

# OESOPHAGUS & STOMACH

BY

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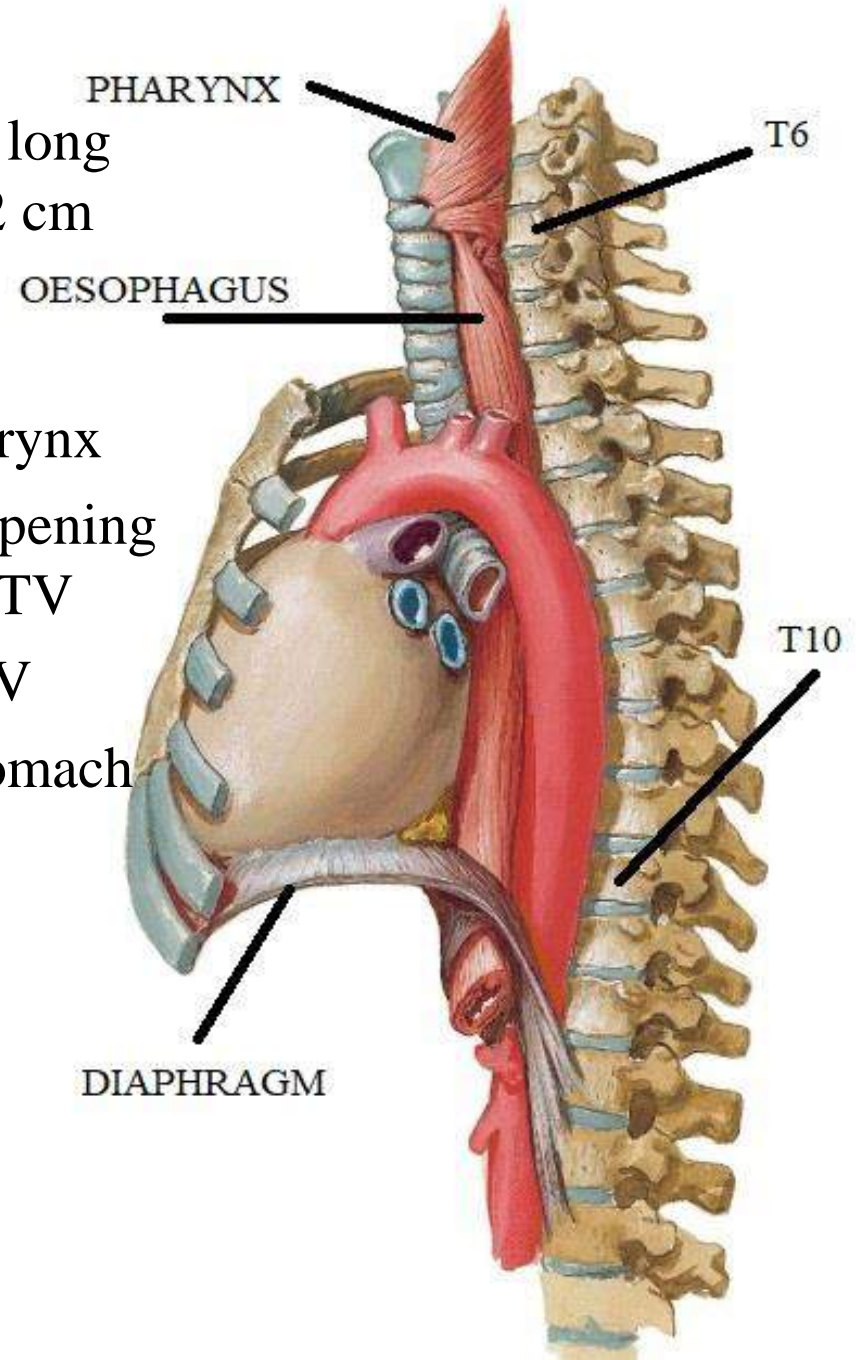
# OESOPHAGUS

# OESOPHAGUS

**Def.** It is a muscular tube 25 cm long with an average diameter 2 cm

## **Extent**

- **Begins** at the level of 6<sup>th</sup> CV as continuation of pharynx
- Passes through oesophageal opening of diaphragm at level of 10<sup>th</sup> TV
- **Ends** at the level of the 11<sup>th</sup> TV at cardiac opening of stomach



# OESOPHAGUS

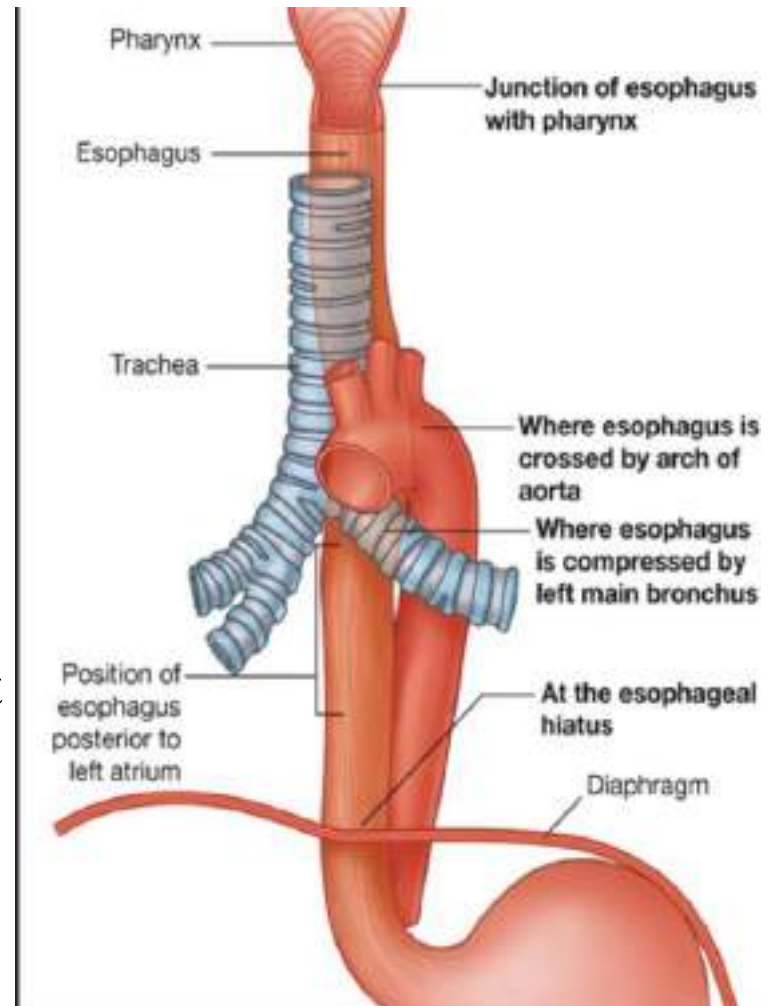
## Course

### In the neck

- It begins in the midline,
- as it descends through the neck, it deviates to the left side as far as the root of the neck

### In the thorax

- it passes downward and to the left
- At the level of the sternal angle, the aortic arch pushes the esophagus to the midline
- at the seventh thoracic vertebra deviates left again, before it pierces the diaphragm



# OESOPHAGUS

## Relations In the neck

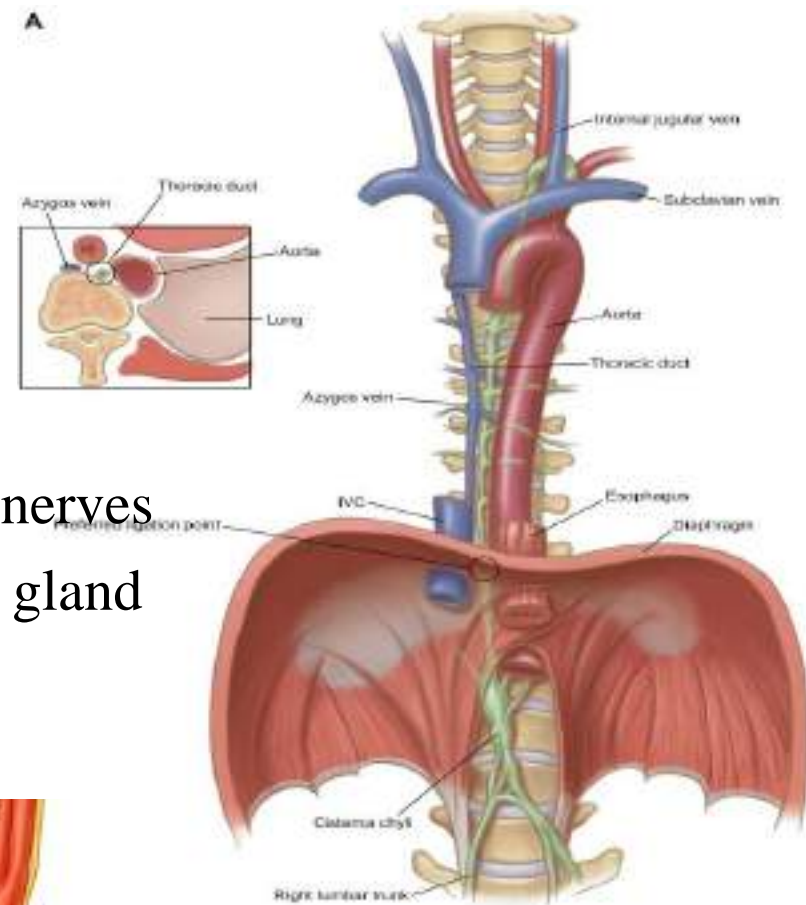
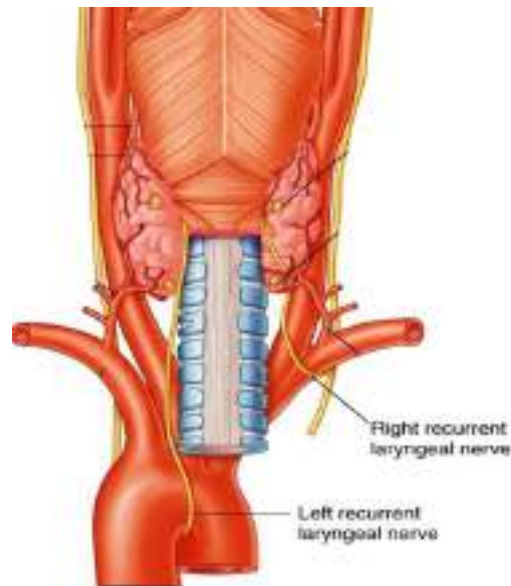
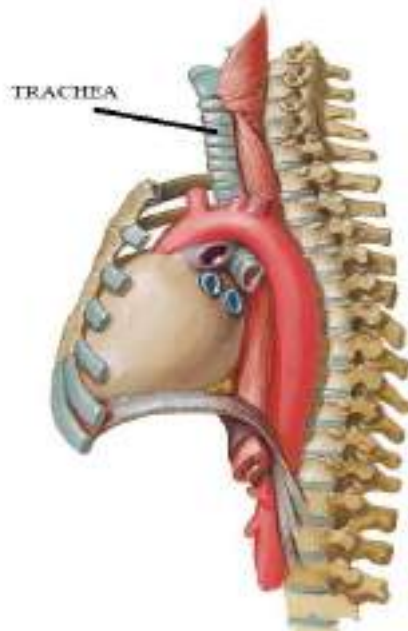
### relations

**Posteriorly:-** the vertebral column;

**Anteriorly:-** the trachea

the recurrent laryngeal nerves

**Laterally:-** the lobes of the thyroid gland



# OESOPHAGUS

## Relations In the thorax

### Posteriorly:

the vertebral column

the thoracic duct

the descending thoracic aorta

### Anteriorly

the trachea

the left recurrent laryngeal nerve

the left main bronchus,

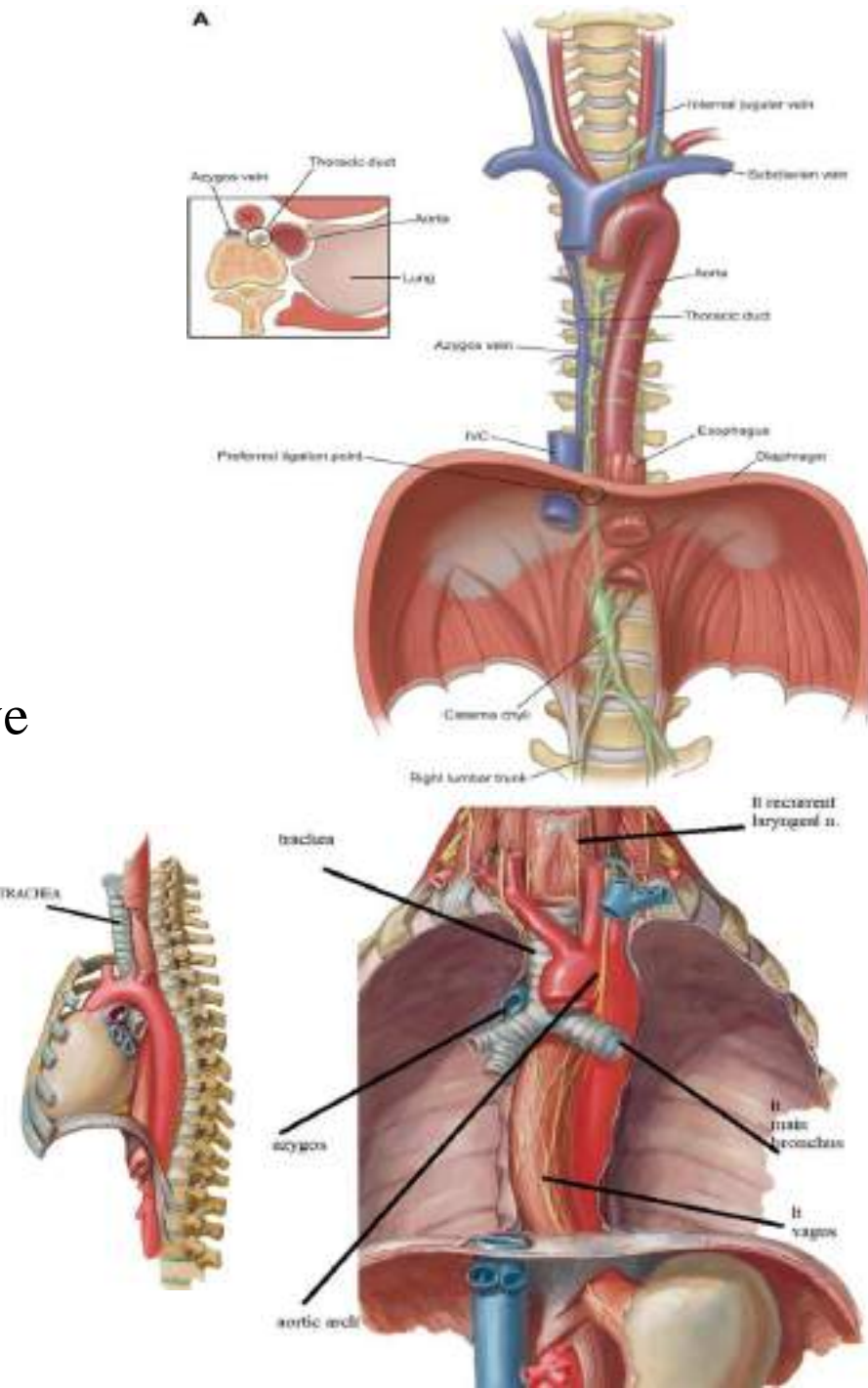
the pericardium, the left atrium

**Right side:** the pleura

the terminal part  
of the azygos vein

**Left side:** the pleura

the aortic arch



# OESOPHAGUS

## Constrictions:-

### 1-At Pharyngo oesophageal junction

approximately 15 cm  
from the incisor teeth

### 2-At Aortic arch

22.5 cm

from the incisor teeth

### 3-At left main bronchus

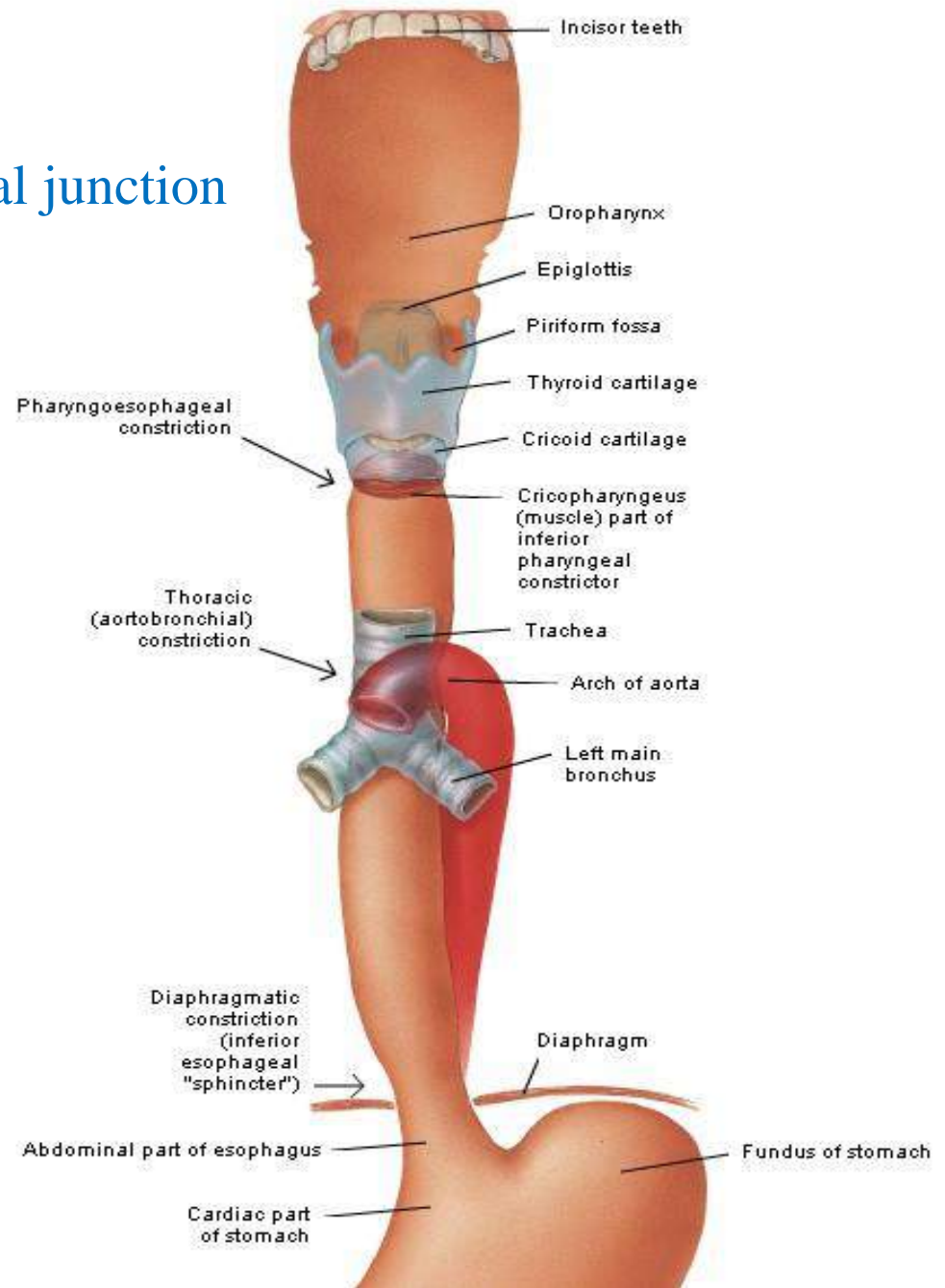
27.5 cm

from the incisor teeth

### 4-At diaphragm

40 cm

from the incisor teeth



# OESOPHAGUS

**A.S.:**

the inferior thyroid artery  
descending thoracic aorta.&  
lt. gastric artery

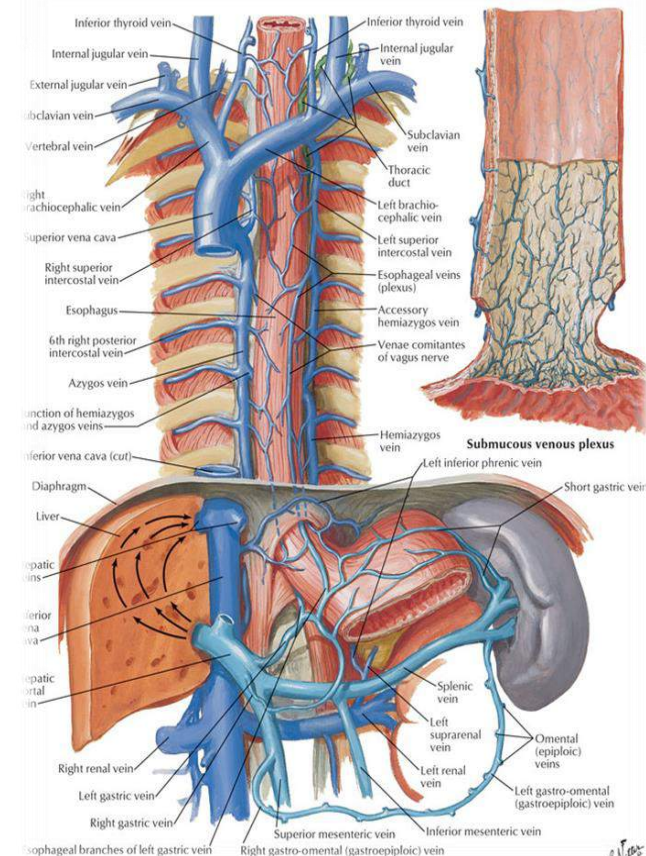
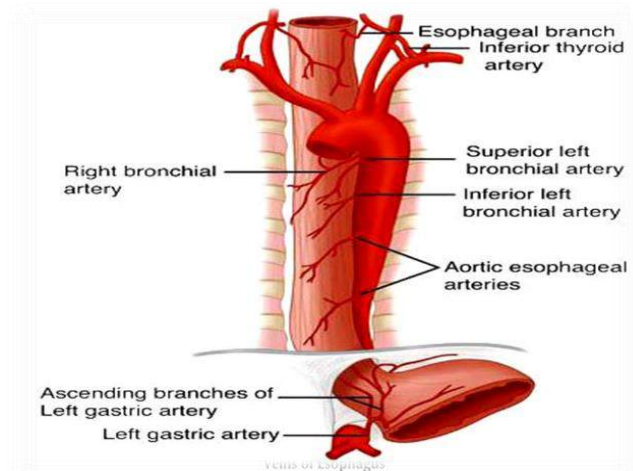
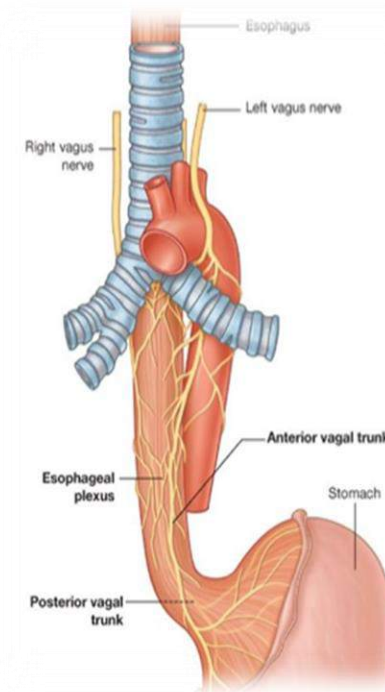
**V.D.:-**

Inferior thyroid vein  
azygos v. &  
lt. gastric vein

**L.D.:-**

Deep cervical L.N.  
mediastinal L.Ns &  
coeliac L.Ns

**N.S.:-** parasympathetic and sympathetic  
fibers via the vagi and  
sympathetic trunks that  
form oesophageal plexus





# STOMACH

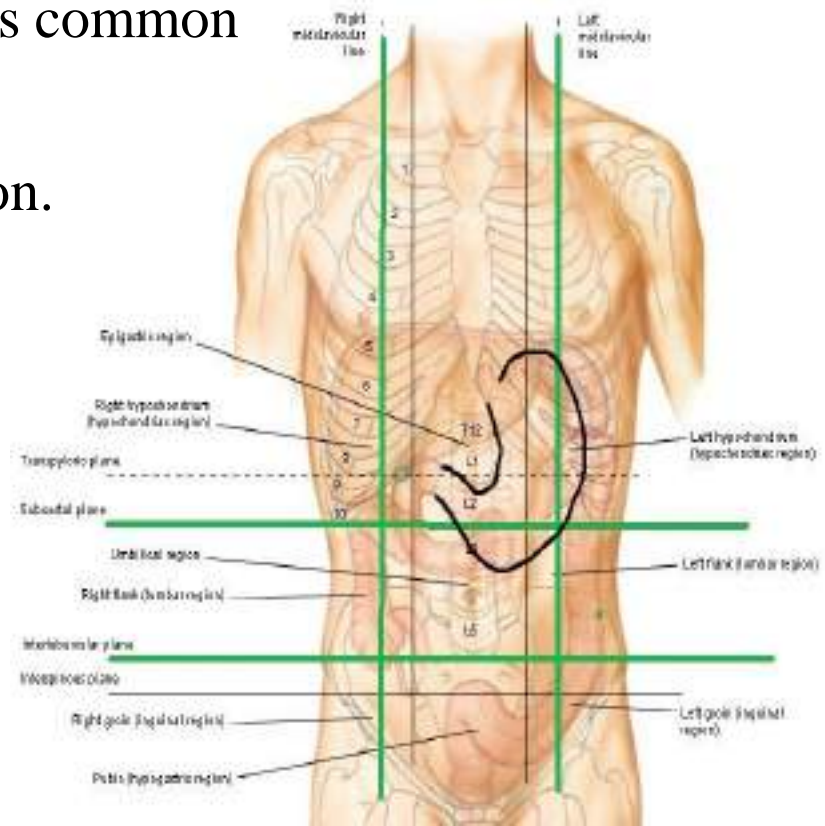
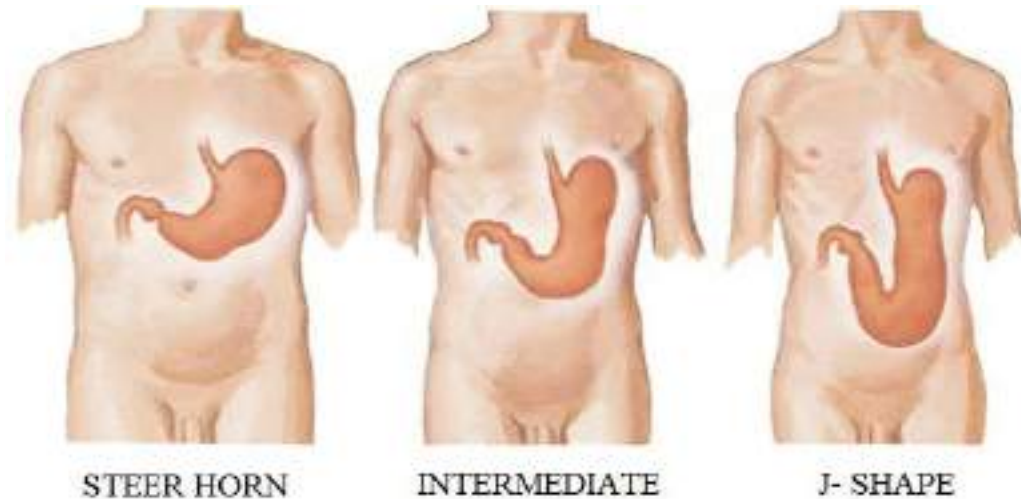
# STOMACH

## Position:

left hypochondriac  
epigastric &  
umbilical regions

## Shape:

- 1- J shaped (vertical): more common
  - 2- steer (ox) horn (horizontal): less common
  - 3- intermediate
- it is more vertical in tall thin person.



# STOMACH

## External features:

### 2 orifices:

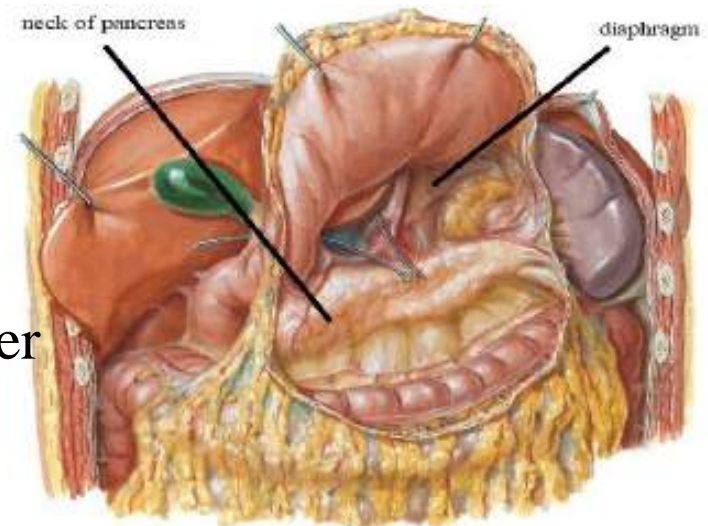
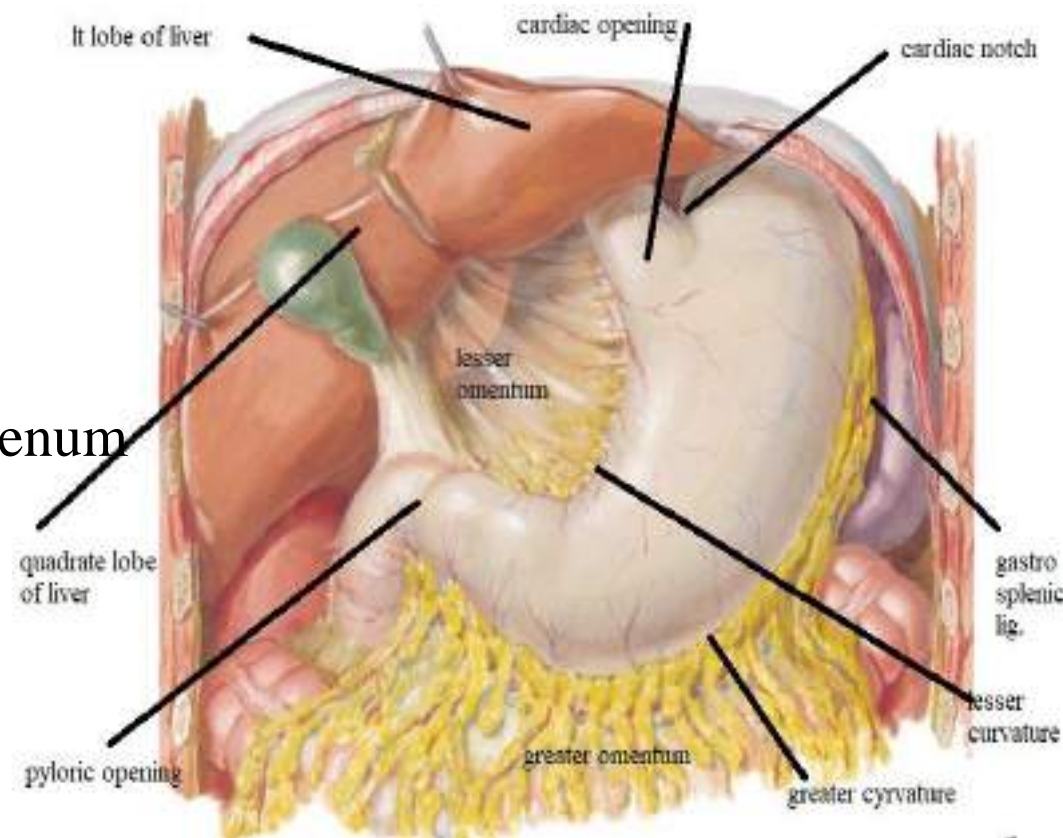
#### Pyloric orifice

- continue with the duodenum
- surface anatomy:-

L1 (transpyloric plane)

1/2 inch to Rt of midline

- Has a true sphincter  
(pyloric sphincter)  
that indicated on surface by:
  - its thickening.
  - pyloric constriction(circular groove)
  - relation :-Ant. quadrated lobe of liver  
Post.: neck of pancreas



# STOMACH

## External features:

### 2 orifices:

#### Cardiac orifice

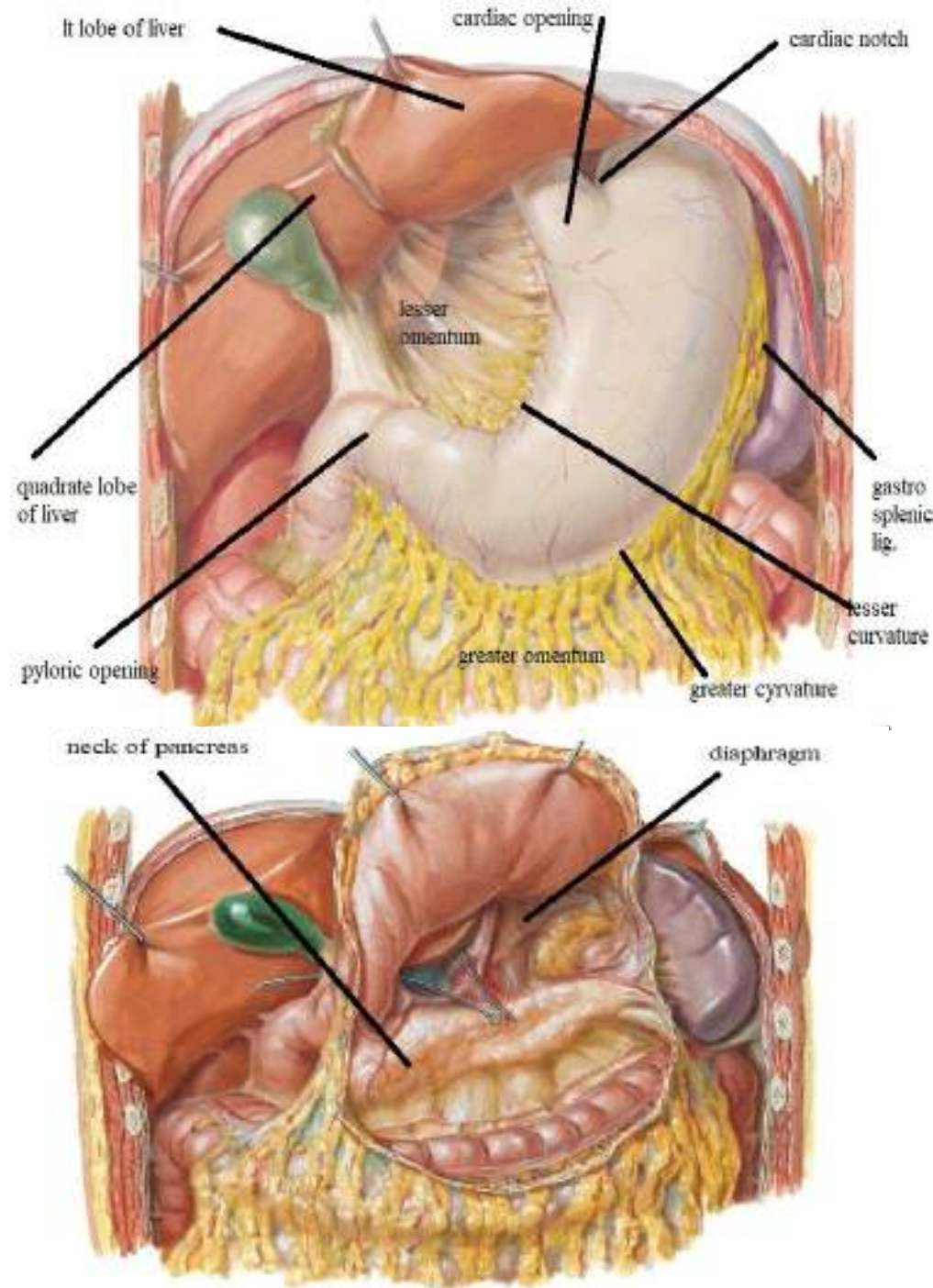
- receive oesophagus
- surface anatomy:  
(T11v) 7th costal cartilage  
1 inch to left of midline
- Has NO true sphincter:  
but cardiac notch
- relation :-

#### Ant.:- -

lt lobe of liver  
ant. gastric n.

#### Post.:- -

diaphragm  
post. gastric n.



# STOMACH

## External features:

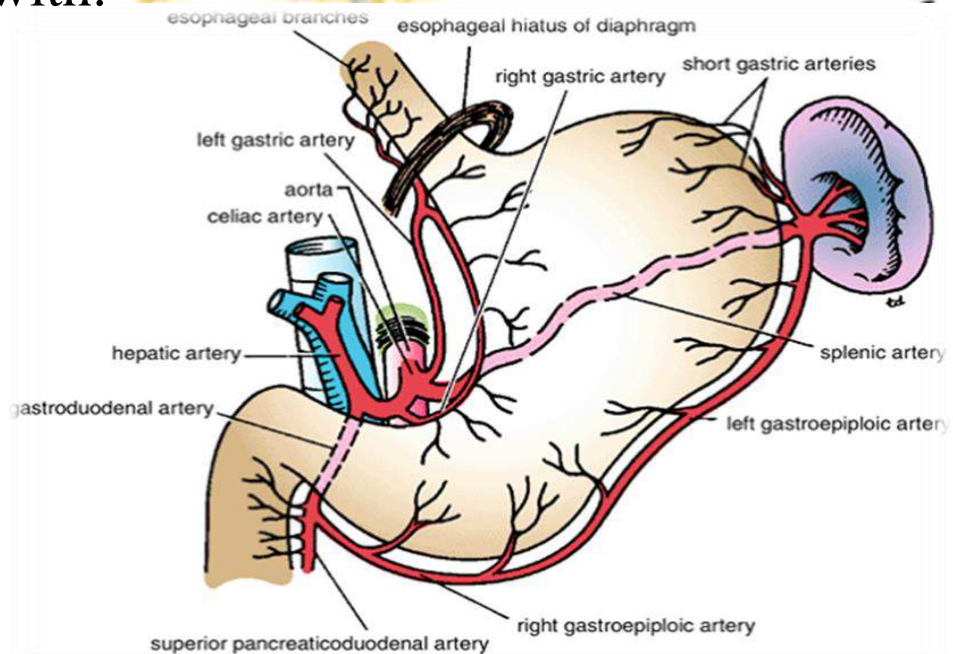
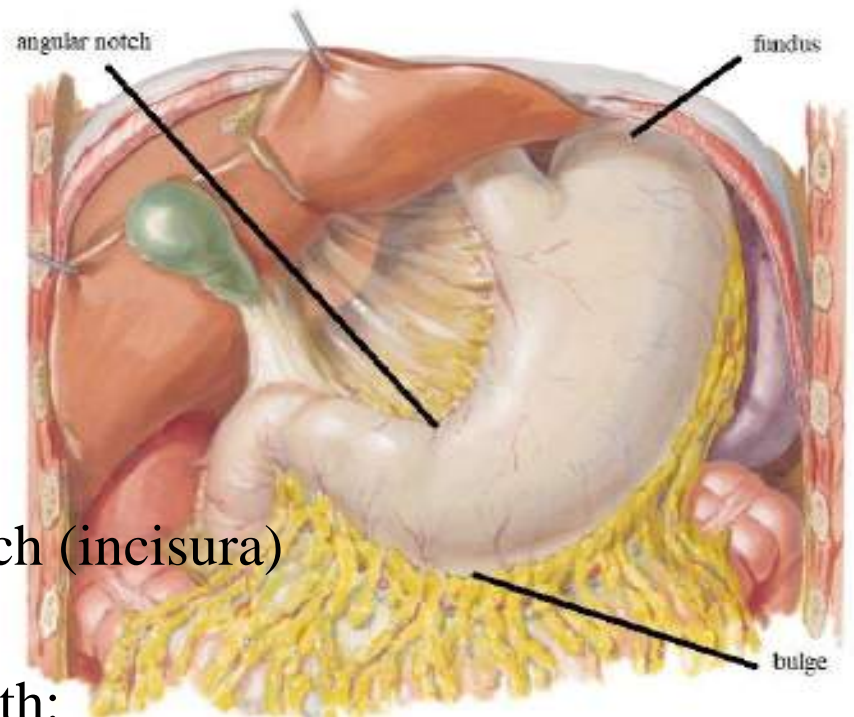
2 borders:

Rt. (lesser curvature)

- concave:  
descends vertically then  
passes to Rt. at angular notch (incisura)
- Relations  
attach to lesser omentum with:

Rt. & Lt. gastric vessels

( ) 2 layer of omentum



# STOMACH

## External features:

2 borders:

Lt (greater curvature)

- convex:  
arches upwards forming fundus then descends vertically then passes to Rt. at bulge below angular notch

- Relations:- attach to

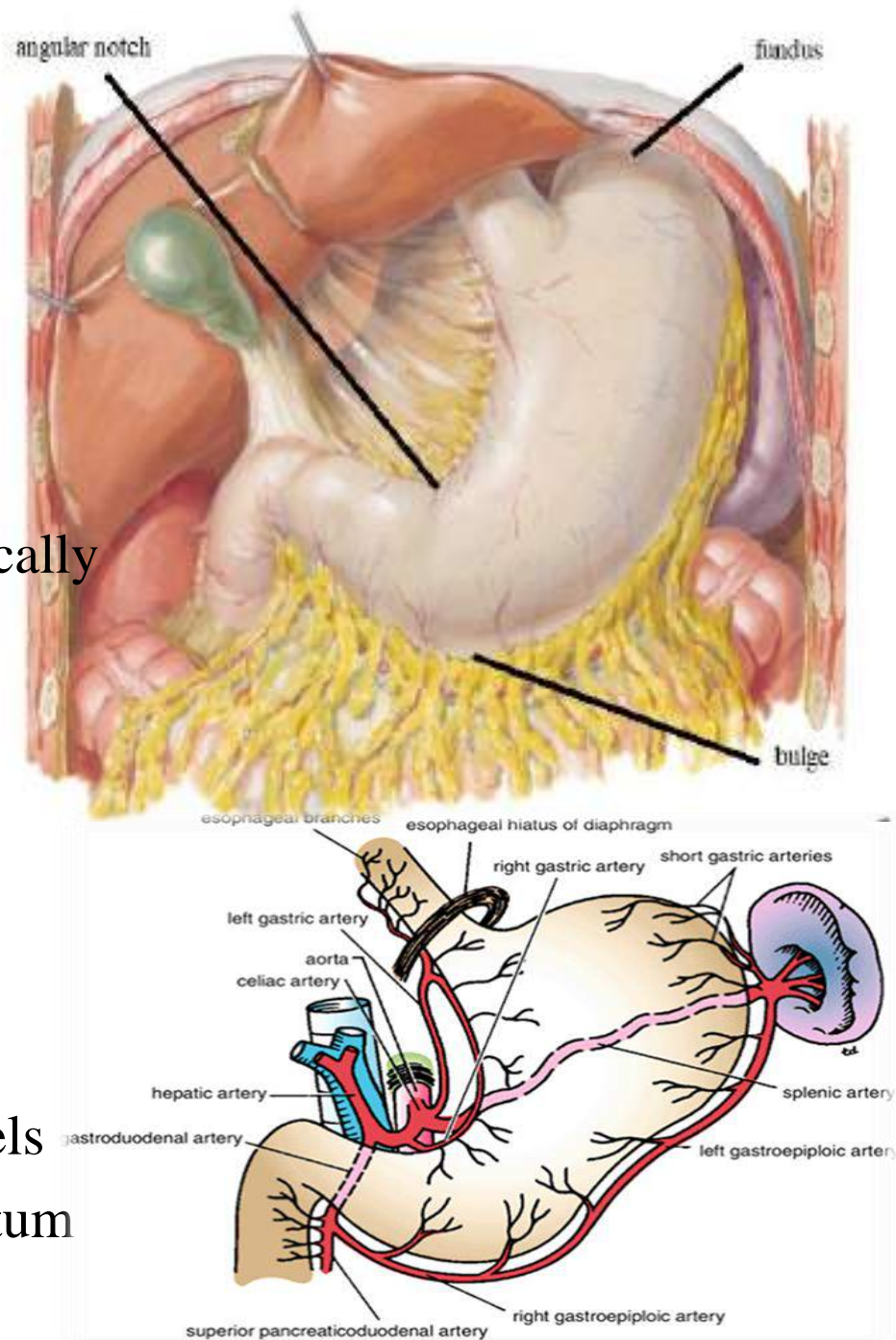
-gastrophrenic lig.

-gastrosplenic lig.

-greater omentum with:

Lt & Rt. gastroepiploic vessels

( ) 2 ant. layers of omentum



# STOMACH

## External features:

2 surfaces:

anterior (antero superior)

## Relations

Lt part:

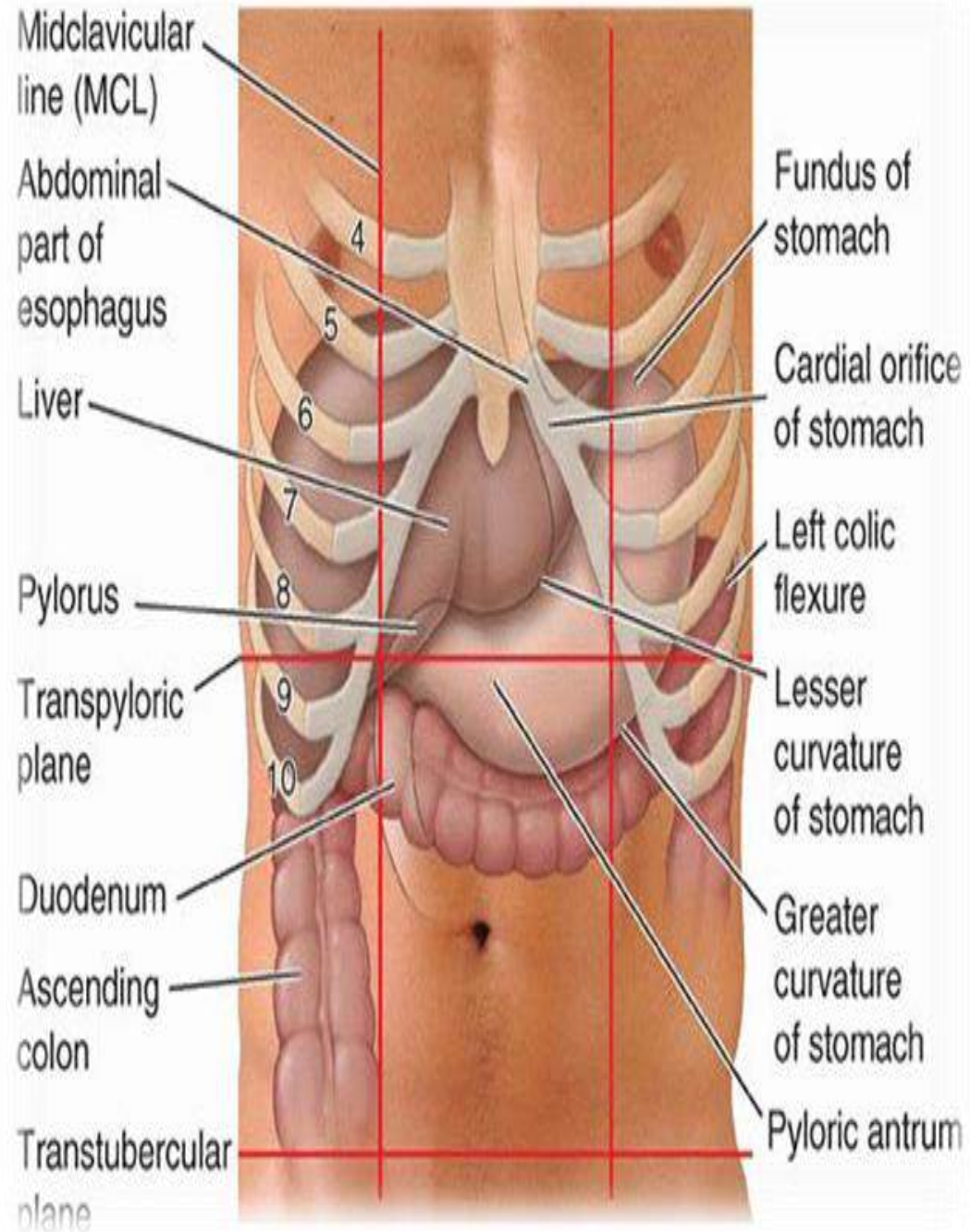
- diaphragm.
- lt lung & pleura
- lt 7, 8 ribs & costal cartilages.

Rt part:

Lt lobe of liver.

Intermediate part:

ant. abdominal wall



# STOMACH

## External features:

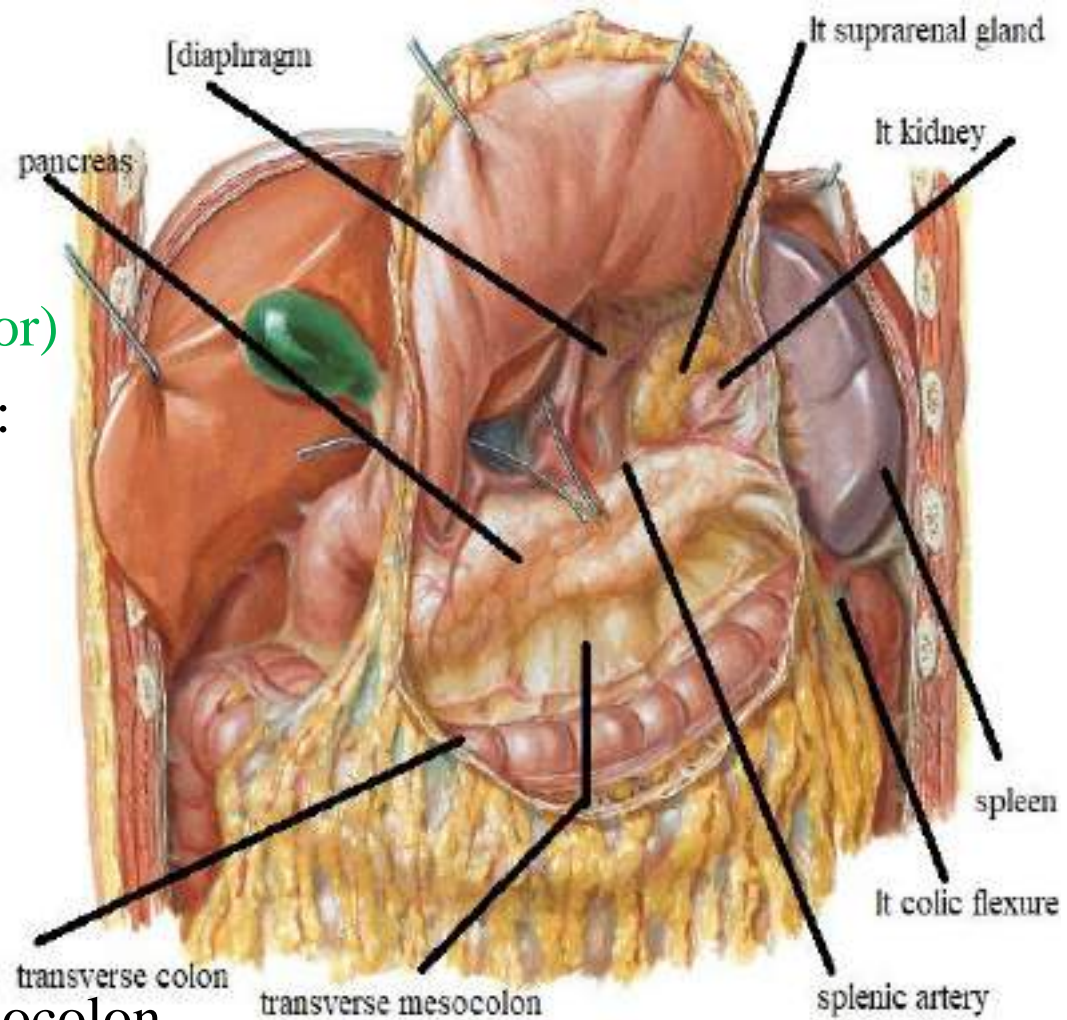
2 surfaces:

Posterior (postero inferior)

**Relations:-stomach bed:**

- Lt crus of diaphragm.
- spleen.
- Lt kidney & suprarenal gland.
- body of pancreas & splenic art.
- transverse colon & mesocolon.
- Lt colic flexure.

& all these structures are separated from stomach by lesser sac except spleen is separated from it by greater sac.



# STOMACH

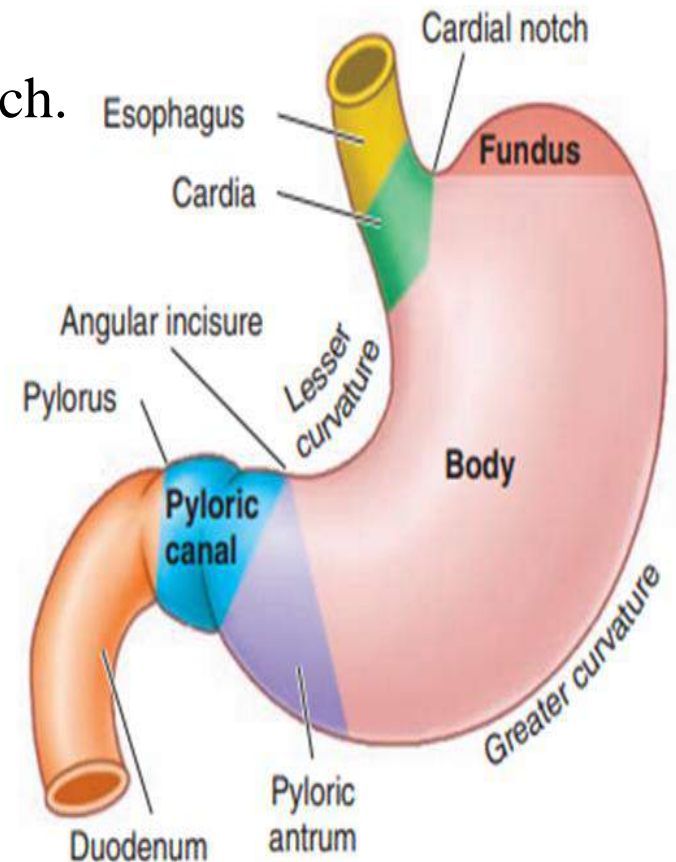
## PARTS

**1-fundus:** above cardiac end  
Lies in Lt midclavicular line  
in Lt 5th intercostal space.

**2-body:** ( ) cardiac end & angular notch.

**3-pyloric part:** below angular notch  
& is divided into 3 parts.

- pyloric antrum :  
dilated part below body
- Pyloric canal.
- pyloric orifice with  
pyloric sphincter.

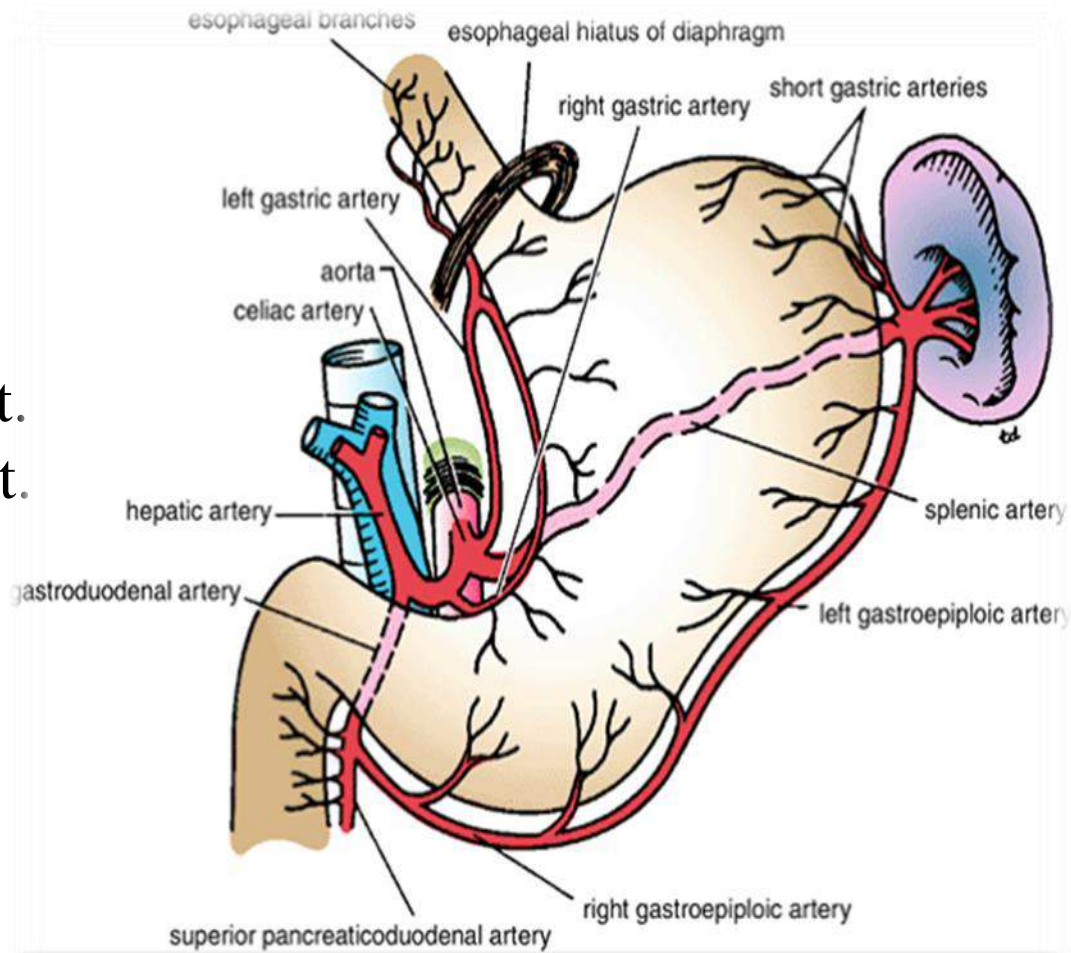


(A) Anterior view

# STOMACH

## arterial supply:

- 1-Lt gastric art.
- 2-Rt gastric art.
- 3-Lt gastro-epiploic art.
- 4-Rt gastro-epiploic art.
- 5-Short gastric art.



# STOMACH

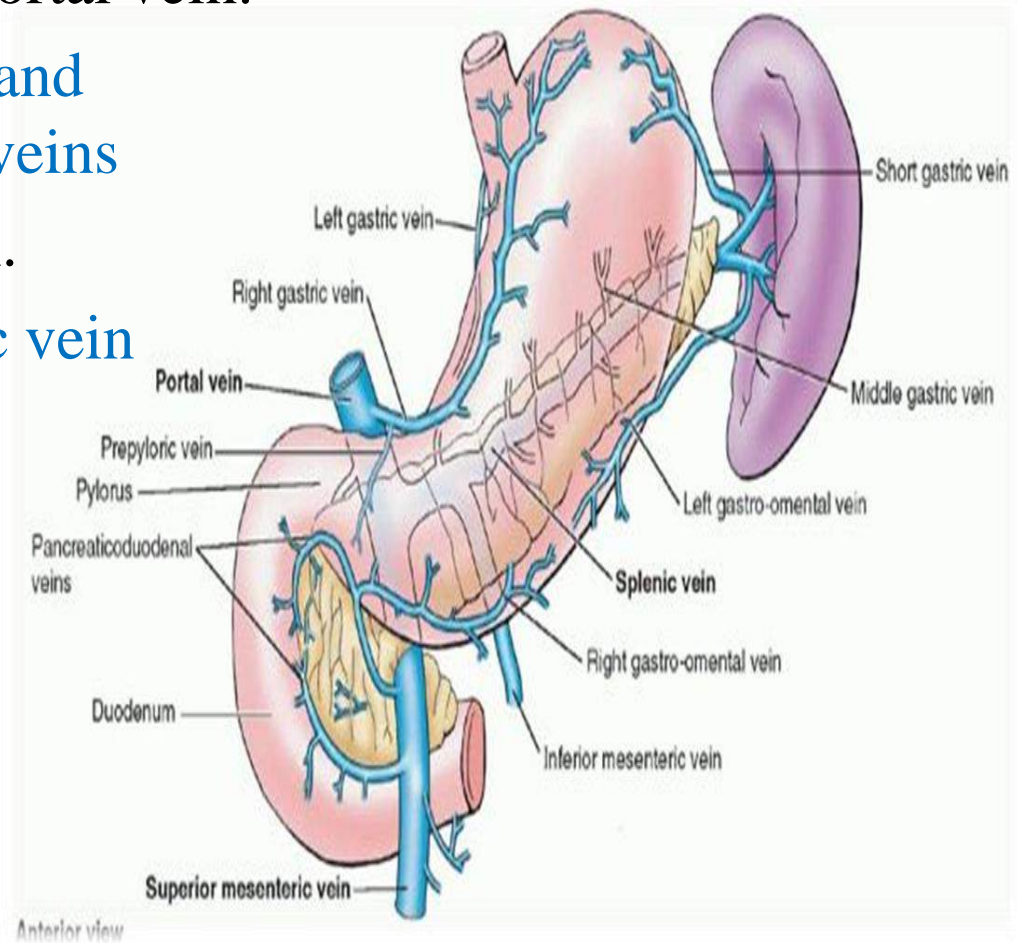
## Venous drainage:

The veins drain into the portal circulation.

The left and right gastric veins drain directly into the portal vein.

The short gastric veins and the left gastroepiploic veins end in the splenic vein.

The right gastroepiploic vein ends in the superior mesenteric vein.



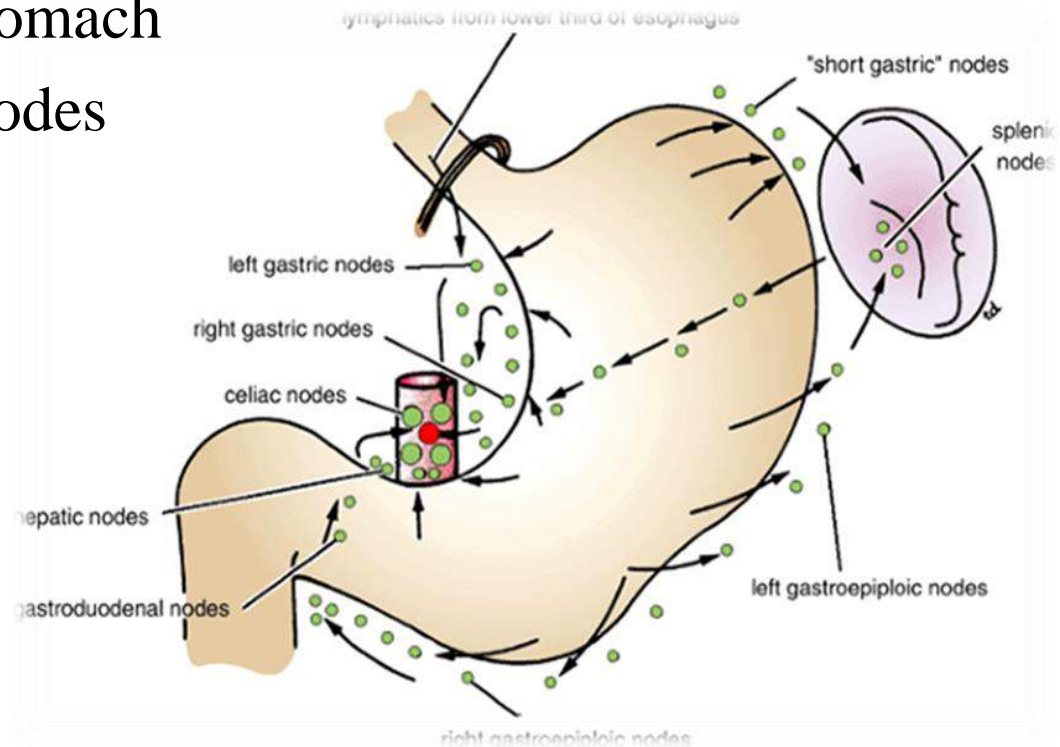
# STOMACH

## lymph drainage:

The lymph vessels follow the arteries into the left and right gastric nodes, the left and right gastroepiploic nodes, and the short gastric nodes.

All lymph from the stomach passes to the celiac nodes

.

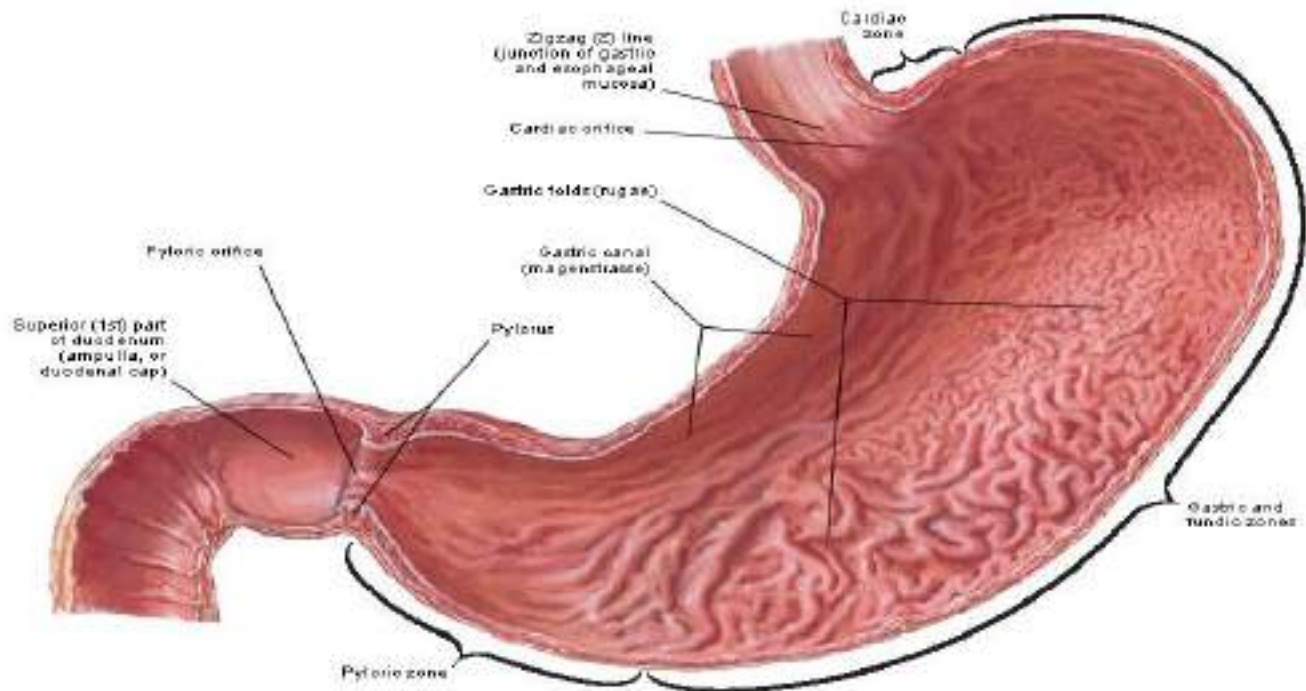


# STOMACH

## Mucosa (interior):

there are longitudinal folds called rugae that disappear in full stomach

2 of them are present along lesser curvature forming gastric canal. the liquids and food eaten at beginning of the meal run along the gastric canal to pyloric portion



# STOMACH

nerve supply of stomach:

sympathetic:

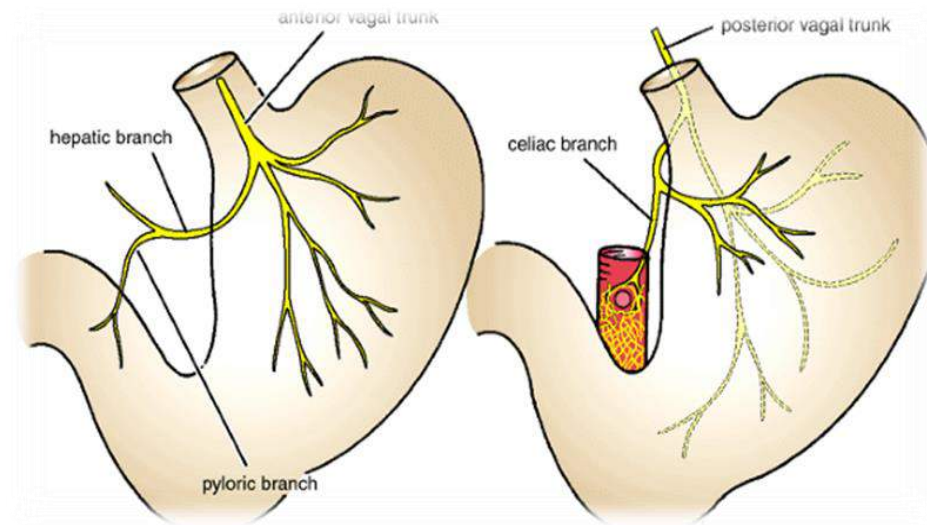
- from T6- 10 segments of spinal cord

parasympathetic:

- from 2 vagi that continue as 2 gastric nerves.

applied anatomy:

- gastric ulcer is common in lesser curvature at pyloric part due to less blood supply





THANQ