

# AMAZING LIVER

WHAT IS THE HUMAN LIVER AND WHAT DOES IT DO?

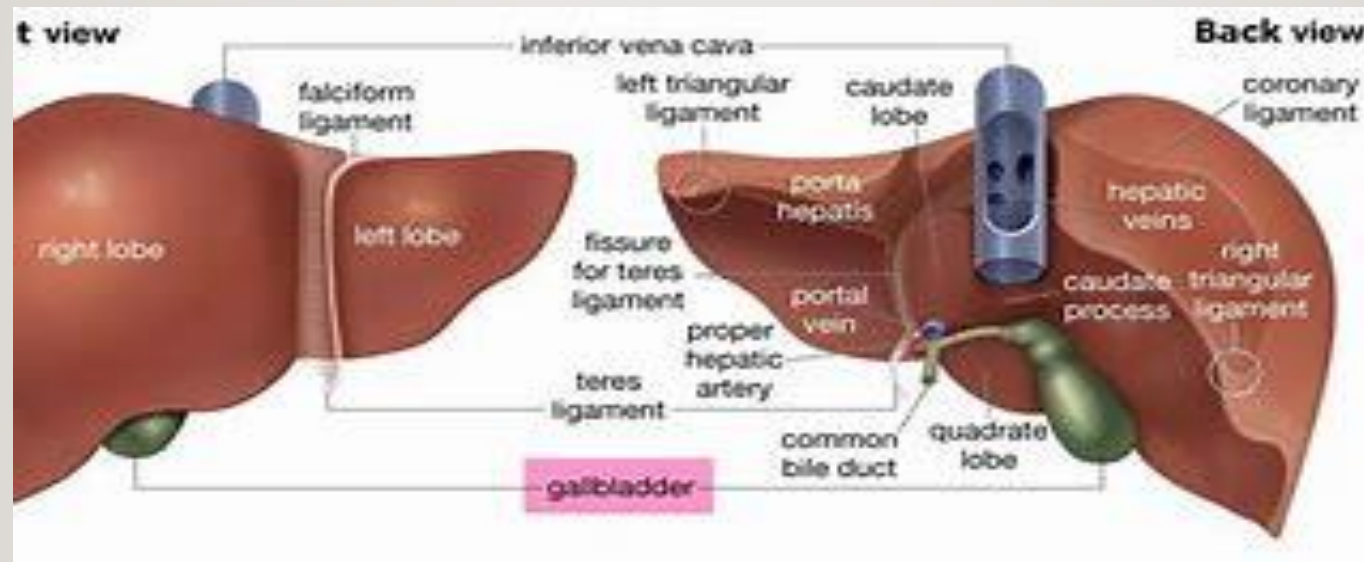


# THE HUMAN LIVER: CONSISTS OF 4 LOBES, MADE UP OF 8 SECTIONS AND THOUSANDS OF LOBULES

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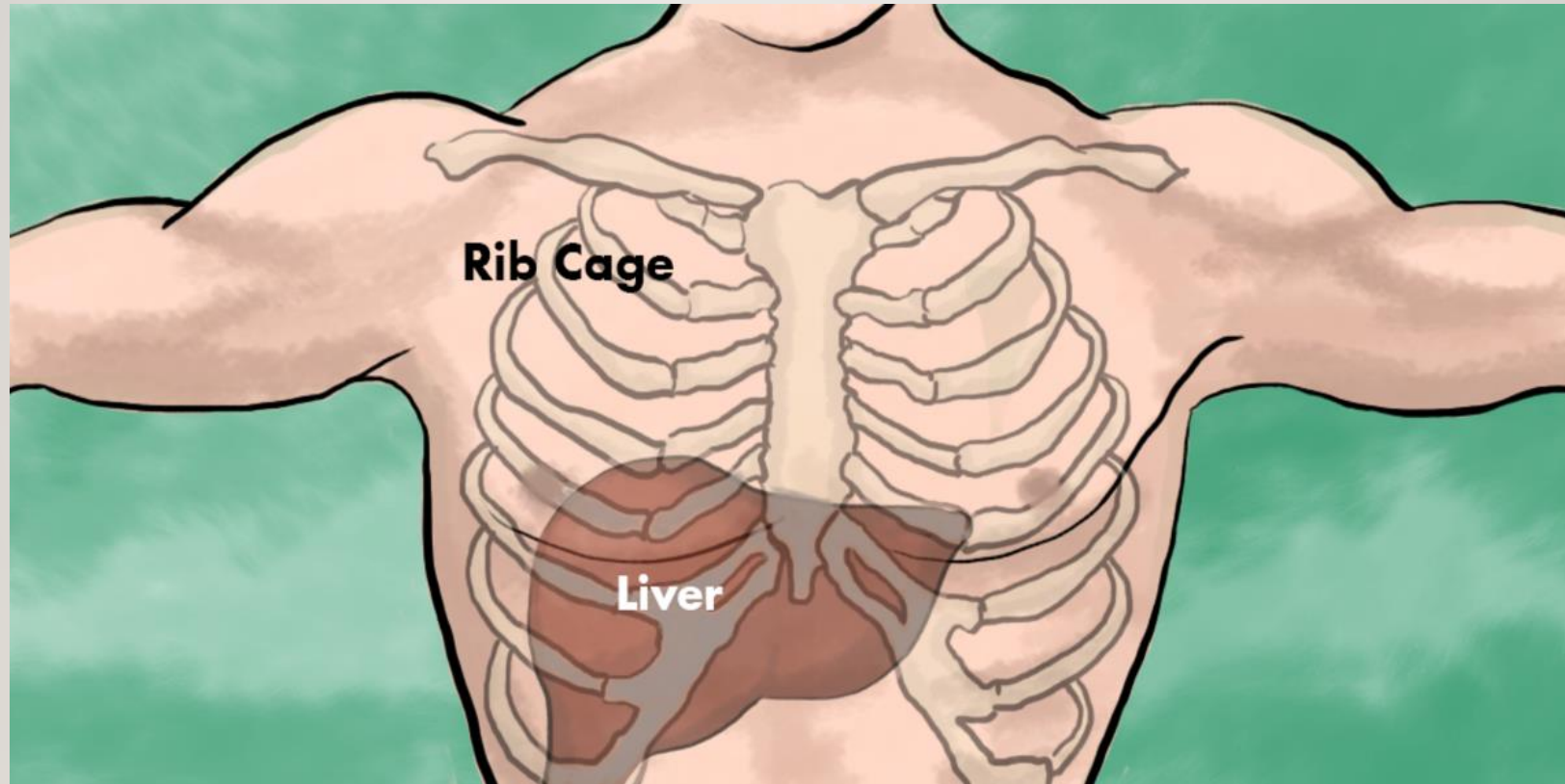
- The liver is the largest gland in the human body with an adult weight of approximately 3.5 lbs., accounting for 2% of the body weight in adults, located in the right abdominal cavity.

The liver consists of four lobes, which are each made up of eight sections and thousands of lobules



# LOCATION OF THE HUMAN LIVER...EASILY PALPABLE UNDER THE BORDER OF THE RIB CAGE

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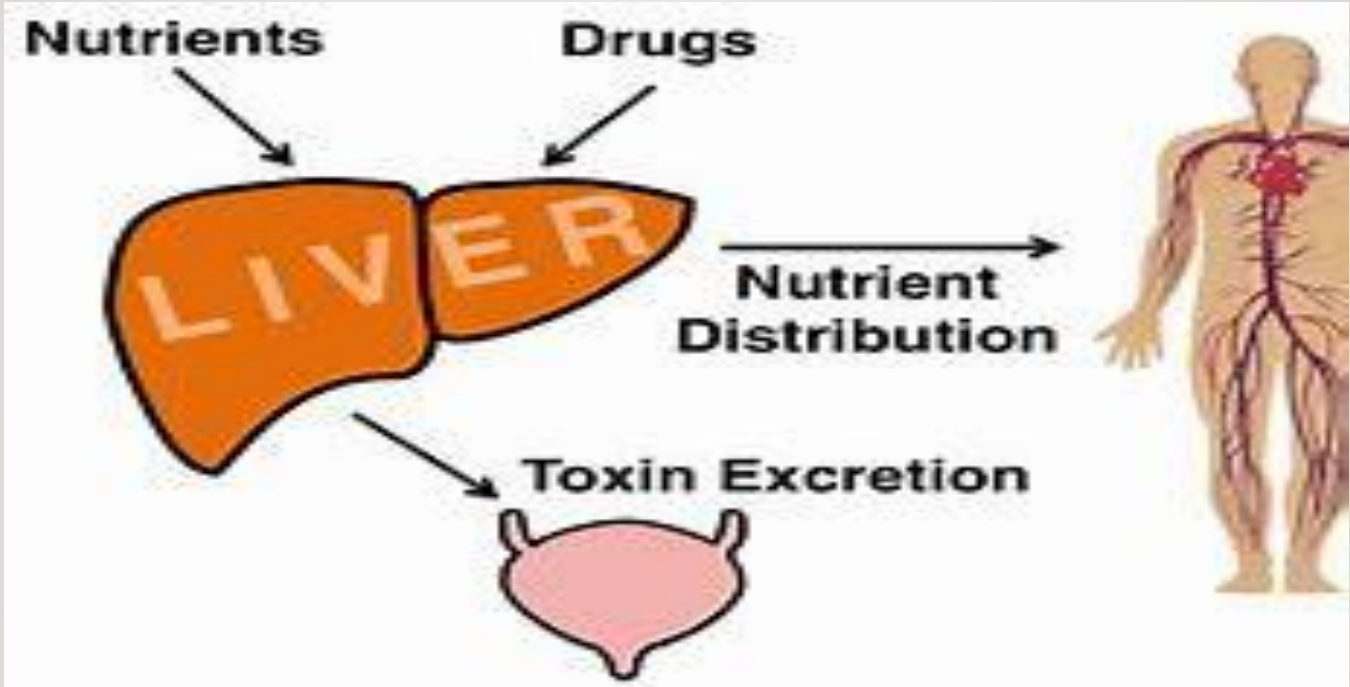
# WHAT DOES THE HUMAN LIVER DO DURING DIGESTION?

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- The Liver, gallbladder, and pancreas are accessory organs of digestion that introduce digestive hormones and enzymes into the alimentary canal (the small intestines), ensuring that the nutrients critical to life can be absorbed selectively by the small intestines into the bloodstream.
- All blood leaving the stomach and intestines must pass through the liver.
- The liver removes toxins from the blood by a filtration system, stores glucose as glycogen to be used when blood sugar levels begin to get low, plays a part in blood clotting, and secretes bile (stored in the gall bladder) to emulsify and breakdown fats.

# A SIMPLE LOOK AT THE FUNCTION OF THE LIVER

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# THE LIVER ARE THE ESSENTIAL FUNCTIONS OF THIS ACCESSORY DIGESTIVE ORGAN?

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The liver filters all of the blood in the body and breaks down poisonous substances, such as alcohol and drugs.

**Albumin Production:** Albumin is a protein that keeps fluids in the bloodstream from leaking into surrounding tissue. It also carries hormones, vitamins, and enzymes through the body.

**Bile Production:** Bile is a fluid that is critical to the digestion and absorption of fats in the small intestine.



# FUNCTIONS OF THE LIVERS, CONTINUED.....

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- **Processes Glucose**: The liver removes excess glucose (sugar) from the bloodstream and stores it as glycogen. As needed, it can convert glycogen back into glucose
- **Regulates Blood Clotting**: Blood clotting coagulants are created using vitamin K, which can only be absorbed with the help of bile, a fluid the liver produces.
- **Stores Vitamins and Minerals**: The liver stores significant amounts of vitamins A, D, E, K, and B12, as well as iron and copper.
- **Resists Infections**: As part of the filtering process, the liver also removes bacteria from the bloodstream.

# HOW DO WE KEEP THIS VITAL ORGAN HEALTHY? TAKING STEPS TOWARD HEALTHY LIVING!

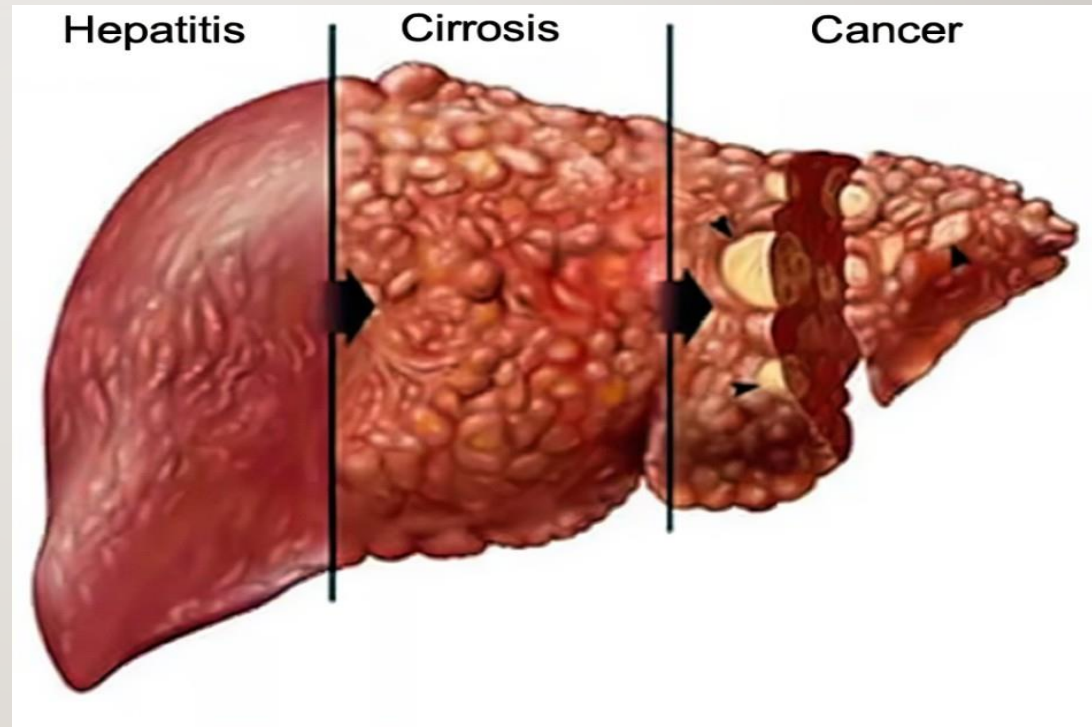
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- **Drink Alcohol Moderately:** Alcohol must be broken down by the liver. Excessive alcohol can cause liver damage
- **Exercise Regularly:** A regular exercise routine will help promote general health for every organ, including the liver.
- **Eat Healthy Foods:** Eating excessive fats can make it difficult for the liver to function and lead to fatty liver disease
- **Vaccinate:** Especially when traveling, get appropriate vaccinations against hepatitis A and B, as well as diseases such as malaria and yellow fever, which grow in the liver.



# BUT WHAT ABOUT LIVER DISEASE?

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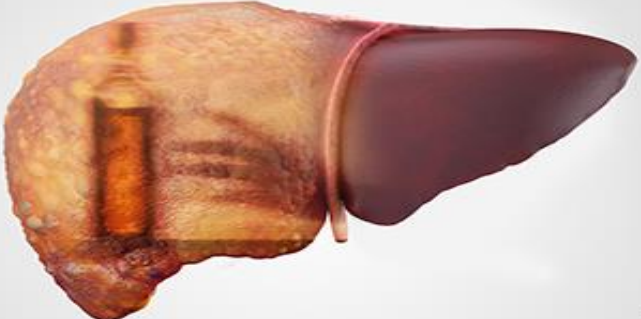
# CIRRHOSIS OF THE LIVER: COMMON S/S INCLUDE N/V, ASCITES, EDEMA, BLEEDING, AND JAUNDICE

**ALCOHOLIC LIVER DISEASE (ALD)**

**1** Is a non-transmittable liver disease caused due to excessive intake of alcohol

**2** The chronicity ranges from harmless and reversible to Alcoholic Hepatitis & Alcoholic Liver cirrhosis

**3** **Prevention:** Stop Drinking too much



**SYMPTOMS INCLUDE**

- Dry Mouth & Increased thirst
- Abdominal pain & Swelling
- Yellowing of Skin & Eyes
- Weight Loss

**RISK FACTOR**

- Alcohol abuse.

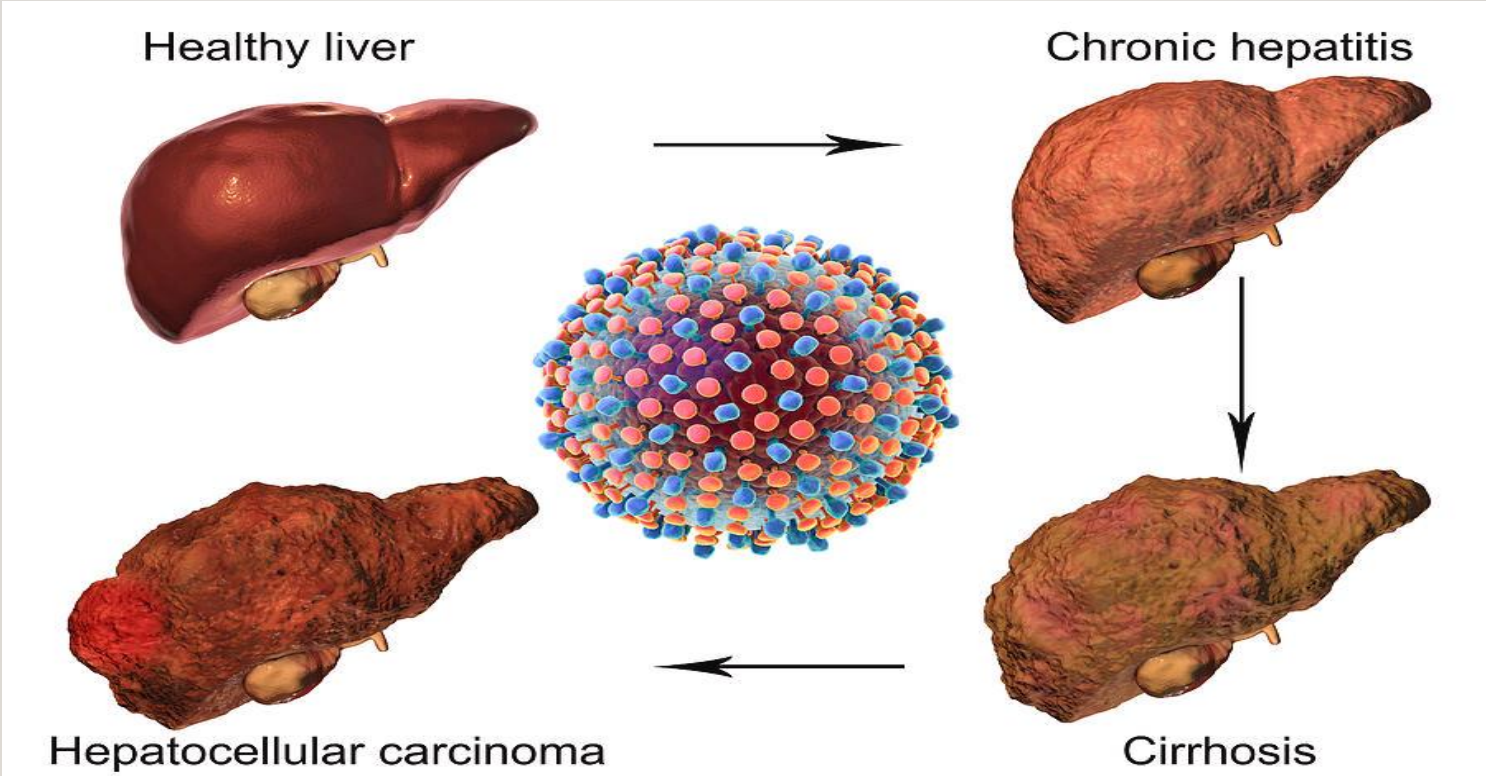
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# HEPATITIS OF THE LIVER: VIRAL DISEASE

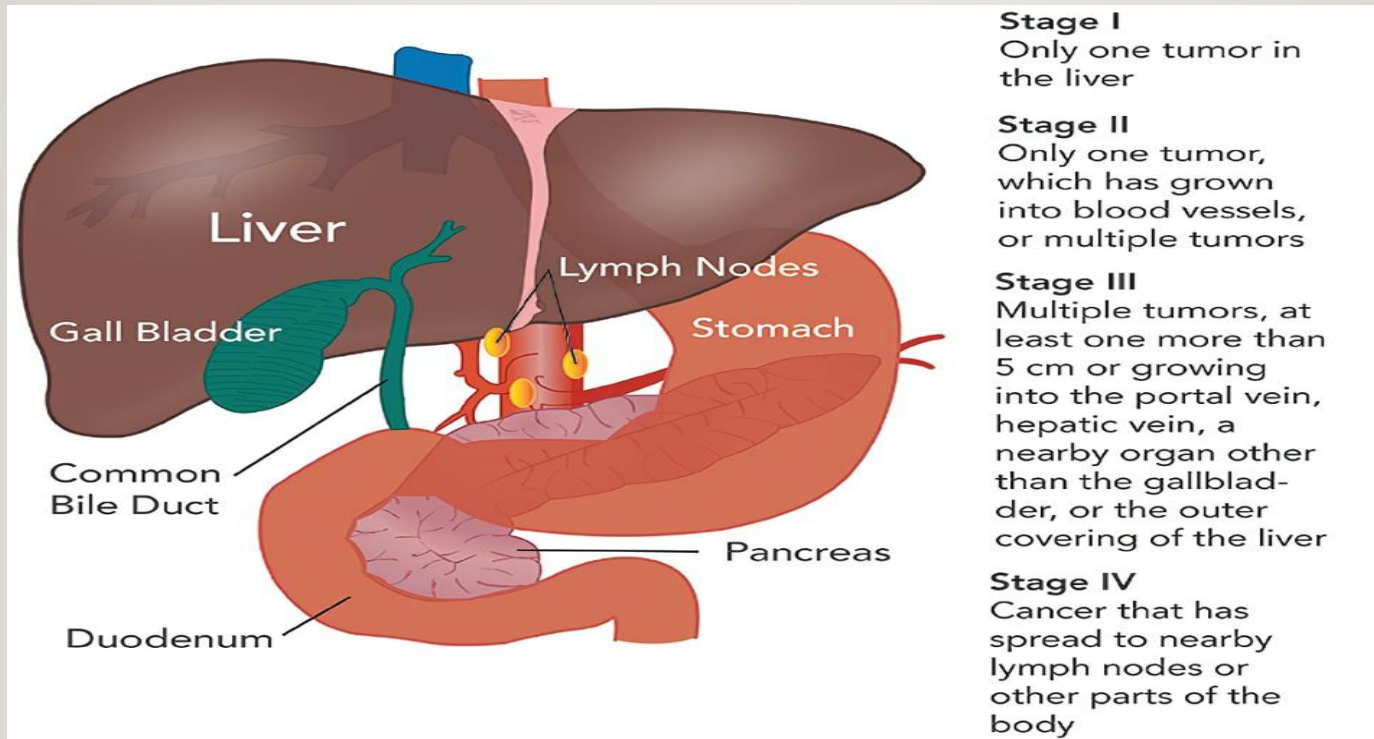
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- Hepatitis means inflammation of the Liver
- Most common types are Hep A, Hep B, and Hp C.
- Some toxins(poisons), chemicals, ETOH, can cause or contribute to Hepatitis
- s/s are like those of cirrhosis, including hepatic encephalopathy(acute confusion)
- Treatment is similar to that of cirrhosis of the liver...avoid alcohol, no NSAIDs, healthy diet, and use of diuretics to decrease edema, and in some cases anti-viral medications
- Early recognition is vital, but in time, a destroyed liver will require a transplant

# HEPATITIS



# CANCER OF THE LIVER: HEPATOCELLULAR CARCINOMA



**Stage I**  
Only one tumor in the liver

**Stage II**  
Only one tumor, which has grown into blood vessels, or multiple tumors

**Stage III**  
Multiple tumors, at least one more than 5 cm or growing into the portal vein, hepatic vein, a nearby organ other than the gallbladder, or the outer covering of the liver

**Stage IV**  
Cancer that has spread to nearby lymph nodes or other parts of the body

# LIVER CANCER

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- It can start in the liver, or spread to it from other areas of the body—metastatic
- S/S are similar to Cirrhosis or Hepatitis, but chronic hepatitis can contribute to the occurrence of liver cancer.
- Risk factors include alcoholism, cirrhosis, diabetes, HBV/HCV, poisons or toxic exposures in the environment.
- Treatment is similar to the recommendations for Cirrhosis and Hepatitis: Avoid heavy alcohol, get vaccinated against Hep B, prevent Hep C, and eat a balanced diet

# WRAP UP!

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- Prevention is the best way to go in all forms of liver disease.
- Early recognition is vital: lab tests, scans, and a visit to your physician is the beginning of recognition and steps toward prevention.
- Alcohol in moderation
- Vaccination against Hep B
- Avoid risky behaviors and toxic exposures
- Liver disease is treatable and beatable!