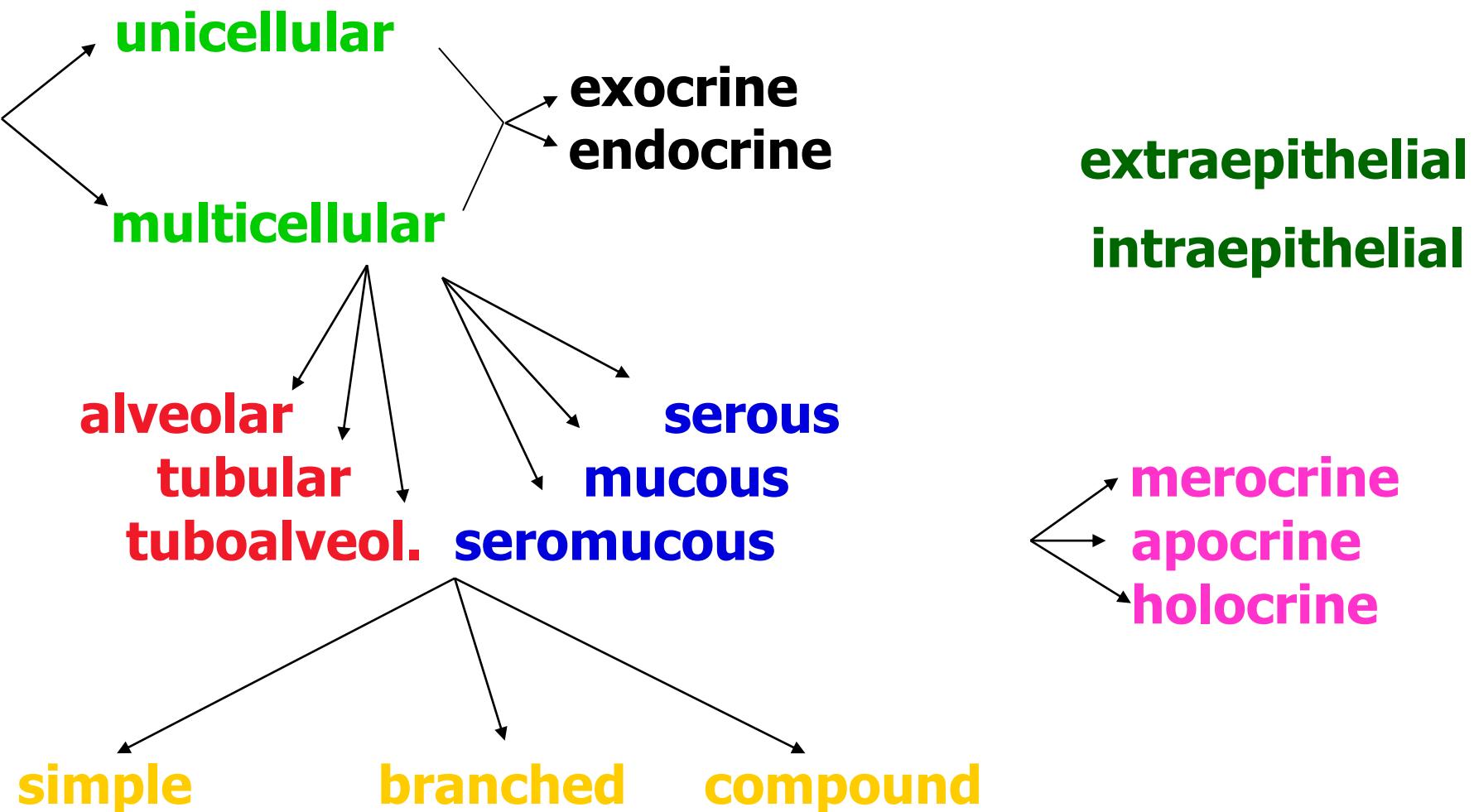


M U N I  
M E D

# Glandular epithelium

Unicellular  
Multicellular

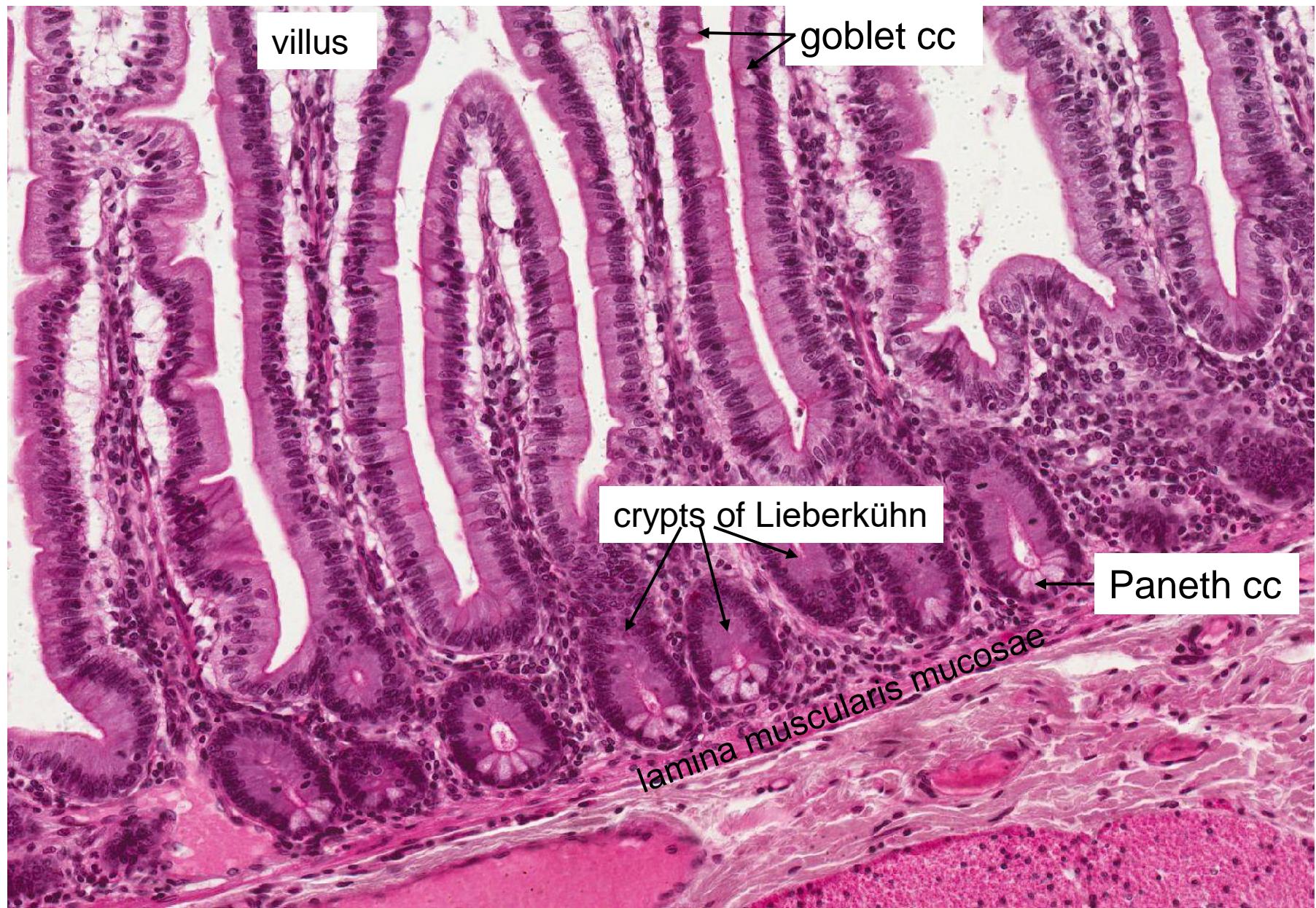
# Classification of glands



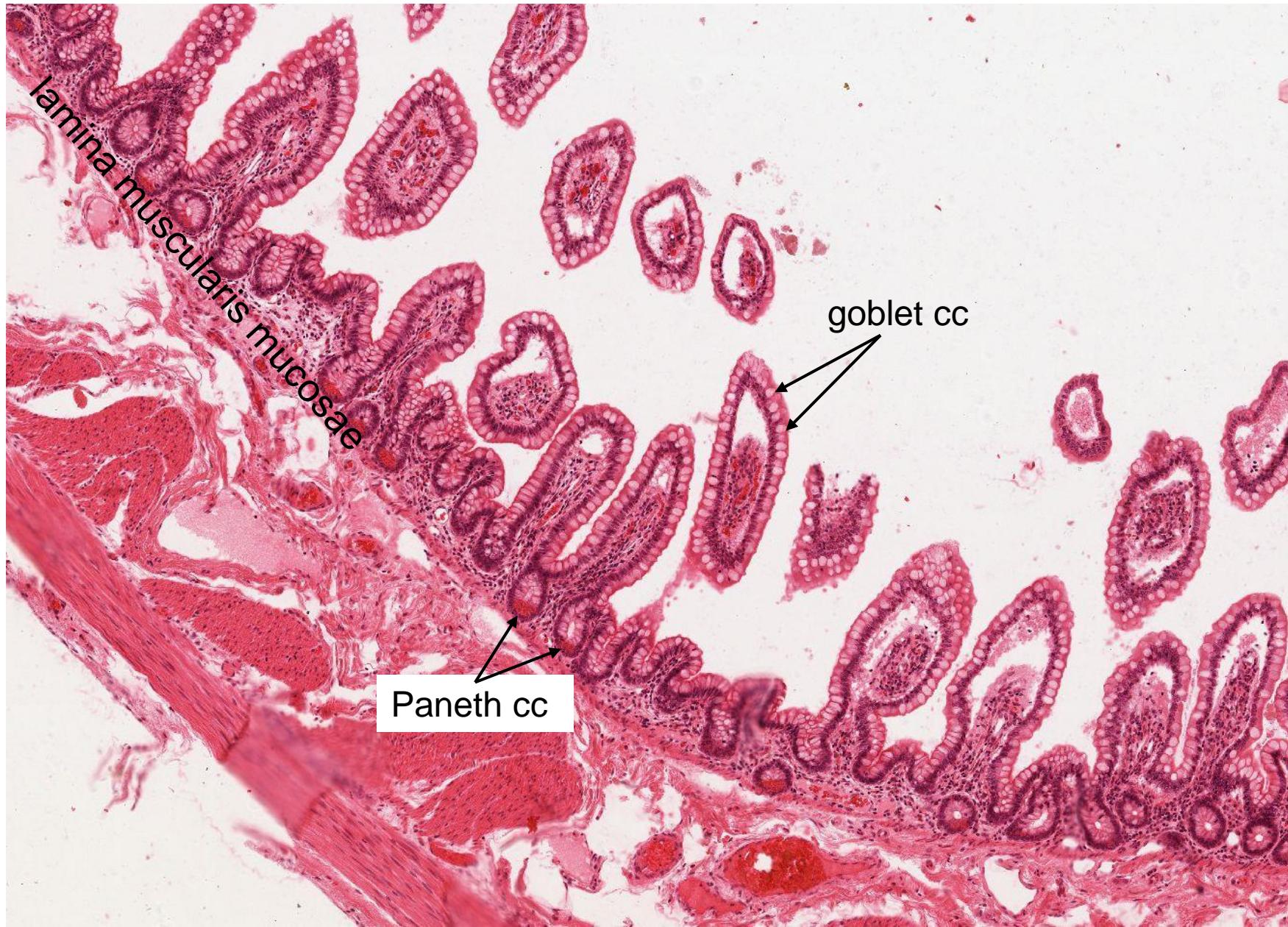
# Unicellular glands intraepithelial – goblet cells (respiratory tract)



# Unicellular glands intraepithelial (goblet cells and Paneth cells) – *Intestinum tenue (jejunum)*



# Unicellular glands intraepithelial (goblet cells and Paneth cells) – *Intestinum tenue (ileum)*



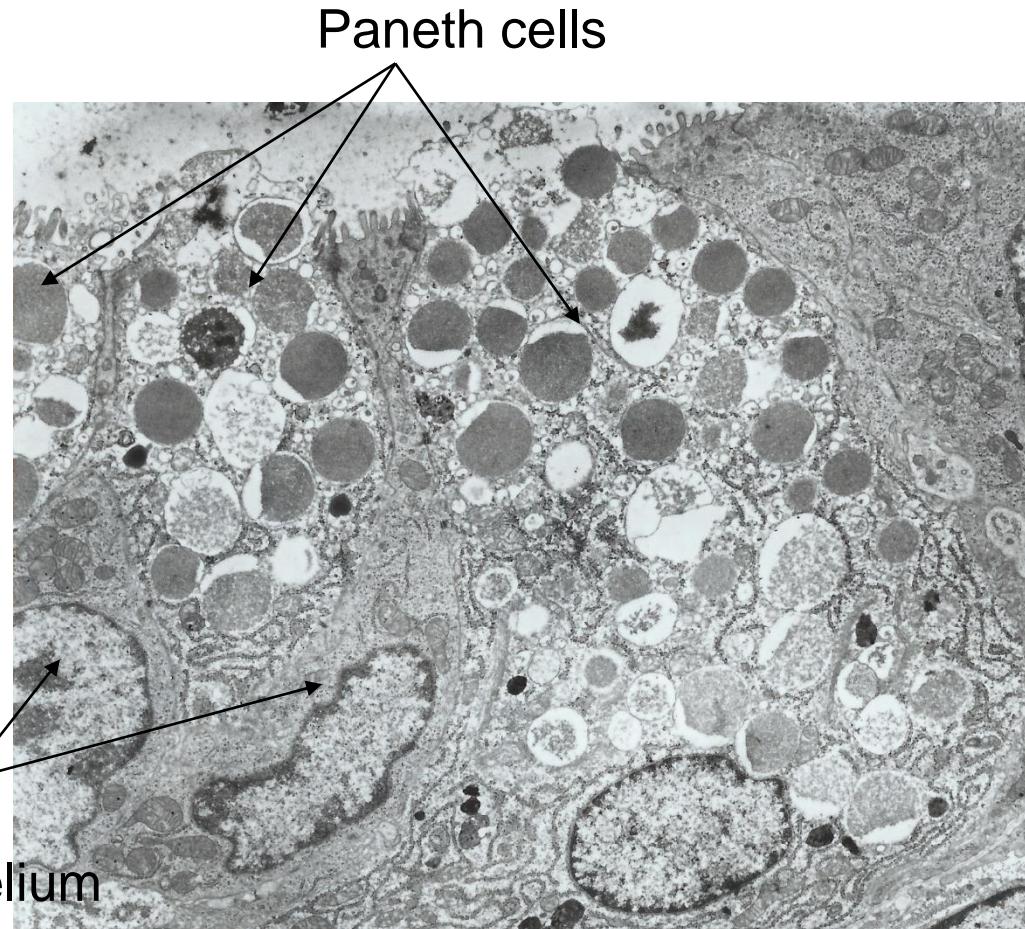
## Goblet cells and Paneth cells - *Intestinum tenue* (TEM)



goblet cell

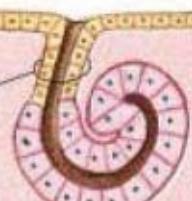
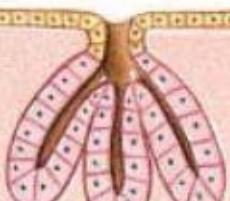
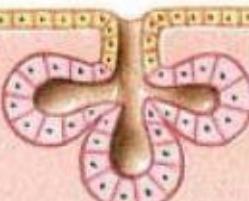
enterocytes

stem cells of  
intestinal epithelium

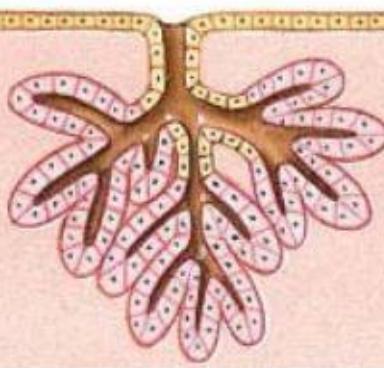
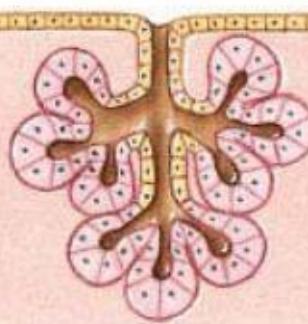
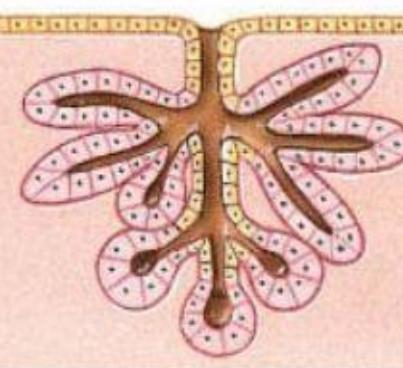


Paneth cells

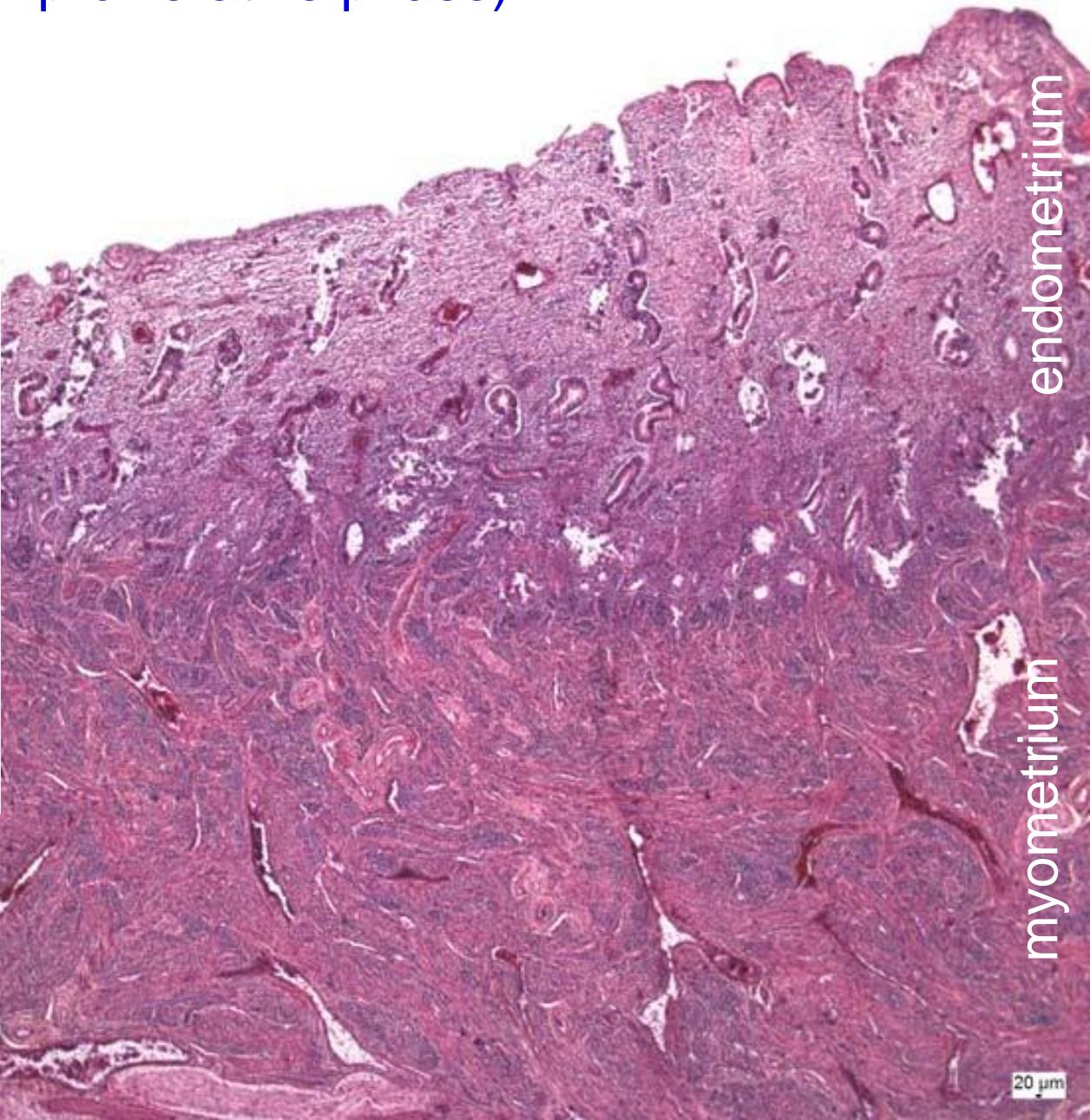
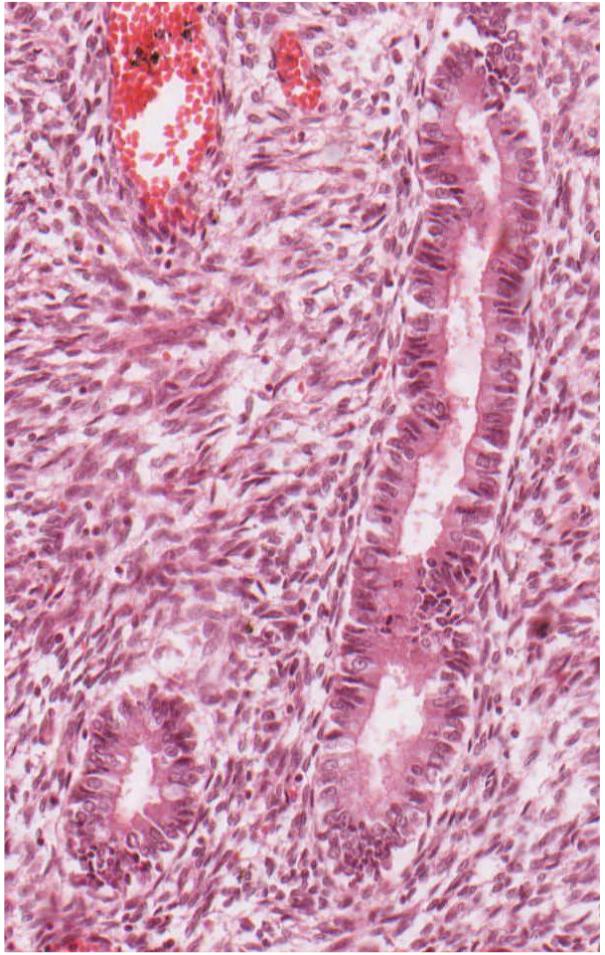
## MULTICELLULAR SIMPLE GLANDS

	 Duct			
<b>Simple tubular</b> <i>Examples:</i> Intestinal glands (crypts of Lieberkühn)	<b>Simple coiled tubular</b> <i>Examples:</i> Merocrine sweat glands	<b>Simple branched tubular</b> <i>Examples:</i> Mucus glands of esophagus, tongue, duodenum	<b>Simple alveolar (acinar)</b> <i>Examples:</i> Not found in adult; a stage in development of simple branched glands	<b>Simple branched alveolar</b> <i>Examples:</i> Sebaceous (oil) glands

## MULTICELLULAR COMPOUND GLANDS

		
<b>Compound tubular</b> <i>Examples:</i> Mucus glands (in mouth) Gastric glands Bulbourethral glands (in male reproductive system) Testes (seminiferous tubules)	<b>Compound alveolar (acinar)</b> <i>Examples:</i> Mammary glands	<b>Compound tubuloalveolar (tubuloacinar)</b> <i>Examples:</i> Salivary glands Glands of respiratory passages Pancreas (excretory portion)

# Simple tubular glands - *gll. uterinae* (Endometrium – proliferative phase)

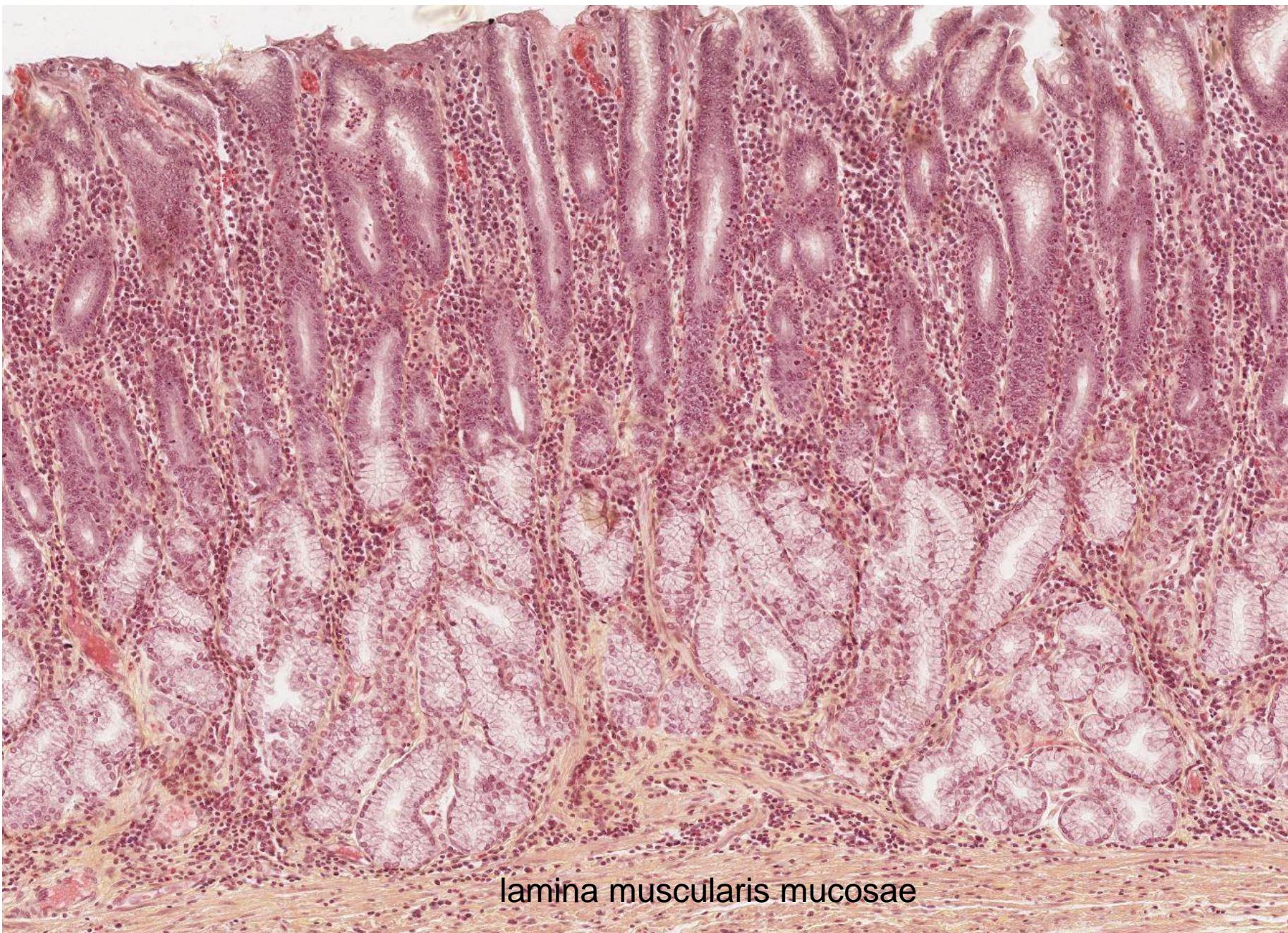


endometrium

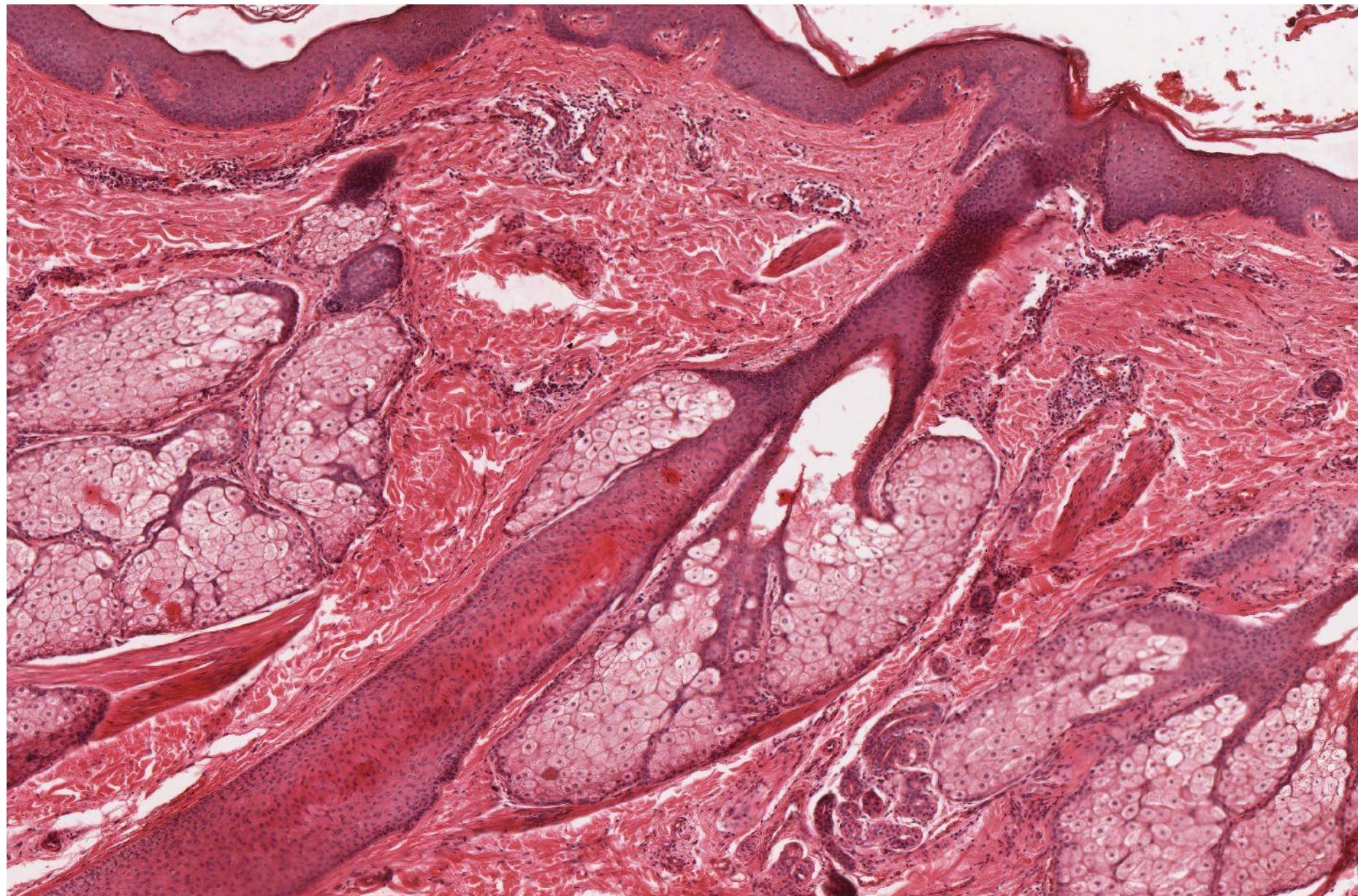
myometrium

20 µm

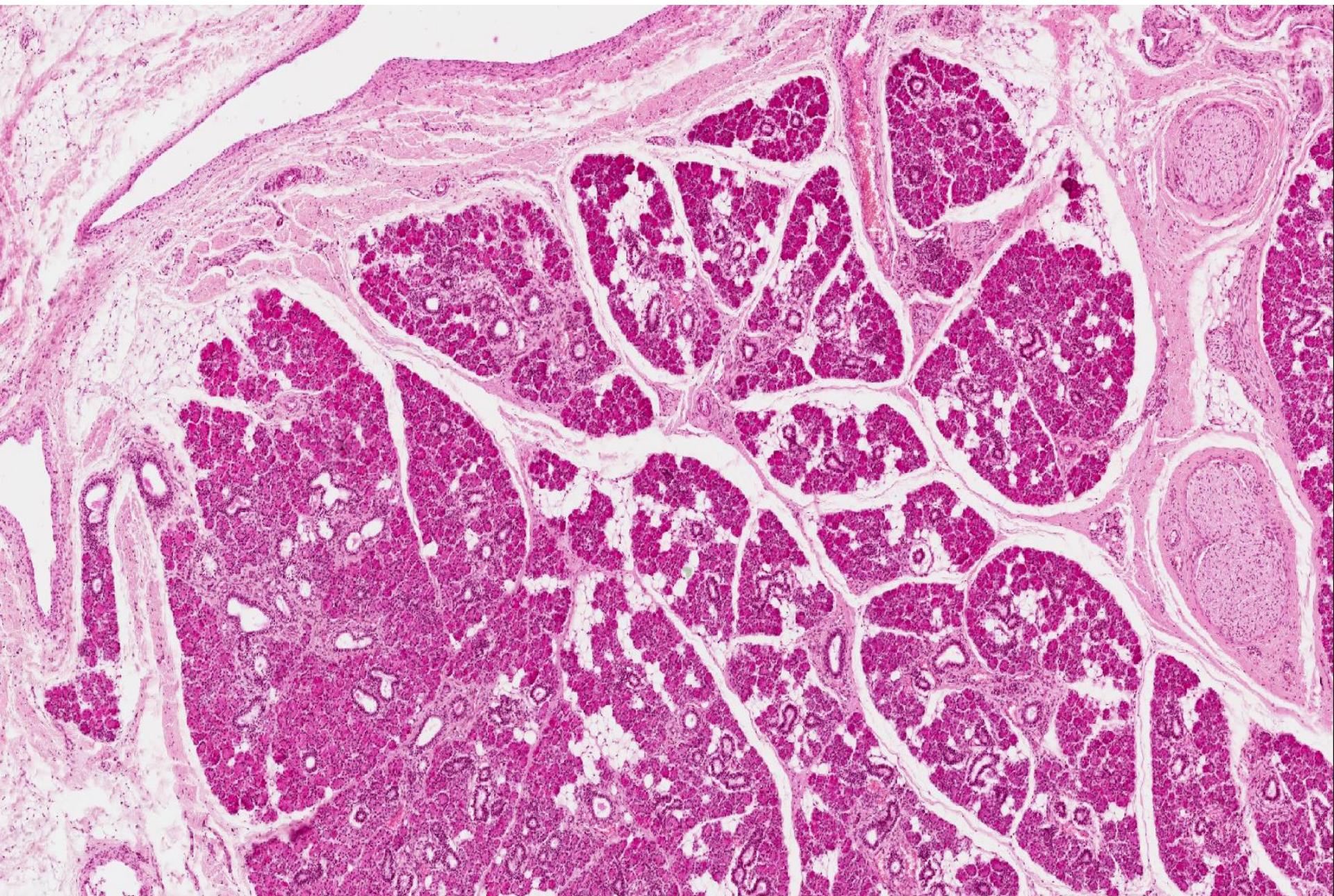
## Branched tubular glands – *gll. pyloricae* (*Pylorus*, HES)



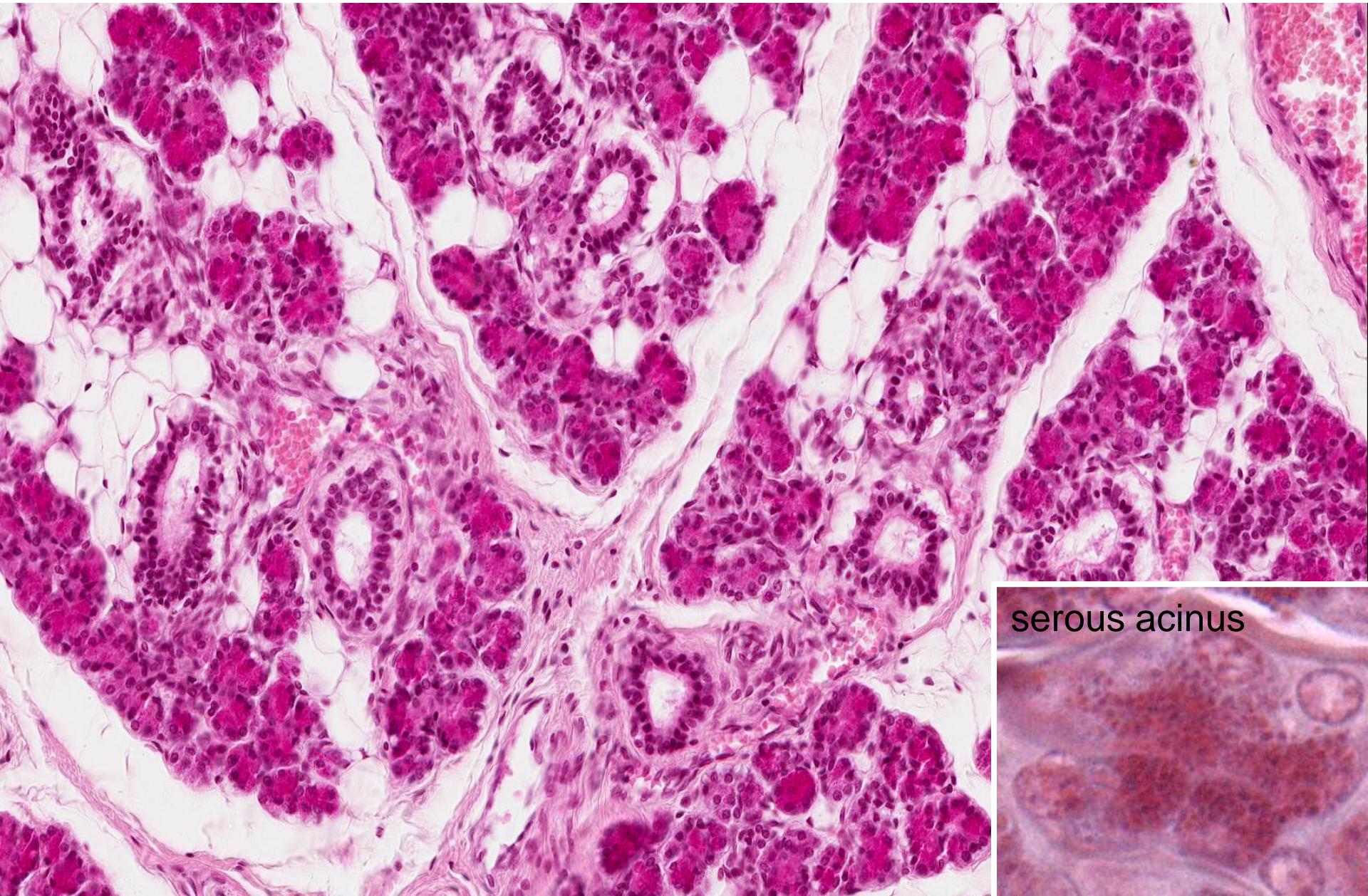
## Branched alveolar (acinar) glands – *gll. sebaceae* (skin)



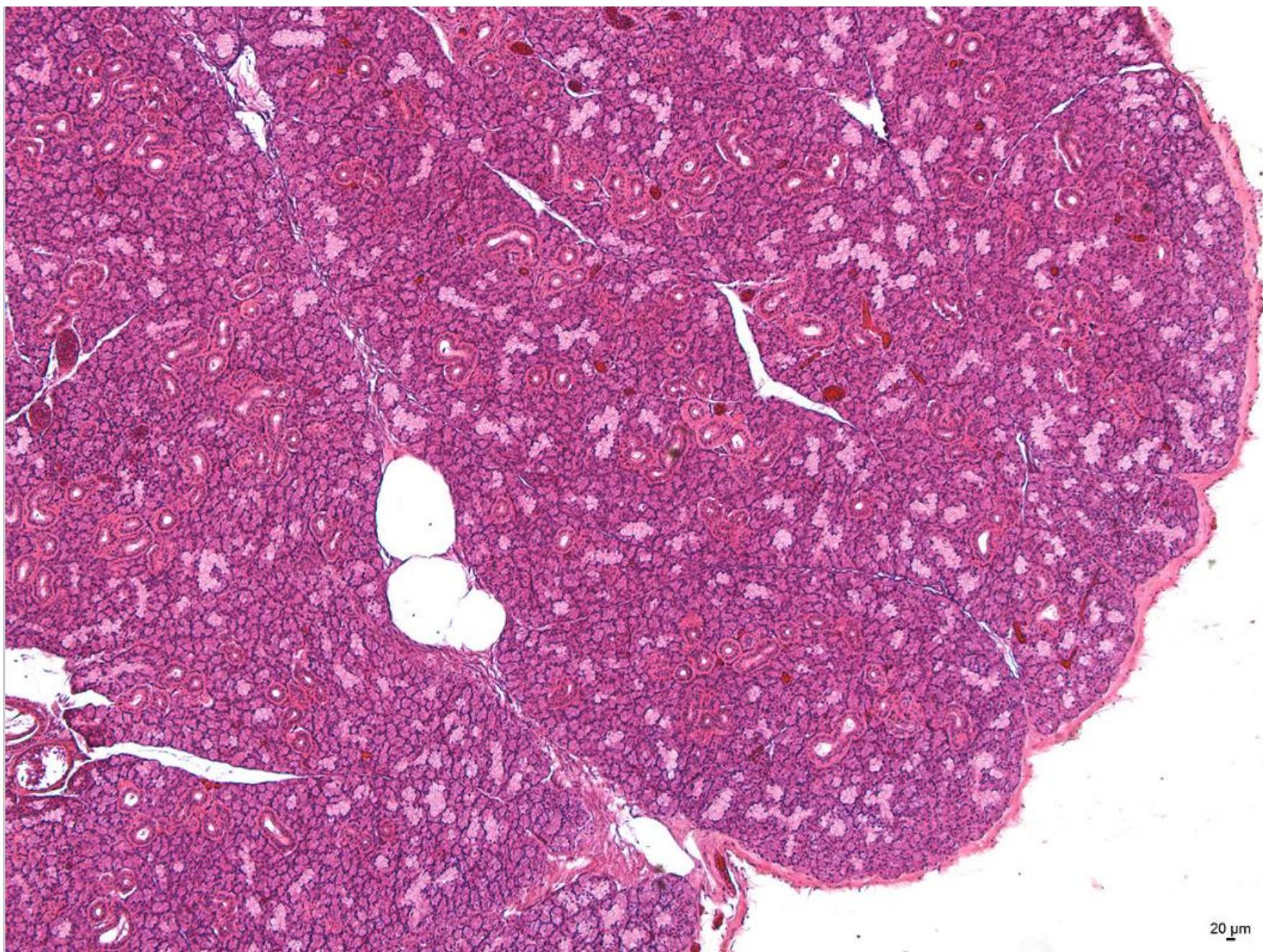
# Compound alveolar (acinar) serous gland - *Glandula parotis*



## Compound alveolar (acinar) serous gland - *Glandula parotis*

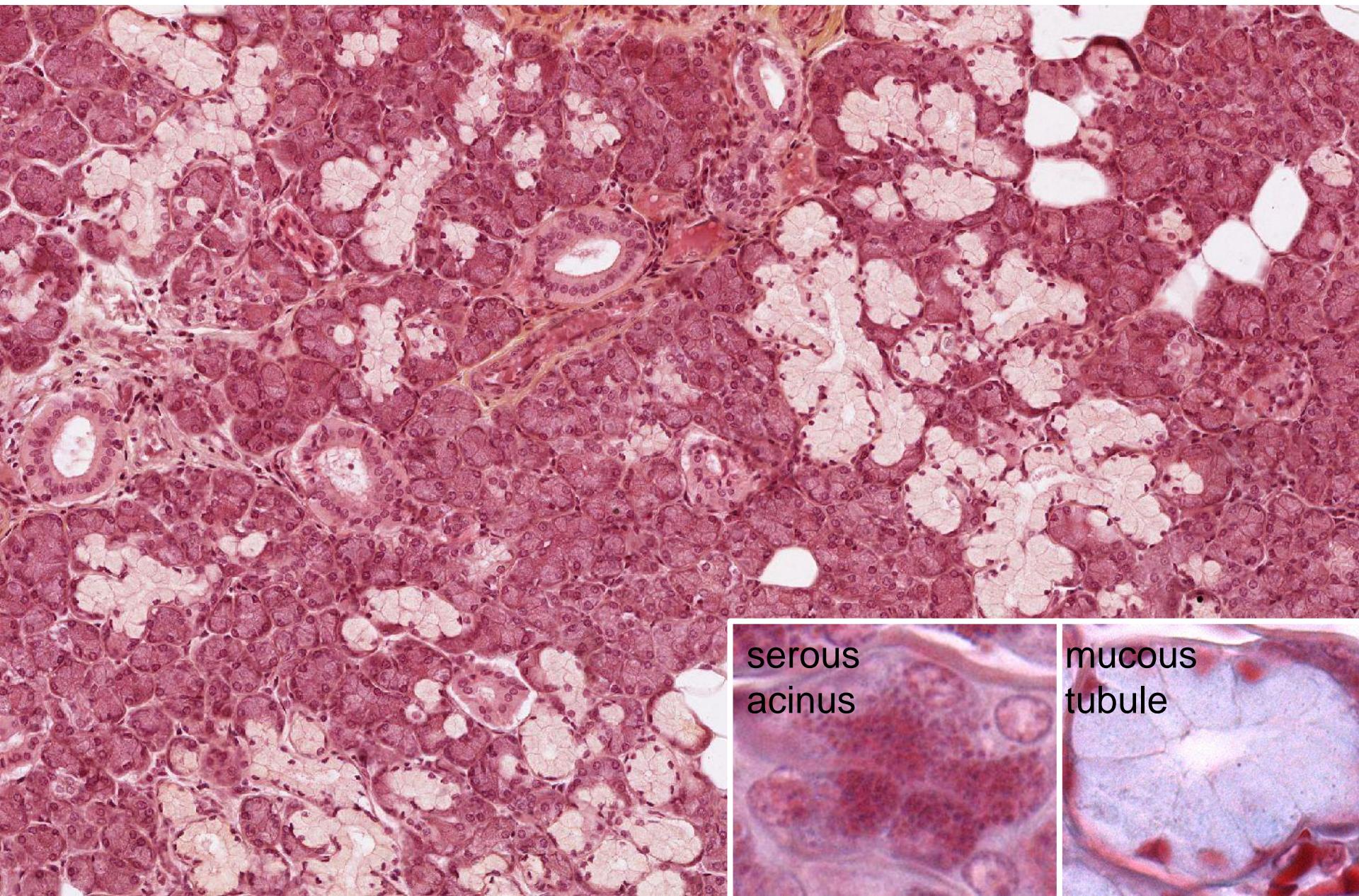


# Compound tuboalveolar mixed gland - *Glandula submandibularis*



20  $\mu$ m

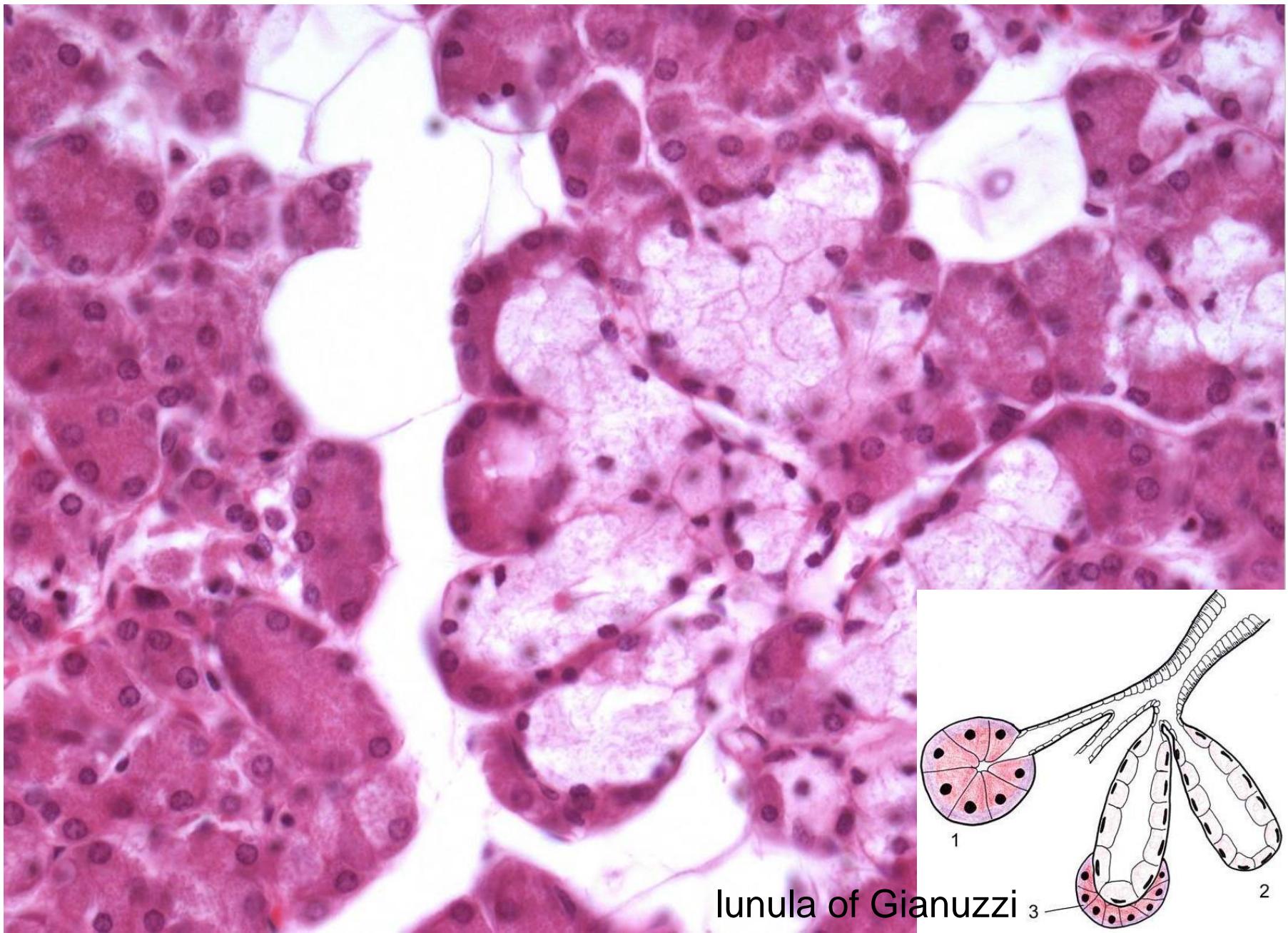
# Compound tuboalveolar mixed gland - *Glandula submandibularis*



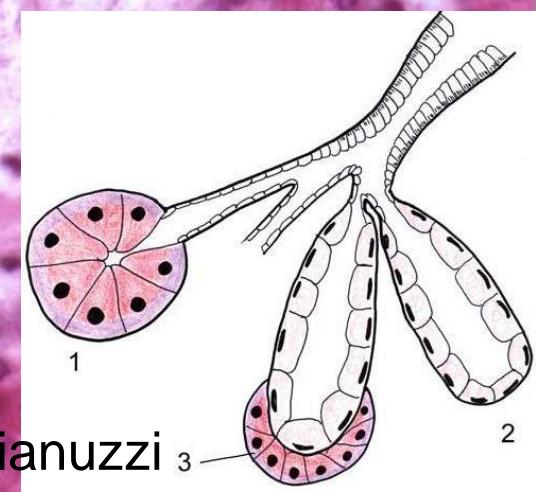
serous  
acinus

mucous  
tubule

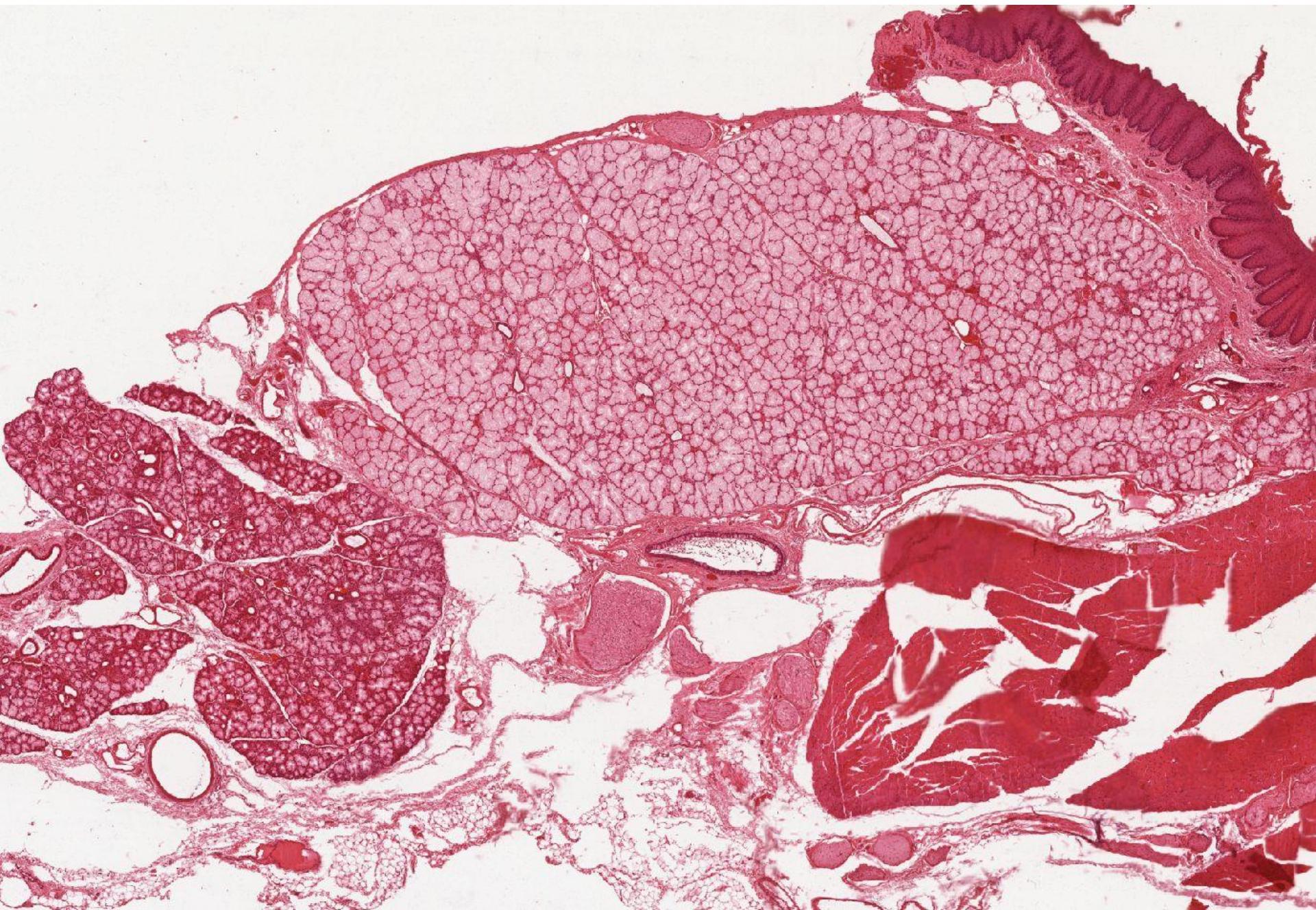
# Compound tuboalveolar mixed gland - *Glandula submandibularis*



lunula of Gianuzzi



# Compound tuboalveolar mixed gland - *Glandula sublingualis*



# Glandular epithelium

## Slides:

Cells of Paneth and goblet cells (16. Intestinum tenue)

Simple tubular glands (47. Uterus – proliferative phase)

Branched tubular glands (14. Pylorus)

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

Compound alveolar (acinar) serous gland (8. Glandula parotis)

Compound tuboalveolar mixed gland (9. Glandula submandibularis)

## Atlas EM:

Glandular cell of the exocrine pancreas (10, 65)

Endocrine cells of the pancreas (66)

Goblet cell in the intestinal epithelium (62, 63)

Paneth cell (64)