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SUMMARY KEYWORDS

liver cancer, patients, cirrhosis, treatments, liver, diagnosed, mayo clinic, carcinoma, cancer, disease, hcc, tumor, chronic liver disease, ablation, abdomen, important, biopsy, symptoms, immunotherapies, chance

SPEAKERS

Dr. Halena Gazelka, Narrator, Dr. Sumera Ilyas

- N** Narrator 00:00
Coming up on Mayo Clinic Q&A: When a liver cancer is diagnosed alcohol is often blamed for the disease, but in most cases it is from other factors.
- D** Dr. Sumera Ilyas 00:00
The ones that place patients at the highest risk of developing liver cancer is not related to alcohol, it actually results from an accumulation of fat in the liver, and it tends to be associated with obesity and diabetes.
- N** Narrator 00:00
As with all cancers, early diagnosis is key for treatment.
- D** Dr. Sumera Ilyas 00:00
So, the treatment options vary depending on what stage of the liver cancer the patient has. The small or early stage tumors in patients who have good liver function and who are otherwise healthy may be treated with surgery. They may also be treated with ablation procedures. If these treatments are not an option, but if the cancer is relatively early stage, then liver transplantation is another option.
- D** Dr. Halena Gazelka 00:04
Welcome, everyone to Mayo Clinic Q&A. I'm Dr. Halena Gazelka. While still relatively rare, the rate of primary liver cancer has been increasing in recent decades, and it disproportionately affects those of minority populations. The National Cancer Institute estimates there will be more than 42,000 new cases of liver cancer this year. So, how is liver cancer diagnosed and treated? Well, we have just the expert to discuss this with us today. Here to discuss this is Mayo Clinic gastroenterologist Dr. Sumera Ilyas. Welcome. Thanks for being here, Sumera.

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Dr. Sumera Ilyas 00:59

Thank you so much, Dr. Gazelka, for having me with you today. It's my pleasure to be here.

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Dr. Halena Gazelka 01:05

So, I think one of the most confusing things, and I'm wondering if you can straighten this out right at the beginning, is liver cancer. Is it cancer that happens in the liver itself? Or is it cancer that came from somewhere else and spread into the liver?

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Dr. Sumera Ilyas 01:20

And so, that's a great question. What we refer to as primary liver cancer, so that's cancer that arises in the liver. And there are two main types of primary liver cancer. There's a hepatocellular carcinoma that we refer to as HCC, and there's bile duct cancer. Of these, the vast majority of primary liver cancers are hepatocellular carcinomas, over 90%. Having said that, most, actually up to 50% of masses that are diagnosed in the liver may actually be from a cancer that arose outside the liver. So, that would be metastatic cancer.

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Dr. Halena Gazelka 02:02

I think that's confusing because sometimes patients will say I have liver cancer, but actually they had another type of cancer and it spread. So, we're talking today about primary liver cancers that occur in the liver. Can you tell us who's at risk? What causes liver cancer?

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Dr. Sumera Ilyas 02:20

The vast majority of liver cancers, over 90%, they occur in patients who have a chronic liver disease, cirrhosis, or advanced scarring of the liver is the strongest risk factor for hepatocellular carcinoma. And cirrhosis from really any cause, can lead to liver cancer.

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Dr. Halena Gazelka 02:40

When I think about cirrhosis, I think about alcohol, but that's not the only cause.

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Dr. Sumera Ilyas 02:45

Right. So, there are a number of liver diseases that can result in cirrhosis. The ones that place patients at highest risk of developing liver cancer include non-alcoholic steatohepatitis, or NASH. And that's not related to alcohol, that actually results from an accumulation of fat in the liver. And it tends to be associated with obesity, what we refer to as metabolic syndrome and diabetes. And in the western world, this is becoming the fastest growing cause of hepatocellular carcinoma or liver cancer. Alcohol consumption is an important risk factor, and that can also cause cirrhosis and lead to liver cancer. But I would say that worldwide, the most common cause of liver cancer remains infection with hepatitis B. And that accounts for approximately 50% of all cases of liver cancer worldwide, but only about 20% in the western world.

D Dr. Halena Gazelka 03:45
And that's because we're often vaccinated?

D Dr. Sumera Ilyas 03:47
Yes, exactly. And that's one of the ways that we can try to prevent having chronic liver disease or cirrhosis and lessen the chance of having liver cancer.


D Dr. Halena Gazelka 03:59
Can I step back and ask you to define what does cirrhosis mean? Does it mean the liver cells are dying or they're not working as well as they should? What does that term mean?

D Dr. Sumera Ilyas 04:07
Yeah. So cirrhosis, what that means is over time, so NASH. Nash is there's inflammation in the liver. And over time, that inflammation can lead to scarring of the liver. A scarred liver becomes sort of very hard, and then it does not function as well as it normally would. And it can lead to a lot of the problems that we see in patients who have end-stage liver disease.

D Dr. Halena Gazelka 04:36
Getting back to primary liver cancer, why are minority populations disproportionately affected?

D Dr. Sumera Ilyas 04:43
So, that's a very important question. And there's a great deal of interest and research in trying to figure out why this is so. There's recent work that has shown that blacks and Hispanics are less likely to be diagnosed with liver cancer at an earlier stage compared to whites. And that in turn means the odds of being eligible for potentially curative treatments are lower for these patients. And these differences in diagnosis, they may be due to differences in access to primary or subspecialty health care. They may also be due to differences in HCC surveillance. So, what's HCC surveillance? For patients who have cirrhosis, we recommend that they have a surveillance for hepatocellular carcinoma every six months, that usually involves having an ultrasound or a blood test. And sometimes there may be a CT scan or an MRI. And blacks and Hispanics are less likely to have the surveillance which means they're less likely to have their liver cancer picked up earlier. When they are diagnosed with liver cancer, they're also less likely to receive HCC treatments. So, there are a number of factors that may be responsible for this and that includes sociodemographic inequalities. And there are studies that have shown that patients at safety net hospitals, which we know care for a disproportionate share of racial and ethnic minorities, patients at these hospitals are less likely to get HCC liver cancer treatment, even when they're diagnosed at an early stage. So, we certainly need to understand why this is so, because that will allow us to put into place appropriate interventions to address these inequities.



 Dr. Halena Gazelka 06:29

Sumera, when we're talking about various illnesses we talk a lot about signs which are things that you or I as physicians could observe, and symptoms, which are things that patients feel. What are the signs and symptoms of liver cancer?

 Dr. Sumera Ilyas 06:43


So, in the early stages of liver cancer patients actually may not have any symptoms. When they do develop symptoms, these symptoms can be very nonspecific, they could be vague. So, they may have abdominal pain and that abdominal pain maybe in the in the right upper side of the abdomen, it may be in the mid abdomen. They may have noticed that they have a poor appetite, or they're losing weight without trying to lose weight. And they may have other nonspecific symptoms feeling weak, feeling fatigued. They may also have symptoms that are specific to liver disease or having chronic liver disease. And those could be things like having swelling up the abdomen, because when the liver is really sick, the abdomen can fill up with fluid. So, patients, one of the first things they may notice is that my belly has gotten very big. But it's not that I've put on weight. They may have jaundice or yellowing of the eyes. So, it really depends. There's not a specific symptom that could be a tip off to the presence of liver cancer, unfortunately.

 Dr. Halena Gazelka 07:48

How is the diagnosis made?

 Dr. Sumera Ilyas 07:50


So, hepatocellular carcinoma, it's diagnosed with a combination of blood tests and imaging studies. And the appearance of hepatocellular carcinoma on CT or MRI, it's so classic that we often don't need a liver biopsy or biopsy of the tumor itself. Yeah. And so, that's a little unique about liver cancer compared to some of the other cancers that usually require a biopsy. But there are times that the pictures, you know, CT or MRI, they aren't as typical, and patients may need a biopsy to confirm the diagnosis of liver cancer.

 Dr. Halena Gazelka 08:29

And how do you treat them after diagnosed?

 Dr. Sumera Ilyas 08:32

That depends on the stage of the disease. So, the treatment options vary depending upon what stage of the liver cancer a patient has. The small or early stage tumors in patients who have good liver function and who are otherwise healthy, may be treated with surgery. They may also be treated with ablation procedures, such as microwave ablation, or radio frequency ablation, which essentially use heat or sometimes cold to kill the cancer cells. If these treatments are not an option, but the cancer is still relatively early stage, then liver transplantation is another option. So, this involves taking out the old liver replacing it with a liver from a donor. And it's something that we do quite commonly here at the Mayo Clinic.



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Dr. Halena Gazelka 09:23

What other innovative treatments are there for liver cancer?

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Dr. Sumera Ilyas 09:27

So, there are quite a few innovative treatments. I think there's an interest in learning more about proton beam therapy so that's radiation therapy that's directed toward the tumor intends to cause less damage to the healthy liver. So, we're still trying to understand where that falls in in the treatment of liver cancer. Immunotherapies are being actively studied. So, these are drugs that help the immune system fight cancer. And so, there are a number of trials that are going on to see if these treatments can be routine treatments for patients with liver cancer.

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Dr. Halena Gazelka 10:13

Sumera, I bet you're going to tell me that it depends on the stage. But what are the survival rates like for liver cancer?

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Dr. Sumera Ilyas 10:19

Yeah, the survival rates, and they do vary depending upon the stage of the disease. So, if we assume that a patient will not get any treatment, and they have advanced liver cancer, then the survival rate is expected to be six months or less. For a patient who has an early stage cancer and doesn't receive any treatment, the survival rate can be up to about 36 months.

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Dr. Halena Gazelka 10:47

Wow. When a patient is diagnosed with liver cancer, I mean 42,000 cases, that sounds bad, but if you compare it to some of the other types of cancer that are diagnosed in the United States, it's not as many cases. And so, I'm imagining that it is important to go to a center or to find a gastroenterologist or an oncologist who is familiar with this disease?

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Dr. Sumera Ilyas 11:14

Absolutely, I think that's very, very important because a lot of these treatments, you know, and again I emphasize that the treatments depend on the stage of the disease, but a lot of these treatments require expertise. And so, you know, whether that's microwave ablation or radiofrequency ablation, you need an experienced radiologist. We have other local regional treatments such as chemo embolization, or radio-embolization, that involves taking a catheter and placing it into the blood vessels to deliver radioactive beads or chemotherapy drugs or block off blood flow to the tumor. And so, patients really need to be at a center that has done, where the interventionalists have a lot of experience with these procedures to have the best chance of a successful intervention and good outcomes.

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Dr. Halena Gazelka 12:11

So, how would a patient know whether they were coming to the right place to receive care? Or what questions could they ask?

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Dr. Sumera Ilyas 12:18

Yeah, so, I think some of the questions that can ask is, you know, they can ask their provider what is the stage of my cancer? And so, what are my treatment options for this stage? And what do you have available here? What is your experience with this? What are your outcomes? I think these are all very fair questions that patients have every right to ask their providers and get good answers to. I think that the other things that patients can think about, especially if they have advanced disease, or disease that may have spread outside the liver, and, in first line treatment with systemic therapy maybe didn't work as well, it's important to get a biopsy of the tumor so it can be sent for specialized testing, that we call next generation sequencing. And that essentially looks for mutations that can help the tumor grow. And for us physicians, it can potentially help identify drugs that may work against those mutations and may be more appropriate for a certain patient depending upon those sequencing results.

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Dr. Halena Gazelka 13:23

Sumera, you already talked about this a little bit, but what other research is going on in the world of liver cancer?

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Dr. Sumera Ilyas 13:30

So, there's actually a great deal of exciting research that's going on, from investigating how to prevent liver cancer and much of that research is focused on treatments of actually the causes of liver cancer or cirrhosis. There's also a great deal of research looking at ways to detect liver cancer earlier. Because earlier detection means having a better chance of cure. So, investigators, researchers are working on developing tests such as biomarkers that can help us diagnose the cancer at an earlier stage. And of course, there's a lot of effort directed towards the better treatment of liver cancer. There are numerous ongoing clinical trials that are looking at combinations of chemotherapies and immunotherapies. And also, looking at those combinations in different stages of disease. Right? So, for example, in the earlier stage of disease, can we combine chemotherapy and immunotherapy with surgery to have a better chance of having a cure after surgery? And in the later stages can we find the right combination that help prolong survival for patients compared to what we currently have available. So, I would say there's a great deal on the horizon, and we eagerly await the results of these studies to see how we can improve the lives of our wonderful patients.

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Dr. Halena Gazelka 14:47

It is always exciting to hear about the research endeavors that are going on because I wouldn't be aware of them if I wasn't able to interview wonderful physicians like you who are studying interesting diseases.

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Dr. Sumera Ilyas 15:00

Yeah.

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Dr. Halena Gazelka 15:01

Thanks for being here today, Sumera. Do you have any last words to share with our listeners?

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Dr. Sumera Ilyas 15:06

I would say that one other thing that patients can do is in terms of prevention. And we prevent liver cancer, well the best way of preventing it is by trying to prevent liver disease from happening. So, I mentioned earlier Hepatitis B, getting a vaccination against Hepatitis B, and then having a healthy lifestyle with a healthy diet and exercise to maintain a healthy weight. And then if a patient does drink alcohol, I would say to limit that consumption, I think these are important things that patients can try to do to prevent getting liver disease which again, is the biggest risk factor for liver cancer.

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Dr. Halena Gazelka 15:53

And they seem very consistent with other diseases when individuals come to speak here. Those are common healthy lifestyle tips. So, very helpful. Thank you.

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Dr. Sumera Ilyas 16:02

Yeah, which is a good thing, right?

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Dr. Halena Gazelka 16:03

That's right. Thank you for being here today, Sumera.

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Dr. Sumera Ilyas 16:06

Thank you for having me. It was my pleasure.

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Dr. Halena Gazelka 16:09

Our thanks to Mayo Clinic gastroenterologist, Dr. Sumera Ilyas, for being here today to talk to us about liver cancer. I hope that you learned something. I know that I did. We wish each of you a wonderful day.

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Narrator 16:21

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