The lumbar azygos vein is part of the azygos system and arises from the posterior aspect of the inferior vena cava at or below the level of the renal veins. Inconstant in is origin and level of anastomoses, the lumbar azygos vein ascends anterior to the upper lumbar vertebral bodies passing behind the median arcuate ligament or often piercing the right crus of the diaphragm to become the azygos vein.

The lumbar azygos vein together with drainage from the right ascending lumbar and subcostal veins forms the inferior part of the azygos vein.