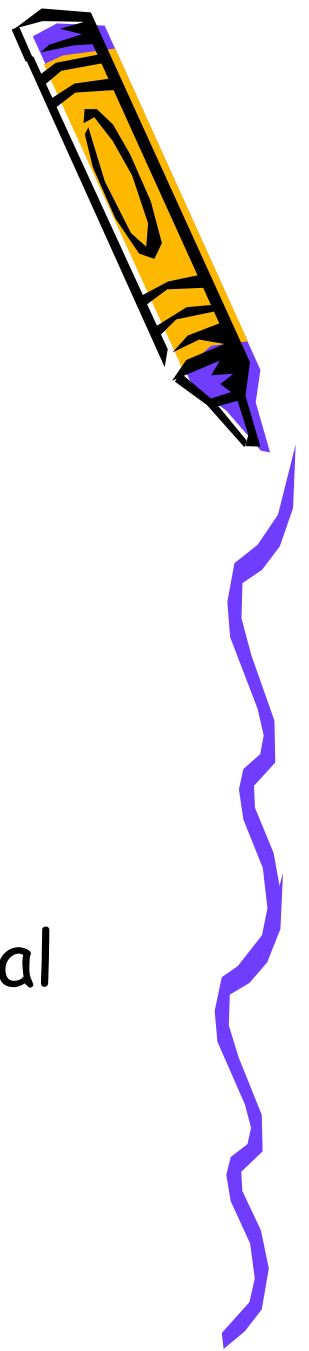




Segmental anatomy
of the liver

Prepared by :
Israa Ismail & Asma' Afaneh



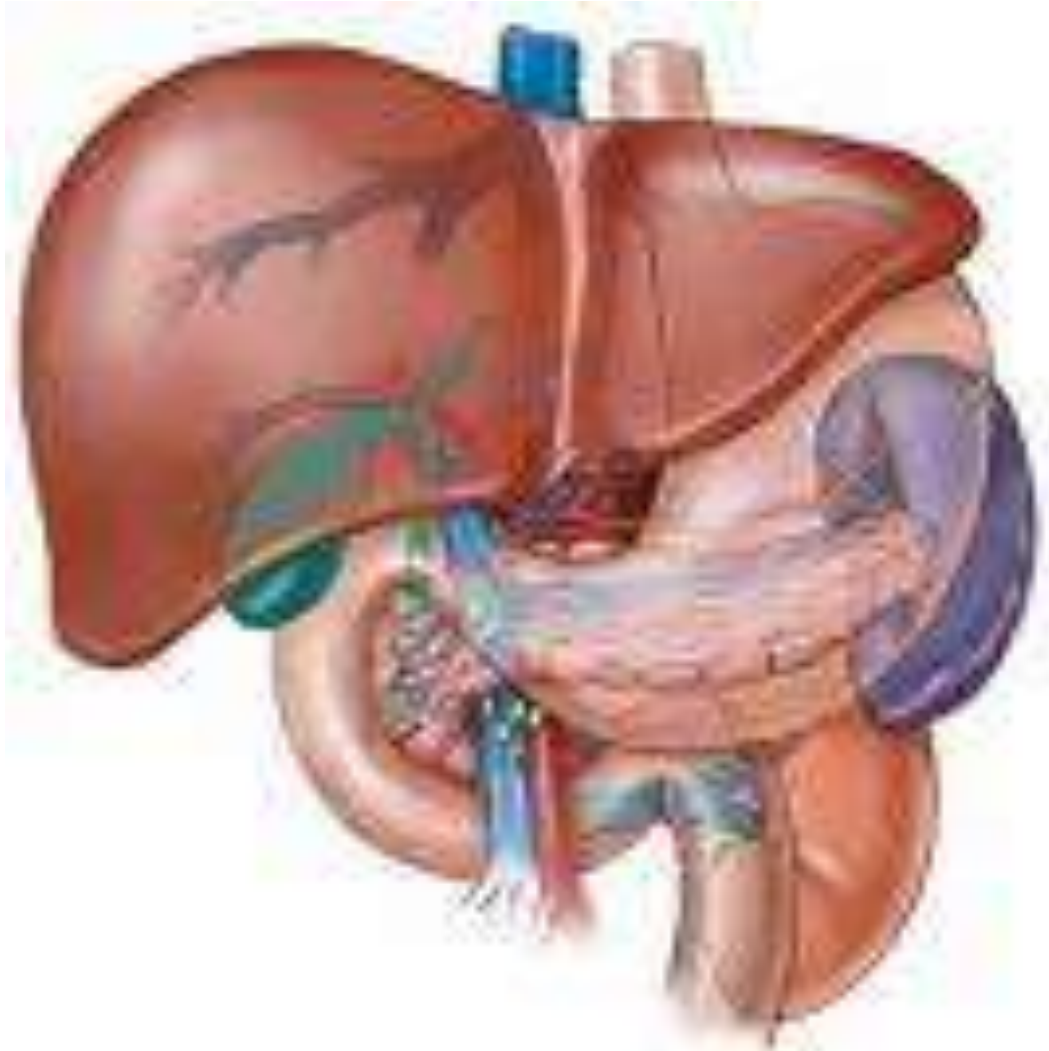


Objectives :

- _definition of the liver
- _locations
- _surfaces
- _hepatic lobules & blood supply
- _classical anatomy
- _functional anatomy
- _comparison between classical & functional anatomy of the liver



The liver

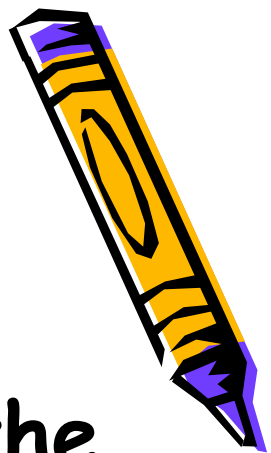


Facts

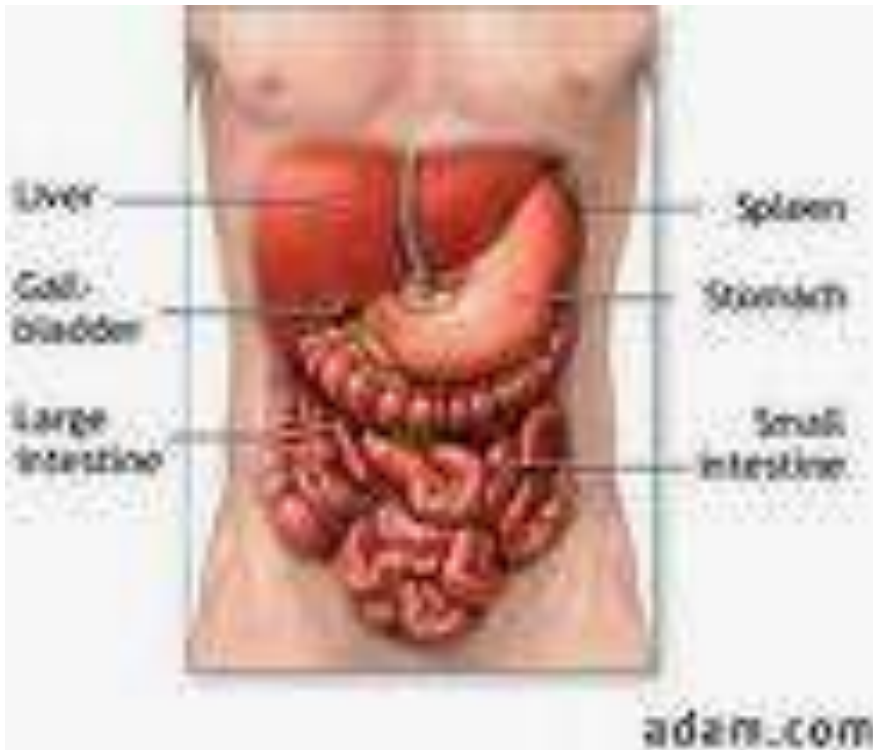
*The liver is the largest gland in the body ...

*It's the second largest organ after the skin ...

*It weighs about 1.5 kg...

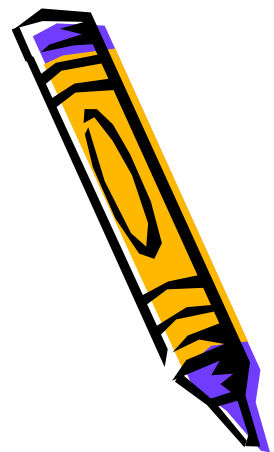


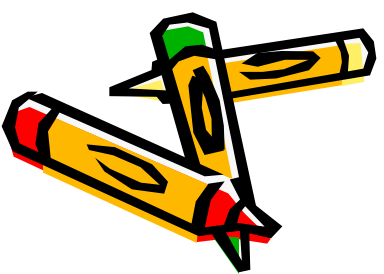
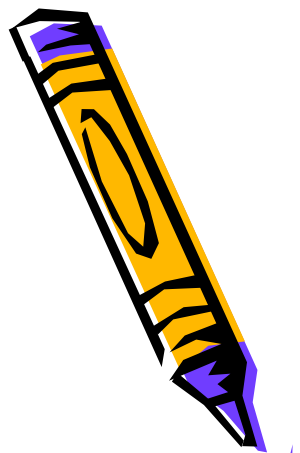
Location ...



- Occupies right hypochondrium + epigastrium ...

- May extends to left hypochondrium...



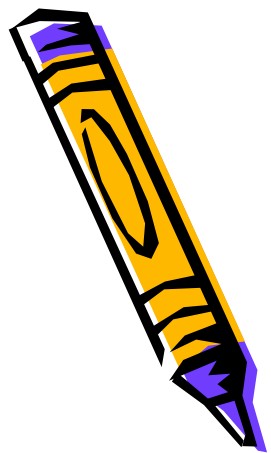


Surfaces...

The liver has two surfaces :

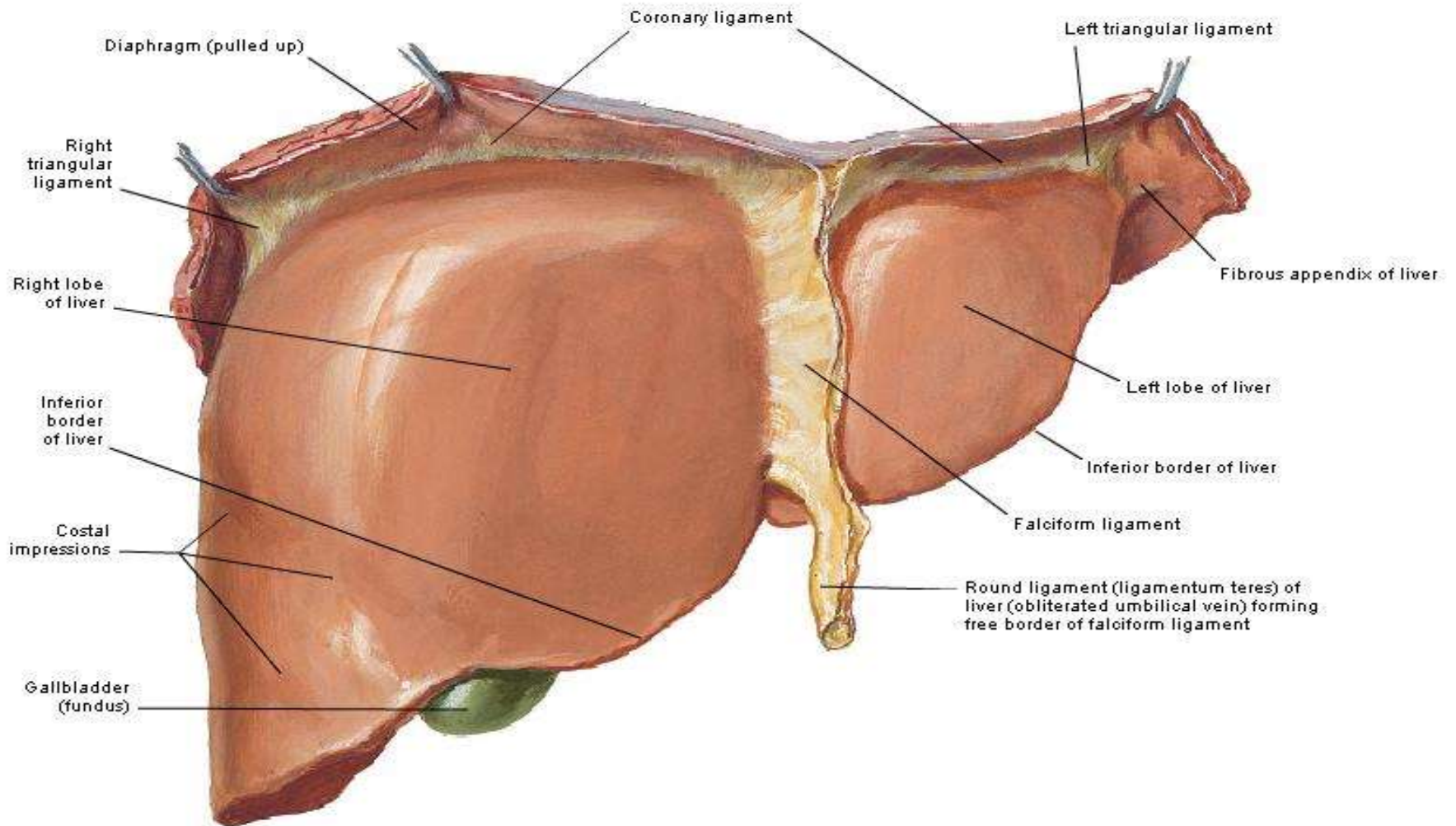
1-diaphragmatic surface

2-visceral surface



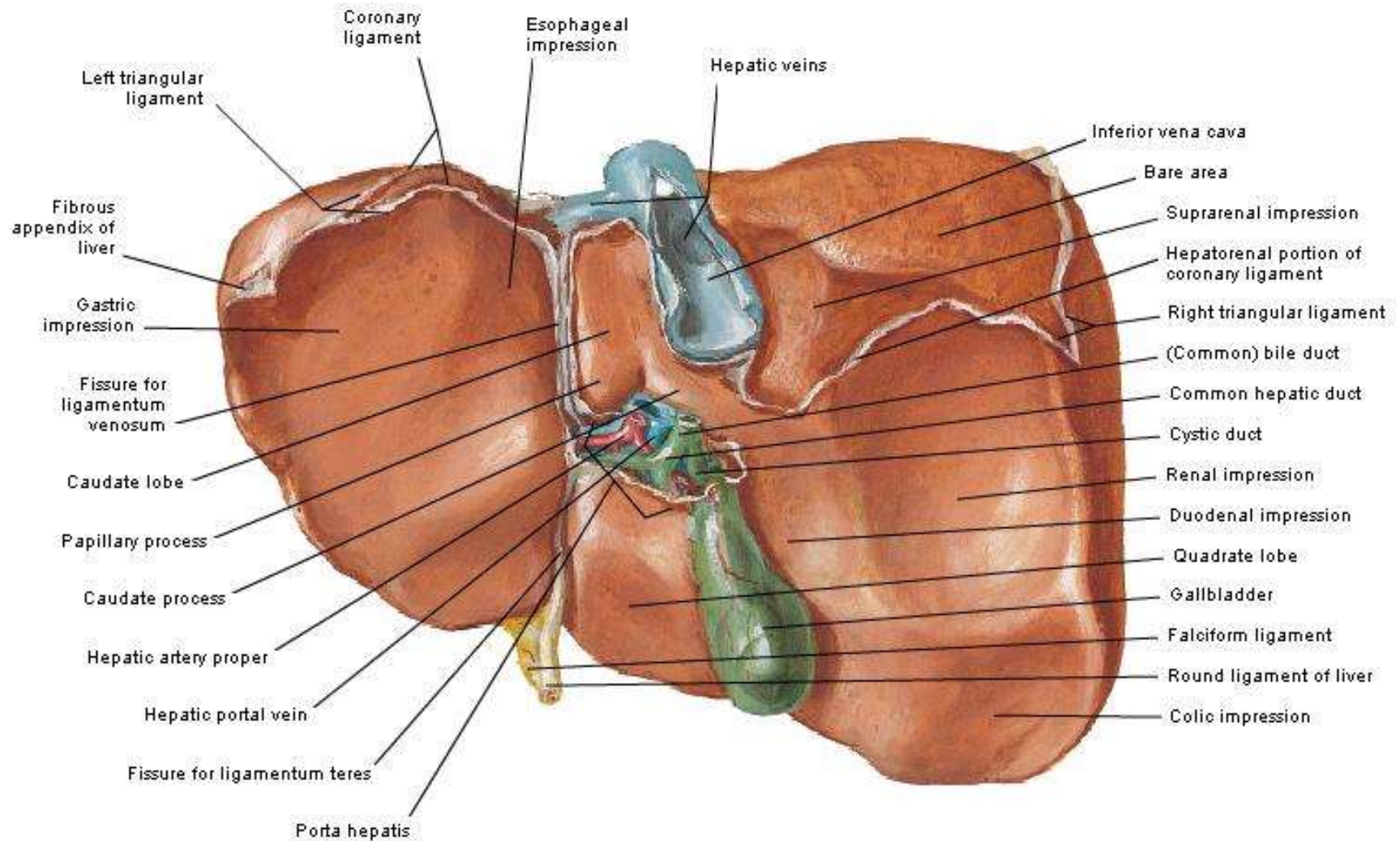
Surfaces and Bed of Liver

Anterior View

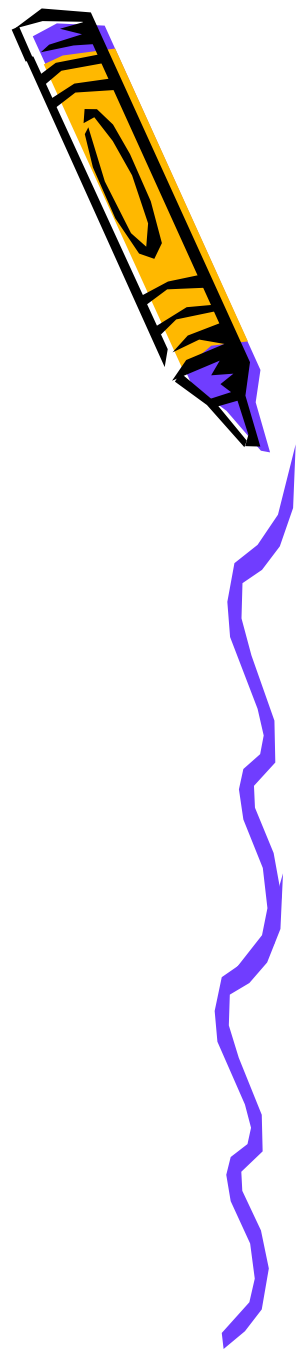


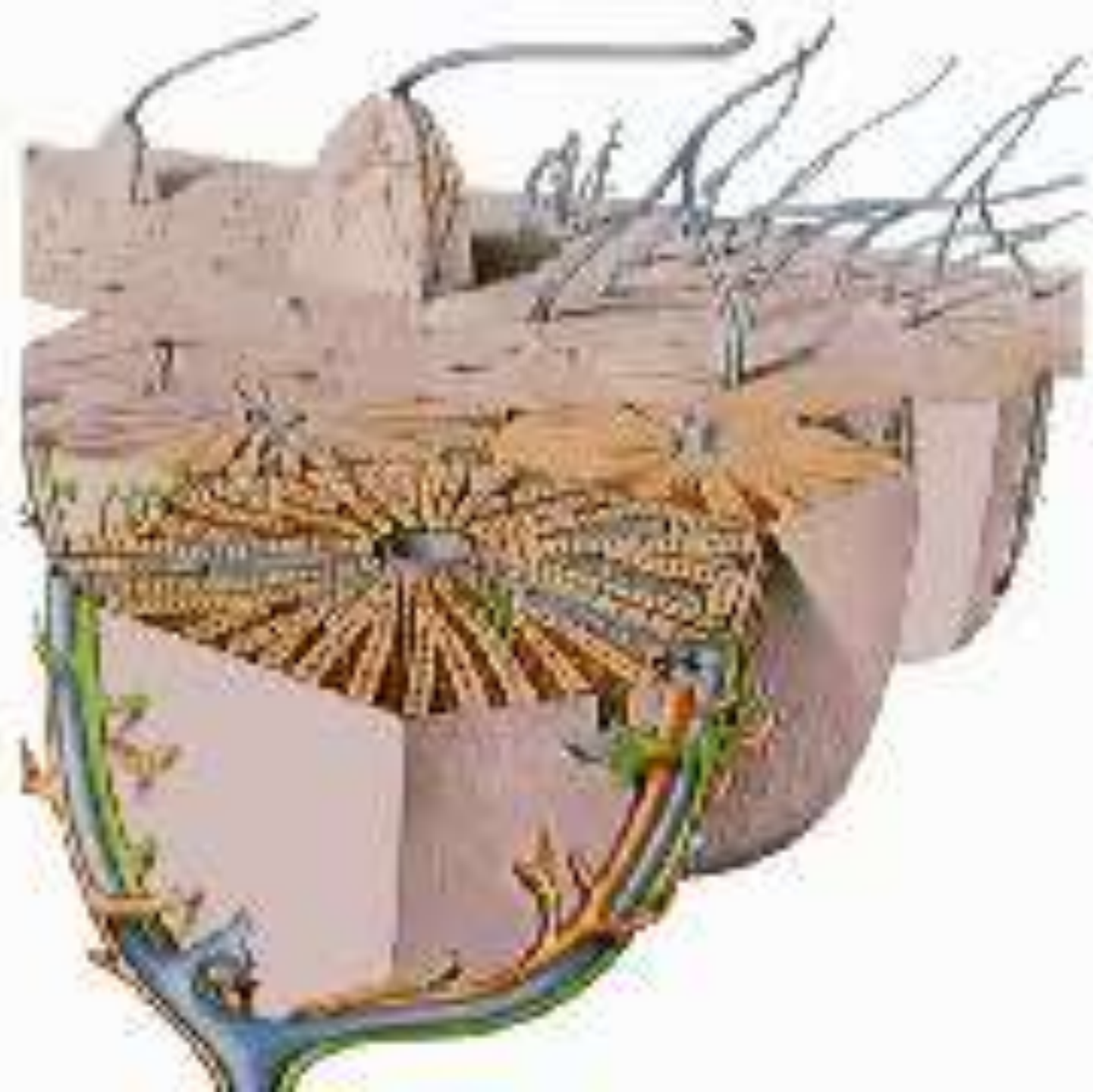
Surfaces and Bed of Liver

Visceral Surface



Hepatic lobules & blood supply of the liver...







Portal vein :

Portal vein

Splenic vein

SMV

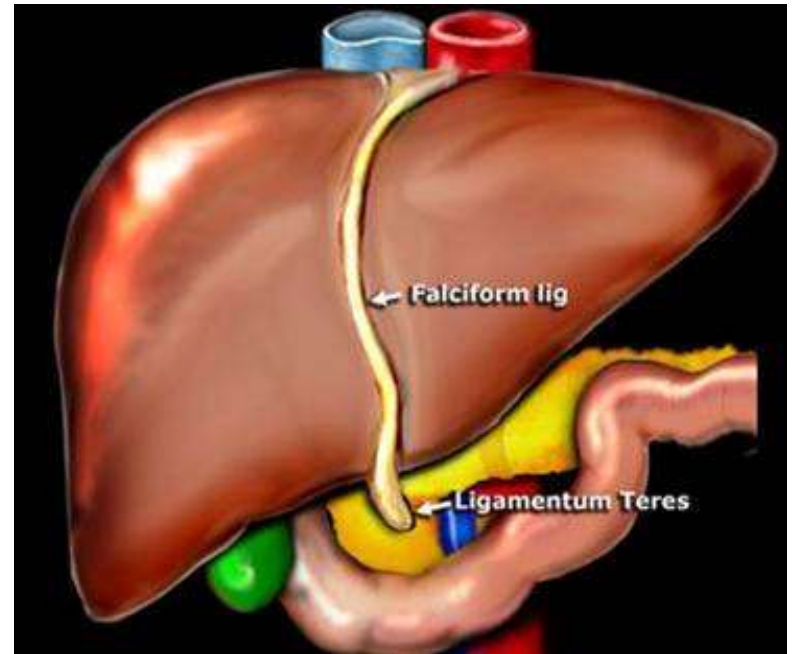
IMV

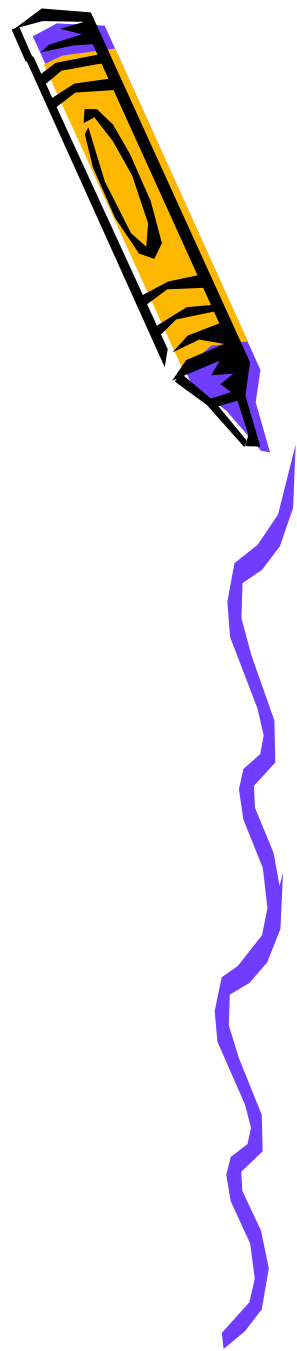


Classical descriptive anatomy of the liver :



_ It is based on external appearance





Anatomical lobes :

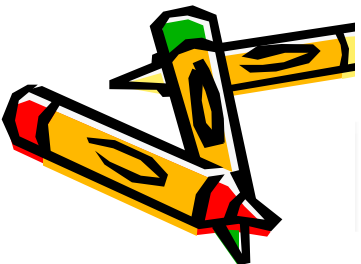
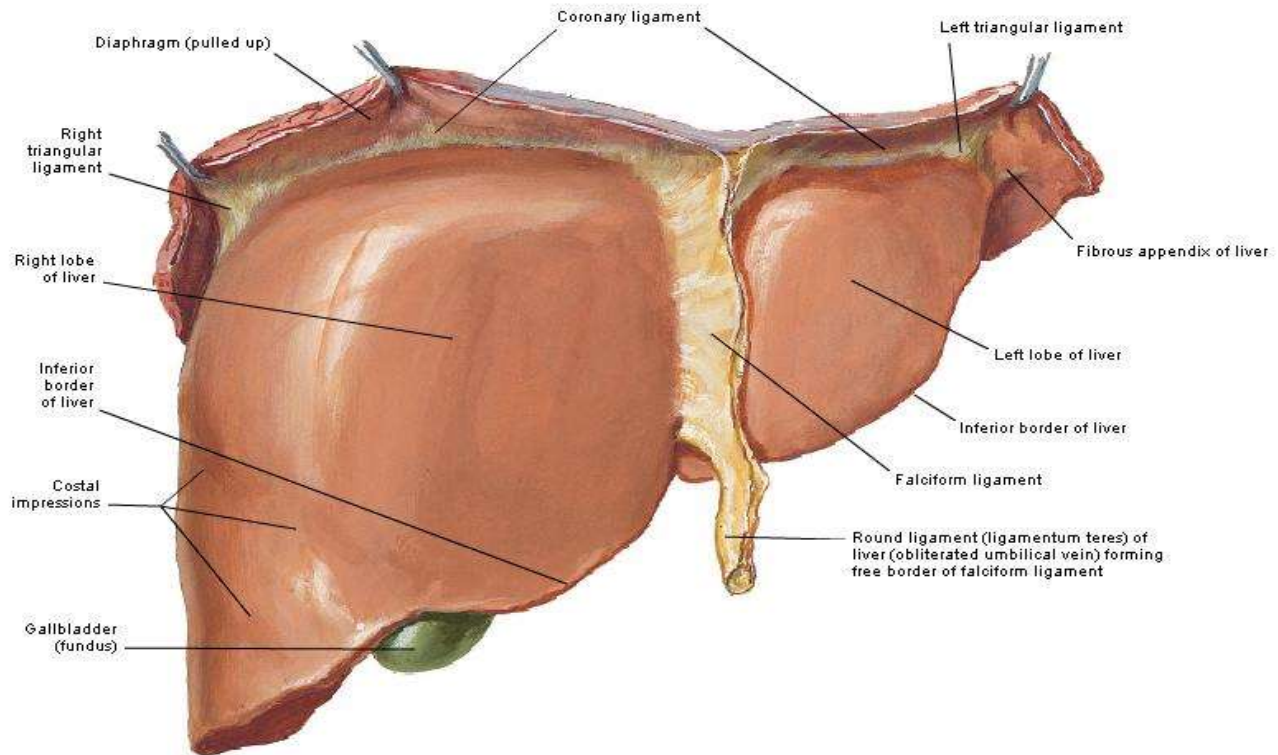
- Two principal lobes (R & L) - separated by falciform ligament
- Two accessory lobes (caudate & quadrate lobes)
- Are not true lobes



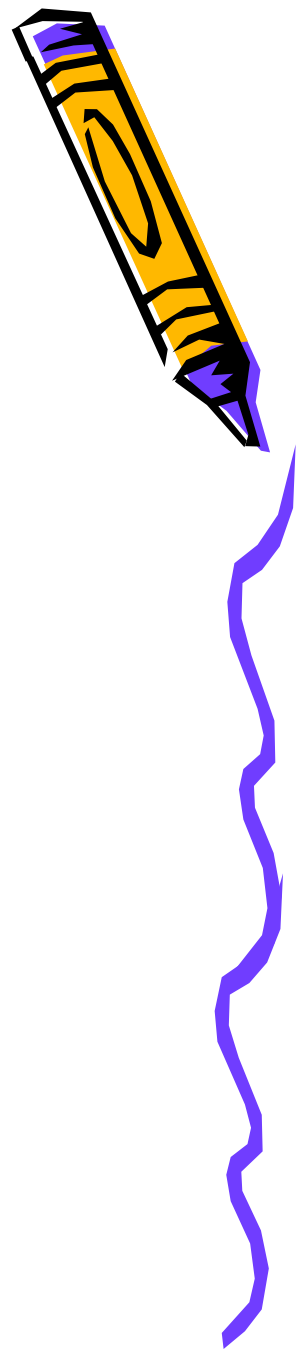


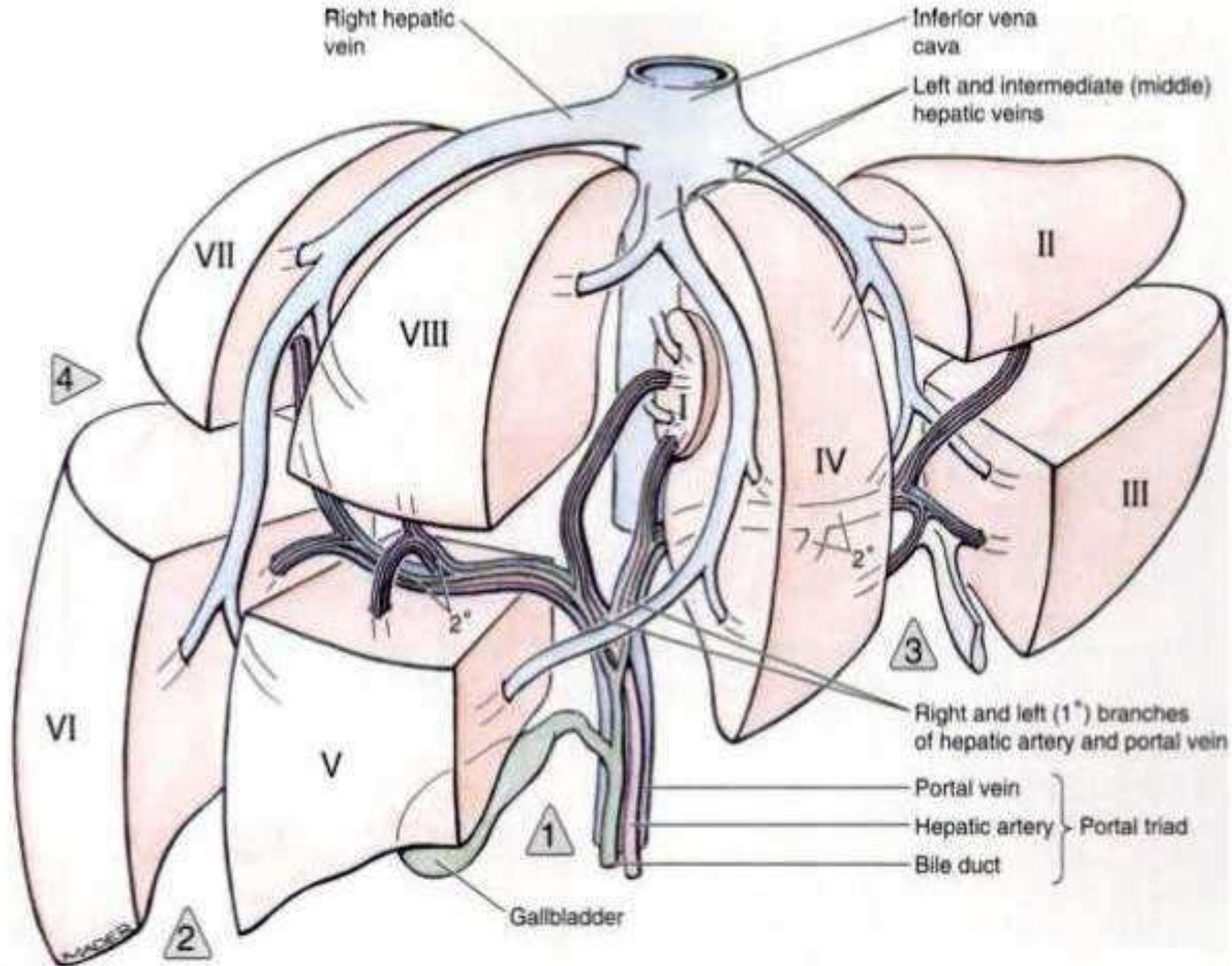
Right & left lobes :

Surfaces and Bed of Liver
Anterior View

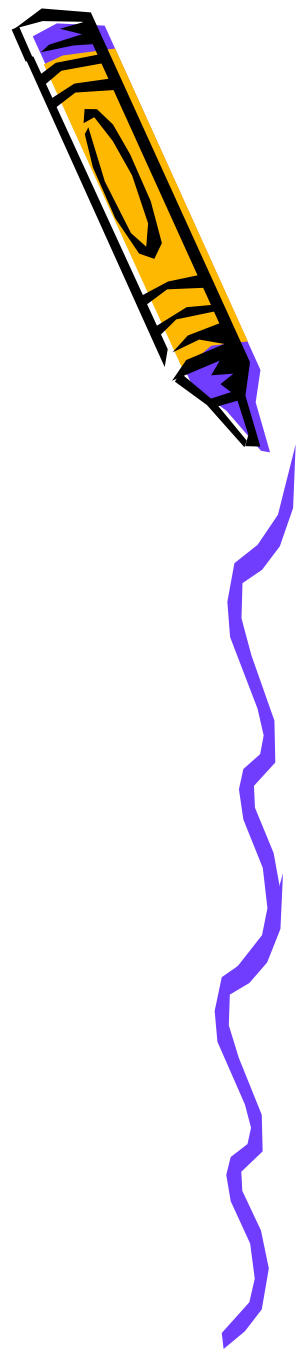


Modern functional anatomy of the liver





Comparison between classical anatomy & modern functional segmentation of the liver...



Anatomical lobes

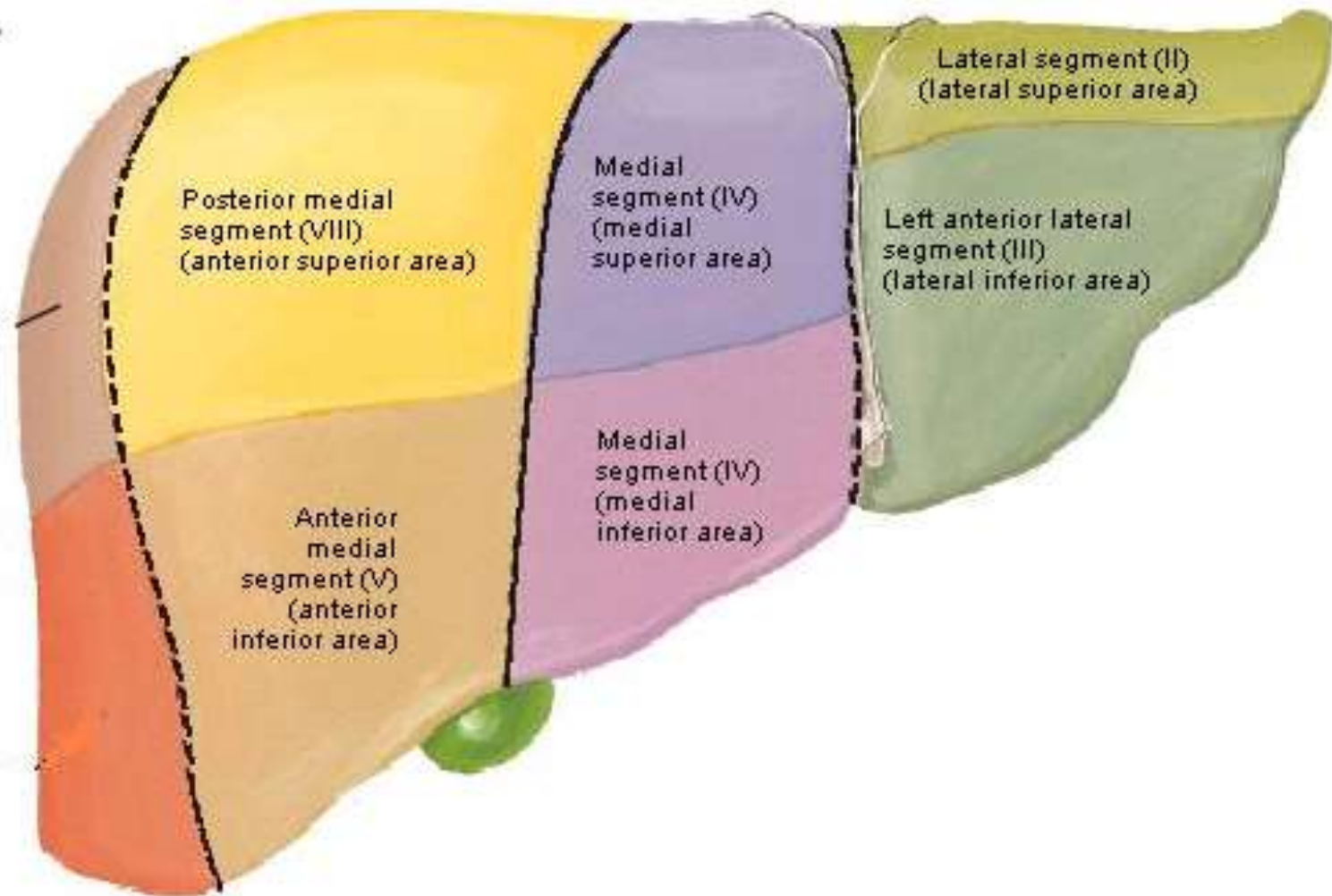
Right lobe

Left lobe

Functional segments

Right (part of) liver

Left (part of) liver





Because of this division into self-contained units, each segment can be resected without damaging those remaining. For the liver to remain viable, resections must proceed along the vessels that define the peripheries of these segments.

This means, that resection-lines parallel the hepatic veins,

The centrally located portal veins, bile ducts, and hepatic arteries are preserved.



For knowledge :

Claude Couinaud :

A french surgeon & anatomist who made significant contribution in the field of hepatobiliary surgery ,he was the first to describe segmental anatomy of the liver ...



Prof Henri Bismuth :

A french surgeon who contributes much to the segmentation of the liver ...

His classification is popular in the USA ...while couinauds' classification is more popular in Asia & Europe...



The end

