ILO : PORTAL VENOUS SYSTEM

#Consists of portal vein & its tributaries
#Their blood pour directly into liver
#Drains the G.I.T, spleen, pancreas & gall bladder

**Formation**
- Union of Splenic vein & Superior Mesenteric Vein
- Behind neck of pancreas
- In front of I.V.C
- At level of 1st lumbar vertebrae

**Course**
1. Behind 1st part of the duodenum
   - In front of I.V.C
   - Behind the bile duct & the gastroduodenal artery
2. Free border of lesser omentum
   - In front of I.V.C
   - Behind the bile duct & the hepatic artery
3. At the porta hepatis
   - Divides into 2 branches:
     *Right & Left to the lobes of liver

**Termination**
Divide into 2 branches --- > Liver sinusoids --- > 2 hepatic veins --- > I.V.C

**Tributaries**
1. Splenic vein : from the spleen
2. Superior Mesenteric Vein : from small intestine, colon as far as left third of the transverse colon & pancreas
3. Left gastric vein : from stomach & abdominal part of esophagus
4. Right gastric vein : from the stomach
5. Para-umbilical vein : connects left branch of the portal vein with the veins of the anterior abdominal wall around the umbilicus
6. Cystic vein : from the GB & joins right branch of portal vein
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**Porto-systemic Anastomosis**

**Definition**
Communication between the tributaries of portal vein & systemic vein

**N.B**
When the portal vein is obstructed they may establish a collateral circulation. The visceral veins have no valve, a fact that helps their dilatation due to the obstruction of portal vein

**Sites**
1. Lower end of oesophagus
2. Lower end of anal canal
3. At umbilicus
4. Retroperitoneal
5. At the bare area of the liver
6. Inside liver

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## Splenic Vein

**Formation:**
Form at the hilum of the spleen by the union of about 4 - 5 tributaries from the spleen.

**Course & Relations**
- At the beginning, it lies in the lienorenal ligament in company with the splenic artery & the tail of the pancreas.
- Passes to the right across the posterior abdominal wall, behind the body of pancreas lower to the splenic artery.

**Termination**
Unites with the superior mesenteric vein behind the neck of the pancreas to form the portal vein.

**Tributaries**
1. **Short gastric veins**
2. **Left gastroepiploic vein**
3. **Pancreatic veins**
4. **Inferior mesenteric vein**

## Inferior Mesenteric Veins

**Formation**
Continuation of the superior rectal vein at the middle of the left common iliac artery with the ureter on its lateral side.

**Course & Relations**
- Ascends behind the peritoneum of the posterior abdominal wall.
- Then, passes behind the body of pancreas & to the left side of the inferior mesenteric artery.

**Termination**
Ends in the splenic vein, close to the point where it joins the superior mesenteric vein.

**Tributaries**
1. **Sigmoid veins**: from the sigmoid colon.
2. **Left colic veins**: from the descending colon & the left third of the transverse colon.
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**Superior Mesenteric Vein**

**Course & Relations**
- Ascends in the root of the mesentery on the right side of the superior mesenteric artery
- Crosses the horizontal part of the duodenum & the uncinate process of the pancreas

**Termination**
Ends behind the neck of the pancreas by joining the splenic vein to form the portal vein

**Tributaries**
1. Jejunal & ileal veins : from the jejunum & ileum
2. Ileocolic vein : from ileum & ascending colon
3. Right colic vein : from ascending colon
4. Middle colic vein : from the transverse colon
5. Right gastroepiploic vein : from the stomach & the greater omentum
6. Pancreaticoduodenal vein : from the duodenum & head of pancreas