Research & Reviews: Journal of Reports in Cancer and Treatment

Liver Cancer: Prevention, Diagnosis and it's Treatment

Friedhelm Jung*

Department of Oncology, Johns Hopkins University, Baltimore, MD, USA

Short Communication

Received: 07-Nov-2022, Manuscript No. RCT -22-82720; Editor assigned: 09-Nov-2022, Pre QC No. RCT -22-82720 (PQ); Reviewed: 23-Nov-2022, QCNo. RCT -22-82720; **Revised:** 30-Nov-2022, Manuscript No. RCT-22-82720 (R); **Published:** 09-Dec-2023,DOI:10.4172/Rep cancer Treat.6.6.005

***For Correspondence:**
Friedhelm Jung, Department of Oncology, Johns Hopkins University, Baltimore, MD, USA.
Email: friedhelm.jung@889.org

DESCRIPTION

Liver cancer (also known as hepatic cancer, primary hepatic cancer, or primary hepatic malignancy) is cancer that starts in the liver. Primary liver cancer begins in the liver, and secondary liver cancer (meaning cancer which has spread from elsewhere to the liver, known as liver metastasis). More frequently than liver metastasis, it occurs in the liver. Worldwide, liver cancer incidence is rising.

Globally, primary liver cancer is the sixth-most common type of cancer and the fourth-leading cause of cancer-related death. It affected 841,000 people in 2018 and caused 782,000 fatalities worldwide. Where hepatitis B and C are prevalent, particularly Asia and sub-Saharan Africa, liver cancer rates are higher. Hepatocellular Carcinoma (HCC) affects men more frequently than women. Most diagnoses occur in people between the ages of 55 and 65.Cirrhosis brought on by alcohol, hepatitis B, or hepatitis C is the main contributor to liver cancer. Aflatoxin, non-alcoholic fatty liver disease, and liver flukes are further causes. HCC, which accounts for 80% of cases, and intrahepatic cholangio carcinoma are the most prevalent forms. Blood testing, medical imaging and tissue biopsy may be used to support the diagnosis.

Since there are numerous causes of liver cancer, there are numerous strategies for preventing it. These initiatives include hepatitis B vaccination, hepatitis B treatment, and hepatitis C treatment, lowering alcohol consumption, lowering aflatoxin exposure in agriculture, and managing obesity and diabetes. Screening is advised for people with chronic liver disease. For instance, it is advised that individuals with chronic liver disease who are at risk for hepatocellular carcinoma undergo screenings using ultrasound imaging every six months [1-6].

The signs and symptoms of liver cancer vary depending on the type of cancer present because the phrase "Liver cancer" covers a wide range of cancers. Symptoms may be nebulous and general. Sweating, jaundice, stomach pain, weight loss, and enlarged liver are all signs of cholangiocarcinoma. Abdominal masses, abdominal pain, emesis, anemia, back pain, jaundice, itching, weight loss, and fever are all symptoms of hepatocellular carcinoma. Surgery,

radiation therapy, and targeted therapy are all possible forms of treatment. In some circumstances, liver transplantation, embolization therapy, or ablation therapy may be used.

The diagnosis of liver cancer is aided by the use of numerous imaging modalities. Medical ultrasound, Computed Tomography (CT), and magnetic resonance imaging are some of these for HCC (MRI). Large lesions are more likely to be HCC when imaging the liver with ultrasound (For example a mass larger than 2 cm has a greater than 95% chance of being HCC). Given the blood flow to the liver, HCC would be more noticeable during the arterial phase (also known as the arterial phase) of the contrast than during the vein phase (also called the venous phase). If a clinician is concerned about HCC and the results of the imaging tests (CT or MRI) are unclear, they may choose to do a liver biopsy. The majority of cholangiocarcimas manifest as bile duct obstruction in the hilar area of the liver. Endoscopic Retrograde Cholangiopancreatography (ERCP), ultrasound, CT, MRI, and Magnetic Resonance Cholangiopancreatography (MRCP) are utilized when the obstruction is thought to be caused by cancer.

Chemicals known as tumor markers, which are occasionally discovered in the blood of cancer patients, can be used to diagnose and track the development of liver malignancies. Many cases of HCC and intrahepatic cholangiocarcinoma have high blood levels of Alpha-Feto Protein (AFP). Notably, rather than for initial diagnosis, AFP is most helpful for monitoring if liver tumors recur following treatment. The tumor markers carbohydrate antigen 19-9 (CA 19-9), Carcino Embryonic Antigen (CEA), and cancer antigen 125 are frequently used to identify cholangiocarcinoma (CA125). In addition to primary liver tumors, these tumor markers are also present in other malignancies and a few other conditions.

There are three types of cancer prevention- primary, secondary, and tertiary. Preventatively lowering exposure to a risk factor for liver cancer is known as primary prevention. Hepatitis B vaccination is one of the most effective primary liver cancer preventions. Hepatitis C virus vaccination is currently not available. Other key preventative strategies include encouraging safe injection techniques, screening blood donation products, and screening high-risk asymptomatic persons in an effort to reduce the spread of these viruses. Exposure to aflatoxin can be prevented by post-harvest mold prevention measures, which have been successful in West Africa. Reduced prevalence of obesity, diabetes, and alcohol use disorders might also lower liver cancer rates. Dietary management in hemochromatosis may reduce the likelihood of iron excess and, consequently, the risk of malignancy.

If primary prevention is not achievable, secondary prevention entails both the treatment of the agent responsible for the development of cancer (carcinogenesis) and the avoidance of carcinogenesis altogether. It is impossible to cure virus-infected people; however antiviral medication can reduce the risk of liver cancer. Chlorophyllin might be able to mitigate aflatoxin's effects.

Treatments to prevent the recurrence of liver cancer are included in tertiary prevention. These include of using surgical procedures, chemotherapeutic medications, and antiviral medications.

Surgery, medicines, and ablation techniques are all forms of treatment; these are covered in the sections below. Numerous chemotherapeutic medications, such as atezolizumab, nivolumab, keytruda, and stivarga, have been licensed for the treatment of liver cancer.

REFERENCES

1. Akulapalli S, et al. History of cancer, ancient and modern treatment methods. J Cancer Sci Ther. 2009; 1: 1–4.

2. Boles M, et al. Central axis depth dose data for use in radiotherapy. Br J Radiol. 1996; 5:196.
3. Motiur Rahman, et al. Dosimetric characterization of medical linear accelerator photon and electron beams for the treatment accuracy of cancer patients. WJAET, 2021; 03:041–059.
4. Scott AJ, et al. Using a monte carlo model to predict dosimetric properties of small radiotherapy photon fields. Med Phys. 2008; 35: 4671-84.
5. Henry FG, et al. Analysis of small field percent depth dose and profiles: Comparison of measurements with various detectors and effects of detector orientation with different jaw settings. J Med Phys.2016; 41:162-163.
6. Bethesda MD, et al. Determination of absorbed dose in a patient irradiated by beams of X or gamma rays in radiotherapy procedures. ICRU. 1976; 24:52-54.