



# PANCREAS

LAIBA MEHTAB

ROLL NO 43

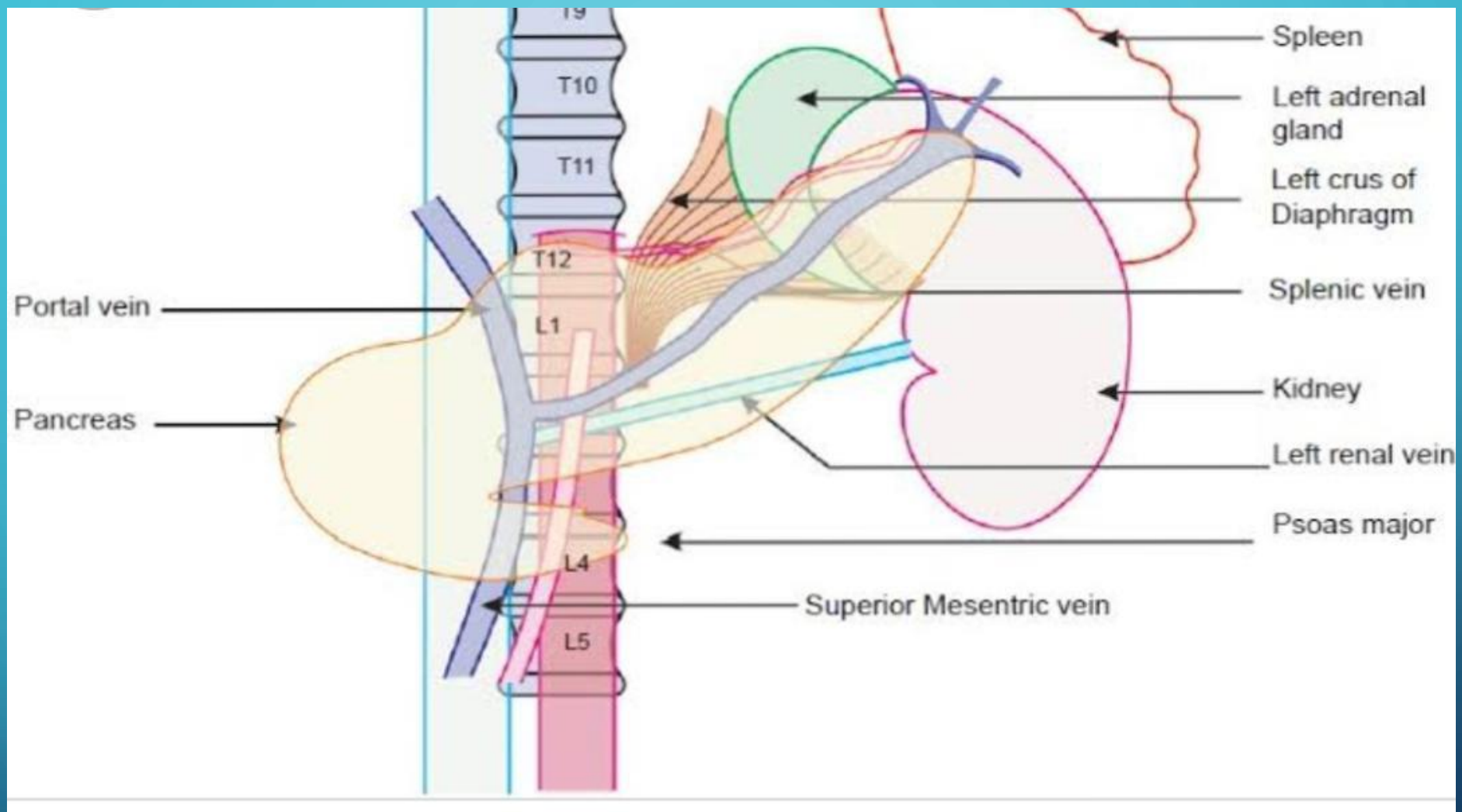
# LEARNING OUTCOMES

- Pancreas position
- Parts of pancreas
- Relations
- Ducts of pancreas
- Arterial ,venous and nerve supply
- Lymphatic drianage
- Clinical correlates

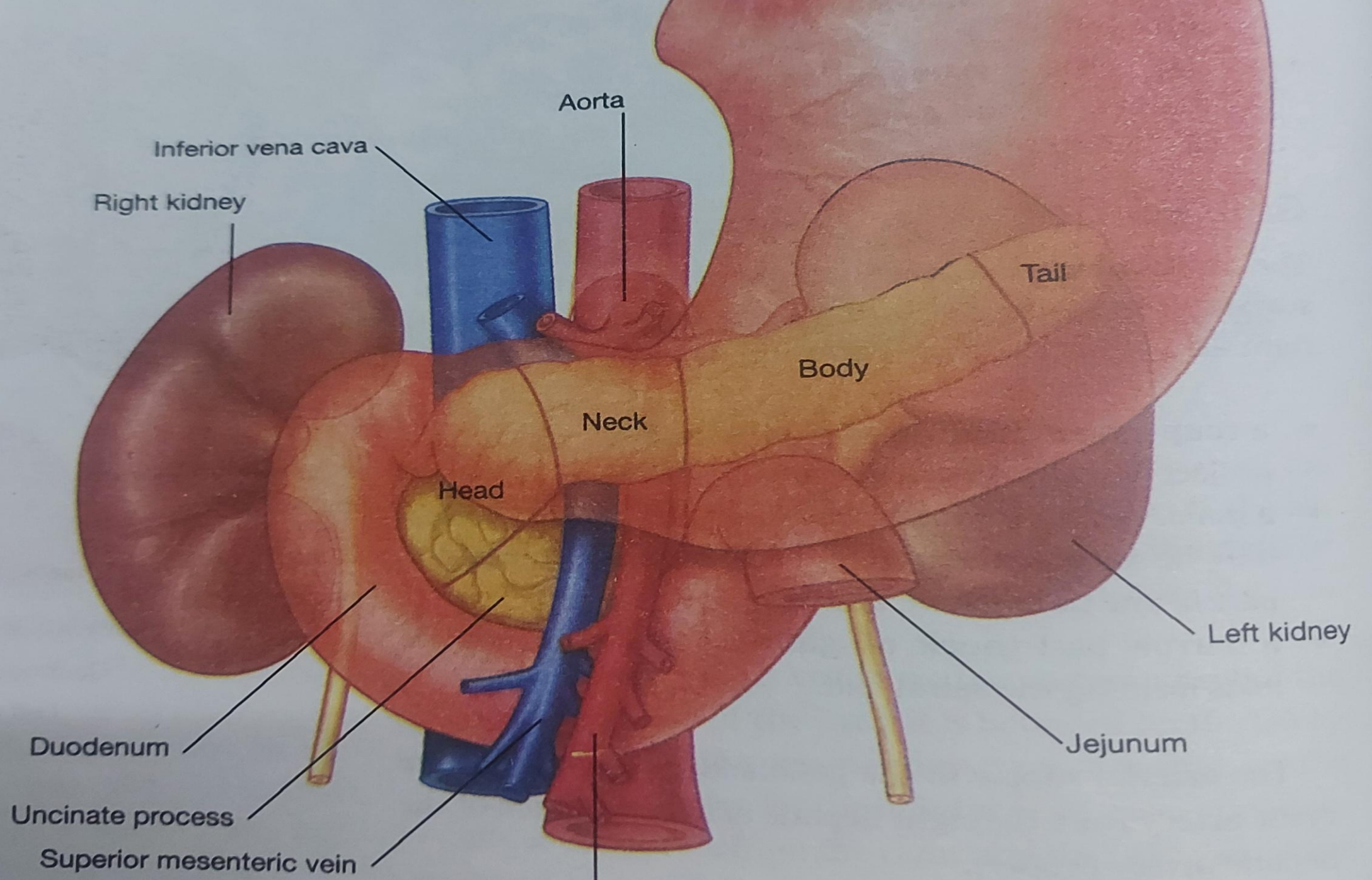
# PANCREAS

## Position of pancreas

- It is located in epigastrium and the left hypochondrium at the level T12 to L3
- It is located posterior to the stomach
- It extended from the concavity of duodenum to the hilum of the spleen in lienorenal ligament
- It is exocrine as well as endocrine in nature



Position of pancreas at vertebral level



- It is retroperitoneal except tail of the pancreas which is intraperitoneal

## **PARTS OF PANCREAS**

It consists of five parts:

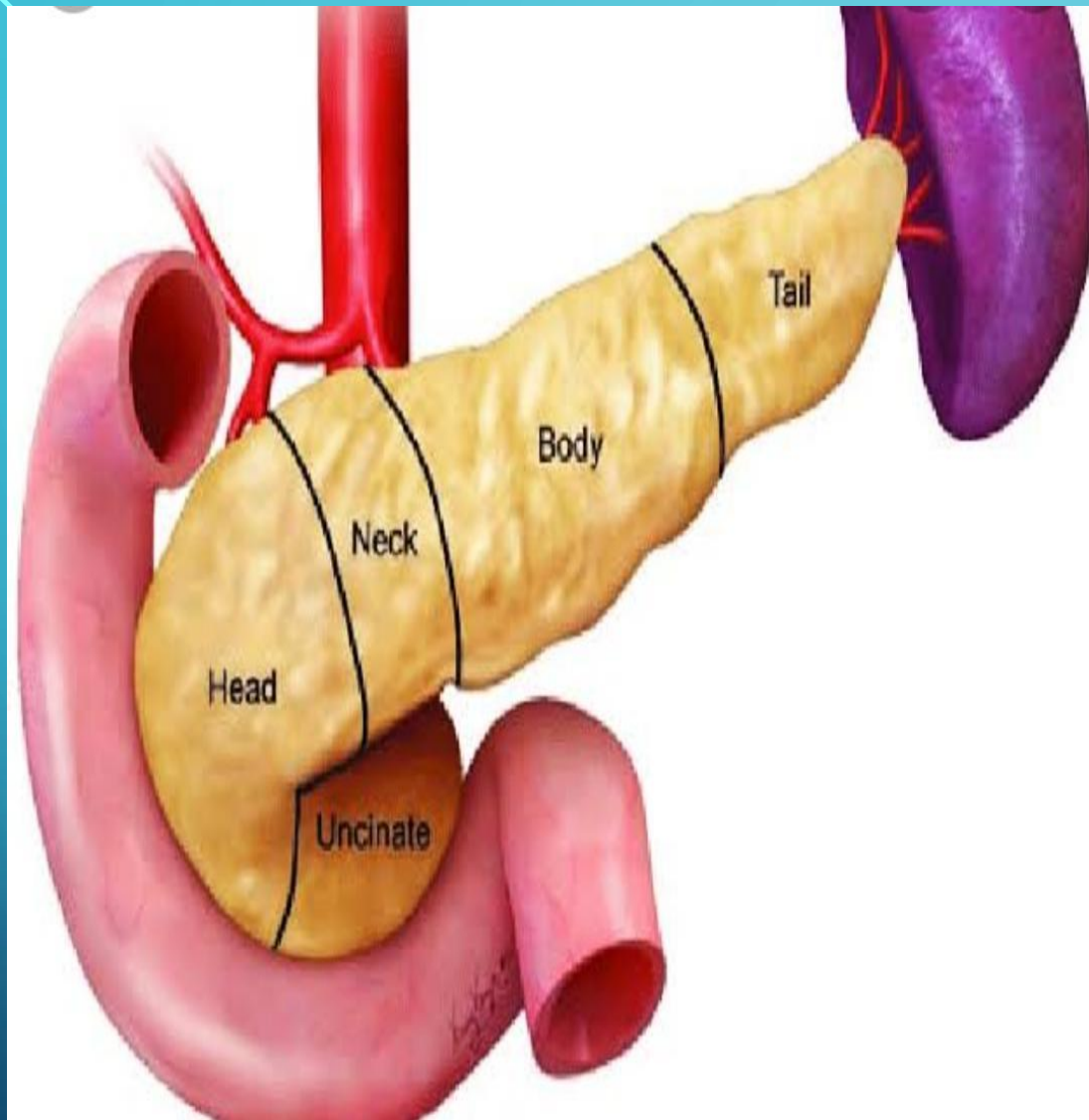
**Head**

**Neck**

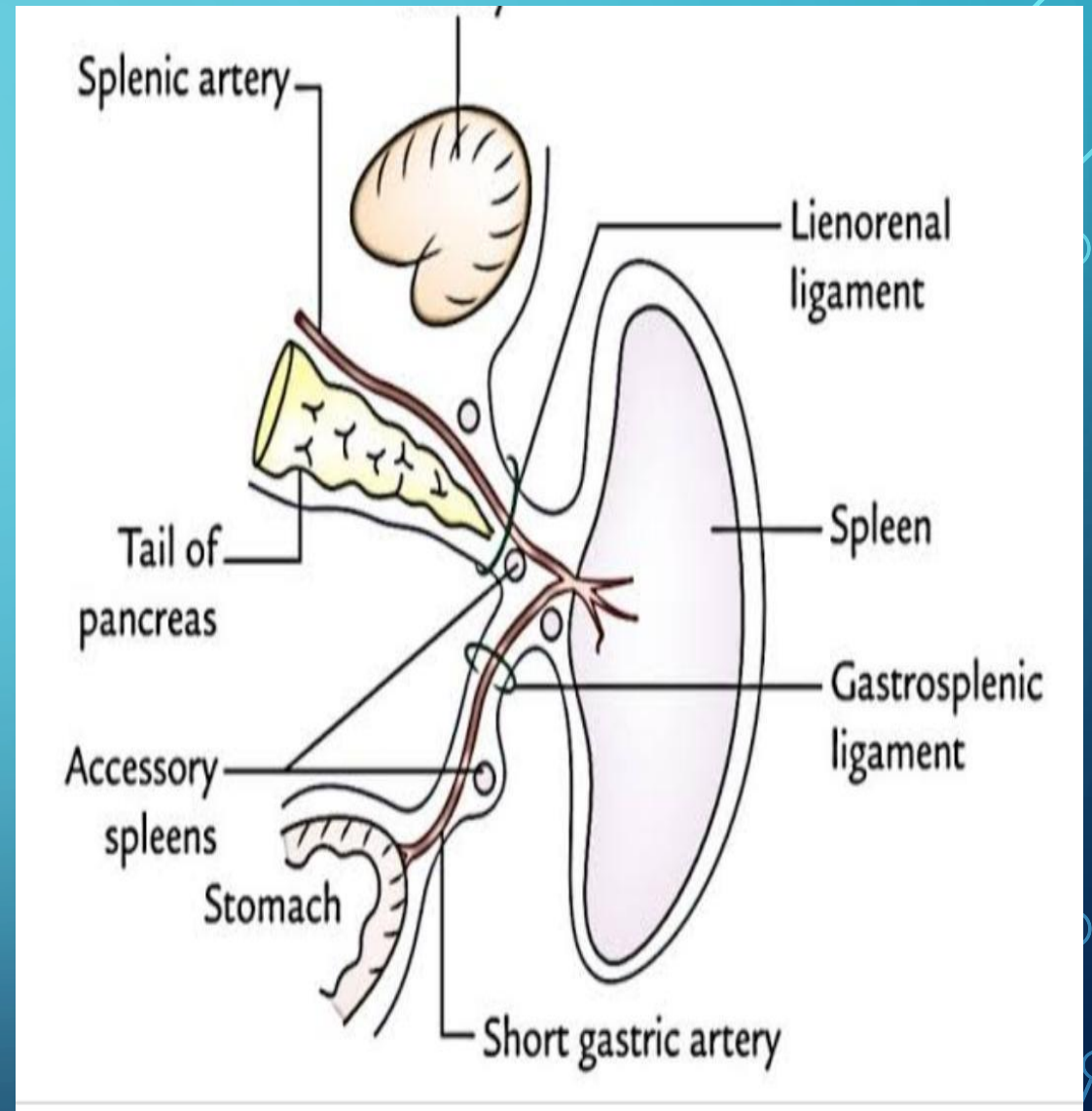
**Body**

**Tail**

**Uncinate process**



**PARTS OF PANCREAS**



**TAIL IS  
INTRAPERITONEAL**

## RELATIONS OF PARTS OF PANCREAS

### • HEAD OF PANCREAS AND UNCINATE PROCESS

#### • Anteriorly

- Transverse colon, Transverse mesocolon and superior mesenteric vessels anterior to the uncinata process
- jejunum

#### • Posterior

- Bile duct
- Inferior vena cava
- Aorta behind the uncinata process

#### • Laterally

- Second part of the duodenum

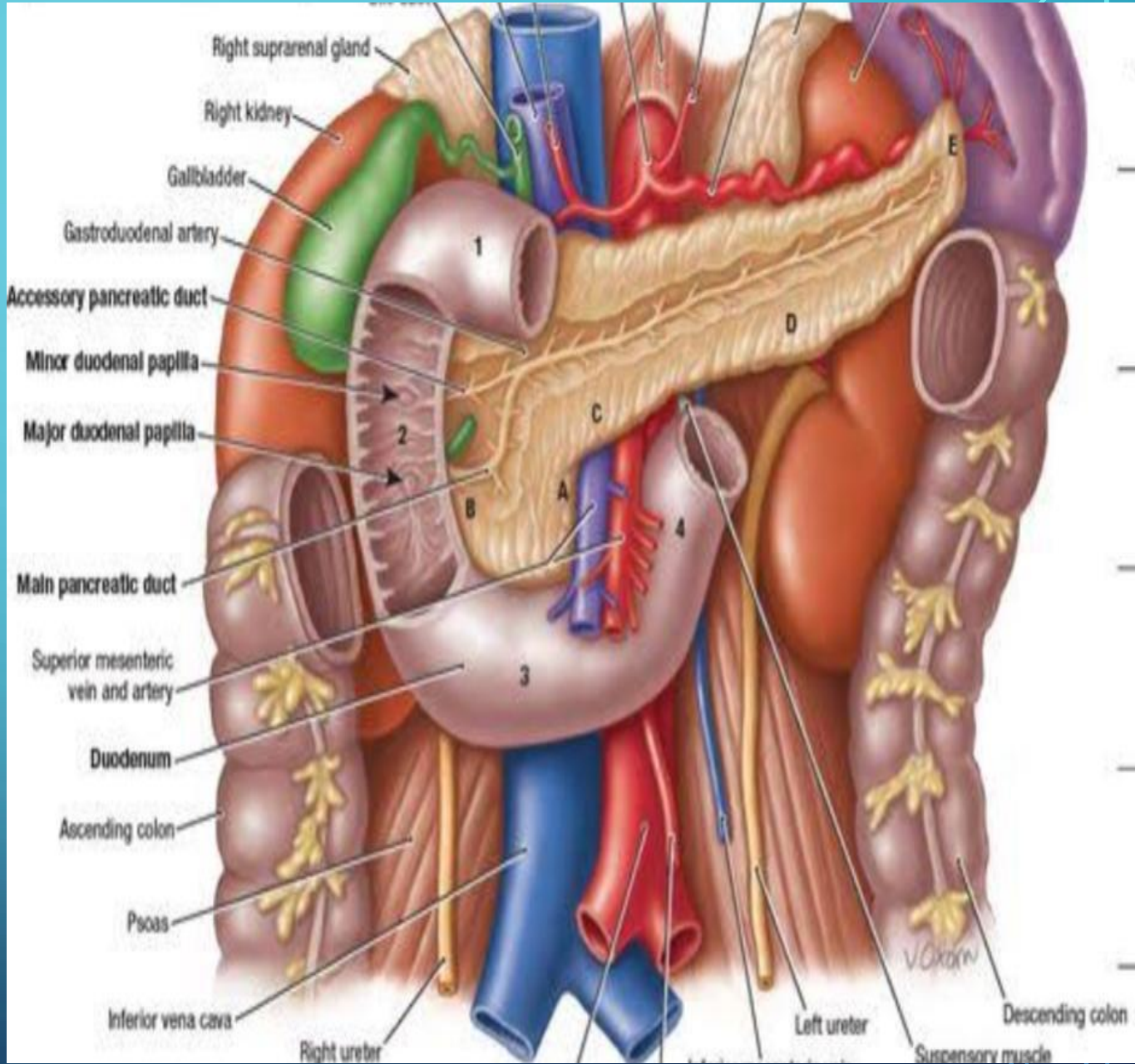
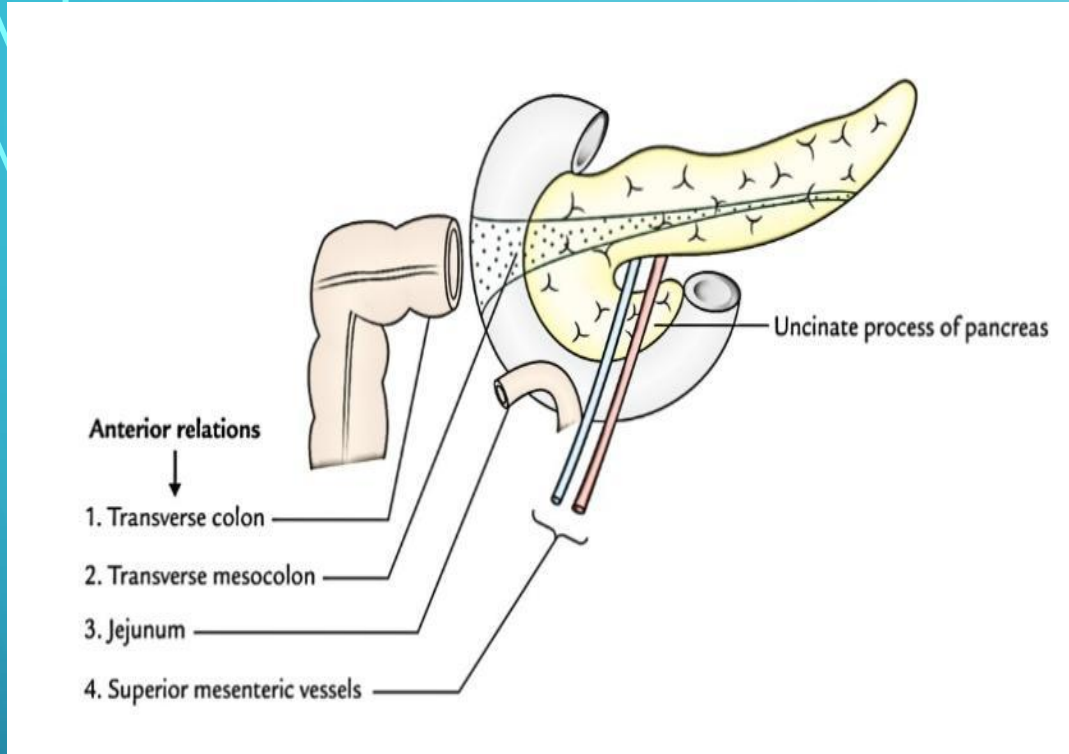
#### • Superiorly

- First part of duodenum

#### • Inferiorly

- 3<sup>rd</sup> part of duodenum





**NECK OF PANCREAS:** It is landmark of origin of two important structure that is:

Origin of portal vein

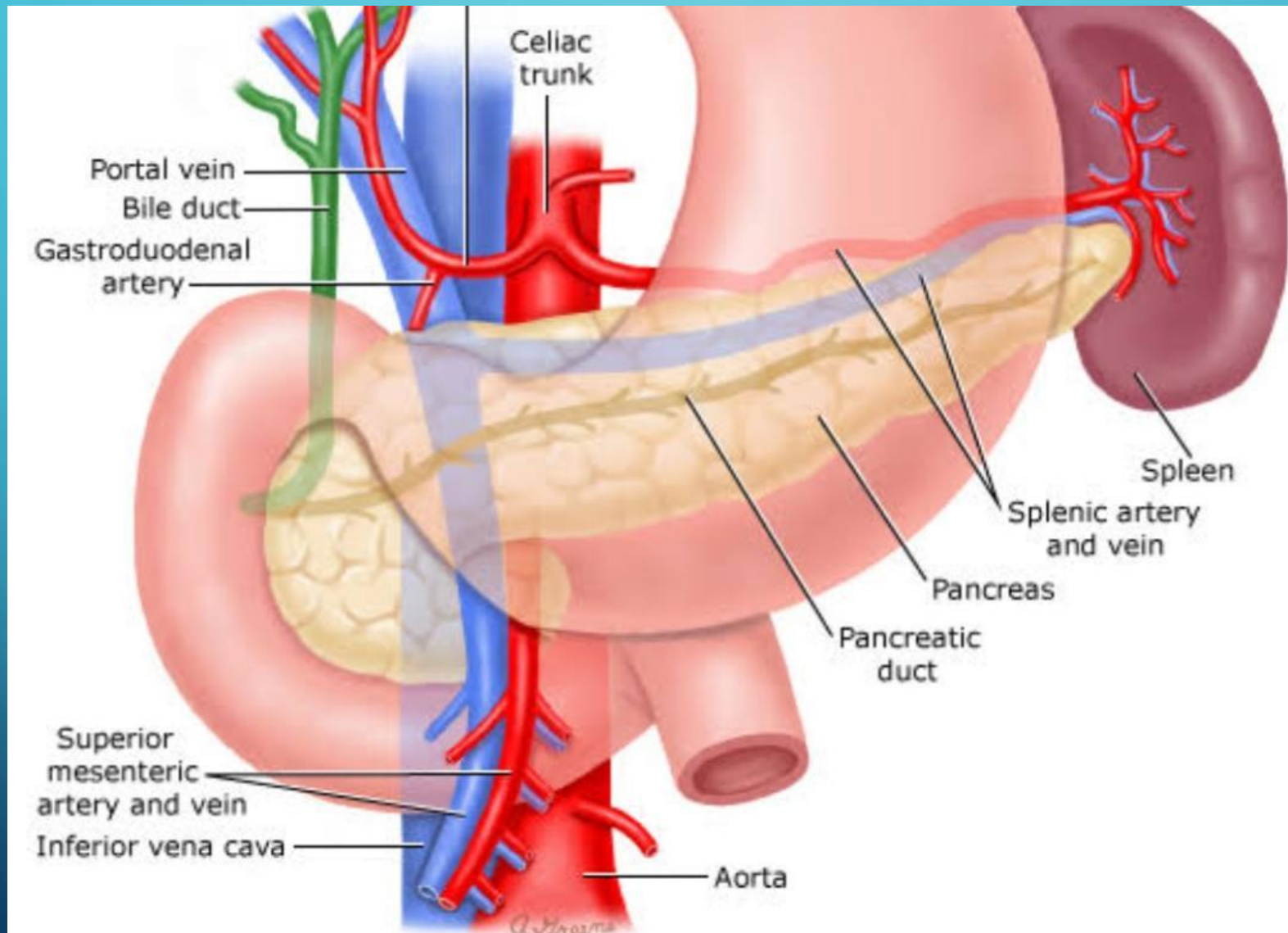
Origin of superior mesenteric artery

It is the second part of the pancreas

### RELATIONS

- **Anteriorly**
- Lesser sac
- 1st part of the duodenum
- **Posteriorly**
- 3 veins and 2 arteries:
- **Veins**
- Portal vein
- Splenic vein
- Superior mesenteric vein
- **Arteries**
- Origin of superior mesenteric artery
- Aorta

# NECK OF THE PANCREAS



# BODY OF PANCREAS

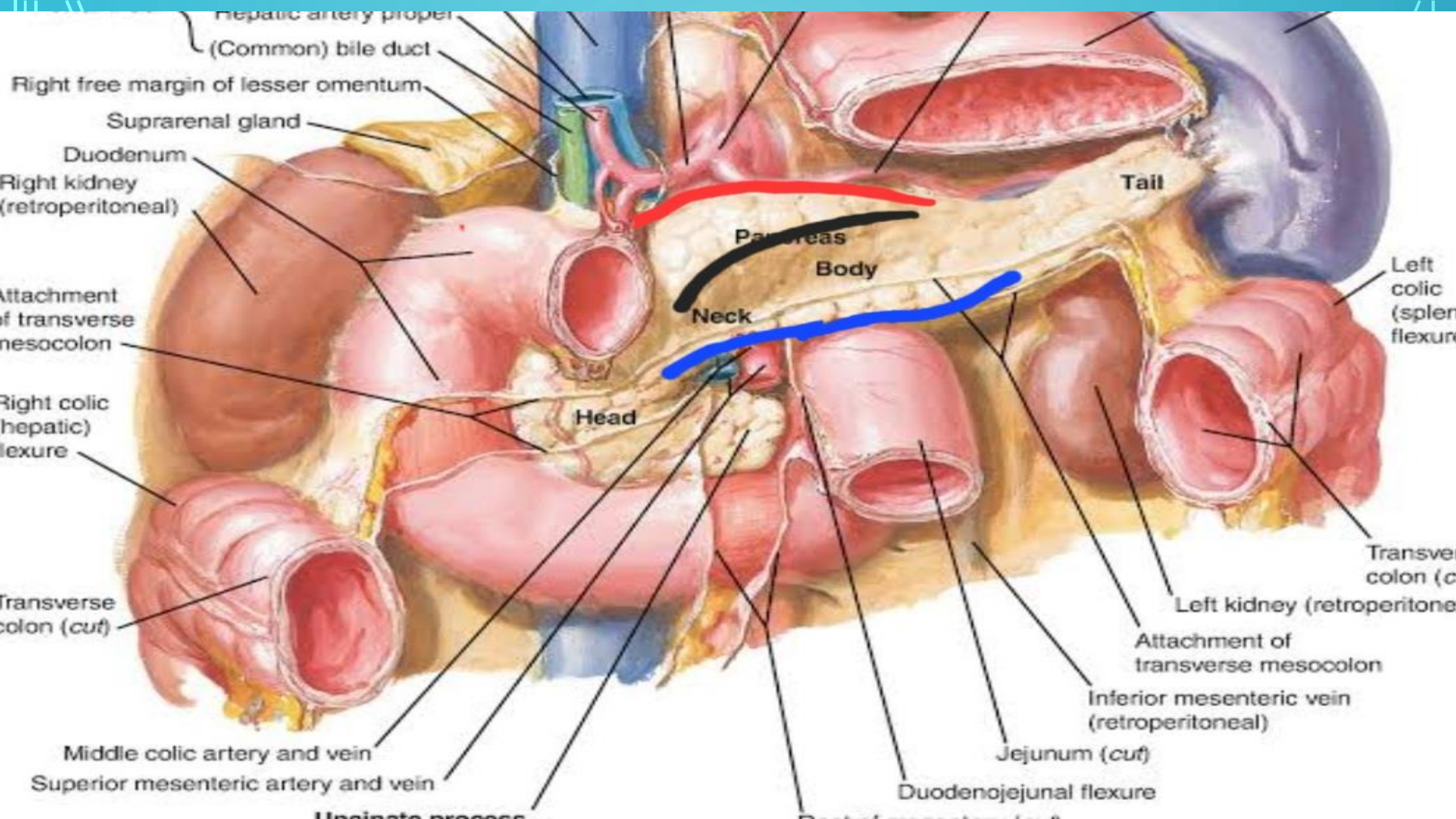
- It is the third part of the duodenum
- It is triangular in shape having:

## Three borders

- Upper border
- Lower border
- Anterior border

## Three surfaces

- Anterior surface
- Inferior surface
- Posterior surface



# RELATIONS OF BODY

## **Anterior surface**

- It is related to Lesser sac and stomach

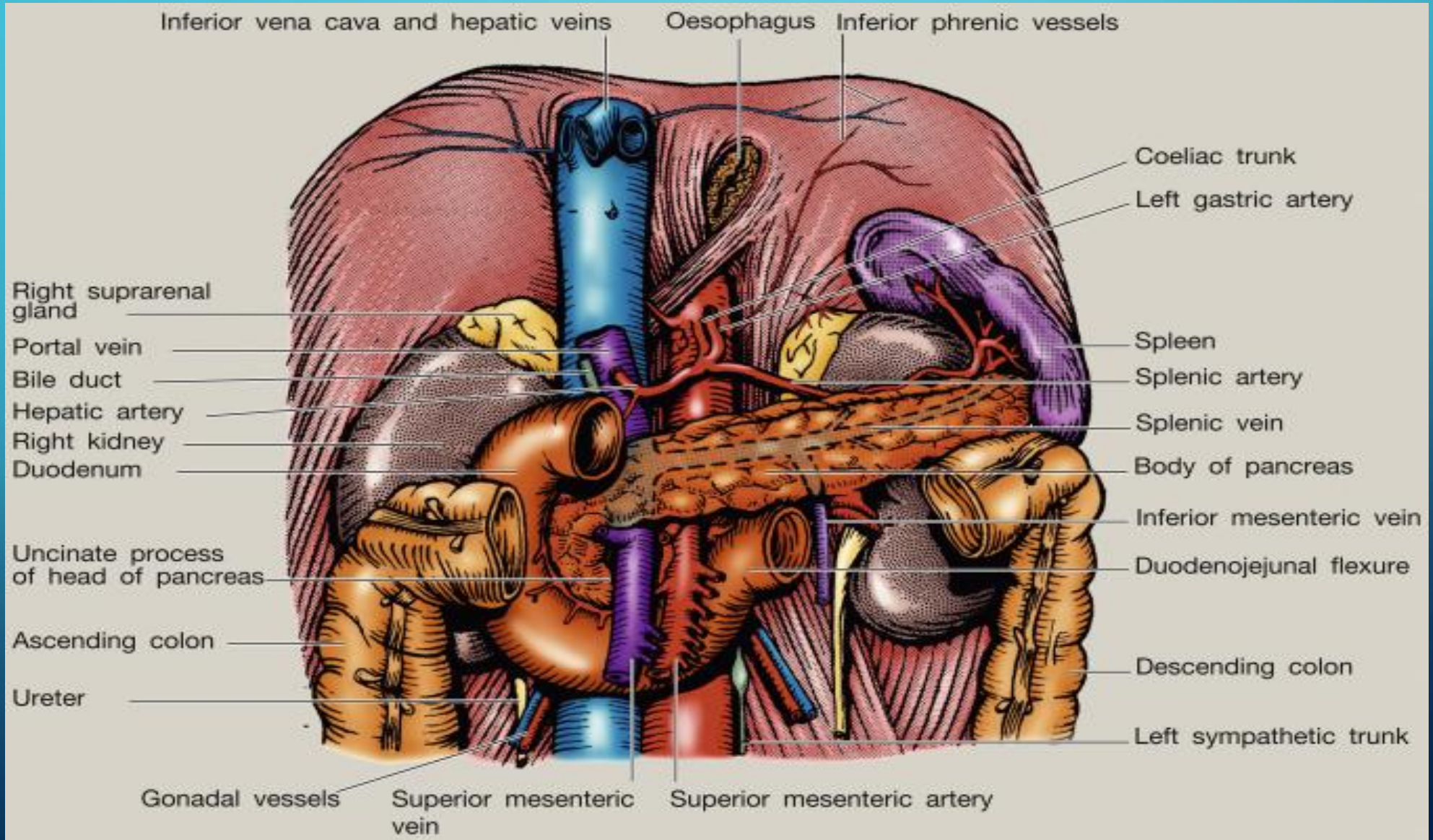
## **Inferior surface**

- It is related to greater sac And small intestine

## **Posterior surface**

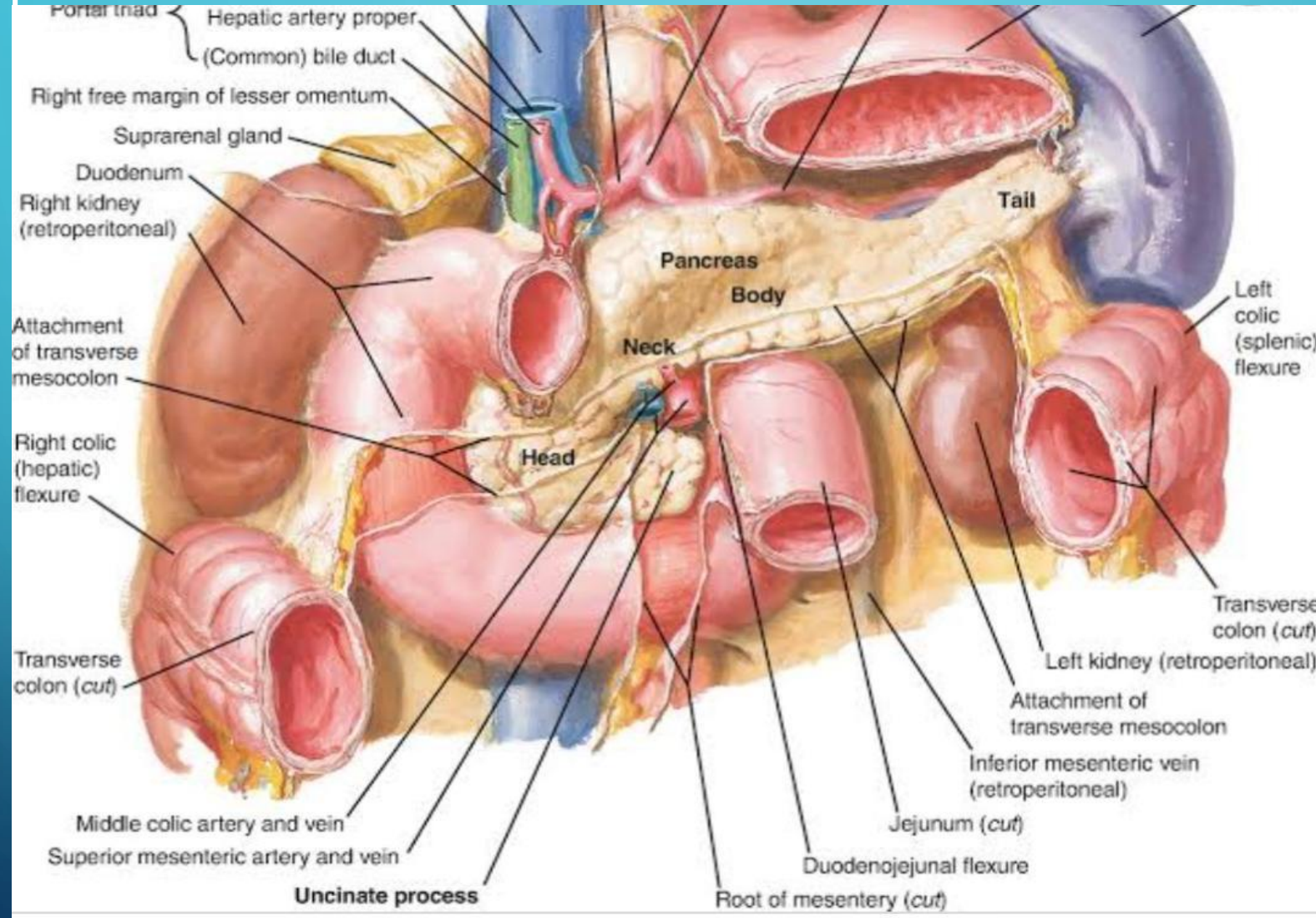
- Left crus of the diaphragm
- Sympathetic chain
- Left psoas
- Left suprarenal gland
- Left kidney
- 3 veins :splenic vein,Inferior mesenteric vein and left renal vein

# Pancreatic body posterior relations



## TAIL OF THE PANCREAS

- It is last part of the pancreas that pass in the lienorenal ligament towards the hilum of the spleen





## ARTERIAL SUPPLY:

Two main arteries That supply the pancreas are

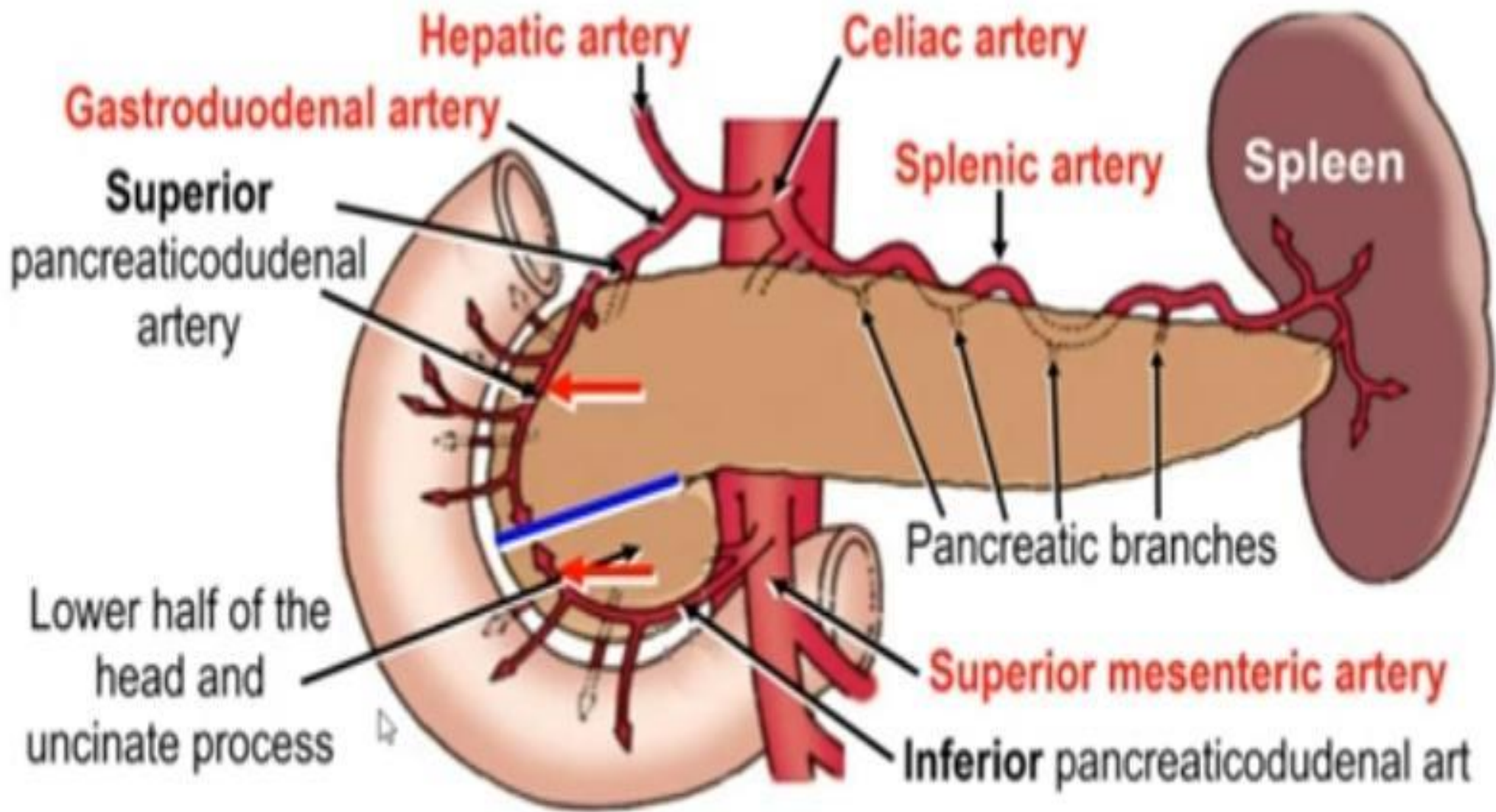
- Celiac artery
- Superior mesenteric artery

- **Celiac artery:**

Celiac artery supply the all parts of the pancreas except lower half of head of pancreas and uncinete process

- **Superior mesenteric artery**

It supply the lower half of head of the Pancreas and uncinete process



- **CELIAC ARTERY BRANCHES:**

- **First branch:**

- Common hepatic artery > gastroduodenal artery > Superior pancreaticoduodenal artery

- Supplies upper ½ of head of pancreas

- **SECOND BRANCH:**

- splenic artery > dorsal pancreatic and great pancreatic arteries supplies neck, body and tail

- **SUPERIOR MESENTERIC ARTERY**

- Gives inferior pancreaticoduodenal artery supplies lower ½ of head and uncinate process

### **VENOUS DRIANAGE:**

- Corresponding veins drian I to portal vein

### **NERVE SUPPLY**

- parasympathetic(vagul) and sympathetic through Celiac plexus and superior mesenteric plexus

### **CELIAC PLEXUS:**

- Supply the all parts except lower half of head and uncinat process

### **SUPERIOR MESENTERIC PLEXUS:**

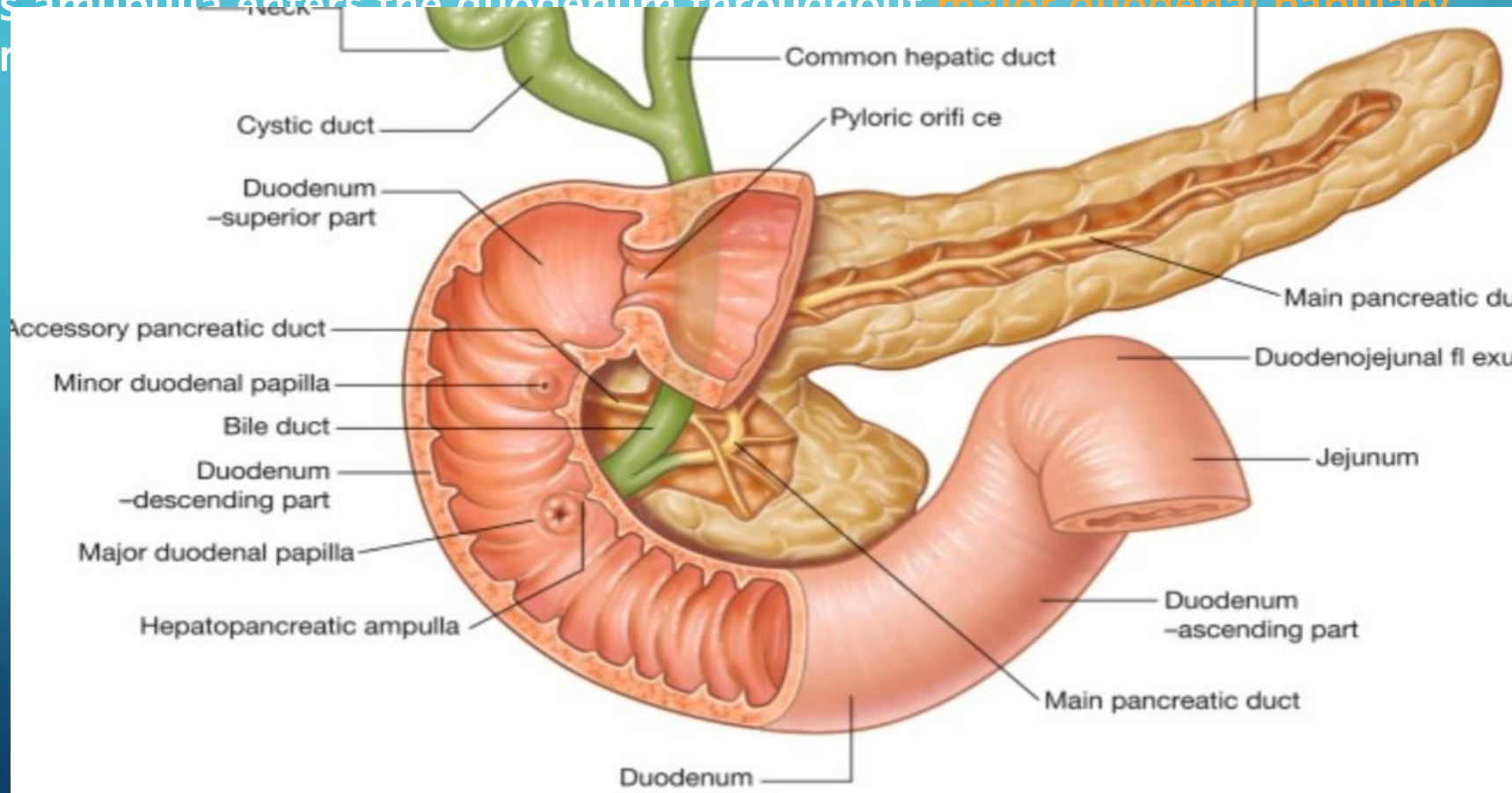
- Supply the lower half of head and uncinat process

### **LYMPHATIC DRIANAGE**

- Upper part of head,neck ,body and tail by Celiac lymph nodes
- Lower half of head and uncinat process by superior mesenteric lymph nodes

## MAIN PANCREATIC DUCT:

- The main pancreatic duct **begin in the tail** of the pancreas and move to the right through Body, neck and when reaches the lower part of the head it joins the Bile duct and form structure Known as **hepaticpancreatic ampulla**(ampulla of vater)
- This amupulla enters the duodenum throughout **major duodenal papillary** surr



## ACCESSORY PANCREATIC DUCT:

- It is present in some individuals and it empties into the duodenum through minor duodenal papillary one inch
- Above major duodenal papillary

## BRANCHES OF ACCESSORY DUCT

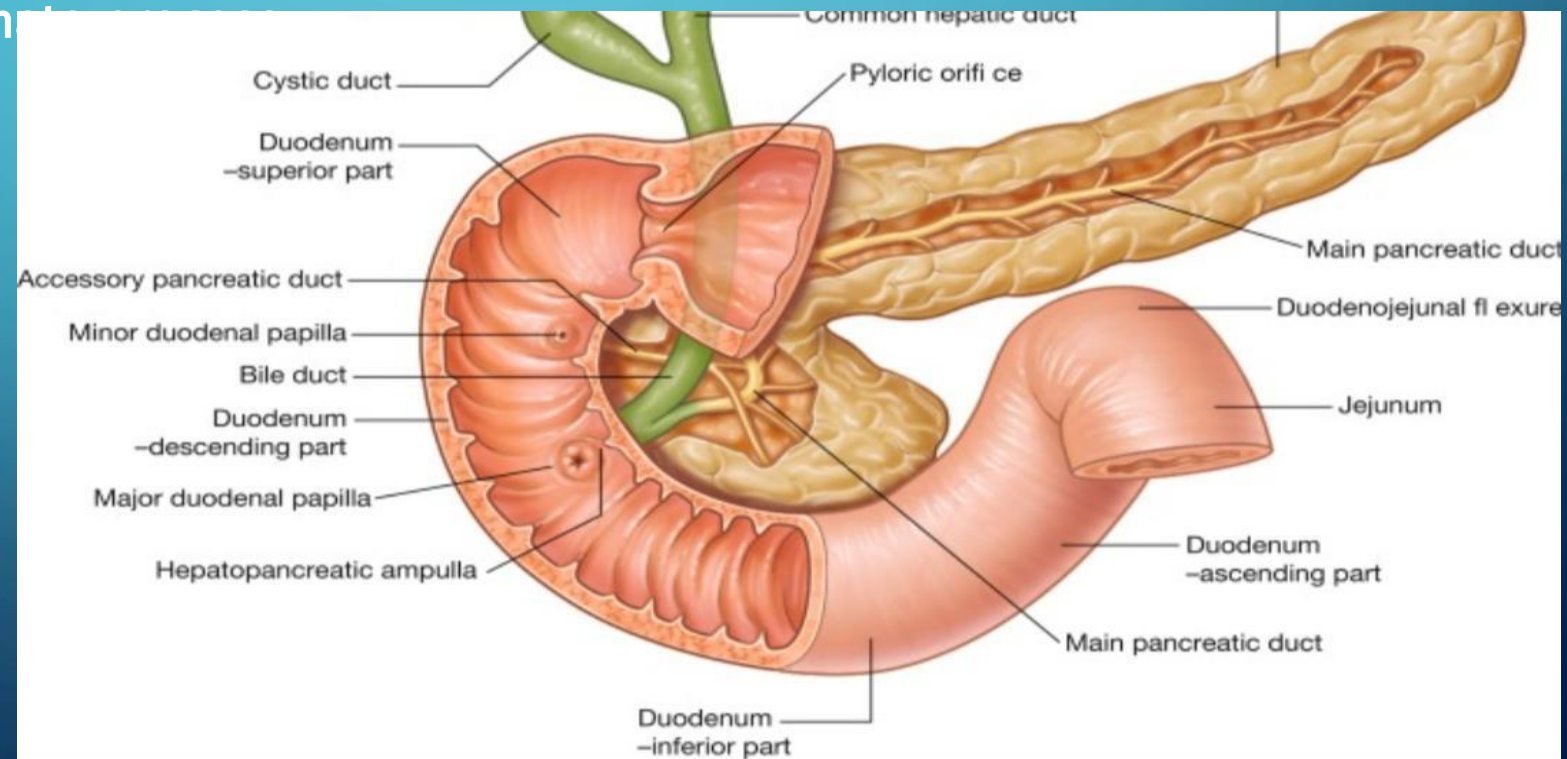
- It have two branches:

### .left branch :

- It extend to left of pancreatic head and joins the main pancreatic duct

### Descending branch:

- It descends into the lower part of pancreatic head anterior to the pancreatic duct and ends with in the uncinate



## CLINICAL CORRELATES

### ANNULAR PANCREAS

- The pancreas develops from two buds i.e. ventral and dorsal bud
- The dorsal bud forms tail, body, neck and some part of the head
- The ventral bud forms the lower part of pancreas and the uncinata process
- But in some cases the ventral splits (becomes bifid) and then the two segments encircle the duodenum as a result the duodenum gets constricted and therefore food cannot pass into the rest of the intestine

### DIABETES MELLITUS

It occurs when beta cells of pancreas are unable to secrete insulin as a result of which diabetes

Mellitus occurs  
Type 1 and type 2

# CARCINOMA OF PANCREAS

- Carcinoma is common in the head of the pancreas
- Due to Carcinomas in head mostly Bile duct obstruction can occur which cause

Jaundice

## Pancreatitis

- It is inflammation of pancreas which occur due alcohol ingestion,obstruction of pancreatic duct





THANK YOU