The liver is a large, wedge-shaped organ molded to the underside of the diaphragm and resting upon the upper abdominal viscera. Its diaphragmatic surface is divided into a pars inferior (which includes the cardiac impression), a pars anterior (which extends beyond the diaphragm onto the anterior abdominal wall), a pars anterior and a pars posterior (attached to the diaphragm by the coronary ligament). The biliary of the anterior aspect and visceral surface is the inferior margin. Its consistence, sharpness of edge, smoothness of surface and movement upon respiration provide clinical information. On laparotomy the inferior margin and the anterior aspect are first exposed. Otherwise, the hepatic surfaces are not separated by distinct margins.

The liver is covered by peritoneum, except for the gallbladder bed, the porta, adjacent parts surrounding the inferior vena cava, and a space to the right of the vena cava inferior called “bowl area”, which is in contact with the right suprarenal gland (suprarenal impression) and the right kidney (renal impression). The biliary duodenum, which extend from the anterior abdominal wall and from the diaphragm to the organ, form the ligaments of the liver, which, formerly, were thought to maintain the liver in its position but probably add little to its fixation. It is now held that the liver is kept in place by intraperitoneal pressure. The diaphragmatic portal vein duplication is the coronary ligament, the upper layer of which is exposed if the liver is pulled away from the diaphragm. The right free lateral margin of the coronary ligament forms the right triangular ligament, whereas the left triangular ligament surrounds and merges with the left tip of the liver, the appendix fibrosa hepatitis. Over the right lobe the space between the upper and lower layers of the coronary ligament is filled with areolar connective tissue. Below the insertion of the lower layer of the right coronary ligament, the hepatoral space extends behind the liver.

From the middle portion of the coronary ligament originates another portal vein duplication, the falciform ligament, which extends from the liver to the anterior abdominal wall between the diaphragm and the umbilicus. Its insertion on the liver divides the organ into a right and left lobe. As the falciform ligament crosses the inferior margin of the liver it releases the ligamentum teres (the obliterated left umbilical vein) which then enters a fissure on the visceral surface of the liver. Infinitely, this fissure of the ligamentum teres separates the quadrate lobe from the left lobe of the liver. Beyond the porta hepatitis it is continued superiorly as the fissure of the ligamentum venosum (the obliterated ductus venous of the fetus). The two fissures may be regarded as the left limit of an H-shaped pattern characteristic of the visceral surface of the liver. The right limit is formed by the gallbladder fossa and the umbilicus of the vena cava inferior. The horizontal limit is marked by the portal ductus, which contains the common hepatic duct, hepatic artery, portal vein, lymphatics and nerves. The quadrate lobe, between the gallbladder and the fissure for the umbilical vein, is in contact with the pylorus and the first portion of the duodenum (fornix duodeni). Above the porta hepatitis lies the cardiac lobe between the fissure for the ligamentum venosum and the vena cava inferior, its caudal projection being the papillary process. The visceral surface of the liver reveals further impressions of the organs with which it is in contact: the impressions for the colon and the right kidney, and on the left the impressions for the esophagus and the stomach. The superior surface is related to the diaphragm and forms the domes of the liver.