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العلوم المختبرية السريرية	القسم
Histology	المادة باللغة الانجليزية
علم الانسجة	المادة باللغة العربية
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Junqueira's Basic Histology: Text and Atlas	المصادر والمراجع

محتوى المحاضرة

The human CVS is composed of :

- ▶ **Heart**
- ▶ **Blood vessels:** There are three major types of blood vessels

1. Arteries:

2. Veins

3. Capillaries:

All arteries and veins contain three layers:

1-Tunica intima (innermost layer)

2-Tunica media (middle layer)

3-Tunica adventitia (outermost layer)

- ▶ **Blood:** is responsible for transporting O₂, nutrients, hormones, and cellular waste products throughout the body.

The Heart

- ▶ It is a muscular organ, that is located in the thoracic region. The bottom tip of the heart, known as its **apex**, is turned to the left side of the body. The top of the heart, known as the **heart's base**, it connects to the great blood vessels of the body: the aorta, vena cava, pulmonary trunk, and pulmonary veins.
- ▶ It is an organ whose function is to pump the blood

The Heart have 3 major layers

1. The inner endocardium of the endothelium and subendothelial connective tissue.
2. The myocardium of cardiac muscle.
3. The epicardium connective tissue with many adipocytes and covered mesothelium.

Blood vessels

- ▶ Blood vessels allow blood to flow quickly and efficiently from the heart to every region of the body and back again. The size of blood vessels corresponds with the amount of blood that passes through the vessel. All blood vessels contain a hollow area called the **lumen** through which blood is able to flow. Around the lumen is the **wall of the vessel**, which may be thin in the case of capillaries or very thick in the case of arteries.

Structure of blood vessels

1. **Tunica intima** is composed of epithelial and connective tissue layers. Lining the tunica intima is the specialized simple squamous epithelium called the endothelium, the basement membrane, or basal lamina, that effectively binds the endothelium to the connective tissue.
2. **Tunica media** is the substantial middle layer of the vessel wall. It is generally the thickest layer in arteries, and it is much thicker in arteries than it is in veins.

3. **Tunica adventitia** is a substantial sheath of connective tissue composed primarily of collagenous fibers. Some bands of elastic fibers are found here as well.

