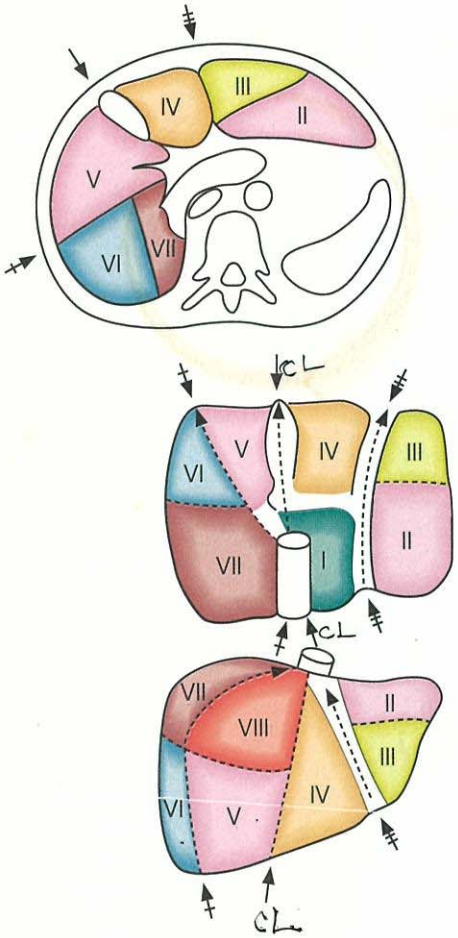
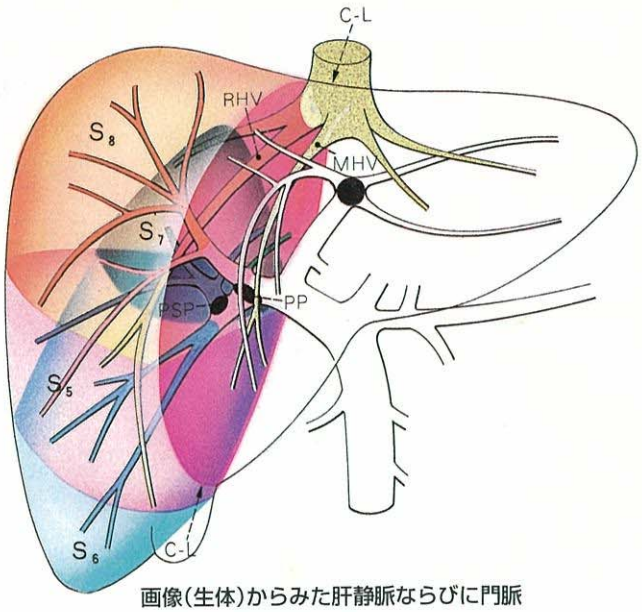
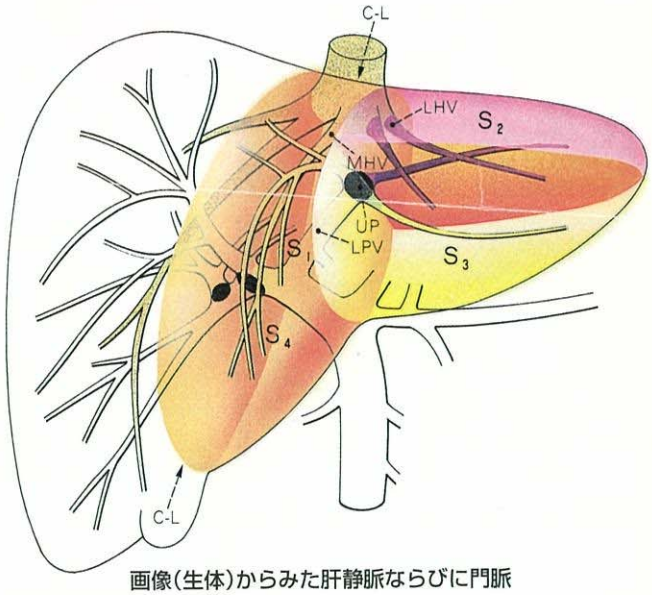
肝区域解剖（Couinaudによる）



尾状葉 ——— I
肝左葉外側区域 { 後外側区域 — II / 前外側区域 — III
肝左葉内側区域 ——— IV
肝右葉 { 前区域 { 前上区域 — VIII / 前下区域 — V } / 後区域 { 後上区域 — VII / 後下区域 — VI }



画像（生体）からみた肝静脈ならびに門脈と肝右葉の区域（S5 - S8）



画像（生体）からみた肝静脈ならびに門脈と肝左葉の区域（S1 - S4）

（打田日出夫編著：肝・胆・膵，医学書院，1984より）

C-L　Cantlie line　カントリー線
LHV　left hepatic vein　左肝静脈
LPV　left portal vein　門脈左枝
MHV　middle hepatic vein　中肝静脈
PP　posterior portion（portal vein）　後部（門脈）
PSP　posterior superior portion（portal vein）　後上部（門脈）
RHV　right hepatic vein　右肝静脈
UP　umbilical portion（portal vein）　臍部（門脈）

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Vessel and Duct Distribution, Liver Segments

The intrahepatic distribution of vessels and bile ducts was successfully studied on casts prepared by injecting a chemically impregnable plastic into the vascular and biliary conduits before removing the tissue by corrosive agents. The knowledge thus obtained proved to be a valuable asset for the cholangiographic demonstration of the vascular apparatus in vivo but was also of more than theoretical interest in view of the recognition of segmental divisions, similar to those in the lungs, which opened up the possibility of partial hepatectomy or the excision of single metastatic nodules. Although the human liver, in contrast to the liver of some animals, fails to display surface lobulation, the parallel course of the branches of the hepatic artery, portal vein and bile ducts and the appearance of clefts in these preparations of vessels and ducts pointed to a distinct lobular composition. A major lobar fissure extends obliquely downward from the fossa for the inferior vena cava (see page 5) to the gallbladder fossa, which does not coincide with the surface separation between the right and left lobes running along the insertion of the falciform ligament and the fossa for the ductus venosus. Through this fissure extends one of the main trunks of the hepatic vein, the tributaries of which never follow the distribution of the other vessels but cross the portal vein branches in an interdigitated fashion.

Each lobe is partitioned by a segmental division and is drained by a lobar bile duct of the first order. The right division extends obliquely from the junction of the anterior and posterior surfaces downward toward the lower border of the liver and continues on the inferior surface toward the porta, dividing the *right lobe* into an *anterior* and a *posterior segment*, each of which is drained by a bile duct of the second order. The left segmental cleft runs on the anterior surface along the attachments of the falciform ligament and on the visceral surface through the fissure of the ligamentum teres and ligamentum venosum. This fissure divides the *left lobe* into a *medial* and a *lateral segment*, but in a significant number of cases it is crossed by bile ducts and vessels. The lateral segment corresponds to the classical descriptions of the left lobe, whereas the aspect of the medial segment on the visceral liver surface corresponds to the quadrate lobe. The four bile ducts of the second order fork into those of the third order, which drain either the superior or the inferior area of the corresponding segments. Thus, the bile ducts and the accompanying vessels can be designated according to the lobes, segments and areas to which they belong. The anatomically distinct *caudate lobe* has a vascular arrangement which divides it into a *left portion* drained by the left and a *right portion* drained by the right lobar duct. The *caudate process*, connecting the caudate lobe with the right lobe of the liver, has a separate net of vessels, which, in the majority of cases, communicates with branches of the right lobar duct. Neither the caudate lobe nor other parts of the liver provide an effective communication between the right and left lobar duct systems. Intrahepatic anastomoses between intraparenchymal branches of the arteries also have not been found, but in one fourth of the cases interconnections between the right and left systems exist through small extrahepatic or subcapsular anastomosing vessels.

The distribution of draining bile ducts and afferent blood vessels, as described and pictorialized in a schematic fashion, is valid in the majority of instances, but individual variations are met in abundance. They concern, especially, the lateral superior vessels and ducts for the appendix fibrosa. Rudimentary bile ducts are frequent in this region. The incidence of segmental bile duct variation is greater on the right, whereas that of segmental arteries is greater on the left side. Furthermore, the observations of several investigating groups are, in some respects, still at variance. The above description, as well as the illustration, follows Healey's account, which is based on the most extensive material.