



THE AZYGOS SYSTEM

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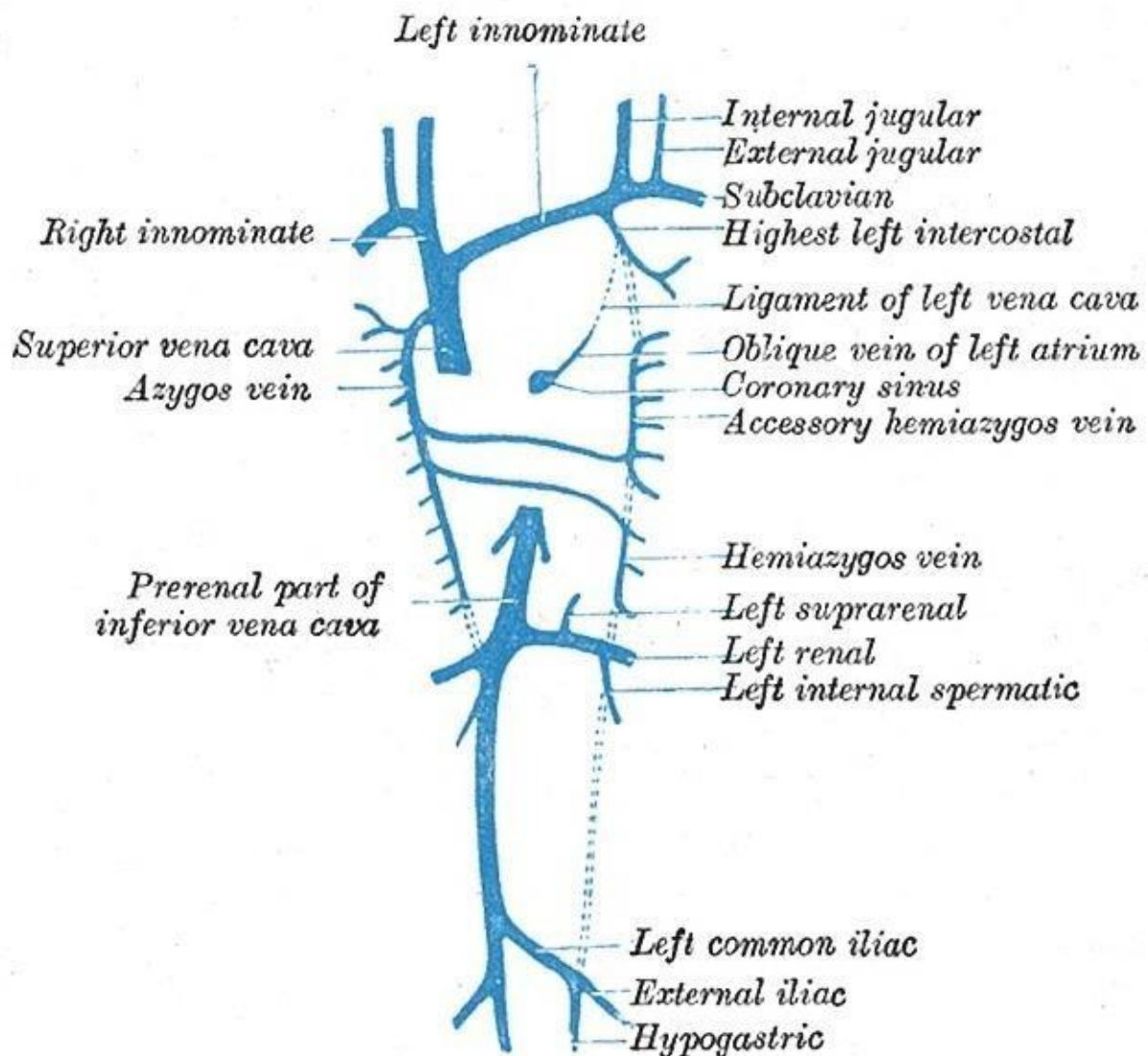
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I – INTRODUCTION:

- The azygos system is a venous network composed of:
 - On the right, the azygos vein;
 - On the left, the inferior hemiazygos vein and the accessory hemiazygos vein, also known as the superior hemiazygos vein.
- Its main tributary is the great azygos vein.



II – AZYGOS VEIN:

1. Origin:

It arises in the posterior infra-mediastinal space, at the level of T11, from the junction of its two intercostal roots.

- The external root is constant and formed by the union of the right ascending lumbar vein and the 12th right intercostal vein.
- The internal root is inconstant.

2. Course :

- It ascends vertically in the posterior mediastinum, to the right of the midline.
- At the level of the second intercostal space, it curves forward to form the arch of the azygos vein, then enters the thorax and runs along the right lateral surfaces of the vertebral bodies.

3. Termination :

It terminates at the lower part of the posterior surface of the superior vena cava, at the level of the fourth thoracic vertebra.

4. Dimensions :

- Its length ranges from 20 to 25 cm.
- Its diameter is approximately 4 mm at its origin and 10 mm at its termination.

5. Anatomical relations :

From its origin to its arch, the azygos vein is related to the following structures:

- **On the left:** the thoracic duct, and further anteriorly, the aorta.
- **On the right:** the right mediastinal pleura and the right pulmonary pleura.
- **Posteriorly:** the thoracic vertebral column and the right intercostal vessels.
- **Anteriorly:** the root of the right lung.
- **On the left:** the oesophagus and the right vagus nerve.

6. Tributaries :

The azygos vein receives the following tributaries:

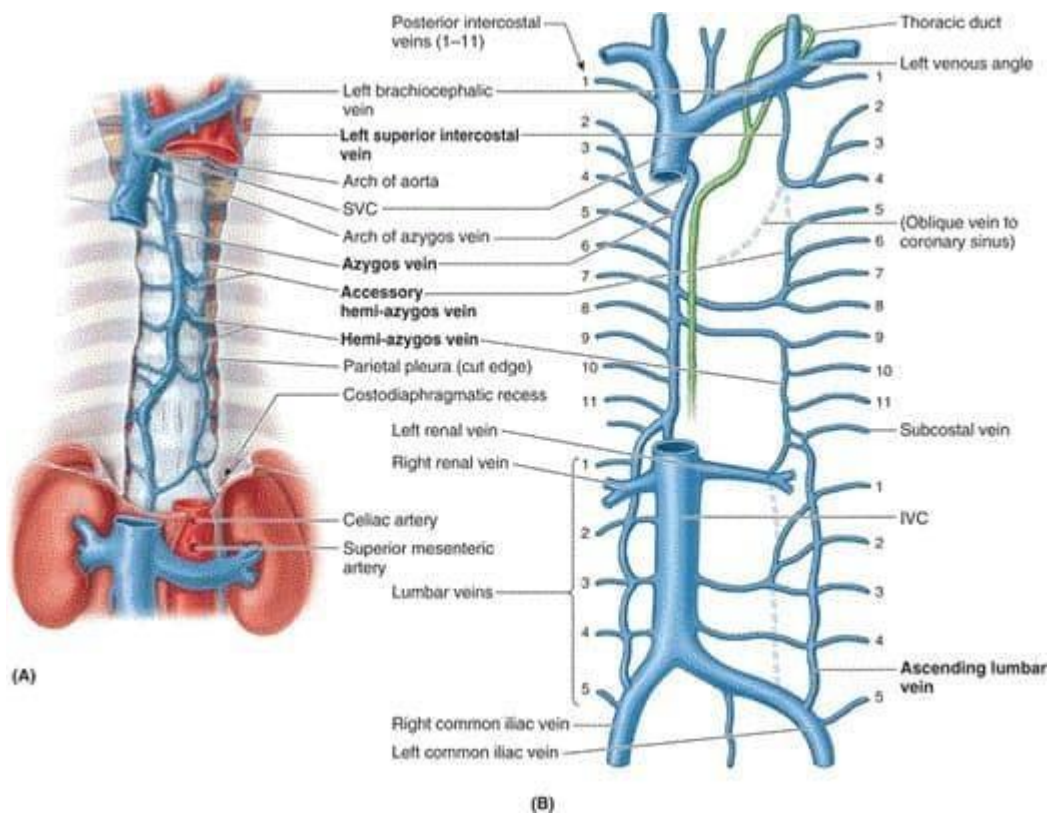
- Oesophageal veins,
- Bronchial veins,
- Superior phrenic veins,
- Intercostal veins,
- The right superior intercostal vein,
- The hemiazygos vein.

III – HEMIAZYGOS VEIN:

- It originates in the abdomen, as the hemiazygos vein continues from the left ascending lumbar vein.
- It enters the thorax through the left crus of the diaphragm and ascends along the left side of the thoracic vertebrae.
- It then curves to the right and passes behind the aorta and the thoracic duct.
- It receives the last four left posterior intercostal veins, as well as oesophageal and mediastinal veins.

IV – ACCESSORY HEMIAZYGOS VEIN:

- It descends along the left side of the upper thoracic vertebrae, and at the level of the seventh thoracic vertebra, it curves to the right, passing behind the aorta and the thoracic duct to terminate in the azygos vein.
- It receives the first six or seven left posterior intercostal veins, as well as the left bronchial veins.



V- CONCLUSION:

The azygos system forms an anastomotic network between the superior and inferior venae cavae. It includes:

- The azygos vein,
- The inferior hemiazygos vein,
- The accessory hemiazygos vein.