

0:00:00 -> 0:00:02.46 Support for Yale Cancer Answers  
0:00:02.46 -> 0:00:04.92 comes from AstraZeneca, dedicated  
0:00:04.999 -> 0:00:07.344 to advancing options and providing  
0:00:07.344 -> 0:00:10.3 hope for people living with cancer.  
0:00:10.3 -> 0:00:14.208 More information at [astrazeneca-us.com](http://astrazeneca-us.com).  
0:00:14.21 -> 0:00:16.064 Welcome to Yale Cancer Answers with  
0:00:16.064 -> 0:00:18.44 your host doctor Anees Chagpar.  
0:00:18.44 -> 0:00:20.24 Yale Cancer Answers features the  
0:00:20.24 -> 0:00:22.432 latest information on cancer care by  
0:00:22.432 -> 0:00:23.848 welcoming oncologists and specialists  
0:00:23.848 -> 0:00:26.26 who are on the forefront of the  
0:00:26.26 -> 0:00:28.36 battle to fight cancer. This week,  
0:00:28.36 -> 0:00:30.085 it's a conversation about liver  
0:00:30.085 -> 0:00:31.81 cancer with Doctor Mario Strazzabosco,  
0:00:31.81 -> 0:00:33.814 Doctor Strazzabosco is a  
0:00:33.814 -> 0:00:35.556 professor of medicine and clinical  
0:00:35.556 -> 0:00:37.596 program leader of the liver Cancer  
0:00:37.596 -> 0:00:40.089 program at the Yale School of Medicine,  
0:00:40.09 -> 0:00:42.16 where Doctor Chagpar is a  
0:00:42.16 -> 0:00:43.54 professor of surgical oncology.  
0:00:45.65 -> 0:00:47.436 Mario, maybe we can start  
0:00:47.436 -> 0:00:49.5 off by you telling us a  
0:00:49.587 -> 0:00:52.127 little bit about liver cancers.  
0:00:52.13 -> 0:00:54.155 So often people have different  
0:00:54.155 -> 0:00:55.775 kinds of liver cancers.  
0:00:55.78 -> 0:00:57.388 Sometimes cancers have started  
0:00:57.388 -> 0:01:00.668 somewhere else and go to the liver and  
0:01:00.668 -> 0:01:03.068 sometimes cancers start in the liver.  
0:01:03.07 -> 0:01:05.779 Can you give us a  
0:01:05.779 -> 0:01:08.328 framework of how to think about  
0:01:08.33 -> 0:01:10.082 liver cancers?

0:01:10.082 -> 0:01:13.171 We distinguish cancers that start in the liver and  
0:01:13.171 -> 0:01:15.505 we call them primary liver cancer,  
0:01:15.51 -> 0:01:19.39 from cancer that goes into the liver with  
0:01:19.39 -> 0:01:23.306 the primary cancer somewhere else.  
0:01:23.31 -> 0:01:25.865 Those are called secondary liver  
0:01:25.865 -> 0:01:29.03 cancer and in essence they are  
0:01:29.03 -> 0:01:31.63 metastasis from a primary tumor.  
0:01:31.63 -> 0:01:34.804 Today the topic will be  
0:01:34.804 -> 0:01:38.024 cancer that happens  
0:01:38.024 -> 0:01:41.51 in the liver as a primary site.  
0:01:42.85 -> 0:01:45.447 And those are less common than the  
0:01:45.447 -> 0:01:47.644 cancers that spread to the liver  
0:01:47.644 -> 0:01:49.749 from other sites, is that right?  
0:01:50.77 -> 0:01:52.39 That is right they are  
0:01:52.39 -> 0:01:53.605 definitely less common,  
0:01:53.61 -> 0:01:56.403 but it is true that  
0:01:56.403 -> 0:01:58.838 primary liver cancer is actually one  
0:01:58.838 -> 0:02:01.526 of the few cancers that are still  
0:02:01.605 -> 0:02:03.68 increasing in terms of incidence  
0:02:03.68 -> 0:02:06.164 and also in terms of mortality.  
0:02:06.164 -> 0:02:08.588 So tell us a little bit  
0:02:08.59 -> 0:02:10.62 more about primary liver cancers.  
0:02:10.62 -> 0:02:12.24 Are there different types  
0:02:12.24 -> 0:02:13.86 of primary liver cancer?  
0:02:14.47 -> 0:02:17.44 Yes, there are several types.  
0:02:17.44 -> 0:02:21.77 The two main types are  
0:02:21.77 -> 0:02:24.034 hepatocellular carcinoma,  
0:02:24.034 -> 0:02:27.816 which is the cancer  
0:02:27.816 -> 0:02:31.39 that starts from the liver cells.  
0:02:32.348 -> 0:02:36.66 It is the most common of them and the  
0:02:36.66 -> 0:02:38.796 other is called cholangiocarcinoma

0:02:38.796 -> 0:02:42 and that starts from the bile ducts  
0:02:42.088 -> 0:02:44.596 inside or outside of the liver.  
0:02:44.6 -> 0:02:46.238 And this is less common.  
0:02:46.24 -> 0:02:49.691 You mentioned that the  
0:02:49.691 -> 0:02:53.32 incidences was increasing. What are  
0:02:53.32 -> 0:02:57.135 the risk factors for getting liver cancer?  
0:02:58.775 -> 0:03:02.59 This is a very important question.  
0:03:02.59 -> 0:03:06.442 So liver cancer is increasing as a result of  
0:03:06.442 -> 0:03:09.668 several worldwide epidemiological trends.  
0:03:09.67 -> 0:03:14.726 The main risk factor is one, having liver disease.  
0:03:14.73 -> 0:03:17.85 Two having hepatitis c, three having  
0:03:17.85 -> 0:03:20.639 hepatitis B, four, having an excessive  
0:03:20.639 -> 0:03:23.669 consumption of alcohol, five, having  
0:03:23.669 -> 0:03:27.04 what we call metabolic syndrome,  
0:03:27.04 -> 0:03:30.729 which is the result of being obese  
0:03:30.729 -> 0:03:34.07 or overweight or having diabetes,  
0:03:34.07 -> 0:03:38.33 or having other cardiovascular risk factors.  
0:03:38.33 -> 0:03:40.11 In addition to that,  
0:03:40.11 -> 0:03:42.335 there is a 6th epidemiological  
0:03:42.335 -> 0:03:44.74 trend which is very important,  
0:03:44.74 -> 0:03:48.943 which is the poor access to care in certain countries.  
0:03:55.42 -> 0:03:58.3 These are the main factors that  
0:03:58.3 -> 0:04:00.22 contribute to increasing the  
0:04:00.306 -> 0:04:03.026 incidence of primary liver cancer,  
0:04:03.03 -> 0:04:05.56 and particularly of hepatocellular carcinoma.  
0:04:05.56 -> 0:04:08.92 Of course, the combination of these factors  
0:04:08.92 -> 0:04:12.148 changes according to the geographical area.  
0:04:20.772 -> 0:04:24.32 It used to be that in the US,  
0:04:24.32 -> 0:04:27.44 the incidence of HCC was lower  
0:04:27.44 -> 0:04:29.7 for example, than Asia, Africa,  
0:04:29.7 -> 0:04:31.056 or other places.

0:04:31.056 -> 0:04:34.22 But now with migration and other factors,  
0:04:34.22 -> 0:04:37.732 it tends to become more equal in terms  
0:04:37.732 -> 0:04:40.523 of distribution of risk factors and  
0:04:40.523 -> 0:04:43.259 also the risk factors are changing,  
0:04:43.26 -> 0:04:46.508 so we used to have a very big  
0:04:46.508 -> 0:04:48.679 impact of hepatitis C.  
0:04:48.68 -> 0:04:50.94 Now with the new treatments  
0:04:52.75 -> 0:04:55.914 we see a rise in the  
0:04:55.914 -> 0:04:56.818 hepatocellular cancer  
0:04:56.82 -> 0:04:59.15 which is a consequence of the metabolic  
0:04:59.15 -> 0:05:01.48 risk factor such as diabetes,  
0:05:02.88 -> 0:05:06.352 so the incidence in the US vs Asia  
0:05:06.352 -> 0:05:09.268 has increased.  
0:05:09.268 -> 0:05:12.64 You mentioned that was due to in part to migration  
i.e.  
0:05:12.64 -> 0:05:15.58 people from Asia moving to the US which  
0:05:15.58 -> 0:05:18.22 might imply some genetic factors.  
0:05:18.22 -> 0:05:20.938 So is there a genetic underpinning  
0:05:20.938 -> 0:05:24.268 to some of these cancers as well?  
0:05:24.73 -> 0:05:27.055 I think this is more exposure  
0:05:27.055 -> 0:05:28.915 to viral hepatitis.  
0:05:28.92 -> 0:05:32.238 For example, one of the main factors  
0:05:32.24 -> 0:05:34.22 in hepatitis B  
0:05:34.22 -> 0:05:37.19 which is a direct oncogenic virus  
0:05:37.291 -> 0:05:41.08 and it used to be lower here and higher  
0:05:41.08 -> 0:05:43.4 for example, in the Mediterranean  
0:05:43.4 -> 0:05:45.256 countries and in Asia.  
0:05:45.26 -> 0:05:48.956 And changes in the  
0:05:48.956 -> 0:05:51.31 worldwide population may change that.  
0:05:51.31 -> 0:05:53.858 But one peculiar thing in the  
0:05:53.858 -> 0:05:56.828 US is actually the increase

0:05:56.828 -> 0:05:59.208 of metabolic risk factors.  
0:05:59.21 -> 0:06:01.54 Cancer associated with obesity  
0:06:02.6 -> 0:06:05.78 and diabetes and one important thing  
0:06:05.78 -> 0:06:08.82 to understand in terms of liver cancer  
0:06:08.82 -> 0:06:11.802 is that whereas we try to focus on  
0:06:11.802 -> 0:06:14.566 one risk factor as a matter of fact,  
0:06:14.566 -> 0:06:16.15 patients with liver cancer,  
0:06:16.15 -> 0:06:18.526 have several risk factors. It is not unusual  
0:06:18.53 -> 0:06:20.912 to find a patient that is  
0:06:20.912 -> 0:06:22.5 overweight, maybe is diabetic,  
0:06:22.5 -> 0:06:25.14 which goes with being overweight and  
0:06:25.14 -> 0:06:28.573 he didn't know he had hepatitis C  
0:06:28.573 -> 0:06:31.63 so lived a normal life with  
0:06:32.456 -> 0:06:35.347 drinking more than his liver could stand,  
0:06:35.35 -> 0:06:37.8 and so here we are and maybe  
0:06:37.8 -> 0:06:39.64 even he was smoking.  
0:06:39.64 -> 0:06:42.52 So just a regular guy that had  
0:06:42.52 -> 0:06:45.49 accrued four risk factors for liver cancer.  
0:06:45.49 -> 0:06:48.22 So this is very important to understand  
0:06:48.22 -> 0:06:50.99 when they add to each  
0:06:50.99 -> 0:06:53.282 other the increasing the risk factor  
0:06:53.29 -> 0:06:53.942 is exponential.  
0:06:53.942 -> 0:06:56.55 I want to pick up on the viral  
0:06:56.623 -> 0:06:59.047 hepatitities which increase the risk  
0:06:59.047 -> 0:07:01.869 of developing hepatocellular cancer.  
0:07:01.87 -> 0:07:04.678 So hepatitis B and hepatitis C,  
0:07:04.68 -> 0:07:06.764 interestingly, as we're living  
0:07:06.764 -> 0:07:09.372 through Covid right now, another  
0:07:09.372 -> 0:07:13.548 viral disease for which we have a vaccine,  
0:07:13.55 -> 0:07:16.81 it's important to understand that  
0:07:16.81 -> 0:07:20.57 there are vaccines for hepatitis B&C.

0:07:20.57 -> 0:07:23.432 Have those vaccines had any  
0:07:23.432 -> 0:07:26.109 impact on reducing the rates  
0:07:26.109 -> 0:07:28.67 of hepatocellular cancer?  
0:07:28.67 -> 0:07:30.718 We have vaccination available  
0:07:30.718 -> 0:07:34.363 for hepatitis A&B. Hepatitis A is not  
0:07:34.363 -> 0:07:37.279 associated with liver cancer, it is the  
0:07:37.279 -> 0:07:40.72 hepatitis that is actually acquired  
0:07:40.72 -> 0:07:43.248 through eating shellfish,  
0:07:43.25 -> 0:07:48.403 or seafood. Hepatitis B,  
0:07:48.403 -> 0:07:51.709 we have a vaccine which is extremely  
0:07:51.709 -> 0:07:55.208 efficient and we have data showing that,  
0:07:55.21 -> 0:07:58.521 for example, in some country in Africa  
0:07:58.521 -> 0:08:01.999 where they had a very high incidence  
0:08:01.999 -> 0:08:05.694 of a hepatocellular cancer because of the  
0:08:05.694 -> 0:08:08.969 maternal fetal transmission of hepatitis B,  
0:08:08.97 -> 0:08:12.138 they implemented a mass  
0:08:12.138 -> 0:08:13.722 vaccination program there.  
0:08:13.73 -> 0:08:17.018 And the incidence of liver cancer dropped  
0:08:17.02 -> 0:08:18.62 dramatically, so yes,  
0:08:18.62 -> 0:08:22.163 it is there and we can decrease the  
0:08:22.163 -> 0:08:25.319 incidence with vaccination and in fact  
0:08:25.319 -> 0:08:29.209 most people in the younger generation  
0:08:29.21 -> 0:08:31.09 are vaccinated for it.  
0:08:33.44 -> 0:08:36.038 Unfortunately we never made it with  
0:08:36.038 -> 0:08:39.35 trying to find a vaccine for hepatitis C because of  
0:08:39.35 -> 0:08:42.344 this high variability of the virus.  
0:08:42.35 -> 0:08:45.032 But we were lucky because  
0:08:45.032 -> 0:08:47.6 we were able to devise  
0:08:47.6 -> 0:08:50.295 pharmacological treatment and so now  
0:08:50.295 -> 0:08:54.232 we have very effective ways to eradicate  
0:08:54.232 -> 0:08:57.694 the virus using small molecule compounds.

0:08:57.7 -> 0:09:00.538 And that is important information.  
0:09:00.54 -> 0:09:03.156 And overall I think one message  
0:09:03.156 -> 0:09:06.016 that it would be very important  
0:09:06.016 -> 0:09:09.076 to get through to the public, is that  
0:09:09.08 -> 0:09:11.654 most formal liver disease and therefore  
0:09:11.654 -> 0:09:14.29 also liver cancer are preventable.  
0:09:14.29 -> 0:09:18.074 And also treatable in terms of liver disease.  
0:09:18.08 -> 0:09:20.45 So you can  
0:09:20.45 -> 0:09:23.078 prevent risky behavior for viral  
0:09:23.078 -> 0:09:26.14 hepatitis, you can use vaccination.  
0:09:26.14 -> 0:09:28.65 You can treat the virus  
0:09:29.811 -> 0:09:33.171 if you realize you are  
0:09:33.171 -> 0:09:35.976 infected before having a cirrhosis.  
0:09:35.98 -> 0:09:41.68 Avoid, of course,  
0:09:41.68 -> 0:09:43.42 excessive use of alcohol.  
0:09:43.42 -> 0:09:46.962 You can act on the lifestyle if you  
0:09:46.962 -> 0:09:50 have diabetes. If you are  
0:09:50 -> 0:09:52.628 obese,  
0:09:52.63 -> 0:09:54.378 you can lose weight.  
0:09:54.378 -> 0:09:56.563 You can increase your exercise.  
0:09:56.57 -> 0:09:59.153 You can control those factors and so  
0:09:59.153 -> 0:10:02.27 all of them are actually preventable,  
0:10:02.27 -> 0:10:04.688 acting both at a personal level  
0:10:04.688 -> 0:10:07.519 and public health action.  
0:10:08.4 -> 0:10:11.238 Let's pick up on on that.  
0:10:11.24 -> 0:10:14.39 You mentioned a  
0:10:14.39 -> 0:10:16.49 number of preventative measures,  
0:10:16.49 -> 0:10:19.115 so if somebody gets vaccinated  
0:10:19.115 -> 0:10:21.74 against hepatitis B, for example,  
0:10:21.74 -> 0:10:24.365 and never contracts hepatitis B,  
0:10:24.37 -> 0:10:26.466 it's understandable then that

0:10:26.466 -> 0:10:29.086 they've eliminated that risk factor,  
0:10:29.09 -> 0:10:31.75 but if they get hepatitis  
0:10:31.75 -> 0:10:34.87 C and are treated for it,  
0:10:34.87 -> 0:10:38.014 does that eradicate the risk of  
0:10:38.014 -> 0:10:39.586 developing hepatocellular carcinoma?  
0:10:39.59 -> 0:10:43.526 Or is the fact that they already had  
0:10:43.526 -> 0:10:47.377 hepatitis C even though it was treated,  
0:10:48.204 -> 0:10:50.676 does that still increase their risk?  
0:10:58.41 -> 0:11:00.54 Number one, there's a lot of  
0:11:00.54 -> 0:11:03.309 people that have hepatitis C  
0:11:03.31 -> 0:11:05.69 and don't know it, particularly  
0:11:05.69 -> 0:11:08.78 in the so called baby Boomer.  
0:11:08.78 -> 0:11:15.93 #2 this drug that I was mentioning,  
0:11:15.93 -> 0:11:19.28 DAA, direct active antiviral,  
0:11:19.28 -> 0:11:21.29 are extremely  
0:11:23.32 -> 0:11:25.29 good and can eradicate  
0:11:25.29 -> 0:11:27.26 the virus in most cases.  
0:11:27.26 -> 0:11:29.618 Then the question becomes  
0:11:29.62 -> 0:11:32.378 at what stage did you apply that treatment?  
0:11:32.38 -> 0:11:34.75 Did you have just a minor  
0:11:37.05 -> 0:11:40.315 chronic hepatitis or were  
0:11:40.315 -> 0:11:43.58 you already progressed to have  
0:11:43.69 -> 0:11:46.55 more fibrosis and cirrhosis.  
0:11:46.55 -> 0:11:49.118 And the risk decreases in  
0:11:49.118 -> 0:11:51.438 a different way whether you  
0:11:51.438 -> 0:11:53.514 treated hepatitis before becoming  
0:11:53.514 -> 0:11:56.69 cirrhotic or when you were already  
0:11:56.69 -> 0:11:59.105 cirrhotic?  
0:11:59.105 -> 0:12:01.037 In this second instance,  
0:12:01.04 -> 0:12:04.896 the decrease in the risk is less important.  
0:12:06.241 -> 0:12:08.923 The thing that we learned after treating

0:12:08.923 -> 0:12:11.347 many patients and erradicating  
0:12:11.347 -> 0:12:14.806 the virus is that the risk of  
0:12:14.806 -> 0:12:17.476 having liver cancer was decreasing,  
0:12:17.48 -> 0:12:19.232 but was not zero.  
0:12:19.232 -> 0:12:22.38 So there is still a substantial risk,  
0:12:22.38 -> 0:12:25.509 even if it is, let's say halved.  
0:12:29.072 -> 0:12:31.748 And there is a big controversy in the literature,  
0:12:31.75 -> 0:12:34.426 but I won't go into that,  
0:12:34.43 -> 0:12:38.57 but I think that one of the problems is,  
0:12:38.57 -> 0:12:41.363 the timing in the Natural History  
0:12:41.363 -> 0:12:44.169 of disease in which you apply the  
0:12:44.169 -> 0:12:47.549 treatment and just to go back to  
0:12:47.549 -> 0:12:50.049 the beginning of this conversation,  
0:12:50.05 -> 0:12:52.594 we said most patients  
0:12:52.594 -> 0:12:53.866 with liver cancer  
0:12:53.87 -> 0:12:56.845 have more than one risk factor.  
0:12:56.85 -> 0:12:59.394 So if I only eliminate the  
0:12:59.394 -> 0:13:00.666 virus and eradicate it,  
0:13:00.67 -> 0:13:03.645 I decrease a very important risk factor.  
0:13:03.65 -> 0:13:06.8 But I don't zero the risk factor  
0:13:06.8 -> 0:13:08.98 because the patient  
0:13:08.98 -> 0:13:11.556 may be diabetic, the patient may be overweight,  
0:13:11.56 -> 0:13:13.552 but the patient may be drinking  
0:13:13.552 -> 0:13:15.771 or go back to drink because  
0:13:15.771 -> 0:13:18.207 now he doesn't have the virus.  
0:13:18.21 -> 0:13:18.948 So again,  
0:13:18.948 -> 0:13:20.793 one of the important messages  
0:13:25.41 -> 0:13:29.358 is that liver cancer is a very  
0:13:29.358 -> 0:13:30.674 comprehensive approach.  
0:13:30.68 -> 0:13:33.375 Eliminating the virus is just step one.  
0:13:33.38 -> 0:13:34.928 We're going to pick

0:13:34.93 -> 0:13:38.04 up on how we deal with all of the other  
0:13:38.123 -> 0:13:40.709 lifestyle factors right after we take  
0:13:40.709 -> 0:13:44.19 a quick break it for a medical minute.  
0:13:44.19 -> 0:13:46.47 Please stay tuned to learn more  
0:13:46.47 -> 0:13:48.82 about advances in liver cancer with  
0:13:48.82 -> 0:13:51.184 my guest doctor, Mario Strazzabosco.  
0:13:51.184 -> 0:13:53.237 Support for Yale Cancer Answers  
0:13:53.237 -> 0:13:55.679 comes from AstraZeneca, working to  
0:13:55.679 -> 0:13:58.088 eliminate cancer as a cause of death.  
0:13:58.09 -> 0:14:01.278 Learn more at [astrazeneca-us.com](http://astrazeneca-us.com).  
0:14:01.28 -> 0:14:03.365 This is a medical minute  
0:14:03.365 -> 0:14:04.616 about smoking cessation.  
0:14:04.62 -> 0:14:06.7 There are many obstacles to  
0:14:06.7 -> 0:14:08.364 face when quitting smoking,  
0:14:08.37 -> 0:14:11.289 as smoking involves the potent drug nicotine.  
0:14:11.29 -> 0:14:14.209 But it's a very important lifestyle change,  
0:14:14.21 -> 0:14:15.458 especially for patients  
0:14:15.458 -> 0:14:16.706 undergoing cancer treatment.  
0:14:16.71 -> 0:14:18.954 Quitting smoking has been shown to  
0:14:18.954 -> 0:14:20.989 positively impact response to treatments,  
0:14:20.989 -> 0:14:23.359 decrease the likelihood that patients  
0:14:23.359 -> 0:14:25.255 will develop second malignancies,  
0:14:25.315 -> 0:14:27.13 and increase rates of survival.  
0:14:27.13 -> 0:14:28.762 Tobacco treatment programs are  
0:14:28.762 -> 0:14:30.802 currently being offered at federally  
0:14:30.802 -> 0:14:32.778 designated Comprehensive cancer centers  
0:14:32.78 -> 0:14:34.51 and operate on the principles  
0:14:34.51 -> 0:14:36.915 of the US Public Health Service  
0:14:36.915 -> 0:14:38.727 clinical practice guidelines.  
0:14:38.73 -> 0:14:40.845 All treatment components are evidence  
0:14:40.845 -> 0:14:43.406 based and therefore all patients are

0:14:43.406 -> 0:14:45.722 treated with FDA approved first line  
0:14:45.722 -> 0:14:47.854 medications for smoking cessation as  
0:14:47.854 -> 0:14:50.119 well as smoking cessation counseling  
0:14:50.119 -> 0:14:52.596 that stresses appropriate coping skills.  
0:14:52.596 -> 0:14:55.386 More information is available at  
0:14:55.386 -> 0:14:57.06 yalecancercenter.org you're listening  
0:14:57.13 -> 0:14:58.97 to Connecticut Public Radio.  
0:14:58.97 -> 0:14:59.41 Welcome back to Yale Cancer Answers.  
0:15:01.6 -> 0:15:05.096 This is doctor Anees Chagpar and  
0:15:05.1 -> 0:15:07.728 I'm joined tonight by my guest  
0:15:07.728 -> 0:15:09.48 doctor Mario Strazzabosco.  
0:15:09.48 -> 0:15:12.108 We're discussing the care of patients  
0:15:12.108 -> 0:15:14.734 with liver cancer and right before  
0:15:14.734 -> 0:15:17.534 the break Mario you were telling us  
0:15:17.534 -> 0:15:20.317 about this plethora of factors that  
0:15:20.317 -> 0:15:23.025 increase people's risk of  
0:15:23.025 -> 0:15:25.86 liver cancer and the fact that  
0:15:25.86 -> 0:15:29.077 while we do have interventions for  
0:15:29.077 -> 0:15:31.696 hepatitis there frequently are other  
0:15:31.696 -> 0:15:34.75 factors that are are involved.  
0:15:34.75 -> 0:15:37.162 You mentioned a few that I'm  
0:15:37.162 -> 0:15:40.205 going to lump together,  
0:15:40.205 -> 0:15:42.885 which are metabolic syndrome.  
0:15:42.89 -> 0:15:44.93 So obesity and diabetes,  
0:15:44.93 -> 0:15:47.48 as well as alcohol which  
0:15:47.48 -> 0:15:50.017 can lead to fatty liver.  
0:15:50.02 -> 0:15:53.282 So can you tell us a little  
0:15:53.282 -> 0:15:56.129 bit more about fatty liver,  
0:15:56.13 -> 0:15:59.688 and whether that impacts the development  
0:15:59.69 -> 0:16:02.355 of liver cancer and whether  
0:16:02.355 -> 0:16:05.02 there's any quote safe amount

0:16:05.118 -> 0:16:08.07 of alcohol that we can consume?  
0:16:14.3 -> 0:16:17.048 What we call fatty liver is  
0:16:17.05 -> 0:16:19.672 a very common condition which  
0:16:19.672 -> 0:16:21.985 is identified by an increased  
0:16:21.985 -> 0:16:25.317 deposition of fat in the liver cells.  
0:16:25.32 -> 0:16:30.6 Fatty liver can be the result of several  
0:16:30.6 -> 0:16:36.557 problems, but most likely it's due to  
0:16:36.56 -> 0:16:38.94 the effect of obesity,  
0:16:38.94 -> 0:16:42.01 the affect of diabetes, hyperlipidemia,  
0:16:42.01 -> 0:16:46.15 and what we call metabolic syndrome,  
0:16:46.15 -> 0:16:49.95 which is a complex of  
0:16:49.95 -> 0:16:51.958 changes that are increasing  
0:16:51.958 -> 0:16:54.468 the risk of cardiac disease.  
0:16:54.47 -> 0:16:58.478 This is how we recognize this  
0:16:58.48 -> 0:17:02.458 at the beginning and we used to think that fatty  
0:17:02.458 -> 0:17:06.008 liver was a relatively benign condition,  
0:17:06.01 -> 0:17:08.101 but now we  
0:17:08.101 -> 0:17:10.889 understand that some patients  
0:17:10.889 -> 0:17:12.98 with fatty liver  
0:17:12.98 -> 0:17:16.115 will develop an  
0:17:18 -> 0:17:19.864 inflammatory condition of the liver  
0:17:19.864 -> 0:17:23.57 that is not any more benign but can  
0:17:23.57 -> 0:17:26.054 lead to chronic liver disease like  
0:17:26.054 -> 0:17:28.773 cirrhosis and can be associated with  
0:17:28.773 -> 0:17:31.033 the development of liver cancer.  
0:17:31.04 -> 0:17:35.08 Clearly the amount of people that are  
0:17:35.08 -> 0:17:41.03 affected by this condition is very high, so  
0:17:41.03 -> 0:17:43.28 the question is how do we  
0:17:43.28 -> 0:17:44.405 follow those patients?  
0:17:44.41 -> 0:17:47.21 What do we do?  
0:17:51.25 -> 0:17:55.255 It would be important to try to prevent it,

0:17:55.26 -> 0:17:58.368 and so how do you prevent it?  
0:17:58.37 -> 0:18:02.375 There is data that shows if you lose  
0:18:02.375 -> 0:18:05.49 10% of your body weight the risk decreases.  
0:18:05.49 -> 0:18:08.118 This 10% of your body weight  
0:18:08.118 -> 0:18:10.849 should be lost in your  
0:18:10.849 -> 0:18:13.079 abdominal fat because this  
0:18:13.079 -> 0:18:17.187 is a fact that is more  
0:18:17.187 -> 0:18:19.327 associated with this complication.  
0:18:24.66 -> 0:18:28.628 An increase in physical activity is going to play a role.  
0:18:28.63 -> 0:18:31.6 We see that with patients that  
0:18:31.6 -> 0:18:33.085 have this predisposition,  
0:18:33.09 -> 0:18:36.066 a low carbohydrate diet is preferred.  
0:18:36.07 -> 0:18:40.525 They should avoid sodas and so on.  
0:18:40.53 -> 0:18:44.832 I do understand this is  
0:18:44.832 -> 0:18:49.097 a change in lifestyles which  
0:18:49.097 -> 0:18:52.88 are very very difficult to achieve.  
0:18:52.88 -> 0:18:56.45 But addressing this metabolic factor is  
0:18:56.45 -> 0:19:01.51 really part of the constellation of medical  
0:19:01.51 -> 0:19:04.52 action that we need to take.  
0:19:10.73 -> 0:19:15.032 I mean it seems like this really,  
0:19:15.04 -> 0:19:17.902 that constellation to  
0:19:17.902 -> 0:19:20.768 exercise more, lose weight, eat right,  
0:19:20.768 -> 0:19:23.63 that's really a constellation for good  
0:19:23.707 -> 0:19:27.46 health in general, and it has so many  
0:19:27.46 -> 0:19:29.372 really important health benefits.  
0:19:29.38 -> 0:19:31.985 But one question that people  
0:19:31.985 -> 0:19:34.59 may be wondering about is,  
0:19:34.59 -> 0:19:37.845 if I've been overweight  
0:19:37.845 -> 0:19:41.479 all my life and we know that there is  
0:19:41.48 -> 0:19:44.686 an uptick now  
0:19:44.69 -> 0:19:46.502 even in childhood obesity.

0:19:46.502 -> 0:19:49.74 So if somebody has been overweight, obese,  
0:19:49.74 -> 0:19:52.946 they then lose a bunch of weight,  
0:19:52.95 -> 0:19:55.561 is the damage to their liver already  
0:19:55.561 -> 0:19:58.073 done such that you're  
0:19:58.073 -> 0:20:00.707 having a relatively small impact on  
0:20:00.707 -> 0:20:03.05 reducing hepatocellular carcinoma?  
0:20:03.05 -> 0:20:05.34 Or is this really reversible?  
0:20:11.01 -> 0:20:15.22 If you eliminate the  
0:20:15.22 -> 0:20:17.32 damaging condition to the liver,  
0:20:17.32 -> 0:20:20.8 you can to a certain extent  
0:20:20.8 -> 0:20:23.12 reverse the chronic damage.  
0:20:23.12 -> 0:20:25.334 We learned this when we started  
0:20:25.334 -> 0:20:27.51 to treat patients with hepatitis B and antivirals.  
0:20:29.726 -> 0:20:33.05 They were very effective in suppressing  
0:20:33.153 -> 0:20:36.345 the virus and that patient  
0:20:36.35 -> 0:20:38.275 went from a complete cirrhosis  
0:20:38.275 -> 0:20:39.815 to an incomplete cirrhosis.  
0:20:39.82 -> 0:20:42.1 So yes, there is a remodeling of your  
0:20:42.1 -> 0:20:44.464 liver and this is not  
0:20:44.464 -> 0:20:46.744 complete in how much it happens.  
0:20:46.75 -> 0:20:49.438 It depends how far you went,  
0:20:49.44 -> 0:20:51.504 but there is to a certain extent  
0:20:51.504 -> 0:20:53.7 a remodeling or the liver and  
0:20:53.7 -> 0:20:55.932 we saw that happening in patients  
0:20:55.932 -> 0:20:58.298 that stopped drinking alcohol.  
0:20:58.3 -> 0:21:00.61 All of them have an improvement.  
0:21:00.61 -> 0:21:02.92 And we saw that with patients  
0:21:02.92 -> 0:21:04.46 treated for hepatitis.  
0:21:04.46 -> 0:21:08.573 Now to what extent this is going to impact  
0:21:08.58 -> 0:21:09.66 the natural  
0:21:09.66 -> 0:21:11.46 history of metabolic liver

0:21:11.46 -> 0:21:13.1 disease is less certain,  
0:21:13.1 -> 0:21:16.493 but it's very likely that we can,  
0:21:16.5 -> 0:21:18.008 for example, if you  
0:21:18.008 -> 0:21:20.27 decrease your body weight,  
0:21:20.27 -> 0:21:21.305 your risk decreases.  
0:21:21.305 -> 0:21:23.375 Now the trick is that when  
0:21:23.375 -> 0:21:25.55 you decrease your body weight,  
0:21:25.55 -> 0:21:28.175 you don't need to get it back,  
0:21:28.557 -> 0:21:31.196 So it's very easy to decrease 10%  
0:21:31.2 -> 0:21:32.948 of your body weight,  
0:21:32.948 -> 0:21:36.87 but what it counts is 2 years after.  
0:21:36.87 -> 0:21:38.71 Did you maintain that 10%  
0:21:38.71 -> 0:21:41.095 decrease because that is what  
0:21:41.095 -> 0:21:44.38 counts in terms of  
0:21:44.38 -> 0:21:46.04 risk reduction.  
0:21:46.04 -> 0:21:47.7 So you want to  
0:21:47.7 -> 0:21:49.78 make sustainable lifestyle changes now.  
0:21:49.78 -> 0:21:52.204 One of the things that you  
0:21:52.204 -> 0:21:54.65 mentioned was that you've seen the  
0:21:54.65 -> 0:21:57.261 fact that you can reduce risk in  
0:21:57.261 -> 0:21:59.737 people who have stopped drinking,  
0:21:59.74 -> 0:22:01.4 so abstained from alcohol,  
0:22:01.4 -> 0:22:04.72 but some people may be wondering,  
0:22:04.72 -> 0:22:08.04 is there any quote safe limit for alcohol?  
0:22:08.04 -> 0:22:12.19 So if you used to drink 4 drinks a night,  
0:22:12.19 -> 0:22:16.447 is it OK to drink one drink a night?  
0:22:16.45 -> 0:22:19.802 Is there any safe level of  
0:22:19.802 -> 0:22:22.963 alcohol to which the damage to your  
0:22:22.963 -> 0:22:27.503 liver is minimal and the risk of  
0:22:27.503 -> 0:22:30.278 hepatocellular carcinoma is minuscule?  
0:22:30.28 -> 0:22:33.472 Or is all alcohol going to be

0:22:33.472 -> 0:22:36.01 somewhat toxic to your liver?  
0:22:40.41 -> 0:22:42.414 We used to think that there  
0:22:42.414 -> 0:22:43.75 was a threshold, and  
0:22:43.75 -> 0:22:46.42 this is being kind of revised,  
0:22:46.42 -> 0:22:49.465 but it's very well known that a little  
0:22:49.465 -> 0:22:51.956 amount of alcohol can actually  
0:22:51.956 -> 0:22:54.16 improve your metabolic risk.  
0:22:54.16 -> 0:22:55.94 However, how little is enough,  
0:22:55.94 -> 0:22:58.788 it doesn't really depend on a fixed dose.  
0:22:58.79 -> 0:23:01.548 It depends what your  
0:23:01.548 -> 0:23:04.62 genes are and what your history is.  
0:23:04.62 -> 0:23:06.846 So if you're drinking alcohol but  
0:23:06.846 -> 0:23:09.299 you have hepatitis C, it's zero,  
0:23:09.3 -> 0:23:12.132 there's no even smelling it.  
0:23:12.132 -> 0:23:15.06 So it's a difficult question to reply.  
0:23:21.74 -> 0:23:25.002 In general your advice is  
0:23:25.002 -> 0:23:28.17 abstinences is the gold standard.  
0:23:28.17 -> 0:23:30.13 It depends on what your  
0:23:30.13 -> 0:23:32.09 overall risk profile is.  
0:23:32.09 -> 0:23:36.01 But let's say if you drink once in a while,  
0:23:36.01 -> 0:23:38.356 that is clearly not a problem,  
0:23:38.36 -> 0:23:41.606 But if it's your habit,  
0:23:41.61 -> 0:23:46.188 it may become a problem.  
0:23:46.19 -> 0:23:47.52 This doesn't say that if  
0:23:47.52 -> 0:23:48.85 you go out for dinner,  
0:23:48.85 -> 0:23:50.705 you can drink a glass of wine.  
0:23:50.71 -> 0:23:52.838 Of course you can,  
0:23:52.838 -> 0:23:56.538 even eating a candy is OK.  
0:23:56.54 -> 0:24:00.12 But not OK if you have diabetics.  
0:24:00.12 -> 0:24:03.135 This brings us to the point  
0:24:03.135 -> 0:24:06.088 of surveillance of the liver, right?

0:24:06.088 -> 0:24:09.67 How can we tell how damaged our liver is,  
0:24:09.67 -> 0:24:11.262 whether it's from diabetes,  
0:24:11.262 -> 0:24:13.252 or whether it's from obesity,  
0:24:13.26 -> 0:24:15.25 or whether it's from alcohol,  
0:24:15.25 -> 0:24:17.24 or whether it's from hepatitis.  
0:24:17.24 -> 0:24:20.019 As you mentioned before the break,  
0:24:20.02 -> 0:24:23.204 we may not even know that we have.  
0:24:23.21 -> 0:24:25.23 Are there ways of looking  
0:24:25.23 -> 0:24:27.58 at the liver?  
0:24:28.46 -> 0:24:30.364 Yes, so everything starts  
0:24:30.364 -> 0:24:31.792 from understanding whether  
0:24:31.792 -> 0:24:34.398 you liver is damaged or not,  
0:24:34.4 -> 0:24:37.599 so you may for any reason do  
0:24:37.6 -> 0:24:38.971 some laboratories tests that  
0:24:38.971 -> 0:24:40.799 include liver function tests.  
0:24:40.8 -> 0:24:43.464 You may get an ultrasound or  
0:24:43.464 -> 0:24:46.263 you may get tested for hepatits  
0:24:46.263 -> 0:24:49.029 C for example if you  
0:24:51.69 -> 0:24:54.49 were born a baby boomer,  
0:24:54.49 -> 0:24:57.99 so if you had a risky behavior  
0:24:59.74 -> 0:25:02.032 anything that may increase risk,  
0:25:04.29 -> 0:25:06.264 then a way to understand how  
0:25:06.264 -> 0:25:08.49 chronic is your damage,  
0:25:08.49 -> 0:25:12.434 you can use a fiber scan so it's like  
0:25:12.44 -> 0:25:14.395 a machine that  
0:25:14.395 -> 0:25:15.959 looks like an ultrasound,  
0:25:15.96 -> 0:25:18.856 but it is not ultasound because this  
0:25:18.856 -> 0:25:21.288 measures how elastic is your liver and  
0:25:21.288 -> 0:25:23.972 that can give us an estimate whether  
0:25:23.972 -> 0:25:26.906 you have significant fibrosis or not.  
0:25:26.91 -> 0:25:29.694 Or you can do an MRI, there are

0:25:29.694 → 0:25:32.189 several ways to understand if you  
0:25:32.189 → 0:25:34.334 liver disease, and  
0:25:34.34 → 0:25:36.686 then if you have chronic liver  
0:25:36.686 → 0:25:38.25 disease with significant fibrosis,  
0:25:38.25 → 0:25:40.005 the current guidelines are that  
0:25:40.005 → 0:25:42.55 you should be doing an ultrasound,  
0:25:44.11 → 0:25:45.28 every six months.  
0:25:47.32 → 0:25:50.47 And there is very good evidence that  
0:25:50.47 → 0:25:53.926 this can help diagnose liver cancer  
0:25:53.926 → 0:25:57.541 in early stage and therefore in a  
0:25:57.541 → 0:26:00.547 stage when the treatment can be successful.  
0:26:00.55 → 0:26:03.49 There are other patients that may  
0:26:03.49 → 0:26:05.45 need screening, like patients  
0:26:05.45 → 0:26:08.39 mainly from Asia that have hepatitis.  
0:26:11.96 → 0:26:16.368 and are less than 40 years of age.  
0:26:20.41 → 0:26:22.912 Or for example, a patient with hepatitis C that  
0:26:22.912 → 0:26:25.8 has been treated,  
0:26:25.8 → 0:26:28.04 but they have significant fibrosis.  
0:26:33.43 → 0:26:36.335 So the screening is a very important  
0:26:36.335 → 0:26:38.977 component of our strategy, but  
0:26:38.977 → 0:26:43.226 still we see patients coming to the  
0:26:43.226 → 0:26:47.212 clinic with advanced stage cancers.  
0:26:47.212 → 0:26:52.43 Or cancer that is beyond curative options.  
0:26:52.43 → 0:26:55.146 And that is a failure of screening,  
0:26:55.15 → 0:26:57.67 but of course you can have the  
0:26:57.67 → 0:26:59.65 situation in which the patient  
0:26:59.65 → 0:27:02.128 didn't know he had liver disease,  
0:27:02.13 → 0:27:04.853 because a lot of times liver disease  
0:27:04.853 → 0:27:07.232 can be significant but not  
0:27:07.232 → 0:27:09.5 symptomatic.  
0:27:12.61 → 0:27:15.508 So still the amount of patients that come

0:27:15.508 -> 0:27:18.037 with advanced liver disease is too high  
0:27:18.04 -> 0:27:21.595 because we do have again  
0:27:21.595 -> 0:27:25.249 ways to prevent the cancer, ways to screen  
0:27:25.25 -> 0:27:28.505 to get an early diagnosis and it  
0:27:28.505 -> 0:27:31.452 is important because we now have  
0:27:31.452 -> 0:27:34.374 several ways to approach liver cancer  
0:27:34.38 -> 0:27:37.592 and therapeutic approaches  
0:27:37.592 -> 0:27:41.607 are increasing every year.  
0:27:41.61 -> 0:27:44.053 So it's very important to get diagnosed  
0:27:44.053 -> 0:27:47.823 and to go to a center where you have a  
0:27:47.823 -> 0:27:50.083 multispecialty program so that all  
0:27:50.083 -> 0:27:52.526 aspects of the care can be addressed  
0:27:52.53 -> 0:27:54.35 at the highest professional level.  
0:27:55.44 -> 0:27:57.82 And it brings back one of the other  
0:27:57.82 -> 0:27:59.677 risk factors that you mentioned  
0:27:59.677 -> 0:28:02.351 which was access to care people who  
0:28:02.351 -> 0:28:04.538 don't have good access to care,  
0:28:04.54 -> 0:28:06.26 and I wonder whether you  
0:28:06.26 -> 0:28:08.55 mentioned that as a risk factor.  
0:28:08.55 -> 0:28:11.83 Because if you don't have access to care,  
0:28:11.83 -> 0:28:13.51 you can't get appropriate screening,  
0:28:13.51 -> 0:28:14.518 is that right?  
0:28:15.6 -> 0:28:17.338 You cannot and appropriate care  
0:28:20.71 -> 0:28:23.559 is something that we will be  
0:28:23.559 -> 0:28:25.5 investigating next because it's really  
0:28:25.5 -> 0:28:28.38 a pity that you have ways to prevent it,  
0:28:28.38 -> 0:28:30.683 way ato treat it, but people don't  
0:28:30.683 -> 0:28:33.12 even get close to that opportunity.  
0:28:33.12 -> 0:28:34.218 It's really saddening.  
0:28:35.03 -> 0:28:37.148 Doctor Mario Strazzabosco is a  
0:28:37.148 -> 0:28:38.99 professor of medicine and clinical

0:28:38.99 -> 0:28:41.18 program leader of the Liver Cancer  
0:28:41.18 -> 0:28:43.858 program at the Yale School of Medicine.  
0:28:43.86 -> 0:28:45.336 If you have questions,  
0:28:45.336 -> 0:28:46.812 the address is [canceranswers@yale.edu](mailto:canceranswers@yale.edu)  
0:28:46.812 -> 0:28:48.853 and past editions of the program  
0:28:48.853 -> 0:28:50.713 are available in audio and written  
0:28:50.775 -> 0:28:52.329 form at [yalecancercenter.org](http://yalecancercenter.org).  
0:28:52.33 -> 0:28:54.802 We hope you'll join us next week to  
0:28:54.802 -> 0:28:57.189 learn more about the fight against  
0:28:57.189 -> 0:29:00.072 cancer here on Connecticut Public Radio.