

# Gross and Microscopic Anatomy of the Heart

## Introduction

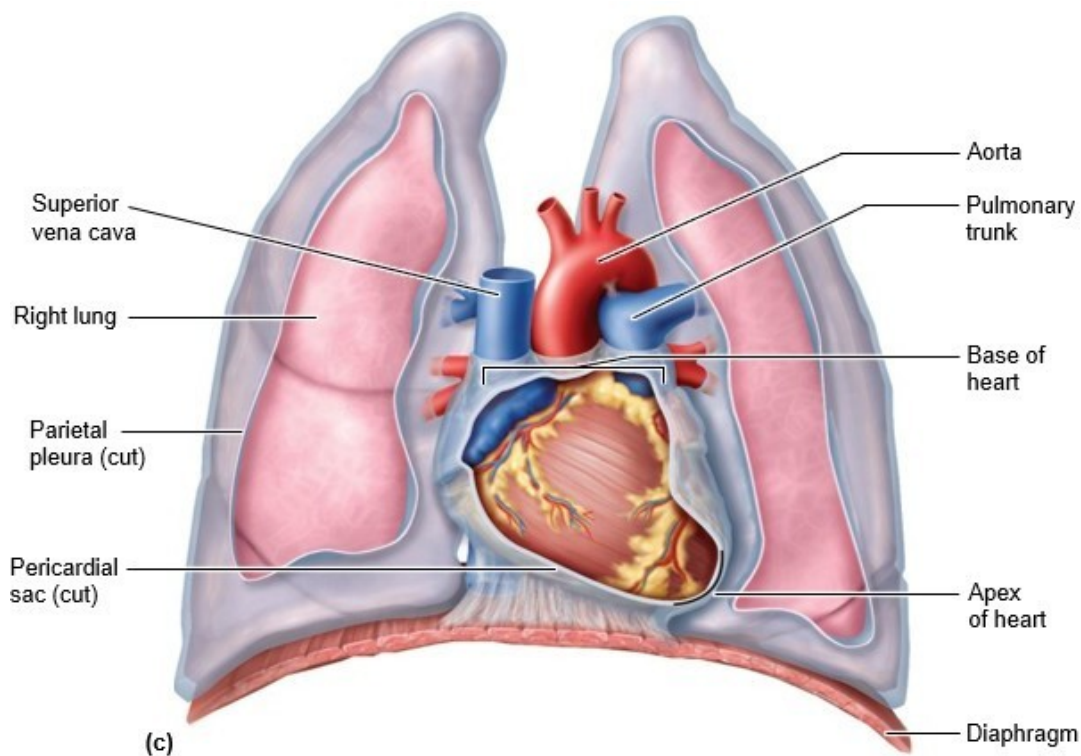
The heart represents the central organ that we associate with the cardiovascular system. This organ is associated with two distinct sets of blood vessels—pulmonary and systemic. Before delving into these circulatory systems, you must first learn about the gross anatomical features of this four-chambered hydraulic pump.

## The Position of the Heart in the Thoracic Cavity

In the first week of the course, we learned about the properties of blood including its development, function, and appearances. We are going to shift our focus this week to the mechanisms of pumping the blood conducted by the heart.

The heart is in the mediastinum of the thoracic cavity surrounded by loose connective tissue known as the pericardium. The majority of the heart rests to the left side of the sternum, pointing into the left lung between ribs 2 and 5. If you feel (palpate) the left side of the chest, you should be able to feel rhythmic contractions.

If we were to observe the heart, we would see that it comes to a rounded point. This structure is known as the apex and it rests just above the diaphragm.



## Pericardium

As mentioned, the heart is surrounded by a connective tissue serous membrane known as the pericardium. Peri refers to "around" and cardio refers to "heart." Outside the serous pericardium a thicker connective tissue layer can be found that is called the fibrous pericardium.

Previously you learned that serous membranes would have two sides. The side that faces the heart is known as the visceral pericardium.

Visceral refers to organs or organ-side. The side that faces away from the heart is known as the parietal pericardium. Parietal refers to the side of a structure or facing away. We have seen the word parietal when referring to the parietal bone and parietal lobe, both of which are located on the sides of the skull and brain, respectively.

Between the parietal and visceral layers of serous membranes is typically a volume of serous fluid. The pericardial fluid that resides within the pericardium acts to reduce friction as the heart beats.