The intercostal nerves, arteries and veins are positioned deep to the internal intercostal muscles. The intercostal nerves are positioned inferior to the ribs. The intercostal veins and arteries are positioned directly inferior to the ribs. The descending (thoracic) aorta is positioned to the left (lateral) of the vertebral bodies. The inferior vena cava is positioned to the right of the descending aorta.
The internal thoracic artery is positioned posterior (deep) to the first six costal cartilages. The right posterior intercostal arteries pass anterior to the vertebral bodies.
The left phrenic nerve passes anterior to the root of the left lung. The left phrenic nerve is positioned lateral to the pericardial sac. The left phrenic nerve passes lateral to the ascending aorta. The right phrenic nerve is positioned lateral to the superior vena cava. The right phrenic nerve is positioned lateral to the pericardial sac. The right phrenic nerve passes anterior to the root of the right lung.
The arch of the aorta passes superior to the pulmonary trunk.
The left vagus nerve passes directly lateral to the arch of the aorta.
The left recurrent laryngeal nerve passes posterior to the ligamentum arteriosum.
The left recurrent laryngeal nerve passes directly inferior to the arch of the aorta.
The left vagus nerve passes posterior to the left main bronchus.
The right vagus nerve is positioned lateral to the trachea.
The right vagus nerve passes posterior to the right main bronchus.
The right posterior intercostal arteries pass anterior to the vertebral bodies.
The sympathetic chain is positioned lateral to the thoracic vertebral bodies.
The right vagus nerve passes medial to the arch of the azygos vein.
At the hilum of the right lung, the pulmonary arteries are positioned anterior to the main bronchus.
At the hilum of the right lung, the pulmonary vein(s) are positioned anterior and inferior to the pulmonary arteries.
At the hilum of the left lung, the pulmonary artery is positioned superior to the main bronchus.
At the hilum of the left lung, the pulmonary veins are positioned anterior and inferior to the main bronchus.
The superior vena cava is positioned lateral (right) to the ascending aorta.
The transverse pericardial sinus is positioned posterior to the ascending aorta.
The transverse pericardial sinus is positioned posterior to the pulmonary trunk.
The left atrium of the heart is positioned posterior to the ascending aorta and the conus arteriosus.
The left ventricle of the heart is positioned posterior and to the left of the right ventricle.
The right atrium of the heart is positioned to the right of the ascending aorta. The right atrium of the heart is positioned to the right of the right ventricle.
The esophagus is positioned posterior to the trachea.
The esophagus passes posterior to the left main bronchus.
The descending (thoracic) aorta passes posterior to the left main bronchus.
The descending (thoracic) aorta is positioned posterior to the pericardial sac.
The esophagus is positioned posterior to the pericardial sac.
Near the diaphragm, the esophagus is positioned anterior to the thoracic aorta.
The greater splanchnic nerve is positioned anterior – medial to the sympathetic chain.
The thoracic duct is positioned anterior to the thoracic vertebral bodies.