# Liver

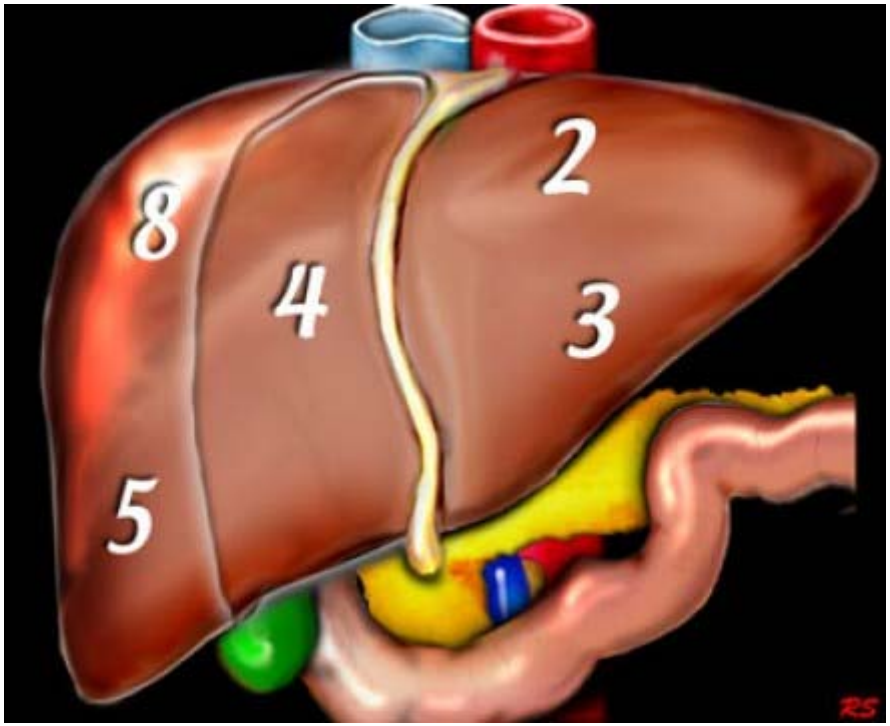
Anatomy

Histology

Developmental anomalies

# ANATOMY

- Anatomic lobes –
- Right, left, caudate, and quadrate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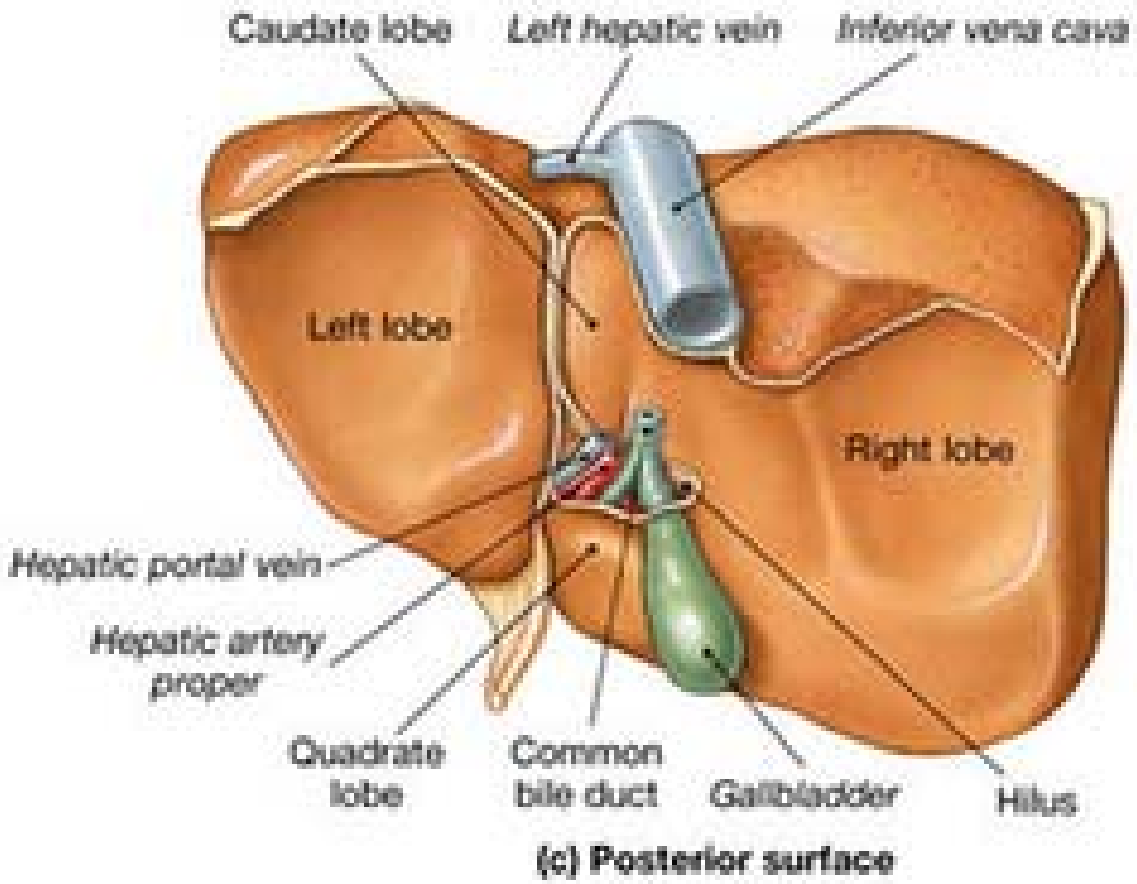
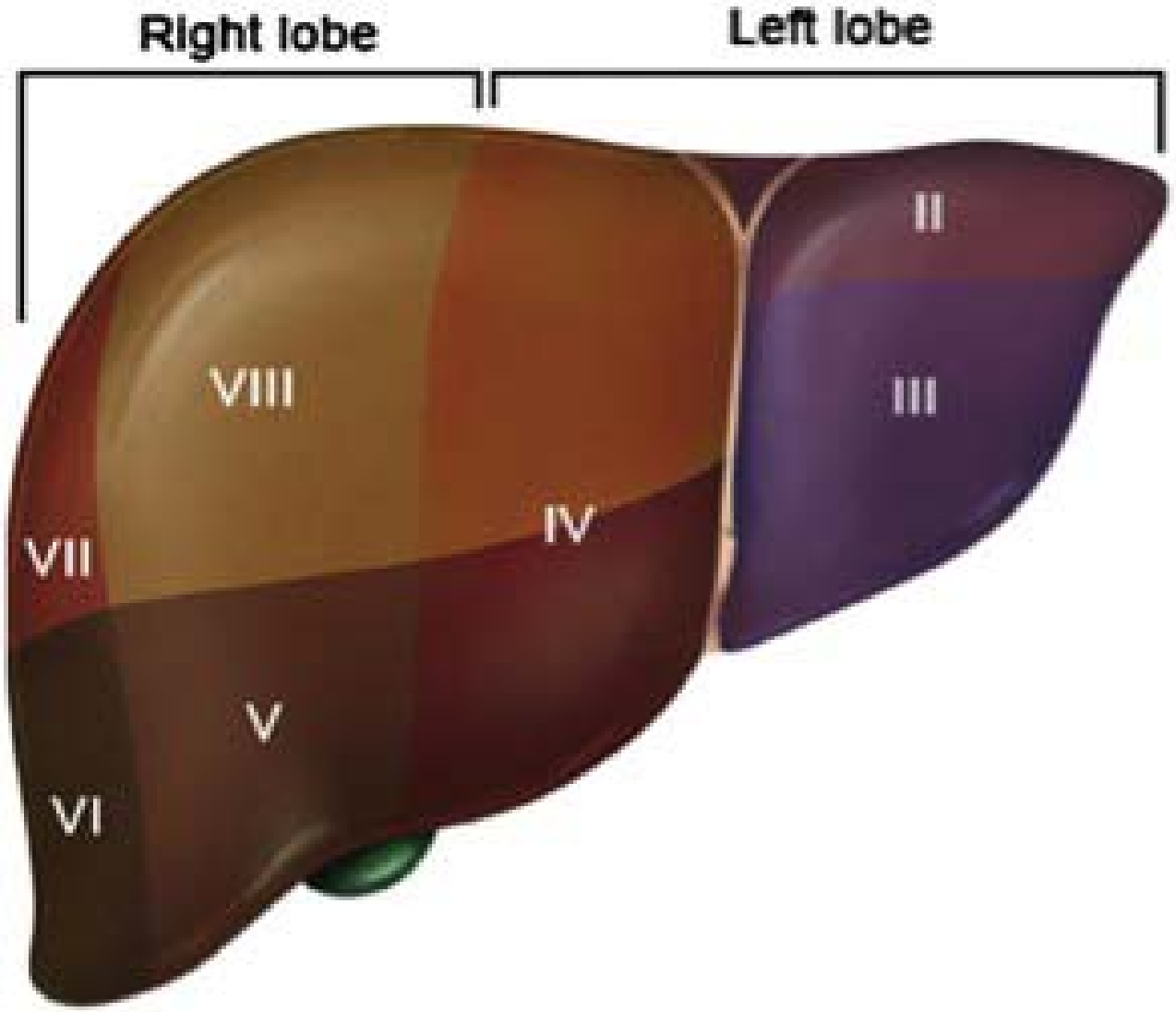



(c) Posterior surface

# TRUE/Functional lobes-system of  Couinaud




**Cantlie’s line**

# Dual blood supply

Blood supply

- 70%- portal vein
- 30% -hepatic artery

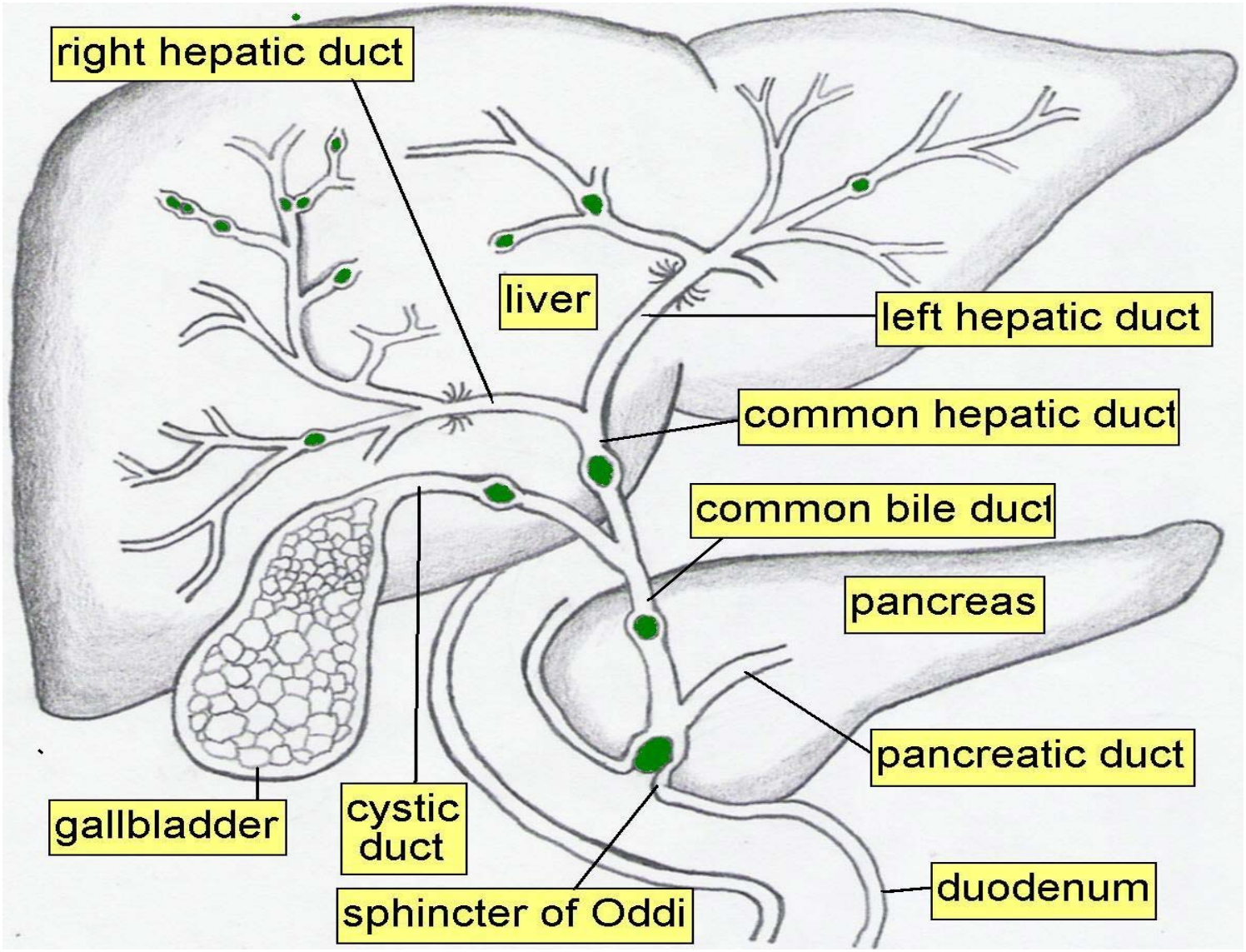
Oxygen

- 40% portal vein
- 60% hepatic artery

# Drainage

- Three major hepatic veins drain into the inferior vena cava

# Extrahepatic biliary tree

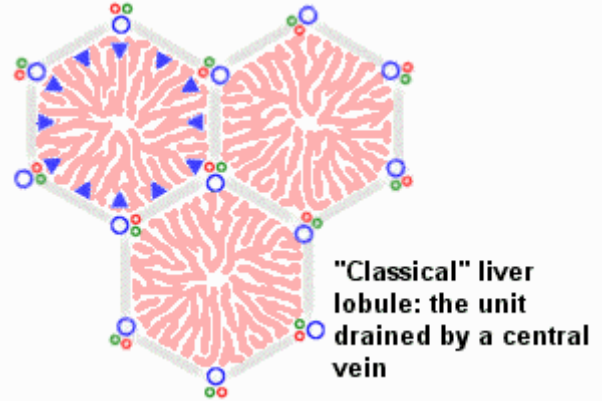


# HISTOLOGY

- Hepatocytes arranged in plates one or two cells thick, separated by sinusoids
- Hepatocytes appear as polygonal cells
- Portal tracts within the parenchyma contain a branch of the hepatic arteriole, portal vein, and bile duct running together as a triad and accompanied by nerve fibers and lymphatic vessels

- A perisinusoidal space, the space of Disse, remains between the sinusoidal lining and the vascular pole of hepatocytes and communicates with the sinusoidal space through multiple fenestrations

# ORGANIZATION OF LIVER PARENCHYMA



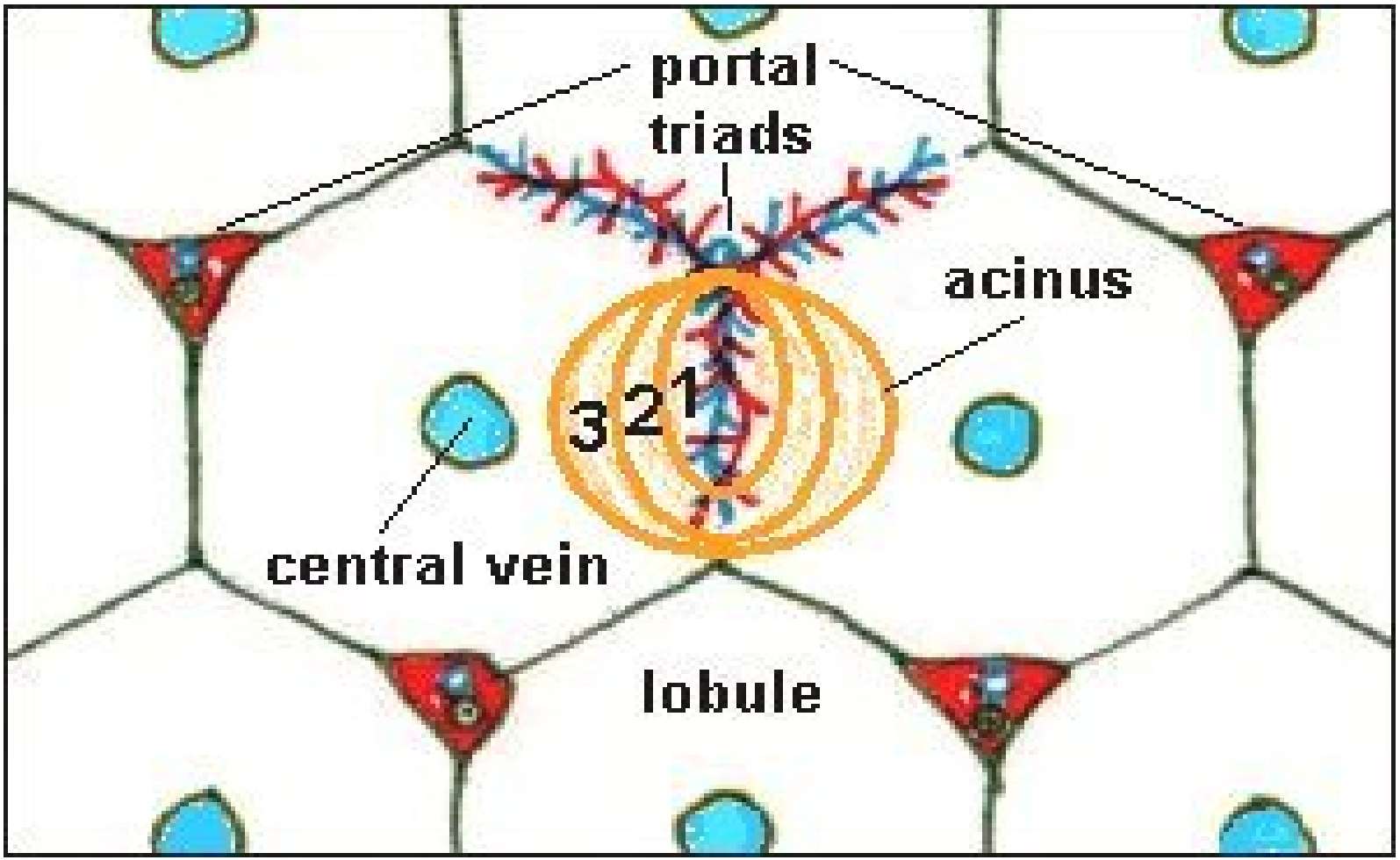
- The classic lobule of the liver - a hexagon with a central vein at its center and portal tracts at three corners

# Following three zones exist:

(1) the periportal zone, or zone 1, which is supplied by blood with high oxygen content;

(2) the intermediate zone (zone 2); and

(3) the perivenular zone (zone 3), which receives blood that is relatively low in oxygen content


portal
triads
acinus
3
2
1
central vein
lobule