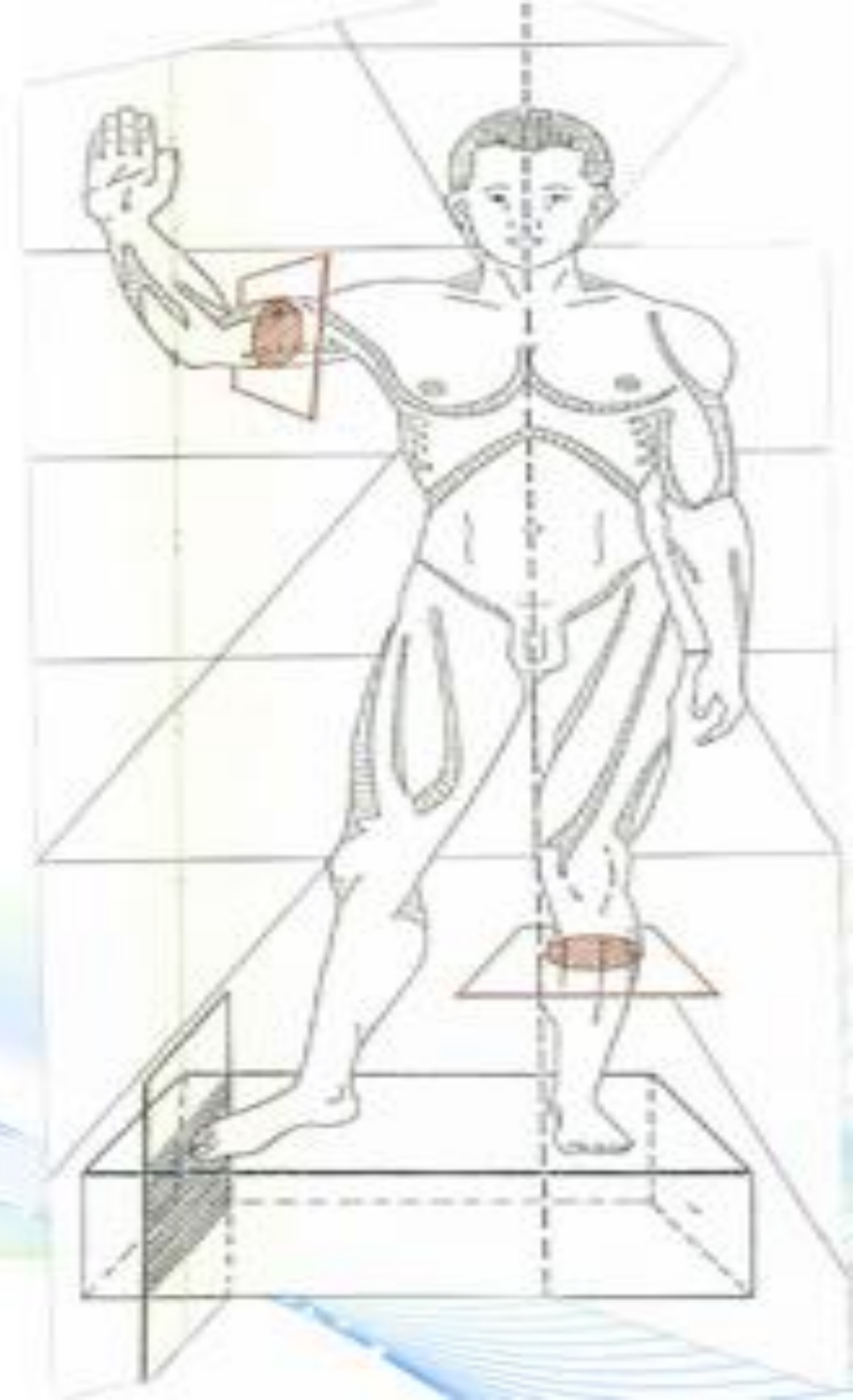


OVARY



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I. INTRODUCTION

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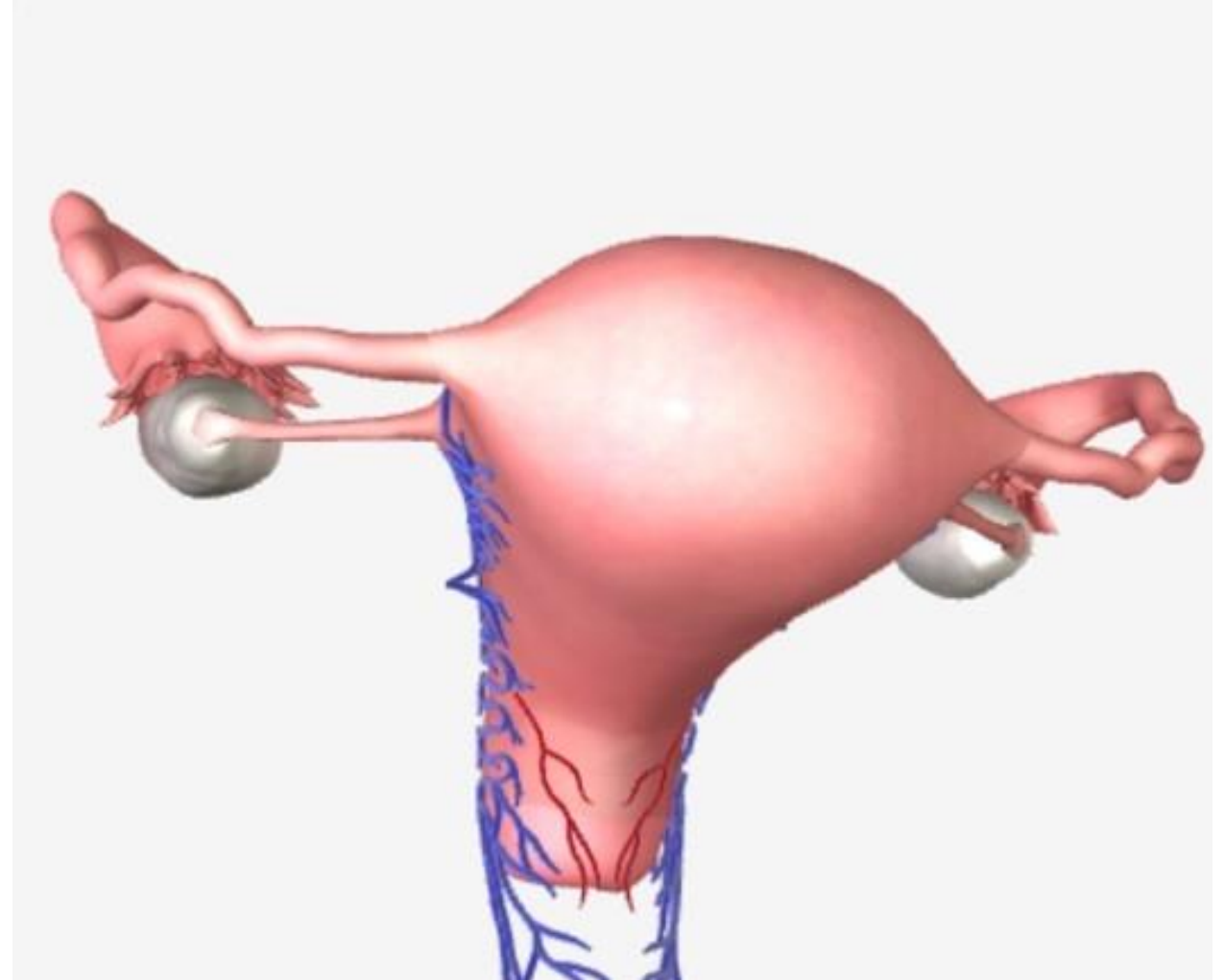
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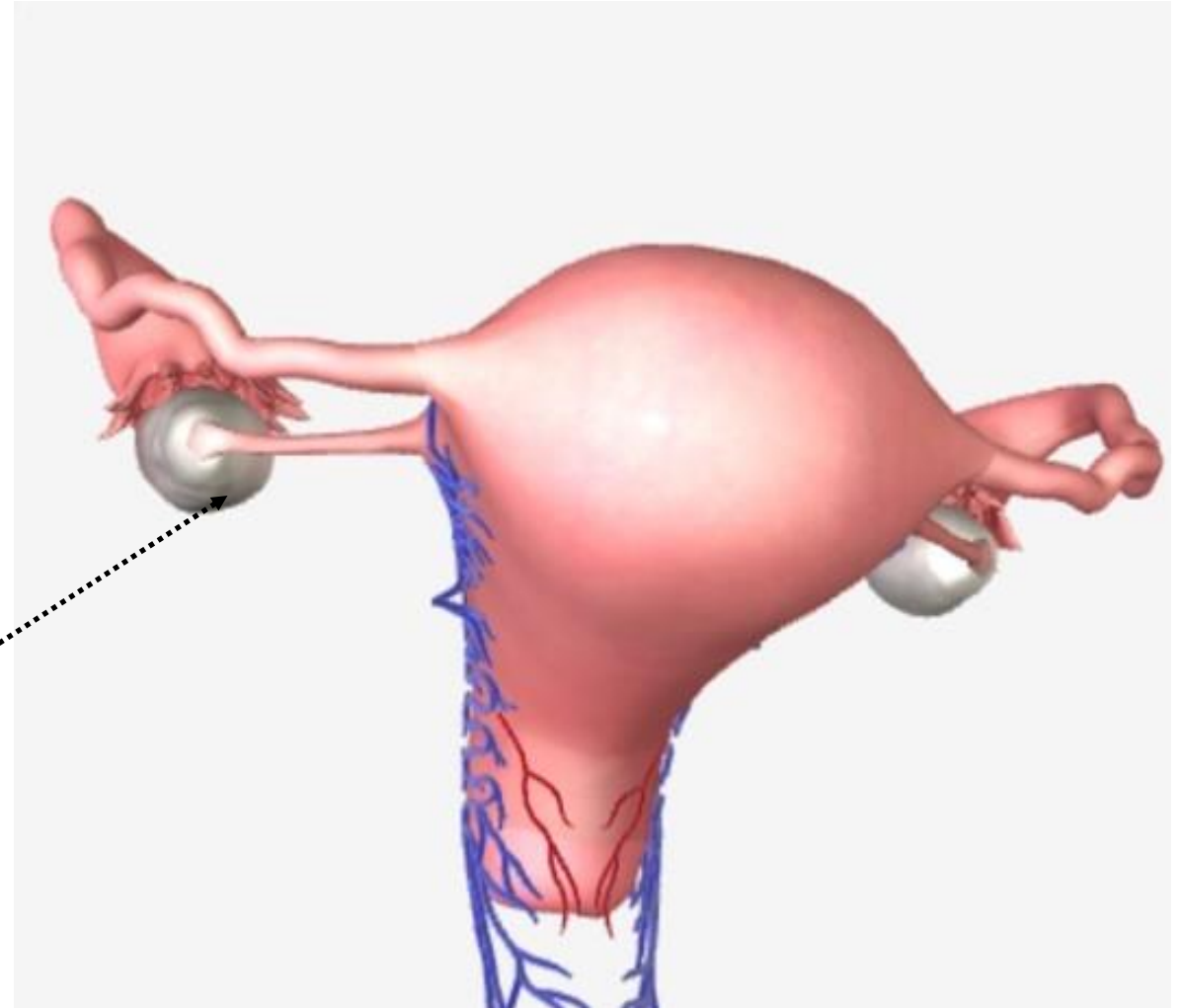
**VI. BLOOD SUPPLY, LYMPH
DRAINAGE AND NERVE
SUPPLY**

VII. CONCLUSION



I. INTRODUCTION

- Paired heterocrine glands
- Intraperitoneal
- Constitute with the Fallopian tubes the adnexa of uterus
- **Endocrine function:** production of sexual hormones
- **Exocrine function:** egg production (oogenesis)



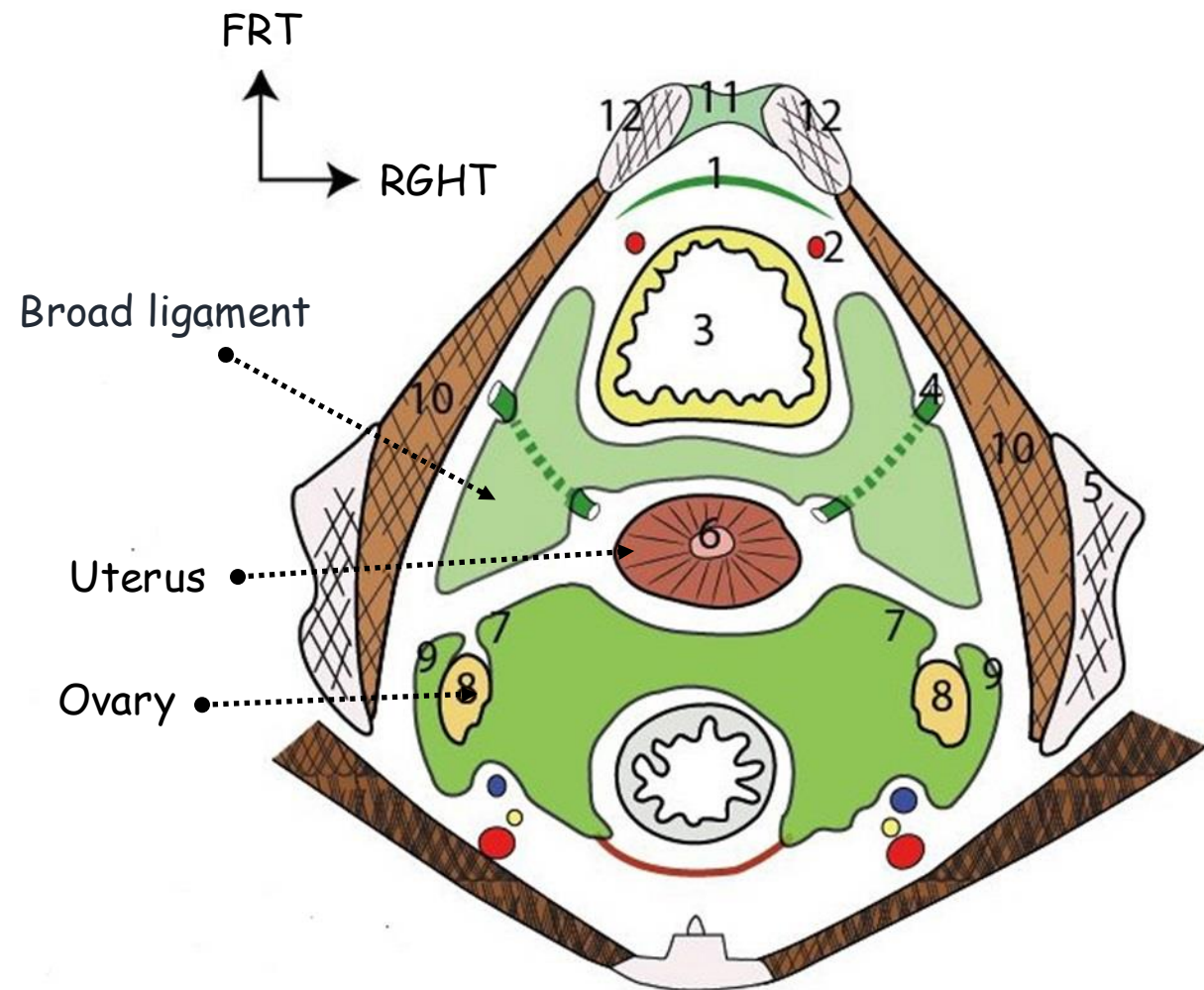
Ovary

ANTERIOR VIEW OF FEMALE INTERNAL GENITAL ORGANS

II. DESCRIPTIVE ANATOMY

A. SITUATION

- Lateral wall of pelvic cavity
- Just inferior to the pelvic brim
- Occupies the ovarian fossa in the angle between the internal and external iliac vessels, on the obturator nerve
- Attached to the posterior leaf of the broad ligament by a double fold of peritoneum: the mesovarium



HORIZONTAL SECTION OF PELVIS MINOR

B. ORIENTATION

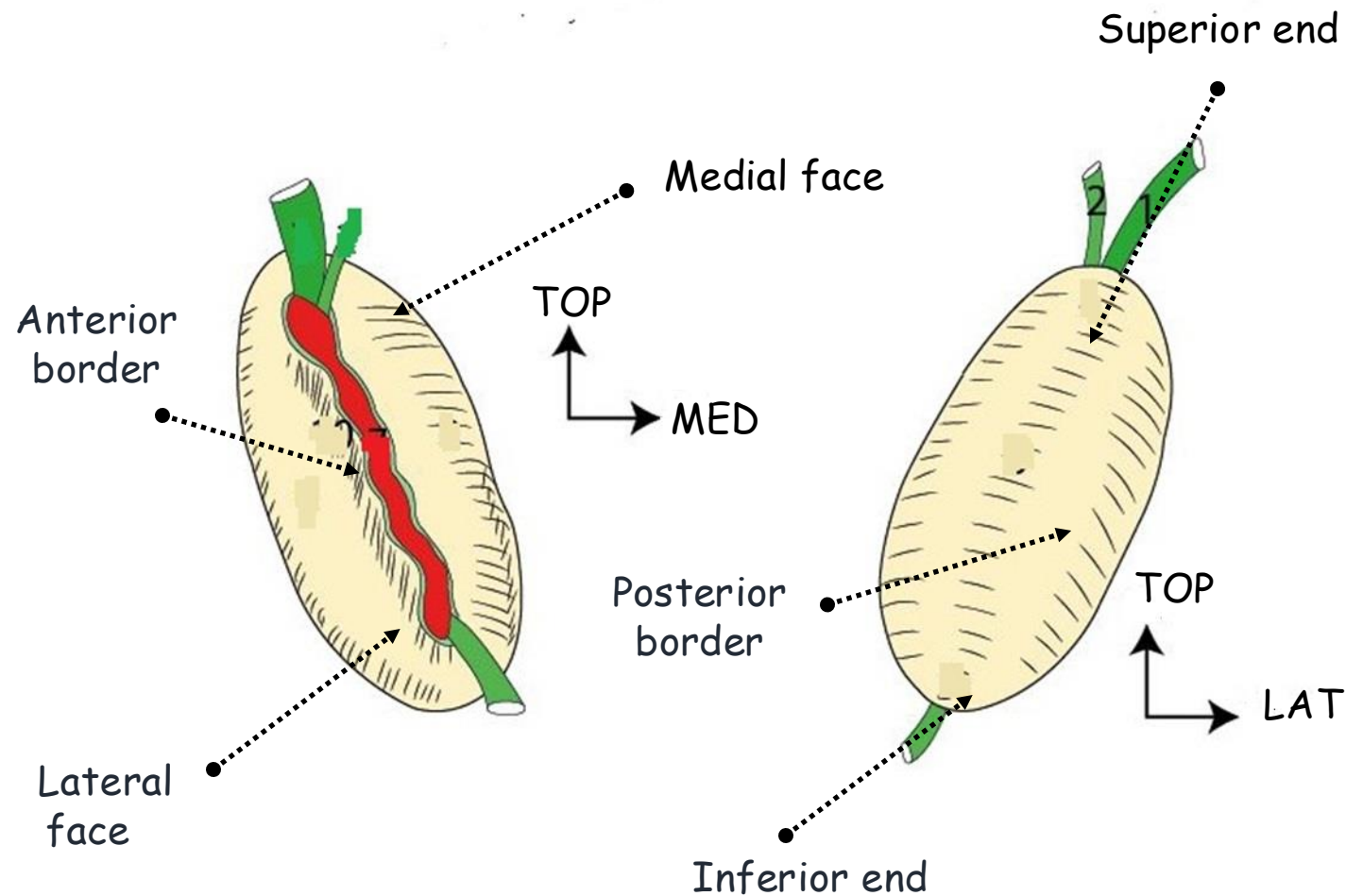
- Long oblique axis, its tubal extremity uppermost and lateral after childbirth
- Vertical in the nulliparous

C. SHAPE

- Ovoid in shape (almond-shaped)
- Firm to the touch
- Whitish colored
- 2 faces : medial and lateral
- 2 borders: posterior free and anterior attached to the posterior leaf of the broad ligament by a double fold of peritoneum: the mesovarium
- 2 ends: superior tubar and inferior uterine

D. DIMENSIONS

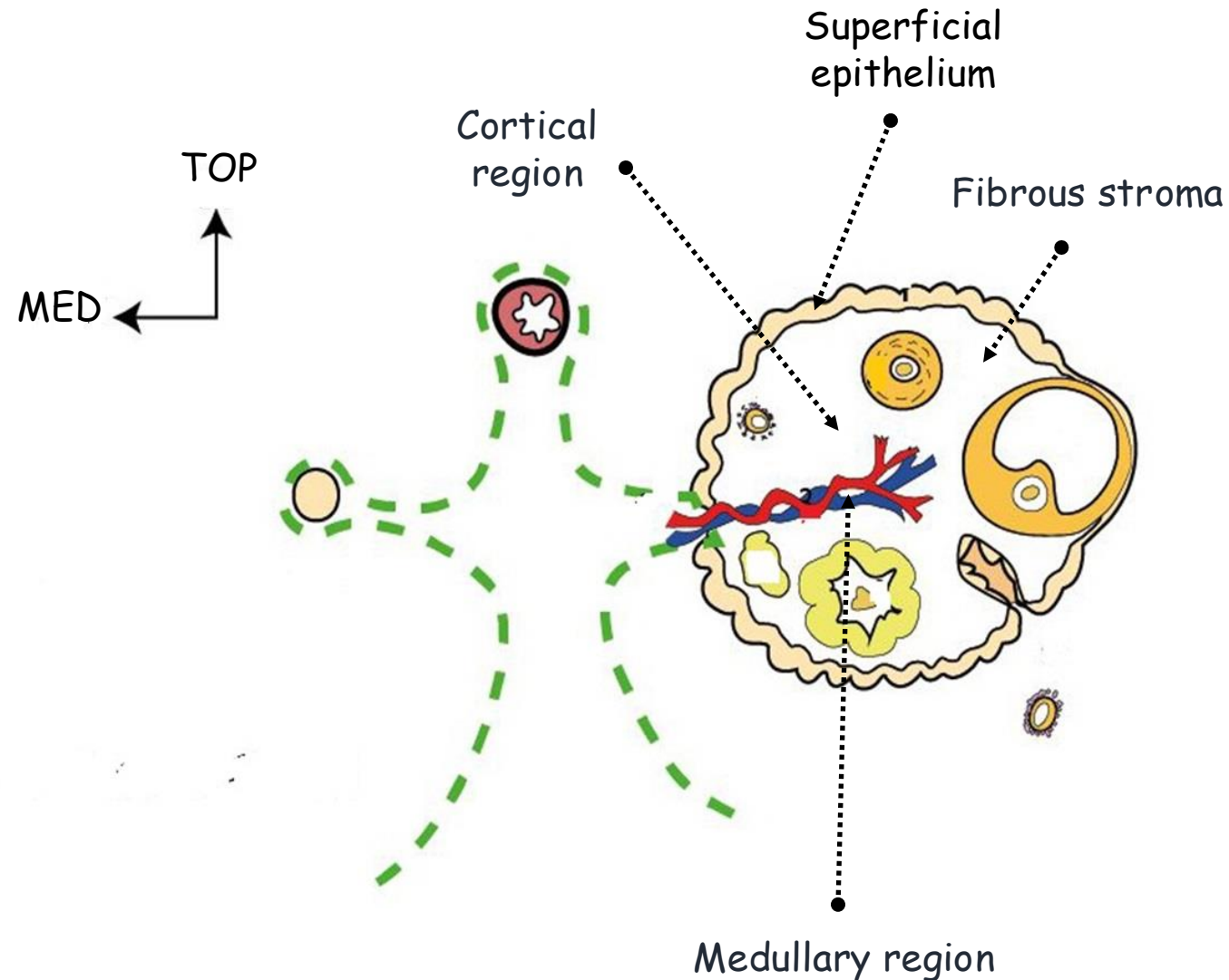
- Smaller than the testis
- Length: 4 cm ; Width: 2cm; Thickness: 1cm
- Weight: 8 grams



OVERVIEW OF OVARY: ORIENTATION AND SHAPE

III. STRUCTURE

- Fibrous stroma covered by a layer of cubical cells, the superficial epithelium
- Medullary region : contains a rich vascular bed with a cellular loose connective tissue
- Cortical region : follicles
- By mitosis and growth the oogonia become primary oocytes surrounded by granulosa cells derived from the stroma
- A primary oocyte with a single layer of granulosa cells is a primary follicle
- When the granulosa cells proliferate to form more than one layer, the primary follicle becomes a secondary follicle
- By birth there are 1 million follicles, reduced to about 40 000 by puberty
- Each month during reproductive life a follicle become an ovarian (Graafian) follicle



SAGITTAL SECTION OF OVARY

IV. SUPPORTS

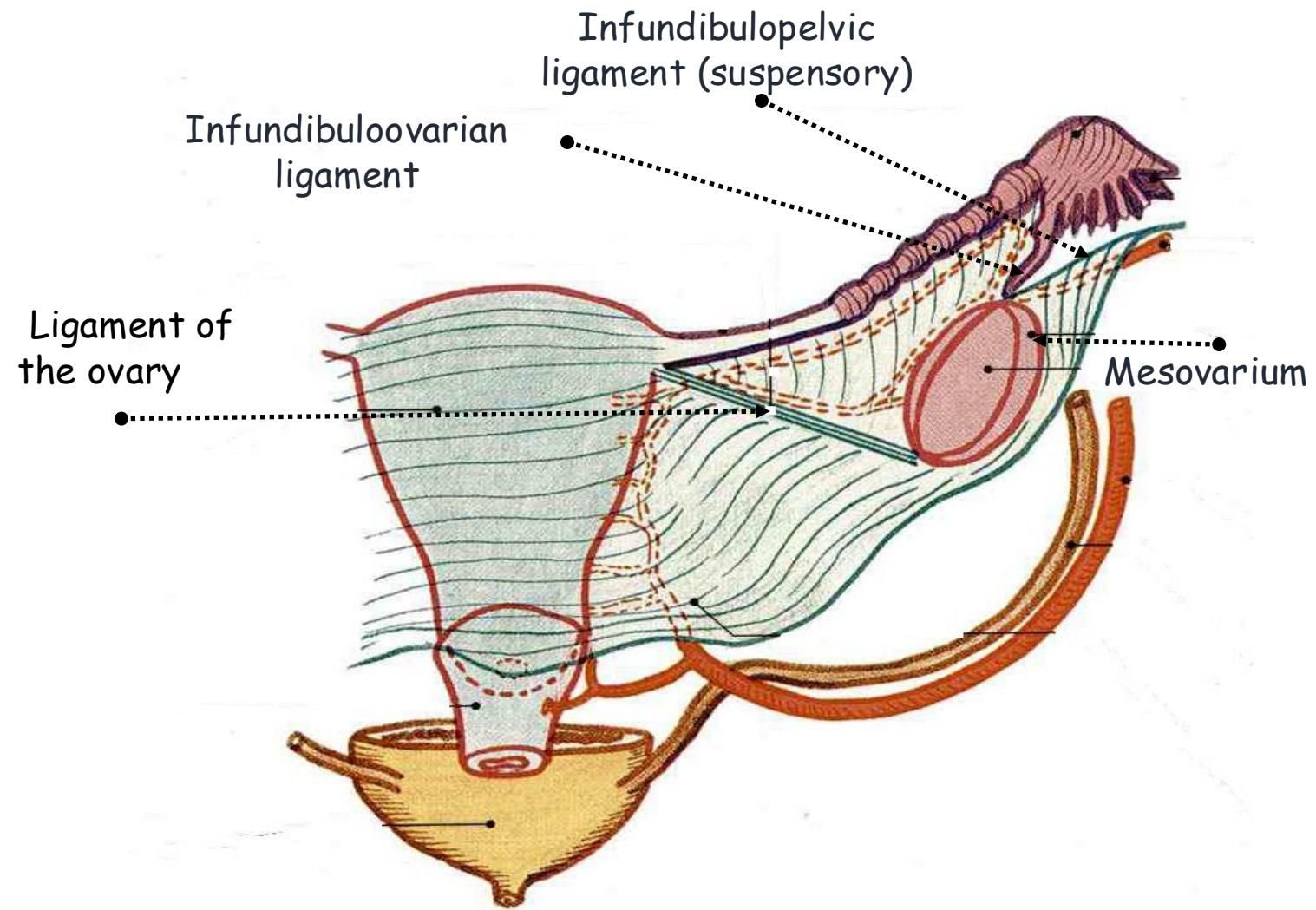
- Free in the peritoneal cavity but fixed by :

-**Ligament of the ovary:** attaches its uterine extremity to the upper angle of the uterus

-**Infundubulopelvic ligament (suspensory):** fixes the tubal extremity to the posterior parietal peritoneum and contains the gonadal vessels

-**Infundibuloovarian ligament:** fixes the infundibulum to the tubal end of the ovary and contains the longest finger-like process of the infundibulum, continuous with the infundibulopelvic ligament

-**Mesovarium:** attached equatorially around the ovary, but does not invest the surface of the gland

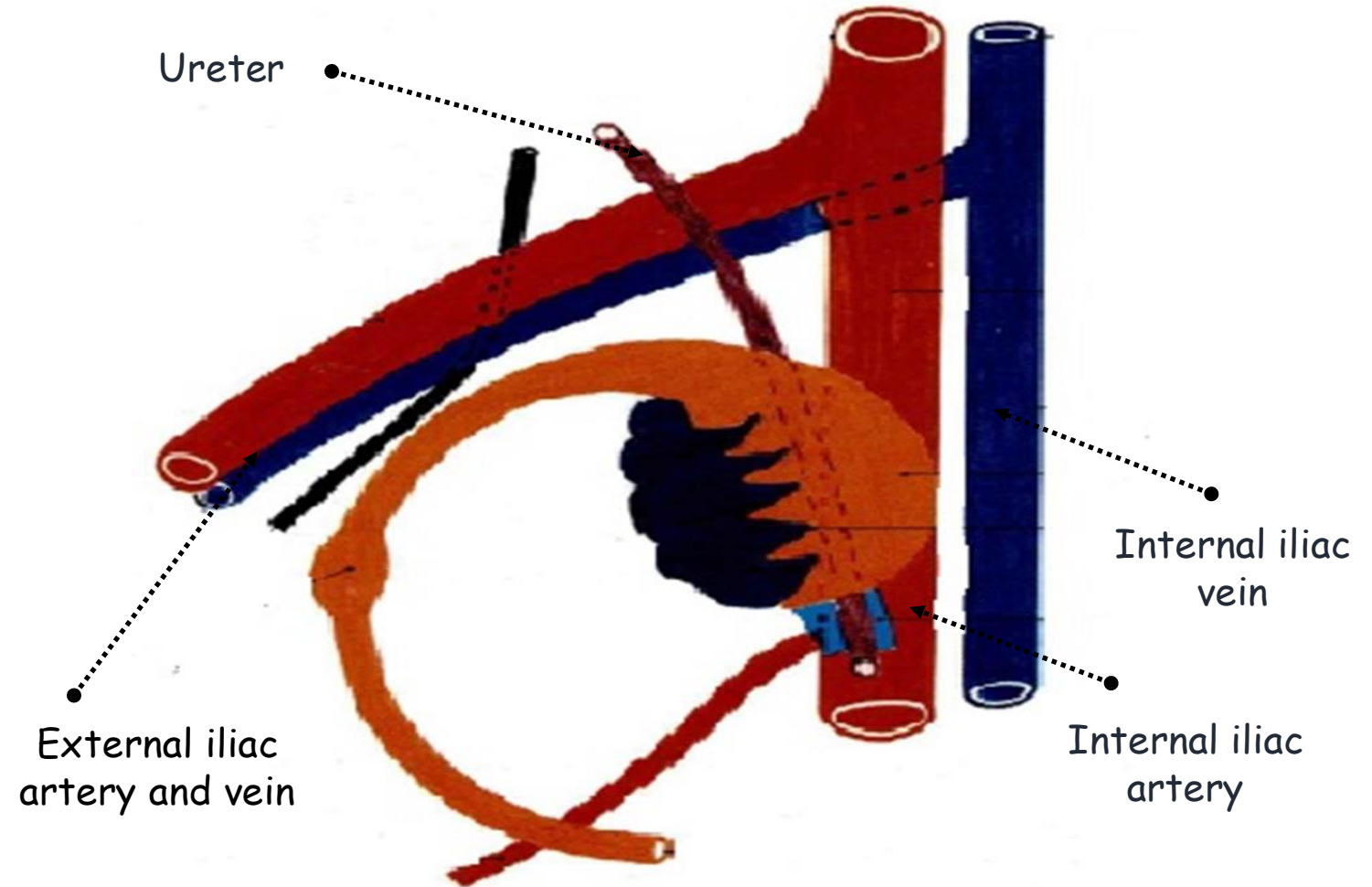


POSTERIOR VIEW OF FEMALE INTERNAL GENITAL ORGANS
SHOWING THE SUPPORTS OF OVARY

V. ANATOMICAL RELATIONS

1. Lateral face:

- In the nulliparous (ovarian fossa):
 - Back: internal iliac vessels and ureter
 - Front: posterior leaf of broad ligament
 - Top: external iliac vessels
 - Bottom: origins of umbilical and uterine arteries



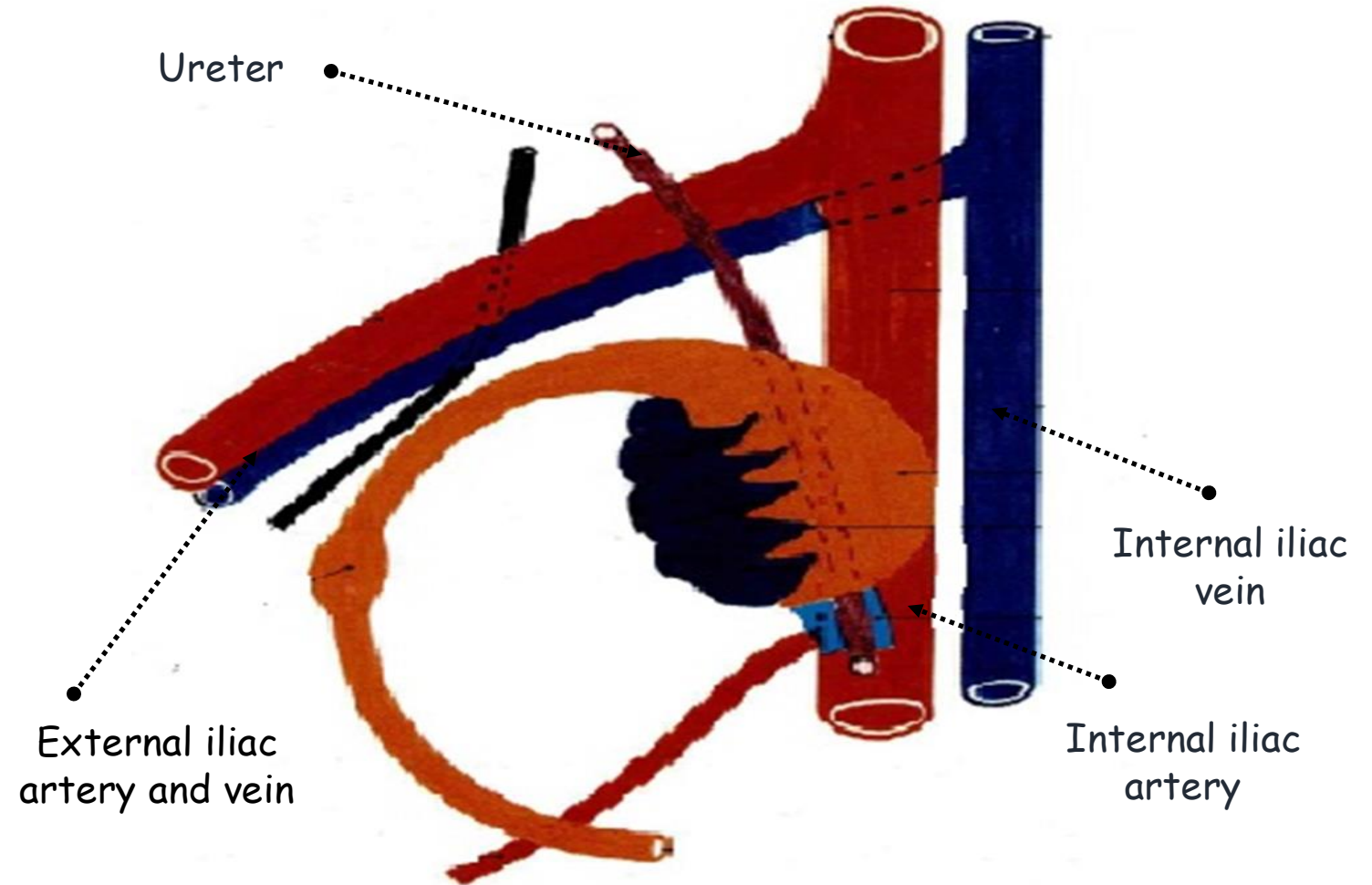
ANTERIOR VIEW SHOWING THE ANATOMICAL RELATION OF OVARY WITH ILIAC VESSELS

• After childbirth:

-Front : ureter and uterine artery

-Back : sacrum

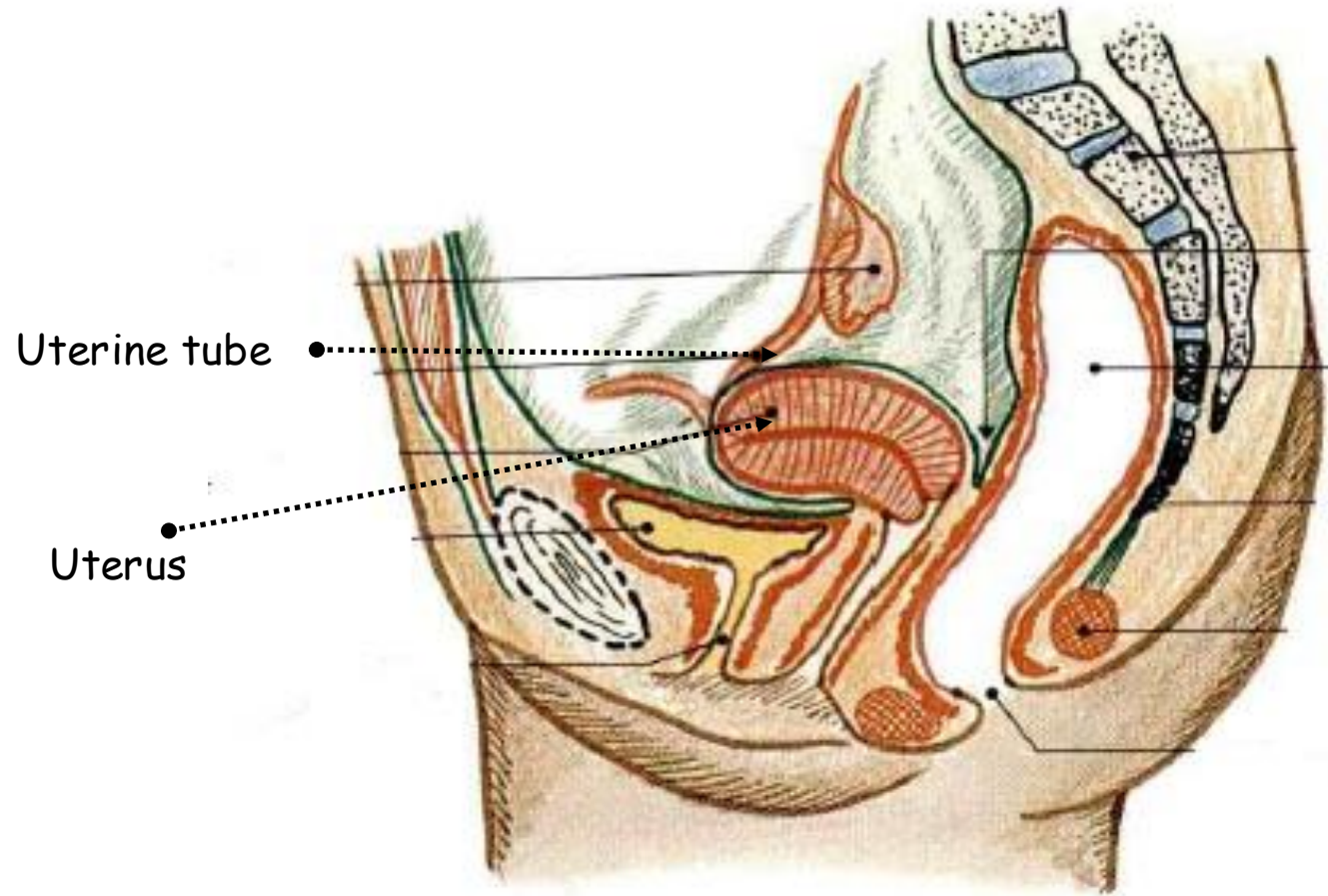
-Bottom: upper border of piriformis muscle



ANTERIOR VIEW SHOWING THE ANATOMICAL RELATION OF OVARY WITH ILIAC VESSELS

2. Medial face:

- Infundibulum of uterine tube
- On the right :
 - Intestinal coils
 - Caecum and appendix
- On the left:
 - Sigmoid colon



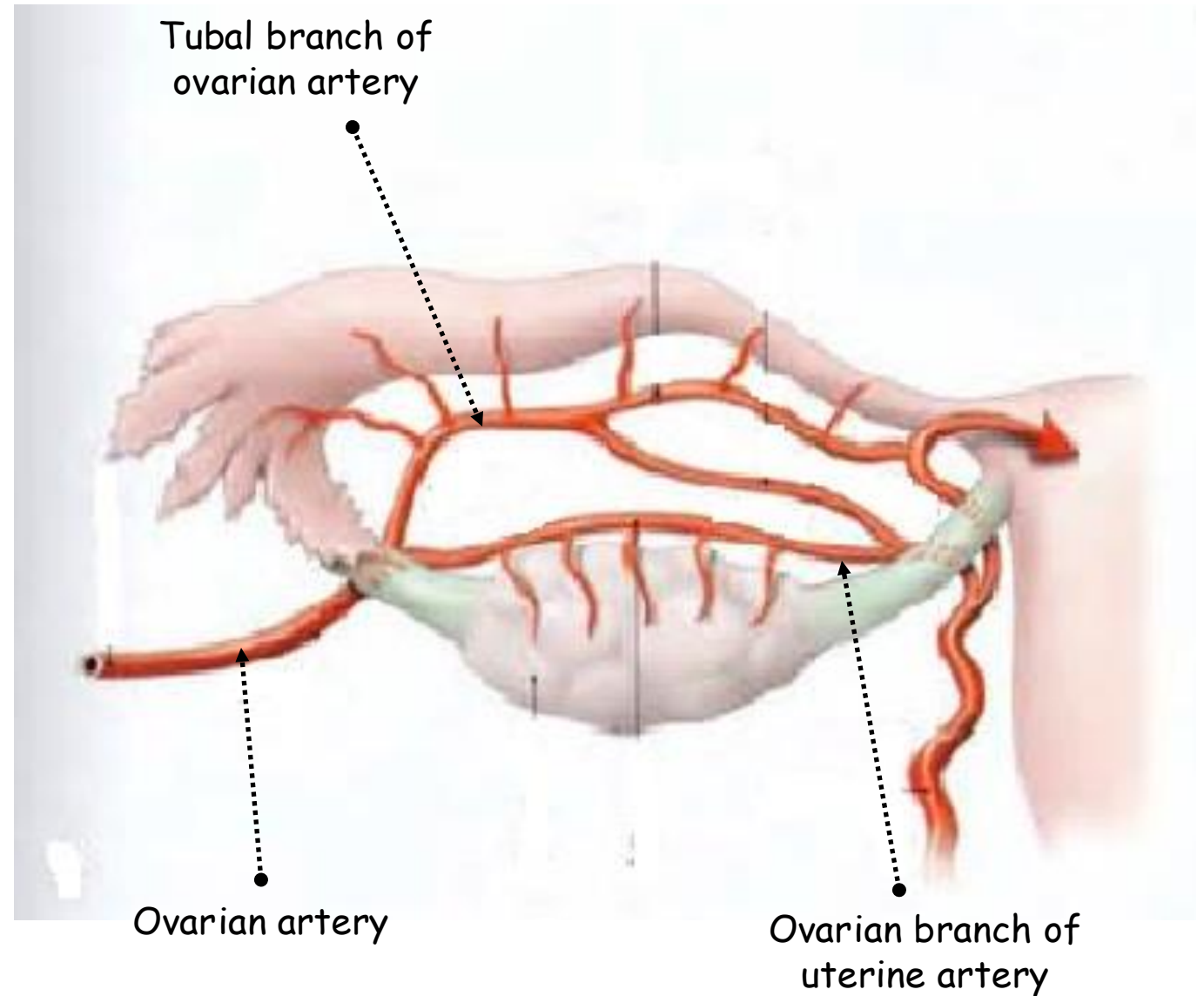
SAGITTAL SECTION OF PELVIS MINOR IN WOMEN

VI. BLOOD SUPPLY, LYMPH DRAINAGE AND NERVE SUPPLY

A. ARTERIES

1. Ovarian artery:

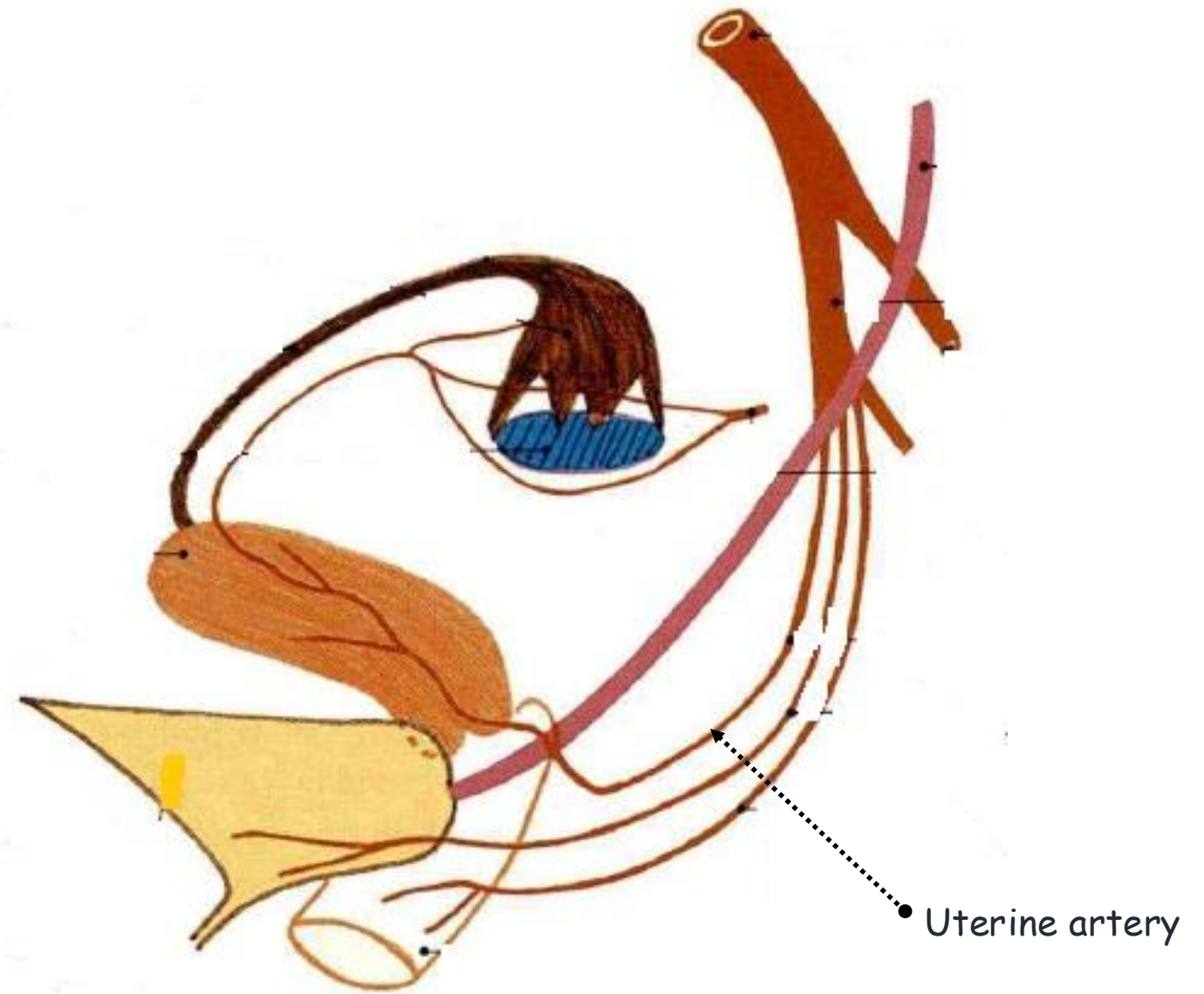
- Branch of the abdominal aorta just below the renal artery
- Runs down behind the peritoneum of the infracolic compartment and the colic vessels, crossing the ureter obliquely, on the psoas muscle
- Crosses the brim of the pelvis and enters the suspensory ligament (formerly the infundibulopelvic ligament) at the lateral extremity of the broad ligament
- Gives off a branch to the uterine tube which runs medially between the layers of the broad ligament and anastomoses with the uterine artery, and it ends by entering the ovary



OVERVIEW OF THE ARTERIES OF UTERINE TUBES AND OVARIES

2. Uterine artery:

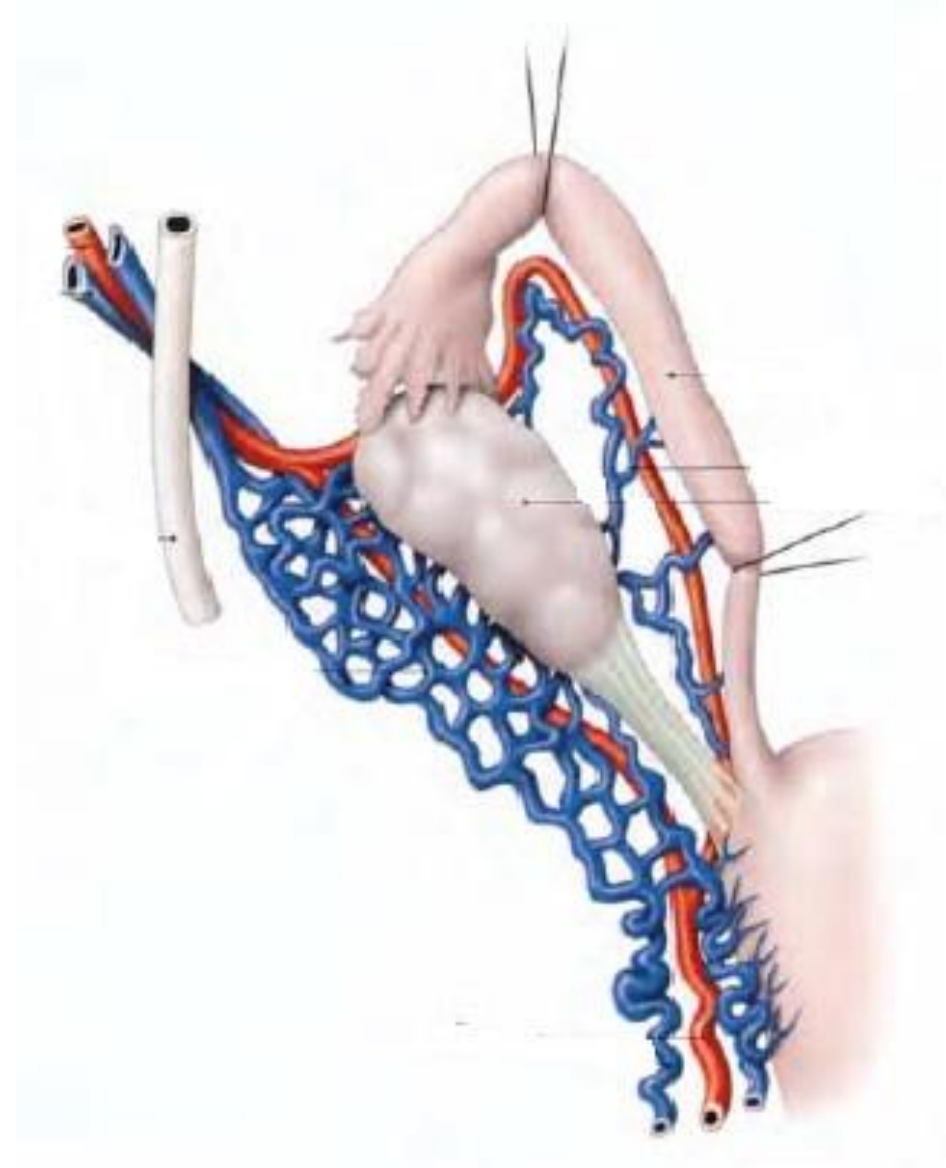
- The anastomosis between the ovarian artery and the ovarian branch of the uterine artery forms the infraovarian arterial circle
- 3 to 4 branches arise from the upper side of the infraovarian arterial circle supply the ovary



SCHEMATIC VIEW SHOWING GONADAL ARTERIES IN WOMEN

B. VEINS

- The ovarian veins form a **plexus in the mesovarium** and the suspensory ligament (the **pampiniform plexus** like the testis)
- The plexus drains into a **pair of ovarian veins** which **accompany the ovarian artery**
- They usually combine as a **single trunk** before their termination
- That on the right joins **the inferior vena cava**, that on the left the **left renal vein**



POSTERIOR VIEW SHOWING THE VEINS OF THE OVARIES

C. LYMPH DRAINAGE

- To para-aortic nodes alongside the origin of the ovarian artery

D. NERVE SUPPLY

- Sympathetic (vasoconstrictor) fibres reach the ovary from the aortic plexus along its blood vessels; the preganglionic cell bodies are in T10 and 11 segments of the cord
- Parasympathetic fibres may reach the ovary from the inferior hypogastric plexus via the uterine artery and are presumably vasodilator



VII. CONCLUSION

- Organ of **egg production**
- Occupies the shallow **ovarian fossa**
- Several **peritoneal** and **visceral** relations
- **Free** in the **peritoneal cavity**
- **Rich anastomotic blood supply**
- Lymph drainage is ensured mainly by **paraortic nodes**





كلية الطب
والصيدلة - مراكش
FACULTÉ DE MÉDECINE
ET DE PHARMACIE - MARRAKECH

