

DIGESTIVE GLANDS -PANCREAS

The pancreas is a unique, large gland lying across the posterior abdominal wall, having both exocrine and endocrine tissues. Therefore, it has 2 secretions –

- i) A **digestive secretion (80% -exocrine tissue)** consists of lobules that contain **acini** poured into the duodenum and plays a major role in digestion and absorption of essential nutrients
- ii) A **hormonal secretion (2% endocrine- Islets of Langerhans)** passed into the blood stream and involved in energy metabolism, deficiency of which results in diabetes mellitus.

HISTOLOGY OF PANCREAS

- Histologically exocrine pancreas resembles salivary glands. The exocrine tissue of pancreas consists of **lobules** that contain multiple **acini**.
- Acini are sac-like dilatation, composed of single layer of **pyramidal (acinar) cells** which contain multiple endoplasmic reticulum, Golgi apparatus and zymogen granules, that are located in the apical region of the acinar cell.
- **Acini** open to **intercalated duct** which in turn empty into **intralobular duct** → drains into **extralobular duct** → that finally open into the main **collecting duct**, the duct of Wirsung.
- The collecting ducts combine to form **pancreatic duct** → that drains into the common bile duct and form **hepatopancreatic**

duct with an ampulla (**Ampulla of Vater**) which open to the second part of duodenum through the **sphincter of Oddi**.

- The acini secrete enzymes of the pancreatic juice.
- Aqueous component of pancreatic juice is produced by **epithelial cells** that line the pancreatic duct.
- Sometimes an **accessory pancreatic duct**, the duct of Santorini, which drains separately from the head of the pancreas into the duodenum.

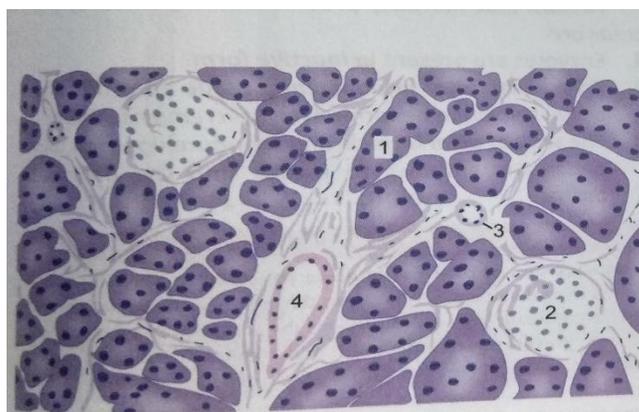
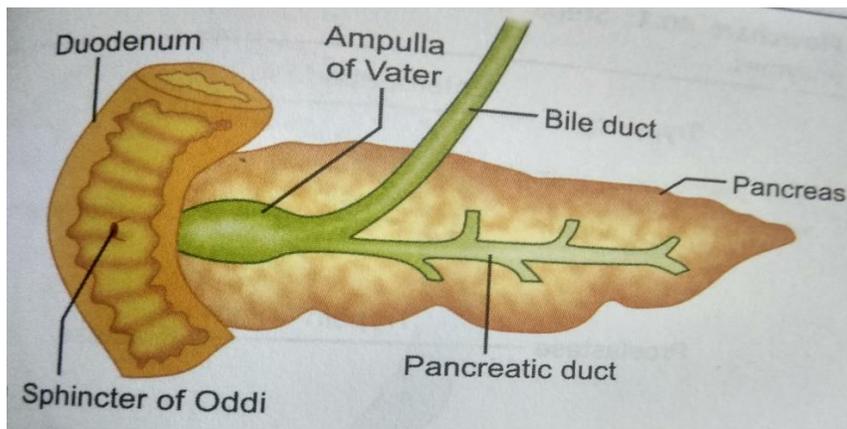


Fig. 40.2: Histology of pancreas. 1: Serous acini inside lobules; 2: Islets of Langerhans; 3: Intralobular duct; 4: Interlobular duct.

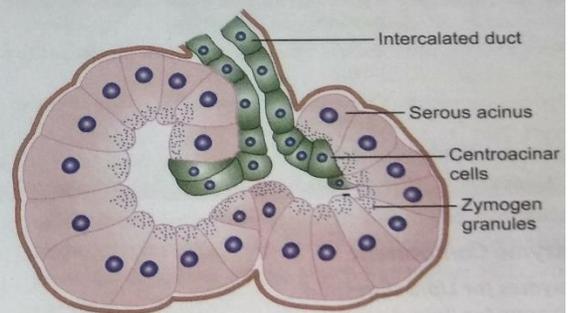


Fig. 40.3: Structure of pancreatic acinus and ducts.

From GKP

