Diagnosis

What are the early indications of hepatocellular carcinoma (HCC)?
A good physical examination, thorough laboratory testing, full abdominal imaging, platelet count, spleen size, liver enzyme patterns, and liver function tests are all part of the initial and ongoing assessment of patients with liver disease who have HCC or who are at risk for HCC.

What is the best imaging test for detecting cirrhosis or liver cancer?
- The best imaging technique for liver fibrosis is either shear wave elastography or magnetic resonance elastography.
- Blood tests such as the fibrosis-4 (FIB-4) score and AST to Platelet Ratio Index (APRI) are also useful and can be found online.

I have been diagnosed with liver cancer. How long can I afford to wait to be seen by an expert?
Because of the urgent need for intervention and the anxiety that the patient and family members are facing, there’s no reason to wait longer than 10 working days, especially because there may be further delays (for example, more testing is usually required). So put pressure on the doctor’s office to give you an appointment within 10 working days.

Should I get a second opinion, and if so, when?
If the oncologist who is treating you does not treat many patients with liver cancer per year, it is very reasonable to get a second opinion. You ideally should be treated by a health care professional who is managing at least 10, preferably 50 or more, liver cancer patients per year. Hepatologists are the main health care professionals who manage liver cancer in collaboration with other specialists, such as highly skilled liver cancer oncologists, surgeons, interventional radiologists, and other health care professionals who make up a multidisciplinary liver cancer management team. Usually these teams are available at liver cancer centers, many of which also have transplant programs. If possible, you should seek care at those centers.

Livercancerconnect.org provides a growing directory of liver cancer centers across the United States.

Does the cause of the liver cancer affect treatment options (eg, viral hepatitis vs alcoholic cirrhosis vs fatty liver disease)?
Yes, if we can treat the underlying disease, we often reverse liver disease. And with better liver function, we can offer more treatments, repeat treatments, and overlapping treatments.

Is a biopsy safe and is it necessary?
We use imaging, not biopsies, to confirm a diagnosis of liver cancer in about 95 percent of patients. But in the small percentage of patients who have indeterminate imaging findings, we use biopsies to confirm the cancer diagnosis. We also perform biopsies to enter patients into new clinical trials. These trials use biopsies on a research basis to provide personalized medicine. So patients and their families should discuss the need for biopsies with their health care team. Although some patients are at a higher risk for bleeding or spreading of the cancer, in most patients, the risk of these complications is extremely low and
should not be a major consideration when deciding about the need for a biopsy. The main question to consider is: Will a biopsy change the treatment plan?

**Surgery and Transplantation**

*If my tumor has been successfully removed, does this mean I am no longer at risk for liver cancer?*
Surgery provides a 5- to 10-year cure in fewer than 30 percent of patients. In other words, in 70 percent or more of patients who undergo surgical resection (cutting out the tumor), the cancer will be back in less than 5 to 10 years. If the tumor is small and the general health of the patient is good, the cure rate is higher. To reduce the risk of the cancer coming back, you have to treat the underlying disease, such as chronic hepatitis B or C, alcoholic cirrhosis, or fatty liver disease. If the cancer comes back, the patient may be placed on the waiting list for a liver transplant, or may undergo ablative therapies.

**What type of surgery is better: partial hepatectomy or full hepatectomy?**
- Full hepatectomy is a liver transplant and is the best option for a cure
- Partial hepatectomy allows the liver to regenerate and grow to the full size in 1-2 months

**What are the chances of a cure with liver transplantation?**
Survival with liver transplantation is high. If a person meets the criteria for liver transplantation (single tumor up to 5 cm or three tumors less than 3 cm each), and they undergo a liver transplant today, I predict there’s an 85% chance of 5-year survival with no cancer going forward. The key to successful transplant outcomes are selecting the right patient; a skilled surgeon, good patient management before and after liver transplant; and being treated at an experienced transplant center.

Read about the encouraging advances in liver transplantation in the Hepatitis B Foundation’s [Spring 2014 newsletter, B Informed](#).

**Hepatitis B and C**

*If a person with hepatitis B-related liver cancer undergoes liver transplantation, is there no more hepatitis B virus in the blood after liver transplant?*
No, hepatitis B is controlled after liver transplant in over 95% of patients with a combination of oral medications and an injectable immunoglobulin for 6 months.

*If a person has chronic hepatitis B or C and has been diagnosed with liver cancer, does he or she need to be treated with antiviral agents first, or does the antiviral treatment run at the same time as the treatment for liver cancer?*
You receive the treatments at the same time. Start the hepatitis C or B drugs immediately while you are considering the treatment options for the cancer. For hepatitis C, currently available treatments offer a cure after 12 weeks, so lifelong antiviral treatment is not needed. People with hepatitis B will need to continue antiviral treatment indefinitely, as a cure is not yet available.

*Is a cure for chronic hepatitis B coming soon?*
We think in 5 to 7 years we will have a cure.

*Regarding hepatitis B, after a successful resection, what adjuvant therapies are available?*
We use antiviral therapy- either entecavir or tenofovir, with a >95% level of viral control.
**Treatment Options**

**When is sorafenib used in patients with liver cancer?**
Sorafenib is used in patients with unresectable cancer, most commonly when the patient is not a candidate for the other, ablative procedures. This includes patients with large tumors in the liver and patients whose cancer has spread outside of the liver (metastatic disease). The patient needs to have good liver function (bilirubin level below 2 to 3 mg per dL), with good health and nutritional status.

The most common side effects of sorafenib are diarrhea, fatigue, and skin reactions. About a third of patients stop treatment due to side effects; another third don’t respond because their tumor is different from (or resistant to) what sorafenib targets, but a third can tolerate the drug and have a tumor response with stable size or shrinkage and we can see survival of up to 30 months.

**Will immunotherapy have fewer side effects (will it be less toxic)?**
We don’t know the answer to this, because the immunotherapy drugs are still in clinical trials. We won’t know if they are less toxic or beneficial until the results of Phase III clinical trials are made available.

**Some immunotherapies cannot be used in people with chronic HBV or HCV. Why is this?**
There’s some uncertainty about this issue. It is thought that some immunotherapies (eg, drugs called checkpoint inhibitors that target PD1 and PDL1) may even have antiviral properties against hepatitis B and hepatitis C, but nothing is certain until larger trials are completed. With some immunotherapies, it is possible that the immune system, while it attacks the liver tumor, can also attack the hepatitis virus, which could result in liver damage or viral clearance. So researchers are cautious about using some immunotherapy agents in people with chronic viral hepatitis infection until we have more information.

**Why don’t standard chemotherapies work for liver cancer?**
Standard chemotherapy involves giving high doses of the drug and it is not possible to deliver the drug directly into the liver tumor unless we use drug-loaded beads, as in the case of doxorubicin. As a result, the therapy can damage other parts of the body. So targeted therapies that are delivered specifically into the liver tumor, or are targeted against specific changes in the liver tumor, are the future therapies for treating liver cancer. Systemic chemotherapy on beads may expand in its use or allow us to use additional medications.

**Is drinking coffee or tea beneficial even with milk and sweetener?**
Follow a low fat diet, including what you put in your coffee: avoid simple sugars and artificial sweeteners.
Key Take-Aways

For people who are at risk but do not have liver cancer:

- Get screened for liver disease with a simple blood test for liver enzymes
- Have more advanced testing if your blood level of ALT is over 19 for women and over 30 for men
- If you have liver disease, undergo monitoring by a health care provider who is an expert in liver diseases (could be a hepatologist, or a knowledgeable primary care provider, nurse practitioner, or physician assistant; infectious disease specialists manage viral hepatitis)
- Obtain accurate staging of your liver disease to find out your risk for liver cancer
- Participate in regular monitoring (surveillance) with blood tests and imaging if needed:

Patients need to be a partner in their own health care. If you are told to return for testing at regular intervals, please make sure you do so.

For people who have been diagnosed with liver cancer:

- Work with a team of liver cancer specialists
- Ask questions!
- Maintain a healthy lifestyle (healthy nutrition, regular exercise)
- Work with your family and support system to maintain a good quality of life
- Even if you are not curable, you can still prolong life for several months or years with the right team approach