Summary , Histo, Lec3 &4

1. Composition of the Female Genital System

Location	Number	Component
Pelvic cavity	2	Ovaries
Between ovaries and uterus	2	Oviducts (Fallopian tubes)
Central pelvic area	1	Uterus
From cervix to the outside	1	Vagina
External genital region	-	External genitalia
Chest area	2	Mammary glands

2.Functions of the Female Genital System

Explanation	Function
Ovaries secrete estrogen and progesterone (endocrine function)	Hormone production
Ovaries produce ova (oocytes) (exocrine function)	Gamete production
Uterus supports and protects the developing embryo	Support and protection

3. Ovary Structure

Description	Feature
Ovoid organ	Shape
Pelvic cavity	Location
Covered by simple cuboidal epithelium (germinal epithelium)	Outer surface
Connective tissue layer (tunica albuginea)	Capsule
Divided into cortex and medulla	Structure
Contains ovarian follicles at various developmental stages, separated by CT with spindle-shaped stromal cells	Cortex
Highly vascular connective tissue, lymphatics, and nerves	Medulla

4.Ovarian Follicles and Their Types

Description	Follicle Type
Formed during fetal life, consists of primary oocyte surrounded by a single layer of flat follicular cells	Primordial follicles
Uni-laminar (single layer of cuboidal cells) or multi-laminar (multiple layers of granulosa cells)	Primary follicles
Contain an antrum (fluid-filled cavity), FSH-dependent growth	Secondary (antral) follicles
Largest, bulges from ovarian surface, oocyte becomes secondary just before ovulation	Mature (Graafian) follicles
Degenerated follicles that did not reach maturation	Atretic follicles

5.Oogenesis and Folliculogenesis

Description	Stage
Oogonia divide by mitosis during fetal life, forming ~7 million cells	Proliferation
Oogonia enter prophase of 1st meiotic division, becoming primary oocytes, arrested until puberty	Growth
Primordial follicles mature under FSH influence, forming primary and eventually mature follicles	Folliculogenesis

6. Tissue Types in Follicle Development

Tissue Type	Follicle Type
Flat follicular cells (simple squamous epithelium)	Primordial follicle
Single layer of cuboidal granulosa cells	Primary follicle (uni-laminar)
Multiple layers of cuboidal granulosa cells	Primary follicle (multi-laminar)
Granulosa cells + theca interna (endocrine cells)	Secondary follicle
Granulosa cells, theca interna, and theca externa	Mature Graafian follicle

7. Corpus Luteum and Its Fate

Description	Corpus Luteum State
Produces progesterone for 10-12 days, then degenerates into corpus albicans if no pregnancy	Non-pregnant
Maintained by HCG, produces progesterone and estrogen until placenta takes over	Pregnant

8. Fallopian Tubes Structure

Description	Part
Connects to the uterus	Interstitium
Narrow, short segment	Isthmus
Expanded segment, site of fertilization	Ampulla
Distal end with fimbriae (fingerlike projections)	Infundibulum

9. Uterine Wall Layers

Tissue Type and Features	Layer
Simple columnar epithelium with tubular glands	Endometrium
Smooth muscle (outer longitudinal, middle vascular, inner circular)	Myometrium
Connective tissue and peritoneal mesothelium	Perimetrium

10. Vagina Structure

Tissue Type	Layer
Stratified squamous epithelium (glycogen-rich)	Mucosa
Inner circular and outer longitudinal smooth muscle	Musculosa
Dense connective tissue with elastic fibers	Adventitia

11. Mammary Gland Structure

Structure	State
Ducts embedded in loose connective tissue, no secretory units	Resting
Ducts and secretory acini, lined by simple columnar cells surrounded by myoepithelial cells	Lactating

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هستو بالحياة

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