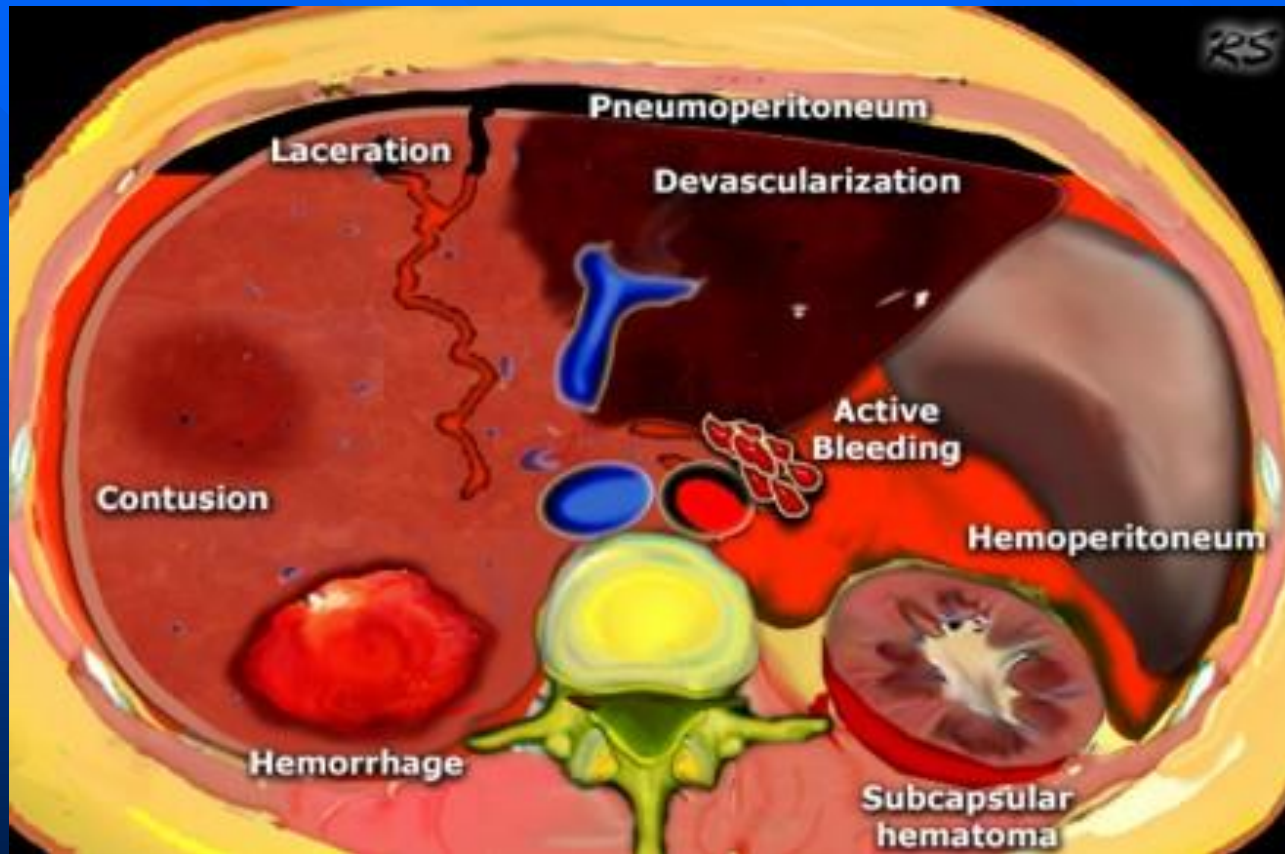


Trauma



General Features

- In trauma the liver is the second most commonly involved solid organ in the abdomen after the spleen.
- However liver injury is the most common cause of death.
- This is due to the fact that there are many major vessels in the liver, like the IVC, hepatic veins, hepatic artery and portal vein.
- It is important to remember, especially if you are doing ultrasound, that the posterior segment of the right liver lobe is the most frequently injured part.
- This part also involves the bare area and this can lead to retroperitoneal bleeding rather than bleeding into the peritoneal cavity.

- Historically liver injury was managed surgically, but at laparotomy it was found that 70% of the bleedings had already stopped by the time the surgeons got there.
- Importantly, patients who went for surgery had more transfusions and more complications than patients who were treated non-operatively.
- Today about 80% is managed non-operatively.
- Delayed complications occur in 10-25% of all patients and include:
 - hemorrhage (2-6%)
 - hepatic abscess (1-4%)
 - biloma (

AAST (American Association for the Surgery of Trauma) liver injury scale

- **grade I**
 - hematoma: subcapsular, <10% surface area
 - laceration: capsular tear, <1 cm parenchymal depth
- **grade II**
 - hematoma: subcapsular, 10-50% surface area
 - hematoma: intraparenchymal <10 cm diameter
 - laceration: capsular tear 1-3 cm parenchymal depth, <10 cm length
- **grade III**
 - hematoma: subcapsular, >50% surface area of ruptured subcapsular or parenchymal hematoma
 - hematoma: intraparenchymal >10 cm or expanding
 - laceration: capsular tear >3 cm parenchymal depth
- **grade IV**
 - laceration: parenchymal disruption involving 25-75% hepatic lobe or involves 1-3 [Couinaud segments](#)
- **grade V**
 - laceration: parenchymal disruption involving >75% of hepatic lobe or involves >3 [Couinaud segments](#) (within one lobe)
 - vascular: juxtahepatic venous injuries (retrohepatic vena cava / central major hepatic veins)
- **grade VI**
 - vascular: hepatic avulsion