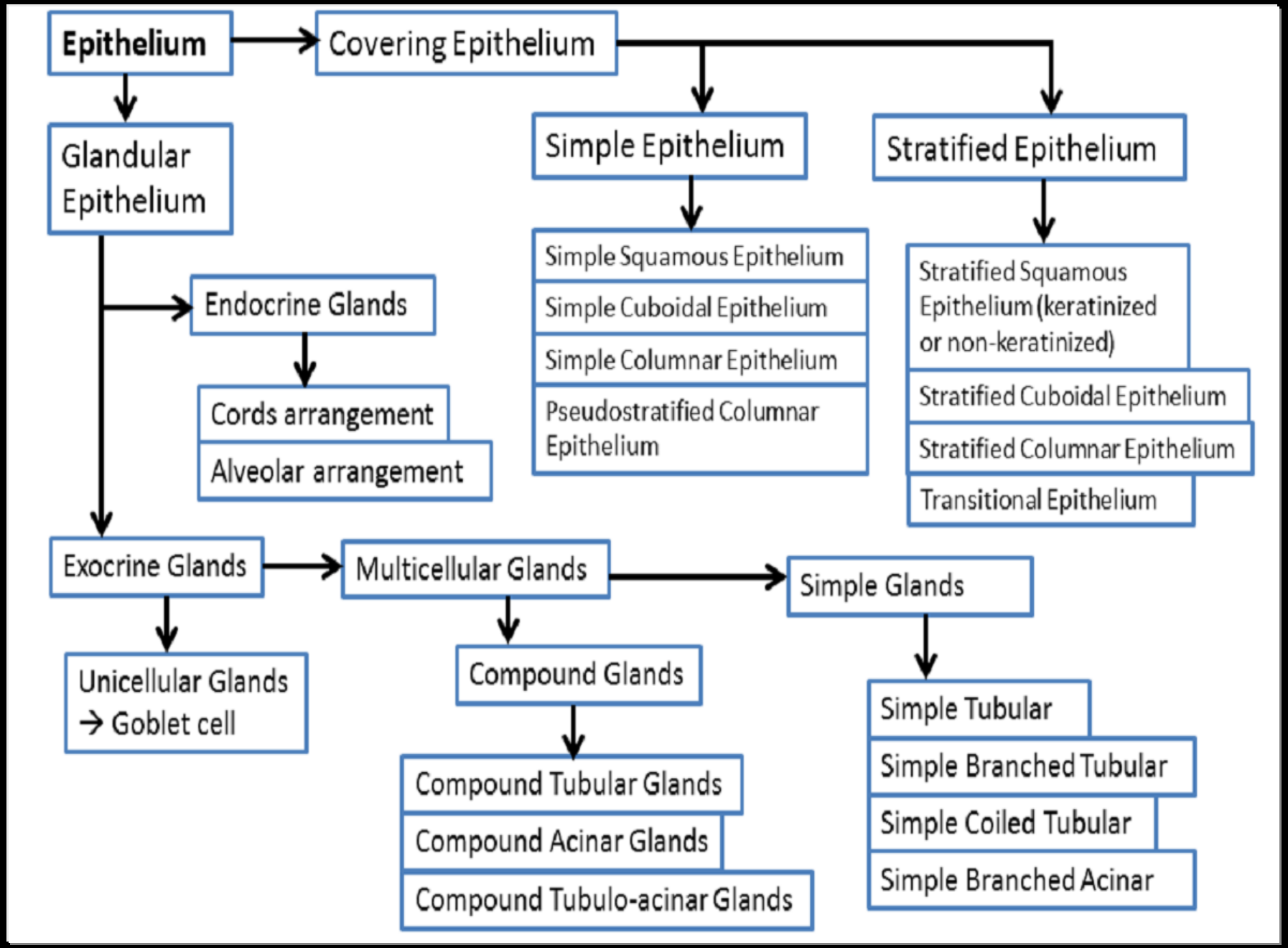
Medical Biology


Epithelium
Covering Epithelium
Glandular Epithelium
Simple Epithelium
Stratified Epithelium
Simple Squamous Epithelium
Simple Cuboidal Epithelium
Simple Columnar Epithelium
Pseudostratified Columnar Epithelium
Stratified Squamous Epithelium (keratinized or non-keratinized)
Stratified Cuboidal Epithelium
Stratified Columnar Epithelium
Transitional Epithelium
Endocrine Glands
Cords arrangement
Alveolar arrangement
Exocrine Glands
Multicellular Glands
Simple Glands
Unicellular Glands → Goblet cell
Compound Glands
Compound Tubular Glands
Compound Acinar Glands
Compound Tubulo-acinar Glands
Simple Tubular
Simple Branched Tubular
Simple Coiled Tubular
Simple Branched Acinar

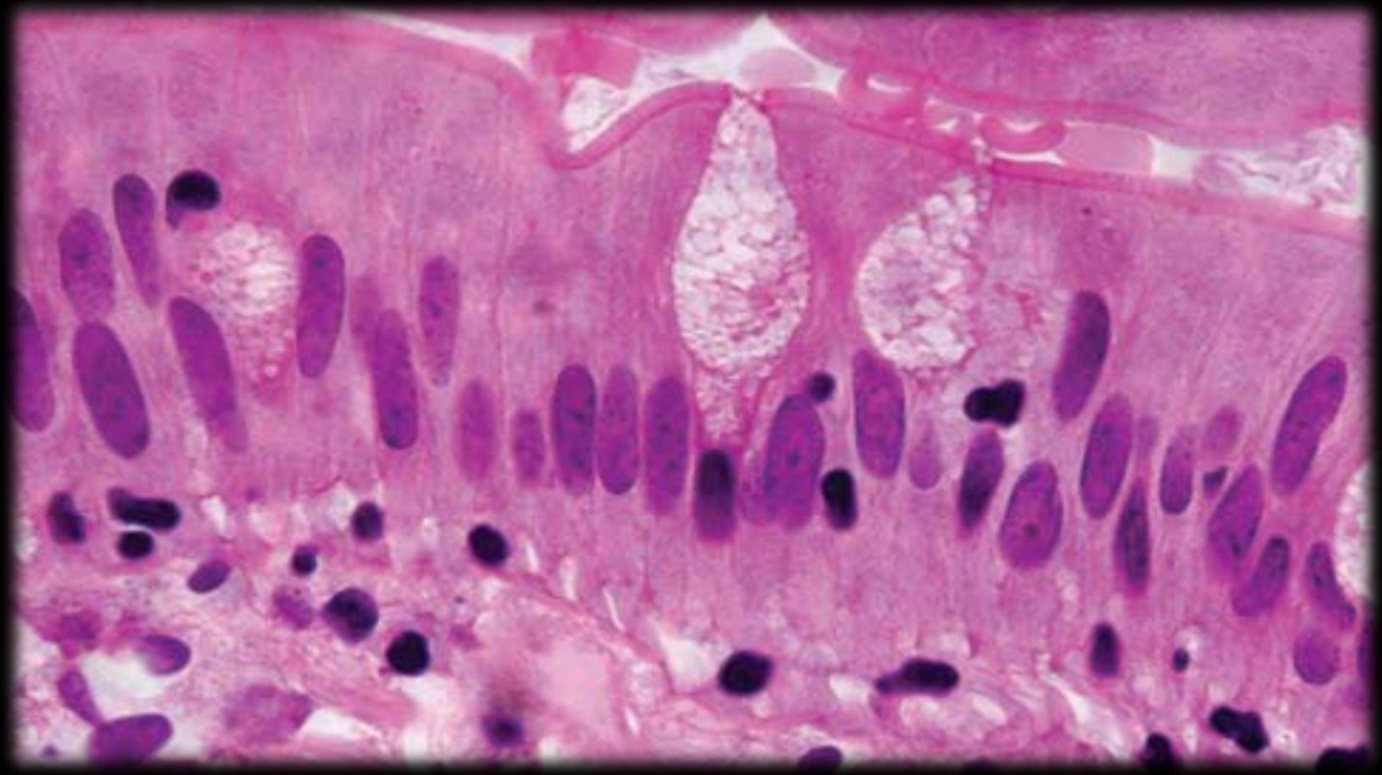
2. Exocrine Glands Classified by Morphology:

Exocrine glands are classified according to the no. of cells into two groups:

unicellular glands

multicellular glands.

- Unicellular exocrine glands:



Classification of glandular epithelium

It is classified according to morphology

1. Unicellular glands

2. Multicellular glands: they are classified according to the following:

Organization of the duct system	Organization of the secretory portion	Shape of the secretory portion
simple	straight	tubular
compound	branched	acinar
	coiled	Tubule-acinar

Simple

Simple straight tubular

simple branched tubular

simple coiled tubular

Simple straight acinar

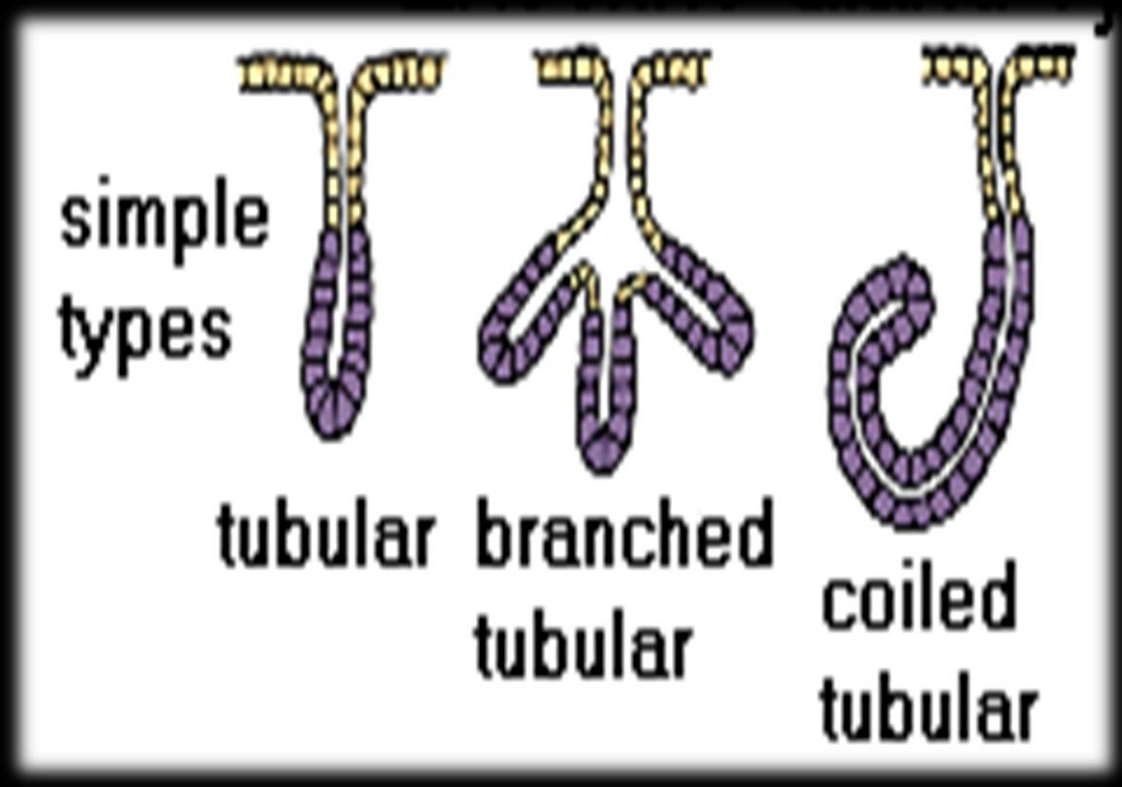
Simple branched acinar

1. simple tubular glands:

a. simple straight tubular glands:

b. simple branched tubular glands:

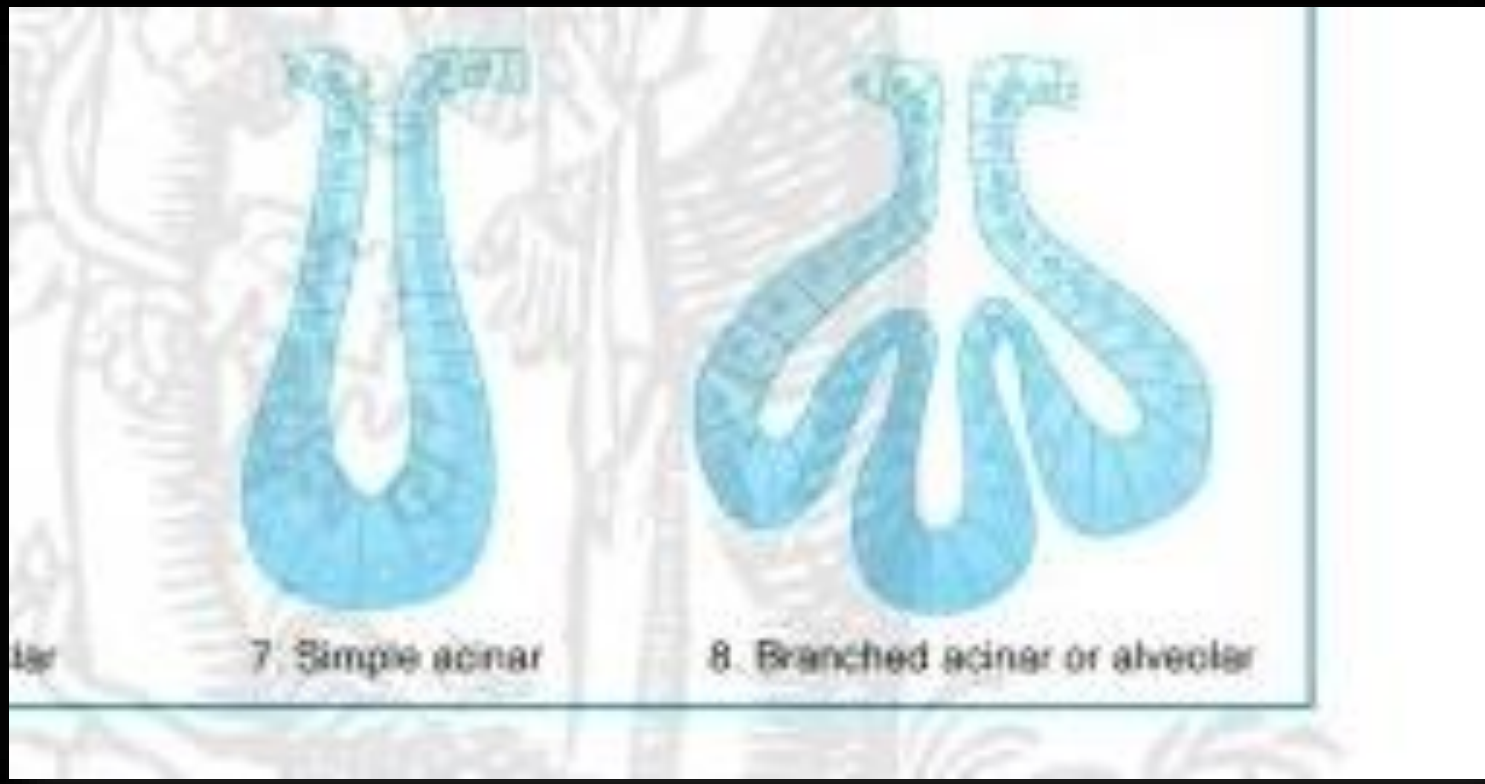
c. simple coiled tubular glands:



2. simple acinar glands (simple alveolar)

a. simple straight acinar glands:

b. simple branched acinar glands:



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compound	branched	acinar
	coiled	Tubule-acinar

Compound

(only classified according to organization of duct system and shape of secretory portion)

Compound tubular

Compound acinar

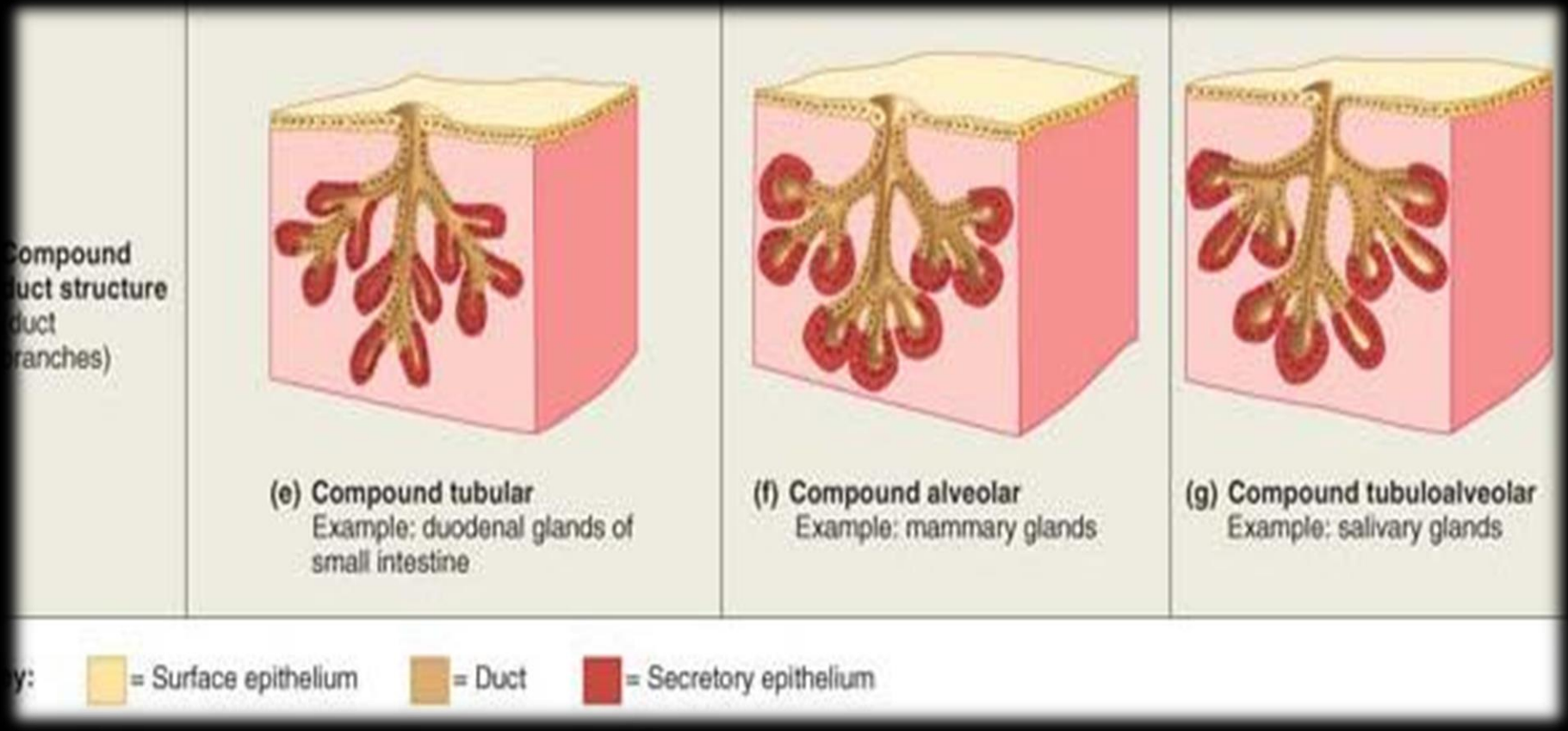
Compound tubulo-acinar

2. compound multicellular exocrine glands:

a. compound tubular glands:

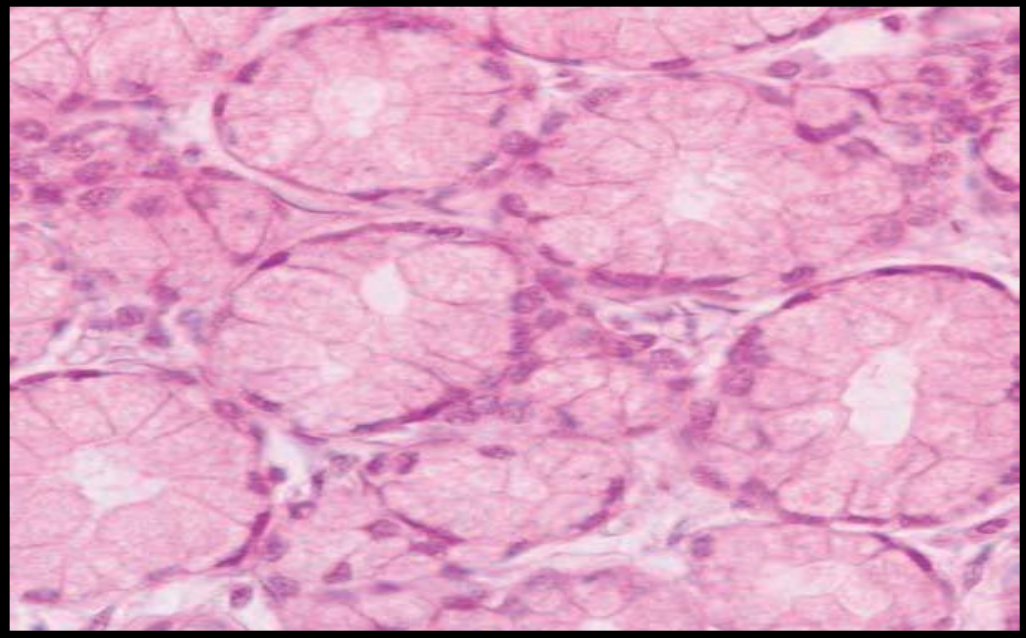
b. b. compound acinar or alveolar glands:

c. c. compound tubuloacinar (tubuloalveolar):

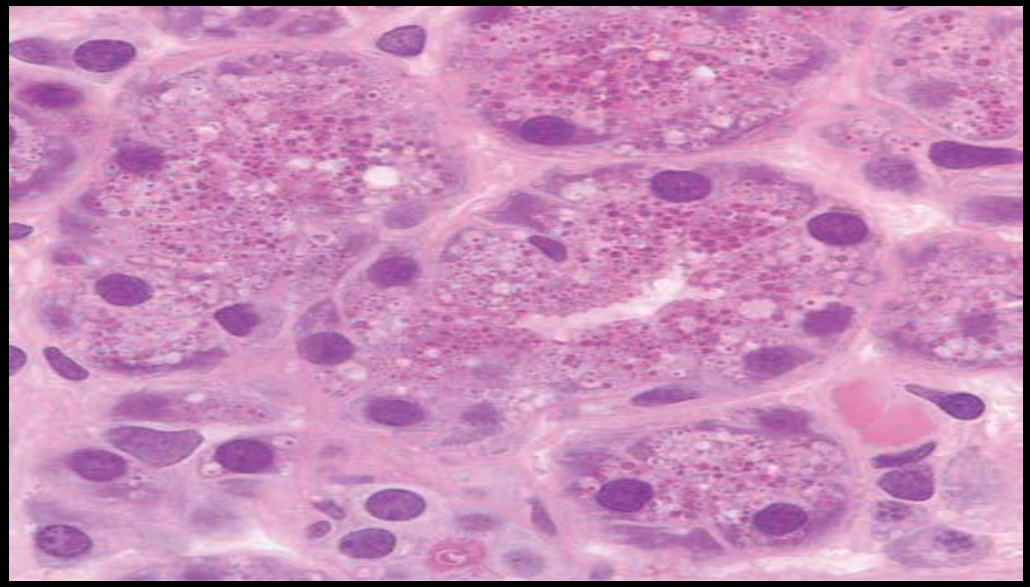


3. Exocrine Glands Classified by Product:

a. Mucous cells:

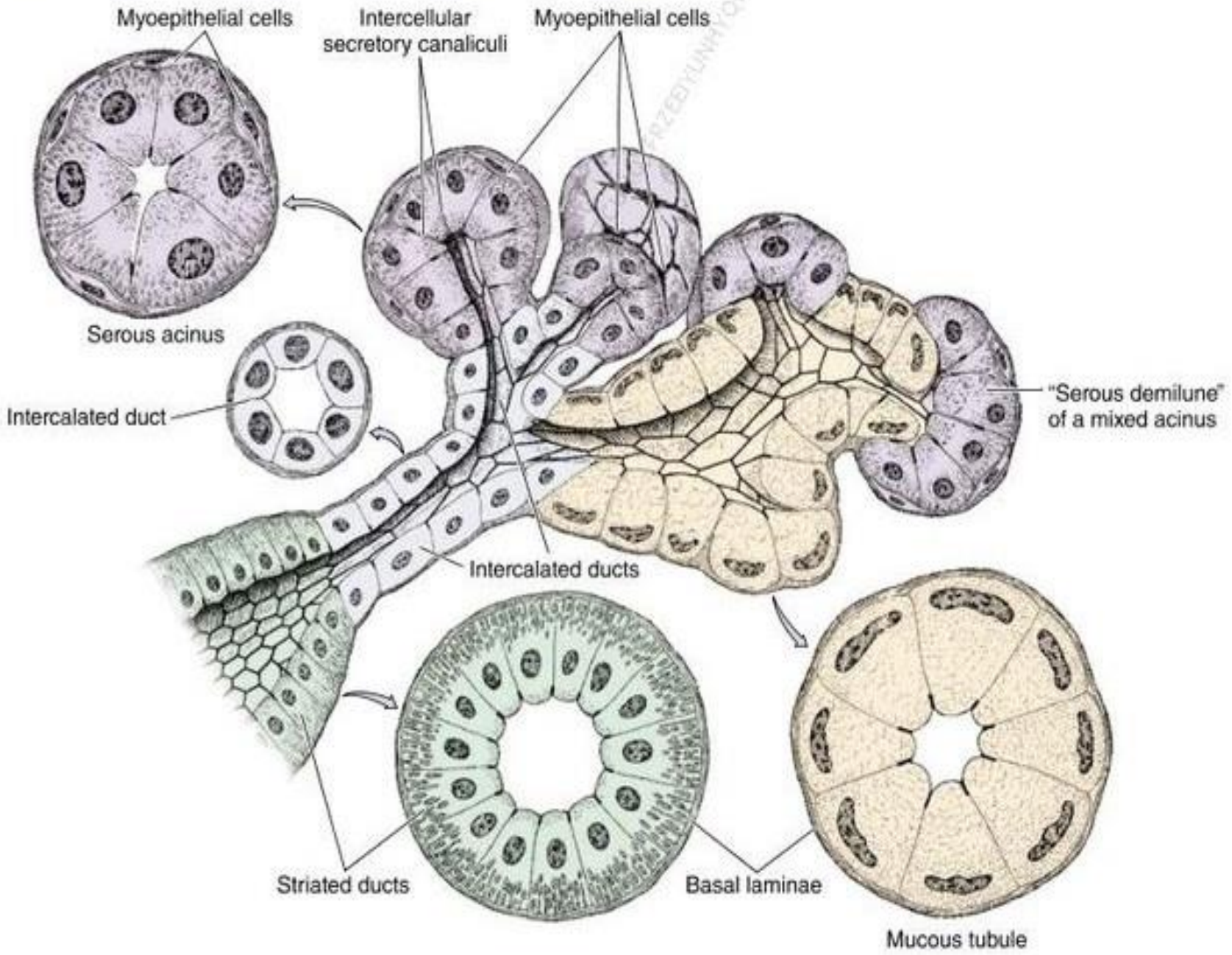


b. Serous cells:

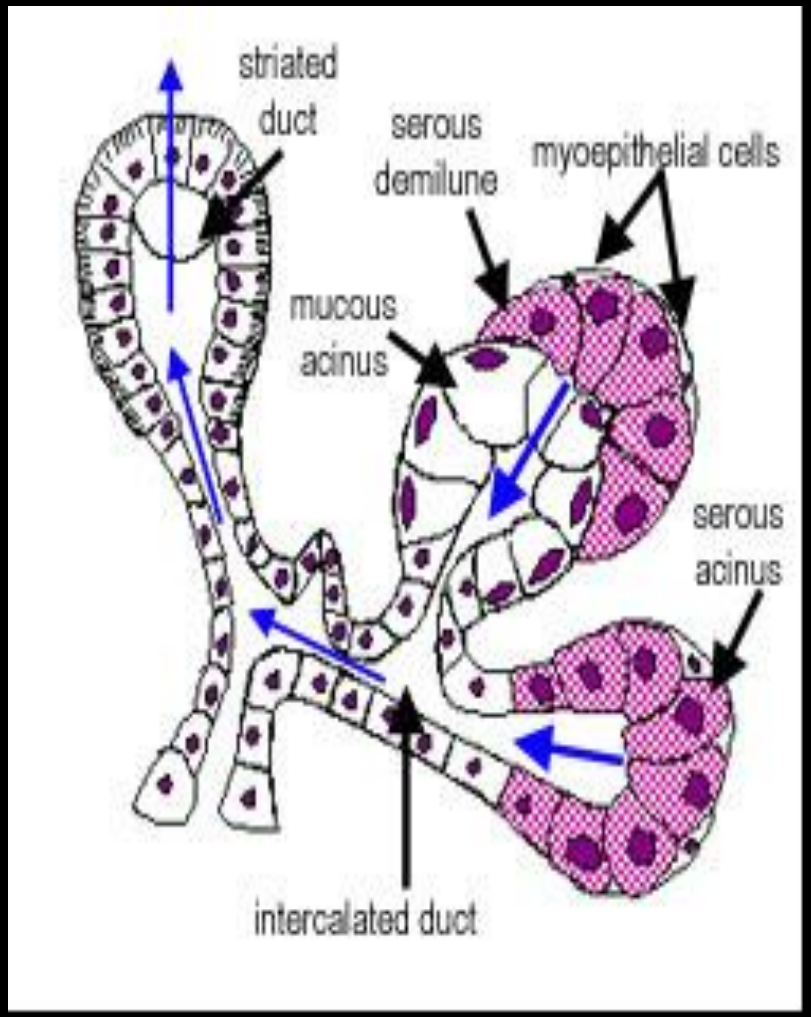


c. Mixed:

FIGURE **16–2** **Epithelial components of a submandibular gland lobule.**



- The mucous cells ends are capped by serous cells that secrete between the mucous cells' intercellular space. These serous caps on mucous cells are called serous demilunes.



Difference between Serous & Mucous Acini

Serous

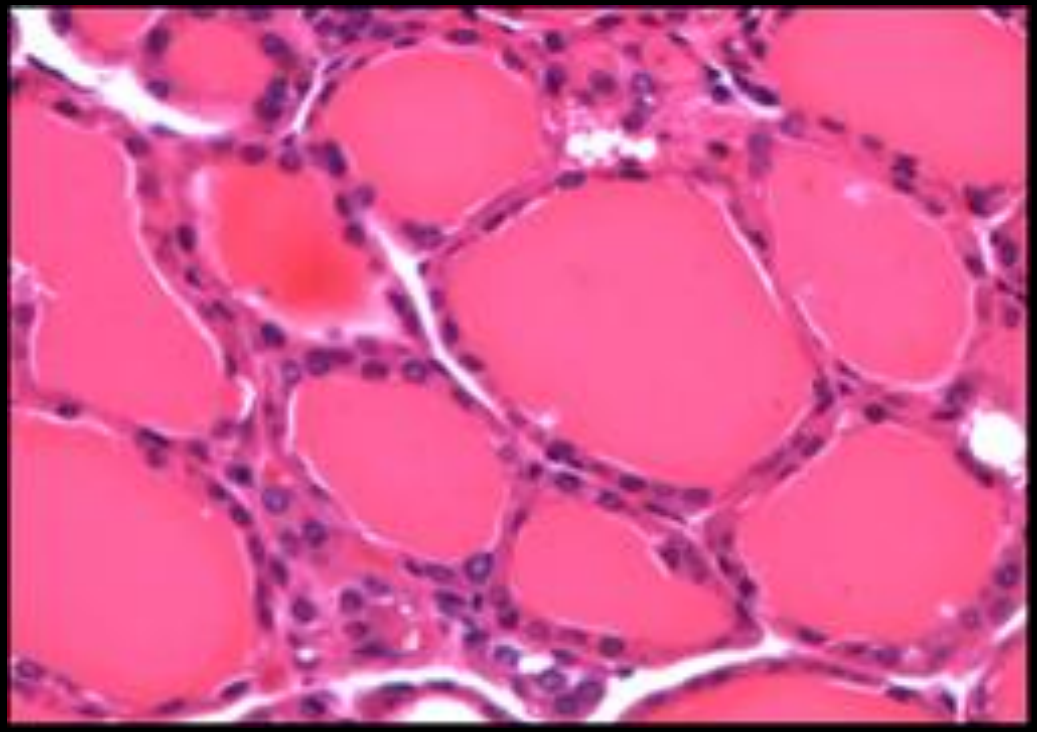
- Thin, watery
- Proteinaceous secretion
- Zymogen granules in cyto
- Central rounded Nucleus
- Small Lumen
- Indistinct cell bondaries
- Darkly stained
- Enzymatic action
- Parotid Gland

Mucous

- Thick, viscous
- Mucopolysaccharides
- Mucigen droplets
- Nucleus-flat & peripheral
- Large Lumen
- Distinct cell boundaries
- Lighly stained
- Protection & lubrication
- Sublingual gland

Endocrine glands:

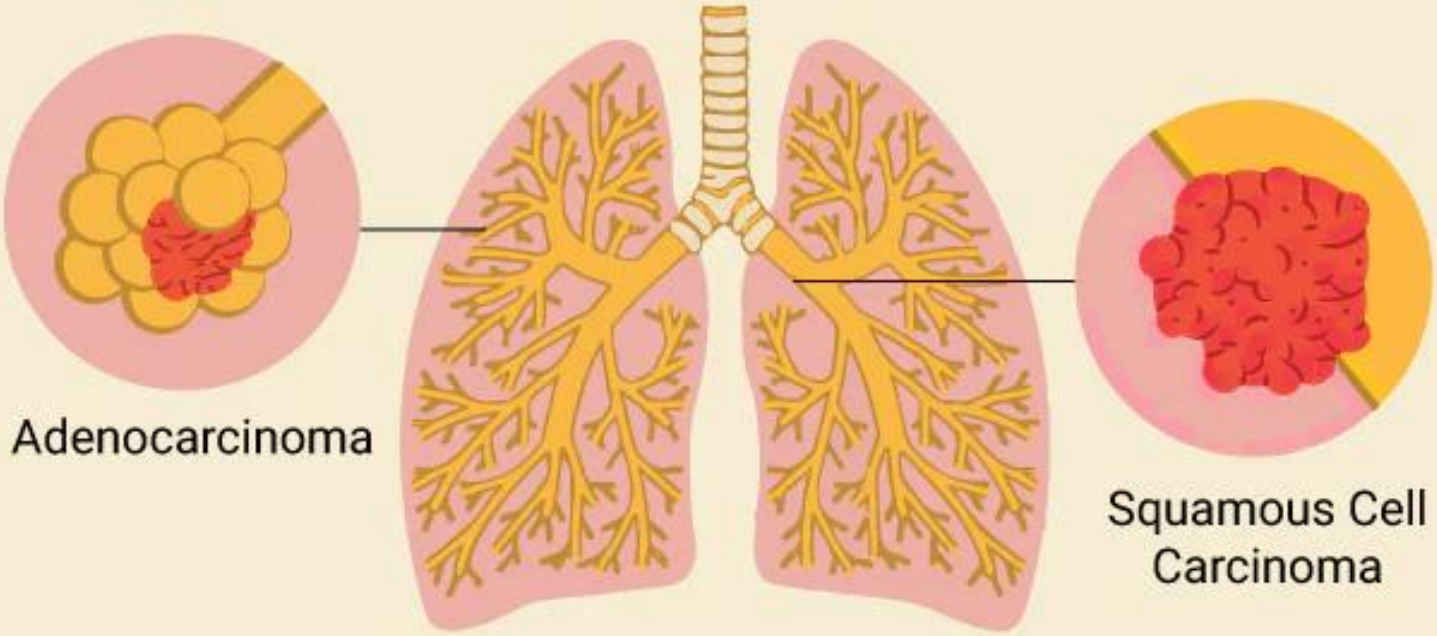
- polypeptide (or protein)-secreting cells
- steroid-secreting cells.



Medical notes

- Both benign and malignant tumours can arise from most types of epithelial cells. Malignant tumours of epithelial origin are called carcinomas. Malignant tumours derived from glandular epithelial tissue are called adenocarcinomas which are mostly common tumours in adults after age 45.

Adenocarcinoma VS Squamous Cell Carcinoma



THANK YOU