

GLANULAR EPITHELIUM

- Derived from the epithelial tissue and elaborate secretion.
- Glands are develop as cords of epithelial cell from the surface membrane and invade the adjoining connective tissue.

STRUCTURE OF GLANDS

PARENCHYMA

SECRETORY END PIECES
DUCTS

STROMA

-CAPSULE
-SEPTAE
-LOOSE
INTRALOBULAR TISSUE

CLASSIFICATION
OF GLAND

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graph TD; A[CLASSIFICATION OF GLAND] --> B[EXOCRINE GLAND]; A --> C[PARACRINE GLANDS]; A --> D[ENDOCRINE GLAND];
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EXOCRINE
GLAND

PARACRINE
GLANDS

ENDOCRINE
GLAND

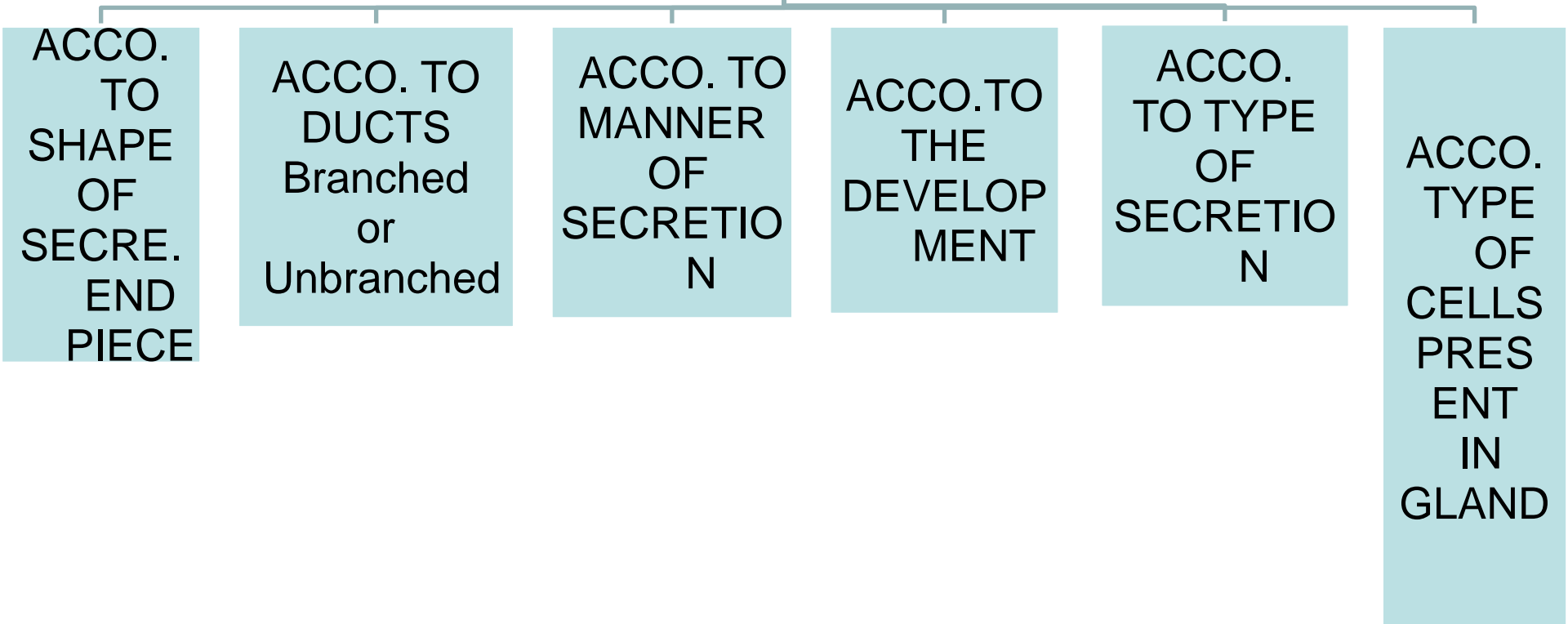
EXOCRINE GLANDS

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graph TD; A[EXOCRINE GLANDS] --> B[UNICELLULAR]; A --> C[MLTICELLULAR]
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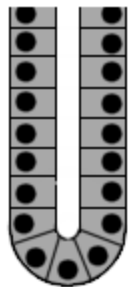
UNICELLULAR

MLTICELLULAR

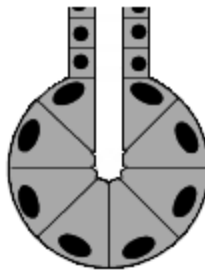
MULTICELLULAR
EXOCRINE
GLAND



tubular



acinar



alveolar



glands



Intestine

Simple tubular



Sweat gland

Simple coiled tubular



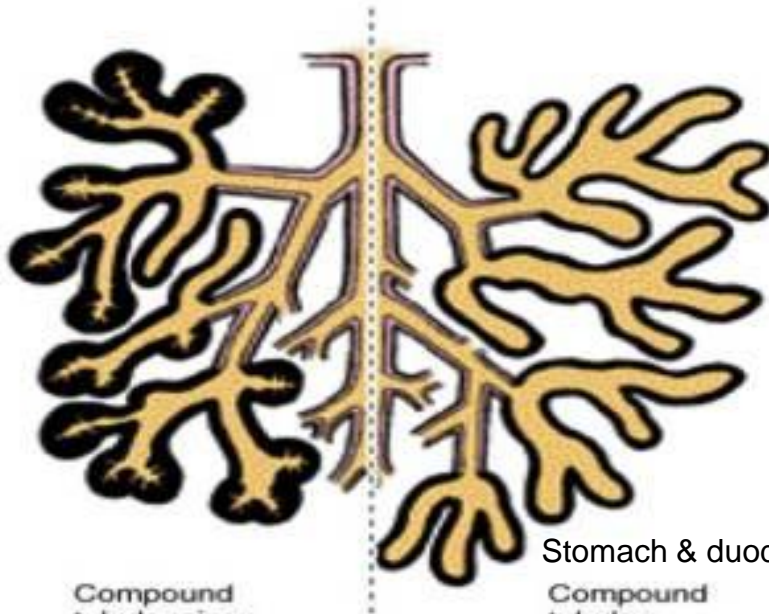
Uterine glands

Simple branched tubular



Sebaceous and tarsal glands

Simple branched acinar



Compound tubuloacinar

Stomach & duodenum

Compound tubular



Compound acinar

Submandibular and sublingual glands

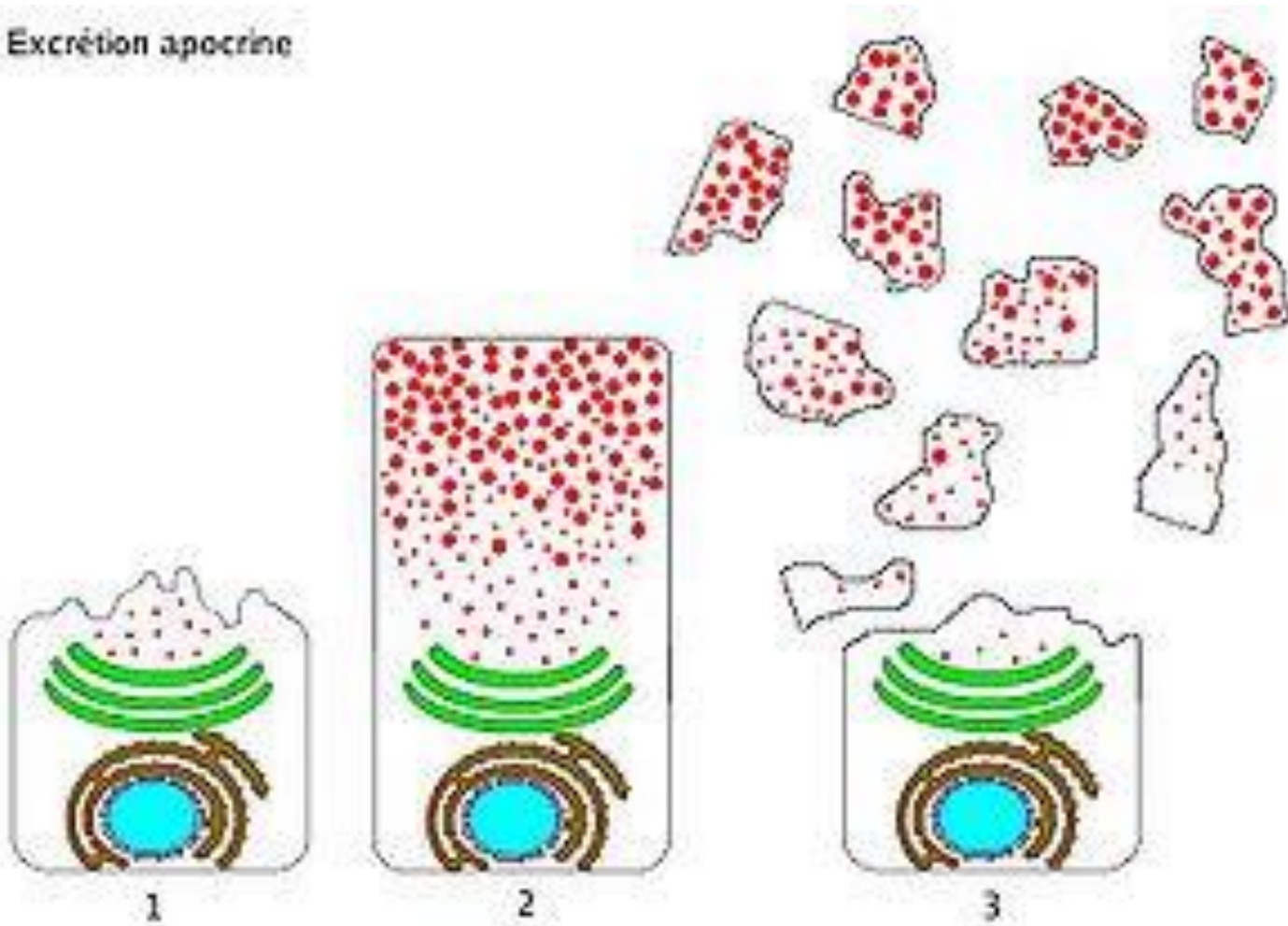
Kanan Shah

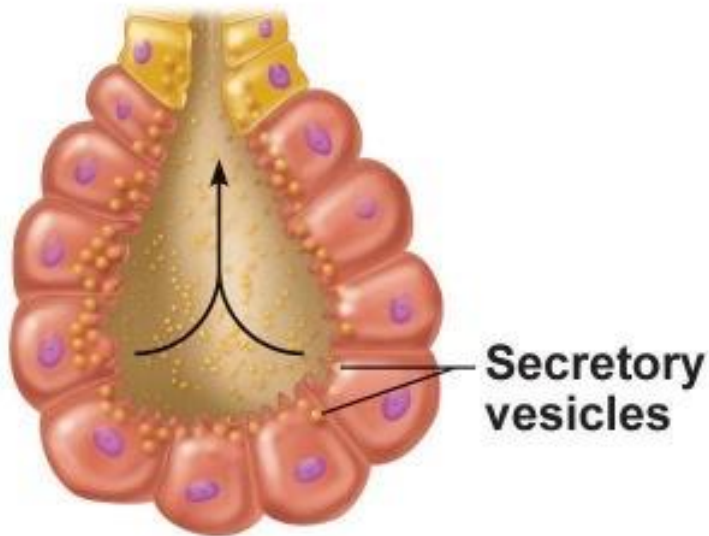
Parotid gland

According to manner of secretion

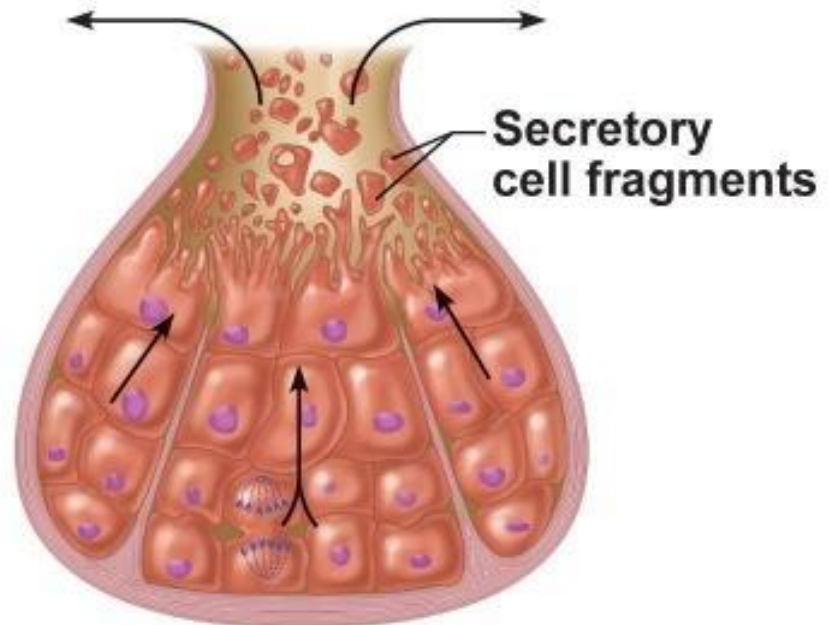
- Cytocrine gland
- Merocrine glands(Ecrine)
 - corresponds to the process of exocytosis. Vesicles open onto the surface of the cell, and the secretory product is discharged from the cell without any further loss of cell substance.
- Apocrine glands
 - designates a mechanism in which part of the apical cytoplasm of the cells is lost together with the secretory product. The continuity of the plasma membrane is restored by the fusion of the broken edges of the membrane, and the cell is able to accumulate the secretory product anew. This mechanism is used by apocrine sweat glands, the mammary glands and the prostate.
- Holocrine glands
 - secretion designates the breakdown and discharge of the entire secretory cell. It is only seen in the sebaceous glands of the skin.

Excrétion apocrine





(a) Merocrine glands secrete their products by exocytosis.



(b) In holocrine glands, the entire secretory cell ruptures, releasing secretions and dead cell fragments.

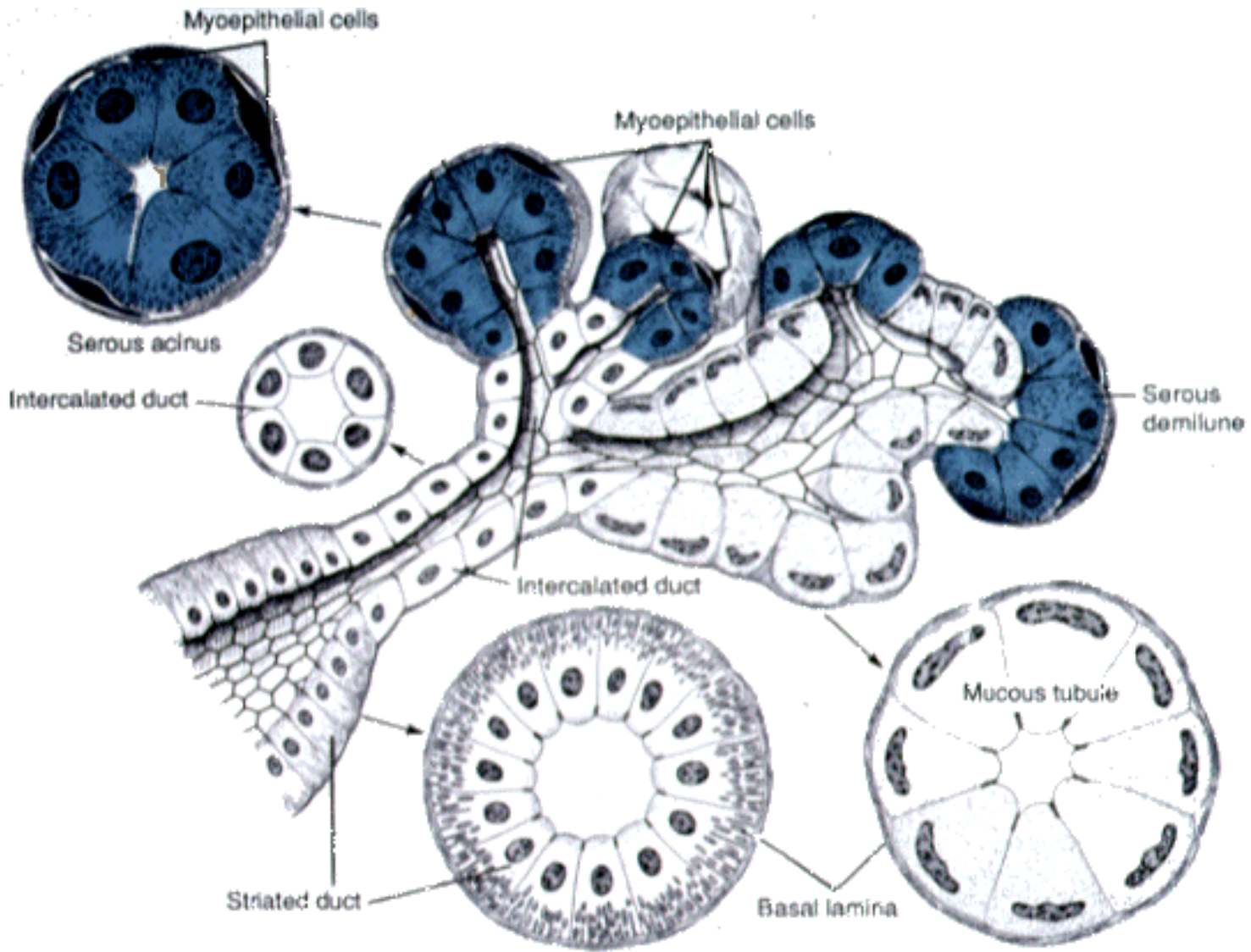
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ENDOCRINE GLANDS

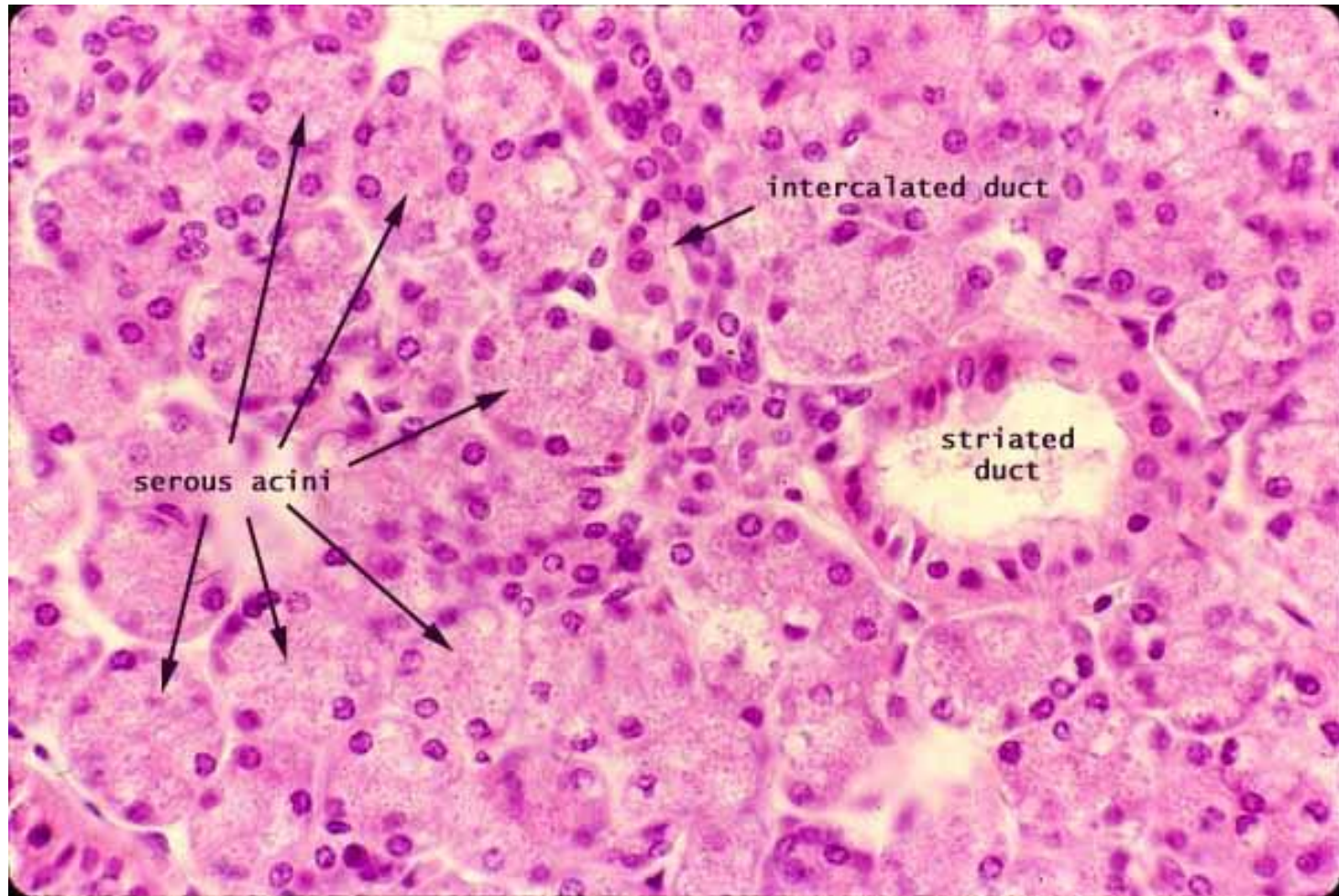
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graph TD; A[ENDOCRINE GLANDS] --> B[CORD AND CLUMP TYPE]; A --> C[FOLLICULAR TYPE];
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CORD AND CLUMP
TYPE

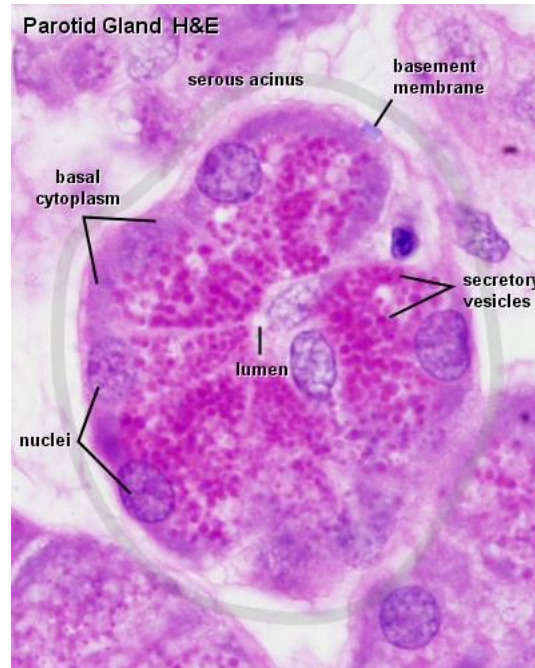
FOLLICULAR
TYPE



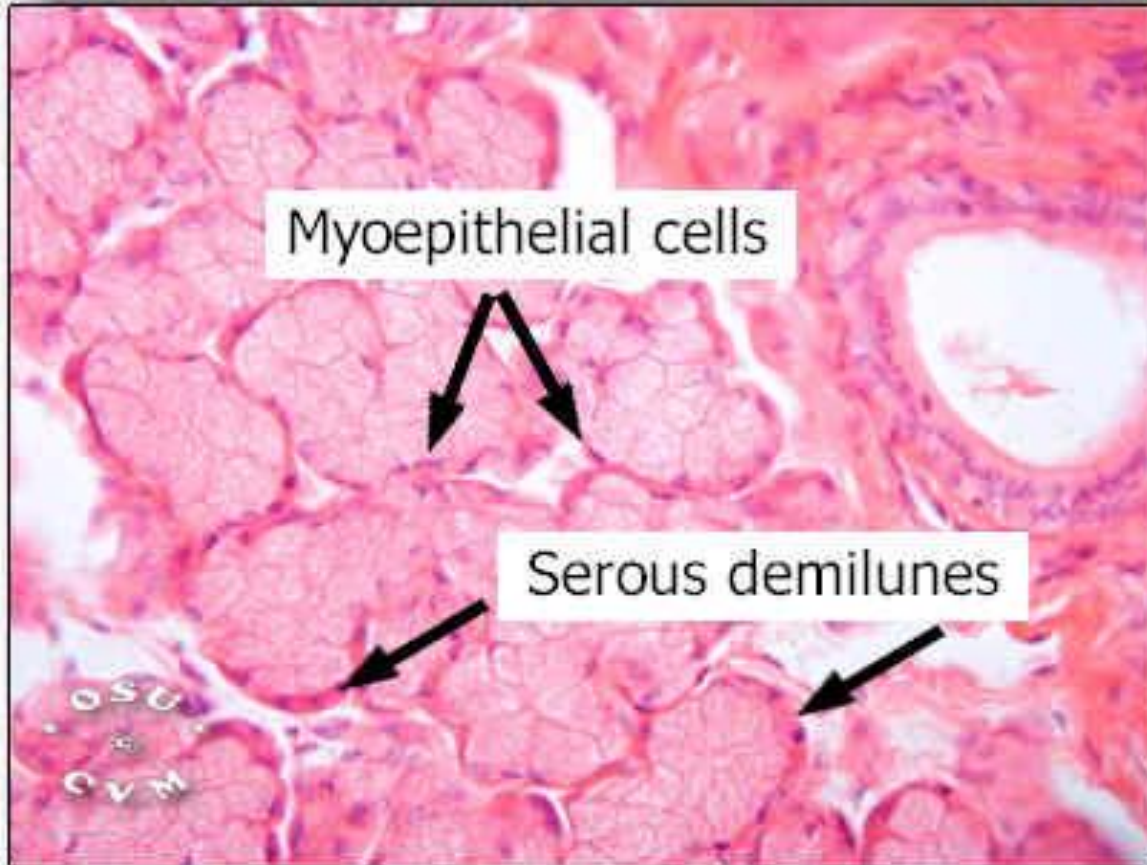
SEROUS GLAND

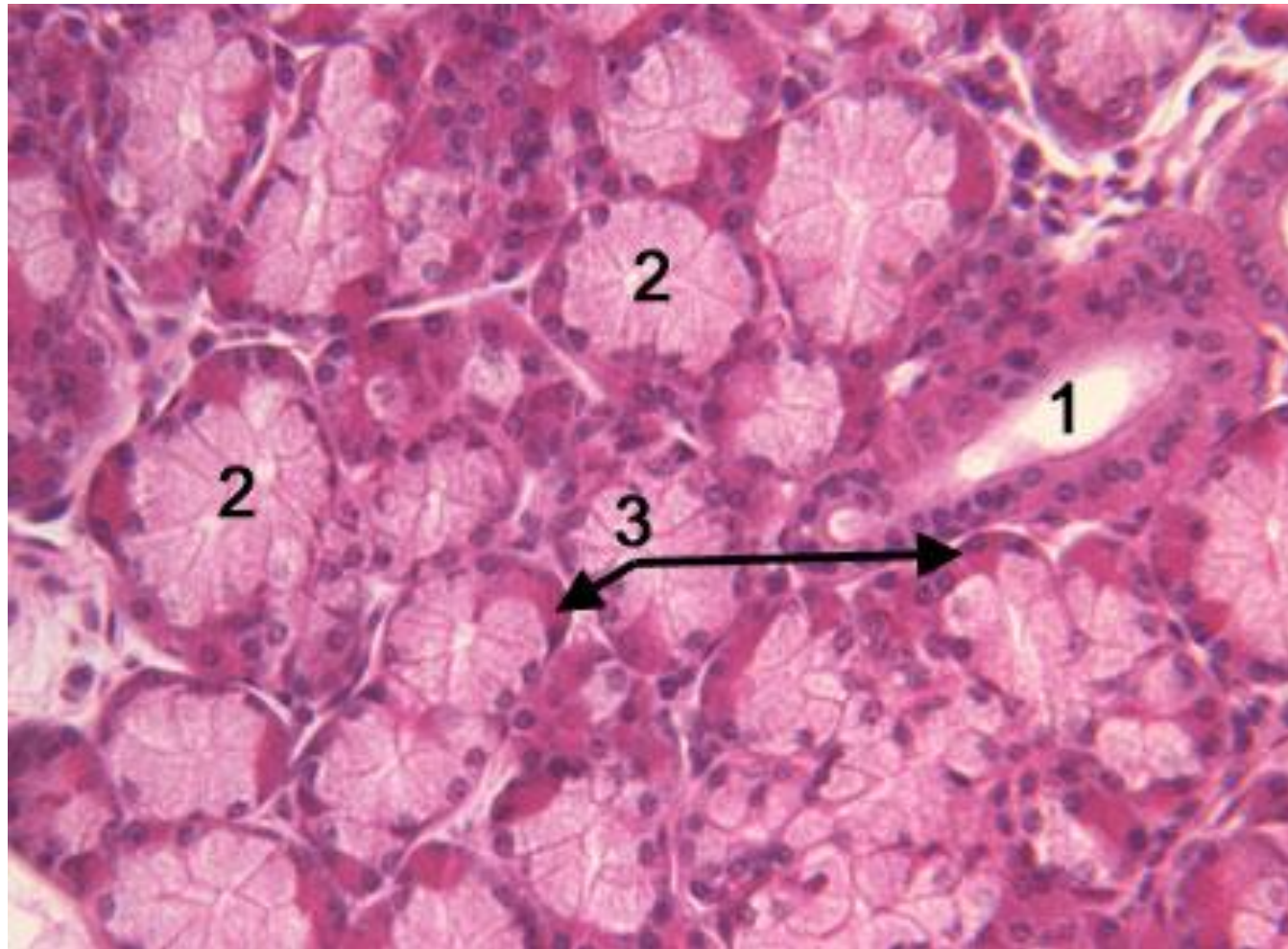


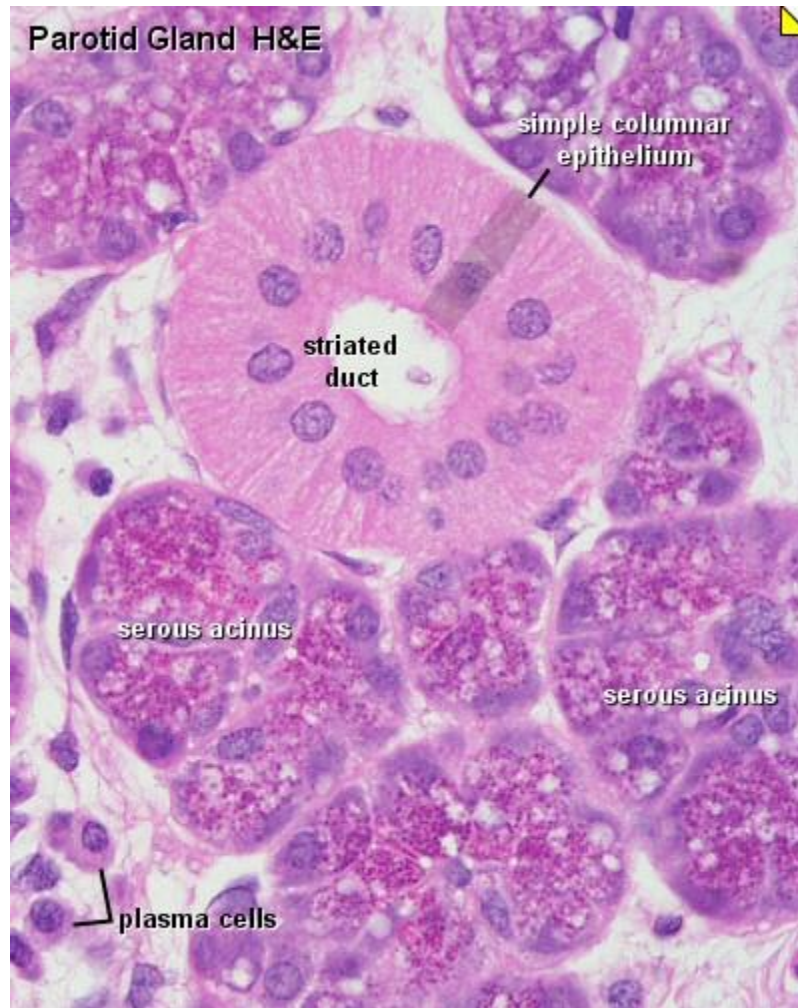
SEROUS GLAND



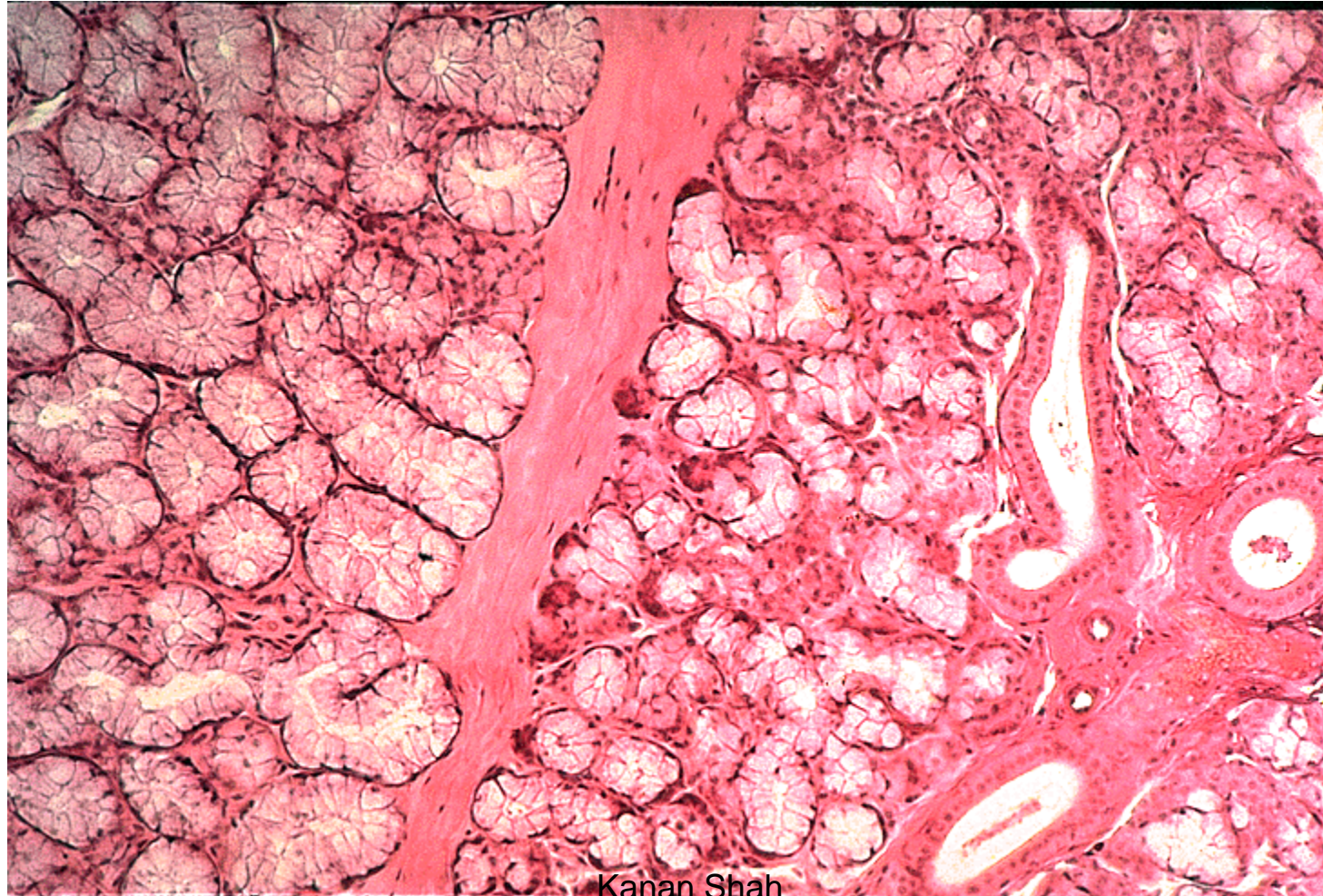
MIXED GLAND





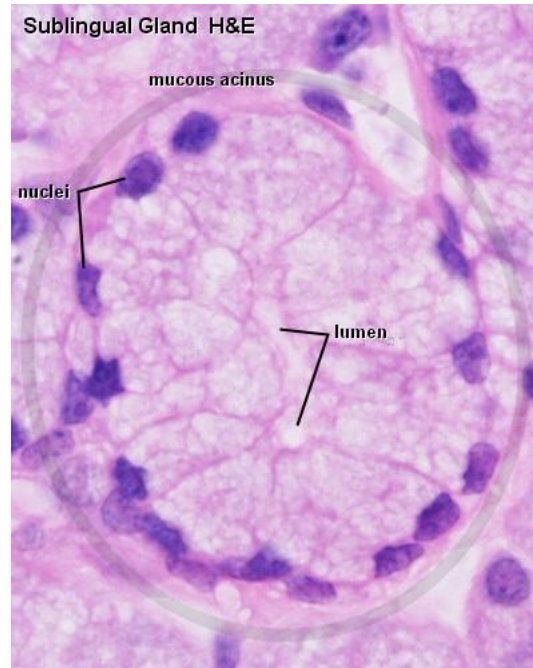


MUCOUS GLAND (SUBLINGUAL GLAND)



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MUCOUS GLAND



Aknowledgement

- Inderbir Singh's Textbook of Human Histology
- Textbook of Histology- Atlas and Practical Guide by JP Gunasegaran
- Difiore's Atlas of Histology
- Images from Google
- Histology Text & Atlas -Brijeshkumar



THANK YOU