The superior intercostal veins arise lateral to the vertebral column from the union of the upper intercostal veins. On the right the second to fourth posterior intercostal veins unite to form the superior intercostal vein. It descends anterior to the rib heads to drain into the arch of the azygos vein. On the left the second and third (and sometimes fourth) posterior intercostal veins unite to form the superior intercostal vein. It ascends obliquely across the left part of the arch of the aorta with the left vagus nerve (X cranial nerve) medial and left phrenic nerve lateral. It drains into the left brachiocephalic vein and is continuous with the accessory hemiazygos vein inferiorly. It receives the left bronchial veins.