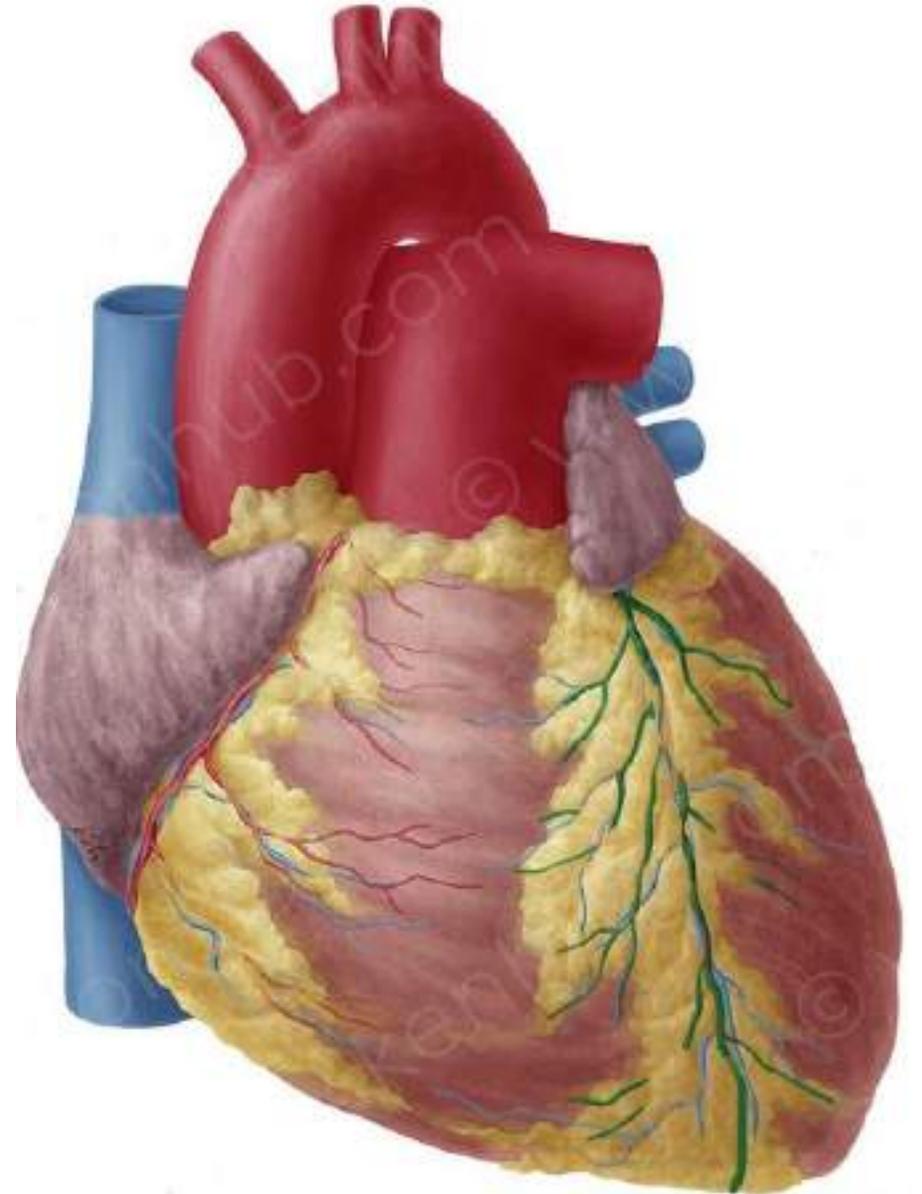


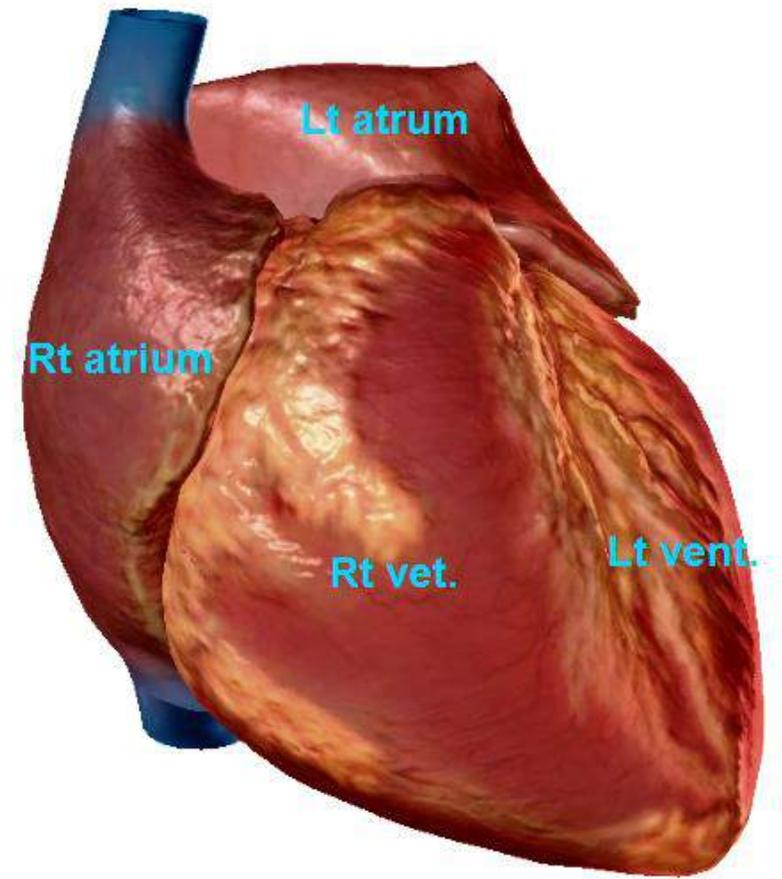
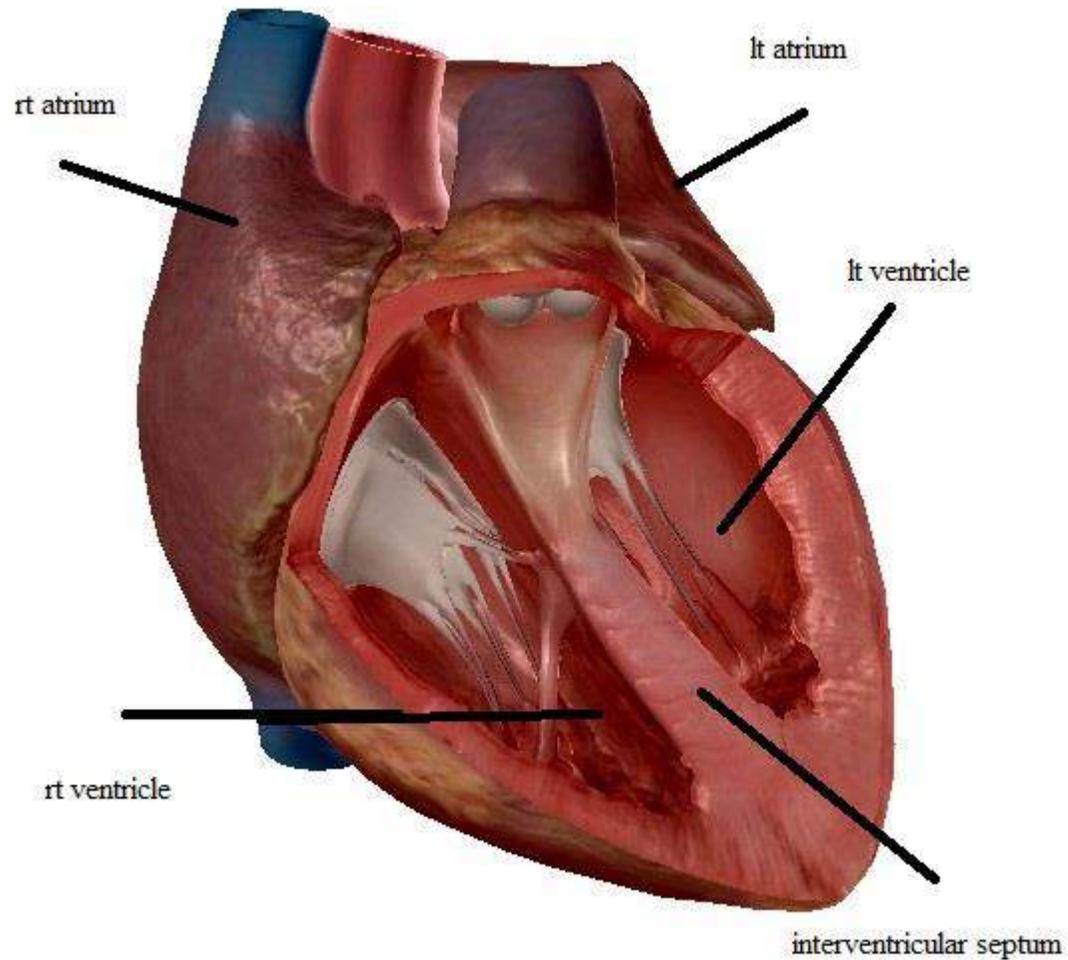
# EXTERNAL FEATURES OF THE HEART

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# DEFINITION

conical hollow organ consists of  
2 atria separated by interatrial septum &  
2 ventricles separated by interventricular septum

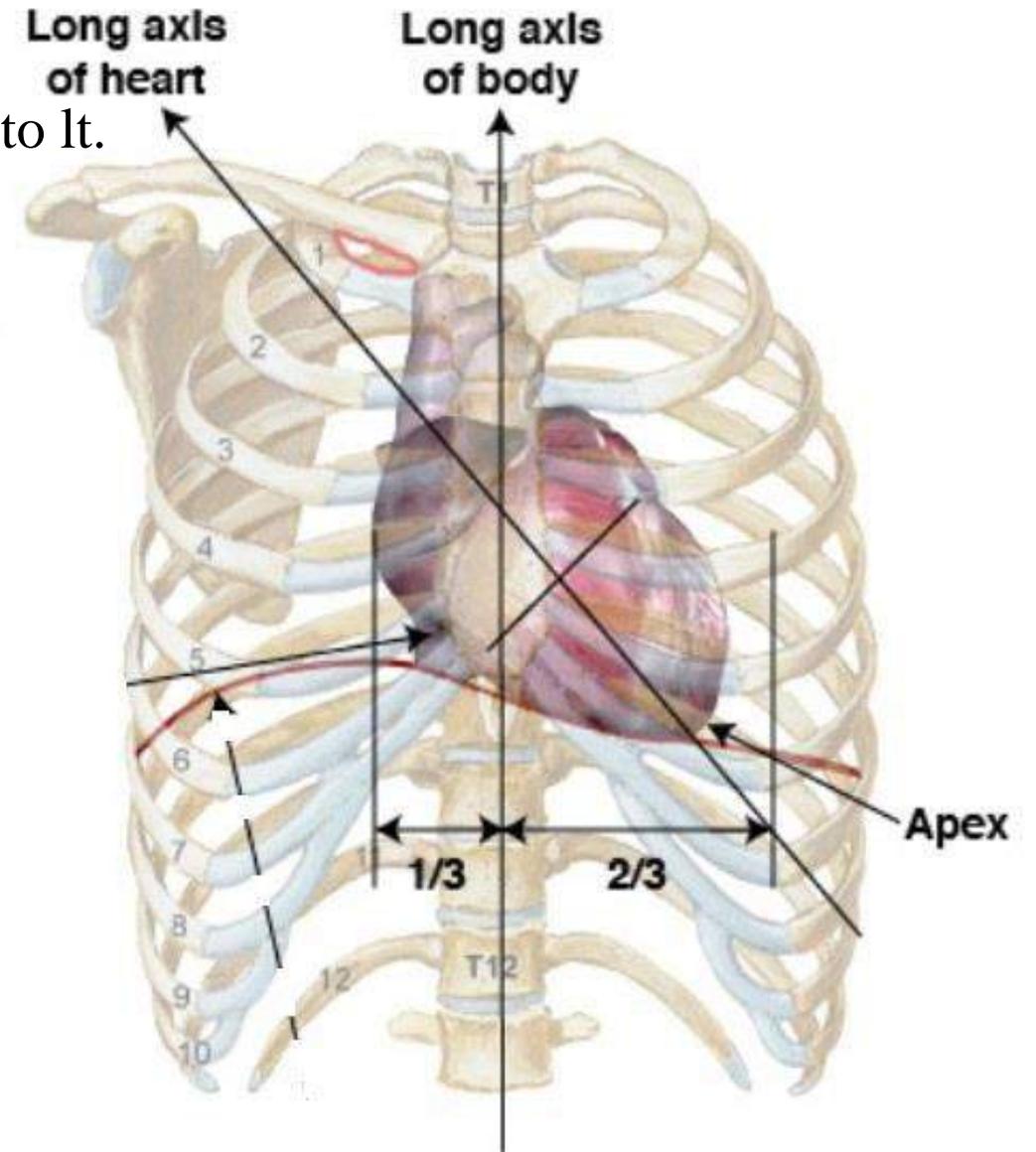


# POSITION

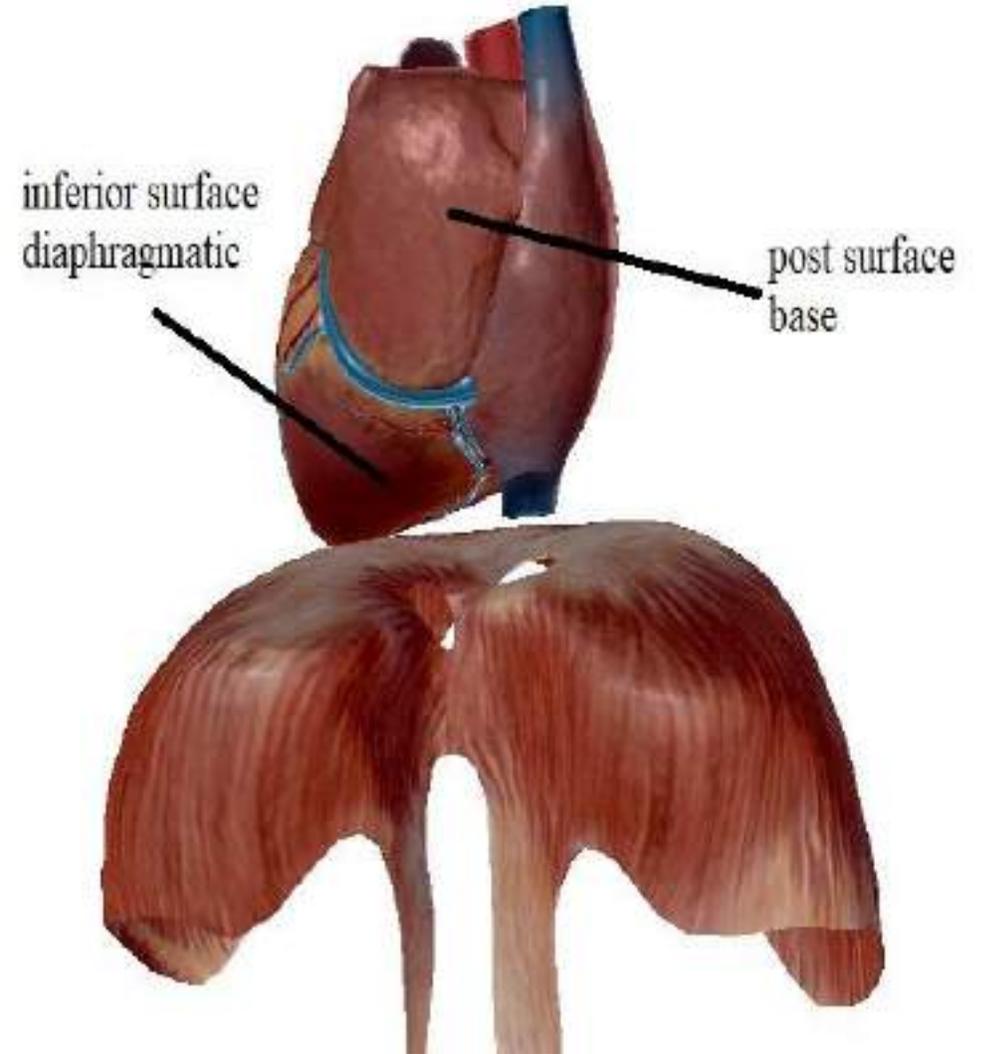
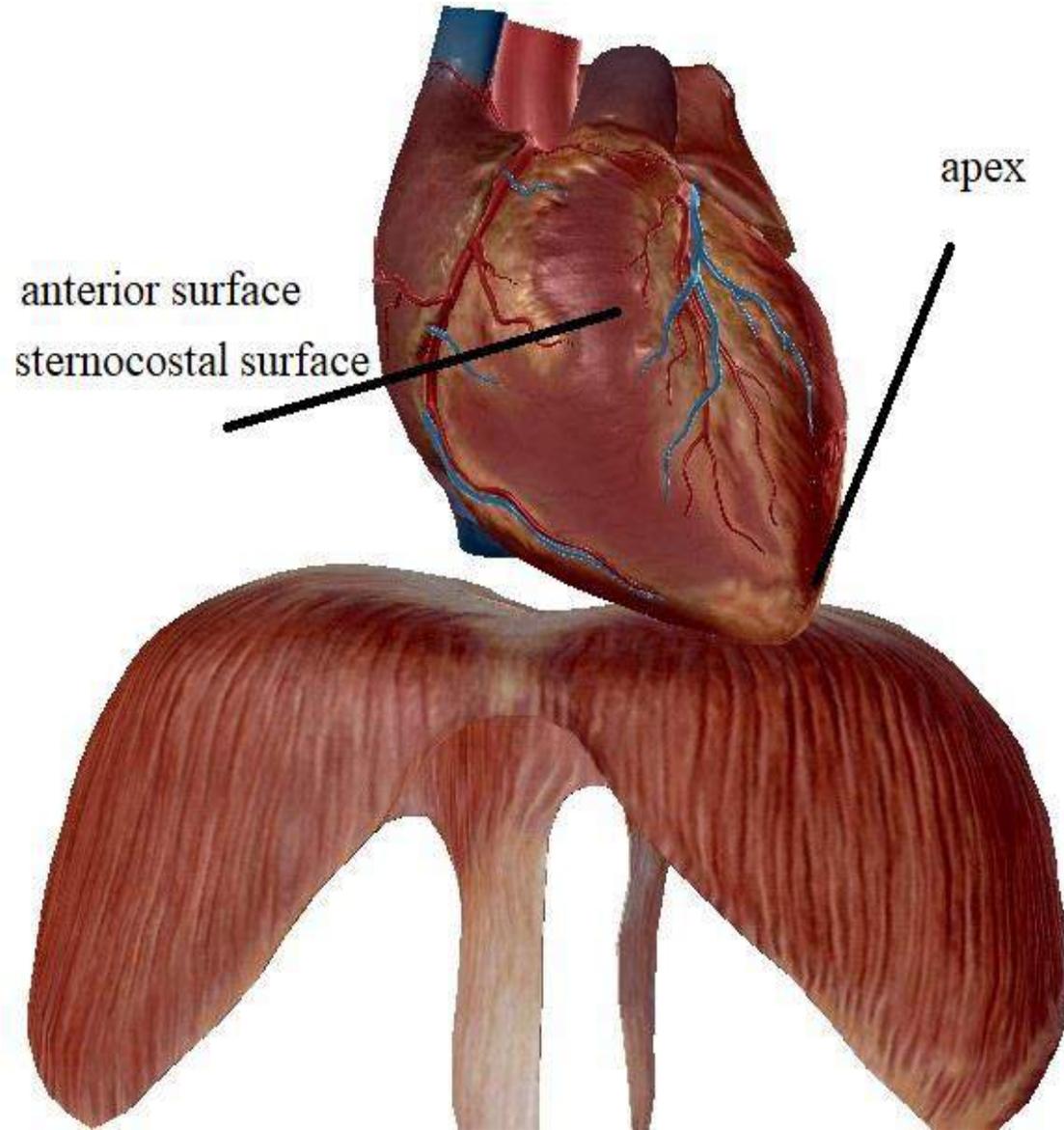
in middle mediastinum

1- its long axis directed downwards forwards & to lt.

2 - 1/3 of heart lies on Rt side &  
2/3 on Lt side of median plane



# SHAPE OF THE HEART



# GROOVES OF THE HEART

## 1- Coronary (atrioventricular)

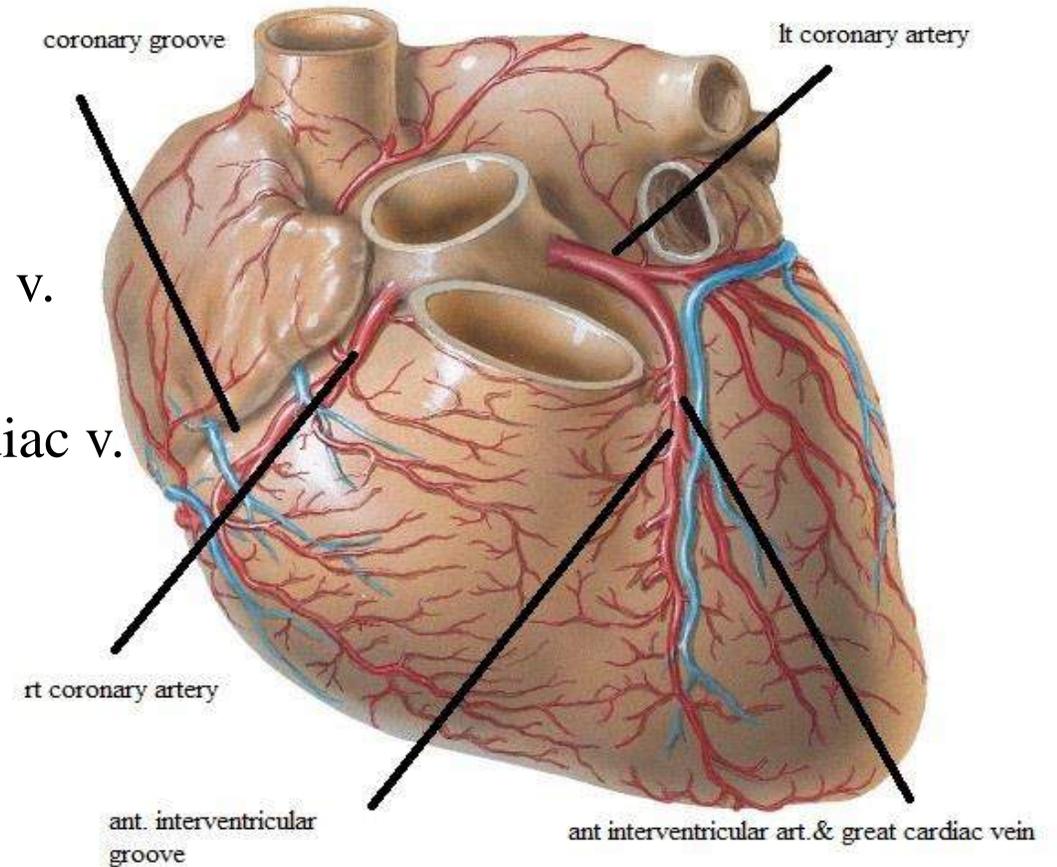
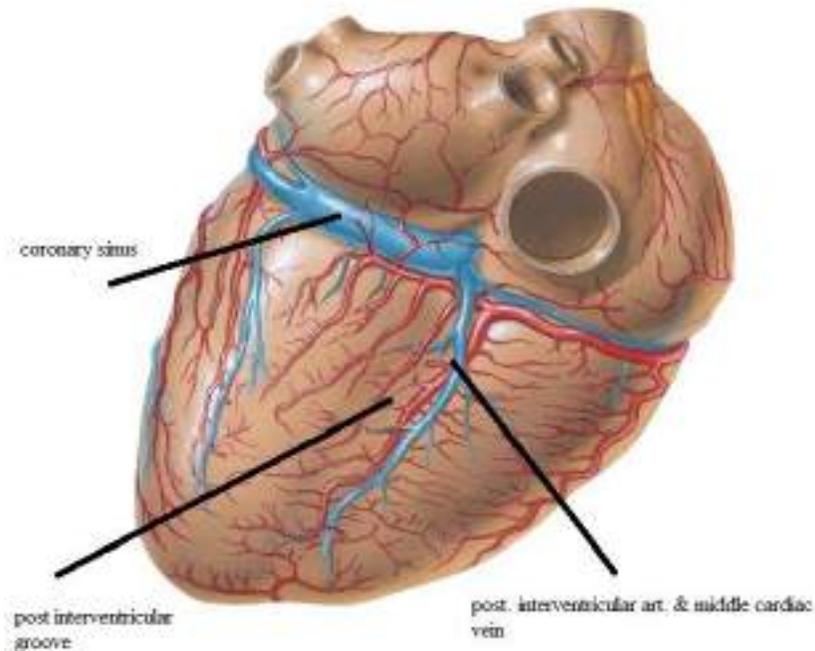
contains coronary arteries & coronary sinus

## 2-Ant. interventricular groove

contains ant interventricular art. & great cardiac v.

## 3-Post interventricular groove

contains post interventricular art. & middle cardiac v.



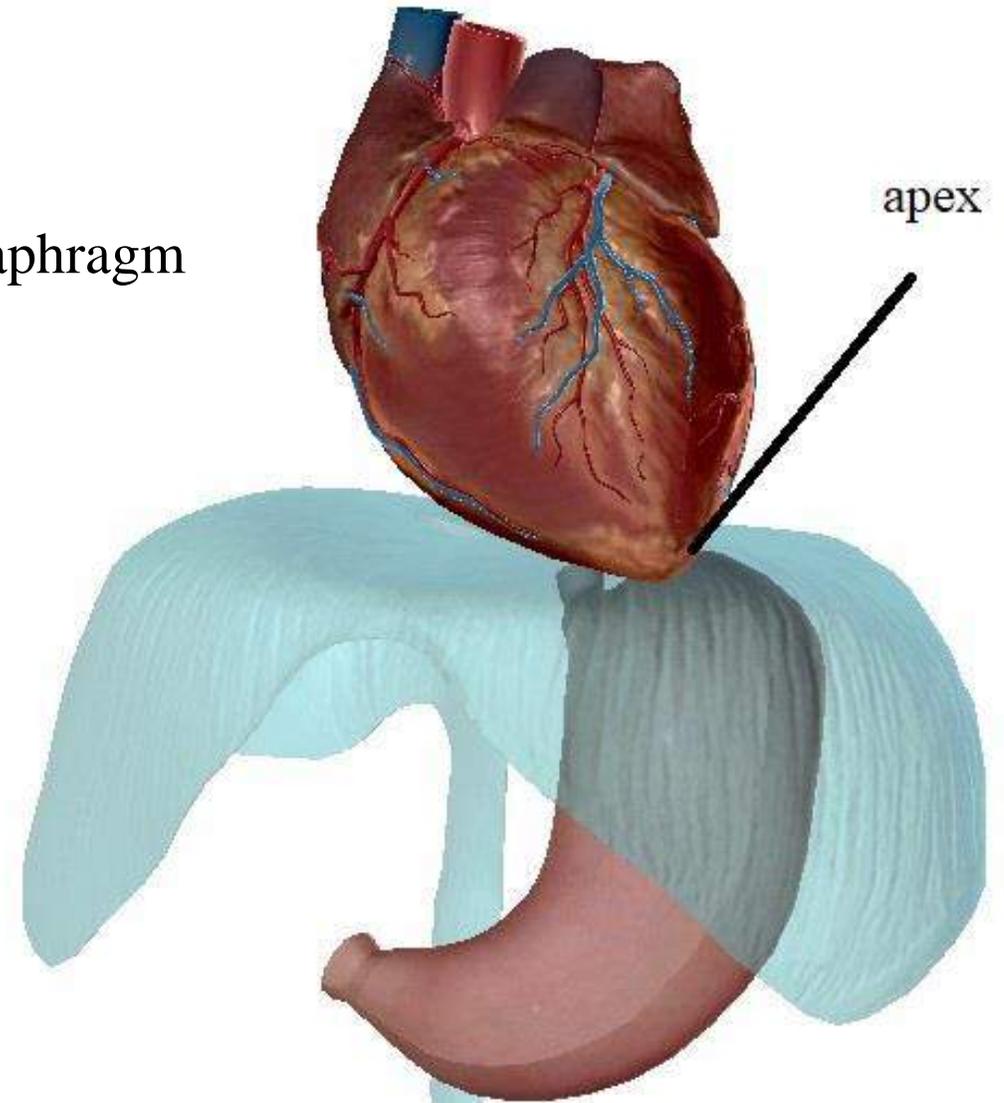
# SURFACES OF THE HEART

**Apex :**

**Formed by:** - Lt Ventricle.

**Directed:** - downward forward & to Lt.

**Relation:** - separated from fundus of the stomach by pericardium & diaphragm



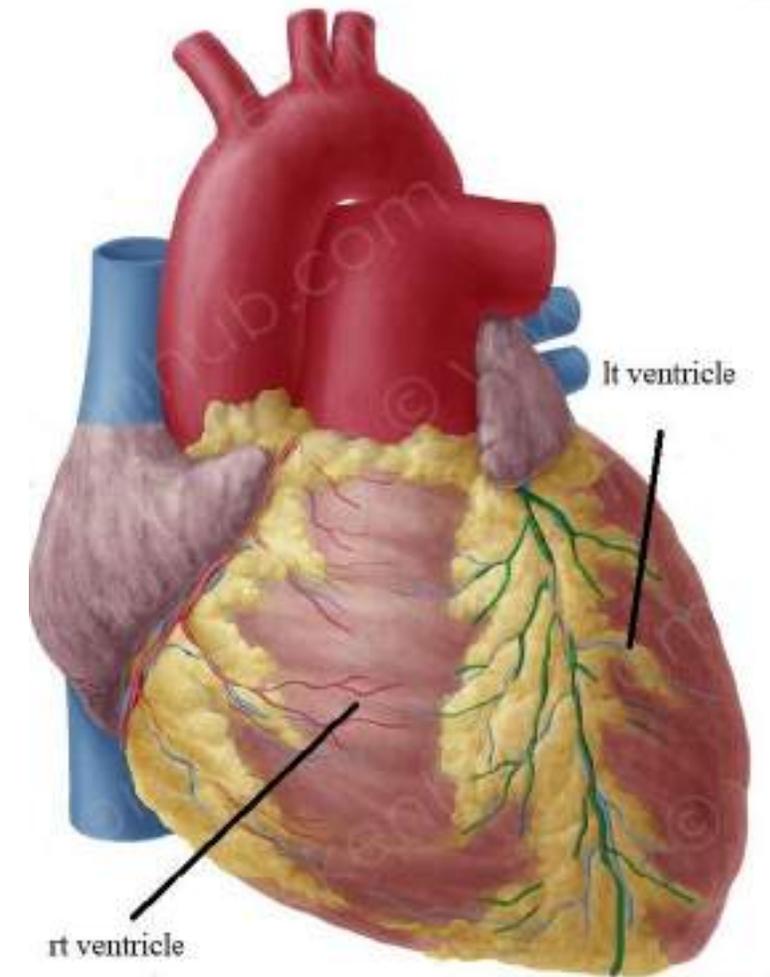
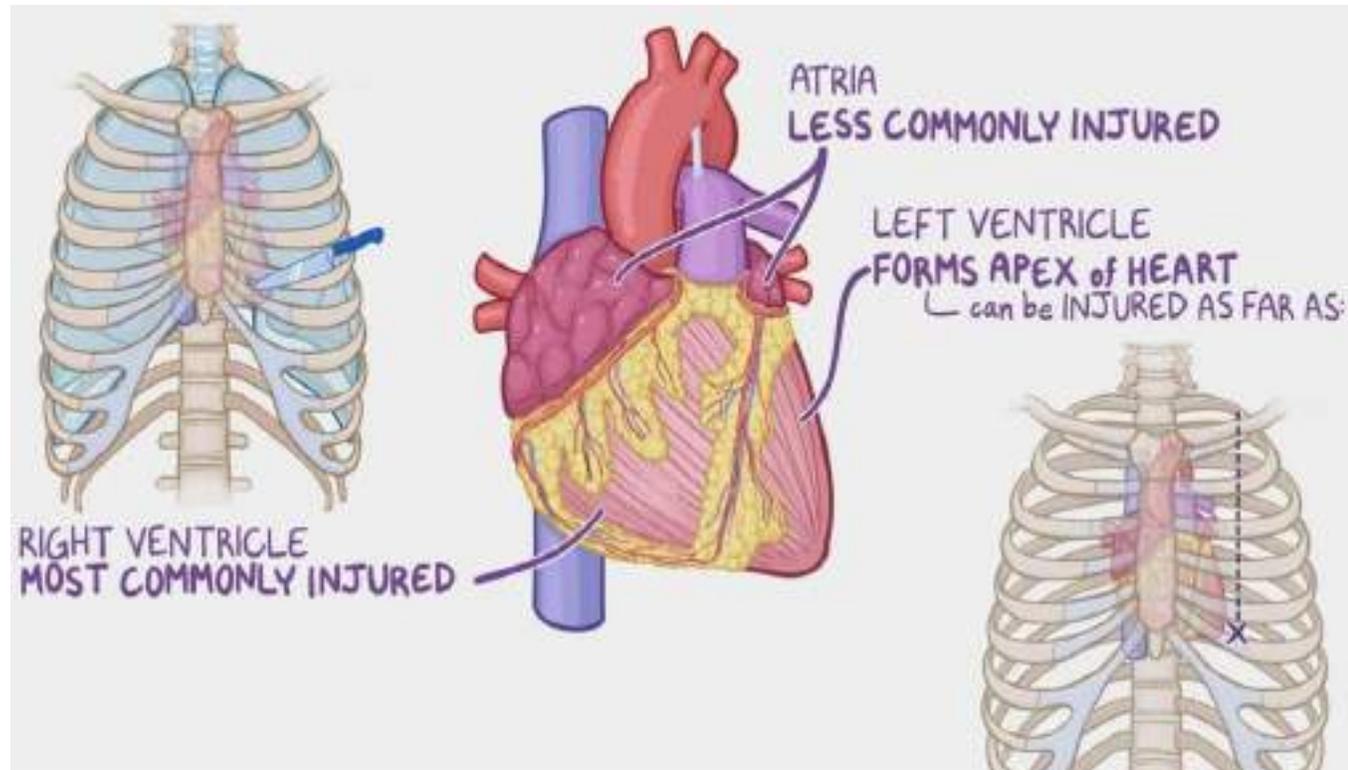
# SURFACES OF THE HEART

**Anterior (sternocostal) surface:**

Formed by

- 1- Rt ventricle mainly
- 2- Lt ventricle partially

**Relations:** - lies behind the sternum & rt & lt c c 3-6



# SURFACES OF THE HEART

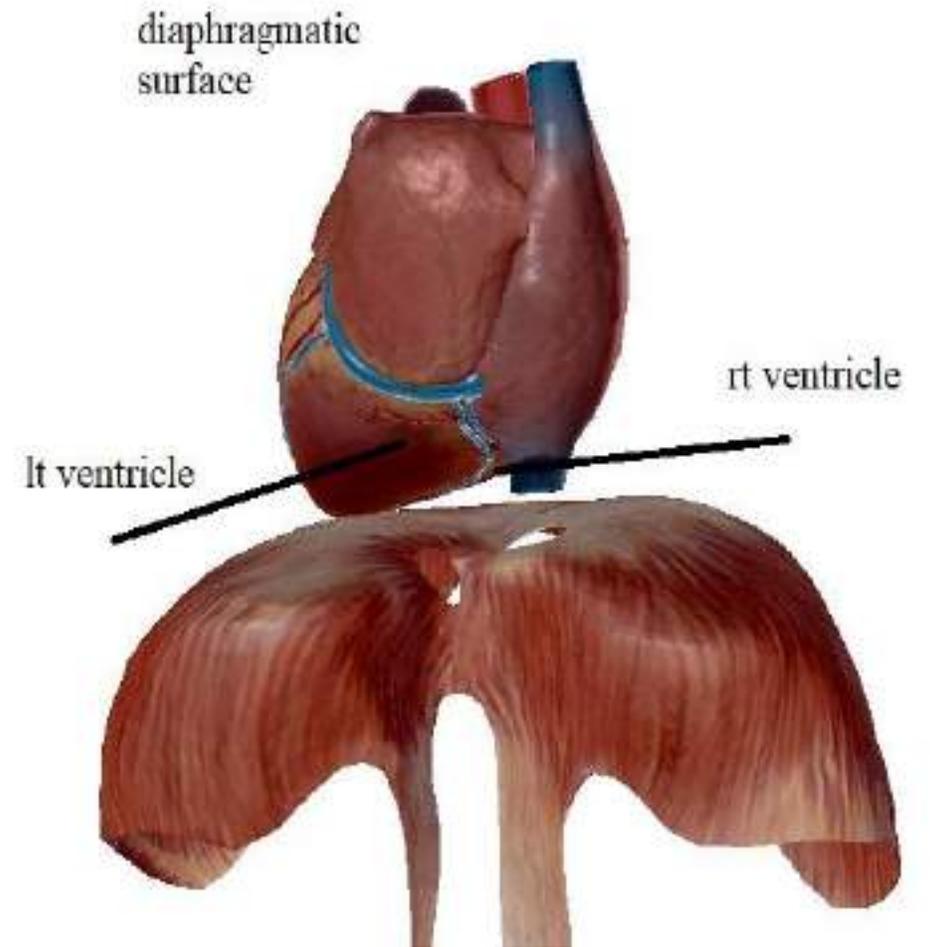
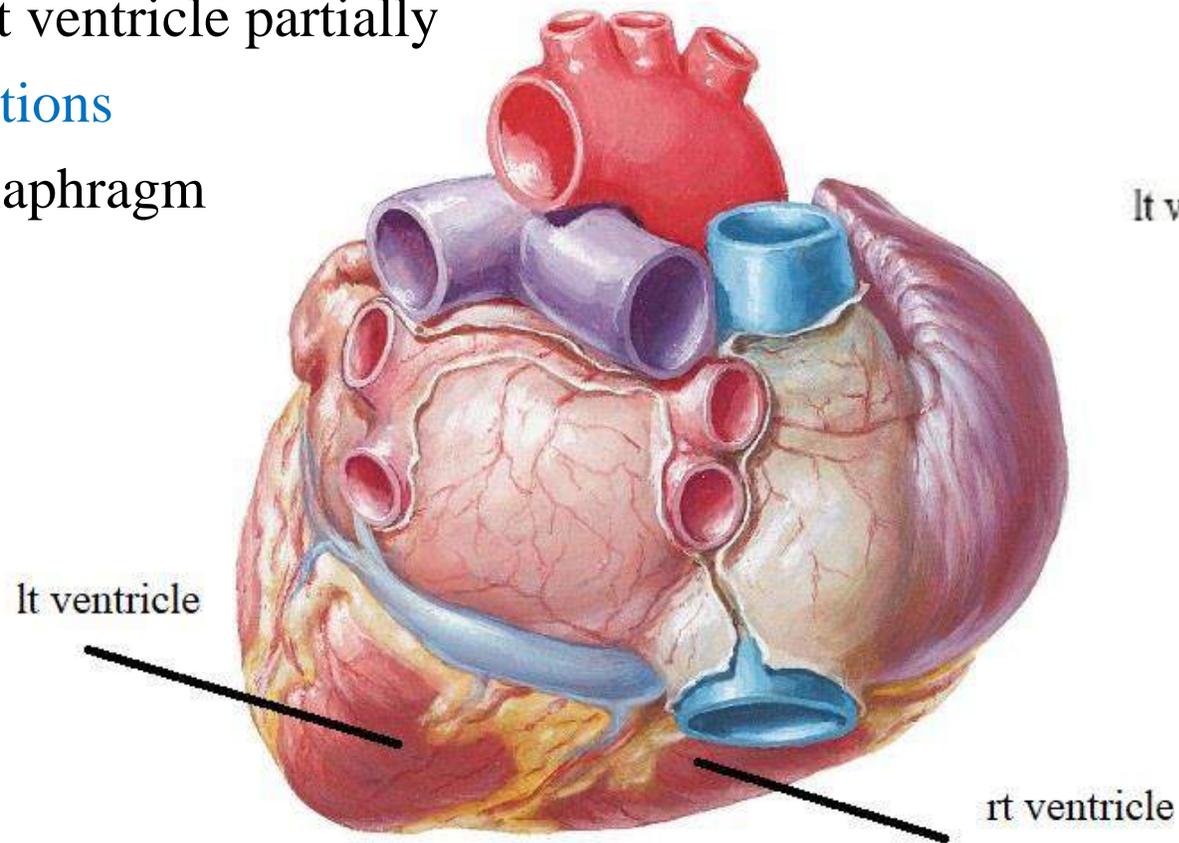
Inferior (diaphragmatic) surface:

Formed by:

- 1- Lt ventricle mainly
- 2- Rt ventricle partially

Relations

- 1- diaphragm



# SURFACES OF THE HEART

**Post. Surface (base):**

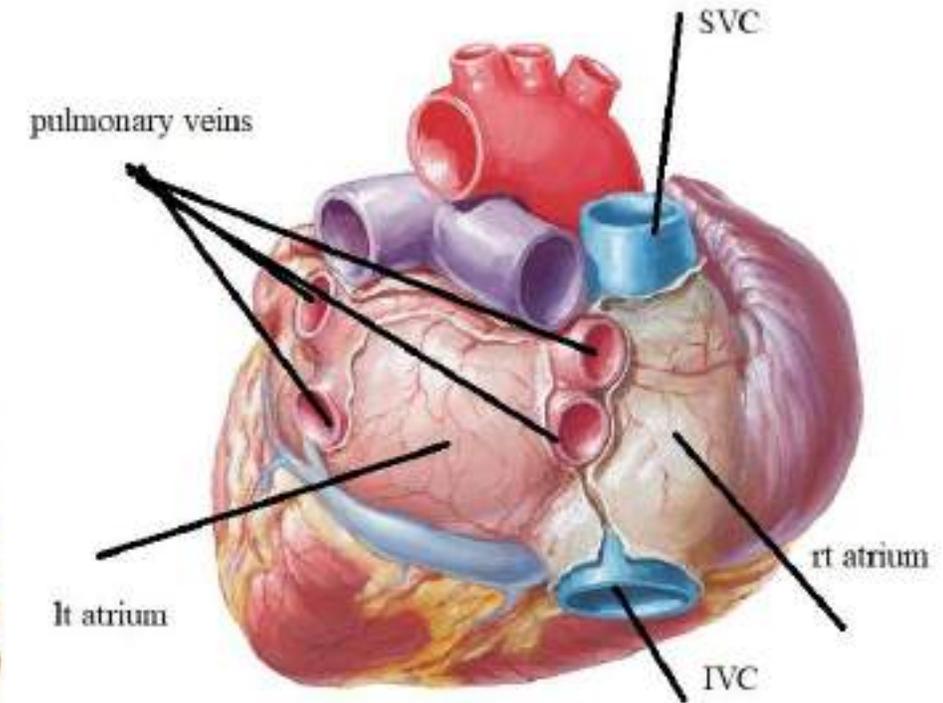
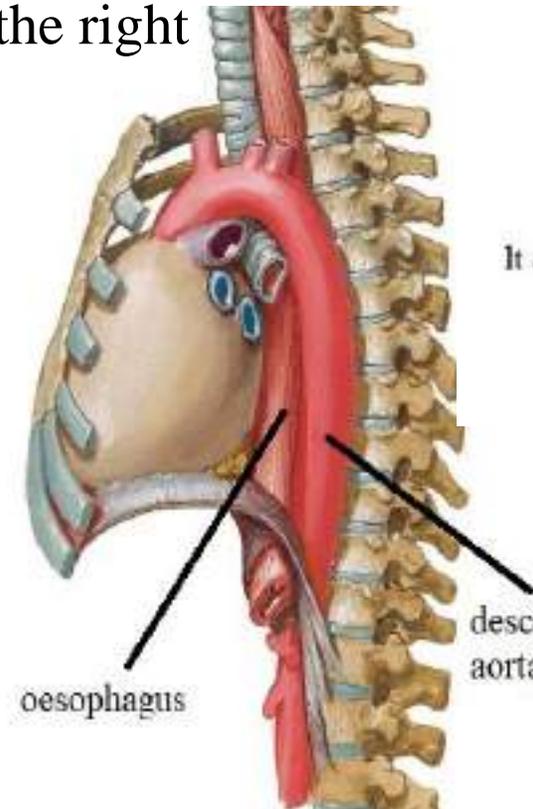
**Formed by:**

- 1-lt. atrium (mainly)
- 2- rt. Atrium partially

**Directed:** - backwards slightly to the right

**Relations:**

- 1-middle 4 thoracic vertebrae
- 2-separated from them by descending aorta, oesophagus, & oblique sinus of pericardium



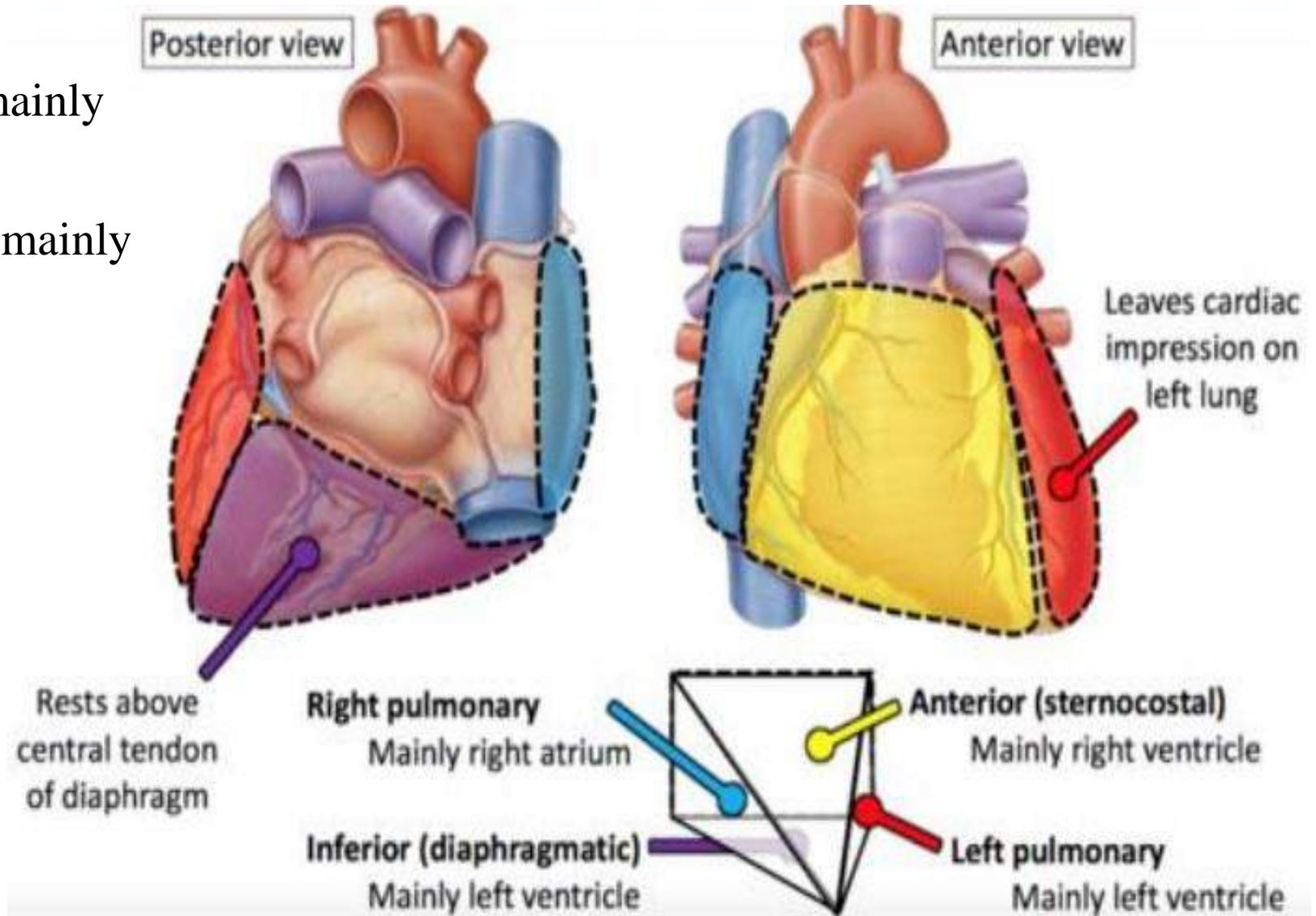
# SURFACES OF THE HEART

**Rt. Surface:**

**Formed by:** rt. atrium mainly

**Lt. Surface:**

**Formed by:** lt. ventricle mainly



# BORDERS OF THE HEART

**Borders of the heart** : all convex and ill-defined except inferior (sharp)

1-Rt. border:

formed by Rt atrium. Extends from opening of SVC to opening of IVC

2-Inferior border:

formed by: 2 ventricles (mainly the rt)

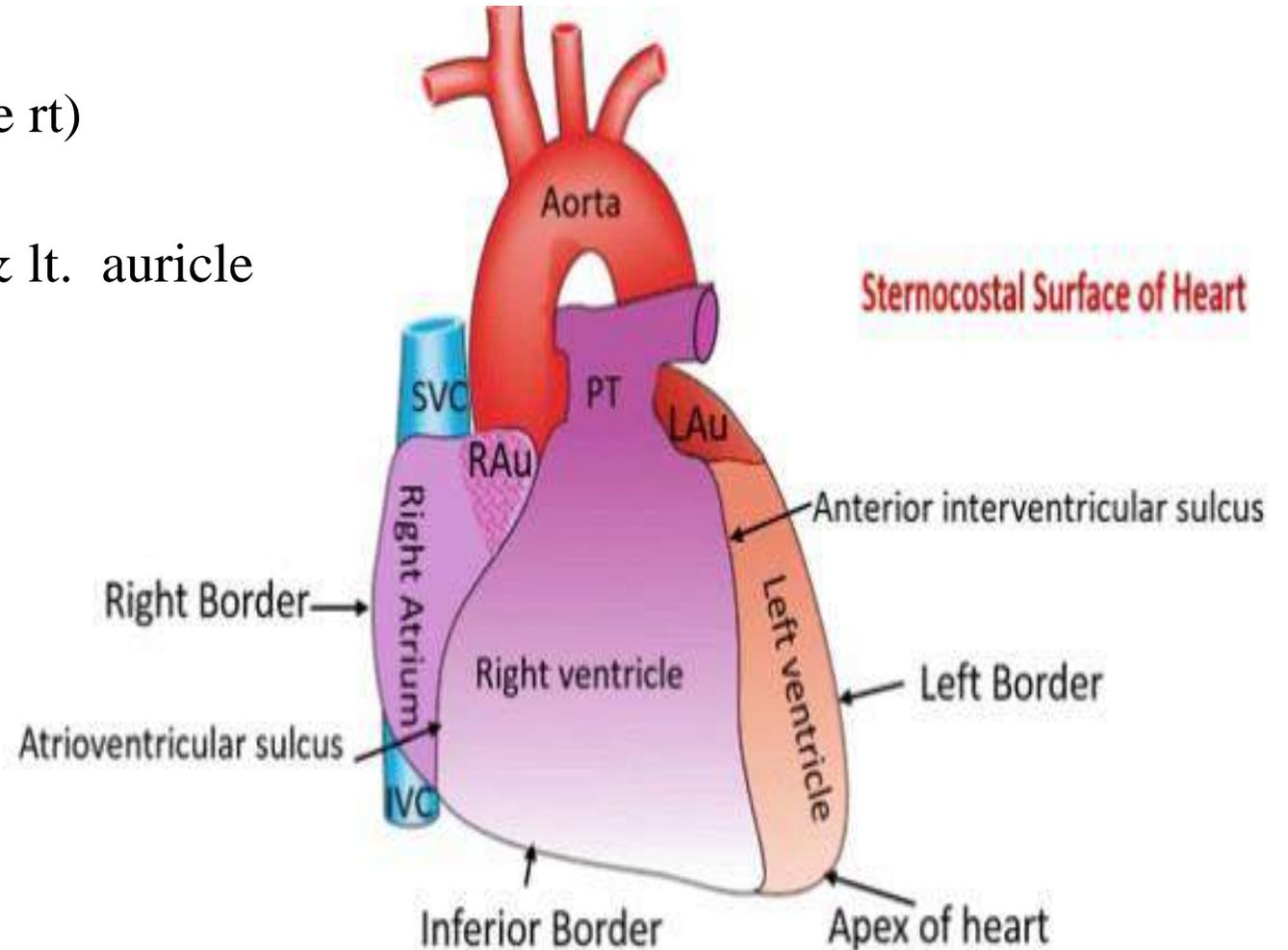
3-Lt. border:

formed by: Lt Ventricle (mainly) & Lt. auricle

4-Superior border: -

2 atria (mainly the lt)

hidden by great vessels of the heart



# SURFACE ANATOMY OF HEART

represented by the following points

**Point 1:** at lower border of Lt. 2nd c.c. 1.5 cm from the sternum

**Point 2:** at upper border of Rt. 3rd c.c. 1 cm from the sternum

**Point 3:** at Rt. 6th c.c. 1 cm from the sternum

**Point 4 (apex):** Lt. 5th intercostal space in midclavicular line 9 cm midline

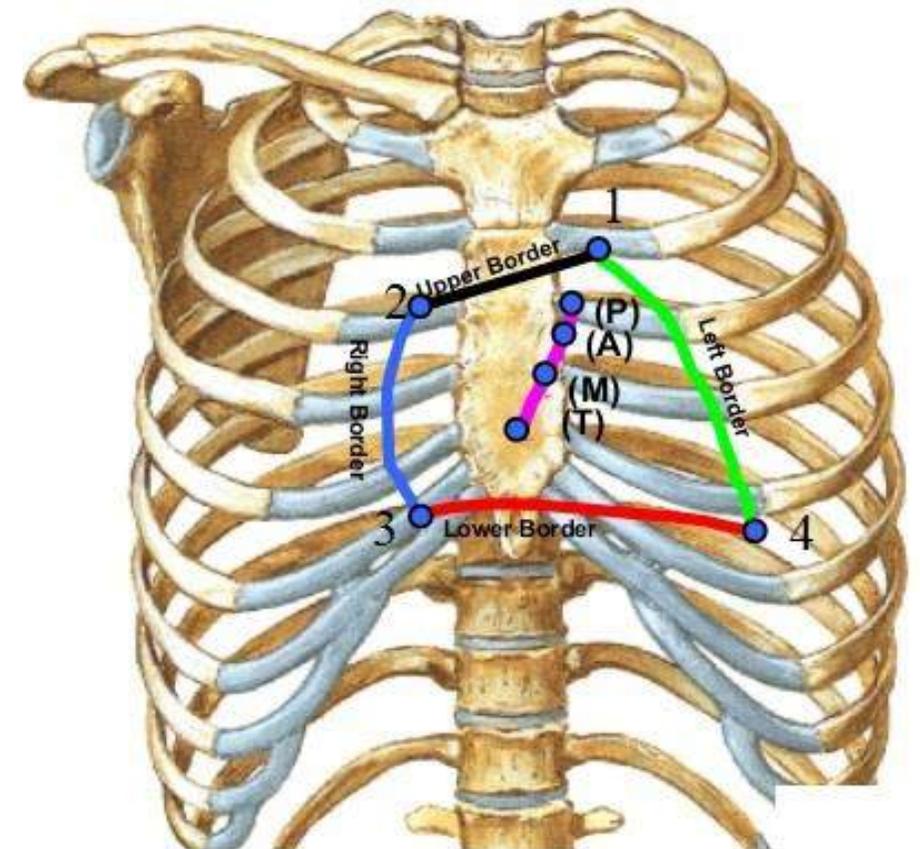
sternocostal surface

**Upper border:** convex upward ( ) point 1, 2

**Rt. border:** convex to Rt ( ) point 2, 3

**Lower border:** concave downward ( ) point 3, 4

**Lt border:** convex to Lt ( ) point 4, 1



# SURFACE ANATOMY OF HEART

## cardiac valves :

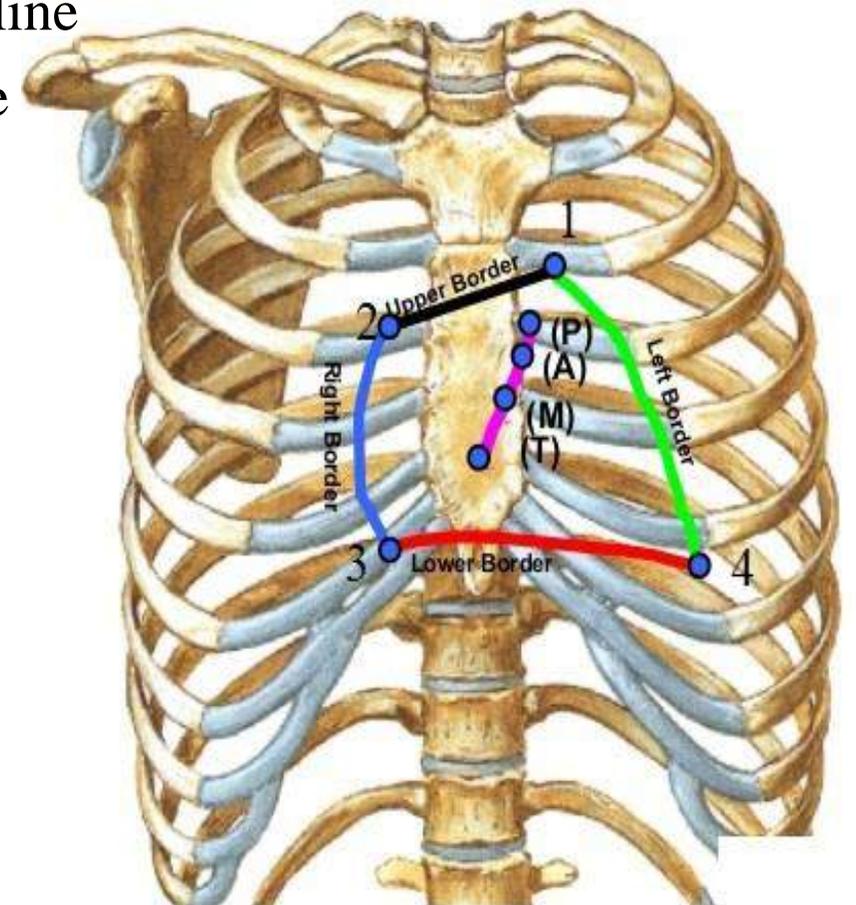
**Pulmonary:** opposite Lt 3rd c.c. close to margin of the sternum

**Aortic:** opposite Lt 3rd space close to margin of the sternum

**Mitral:** opposite Lt 4th c.c. on Lt. 1/2 of sternum

**Tricuspid:** opposite 4th space close to rt side of midline

**Base of the heart :-** opposite middle 4 thoracic vertebrae





**THANQ**