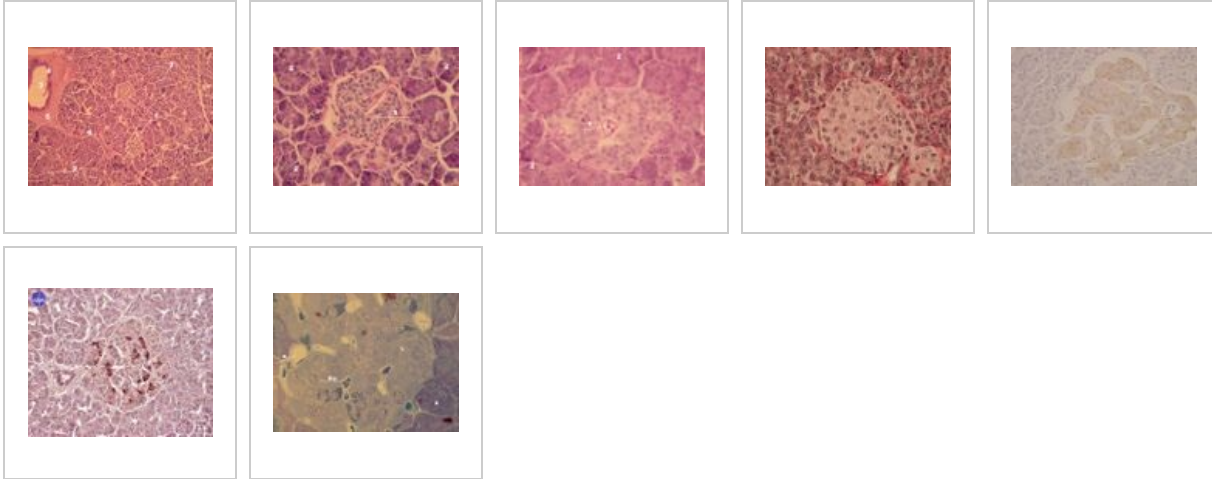
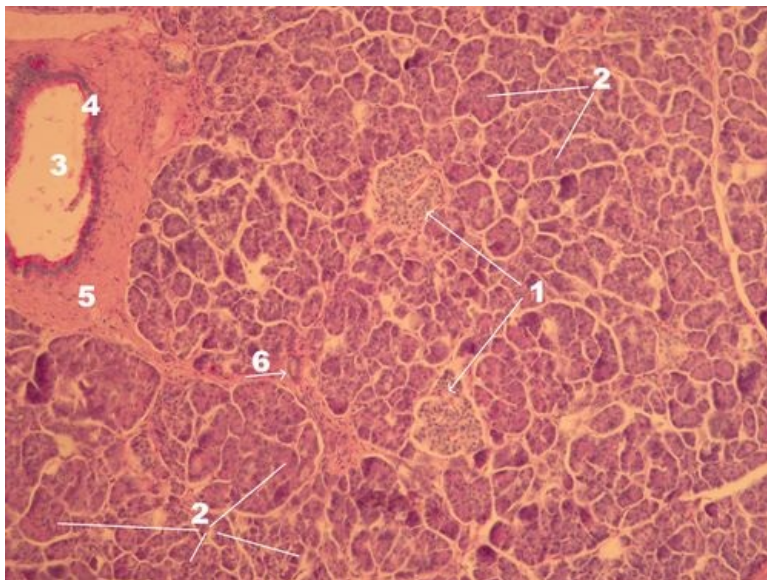


# Langerhans islet

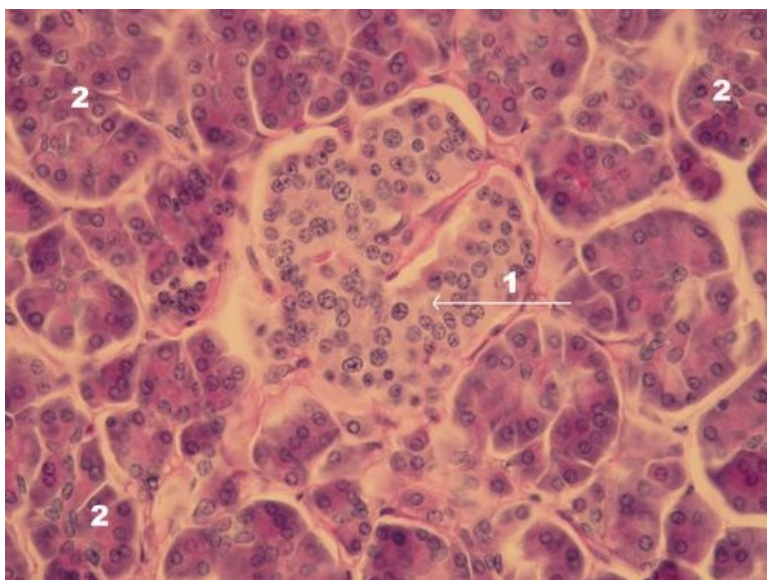


## Pancreas - clear enlargement (HE)



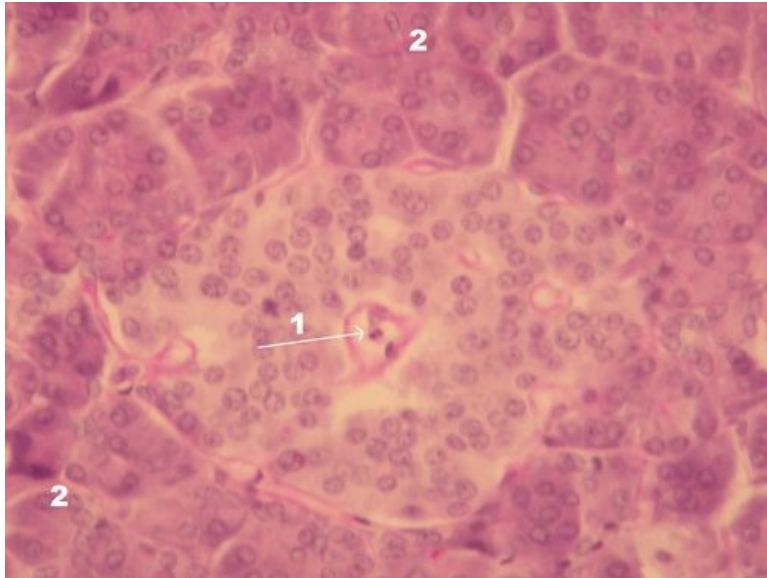
**Description:** **1** - islet of Langerhans (endocrine part of the pancreas), **2** - serous acini (exocrine part of the pancreas having ducts - 3), **3** - lumen of the large interlobar duct, **4** - single-layer cylindrical epithelium of the duct, **5** - connective tissue capillaries and containing a system of ducts, **6** - fibrous septum and interlobar duct.

## Islet of Langerhans - detail (HE)



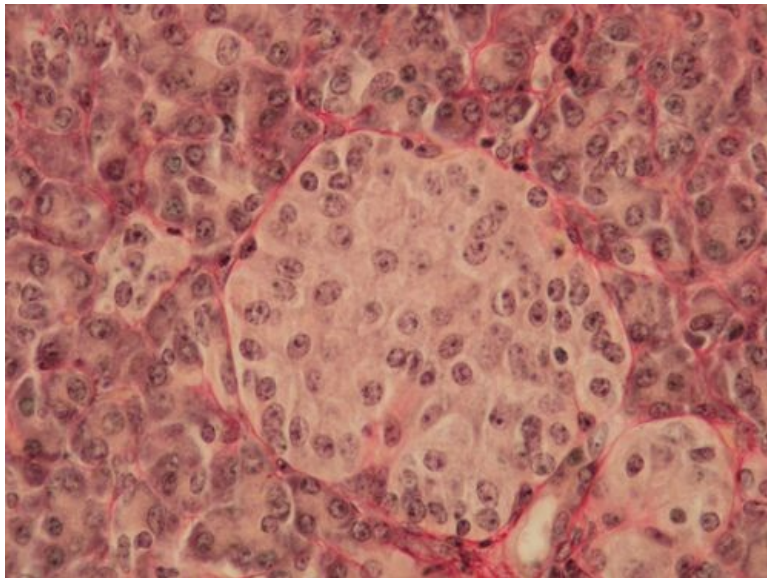
**Description:** **1** – islet of Langerhans (endocrine part of the pancreas), **2** – serous acini (exocrine part of the pancreas), dark for marked basophilia of the cytoplasm (basophilia is conditioned by the granular endoplasmic reticulum).

## Islet of Langerhans - detail (HE)



**Description:** **1** – capillary in the islet of Langerhans (endocrine part of the pancreas, hormones produced in the islet are secreted into the lumen of the capillaries), **2** – serous acini (the exocrine part of the pancreas has a duct system for excreting digestive juice, see specimen no. 1)

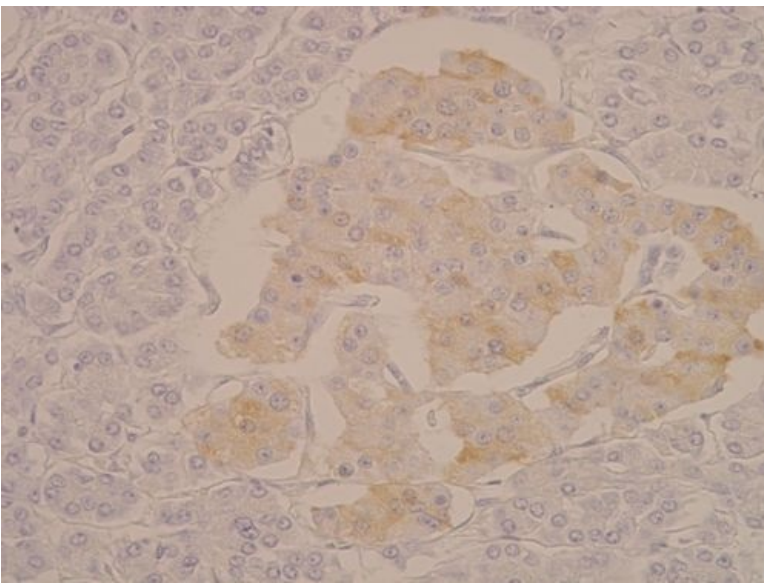
## Islet of Langerhans - detail (depicting the ligament)



**Description:** The islet of Langerhans is surrounded by a fibrous capsule (red), fibrous septa also separate the individual acini of the exocrine pancreas.

## Islet of Langerhans - detail (immunohistochemical evidence of C - peptide in beta cells)

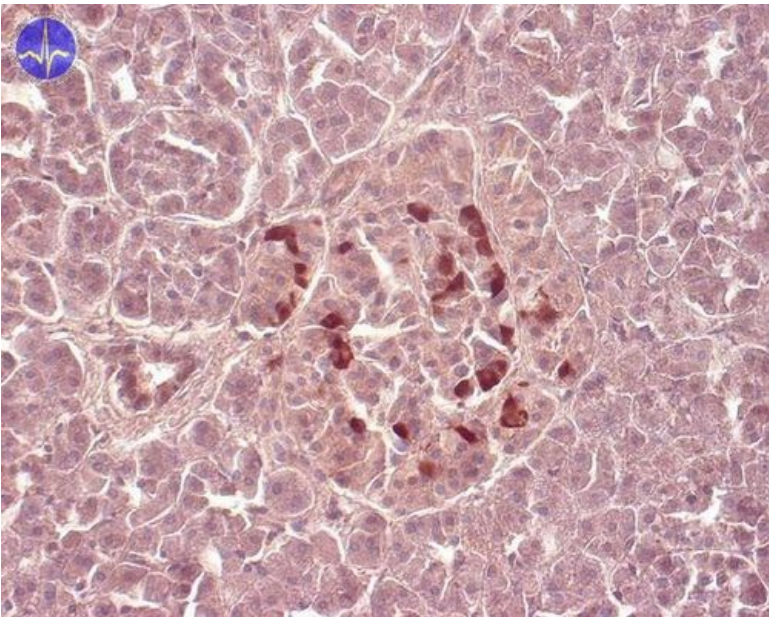




**Description:** Beta cells are in the center of the islet (produce insulin), alpha cells (produce glucagon) and delta cells (produce somatostatin) are peripheral.

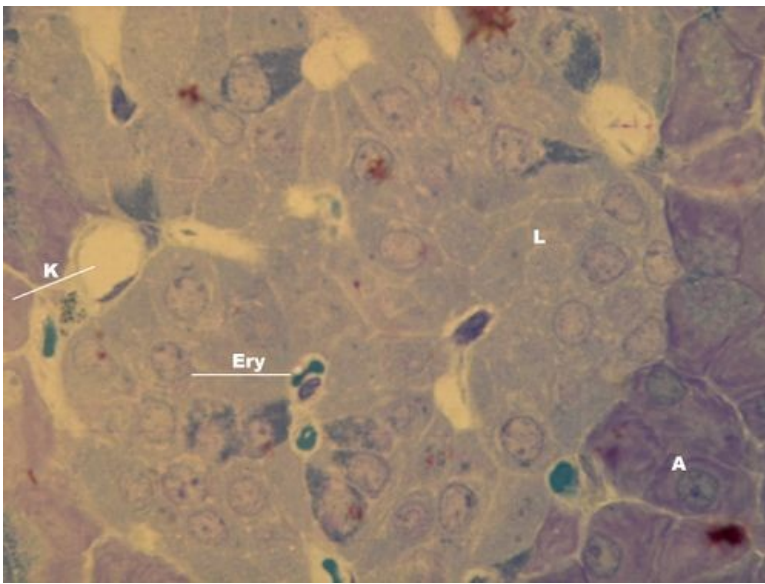
**note:** C-peptide (colored golden) is produced during the release of insulin into the blood (by splicing the insulin polypeptide chain), so it is a product of the beta cells of the islets of Langerhans.

### Islet of Langerhans - detail (immunohistochemical evidence of D cells)



**Description:** delta cells (produce somatostatin) are peripherally in the islet.

### Islet of Langerhans - semi-thin section (toluidine blue)



**Description:** K – capillary with erythrocyte on cross section, Ery – erythrocyte in capillary, A – acinus, L – islet of Langerhans.

## Endocrine System

- Pituitary (SFLT)
- Glandula thyroidea (SFLT)
- Parathyroid gland (SFLT)
- Suprarenal gland (SFLT)
- Pancreas (SFLT)

## Links

- Histological atlas (3. LF UK)