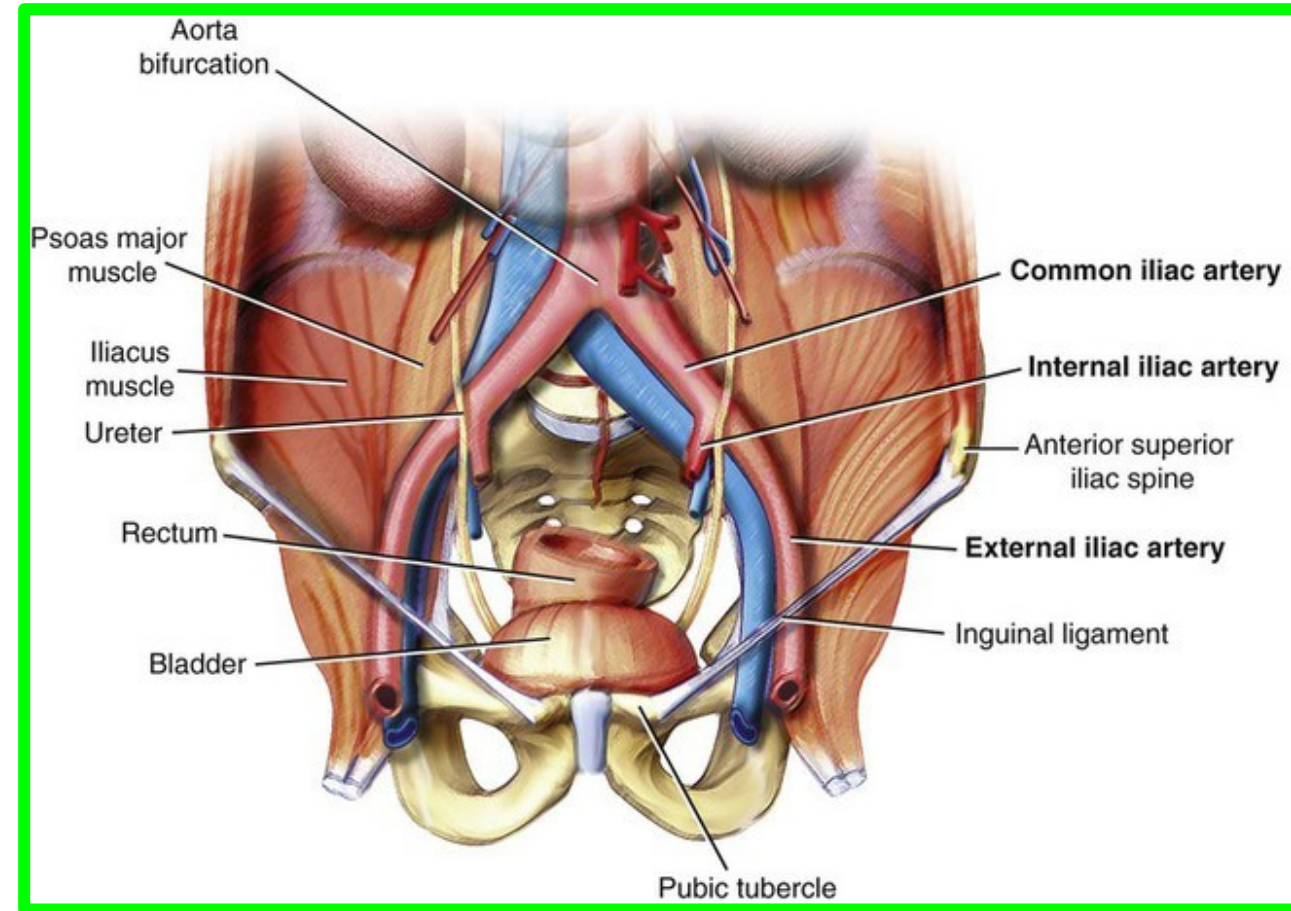


INTERNAL ILIAC ARTERY

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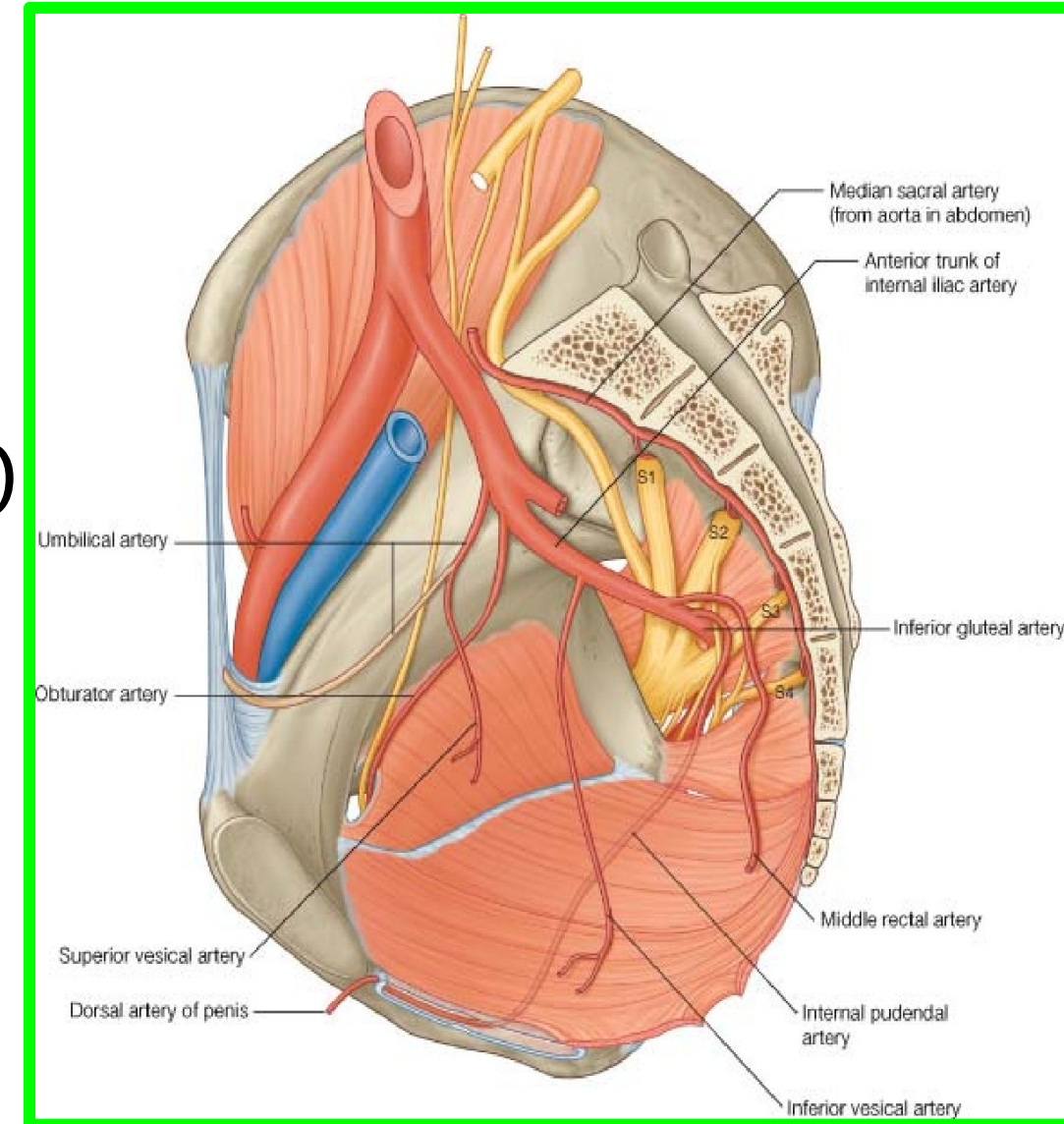
- ❑ Is the principal artery of the pelvis
- ❑ Approximately **4 cm** long
- ❑ Begins as the **common iliac artery** and bifurcates into **the internal** and **external iliac arteries**
- ❑ Begins at the level of the IV disc between the **L5** and **S1 vertebrae**



- ❑ The internal iliac artery is separated from **the sacroiliac joint** by the **internal iliac vein** and **the lumbosacral trunk**.

BRANCHES OF ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

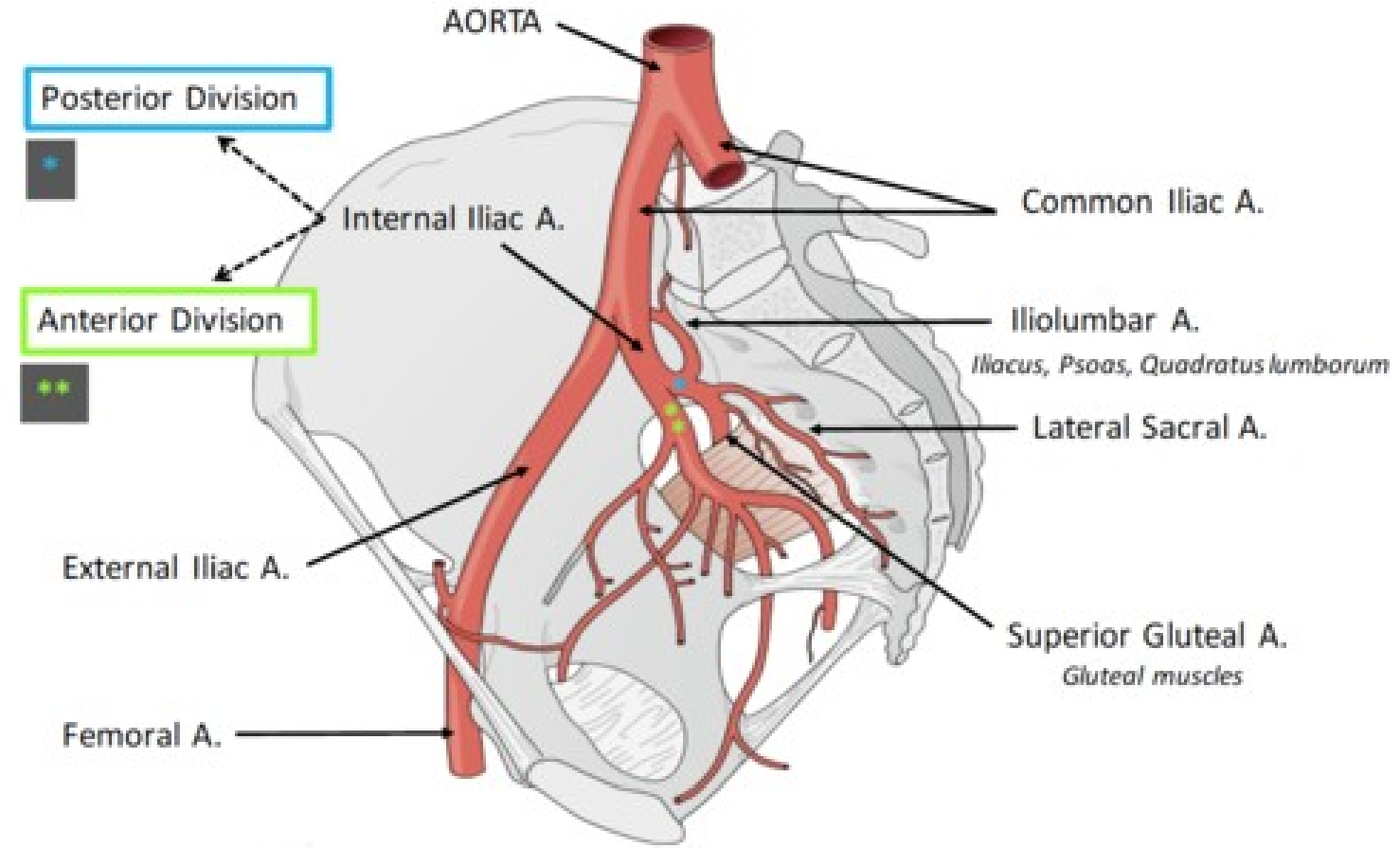
- ❖ Umbilical
- ❖ Obturator
- ❖ Middle rectal
- ❖ Superior vesical
- ❖ Uterine (♀)
- ❖ Inferior vesical (often vaginal in females)
- ❖ Inferior gluteal arteries
- ❖ Internal Pudendal



BRANCHES OF POSTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

- ❖ The iliolumbar artery
- ❖ The lateral sacral artery
- ❖ The superior gluteal artery

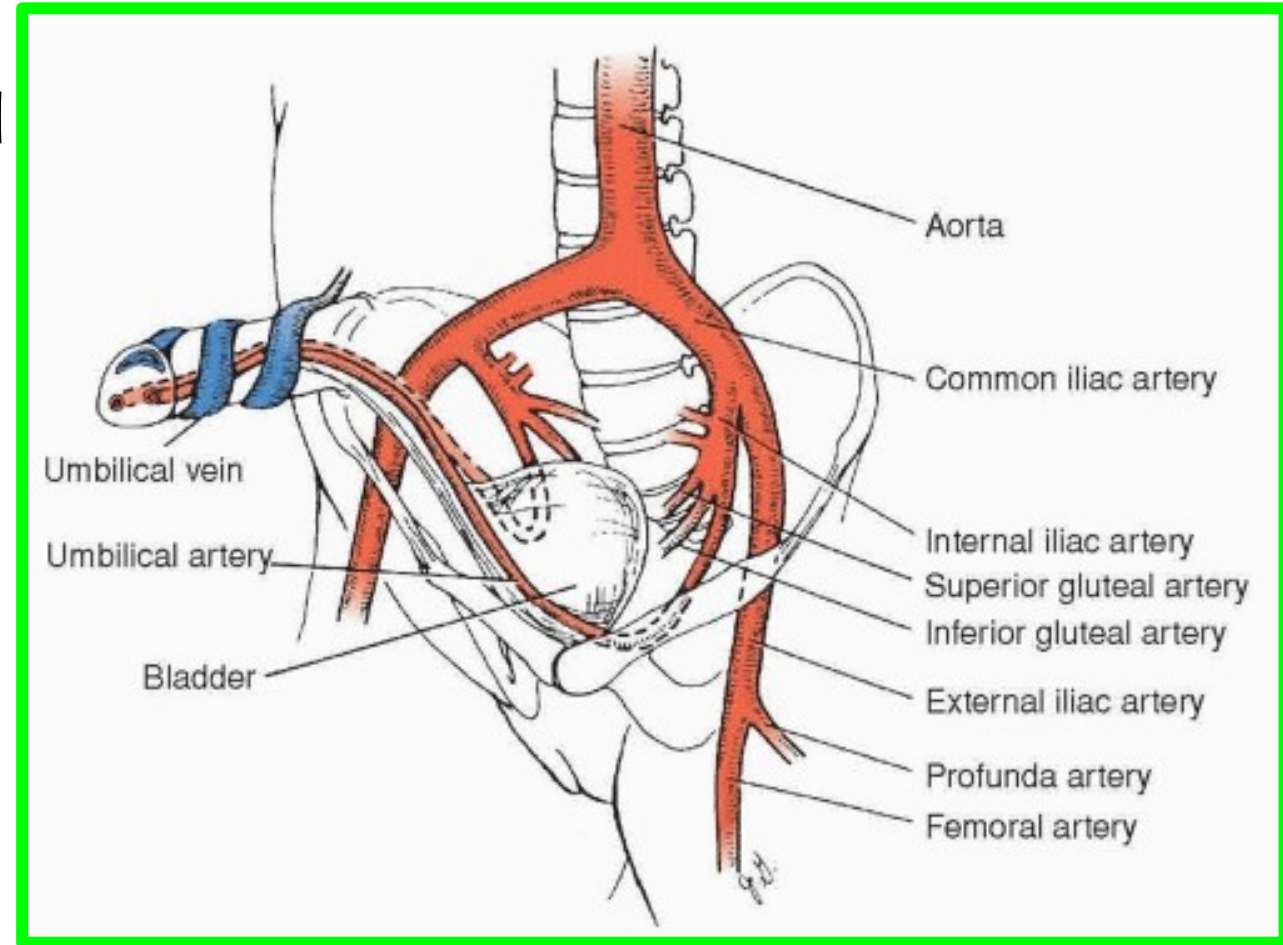
The Blood Supply to the Pelvis



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

1. Umbilical artery

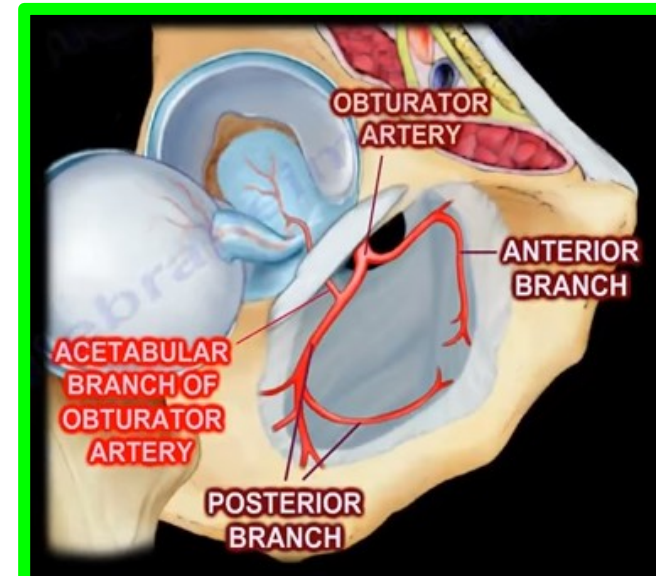
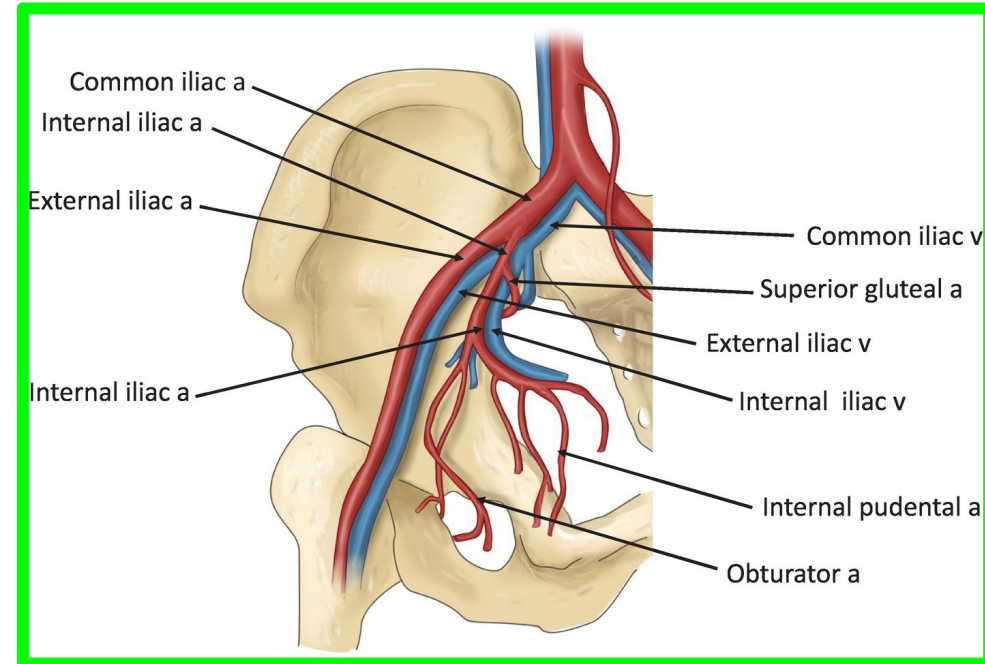
- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Short pelvic course; obliterates after origin of **superior vesical artery**
- ✓ **Distribution:** Via **superior vesical artery**



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

2. Obturator artery

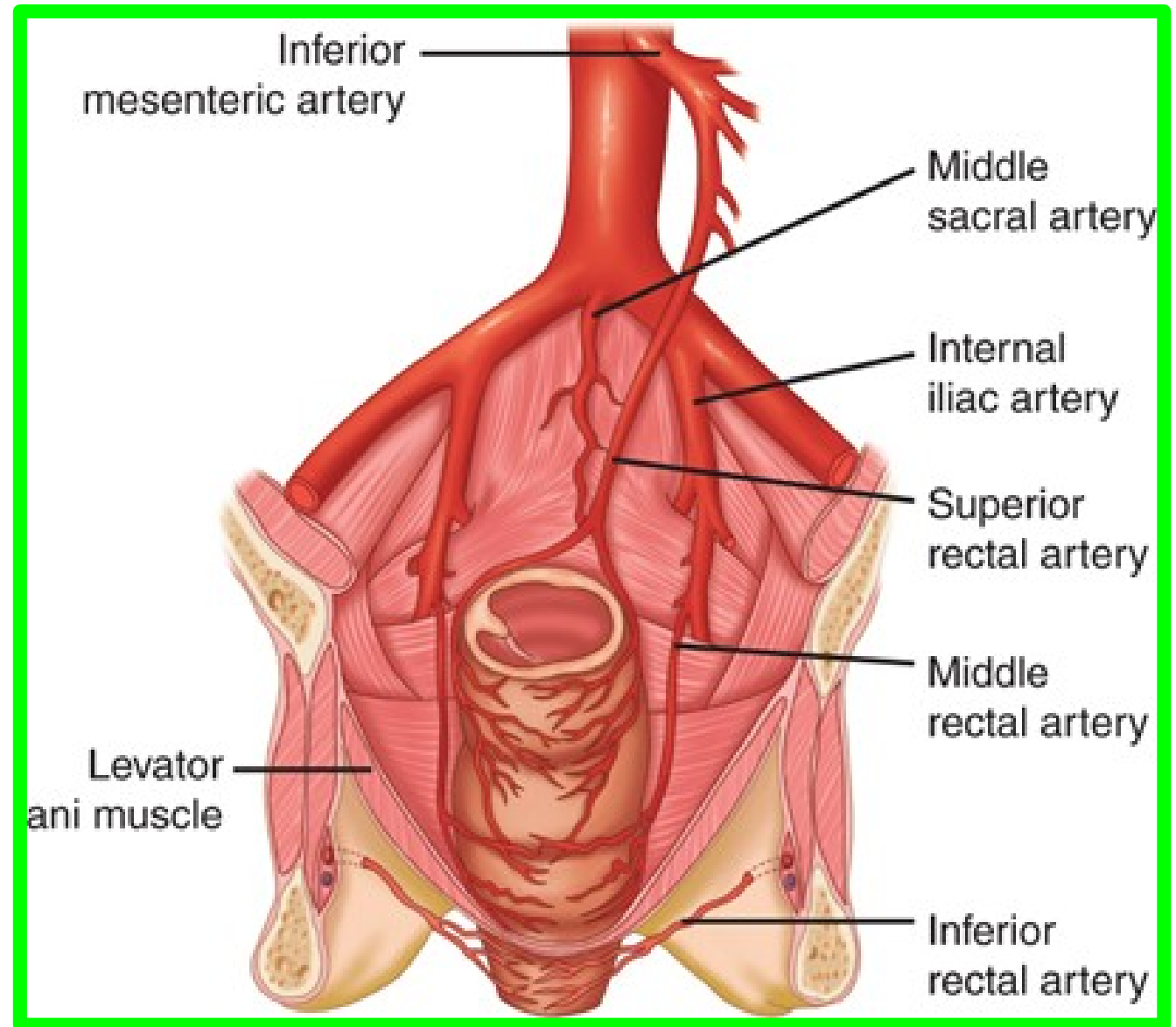
- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Runs antero-inferiorly on lateral pelvic wall
- ✓ **Distribution:** Pelvic muscles, nutrient artery to ilium, and head of femur and muscles of medial compartment of thigh



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

3. Middle Rectal artery

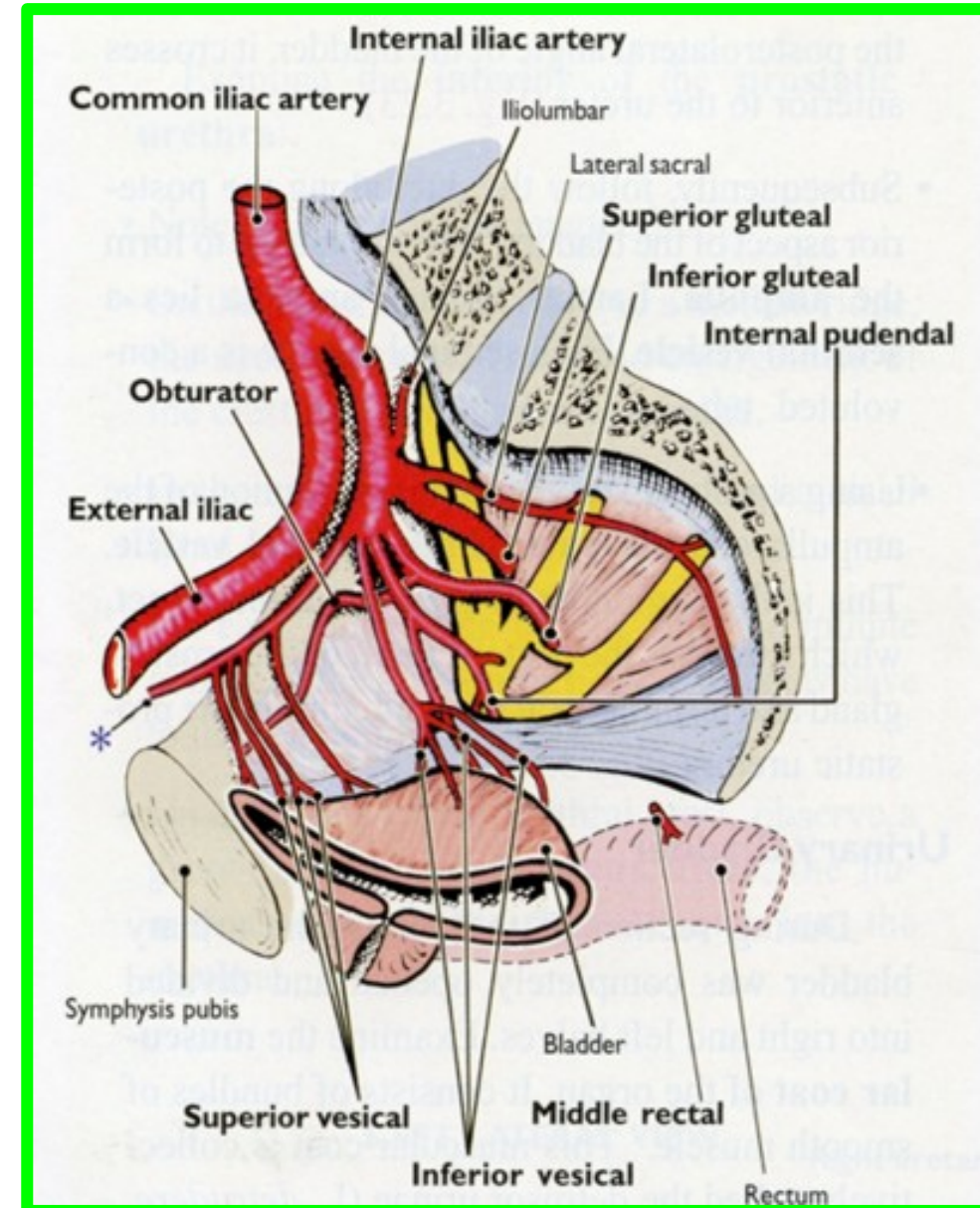
- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Descends in pelvis to rectum
- ✓ **Distribution:** Inferior part of rectum, seminal glands, prostate (vagina)



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

4. Superior vesical artery

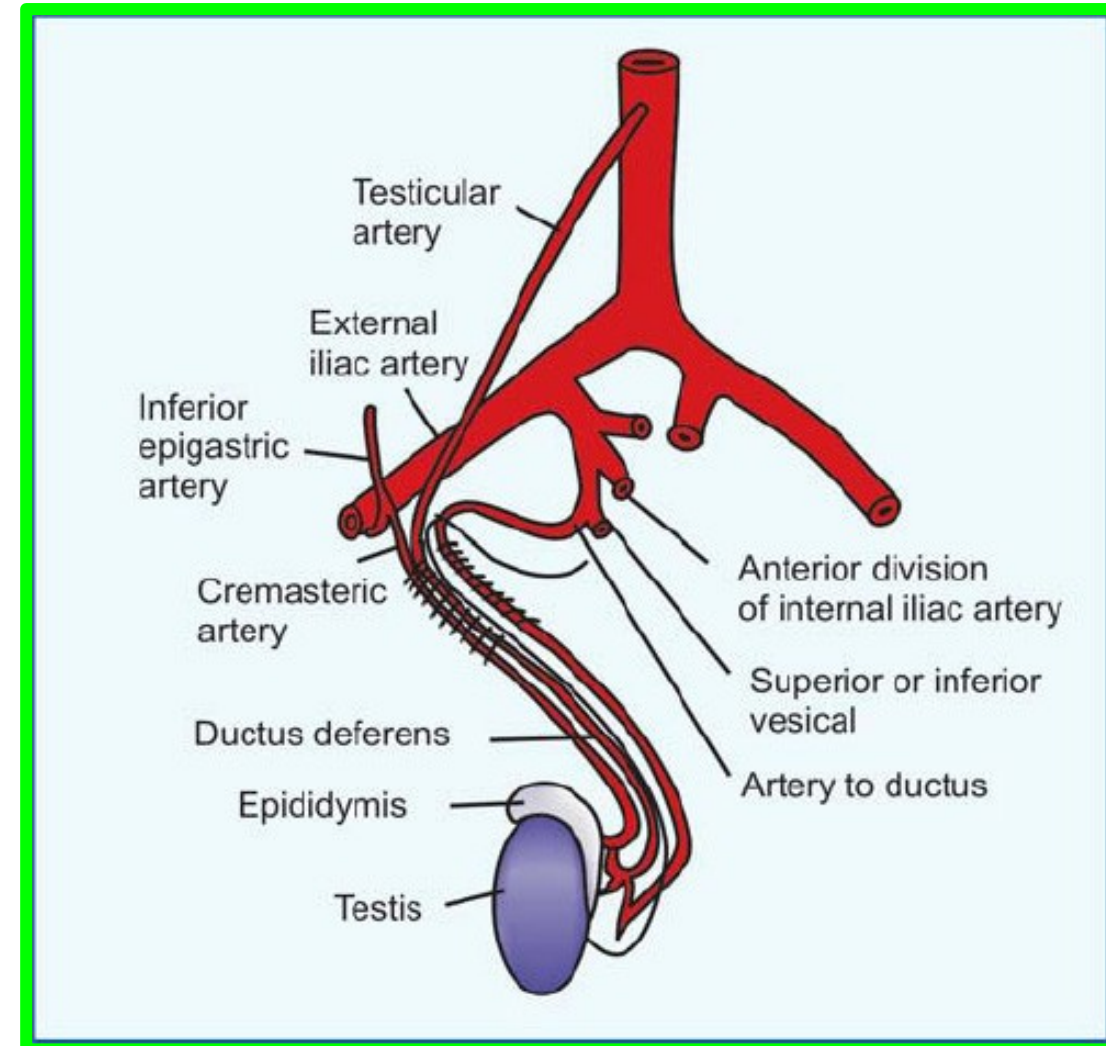
- ✓ **Origin:** Patent part of umbilical artery
- ✓ **Course:** Usually multiple; Passes to superior aspect of urinary bladder
- ✓ **Distribution:** Superior aspect of urinary bladder; in some males, ductus deferens (via artery to ductus deferens)



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

4. 1. Artery to ductus deferens

- ✓ **Origin:** Superior or inferior vesical artery
- ✓ **Course:** Runs subperitoneally to ductus deferens
- ✓ **Distribution:** Ductus deferens

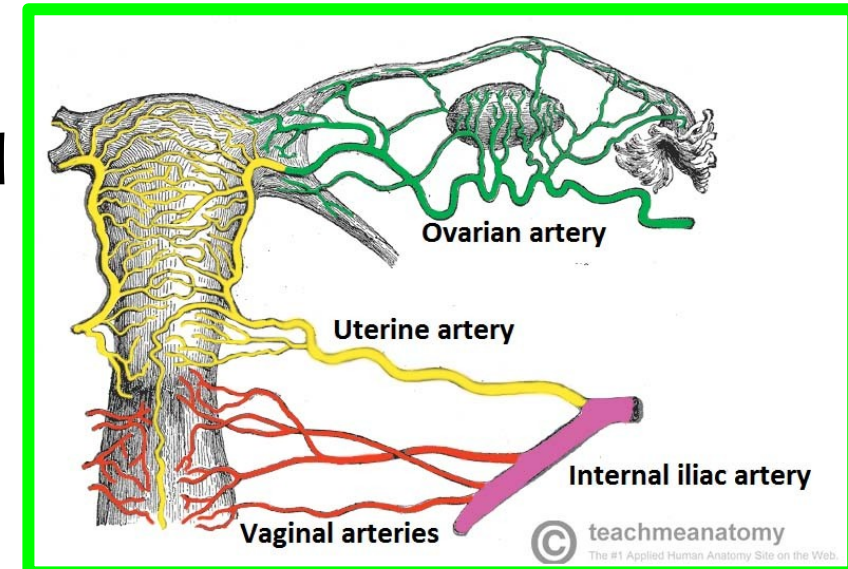
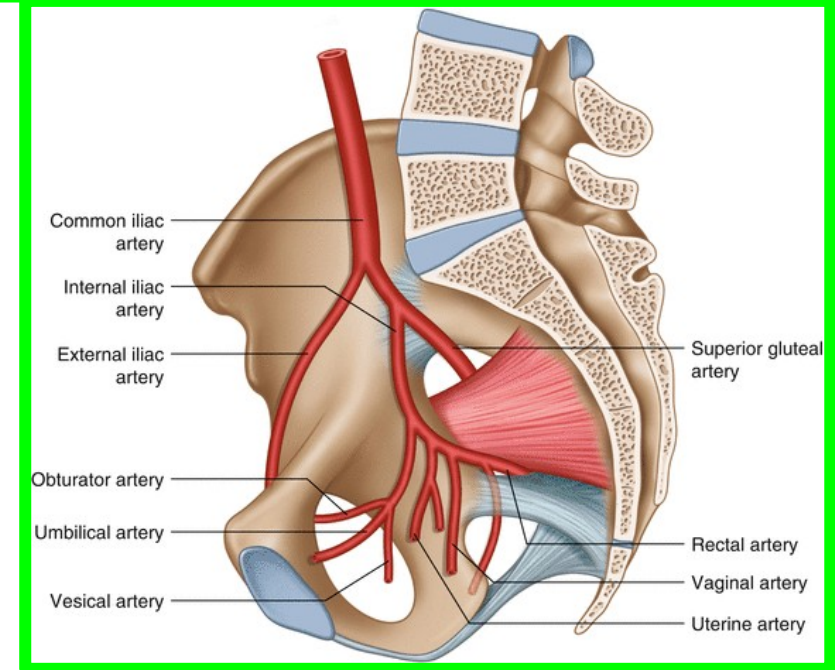


ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

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5. Uterine artery

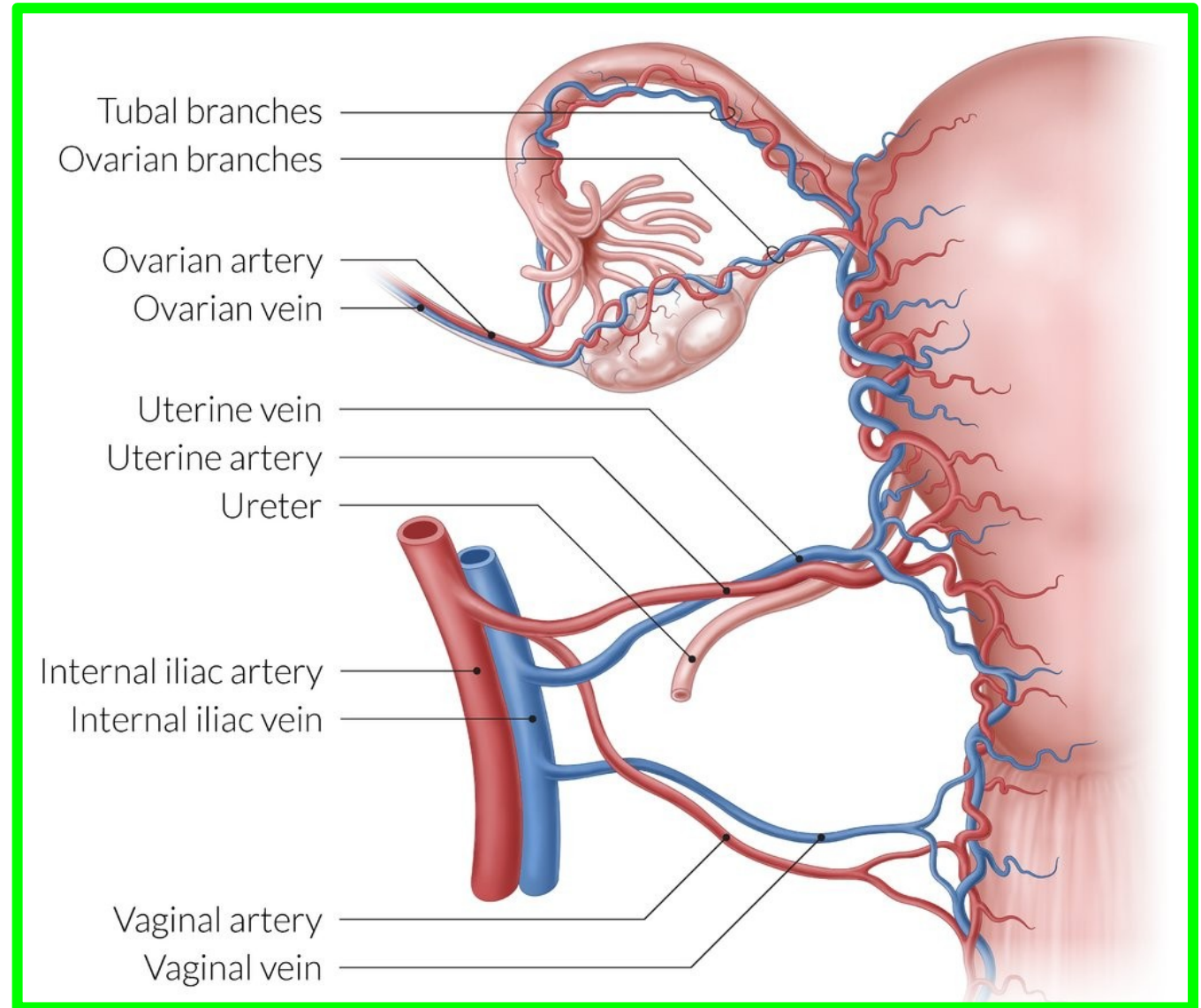
- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Runs anteromedially in base of broad ligament/superior cardinal ligament, **gives rise to vaginal branch**, then crosses ureter superiorly to reach lateral aspect of uterine cervix
- ✓ **Distribution:** **Uterus**, ligaments of uterus, medial parts of **uterine tube** and **ovary**, and **superior vagina**



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

5. 1. Vaginal artery

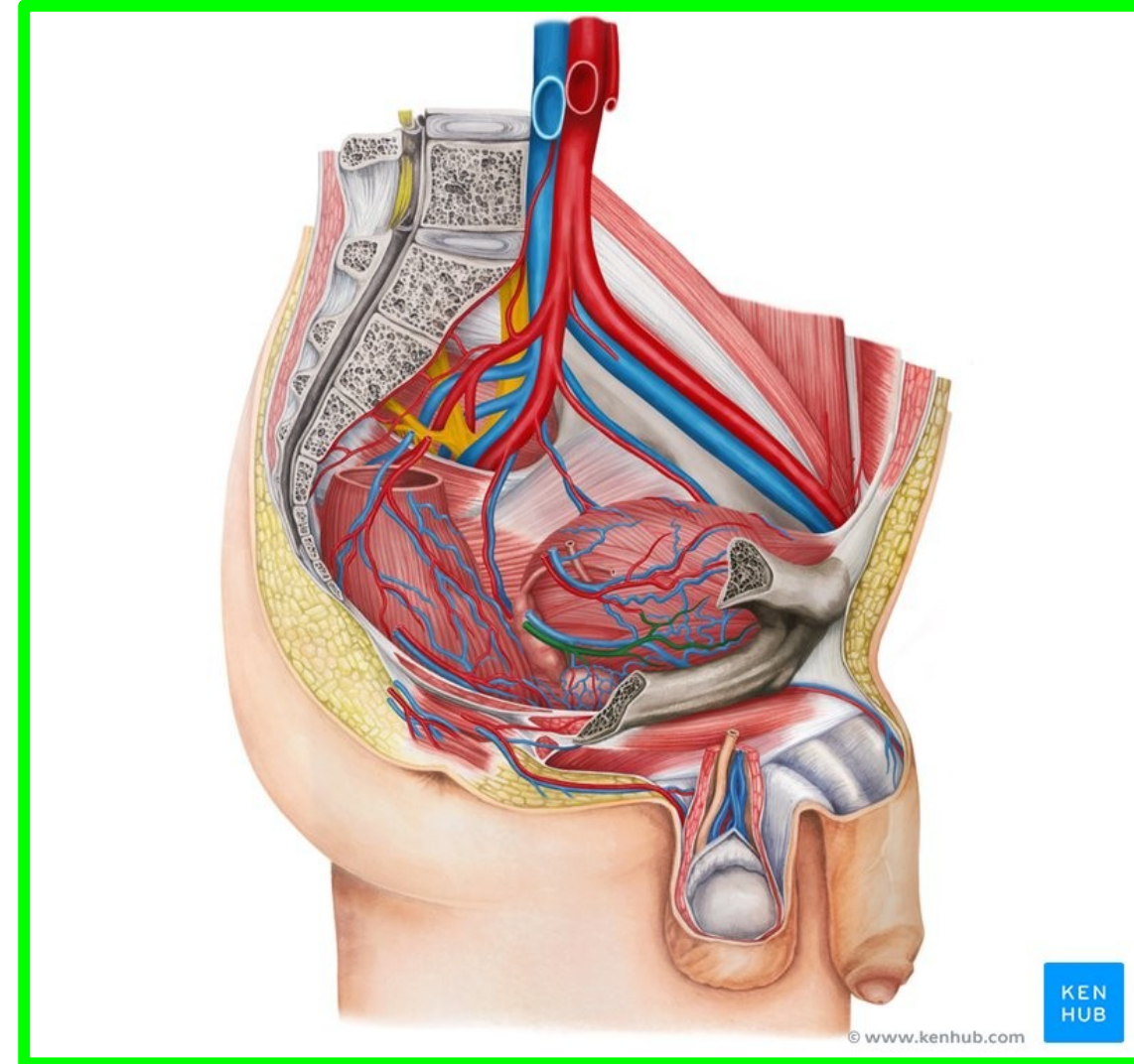
- ✓ **Origin:** Uterine artery
- ✓ **Course:** At junction of body and cervix of uterus, it descends to vagina
- ✓ **Distribution:**
 - ❖ **Vaginal branch:** lower vagina, vestibular bulb, and adjacent rectum;
 - ❖ **Inferior vesical branch:** fundus of urinary bladder



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

6. Inferior vesical artery

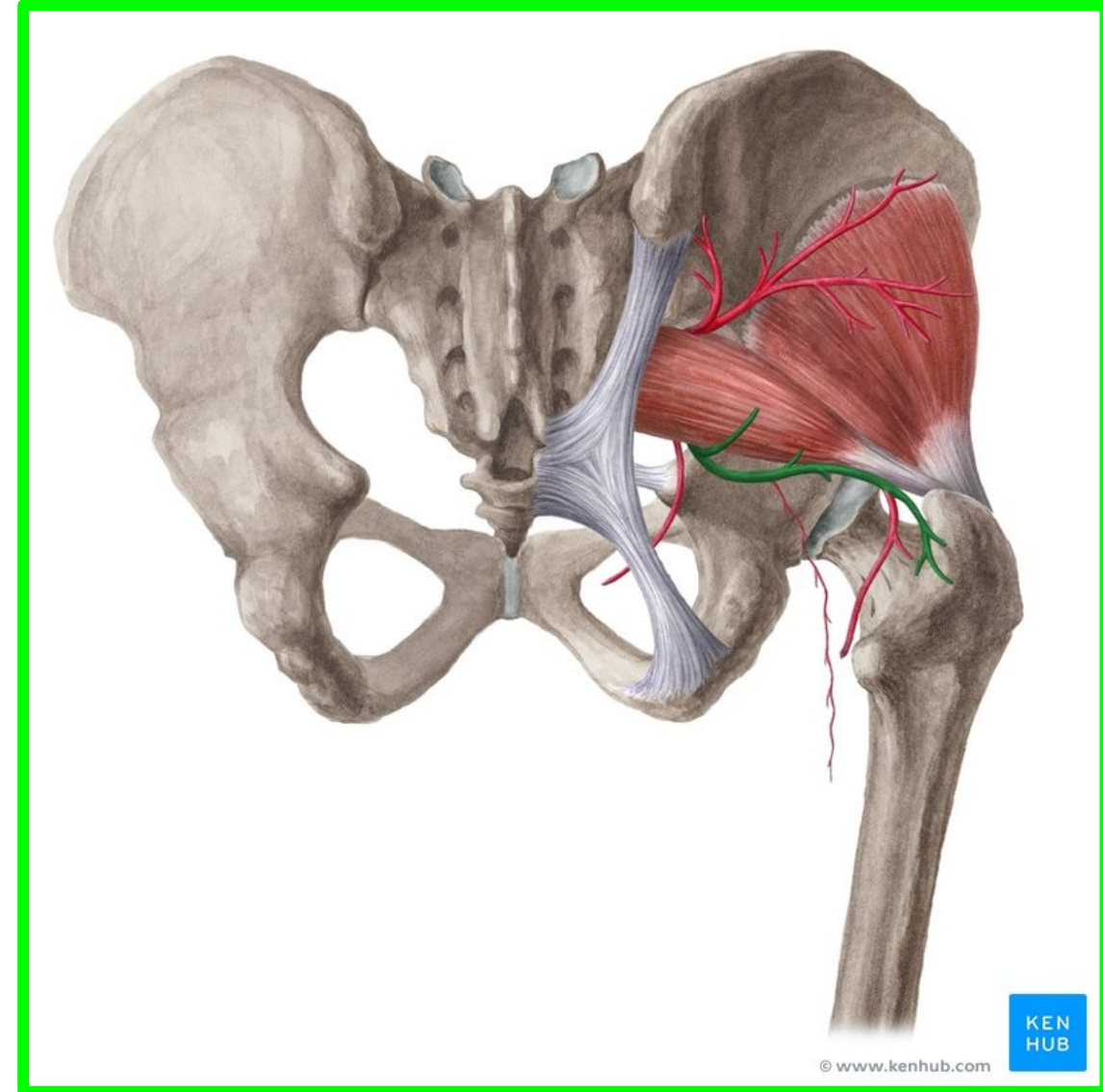
- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Passes subperitoneally to inferior aspect of male urinary bladder
- ✓ **Distribution:** Urinary bladder and pelvic part of ureter, seminal gland, and prostate in males



ANTERIOR DIVISION OF INTERNAL ILIAC ARTERY.

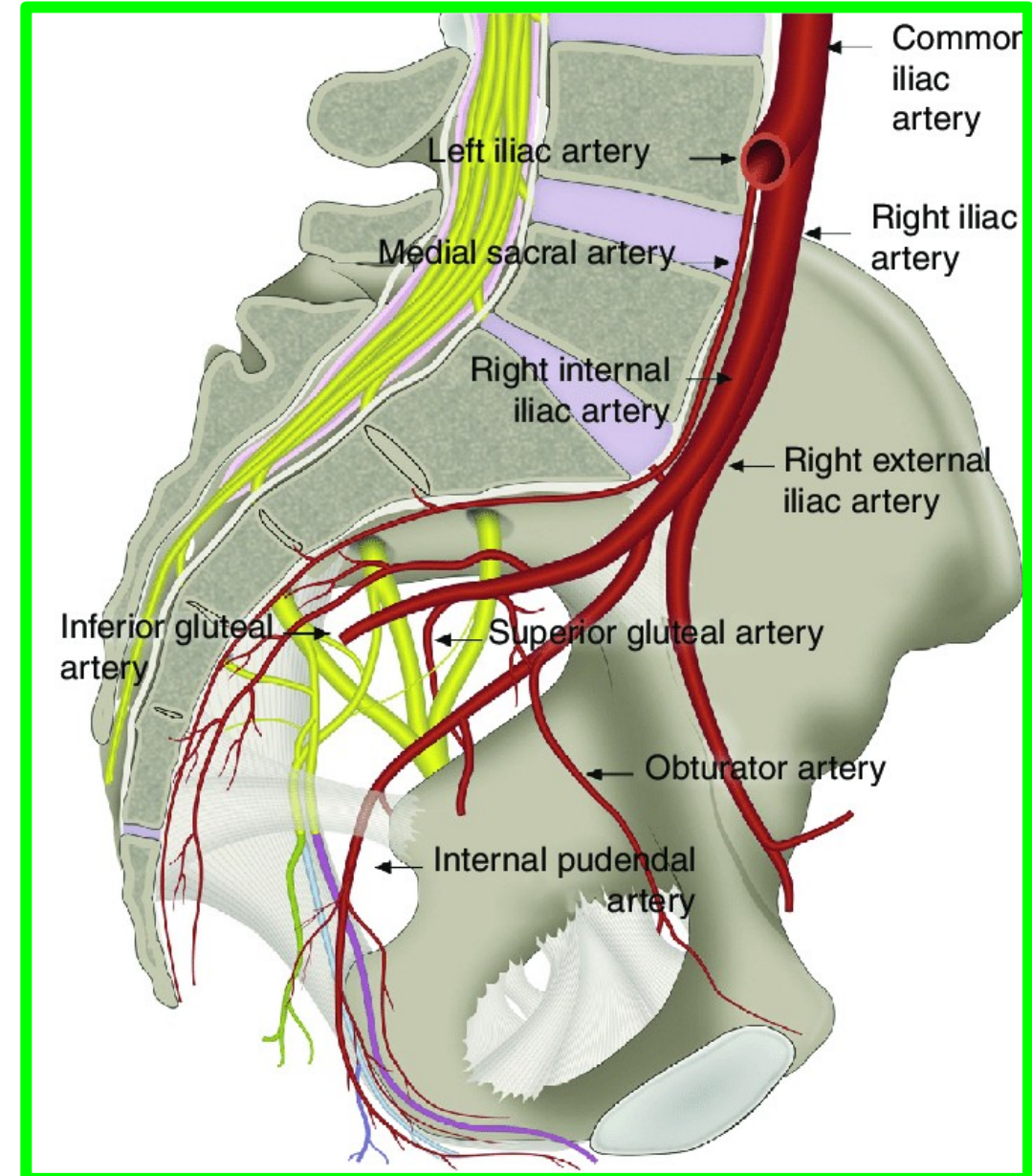
7. Inferior gluteal artery

- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Leaves pelvis through greater sciatic foramen inferior to piriformis
- ✓ **Distribution:** Piriformis, coccygeus, levator ani, and gluteal muscles



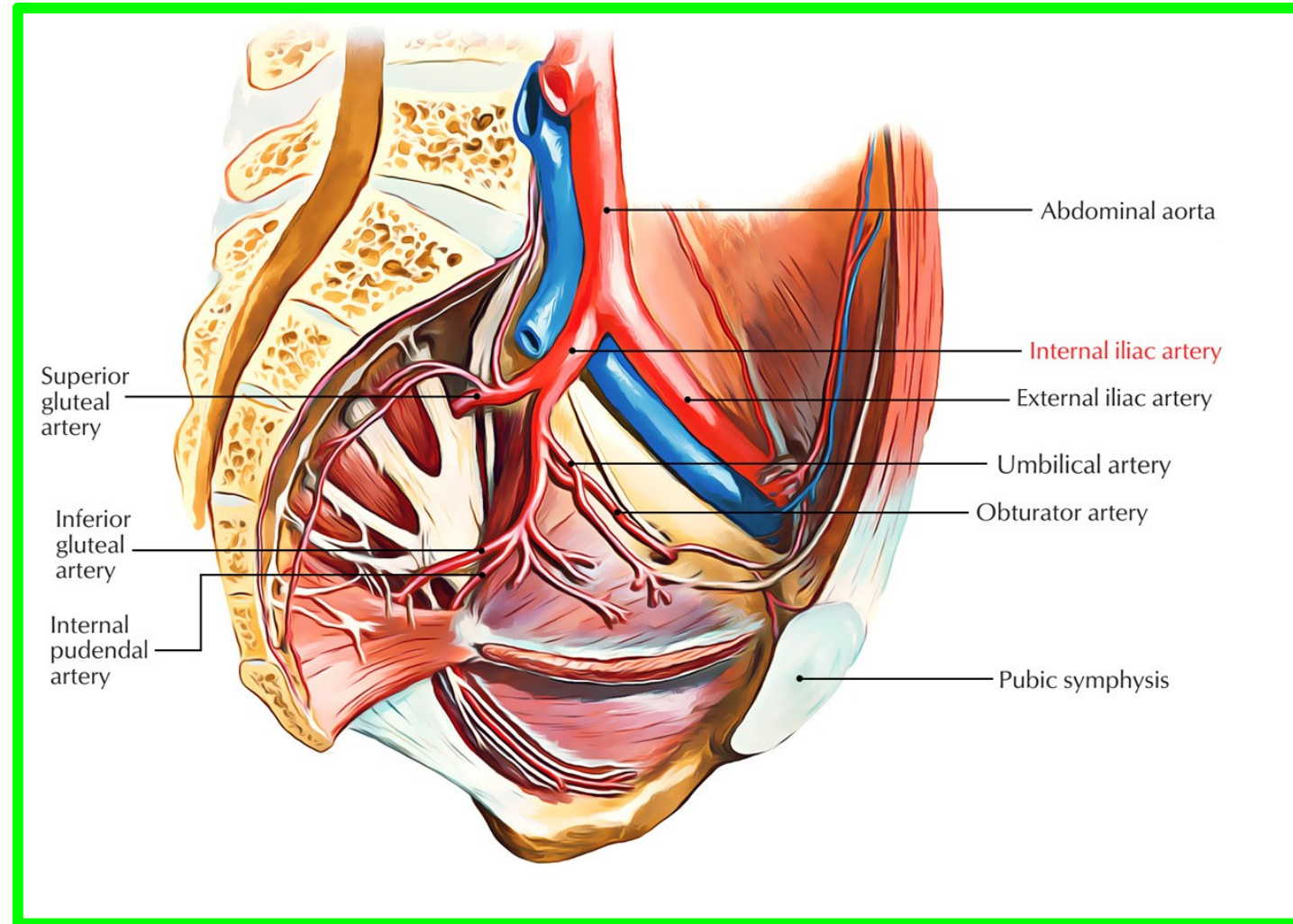
8. Internal pudendal artery

- ✓ **Origin:** Anterior division of internal iliac artery
- ✓ **Course:** Leaves pelvis through greater sciatic foramen and enters perineum (ischio-anal fossa) by passing through lesser sciatic foramen
- ✓ **Distribution:** Main artery to perineum, including muscles of anal canal and perineum; skin and urogenital triangle; erectile bodies



Posterior division of internal iliac artery

- ✓ **Origin:** Internal iliac artery
- ✓ **Course:** Passes posteriorly and gives rise to parietal branches
- ✓ **Distribution:** Pelvic wall and gluteal region

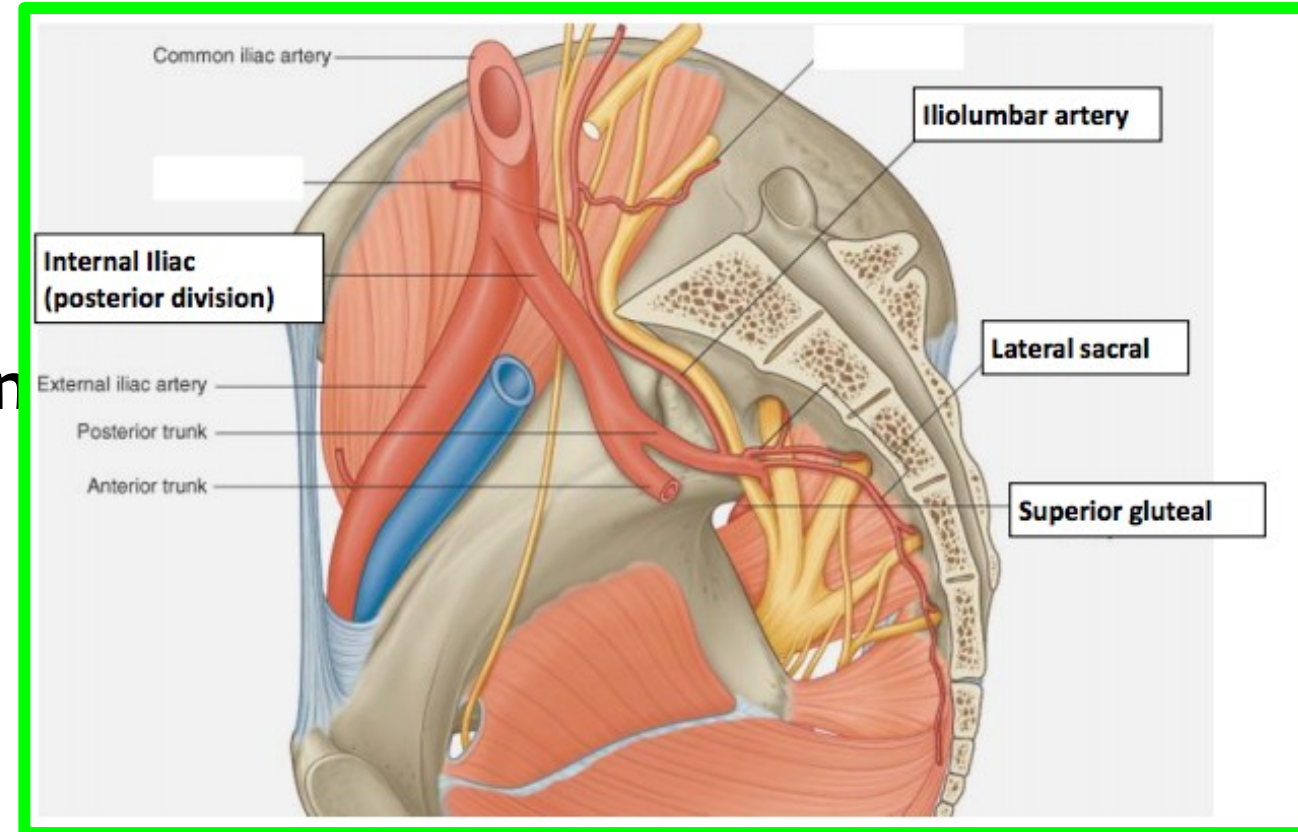


Posterior division of internal iliac artery

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1. Iliolumbar Artery

- ✓ **Origin:** Posterior division of internal iliac artery
- ✓ **Course:** Ascends anterior to sacroiliac joint and posterior to common iliac vessels and psoas major
- ✓ **Distribution:** Iliacus, psoas major, quadratus lumborum muscles, and cauda equina in vertebral canal



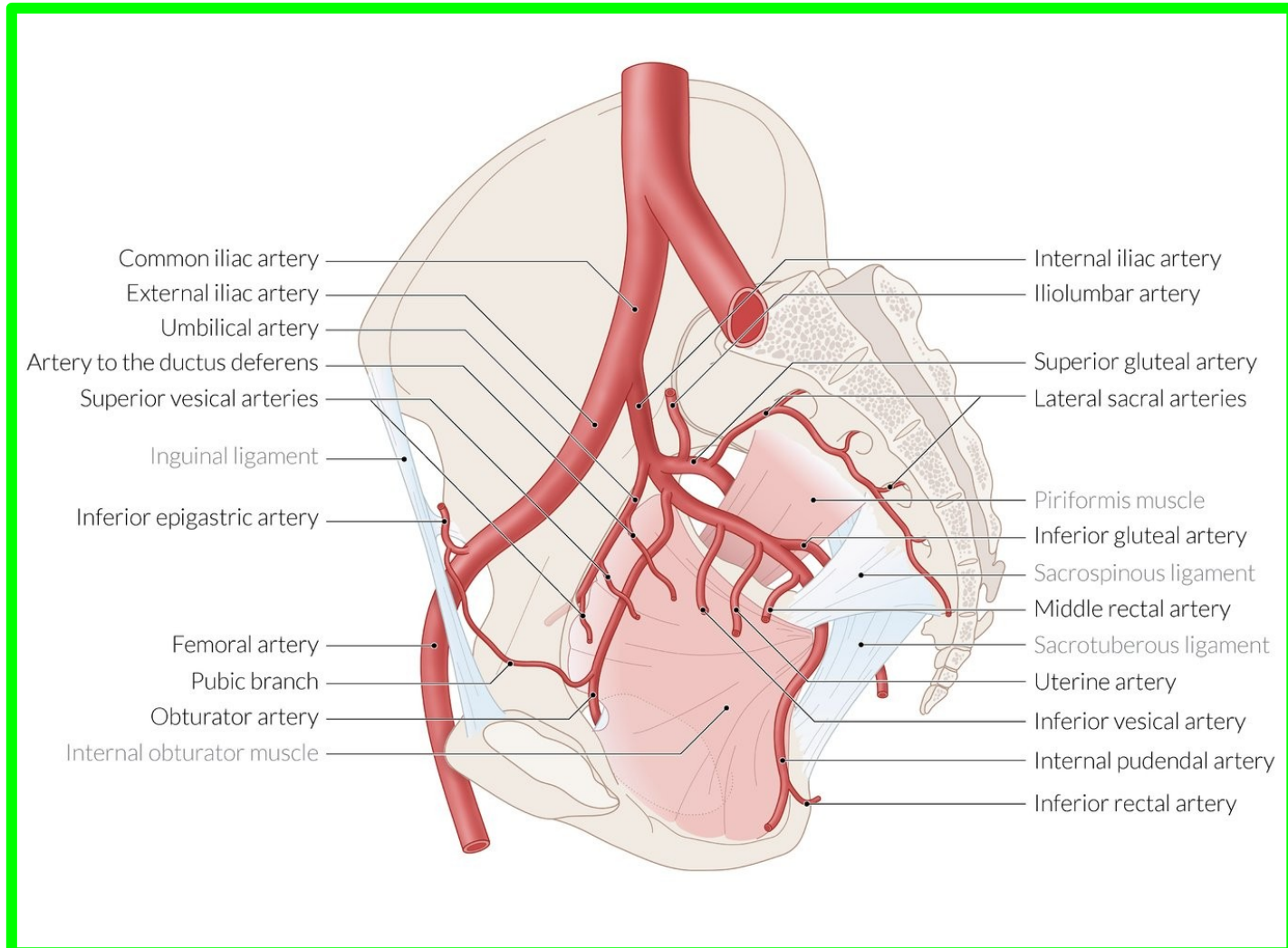
Posterior division of internal iliac artery

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2. Lateral sacral (superior and inferior) Artery

- ✓ **Origin:** Posterior division of internal iliac artery
- ✓ **Course:** Run on superficial aspect of piriformis
- ✓ **Distribution:** Piriformis and vertebral canal

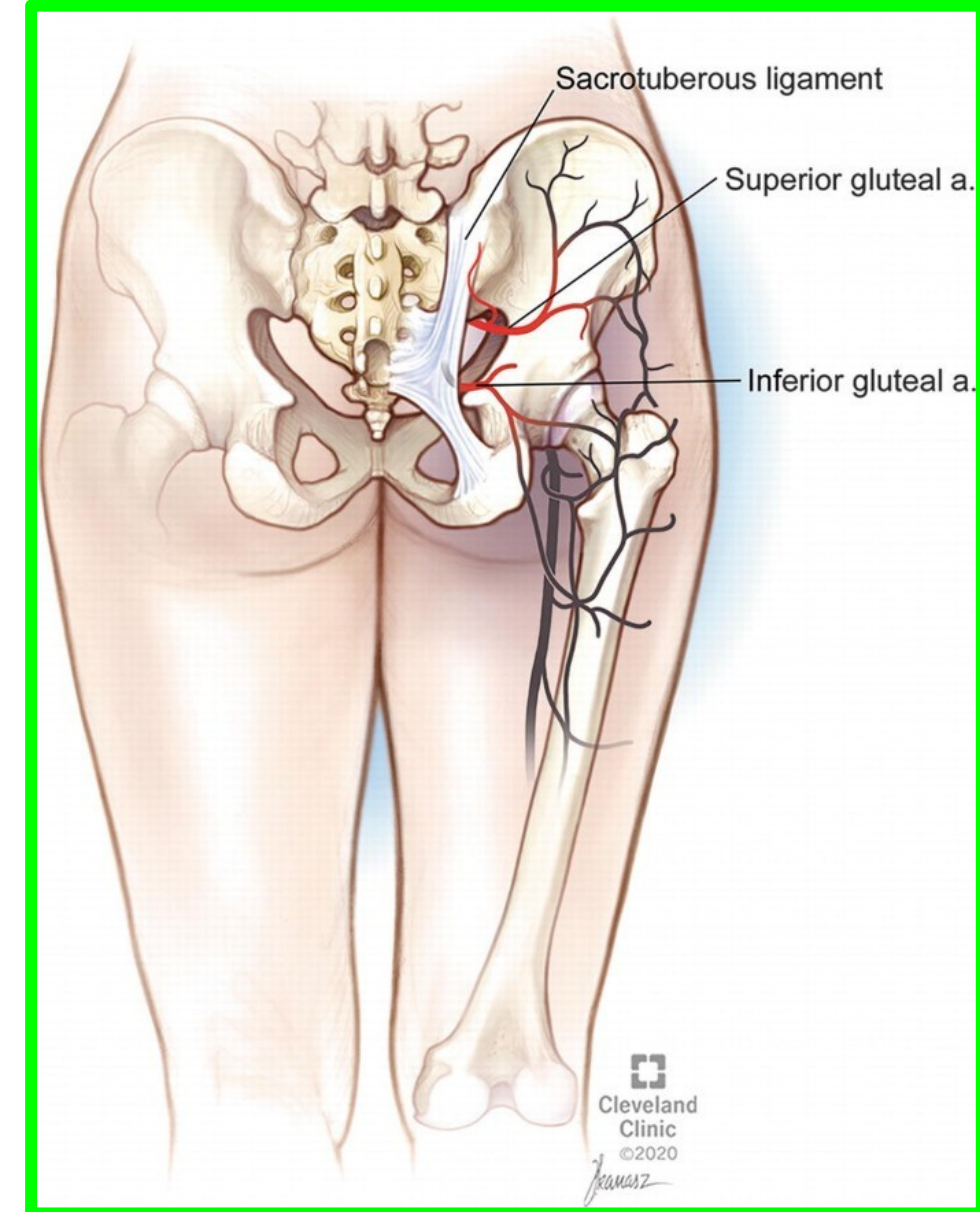


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Posterior division of internal iliac artery

3. Superior gluteal Artery

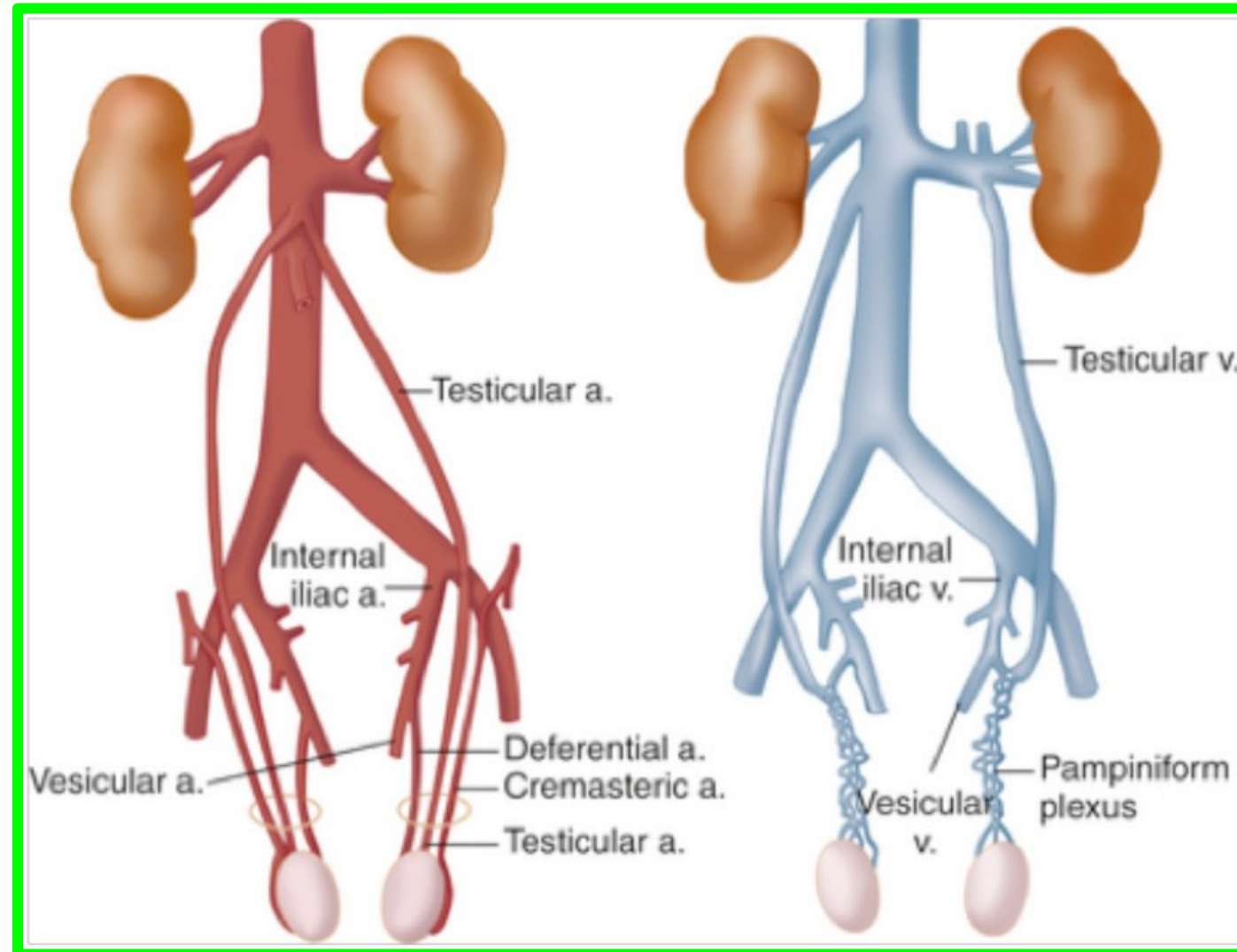
- ✓ **Origin:** Posterior division of internal iliac artery
- ✓ **Course:** Leaves pelvis through greater sciatic foramen, superior to piriformis
- ✓ **Distribution:** Gluteal muscles and tensor fasciae latae



Gonadal Artery from Abdominal aorta Descends retroperitoneally

Testicular Artery (♂)

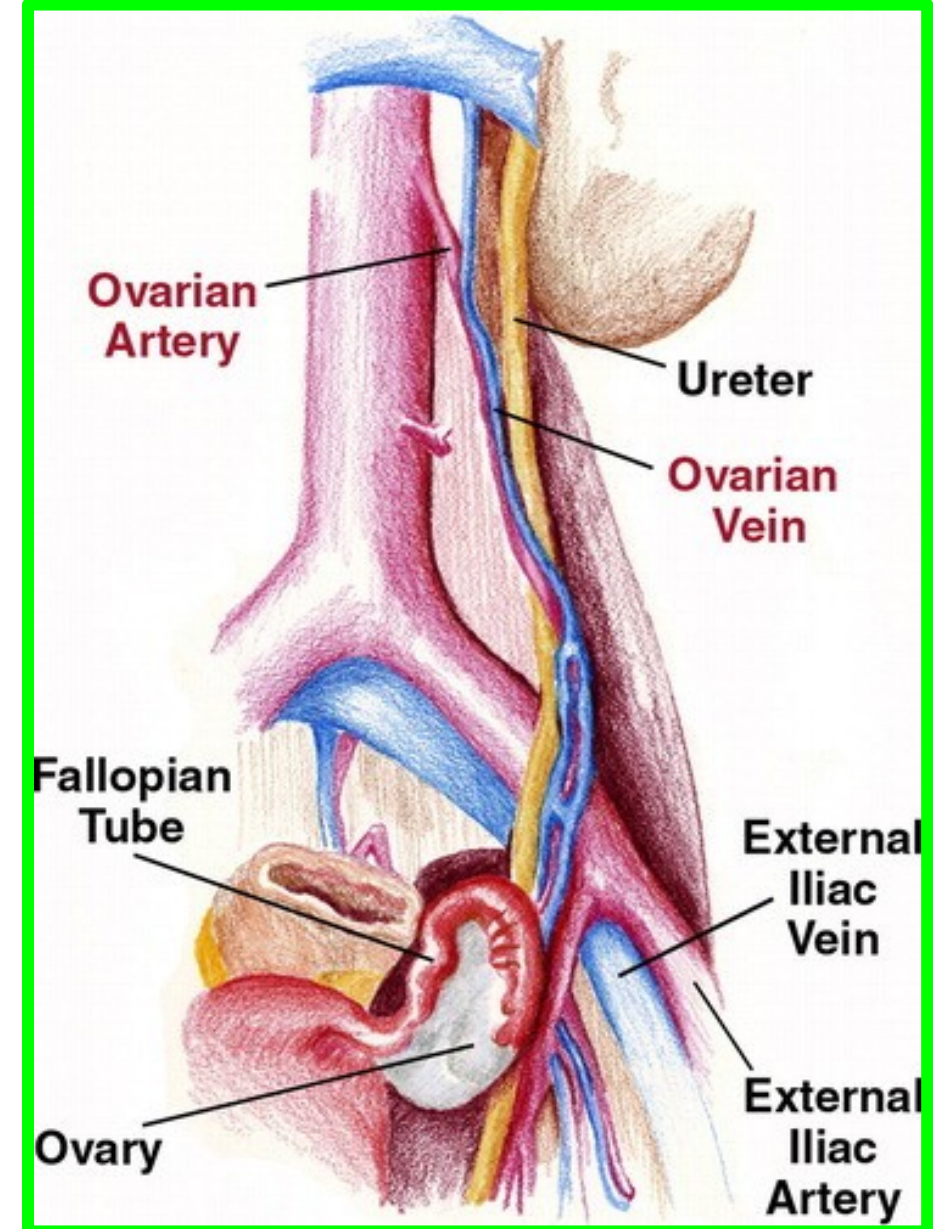
- ✓ **Origin:** Abdominal aorta
- ✓ **Course:** traverses inguinal canal and enters scrotum
- ✓ **Distribution:** Abdominal ureter, testis, and epididymis



Gonadal Artery from Abdominal aorta Descends retroperitoneally

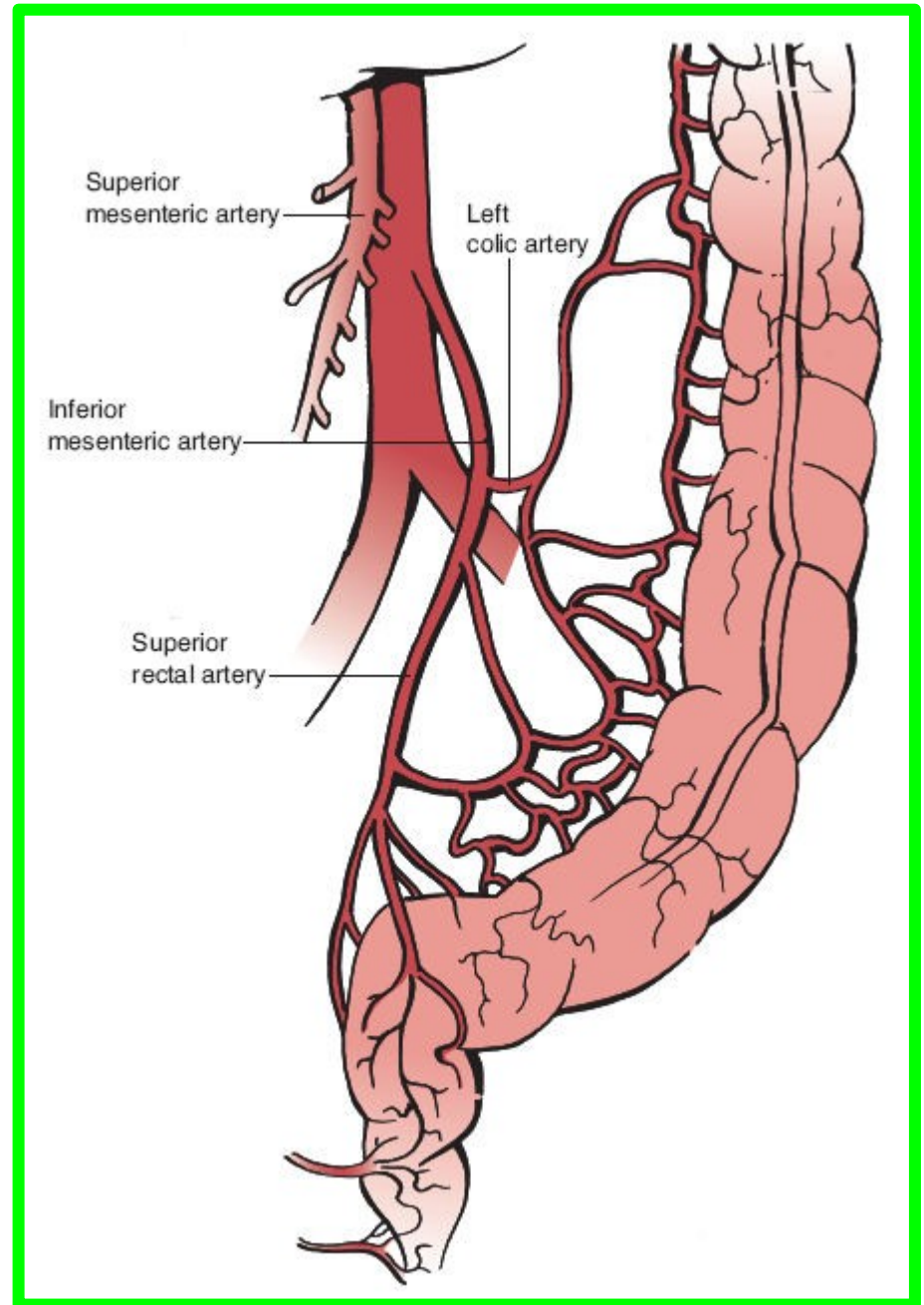
Ovarian Artery (♀)

- ✓ **Origin:** Abdominal aorta
- ✓ **Course:** crosses pelvic brim, descends in suspensory ligament of ovary
- ✓ **Distribution:** Abdominal and/or pelvic ureter, ovary, and ampullary end of uterine tube



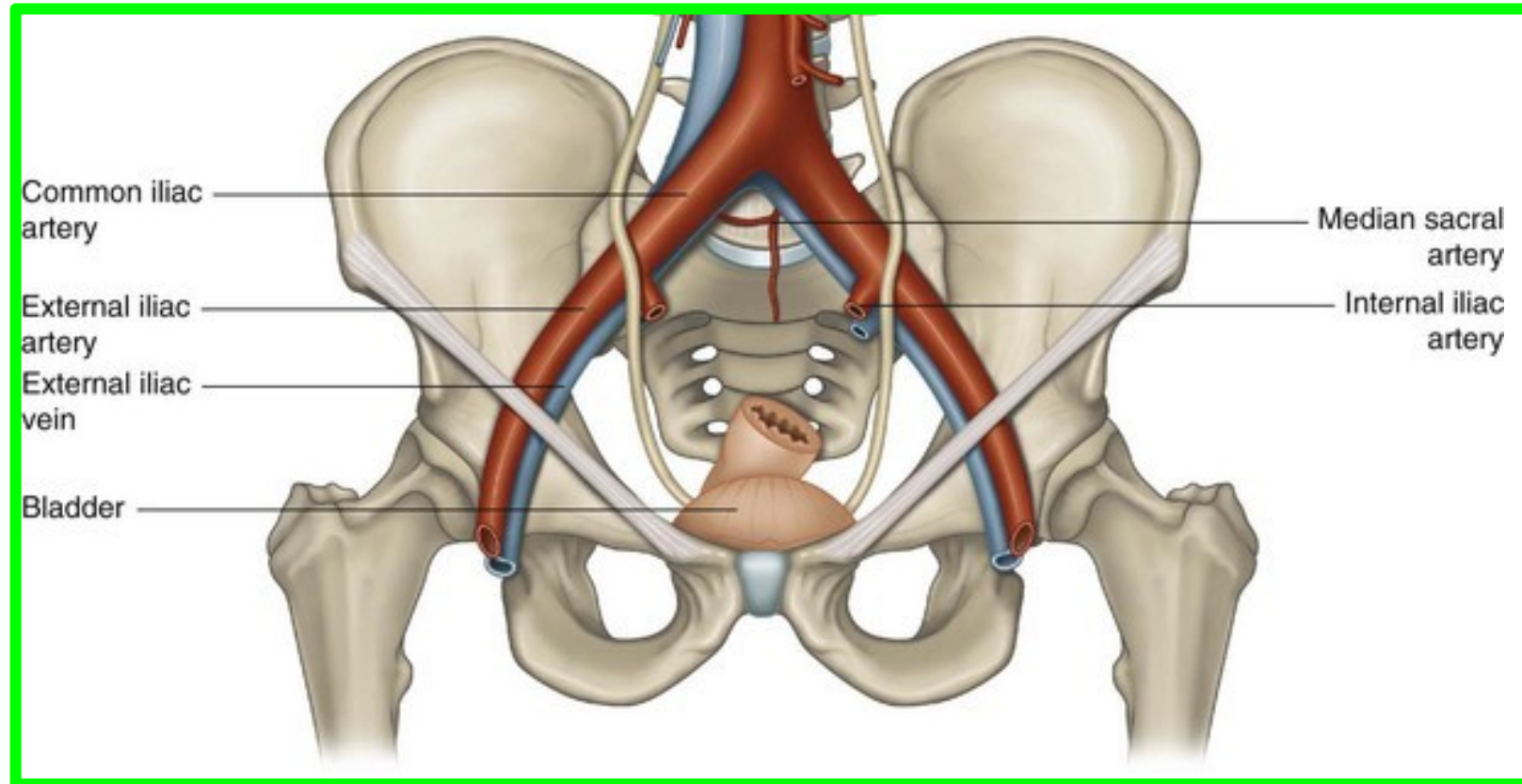
Superior rectal Artery

- ✓ **Origin:** Continuation of inferior mesenteric artery
- ✓ **Course:** Crosses left common iliac vessels and descends into pelvis between layers of sigmoid mesocolon
- ✓ **Distribution:** Superior part of rectum

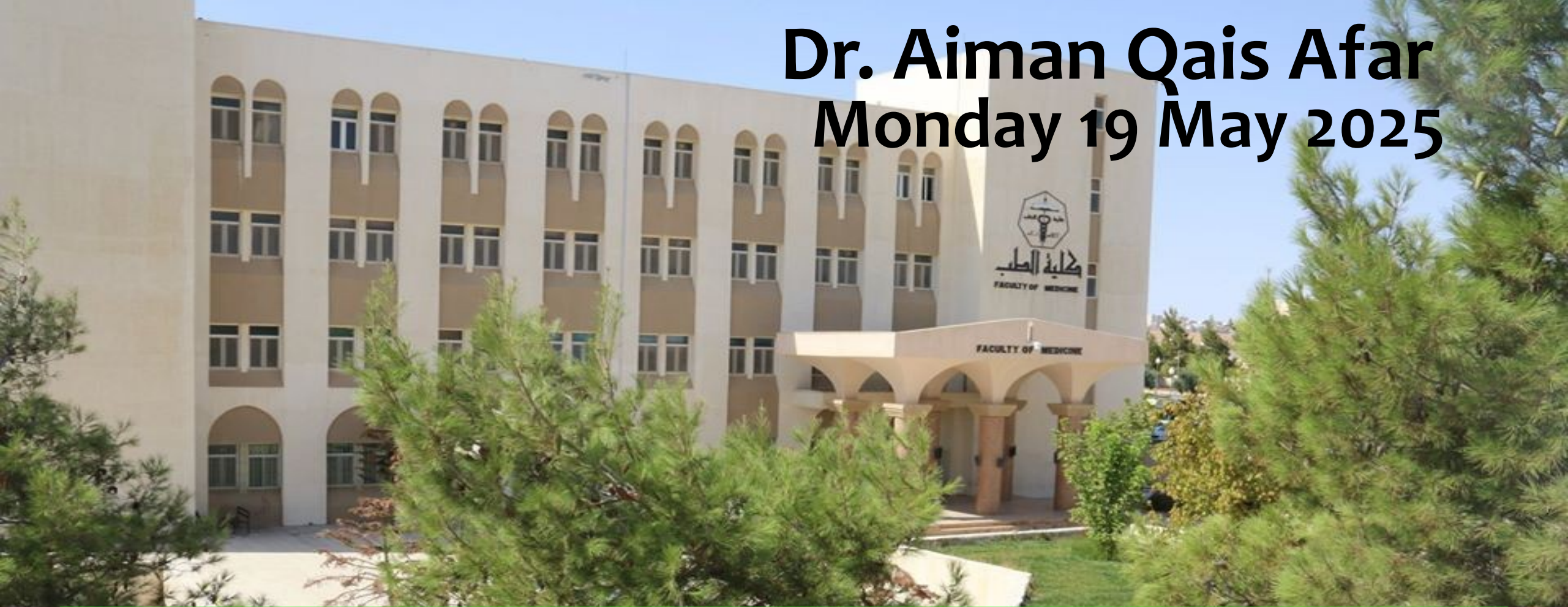


Median sacral Artery

- ✓ **Origin:** Posterior aspect of abdominal aorta
- ✓ **Course:** Descends close to midline over **L4 and L5 vertebrae**, sacrum, and coccyx
- ✓ **Distribution:** Inferior lumbar vertebrae, sacrum, and coccyx



Dr. Aiman Qais Afar
Monday 19 May 2025



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