

Histology Team 431



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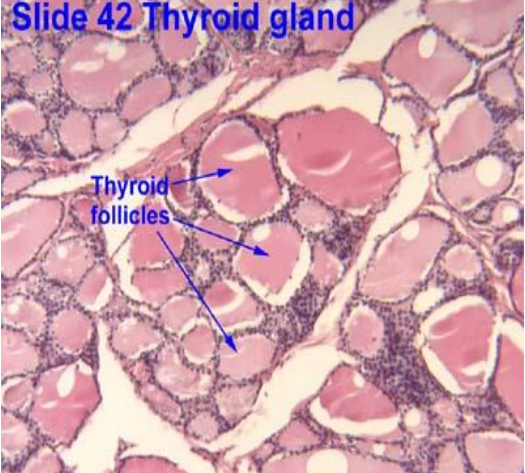
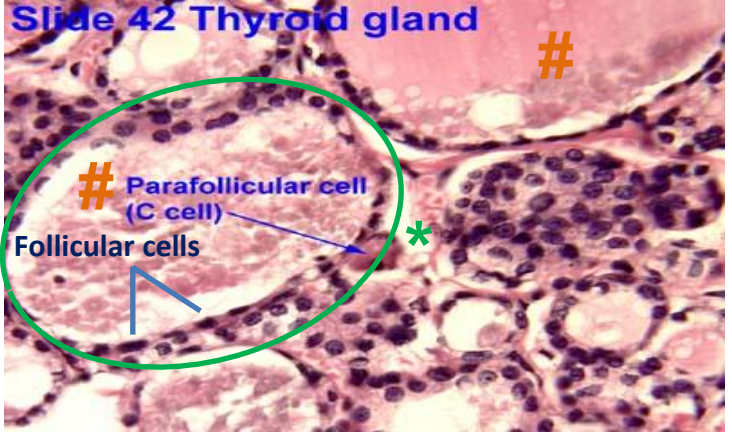
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THYROID GLAND STROMA	PARENCHYMA OF THYROID GLAND
1- Capsule: dense irregular collagenous C.T. 2- Septa (Interlobular septa) 3- Reticular fibers: Thin C.T. composed mostly of reticular fibers with rich capillary plexus surrounds each thyroid follicle.	Thyroid Follicle: The structural and functional unit of the thyroid gland, each follicle is surrounded by thin basal lamina (*) L/M: 1- Simple cuboidal epithelium: a- Follicular cells. b- Parafollicular cells. 2- Colloid (#): central colloid-filled lumen.
	

Thyroid Follicle		
	Follicular (Principal) Cells	Parafollicular (Clear) Cells (C-Cells)
L/M	<ul style="list-style-type: none"> - Basophilic cytoplasm - Simple cuboidal cells, round nucleus with prominent nucleoli. - Apical surface reaches the lumen of the thyroid follicle. 	<ul style="list-style-type: none"> - Pale-stained cells (Clear Cells), have round nucleus - Do not reach the lumen of the follicle (Are found singly or in clusters in between the follicular cells) - Are larger than follicular cells (2-3 times). - Only 0.1% of the epithelial cells (fewer)
E/M	<ul style="list-style-type: none"> - Mitochondria - RER - Supranuclear Golgi Complex (to form thyroglobulin) - Numerous dispersed small vesicles: contain newly formed thyroglobulin. - Numerous apically-located lysosomes. - Numerous apical short microvilli (to increase surface area) 	<ul style="list-style-type: none"> - Mitochondria. - RER (moderate). - Well-developed Golgi.
Function	<p style="text-align: center;">Synthesis of thyroid hormones (T4 & T3)</p> <p>These endocrine cells are unique because they store their hormones in the colloid lumen, not in the cytoplasm</p>	<p>Secrete Calcitonin</p>

QUESTIONS

1-What is true regarding the follicular cells?

- A- Basophilic cytoplasm
- B- Pale-Stained
- C- Acidophilic cytoplasm

2-Which ONE of the following is the function of the parafollicular cells?

- A- Synthesis of the thyroid hormones.
- B- Secrete calcitonin
- C- Secrete growth hormone

ANSWERS

1-A , 2-B