

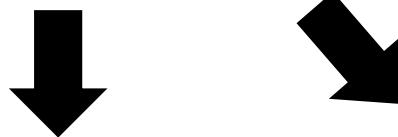
Glandular epithelium

Glandular epithelium

- Single cell glands
- Multicellular glands

Glandular epithelium

Single cell glands



- endoepithelial

- endocrine
- exocrine

- apocrine
- merocrine
- holocrine

Multicellular glands



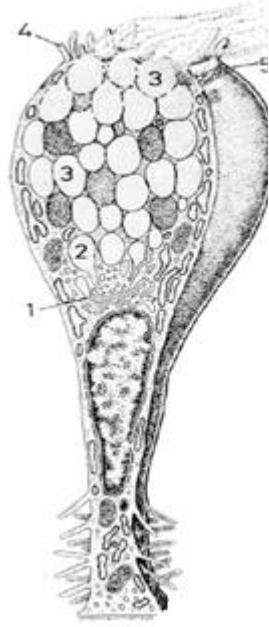
- endoepithelial
- exoepithelial

- alveolar (acinar)
- tubular
- tubuloalveolar

- simple
- branched
- compound

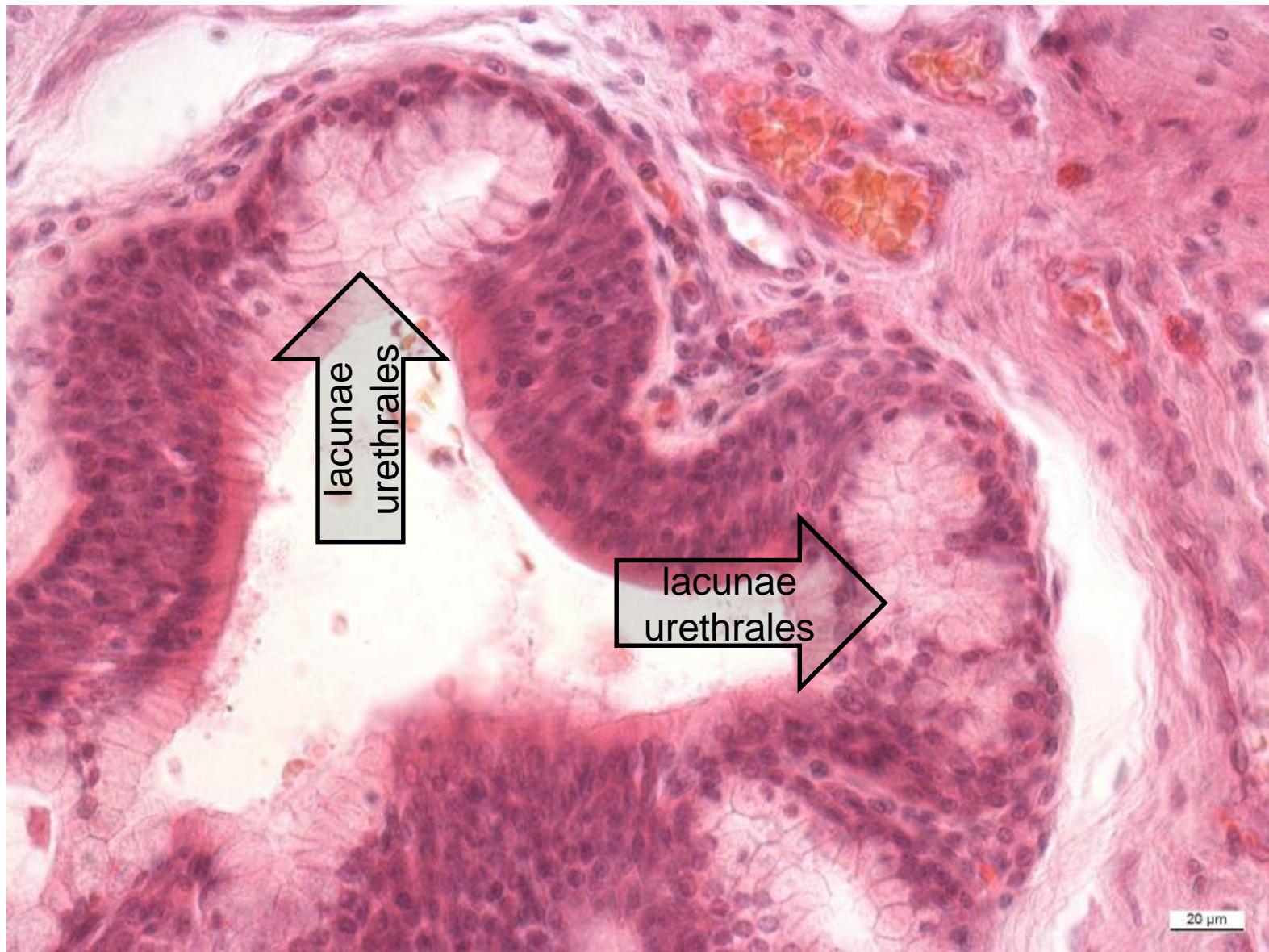
- serous
- mucinous
- mixed

Single cell glands - endoepithelial Goblet cells in respiratory passages



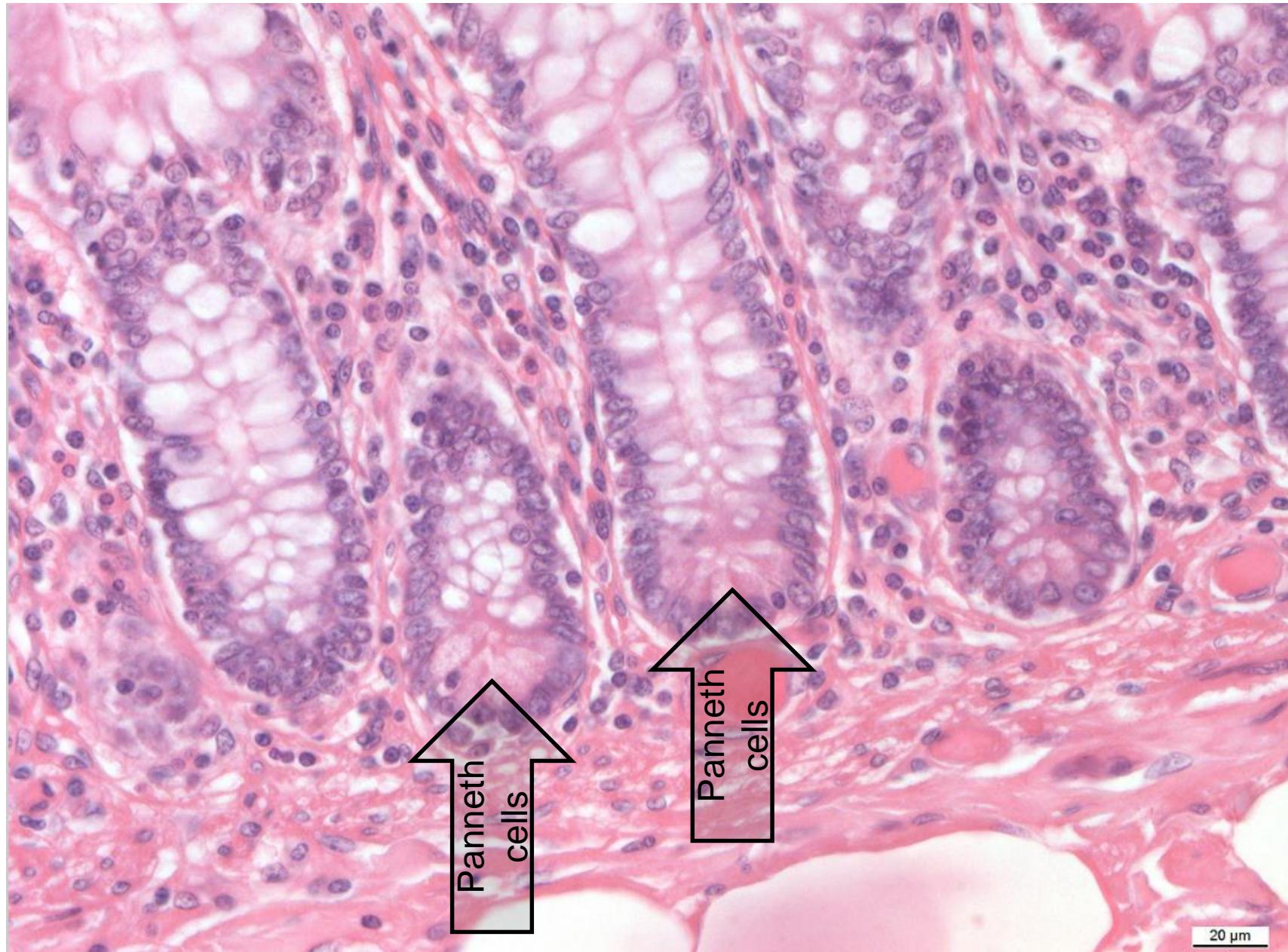
20 µm

Multicellular endoepithelial glands – *lacunae urethrales* (Morgagni) in male urethra

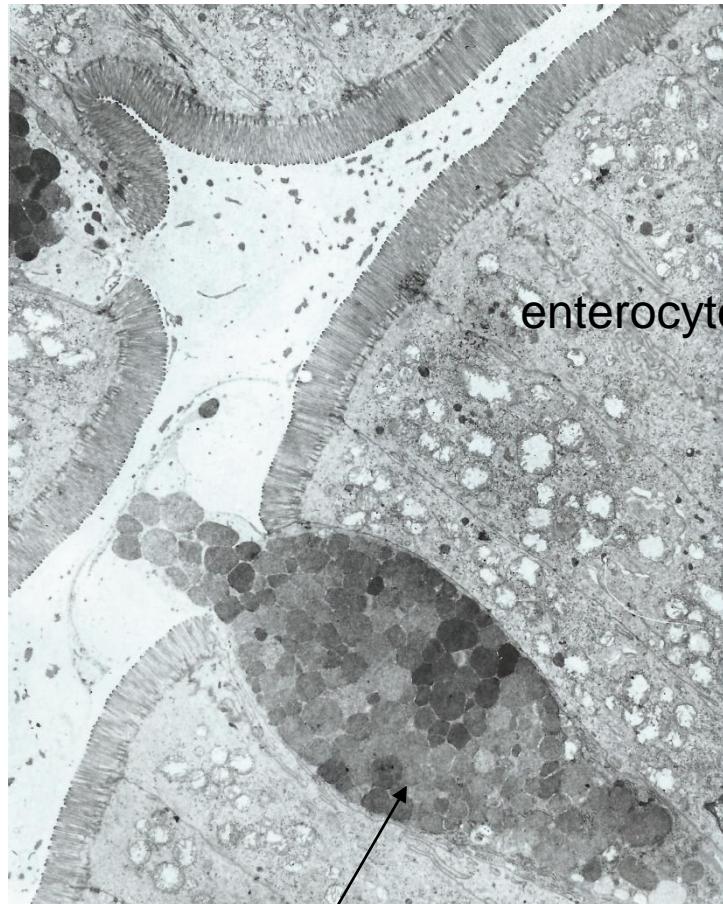


20 µm

Paneth cells and goblet cells - *Intestinum tenue*

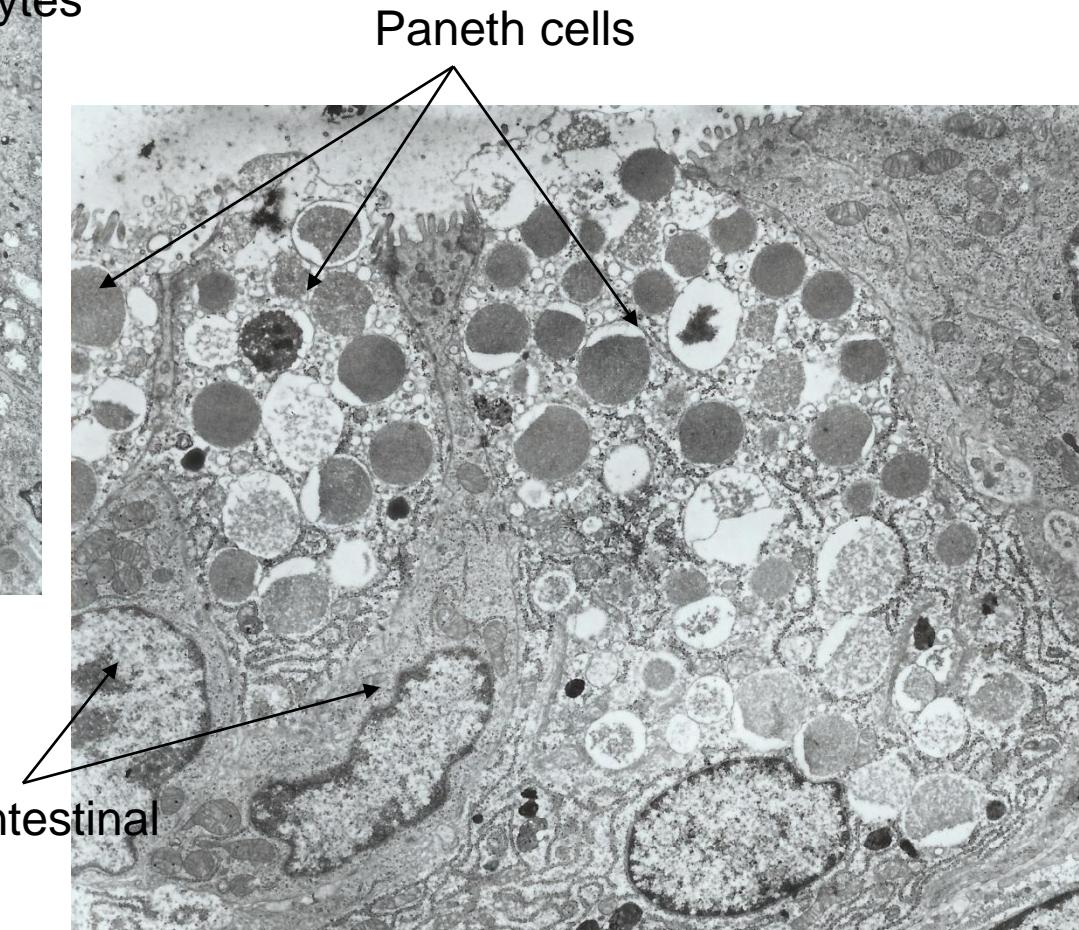


Goblet cells and Paneth cells - Intestinum tenue (TEM)



goblet cell

enterocytes



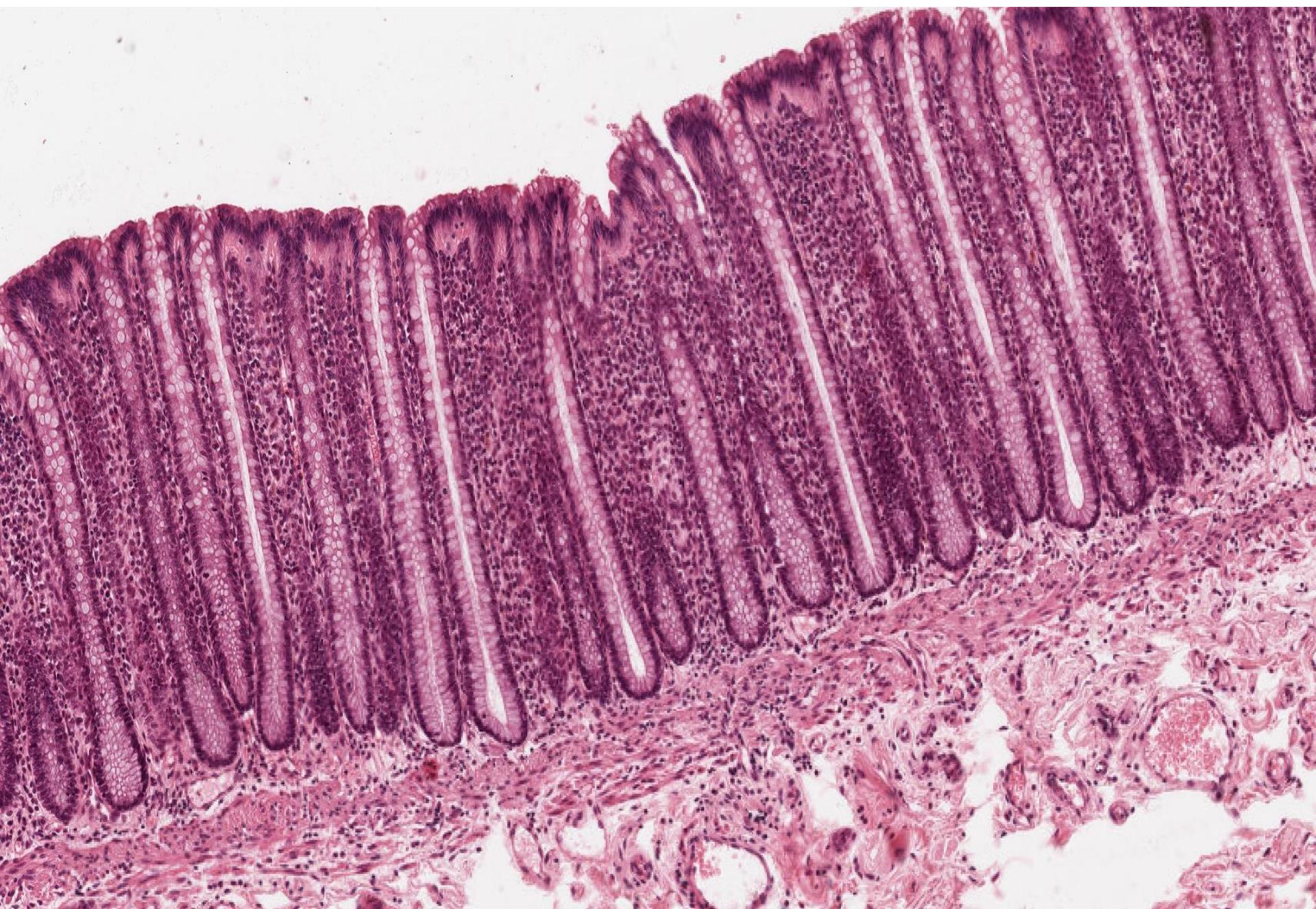
stem cells of intestinal
epithelium

Paneth cells

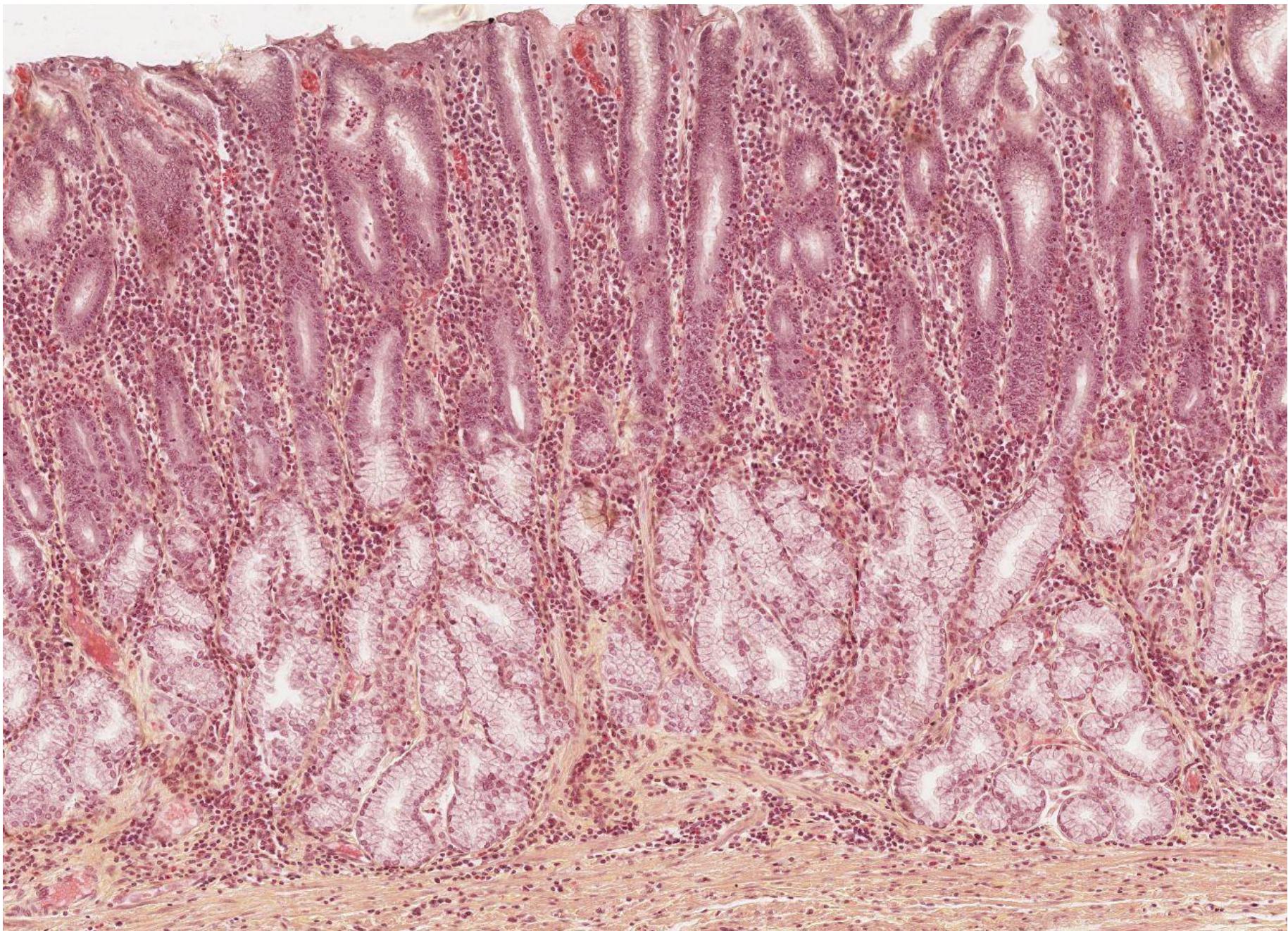
Multicellular exoepithelial glands

MULTICELLULAR SIMPLE GLANDS				
A cross-section of a simple tubular gland showing a single tube of pink tissue extending from the surface through the epidermis.	A cross-section of a simple coiled tubular gland showing a coiled tube of pink tissue within the epidermis, with a yellow duct leading to the surface.	A cross-section of a simple branched tubular gland showing a tube that branches into two or more smaller tubes within the epidermis.	A cross-section of a simple alveolar (acinar) gland showing a single tube that widens into a spherical sac (alveolus) near the surface.	A cross-section of a simple branched alveolar gland showing a tube that branches into multiple spherical sacs (alveoli) near the surface.
Simple tubular	Simple coiled tubular	Simple branched tubular	Simple alveolar (acinar)	Simple branched alveolar
<i>Examples:</i> Intestinal glands (crypts of Lieberkühn)	<i>Examples:</i> Merocrine sweat glands	<i>Examples:</i> Mucous glands of esophagus, tongue, duodenum	<i>Examples:</i> Not found in adult; a stage in development of simple branched glands	<i>Examples:</i> Sebaceous (oil) glands
MULTICELLULAR COMPOUND GLANDS				
A cross-section of a compound tubular gland showing a main tube branching into many smaller tubules within the epidermis.	A cross-section of a compound alveolar (acinar) gland showing a main tube branching into multiple spherical sacs (alveoli) within the epidermis.	A cross-section of a compound tubuloalveolar (tubuloacinar) gland showing a complex branching system where some tubes lead to spherical sacs (alveoli) and others continue as tubules.		
Compound tubular	Compound alveolar (acinar)	Compound tubuloalveolar (tubuloacinar)		
<i>Examples:</i> Mucous glands (in mouth) Gastric glands Bulbourethral glands (in male reproductive system) Testes (seminiferous tubules)	<i>Examples:</i> Mammary glands	<i>Examples:</i> Salivary glands Glands of respiratory passages Pancreas (excretory portion)		

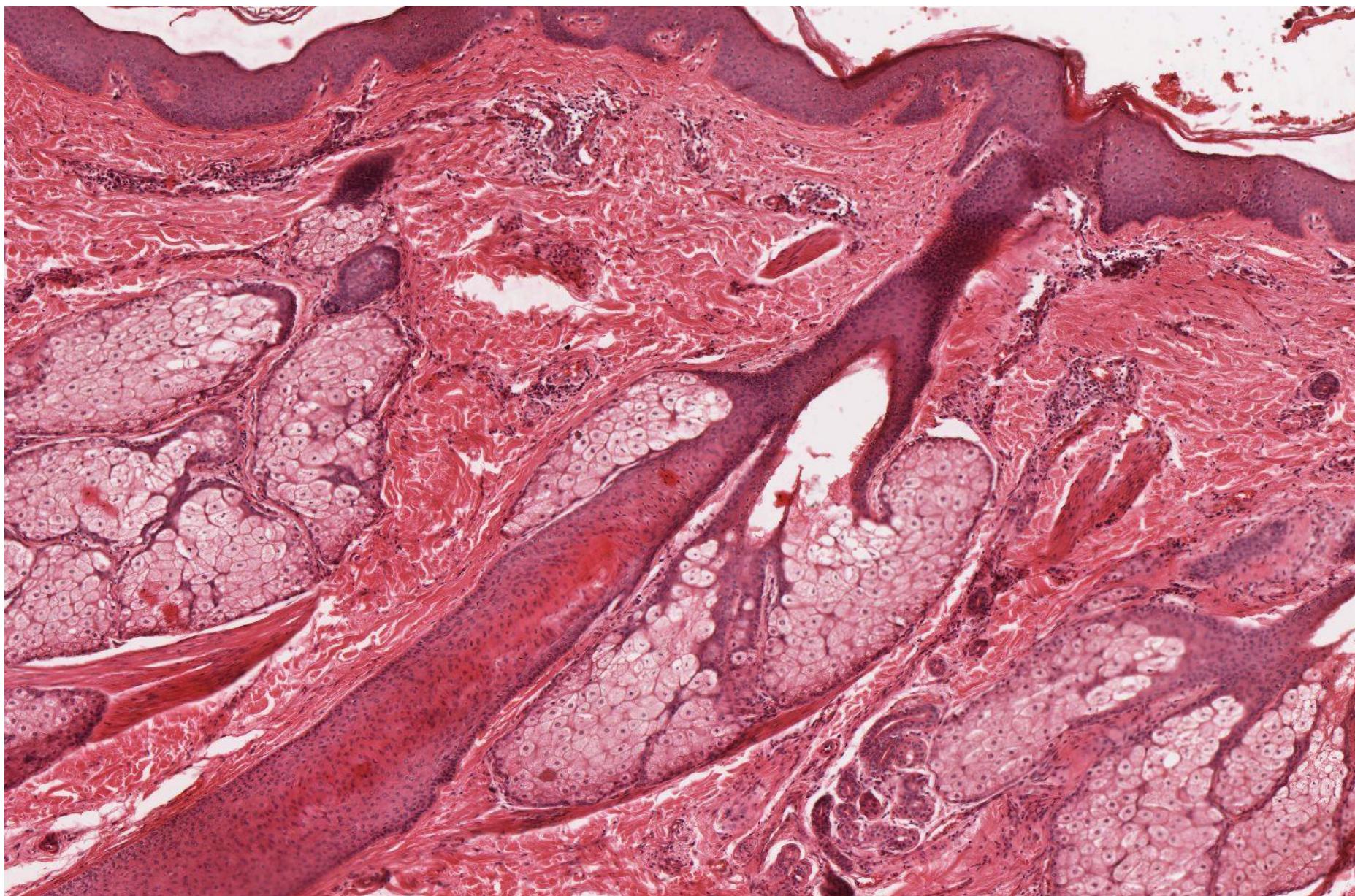
Crypts of Lieberkühn - Intestinum crassum (HE)



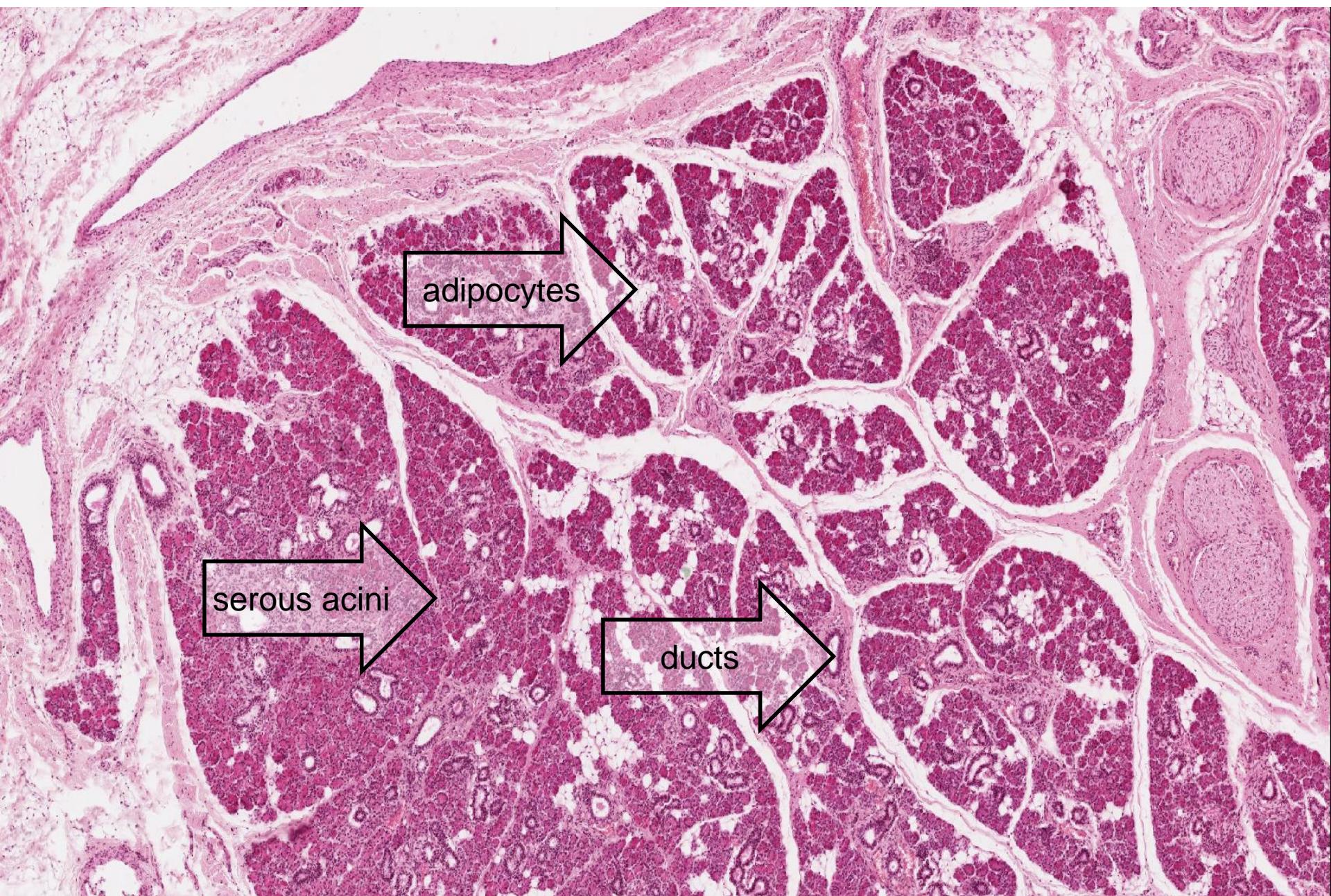
Branched tubular glands – Pylorus (HES)



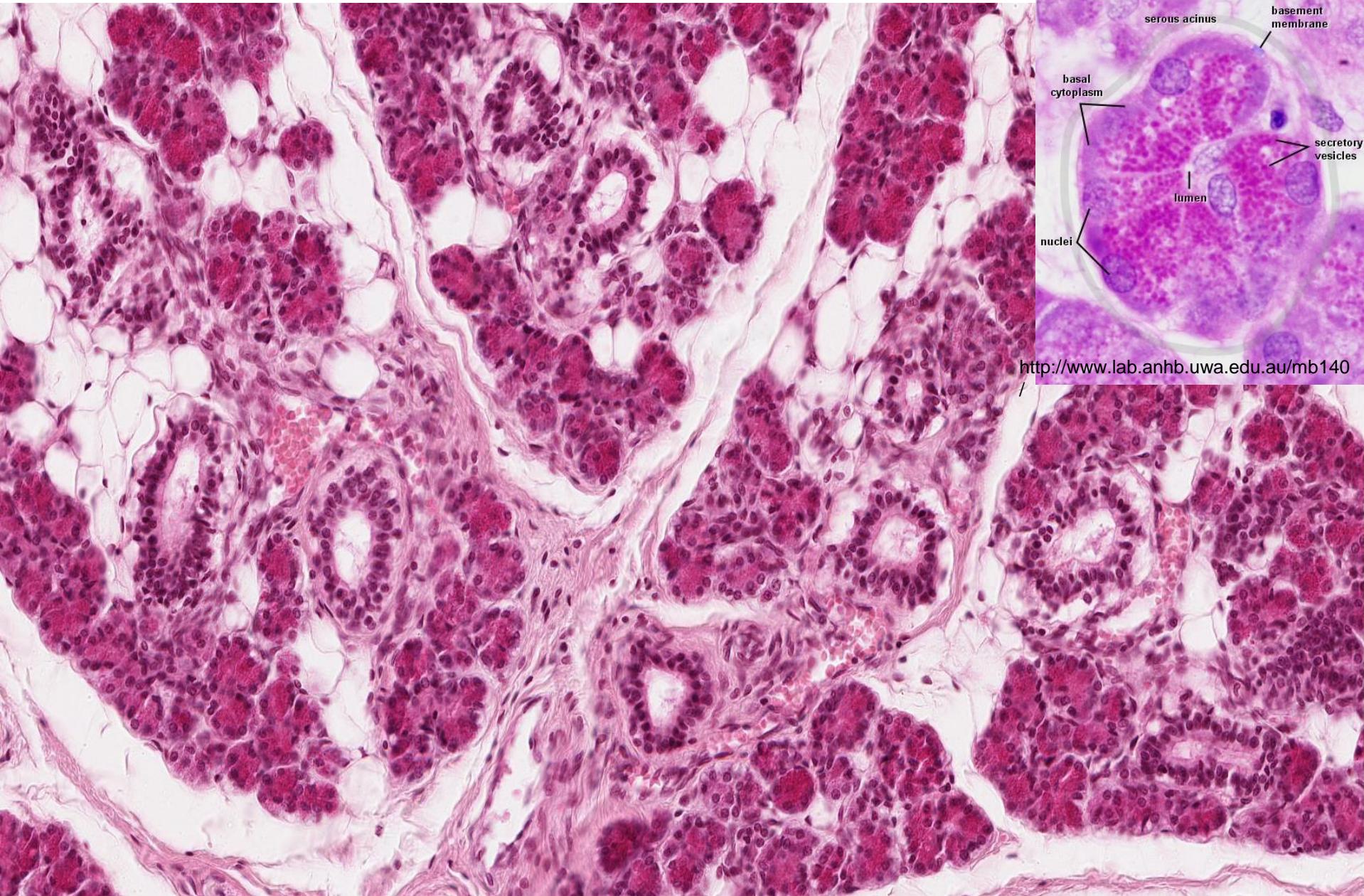
Branched alveolar (acinar) glands – sebaceous glands - Skin



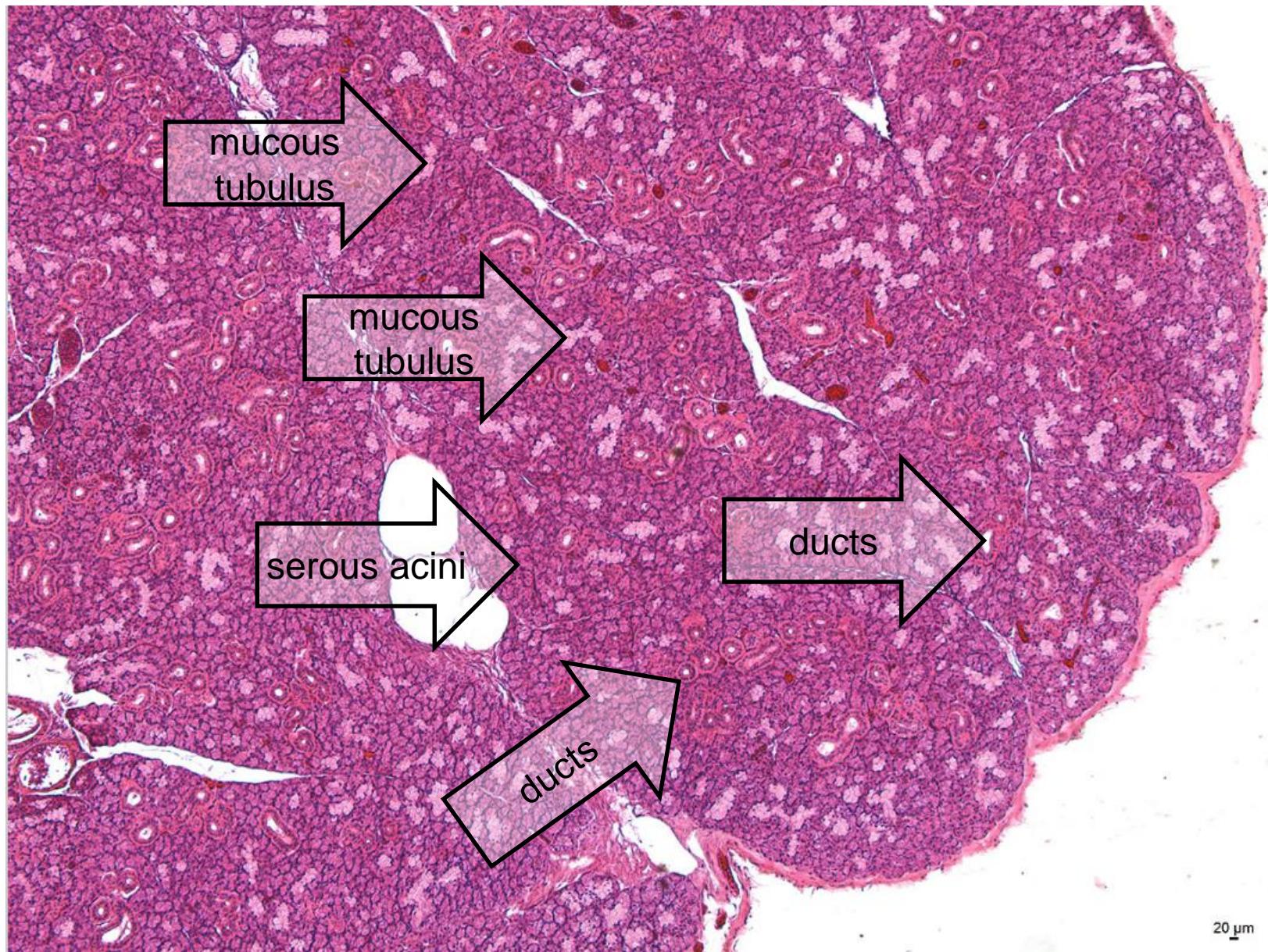
Compound alveolar serous gland - *Glandula parotis*



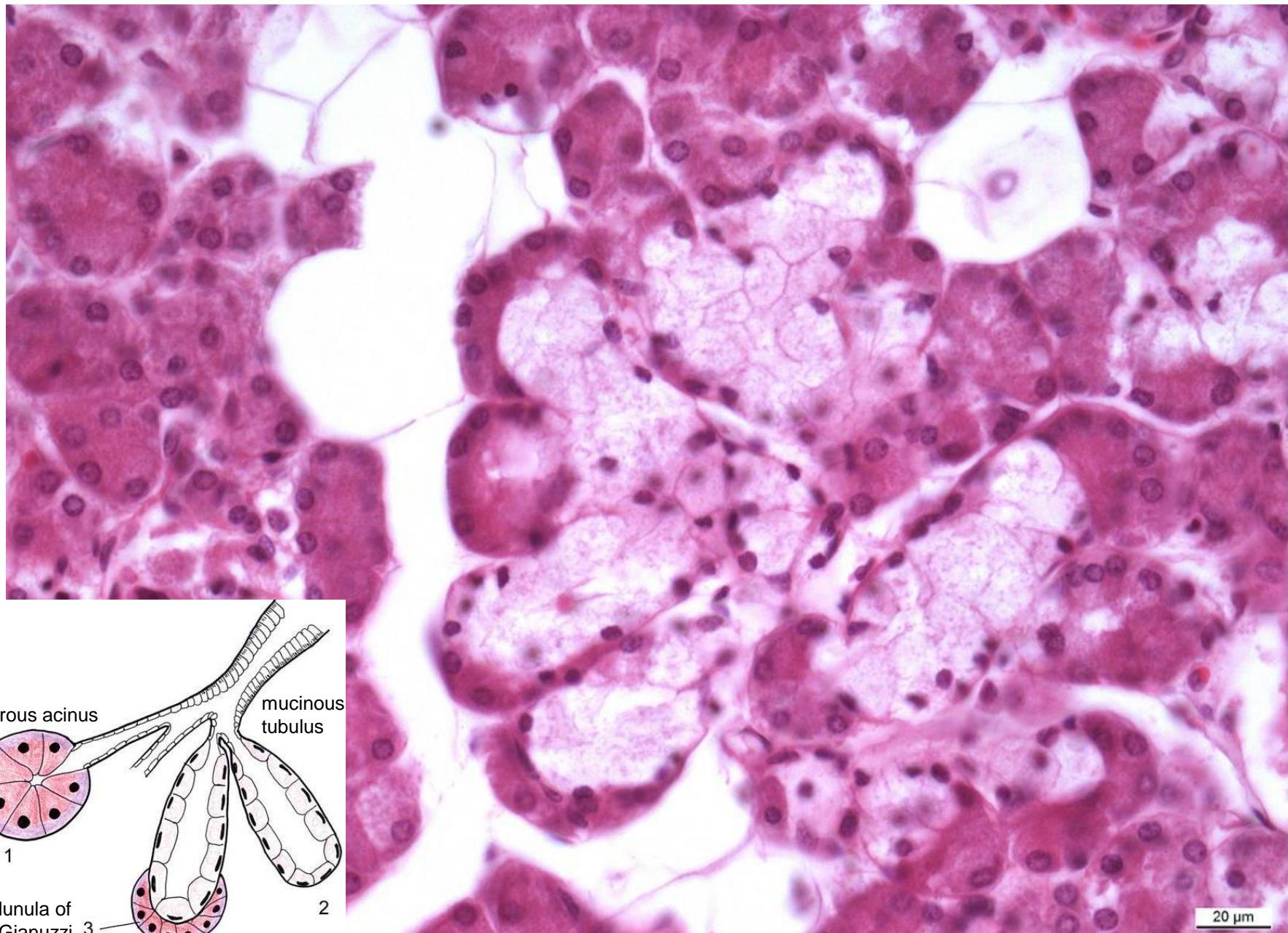
Compound alveolar serous gland - *Glandula parotis*



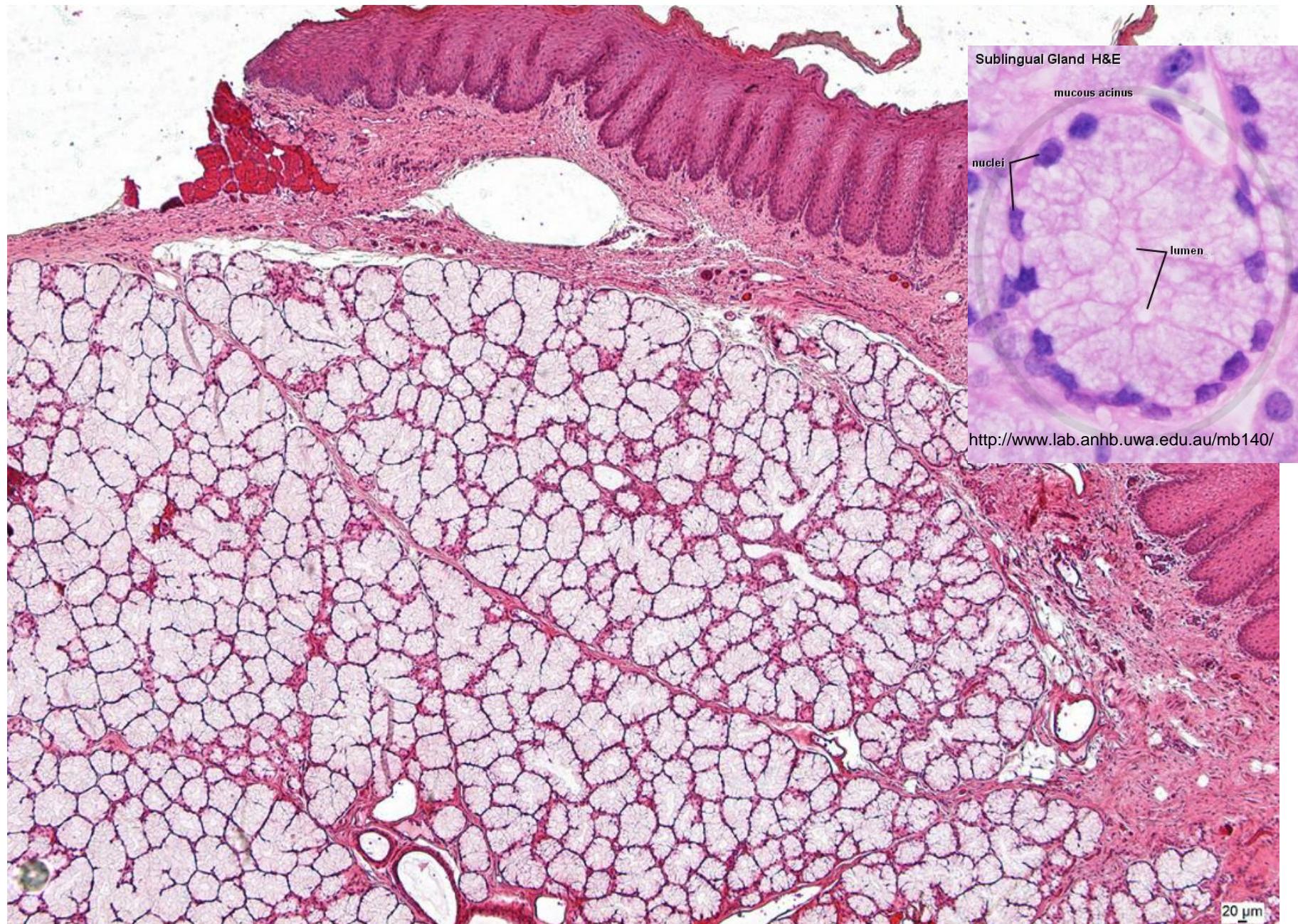
Compound tuboalveolar mixed gland - *Glandula submandibularis*



Compound tuboalveolar mixed gland - *Glandula submandibularis*



Compound tuboalveolar mixed gland - *Glandula sublingualis*



Glandular epithelium

Slides:

Paneth cells and goblet cells (16. *Intestinum tenuum*)

Lacunae urethrales (male urethra)

Simple tubular glands with goblet cells (17. *Intestinum crassum*)

Branched tubular glands (14. Pylorus)

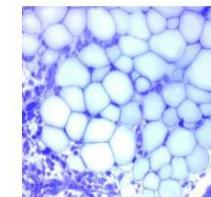
Branched alveolar (acinar) glands – sebaceous glands (71. Skin with hair)

Compound serous gland (8. *Glandula parotis*)

Compound mixed gland (9. *Glandula submandibularis*)

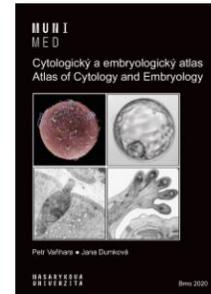
Histologický atlas

Doporučený studijní materiál



Cytologický a embryologický atlas

Doporučený studijní materiál



Electronograms:

Atlas of Cytology and Embryology

Numbers by the slides indicate their positions in sets in Microscopic Hall, not in online atlases. These numbers allow you to find the slides easily and study them using a microscope when the normal classes are opened.