

# Segmental anatomy

## Segmental anatomy

The liver is divided into functional right and left 'units' along the line between the gallbladder fossa and the middle hepatic vein (Cantlie's line). Understanding the internal anatomy of the liver facilitated safe liver surgery and Couinaud, a French anatomist, described the liver as being divided into eight segments ( Figure 69.1 ). Each segment can be considered a functional unit supplied by a branch of the hepatic artery , portal vein and bile duct, and drained by a hepatic vein tributary; this concept facilitates 'anatomical' liver resection. Liver segments V-VIII to the right of Cantlie's line are supplied by the right hepatic artery and the right branch of the portal vein and biliary drainage is via the right hepatic duct. To the left of Cantlie's line segments, I-IV are supplied by the left hepatic artery and left portal vein and drain via the left hepatic duct. Resections of individual segments, the whole of the left or the right hemiliver or combinations are possible.

Right hepatic artery Cystic artery Gastroduodenal artery Figure 69.2 Anatomy of the liver hilum.

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