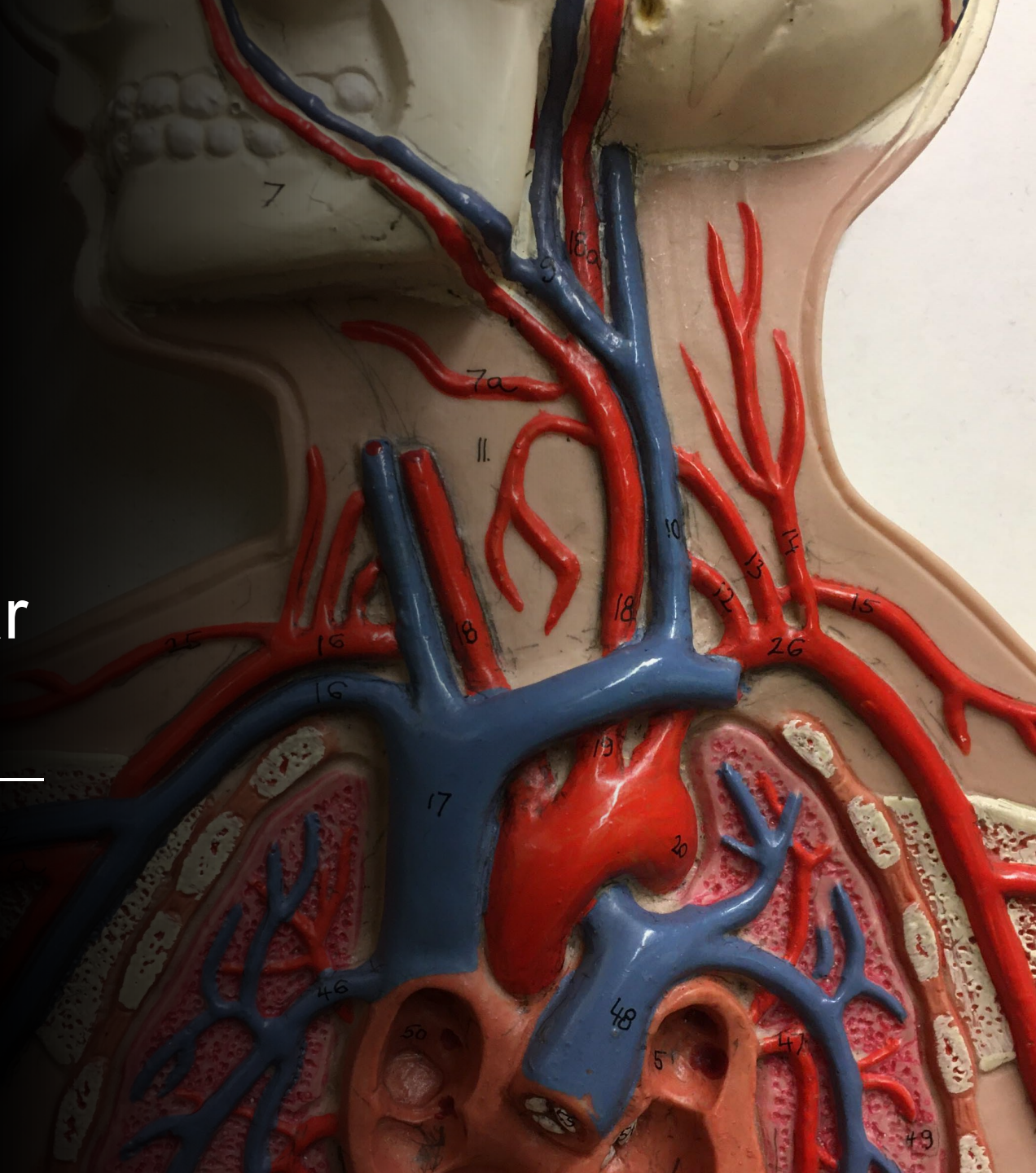


Virtual Lab
Practical 3
Review
Pictures
Cardiovascular
System



Chapters Reviewed

Blood

Heart

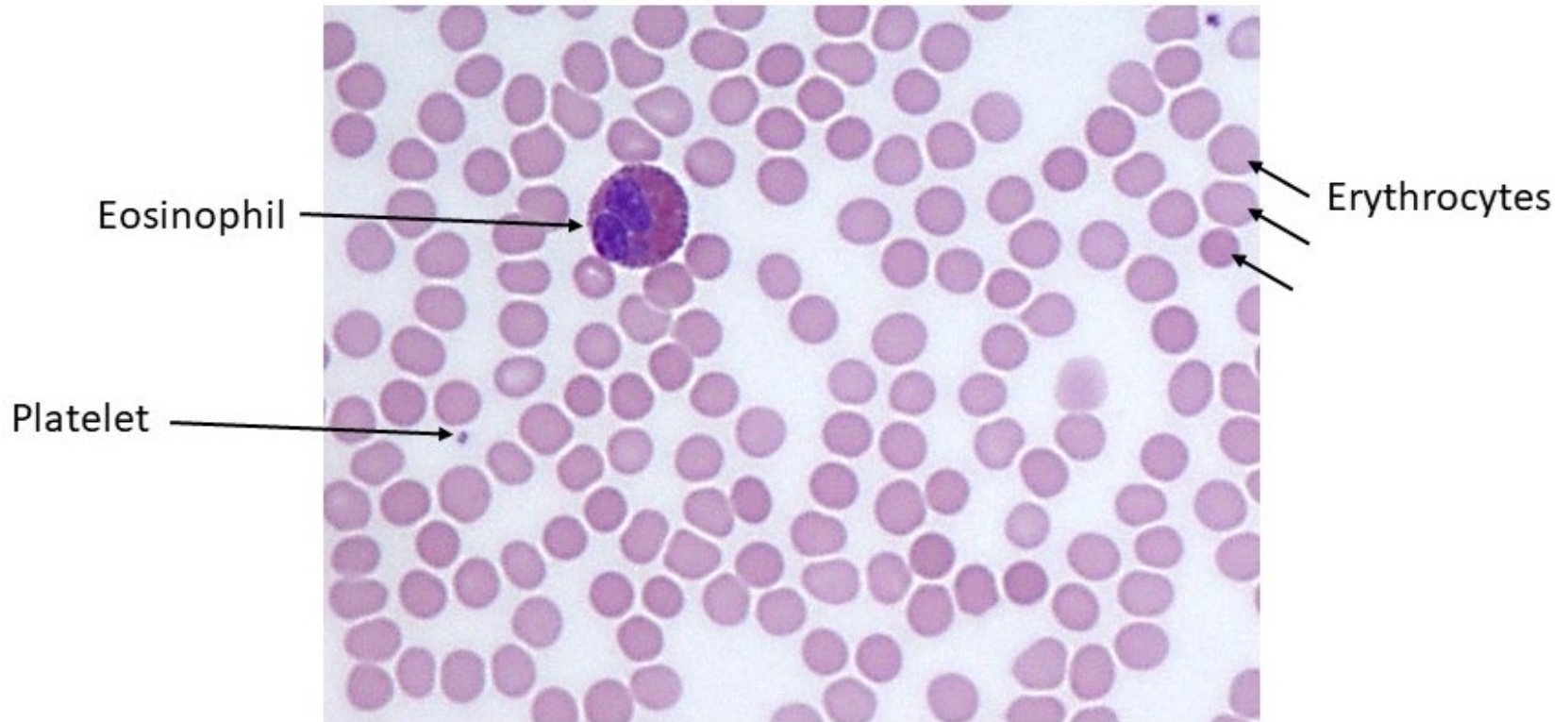
Vessels and Circulation

- Study the histology pictures of the blood and the labeled models as part of your online lab experience.
- Be familiar with these pictures and each label. These pictures are used for your lab exam.
- View Dr. Zimmerman's Dissection videos of the heart and the labeled dissected heart. Know all the labels of the structures within this PowerPoint.
- View Dr. Gannon's instructional videos over the heart and major blood vessels
- Remember to use the zoom function if you need to increase or decrease the size of the image.

Blood Connective Tissue

Erythrocytes, Eosinophil, Platelets

Erythrocytes Surrounding an Eosinophil

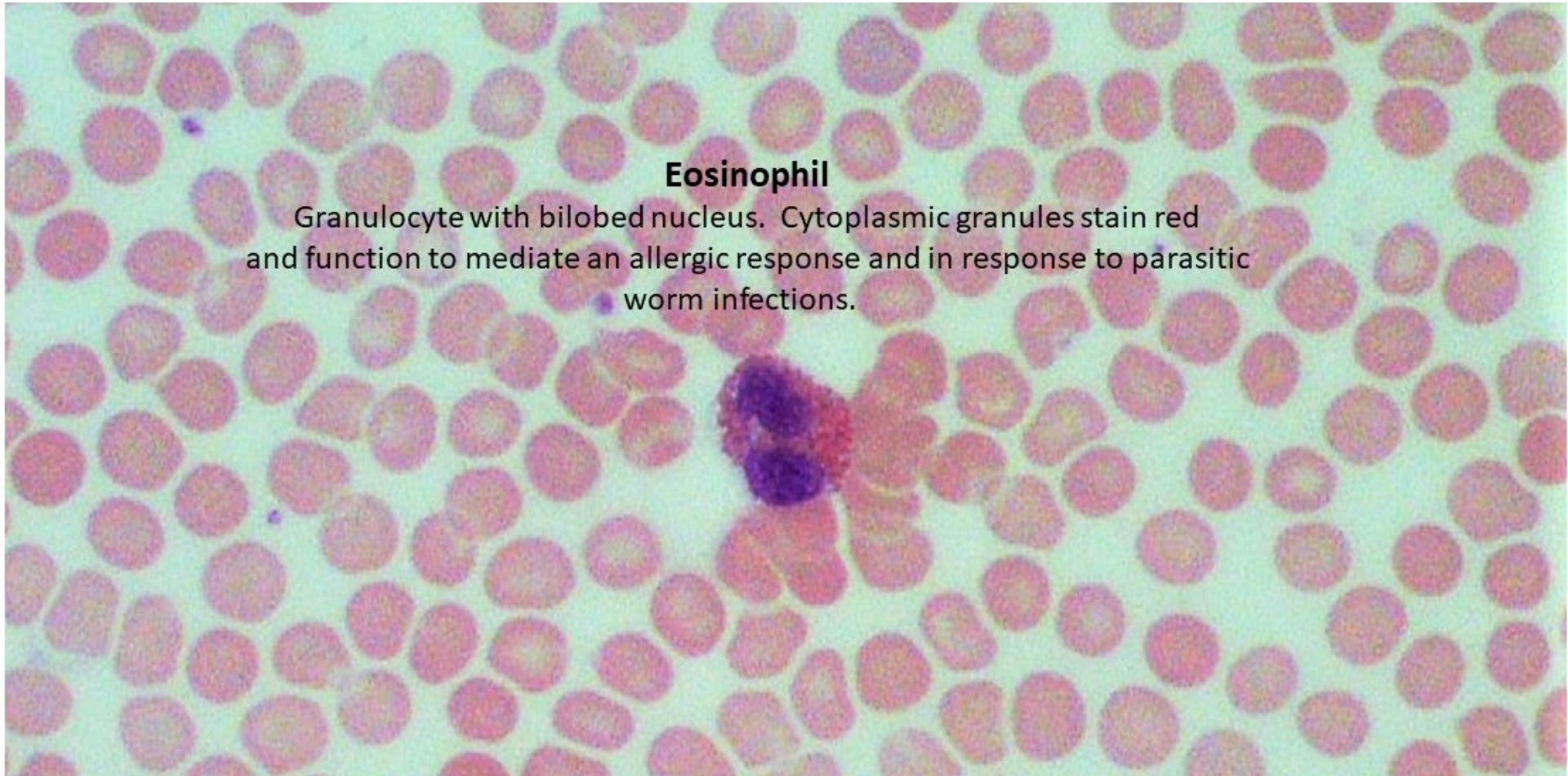


Blood Connective Tissue

Eosinophil

Eosinophil

Granulocyte with bilobed nucleus. Cytoplasmic granules stain red and function to mediate an allergic response and in response to parasitic worm infections.

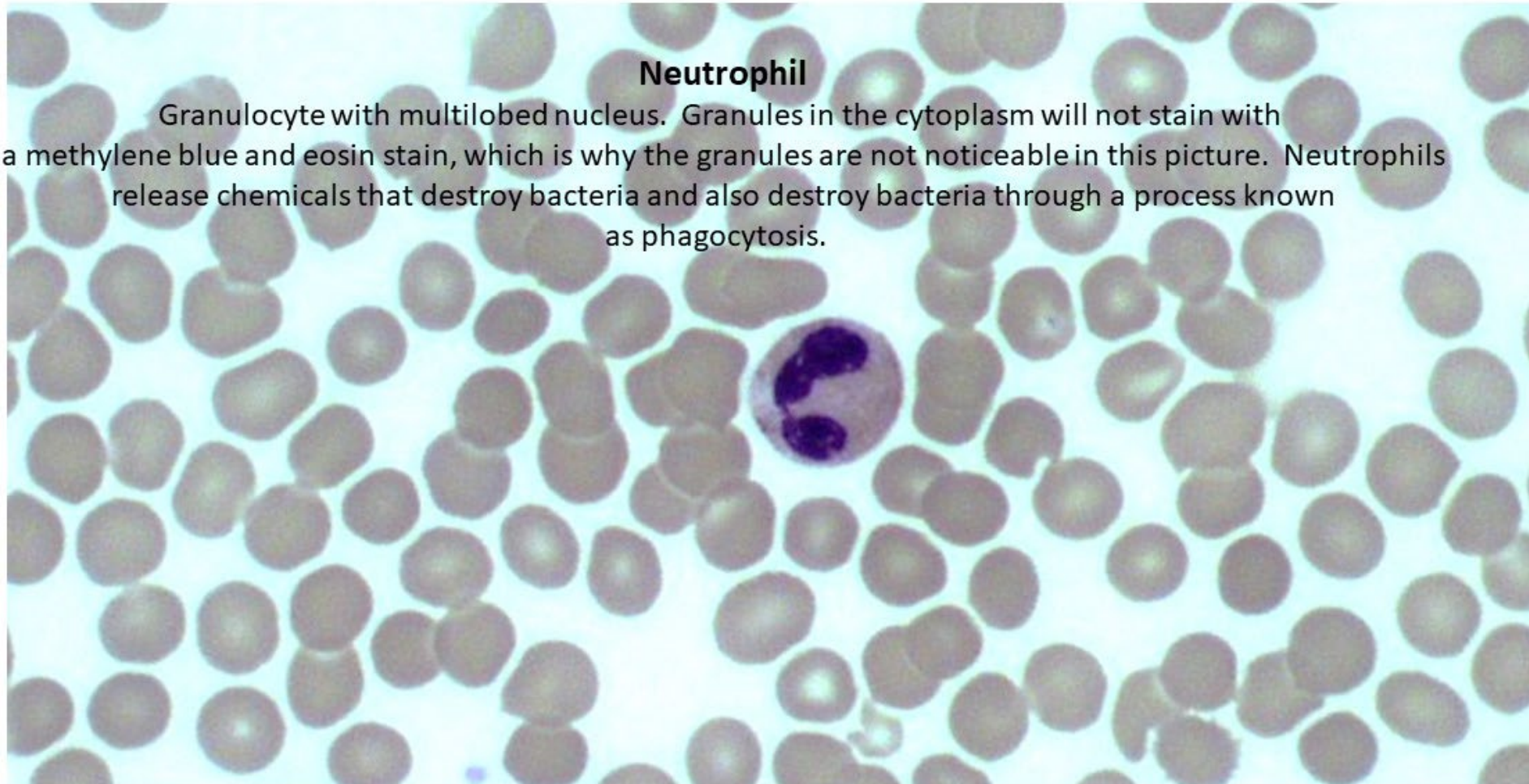


Blood Connective Tissue

Neutrophil

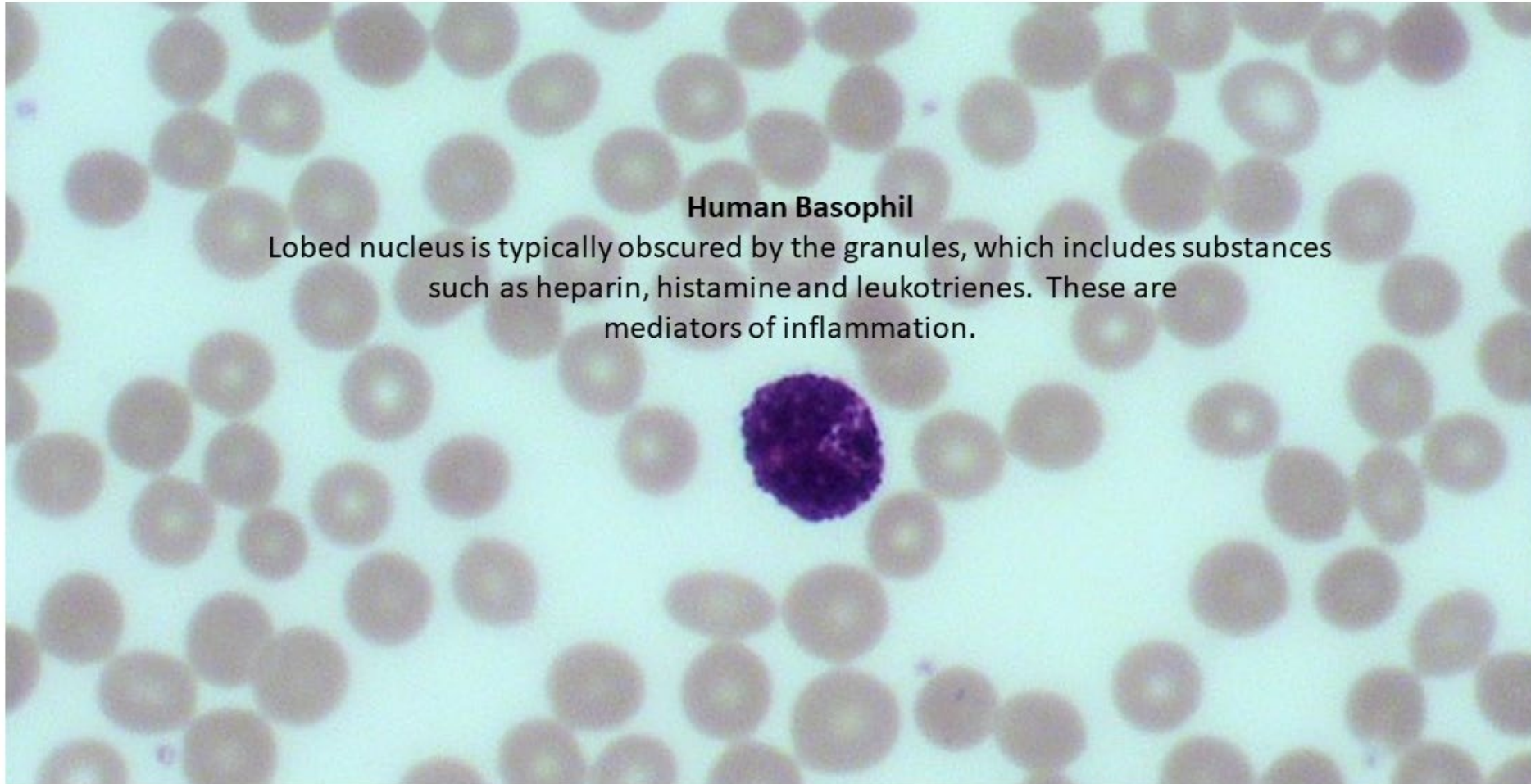
Neutrophil

Granulocyte with multilobed nucleus. Granules in the cytoplasm will not stain with a methylene blue and eosin stain, which is why the granules are not noticeable in this picture. Neutrophils release chemicals that destroy bacteria and also destroy bacteria through a process known as phagocytosis.



Blood Connective Tissue

Basophil

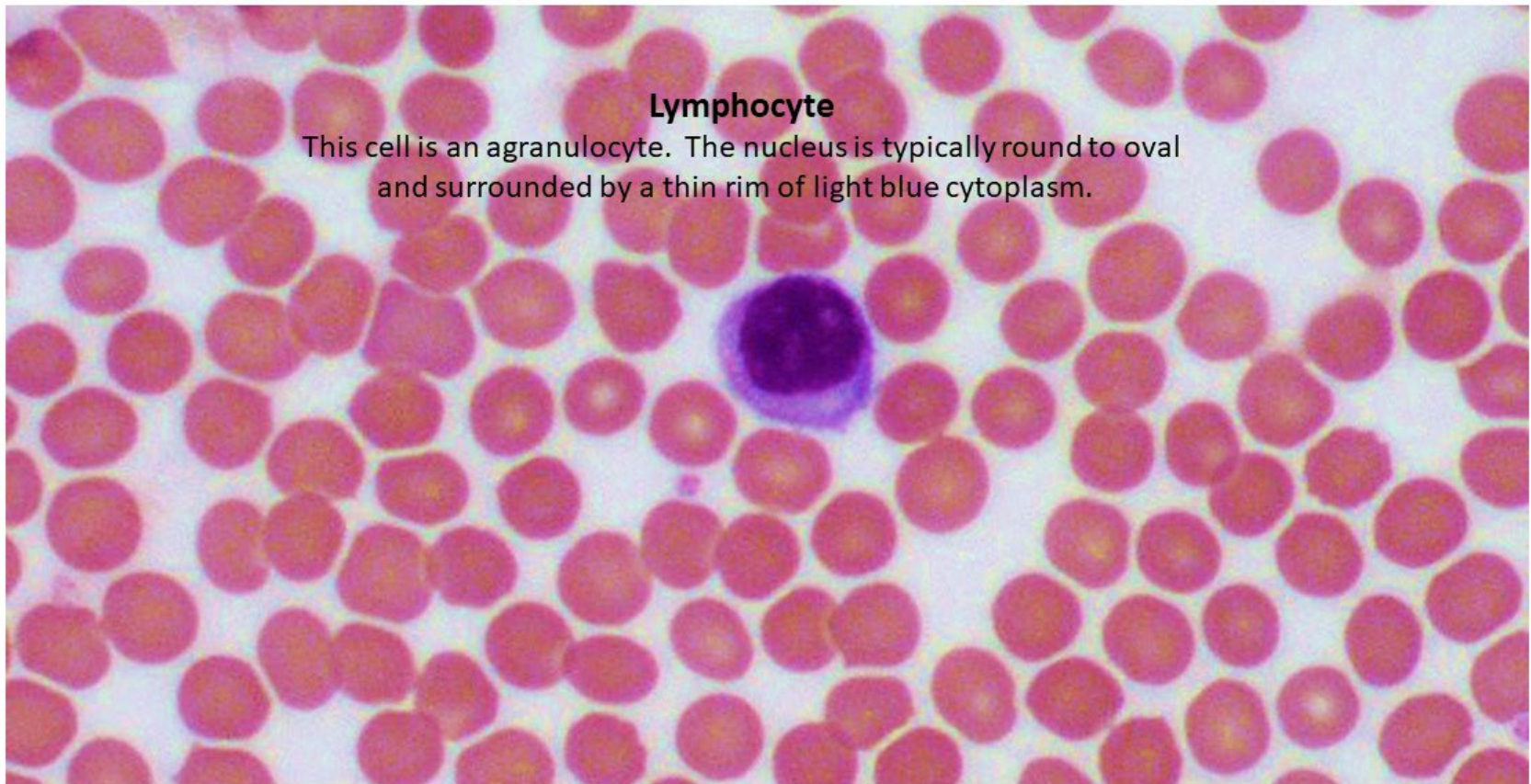


Human Basophil

Lobed nucleus is typically obscured by the granules, which includes substances such as heparin, histamine and leukotrienes. These are mediators of inflammation.

Blood Connective Tissue

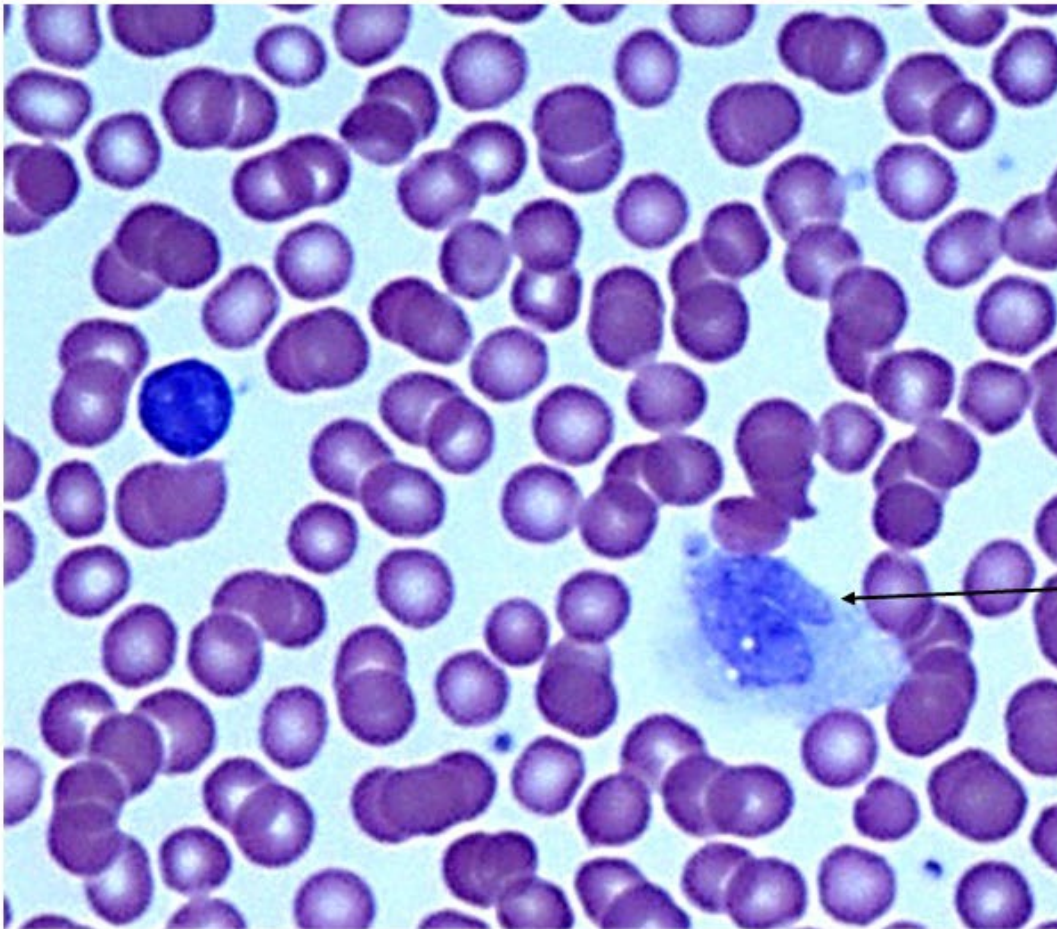
Lymphocyte



Blood Connective Tissue

Monocyte

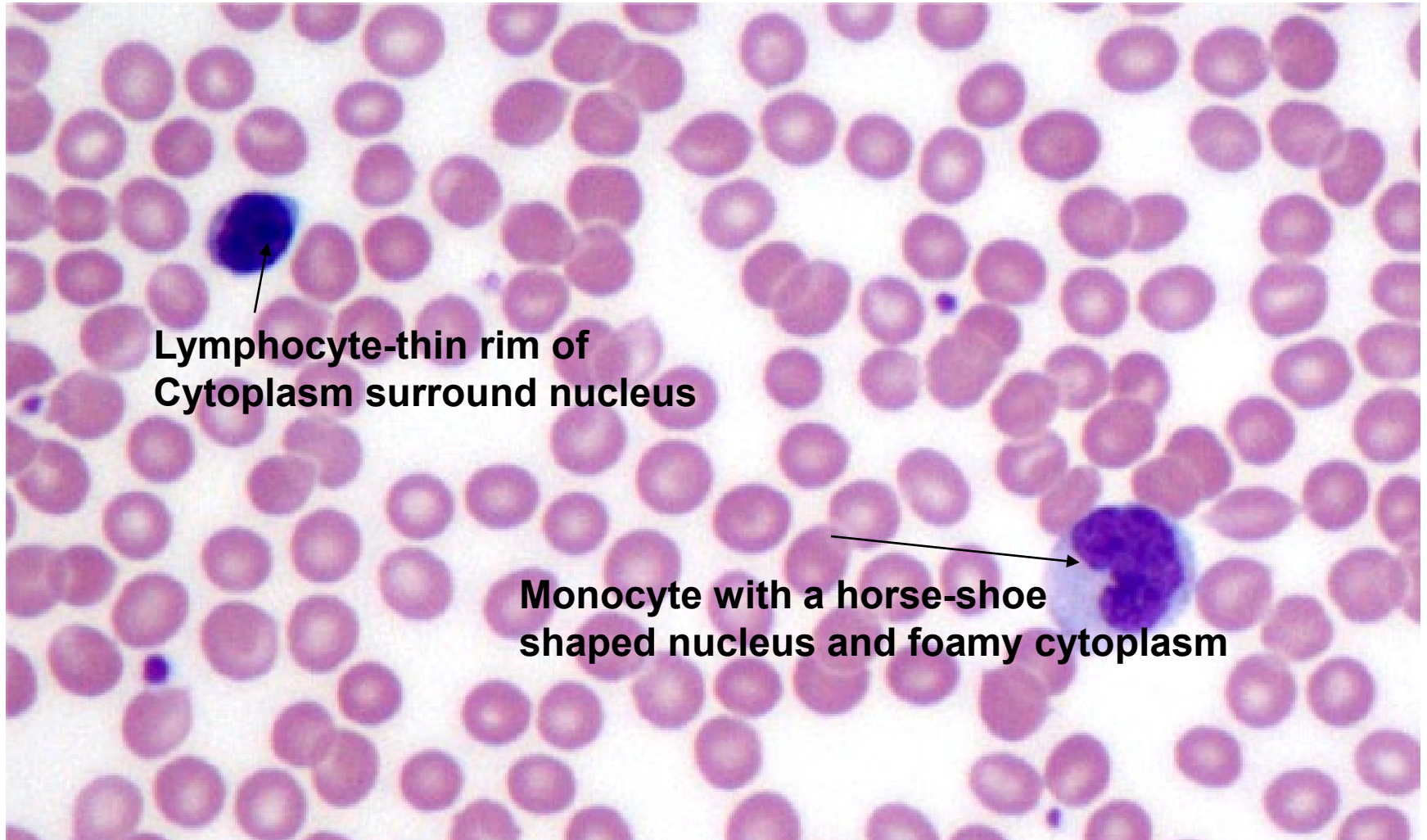
Monocyte



Notice the horseshoe shaped nucleus. Also, notice that it is much larger than surrounding erythrocytes.

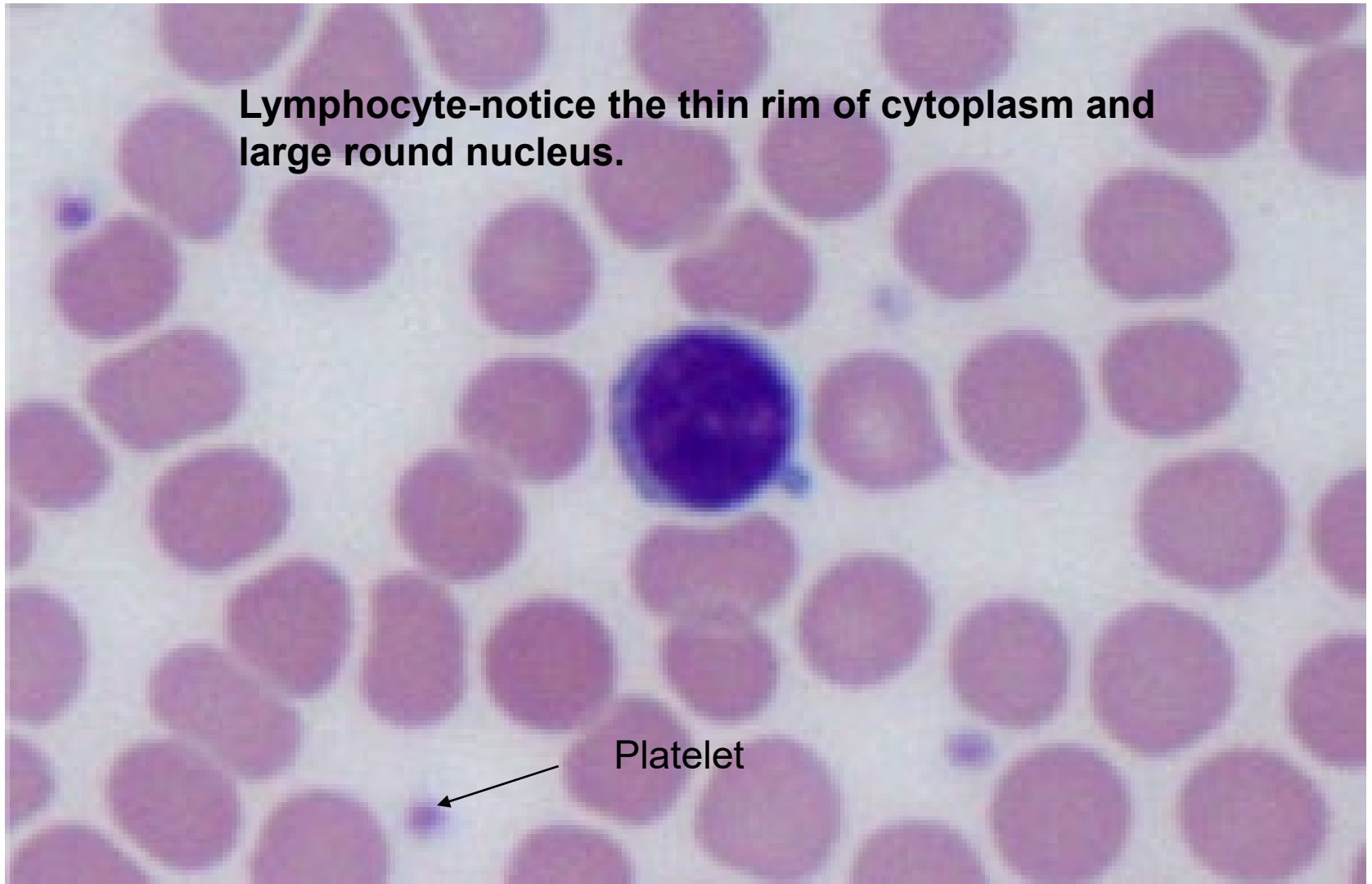
Blood Connective Tissue

Lymphocyte and Monocyte



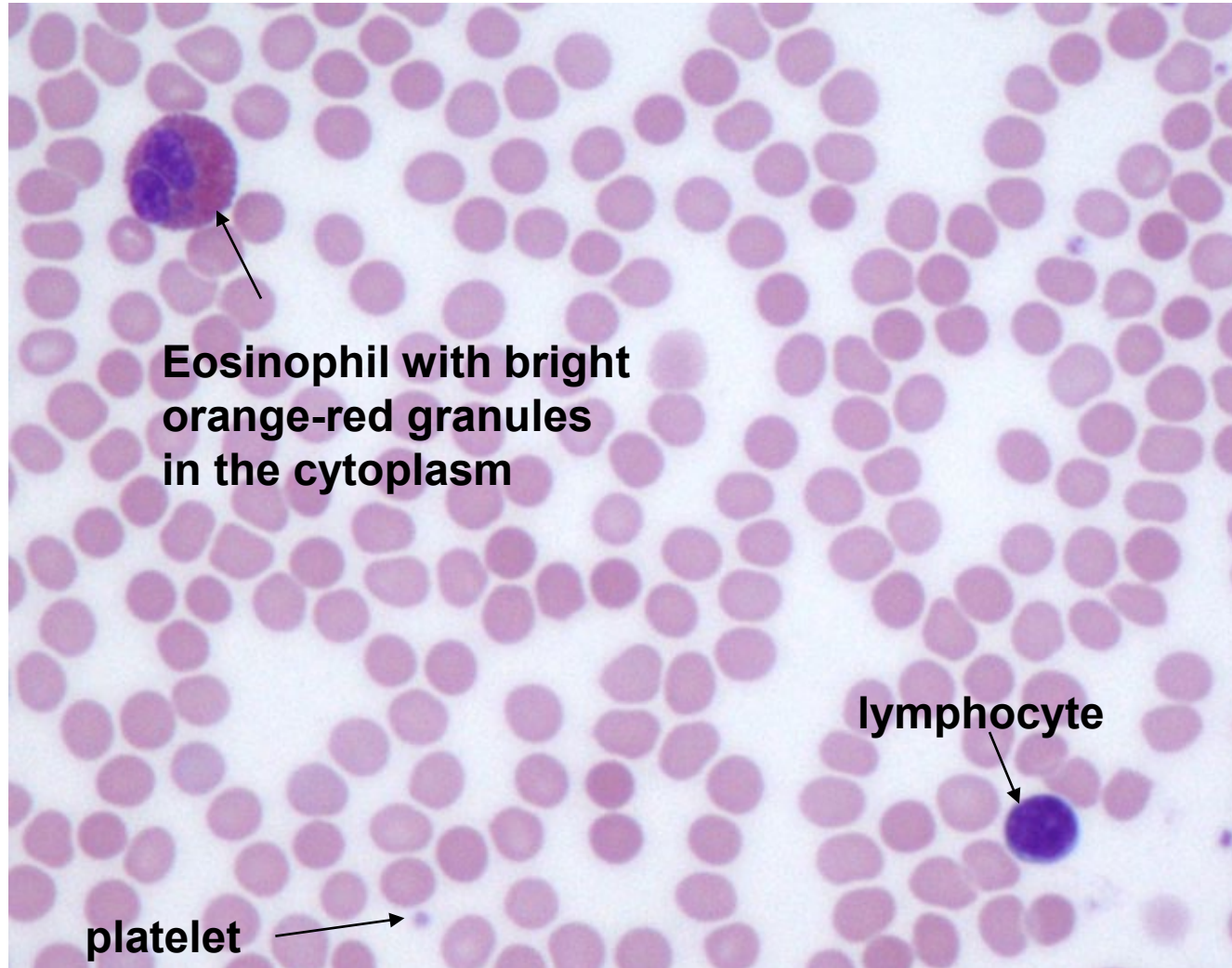
Blood Connective Tissue

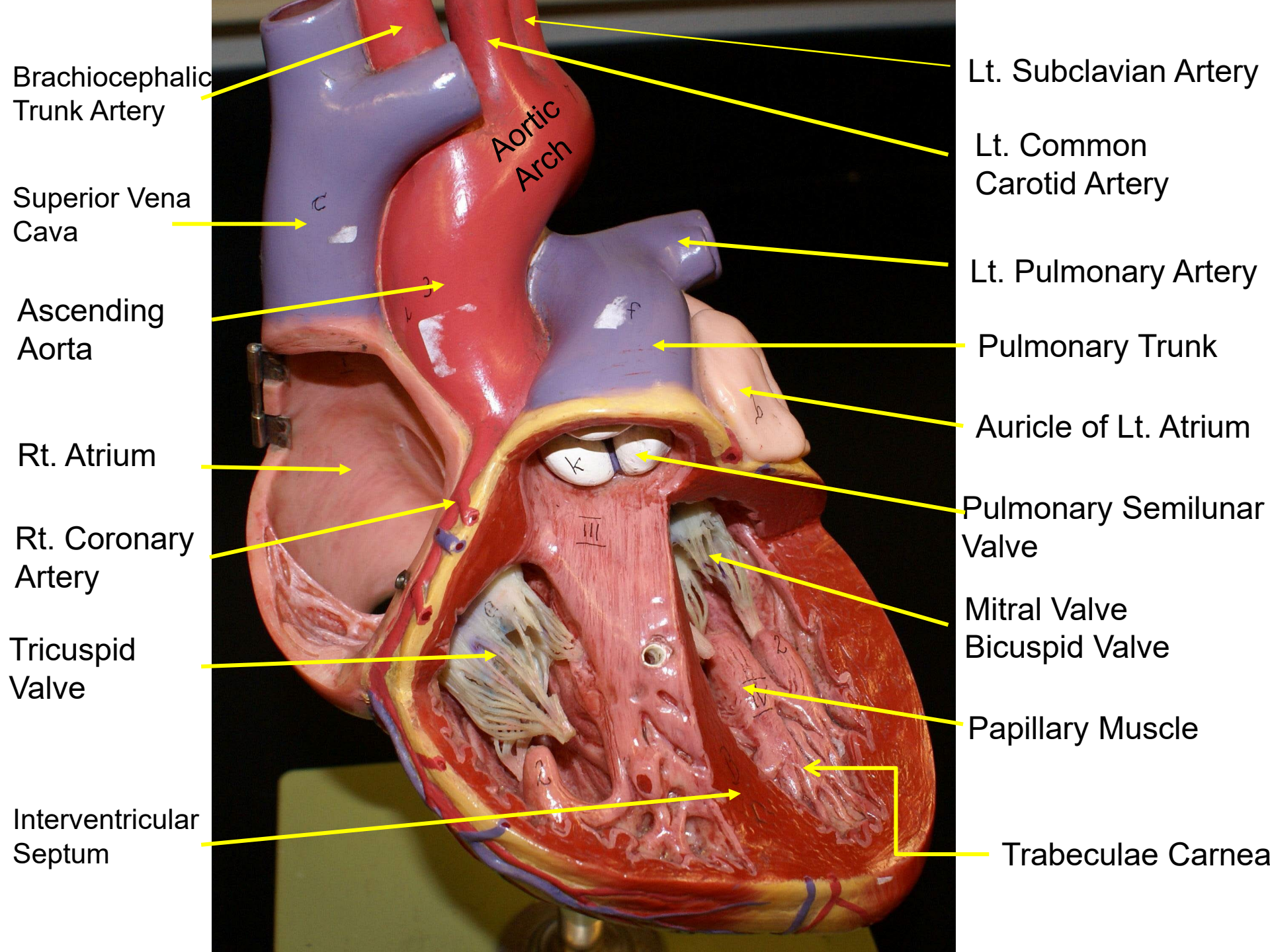
Lymphocyte and Platelets



Blood Connective Tissue

Lymphocyte and Eosinophil





Brachiocephalic Trunk Artery

Superior Vena Cava

Ascending Aorta

Rt. Atrium

Rt. Coronary Artery

Tricuspid Valve

Interventricular Septum

Aortic Arch

Lt. Subclavian Artery

Lt. Common Carotid Artery

Lt. Pulmonary Artery

Pulmonary Trunk

Auricle of Lt. Atrium

Pulmonary Semilunar Valve

Mitral Valve Bicuspid Valve

Papillary Muscle

Trabeculae Carneae

Aortic Arch

Ascending
Aorta

Rt. Coronary
Artery

Great Cardiac
Vein

Ligamentum
Arteriosum

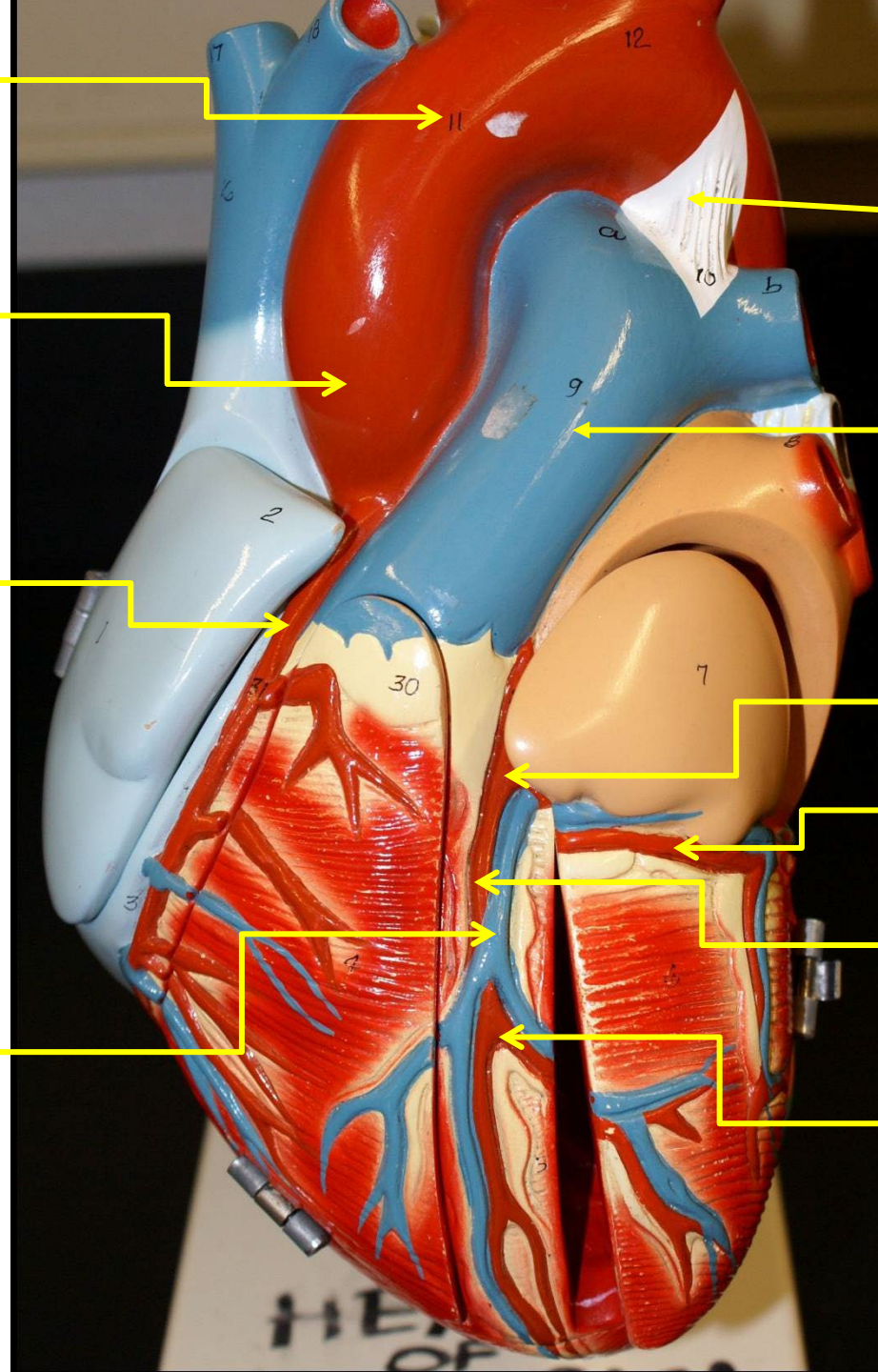
Pulmonary Trunk

Lt. Coronary Artery

Circumflex Artery

Anterior Interventricular
Artery

Site of Widow Maker
Heart Attack



Brachiocephalic
Trunk artery

Left Subclavian
artery

Thoracic
(Descending)
Aorta

Superior
Vena
Cava

Aortic arch

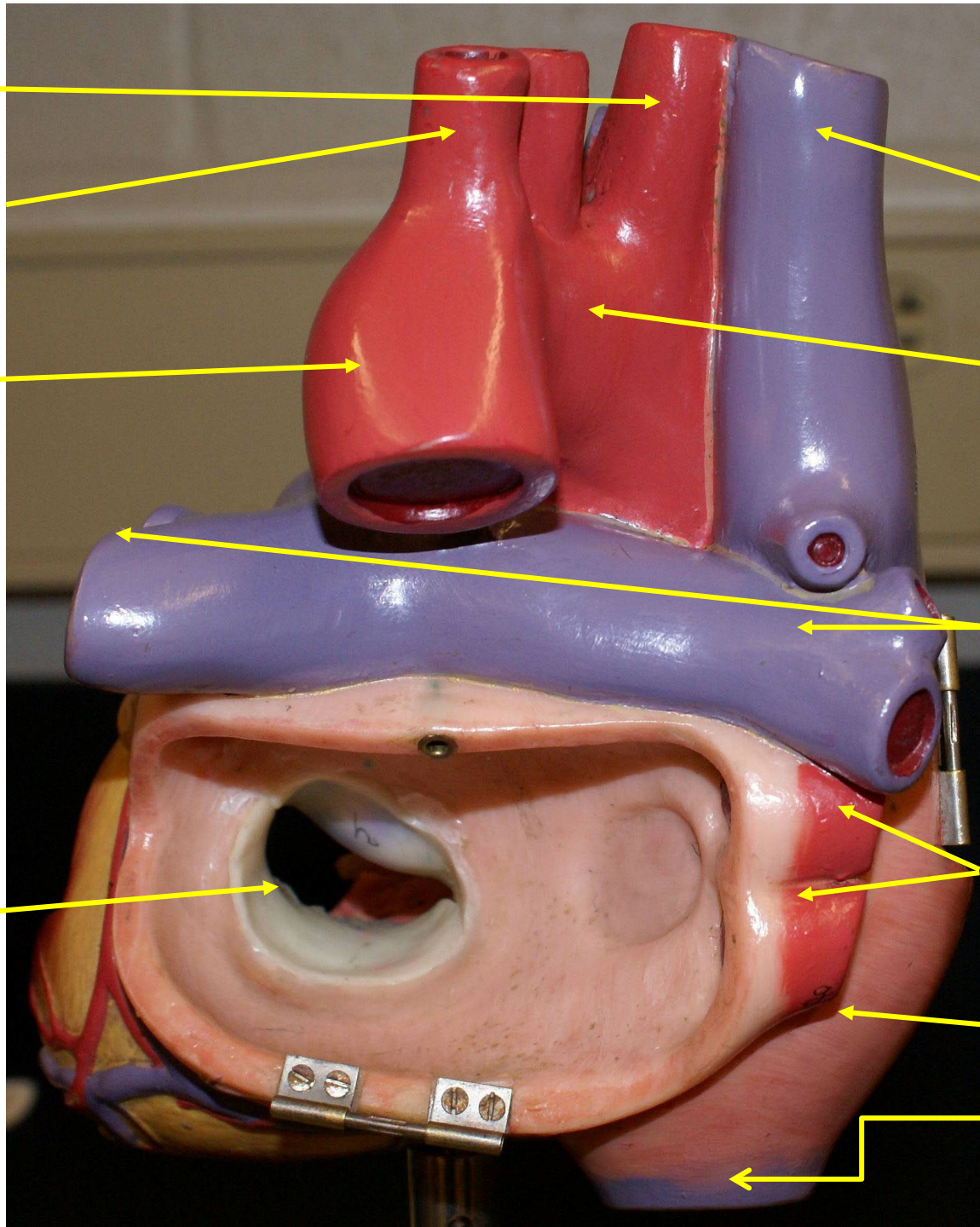
Pulmonary
Arteries

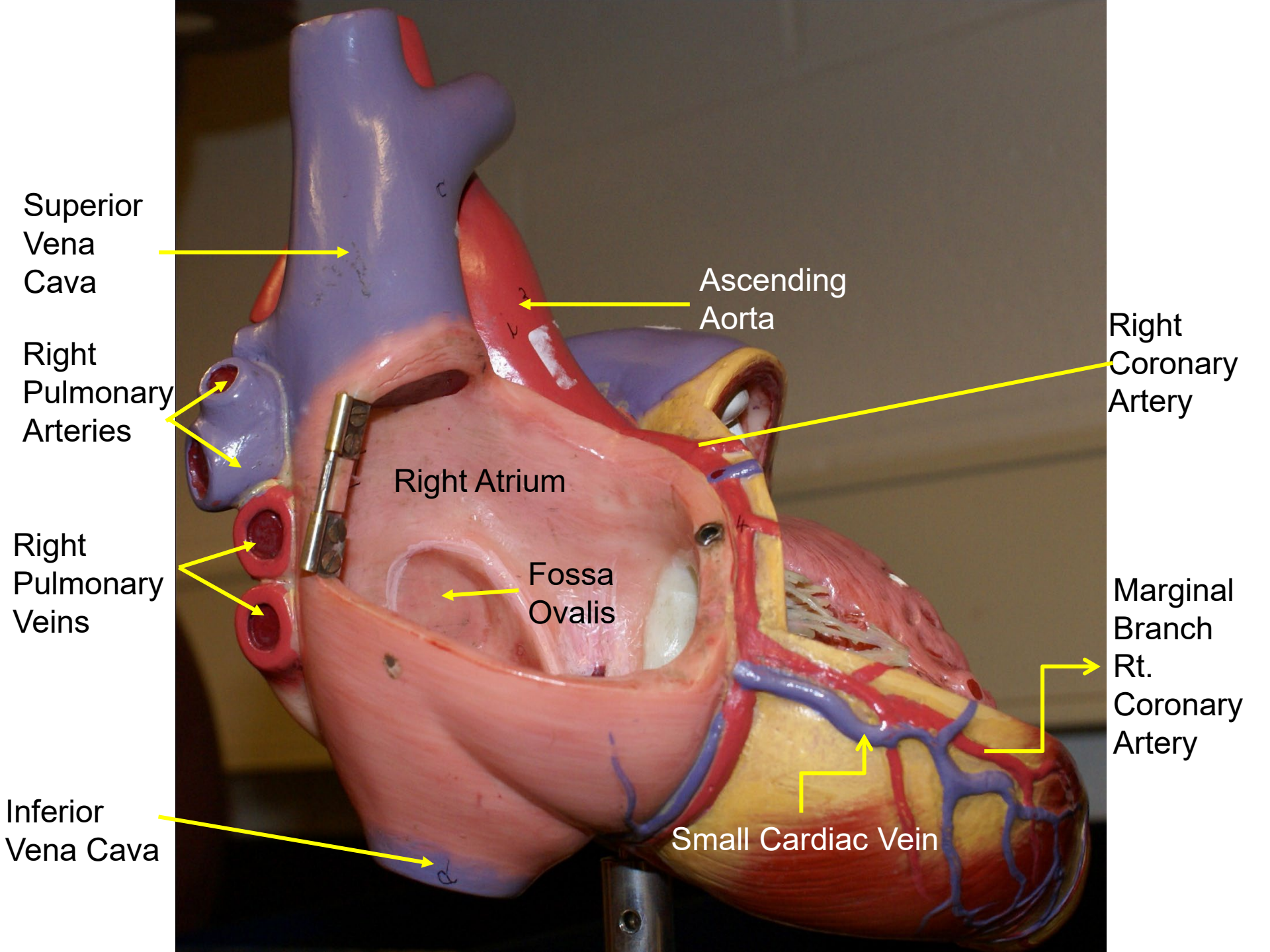
Pulmonary
Veins

Rt. Atrium

Inferior Vena
Cava

Mitral Valve
Bicuspid Valve





Superior
Vena
Cava

Right
Pulmonary
Arteries

Right
Pulmonary
Veins

Inferior
Vena Cava

Ascending
Aorta

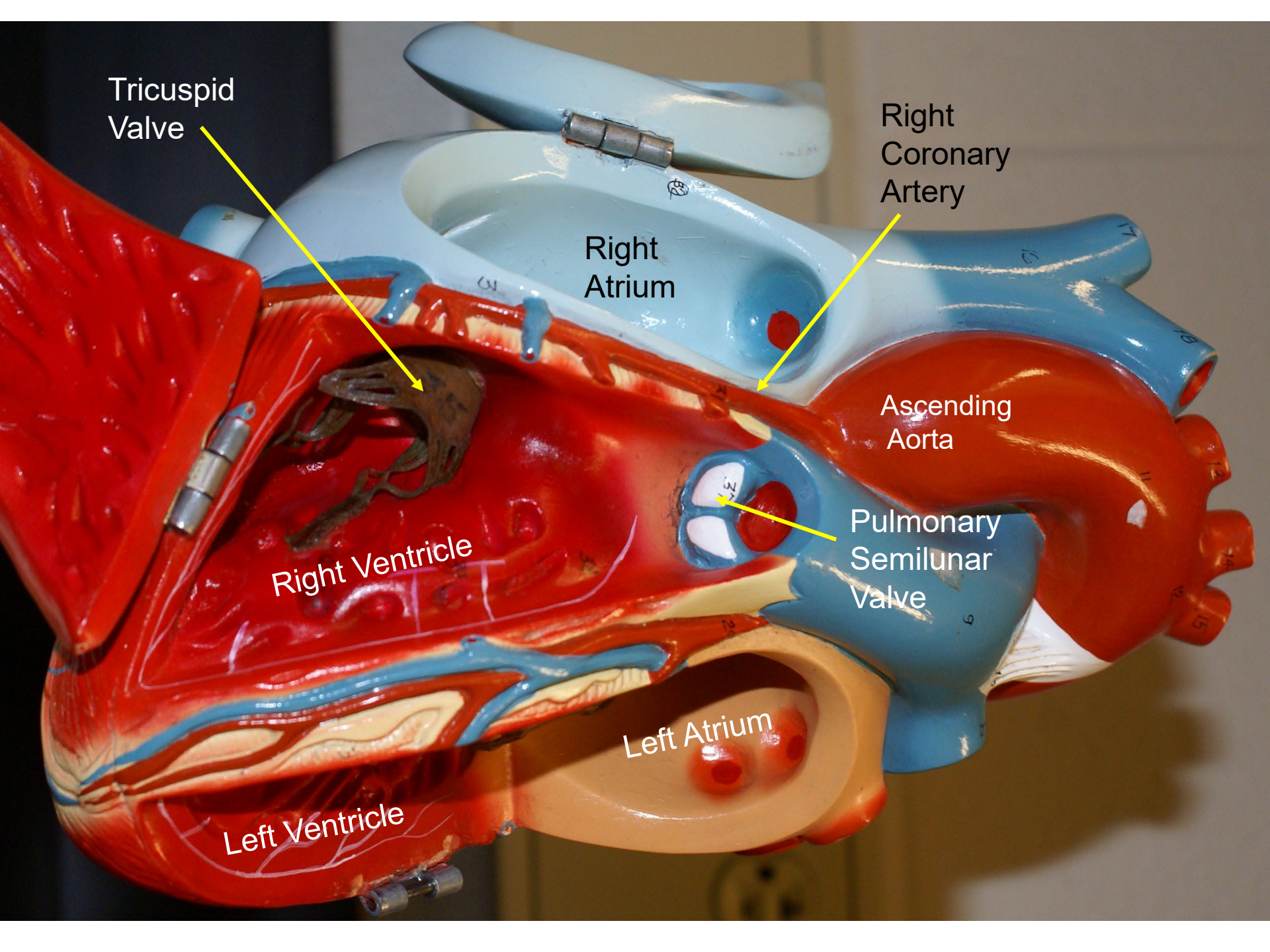
Right
Coronary
Artery

Marginal
Branch
Rt.
Coronary
Artery

Small Cardiac Vein

Right Atrium

Fossa
Ovalis



Tricuspid Valve

Right Coronary Artery

Right Atrium

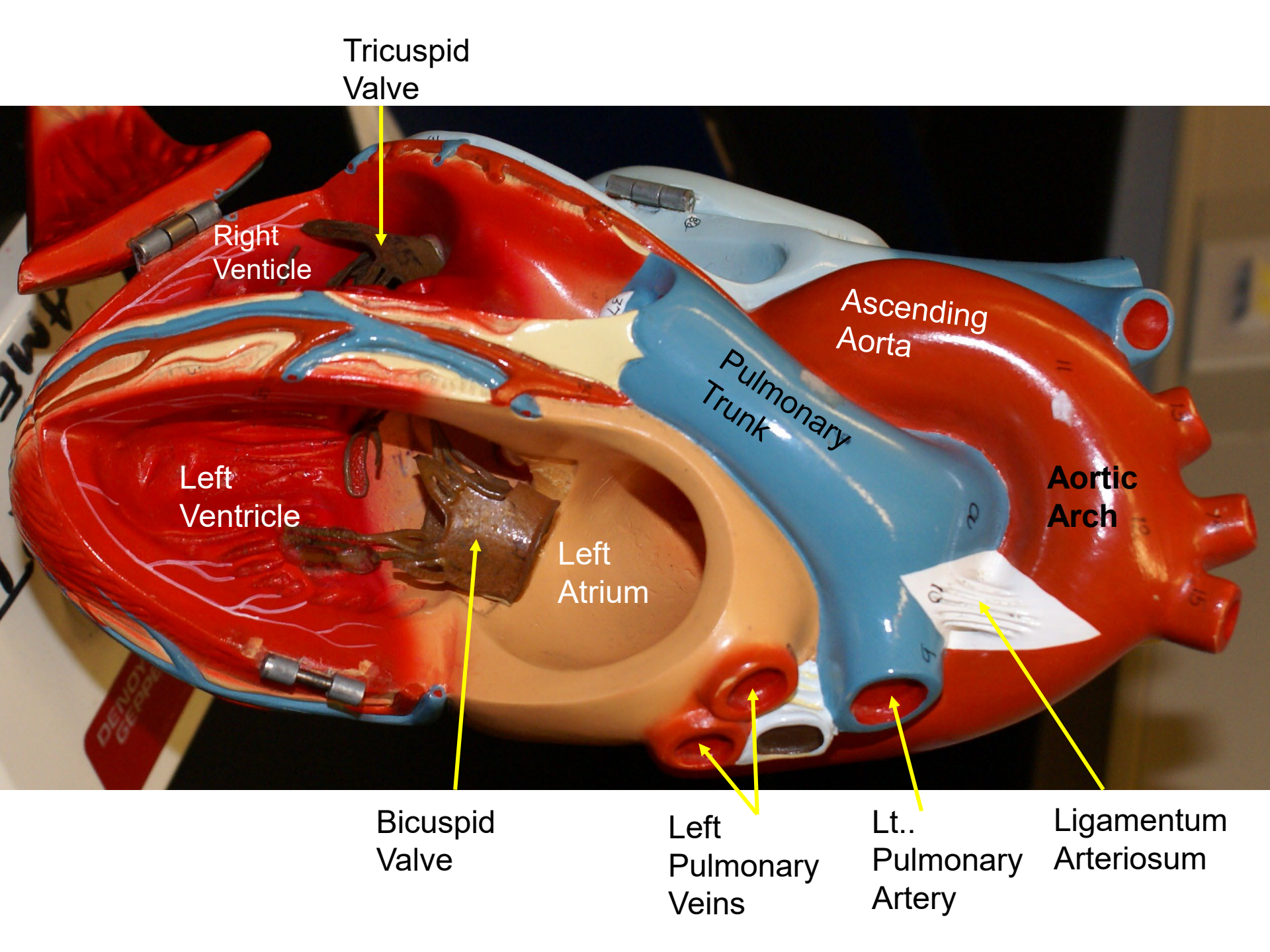
Ascending Aorta

Pulmonary Semilunar Valve

Right Ventricle

Left Atrium

Left Ventricle



Tricuspid Valve

Right Ventricle

Left Ventricle

Left Atrium

Ascending Aorta

Pulmonary Trunk

Aortic Arch

Bicuspid Valve

Left Pulmonary Veins

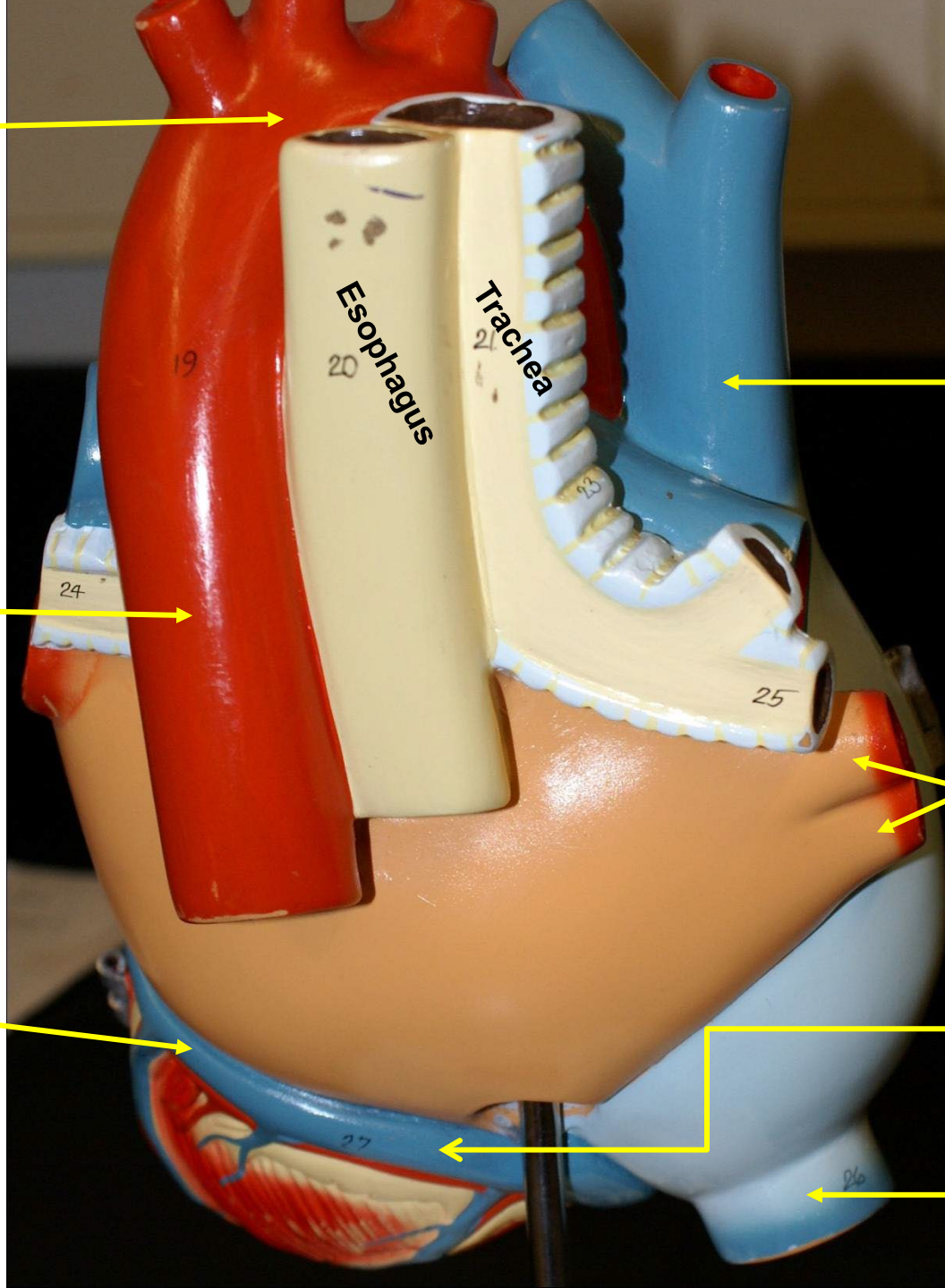
Lt.. Pulmonary Artery

Ligamentum Arteriosum

Aortic Arch

Thoracic or
Descending
Aorta

Middle
Cardiac
Vein



Esophagus

Trachea

Superior
Vena
Cava

Right
Pulmonary
Veins

Coronary
Sinus

Inferior Vena
Cava

Rt. Auricle
Rt. Atrium



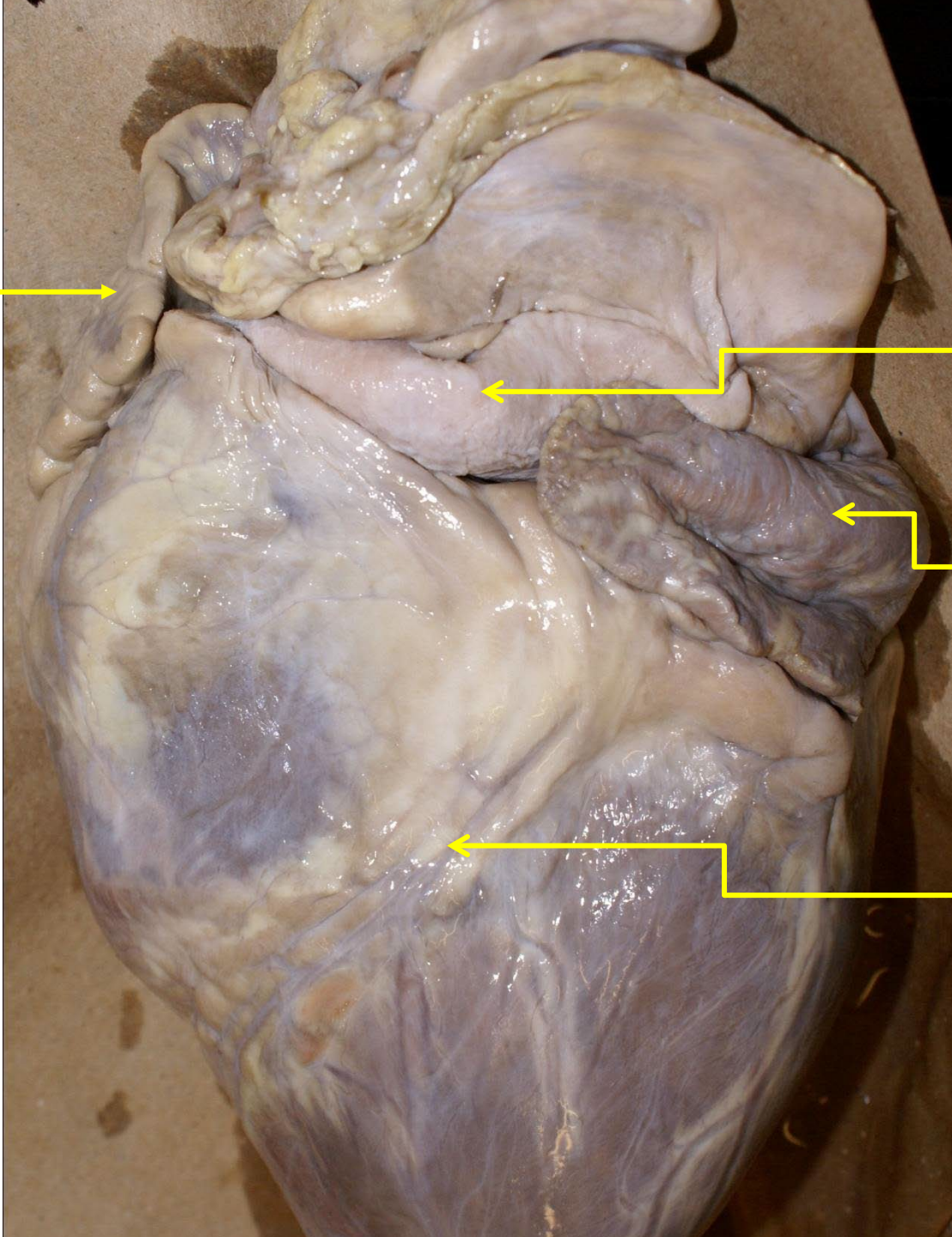
Pulmonary Trunk



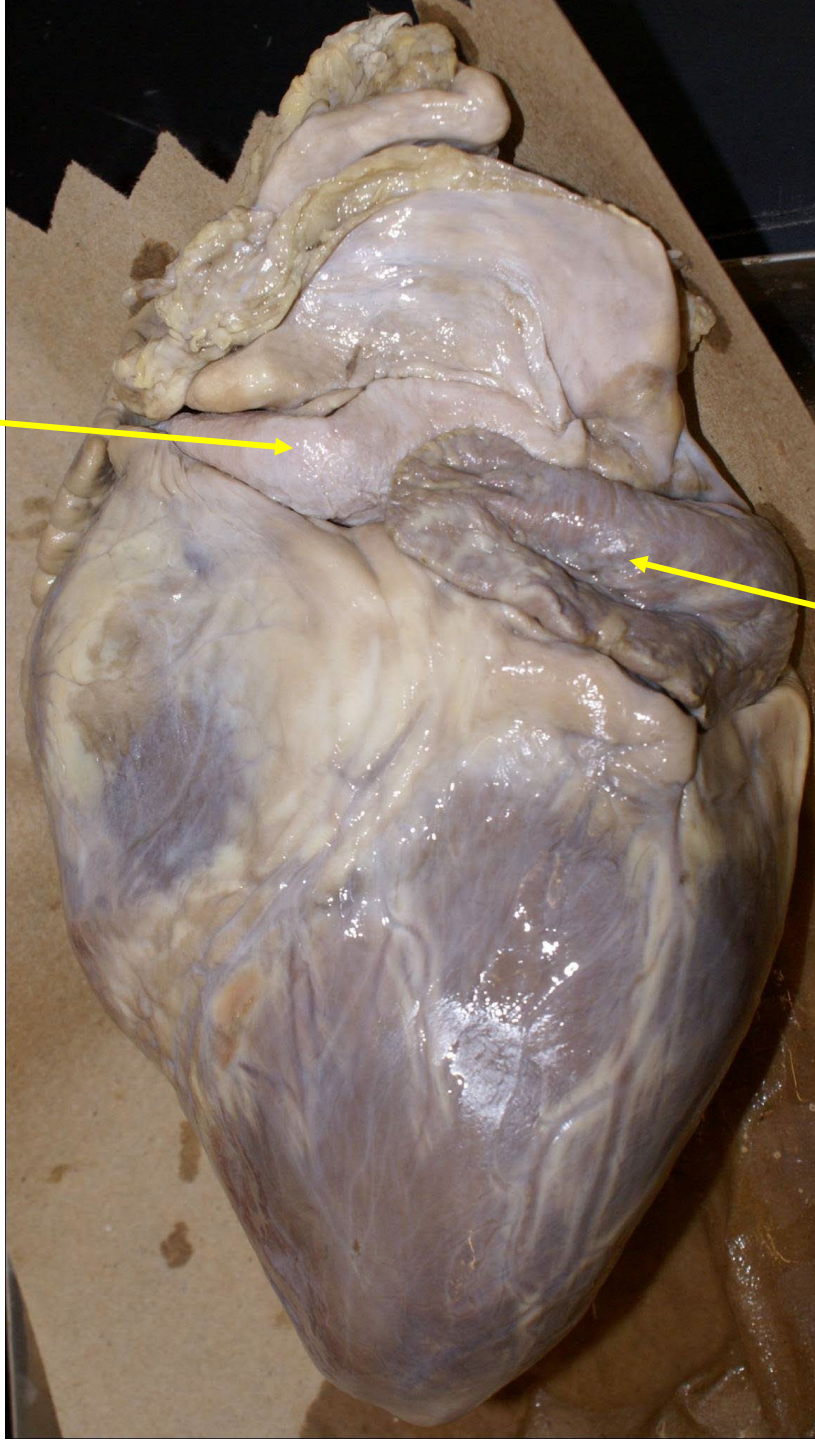
Lt. Auricle of Lt.
Atrium



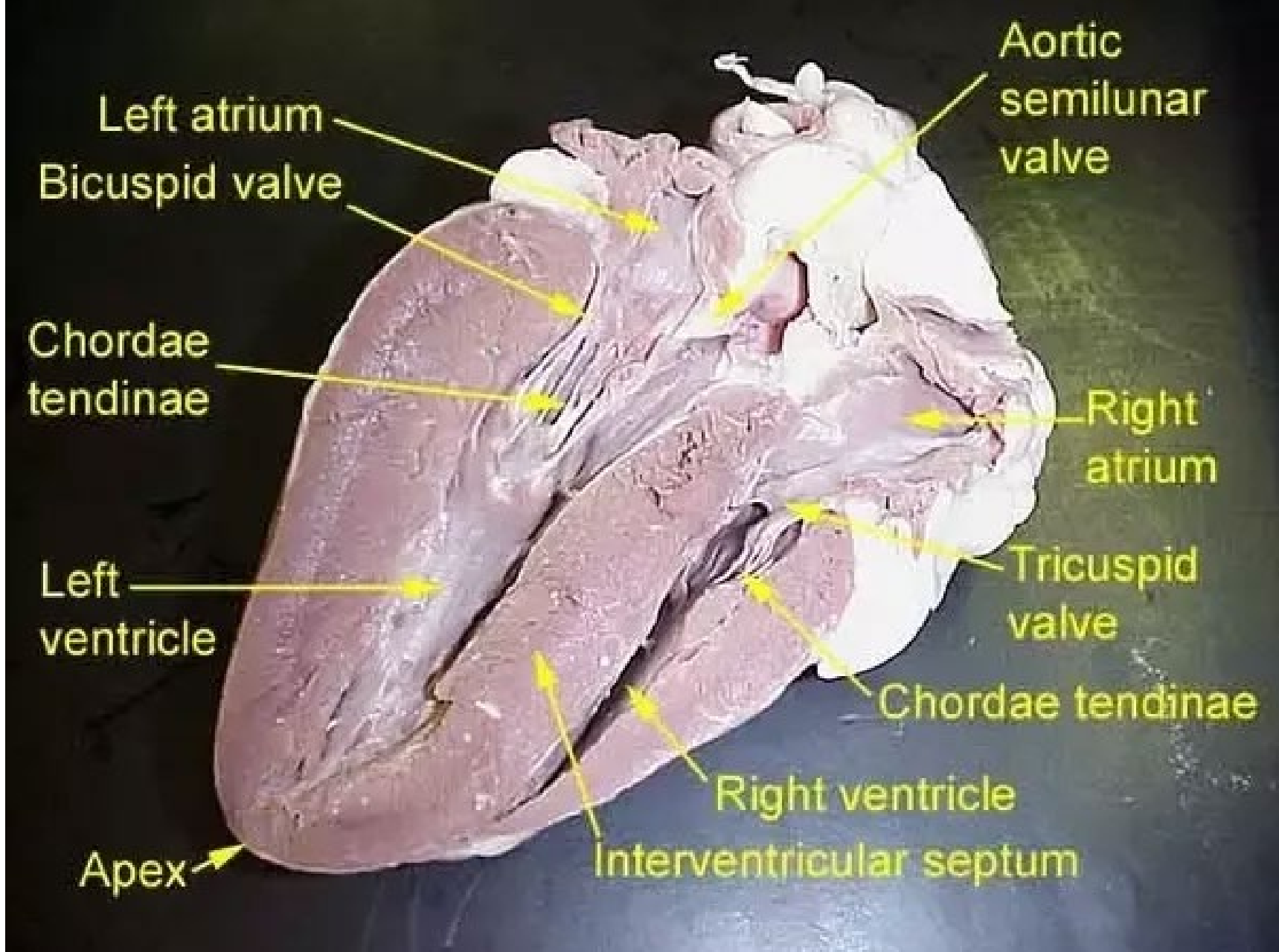
Anterior
Interventricular
Artery



Pulmonary Trunk

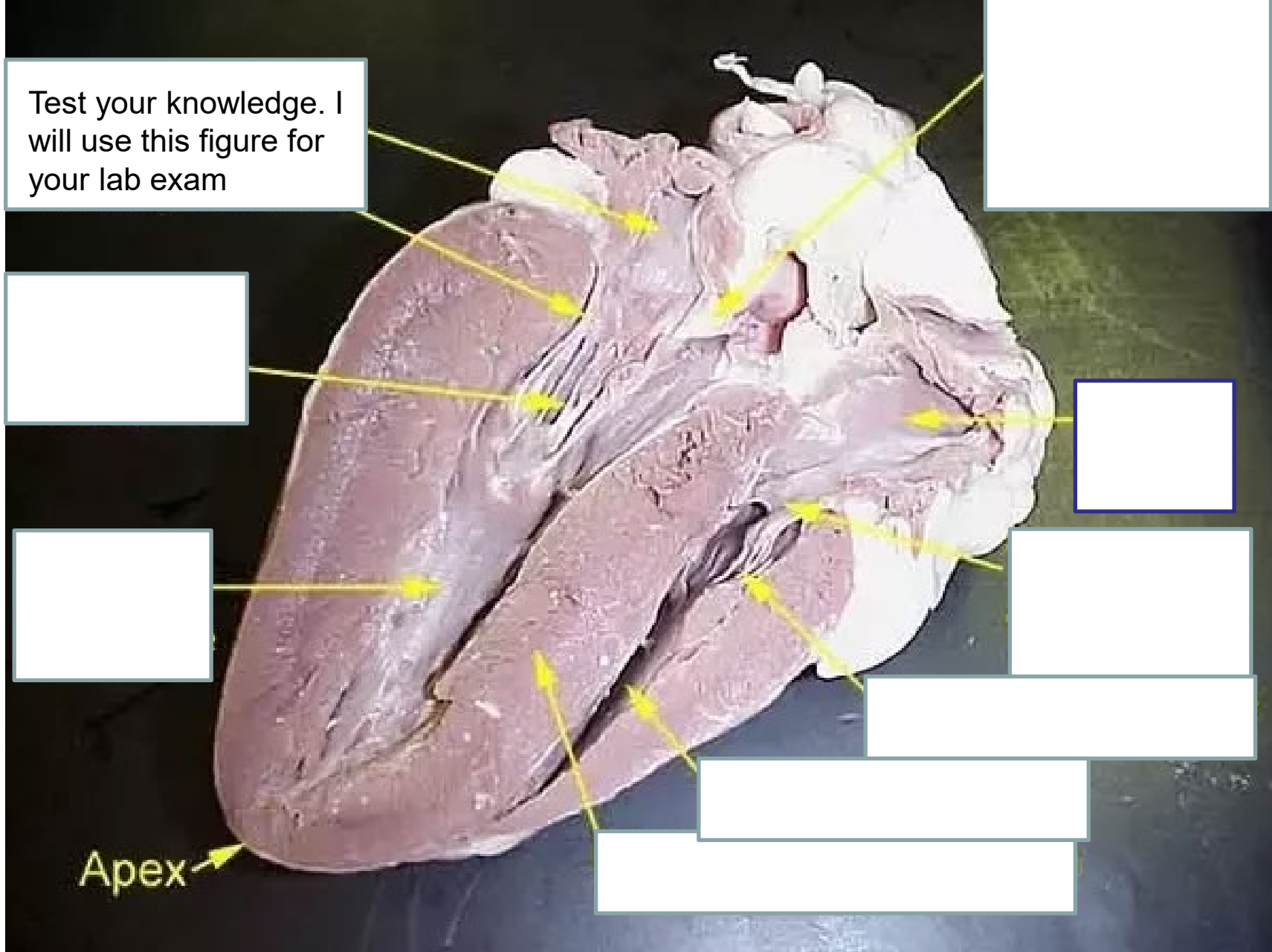


Lt. Auricle of Left Atrium



From website: <https://www.quora.com/What-are-the-differences-between-the-ventricle-and-atrium-of-a-heart>

Test your knowledge. I will use this figure for your lab exam

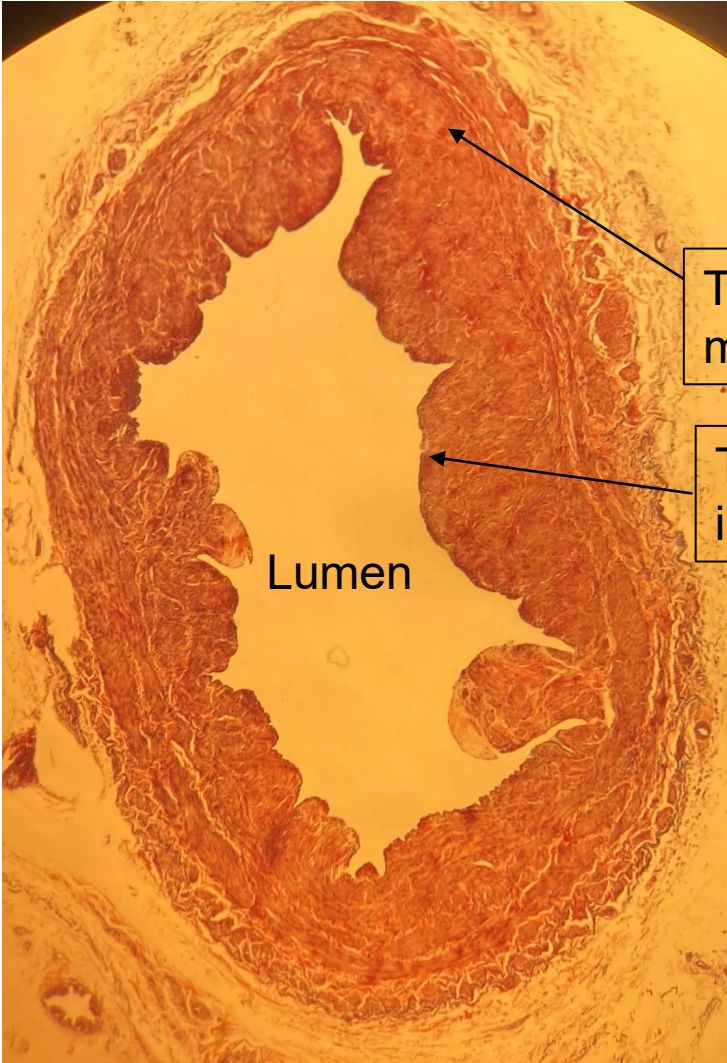


From website: <https://www.quora.com/What-are-the-differences-between-the-ventricle-and-atrium-of-a-heart>

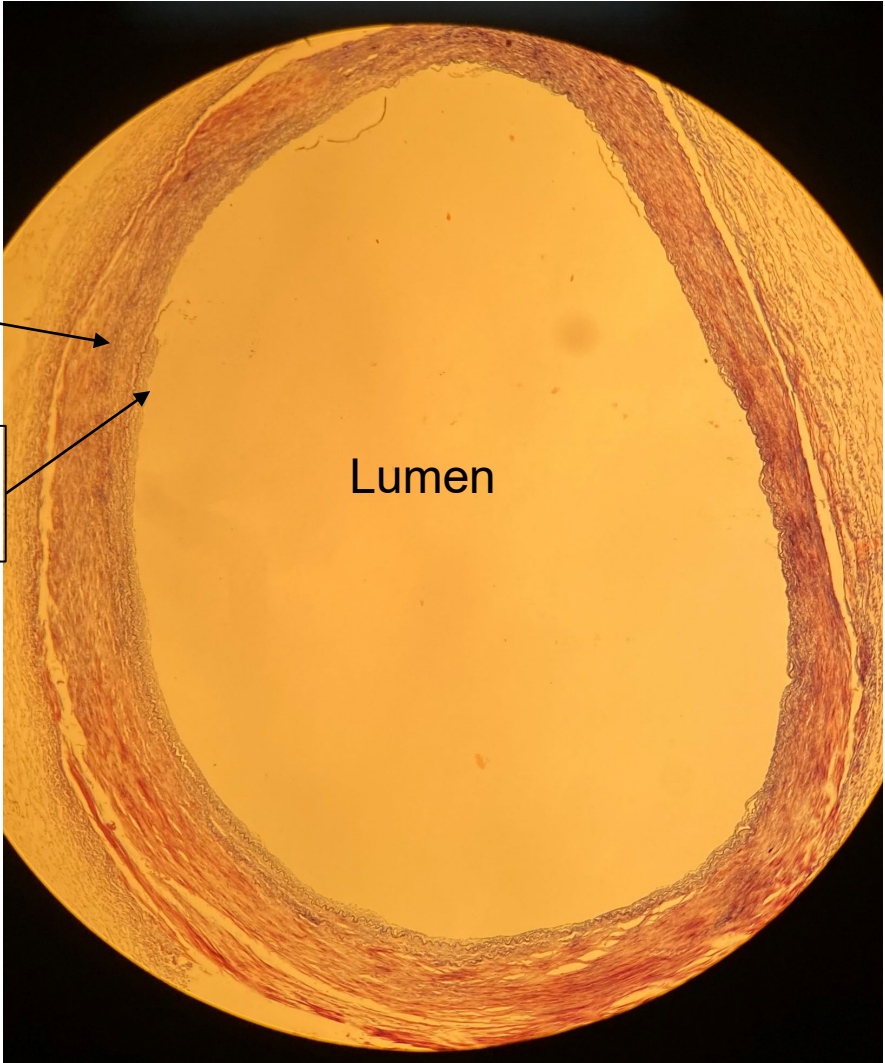
Comparison of the Artery and Vein

Notice how large the lumen of the vein is compared to the artery

Artery



Vein



Tunica media

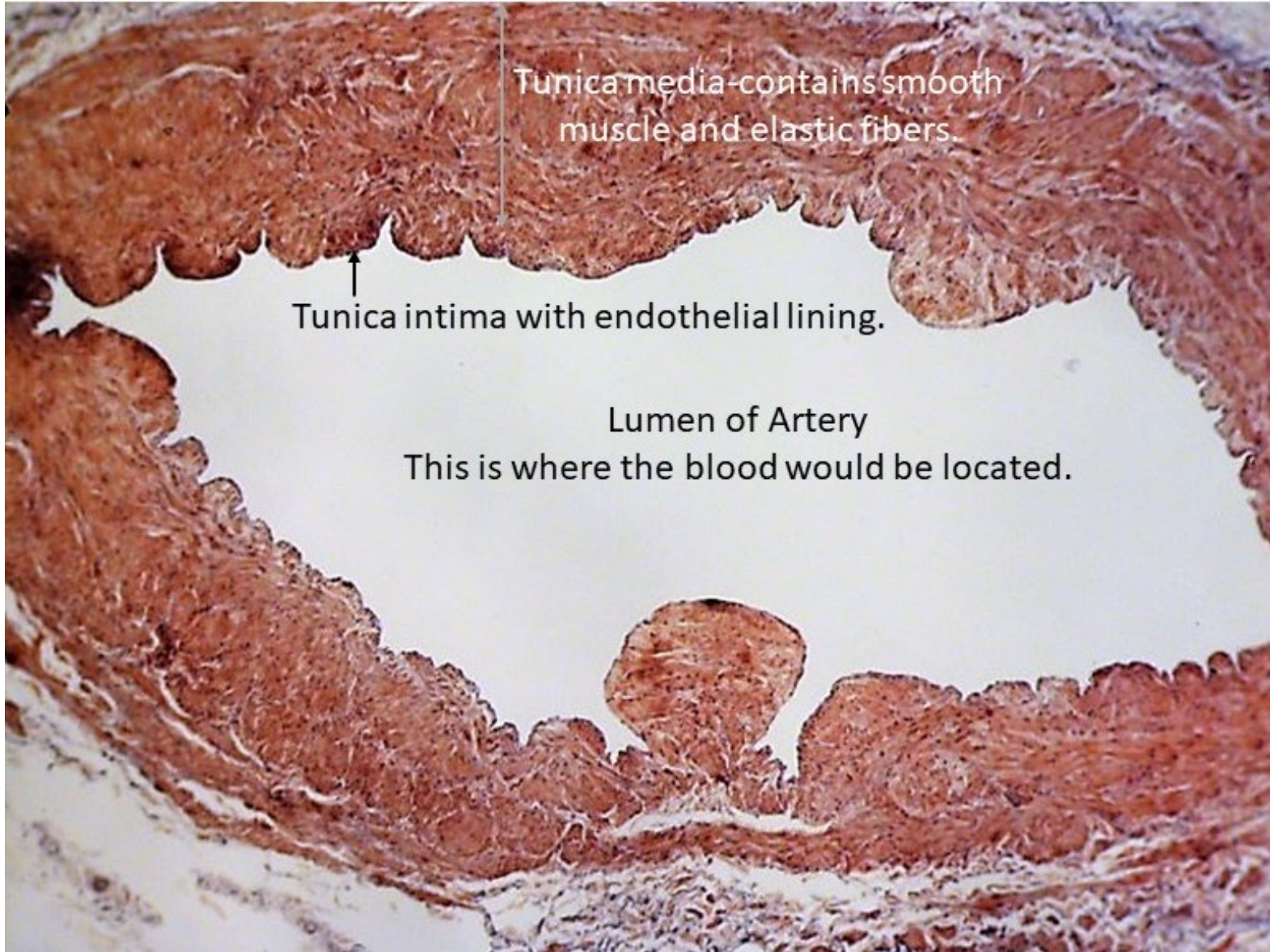
Tunica intima

Lumen

Lumen

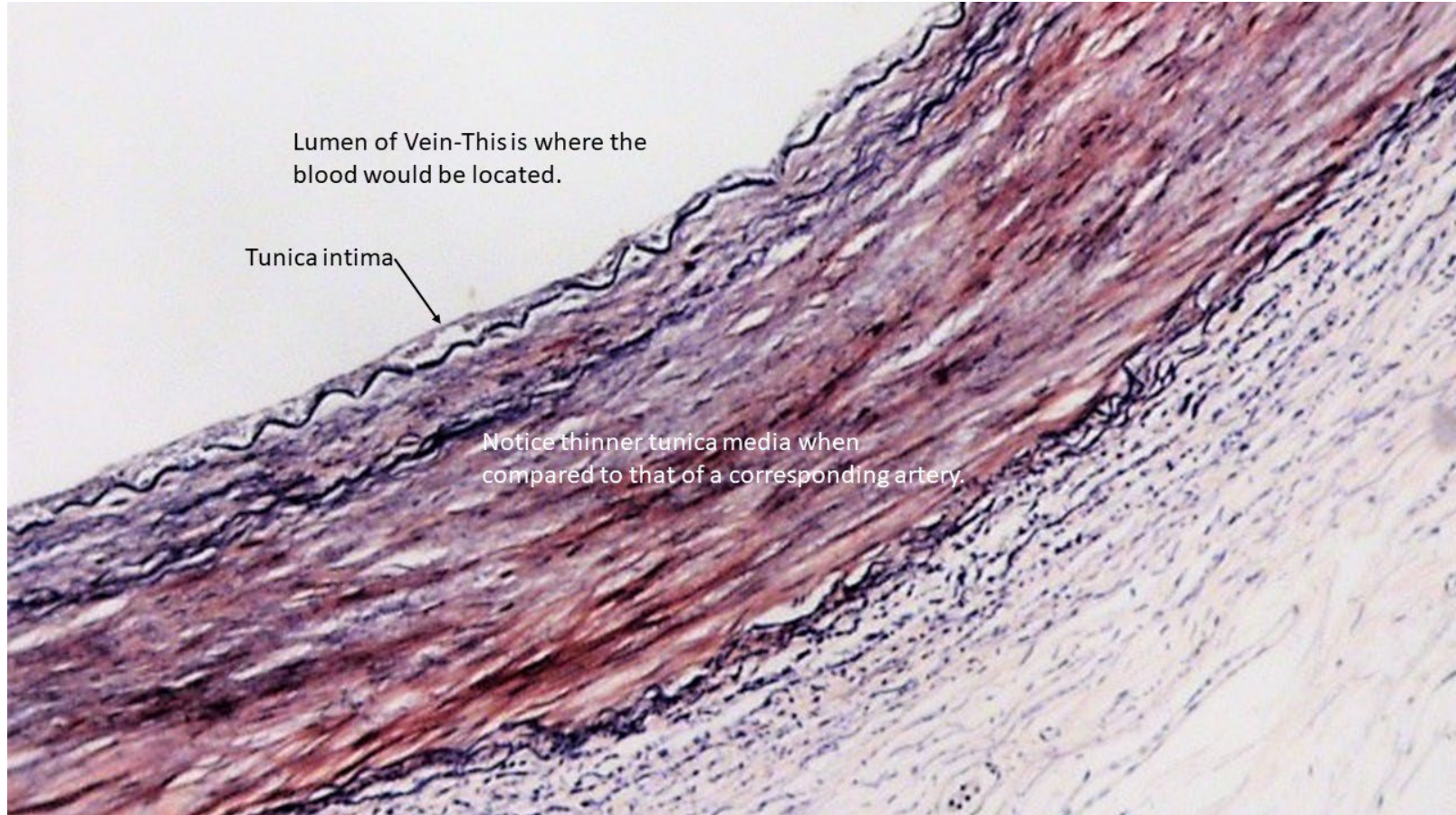
Artery

Know the difference between an artery and vein. Identify the different layers of each.



Vein

Know the difference between an artery and vein. Identify the different layers of each.



ARTERIES to Know for the Lab Practical

Aorta- Branches

Ascending aorta

Right and Left Coronary Arteries

Aortic Arch

Brachiocephalic trunk that branches into the right common carotid artery and right subclavian artery.

Left Common Carotid Artery

Left Subclavian Artery

Thoracic aorta

Intercostal Arteries

Abdominal aorta

Renal arteries (paired)

Celiac Trunk Artery

Superior Mesenteric Artery

Inferior Mesenteric Artery

Subclavian Branches

Becomes axillary artery in axillary region

Becomes brachial artery in brachial region

Divides into the radial and ulnar arteries

Common Carotid Branches

External Carotid Artery

Internal Carotid Artery

ARTERIES to Know for the Virtual Lab Practical con't

Lower Extremity

Abdominal Aorta divides into the:

Right and Left Common Iliac Arteries

External Iliac Artery

Internal Iliac Artery

Femoral Artery

Popliteal Artery

Anterior tibial artery (continues to become dorsalis pedis to supply dorsum of foot)

VEINS to Know

Superior Vena Cava

Right and Left Brachiocephalic Veins join to become the Superior Vena Cava

Inferior Vena Cava

Union of Right and Left Common Iliac Veins form the Inferior Vena Cava

Coronary Sinus

Receives blood from the Great, Middle and Small Cardiac Veins. Drains into the right atrium of the heart. You can view this on the heart model

Veins of the Head and Neck

External Jugular Vein (lays on top of Sternocleidomastoid)

Internal Jugular Vein

Veins of Upper Limb

Brachiocephalic

Subclavian

Basilic

Cephalic

Brachial

Median Cubital

Radial

Ulnar

Veins of Lower Limb

Common Iliac vein- the right and left common iliac veins join to form the inferior vena cava

External Iliac vein- the left and right external iliac veins join to form the common iliac veins

Internal Iliac vein- joins with the external iliac vein to form the common iliac vein

Femoral vein- drains into the external iliac vein

Great Saphenous vein

Be sure to find and identify the arteries that are listed in this review for the lab practical

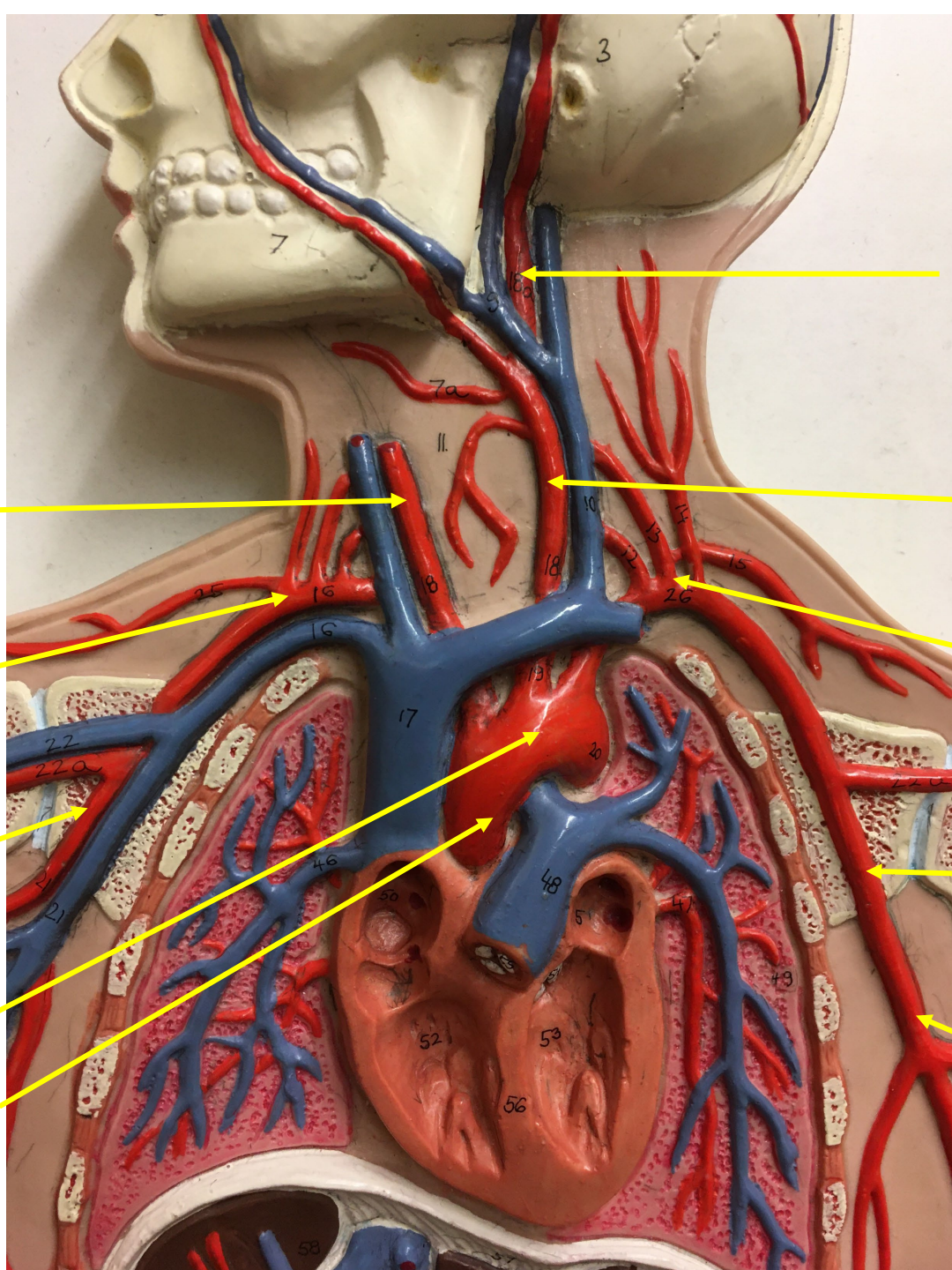
Rt. Common Carotid artery

Rt. Subclavian artery

Rt. Axillary artery

Aortic arch

Ascending Aorta



Left Internal Carotid artery

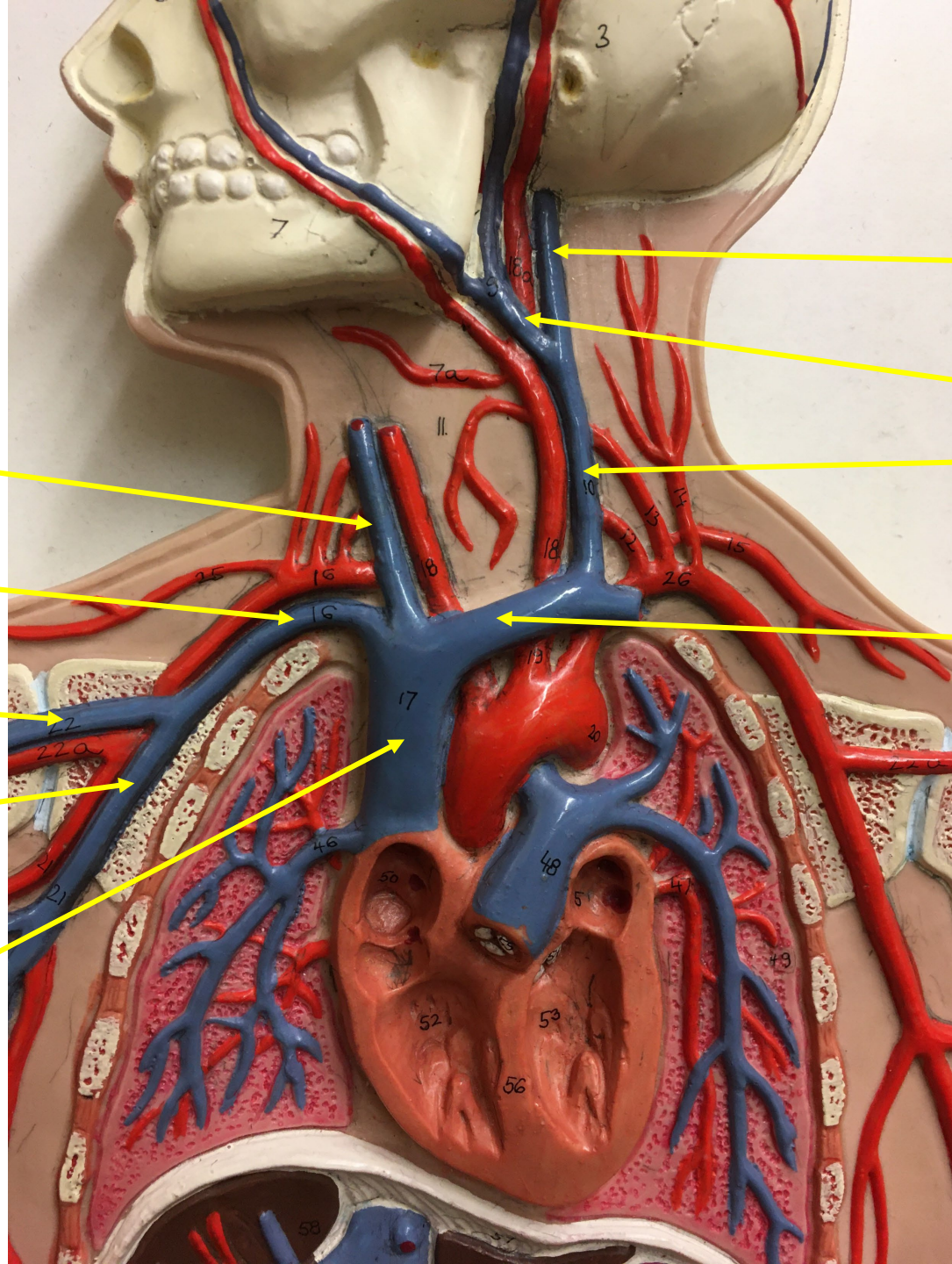
Left Common Carotid artery

Lt. Subclavian artery

Lt. Axillary artery

Lt. Brachial artery

Be sure to find and identify the veins that are listed in this review for the lab practical



Rt. Internal Jugular vein

Rt. Subclavian vein

Rt. Cephalic vein

Rt. Axillary vein

Superior Vena Cava

Lt. Internal Jugular vein

Lt. External Jugular vein

Lt. Internal Jugular vein

Lt. Brachiocephalic Vein

Arteries and Veins of the Neck

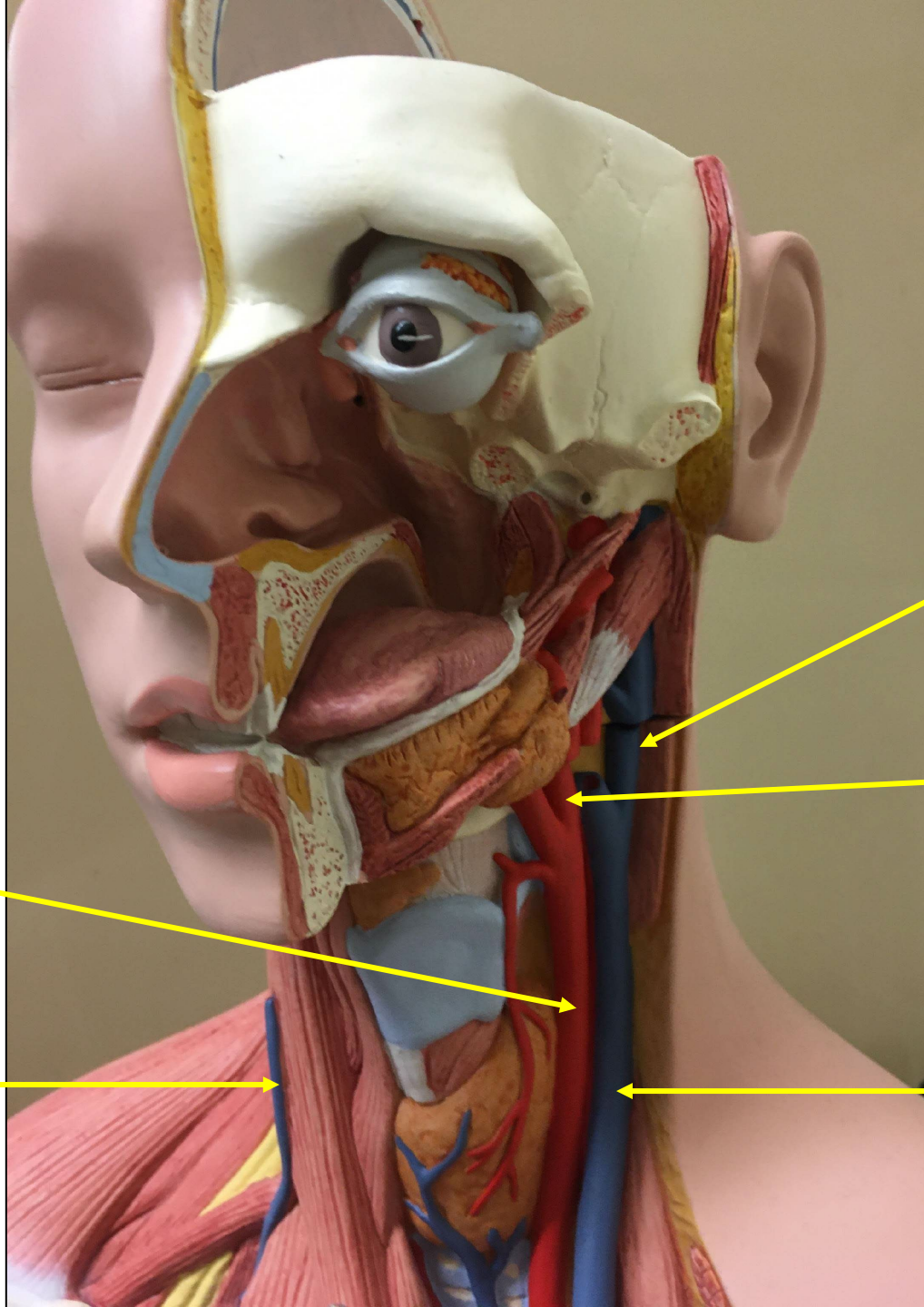
Left Common Carotid artery

Right External Jugular vein

Left Internal Jugular vein

Left Internal Carotid artery

Left Internal Jugular vein



Blood Vessels Neck



Left Internal Carotid artery

Left Internal Jugular vein

Veins

Right
External
Jugular vein

Left Internal
Jugular vein

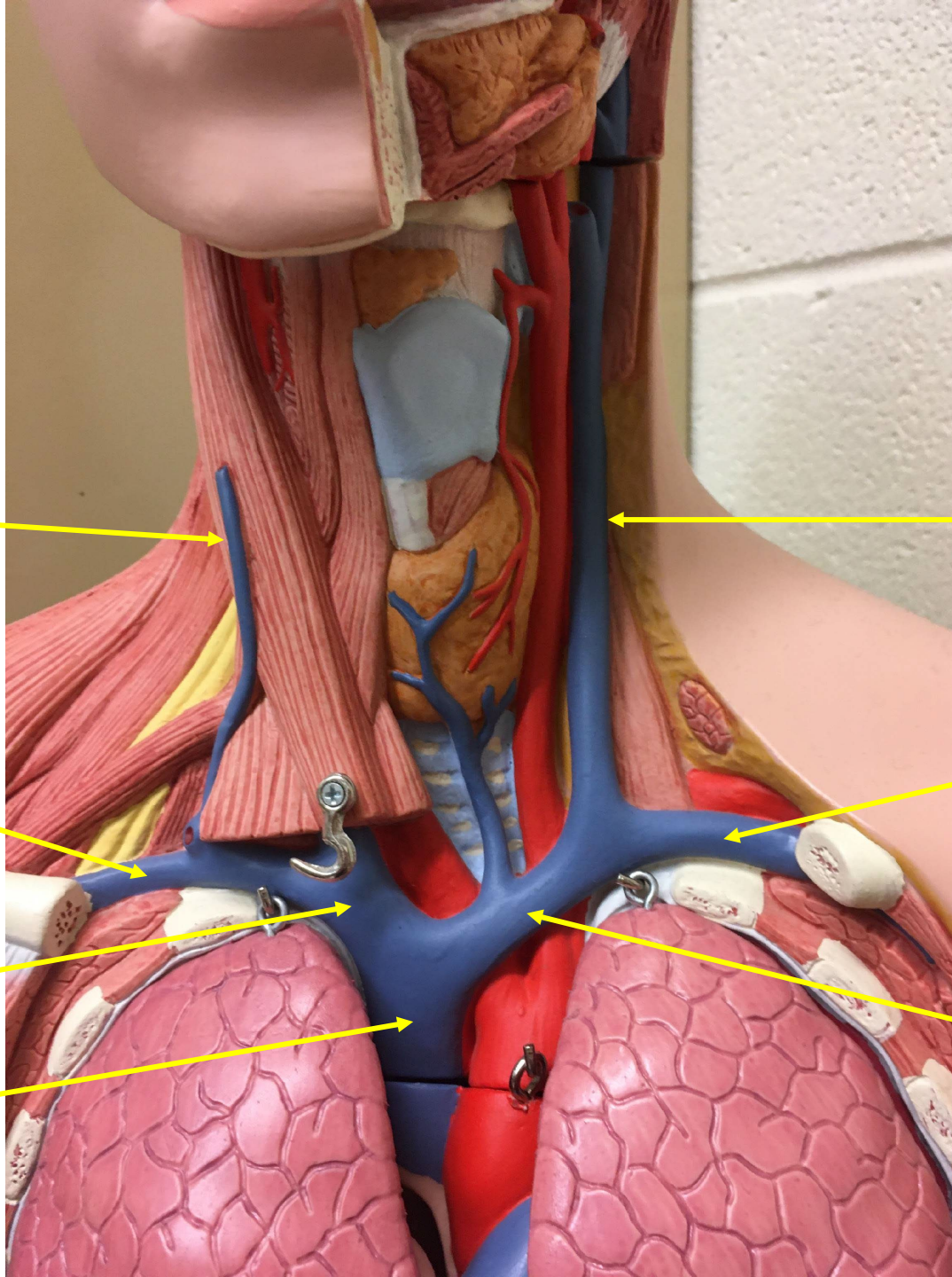
Right
Subclavian vein

Lt. Subclavian
vein

Rt.
Brachiocephalic
vein

Lt.
Brachiocephalic
vein

Superior
Vena cava



Arteries and Veins of the Neck and Chest

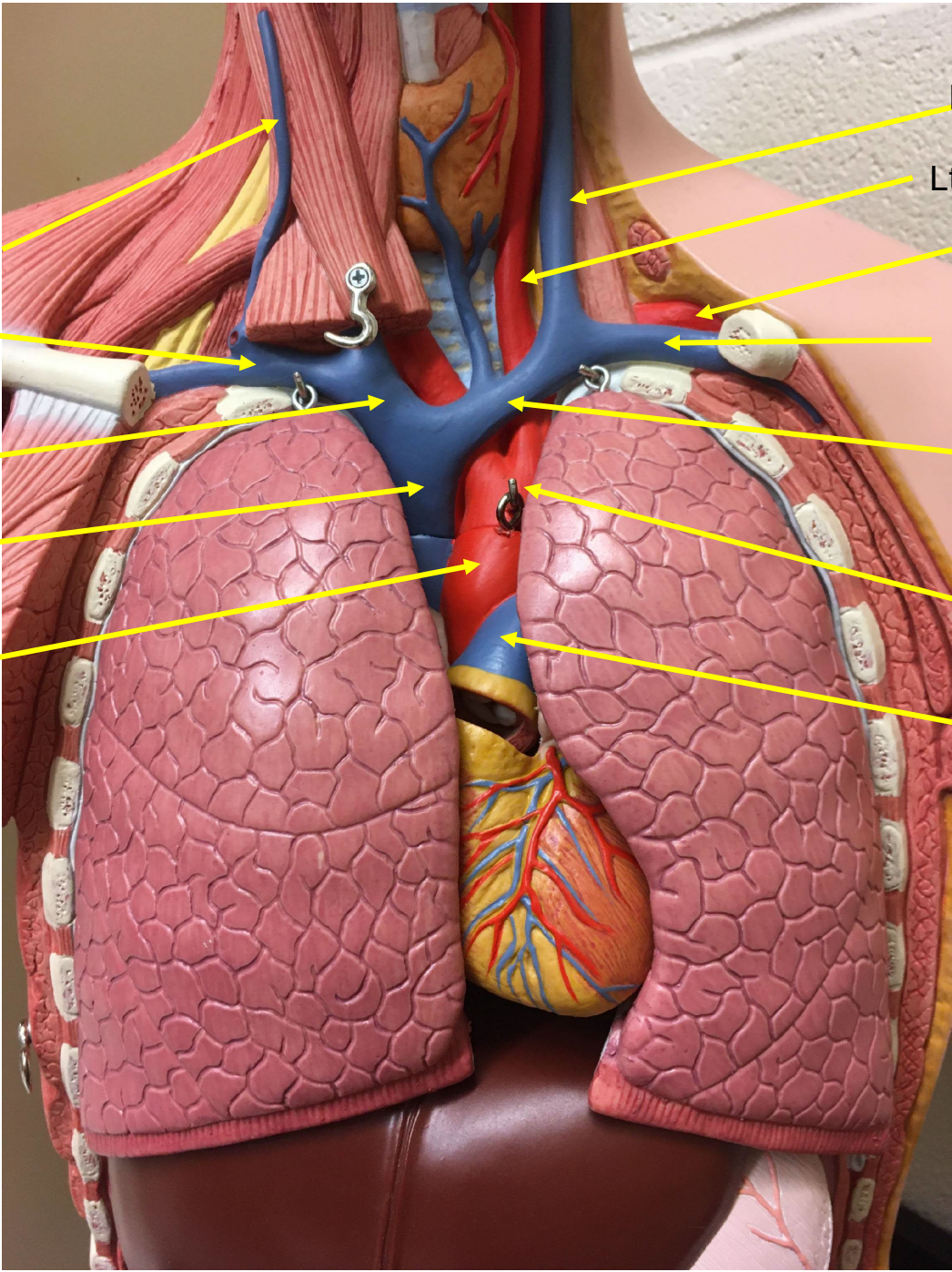
Rt. External Jugular vein

Rt. Subclavian vein

Right brachiocephalic vein

Superior Vena Cava

Ascending aorta



Lt. Internal Jugular vein

Lt. Common Carotid artery

Left Subclavian artery

Lt. Subclavian vein

Lt. Brachiocephalic vein

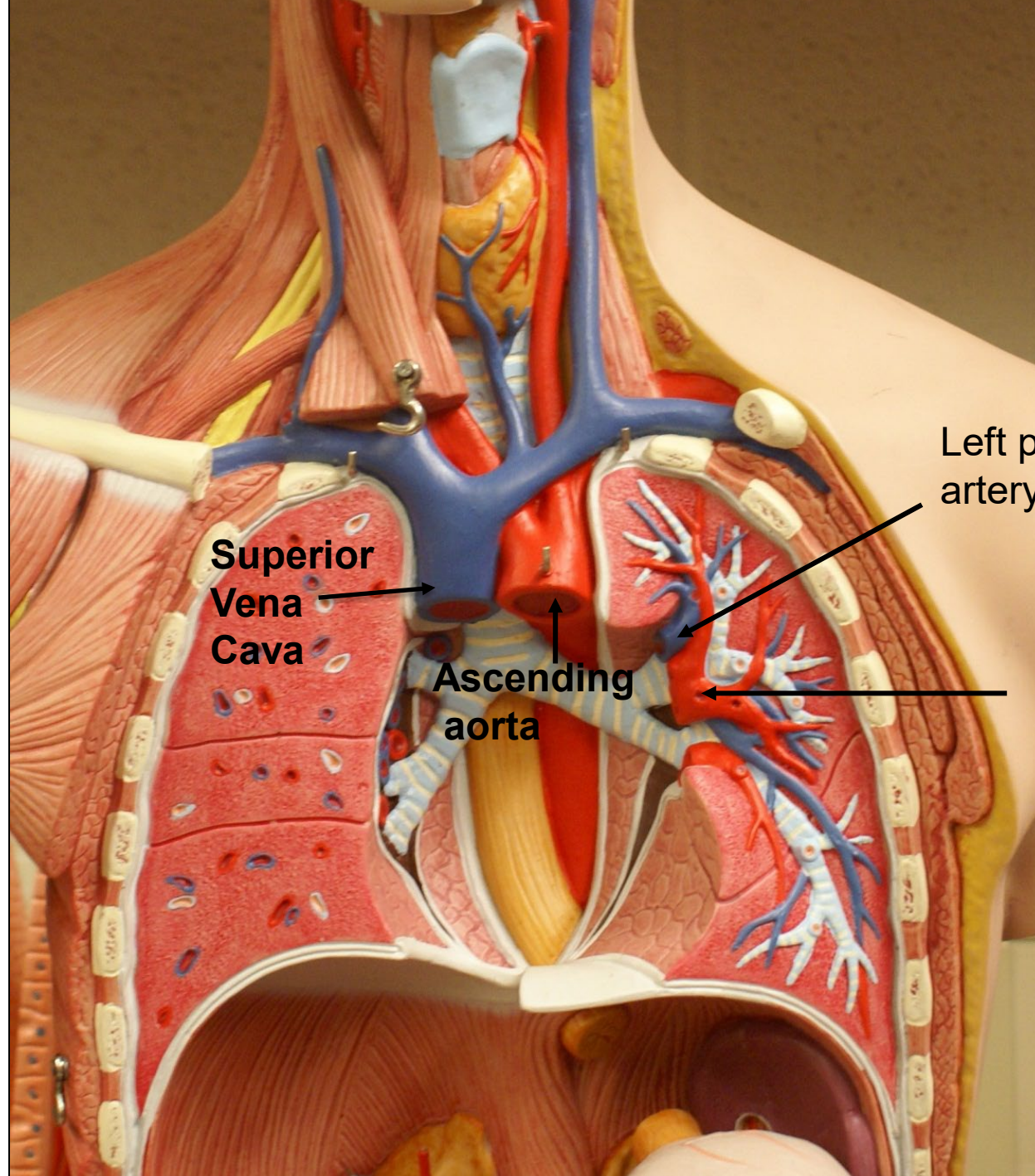
Aortic arch

Pulmonary trunk artery

Identify the Pulmonary Arteries and Pulmonary Veins

The pulmonary arteries are **blue** because they carry deoxygenated blood to the lungs

The pulmonary veins are **red** because they carry oxygenated blood from the lungs to the heart



Superior Vena Cava

Ascending aorta

Left pulmonary artery

Left pulmonary veins

Arteries and Veins Neck and Chest

Note: Intercostal Artery
and Vein
Lt. External Jugular Vein

Rt. Internal
Jugular Vein

Rt. Common
Carotid Artery

Rt. Subclavian Vein

Rt. Brachiocephalic
Vein

Superior Vena Cava

Rt.
Brachiocephalic
Trunk

Lt. External
Jugular Vein

Lt. Internal
Jugular Vein

Lt. Subclavian Vein

Lt. Subclavian Artery

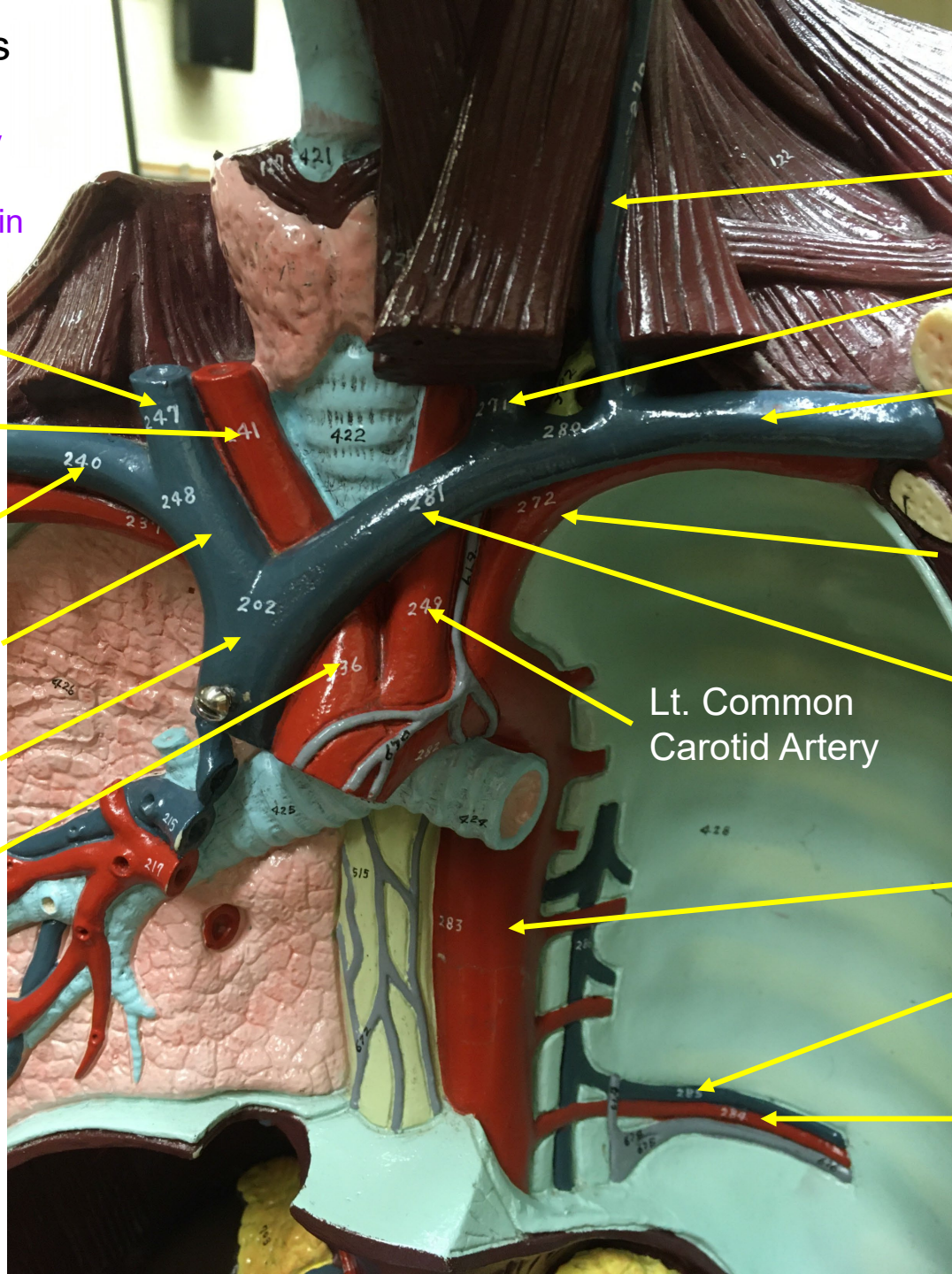
Lt. Brachiocephalic
Vein

Lt. Common
Carotid Artery

Thoracic Aorta

Lt. Intercostal
Vein

Lt. Intercostal
Artery



Arteries and Veins Right Arm

Rt. Axillary vein

Rt. Cephalic vein

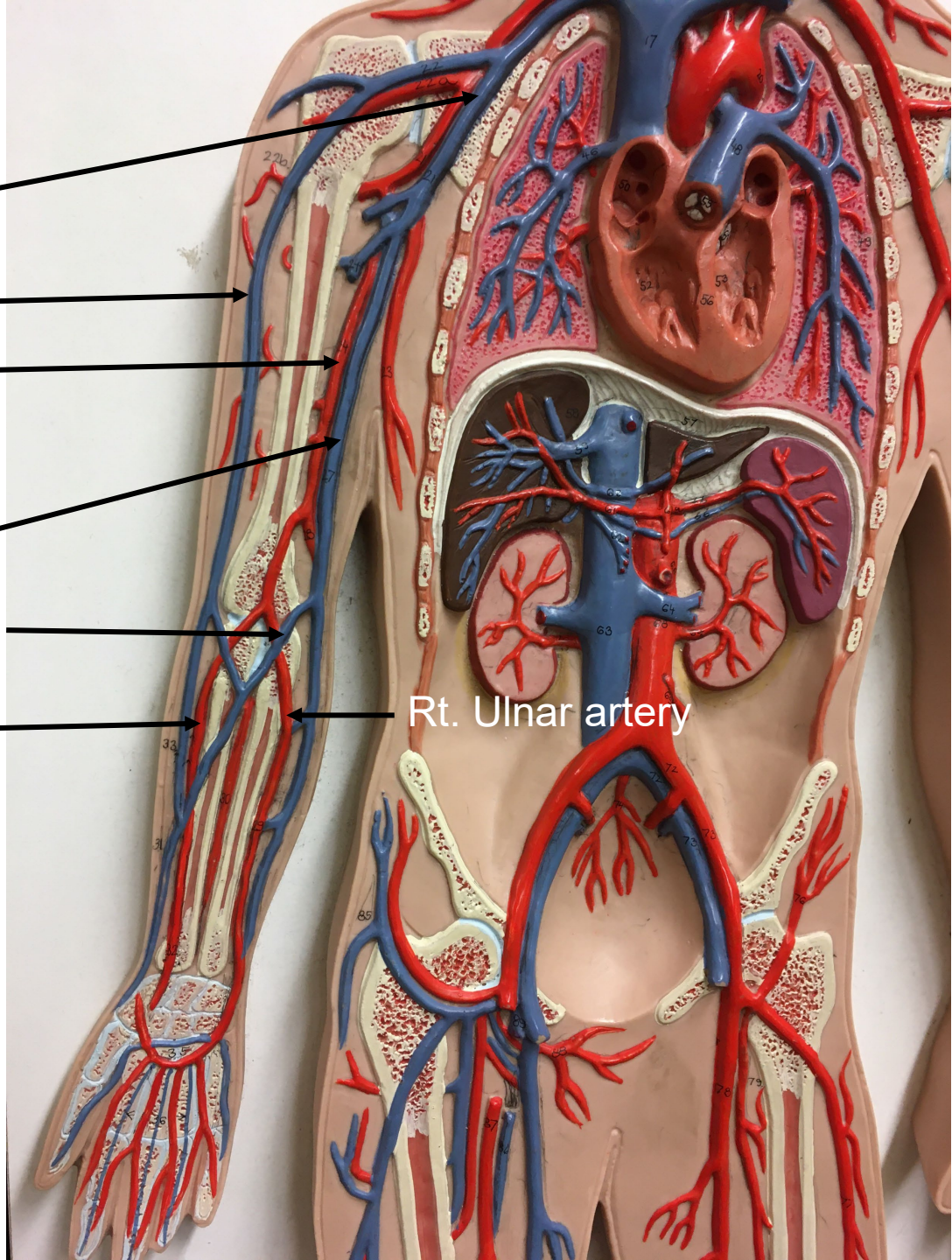
Rt. Brachial artery

Rt. Basilic vein

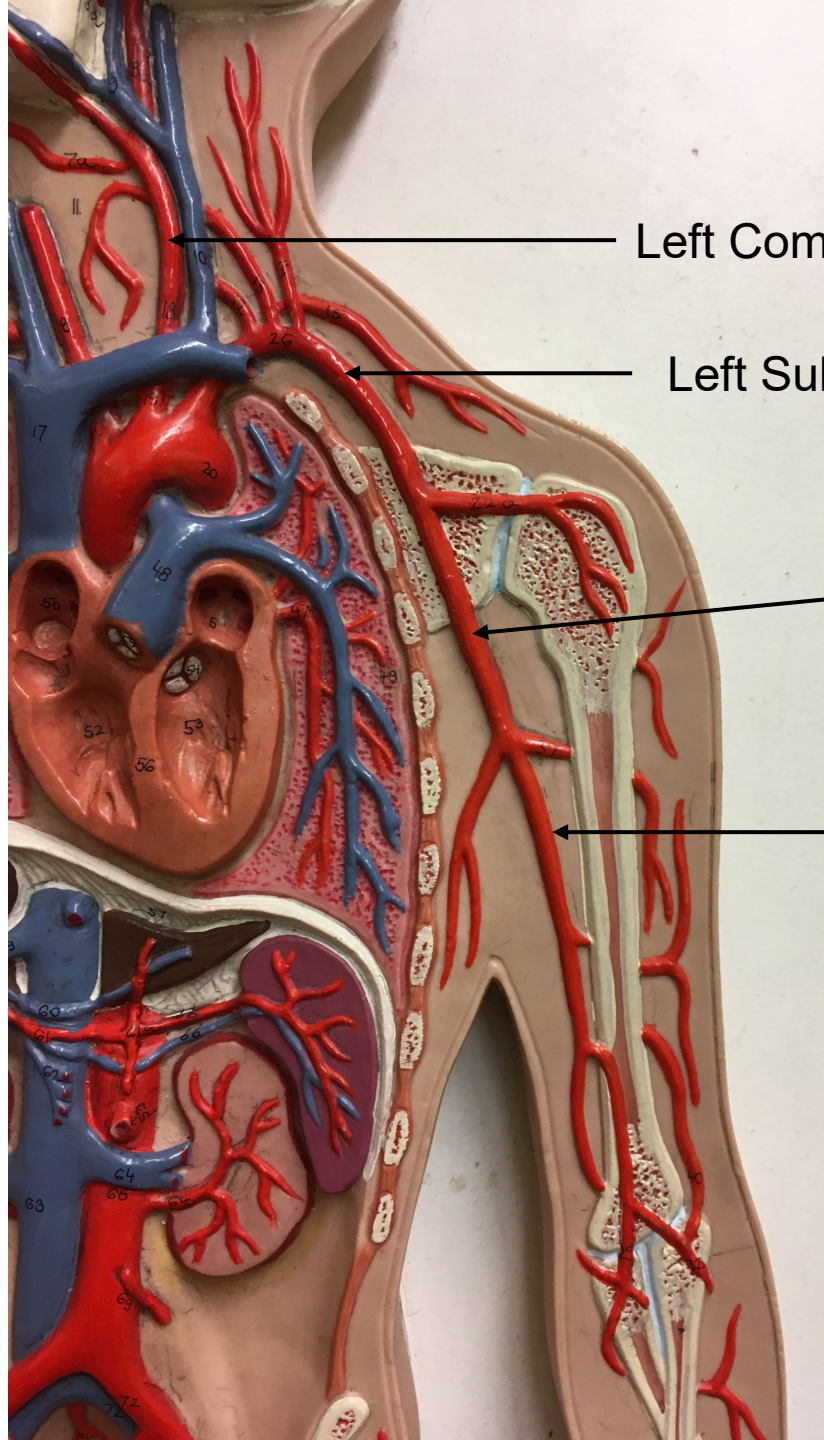
Rt. Median Cubital vein

Rt. Radial artery

Rt. Ulnar artery



Arteries and Veins



Left Common Carotid artery

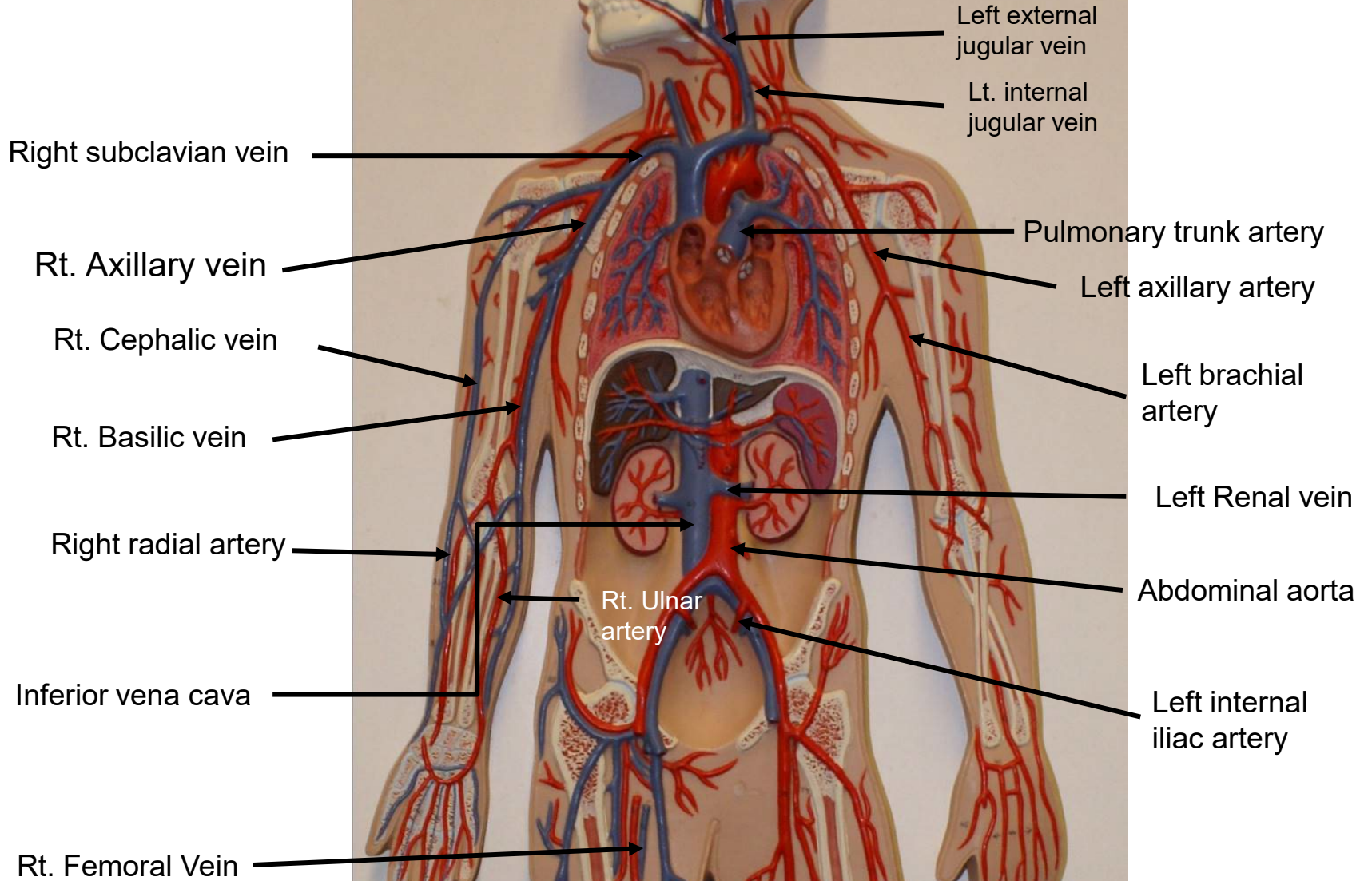
Left Subclavian artery

Left Axillary artery

Left Brachial artery

Identify the Arteries and Veins

LEAVE IN ROOM #1 343 #1



Know the following arteries (left and right sides)

Right Common Iliac artery

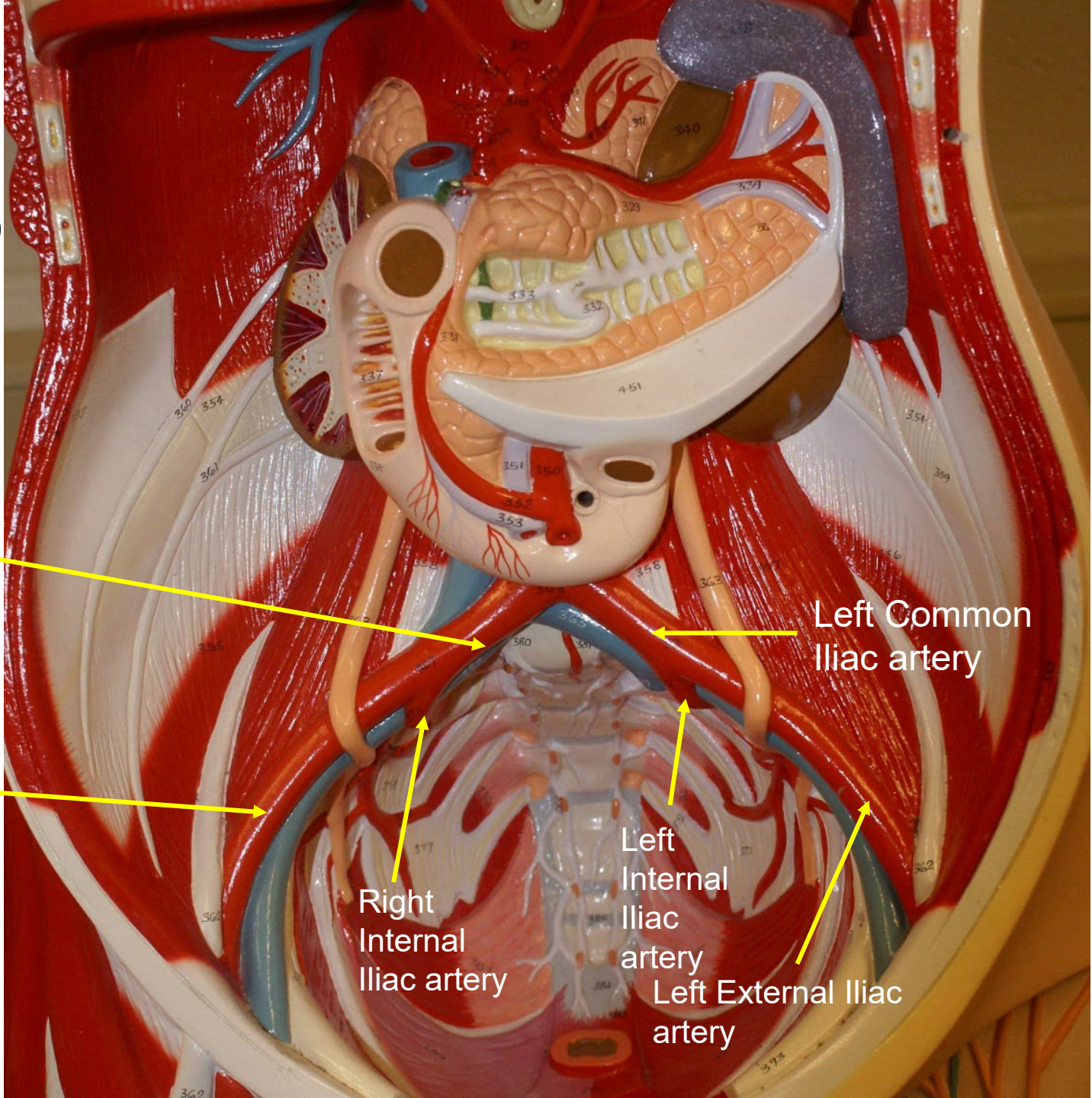
Left Common Iliac artery

Right External Iliac artery

Right Internal Iliac artery

Left Internal Iliac artery

Left External Iliac artery



Identify the Arteries Abdominal Region

Celiac Trunk artery

Superior mesenteric artery

Rt. Renal artery

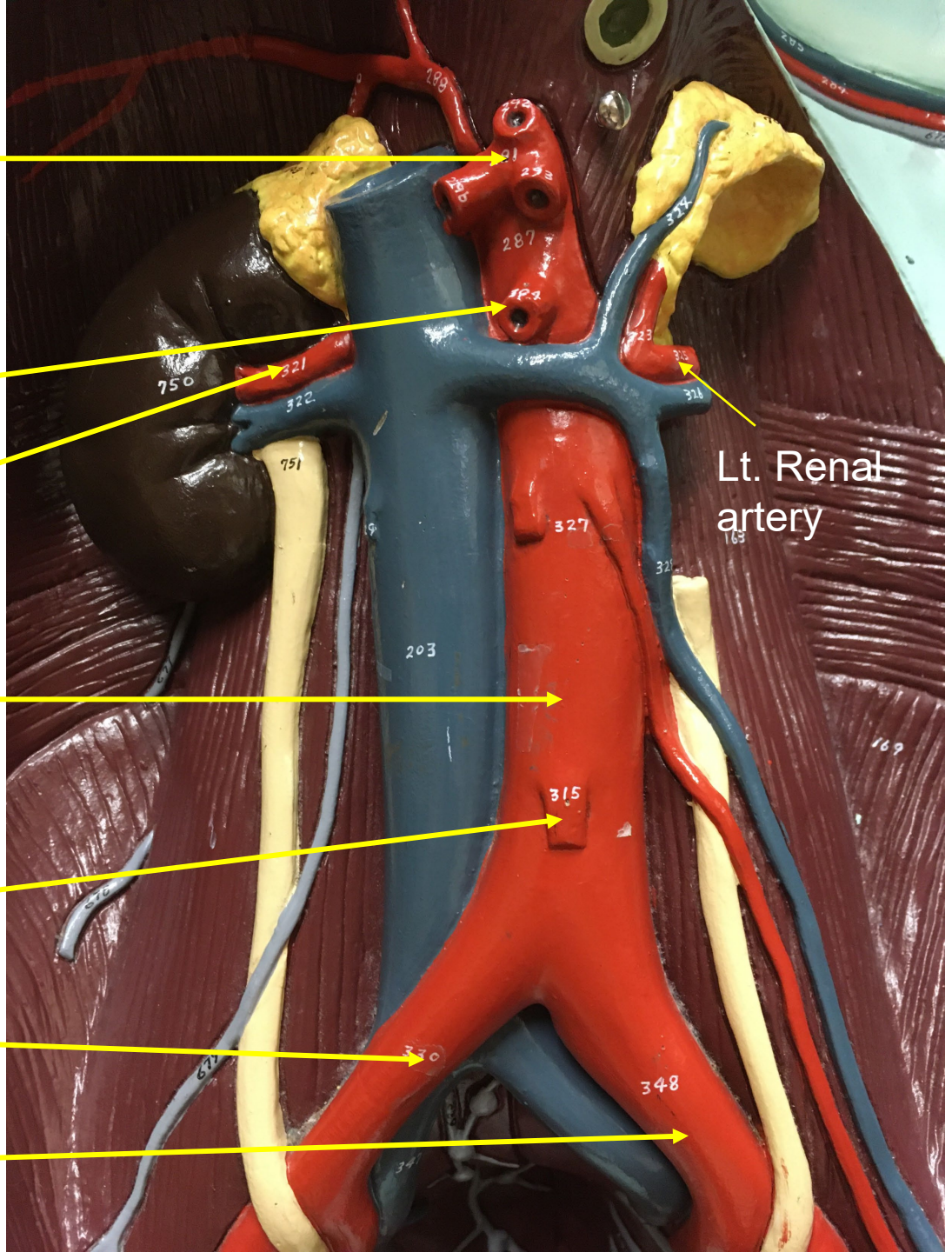
Lt. Renal artery

Abdominal aorta

Inferior mesenteric artery

Rt. Common Iliac artery

Lt. Common Iliac artery



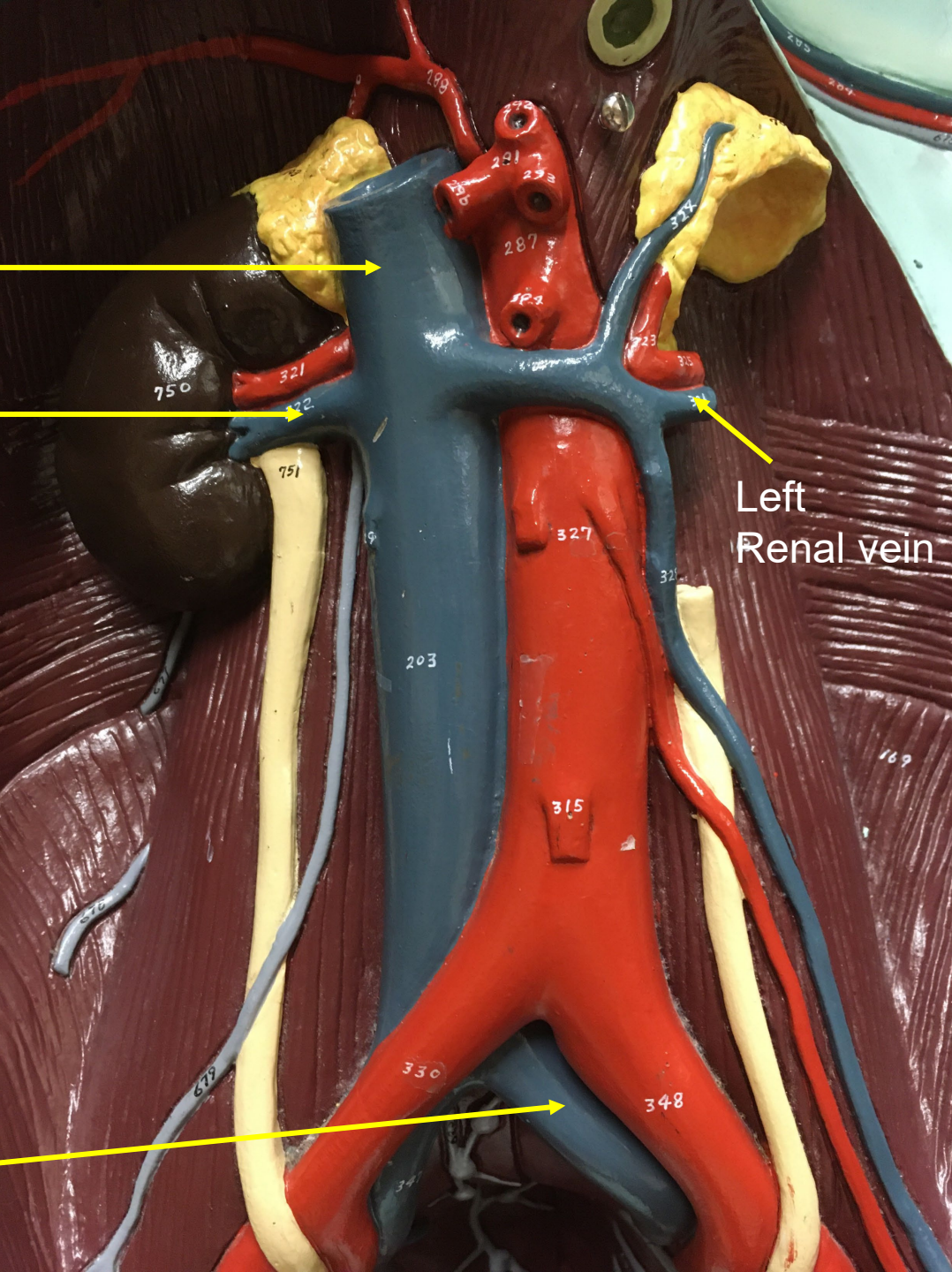
Identify the Veins
Abdominal
Region

Inferior
Vena
Cava

Rt. Renal vein

Left
Renal vein

Lt. Common Iliac vein



Identify the Veins Abdominal Region

Rt. Common
Iliac vein

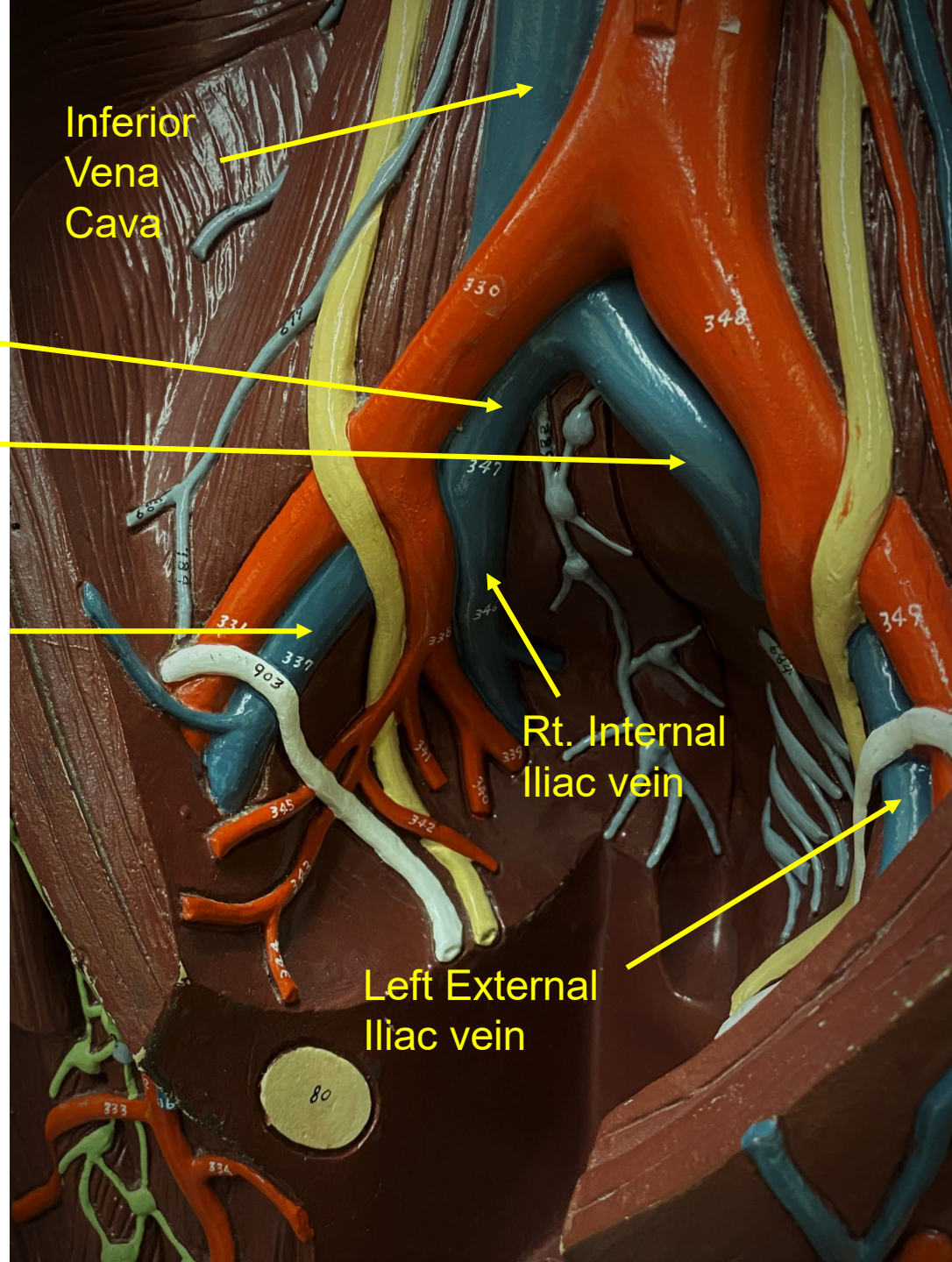
Left Common
Iliac vein

Right External
Iliac vein

Inferior
Vena
Cava

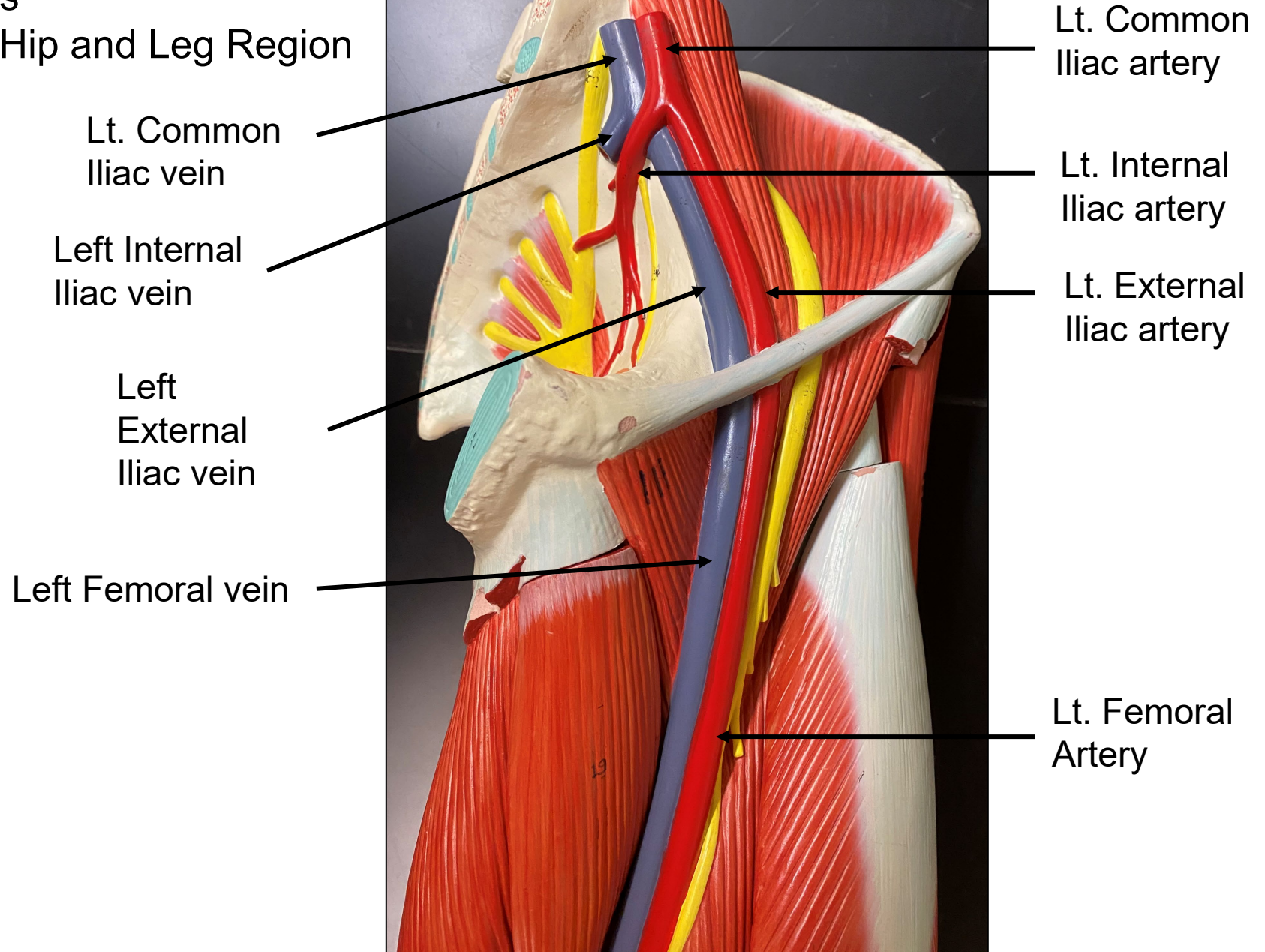
Rt. Internal
Iliac vein

Left External
Iliac vein

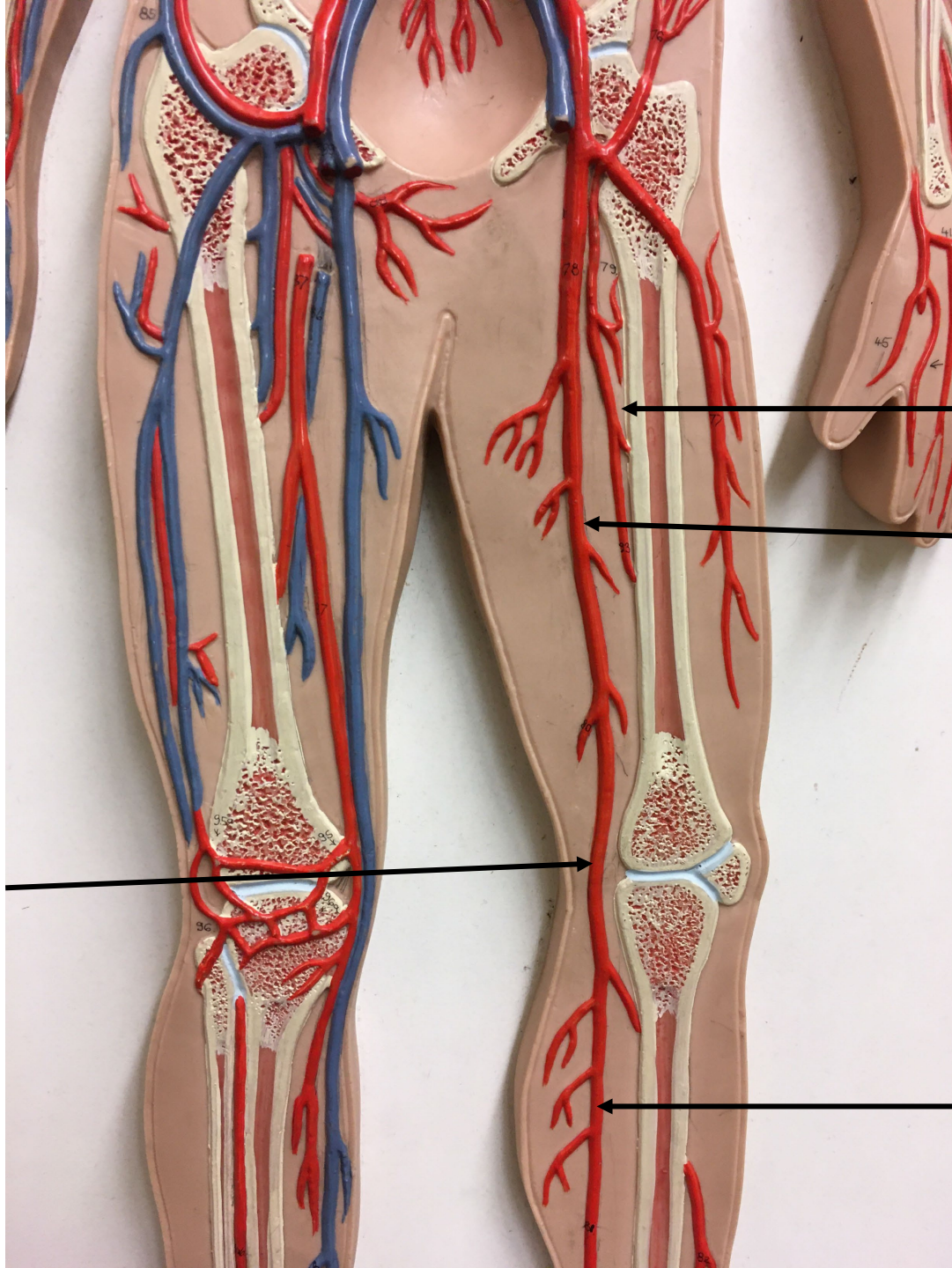


Identify the Arteries and Veins

Left Hip and Leg Region



Identify the
Arteries
Hip and Legs



Lt. Deep
Femoral
artery

Lt. Femoral
artery

Rt. Popliteal artery

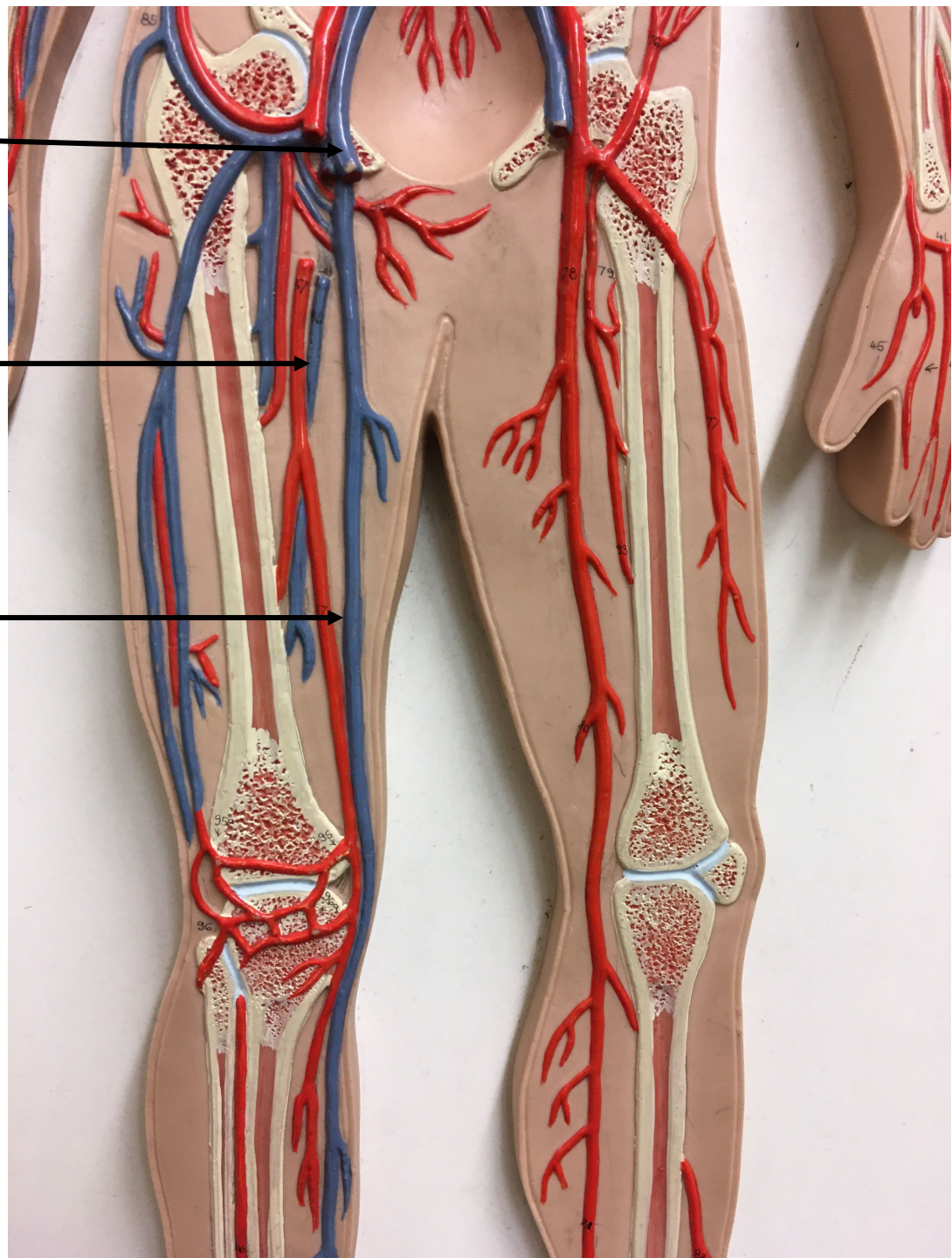
Lt. Posterior
Tibial artery

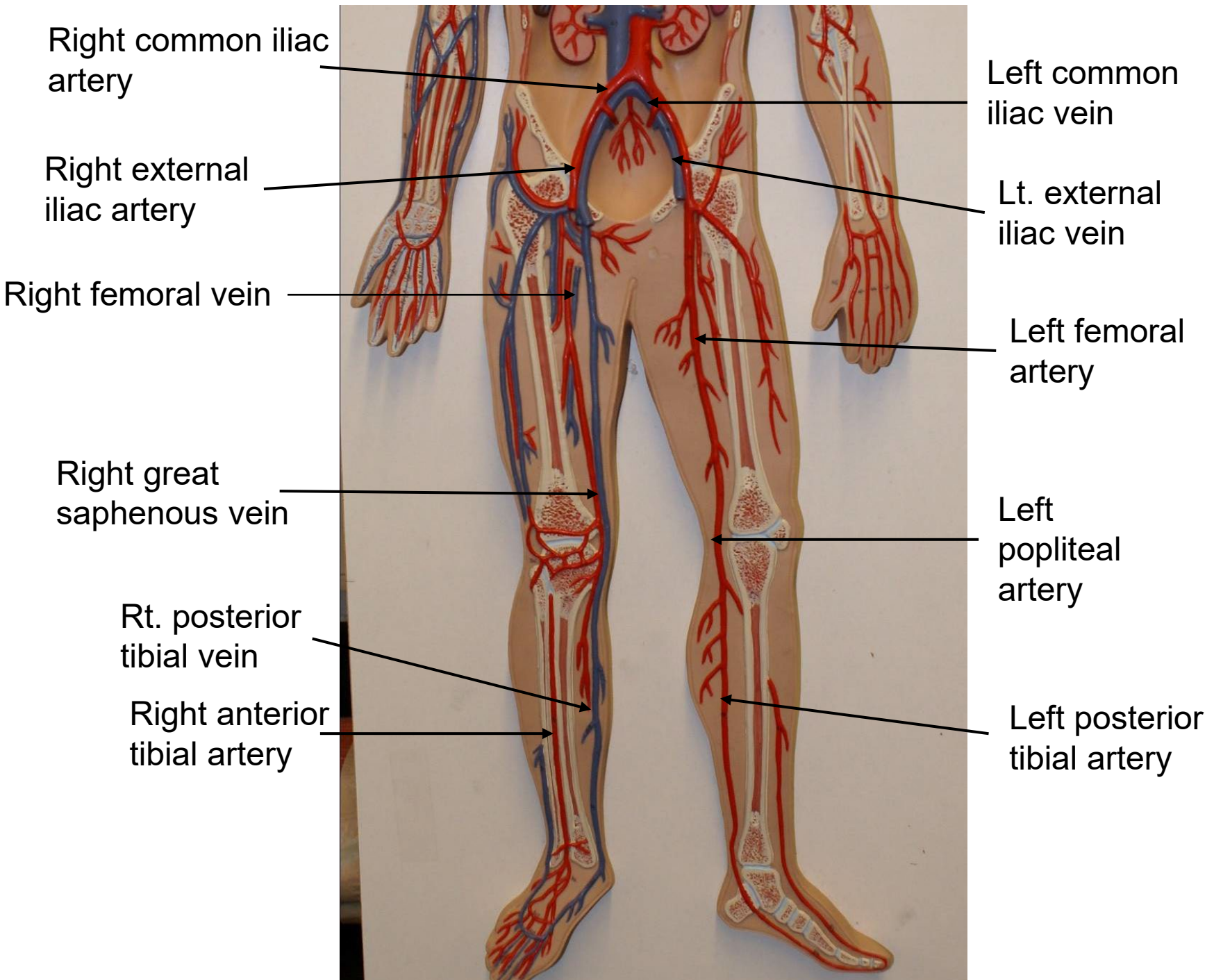
Identify the Veins Lower Legs

Rt. Femoral vein

Rt. Deep
Femoral vein

Right great
saphenous vein





Right common iliac artery

Left common iliac vein

Right external iliac artery

Lt. external iliac vein

Right femoral vein

Left femoral artery

Right great saphenous vein

Left popliteal artery

Rt. posterior tibial vein

Left posterior tibial artery

Right anterior tibial artery

Practice:
Print this figure
and identify the
major arteries and
veins

