

WEBVTT

NOTE duration:"00:11:12"

NOTE recognizability:0.841

NOTE language:en-us

NOTE Confidence: 0.862582811428571

00:00:16.050 --> 00:00:17.640 Welcome back, this session is

NOTE Confidence: 0.862582811428571

00:00:17.640 --> 00:00:18.830 being recorded. Thank you.

NOTE Confidence: 0.30936873

00:00:21.630 --> 00:00:22.936 Welcome everybody, and I'm sorry

NOTE Confidence: 0.30936873

00:00:22.936 --> 00:00:24.600 we're running just a little bit late.

NOTE Confidence: 0.30936873

00:00:24.600 --> 00:00:26.315 Had a little I had a little

NOTE Confidence: 0.30936873

00:00:26.315 --> 00:00:27.841 trouble getting from one talk to

NOTE Confidence: 0.30936873

00:00:27.841 --> 00:00:29.305 the other after the first talk,

NOTE Confidence: 0.30936873

00:00:29.310 --> 00:00:32.630 but I'm pleased to introduce

NOTE Confidence: 0.30936873

00:00:32.630 --> 00:00:35.794 Tamar Taddei who is a professor of

NOTE Confidence: 0.30936873

00:00:35.794 --> 00:00:37.880 internal medicine digestive diseases.

NOTE Confidence: 0.30936873

00:00:37.880 --> 00:00:39.722 And director of the Regional Liver

NOTE Confidence: 0.30936873

00:00:39.722 --> 00:00:42.000 Center at the VA and associate program

NOTE Confidence: 0.30936873

00:00:42.000 --> 00:00:44.723 director of the Yale, MD PhD program.

NOTE Confidence: 0.30936873

00:00:44.723 --> 00:00:46.928 And tomorrow we'll be speaking  
NOTE Confidence: 0.30936873

00:00:46.928 --> 00:00:49.509 to us on Onco hepatology.  
NOTE Confidence: 0.817255031666667

00:00:52.920 --> 00:00:54.648 Thank you Cliff for the introduction.  
NOTE Confidence: 0.9341271

00:01:01.260 --> 00:01:04.883 All right? Hopefully you can all  
NOTE Confidence: 0.9341271

00:01:04.883 --> 00:01:08.570 see my slides. Looks great good,  
NOTE Confidence: 0.9341271

00:01:08.620 --> 00:01:10.004 now they're going without  
NOTE Confidence: 0.9341271

00:01:10.004 --> 00:01:11.768 order here, so one moment.  
NOTE Confidence: 0.81282452

00:01:15.450 --> 00:01:18.927 OK, so First off, I'd like to thank doctors,  
NOTE Confidence: 0.81282452

00:01:18.930 --> 00:01:20.570 Nathanson and Strazza Bosco for  
NOTE Confidence: 0.81282452

00:01:20.570 --> 00:01:22.540 the honor and opportunity to speak  
NOTE Confidence: 0.81282452

00:01:22.540 --> 00:01:24.409 with you today on the path ahead.  
NOTE Confidence: 0.81282452

00:01:24.410 --> 00:01:27.170 And I'll go hepatology.  
NOTE Confidence: 0.81282452

00:01:27.170 --> 00:01:28.927 Before I talk about the path ahead,  
NOTE Confidence: 0.81282452

00:01:28.930 --> 00:01:30.540 perhaps we ought to define  
NOTE Confidence: 0.81282452

00:01:30.540 --> 00:01:32.556 Ancol hepatology and I have to  
NOTE Confidence: 0.81282452

00:01:32.556 --> 00:01:34.246 say it's a personal definition.

NOTE Confidence: 0.81282452

00:01:34.250 --> 00:01:36.650 I define Uncle Hepatology as a

NOTE Confidence: 0.81282452

00:01:36.650 --> 00:01:37.850 burgeoning multidisciplinary field

NOTE Confidence: 0.81282452

00:01:37.850 --> 00:01:39.727 in which the HEPATOLOGIST serves

NOTE Confidence: 0.81282452

00:01:39.727 --> 00:01:41.845 as the anchor for the patient.

NOTE Confidence: 0.81282452

00:01:41.850 --> 00:01:43.698 The interpreter and optimizer

NOTE Confidence: 0.81282452

00:01:43.698 --> 00:01:45.084 of liver function,

NOTE Confidence: 0.81282452

00:01:45.090 --> 00:01:47.988 and the steward of multidisciplinary care

NOTE Confidence: 0.81282452

00:01:47.988 --> 00:01:50.939 for patients with primary liver cancer.

NOTE Confidence: 0.81282452

00:01:50.940 --> 00:01:52.536 As we think about the path ahead,

NOTE Confidence: 0.81282452

00:01:52.540 --> 00:01:54.170 it's important to understand perhaps

NOTE Confidence: 0.81282452

00:01:54.170 --> 00:01:56.820 why the road has been long and winding,

NOTE Confidence: 0.81282452

00:01:56.820 --> 00:01:58.536 and like many roads in Connecticut,

NOTE Confidence: 0.81282452

00:01:58.540 --> 00:02:01.456 it will be long and winding into the future.

NOTE Confidence: 0.81282452

00:02:01.460 --> 00:02:03.338 The field is extremely complex in

NOTE Confidence: 0.81282452

00:02:03.338 --> 00:02:05.816 just the last five years we've seen

NOTE Confidence: 0.81282452

00:02:05.816 --> 00:02:07.746 shifting epidemiology with the advent  
NOTE Confidence: 0.81282452

00:02:07.746 --> 00:02:10.004 of direct acting antivirals for the  
NOTE Confidence: 0.81282452

00:02:10.004 --> 00:02:12.140 treatment of hepatitis C and with  
NOTE Confidence: 0.81282452

00:02:12.140 --> 00:02:15.236 global efforts at hepatitis B vaccination,  
NOTE Confidence: 0.81282452

00:02:15.240 --> 00:02:17.260 while viral hepatitis remains a  
NOTE Confidence: 0.81282452

00:02:17.260 --> 00:02:19.280 significant driver of liver cancer,  
NOTE Confidence: 0.81282452

00:02:19.280 --> 00:02:20.195 fatty liver disease.  
NOTE Confidence: 0.81282452

00:02:20.195 --> 00:02:22.330 Is emerging as a key risk factor  
NOTE Confidence: 0.81282452

00:02:22.388 --> 00:02:24.458 for the development of liver cancer.  
NOTE Confidence: 0.81282452

00:02:24.460 --> 00:02:26.484 Depending upon where you live on the globe,  
NOTE Confidence: 0.81282452

00:02:26.490 --> 00:02:28.980 the epidemiology of liver cancer  
NOTE Confidence: 0.81282452

00:02:28.980 --> 00:02:30.680 may differ he there.  
NOTE Confidence: 0.81282452

00:02:30.680 --> 00:02:32.780 There are a multitude of stakeholders  
NOTE Confidence: 0.81282452

00:02:32.780 --> 00:02:34.953 and disciplines involved in liver care  
NOTE Confidence: 0.81282452

00:02:34.953 --> 00:02:36.713 along the continuum of prevention,  
NOTE Confidence: 0.81282452

00:02:36.720 --> 00:02:39.519 detection, diagnosis, staging,

NOTE Confidence: 0.81282452

00:02:39.519 --> 00:02:42.318 treatment and survivorship.

NOTE Confidence: 0.81282452

00:02:42.320 --> 00:02:44.420 Not only are there many medical and

NOTE Confidence: 0.81282452

00:02:44.420 --> 00:02:45.623 surgical disciplines that we've

NOTE Confidence: 0.81282452

00:02:45.623 --> 00:02:47.129 heard earlier in the day involved

NOTE Confidence: 0.81282452

00:02:47.129 --> 00:02:48.718 in the care of liver cancer,

NOTE Confidence: 0.81282452

00:02:48.720 --> 00:02:50.545 each with their own governance

NOTE Confidence: 0.81282452

00:02:50.545 --> 00:02:51.275 and guidelines,

NOTE Confidence: 0.81282452

00:02:51.280 --> 00:02:53.470 there are many other services integral

NOTE Confidence: 0.81282452

00:02:53.470 --> 00:02:55.600 to care delivery such as nurses,

NOTE Confidence: 0.81282452

00:02:55.600 --> 00:02:57.508 care, navigators, social workers,

NOTE Confidence: 0.81282452

00:02:57.508 --> 00:03:00.660 and health psychologists, just to name a few.

NOTE Confidence: 0.81282452

00:03:00.660 --> 00:03:03.378 How these disciplines come together is

NOTE Confidence: 0.81282452

00:03:03.378 --> 00:03:05.849 pivotal for patient engagement and care.

NOTE Confidence: 0.81282452

00:03:05.850 --> 00:03:08.766 Finally, because of this clinical complexity,

NOTE Confidence: 0.81282452

00:03:08.770 --> 00:03:10.730 it's vital that clinical data,

NOTE Confidence: 0.81282452

00:03:10.730 --> 00:03:13.270 for example, on underlying ideology,

NOTE Confidence: 0.81282452

00:03:13.270 --> 00:03:15.530 stage of disease and treatment

NOTE Confidence: 0.81282452

00:03:15.530 --> 00:03:18.225 cascade be structured in such a

NOTE Confidence: 0.81282452

00:03:18.225 --> 00:03:20.703 way that they can inform and enrich

NOTE Confidence: 0.81282452

00:03:20.703 --> 00:03:23.149 basic and translational science.

NOTE Confidence: 0.81282452

00:03:23.150 --> 00:03:24.330 As we've heard earlier,

NOTE Confidence: 0.81282452

00:03:24.330 --> 00:03:26.670 the liver Center is a global endeavor.

NOTE Confidence: 0.81282452

00:03:26.670 --> 00:03:27.801 Recruiting scientists and

NOTE Confidence: 0.81282452

00:03:27.801 --> 00:03:29.686 trainees from around the world,

NOTE Confidence: 0.81282452

00:03:29.690 --> 00:03:32.150 and HCC is a global problem.

NOTE Confidence: 0.81282452

00:03:32.150 --> 00:03:33.949 It's the leading cause of death in

NOTE Confidence: 0.81282452

00:03:33.949 --> 00:03:35.414 cirrhosis and the second leading

NOTE Confidence: 0.81282452

00:03:35.414 --> 00:03:37.004 cause of global cancer deaths.

NOTE Confidence: 0.81282452

00:03:37.010 --> 00:03:39.310 Claiming an estimated 800,000

NOTE Confidence: 0.81282452

00:03:39.310 --> 00:03:42.185 deaths annually with over 1,000,000

NOTE Confidence: 0.81282452

00:03:42.185 --> 00:03:44.451 projected annual deaths by 2025,

NOTE Confidence: 0.81282452

00:03:44.451 --> 00:03:47.499 HCC takes 90% of the share of primary

NOTE Confidence: 0.81282452

00:03:47.499 --> 00:03:49.593 liver cancer with intrahepatic

NOTE Confidence: 0.81282452

00:03:49.593 --> 00:03:51.225 bile duct cancer,

NOTE Confidence: 0.81282452

00:03:51.230 --> 00:03:53.126 claiming the majority of the remaining.

NOTE Confidence: 0.81282452

00:03:53.130 --> 00:03:53.567 10%.

NOTE Confidence: 0.81282452

00:03:53.567 --> 00:03:56.626 Here you can see the age standardized

NOTE Confidence: 0.81282452

00:03:56.626 --> 00:03:59.390 incidence rates of HCC across the globe,

NOTE Confidence: 0.81282452

00:03:59.390 --> 00:04:01.388 with the darkest areas on the

NOTE Confidence: 0.81282452

00:04:01.388 --> 00:04:03.170 map having the highest rates.

NOTE Confidence: 0.81282452

00:04:03.170 --> 00:04:05.005 The most prominent risk factors

NOTE Confidence: 0.81282452

00:04:05.005 --> 00:04:06.840 for HCC are hepatitis B,

NOTE Confidence: 0.81282452

00:04:06.840 --> 00:04:08.730 especially in most parts of

NOTE Confidence: 0.81282452

00:04:08.730 --> 00:04:09.864 Asia and Mongolia.

NOTE Confidence: 0.81282452

00:04:09.870 --> 00:04:11.930 Hepatitis C in Western Europe,

NOTE Confidence: 0.81282452

00:04:11.930 --> 00:04:13.634 North America and Japan,

NOTE Confidence: 0.81282452

00:04:13.634 --> 00:04:16.770 and alcohol in Central and Eastern Europe.

NOTE Confidence: 0.81282452

00:04:16.770 --> 00:04:18.519 Non-alcoholic steatohepatitis depicted

NOTE Confidence: 0.81282452

00:04:18.519 --> 00:04:22.017 in yellow is becoming the facts

NOTE Confidence: 0.81282452

00:04:22.017 --> 00:04:24.468 fastest growing etiology of HCC.

NOTE Confidence: 0.81282452

00:04:24.470 --> 00:04:26.534 Particularly in the West,

NOTE Confidence: 0.81282452

00:04:26.534 --> 00:04:29.114 this shifting and differing epidemiology

NOTE Confidence: 0.81282452

00:04:29.114 --> 00:04:32.137 is important to understand as it

NOTE Confidence: 0.81282452

00:04:32.137 --> 00:04:34.567 drives public health policy funding

NOTE Confidence: 0.8761692783333333

00:04:34.645 --> 00:04:36.589 and the scientific agenda.

NOTE Confidence: 0.8761692783333333

00:04:36.590 --> 00:04:37.878 To forecast the future,

NOTE Confidence: 0.8761692783333333

00:04:37.878 --> 00:04:39.810 we have to understand the past.

NOTE Confidence: 0.8761692783333333

00:04:39.810 --> 00:04:42.312 Our understanding of HCC has grown

NOTE Confidence: 0.8761692783333333

00:04:42.312 --> 00:04:44.680 exponentially in the last 40 years.

NOTE Confidence: 0.8761692783333333

00:04:44.680 --> 00:04:46.120 While we've seen tremendous

NOTE Confidence: 0.8761692783333333

00:04:46.120 --> 00:04:47.920 strides in the treatment of

NOTE Confidence: 0.8761692783333333

00:04:47.920 --> 00:04:49.960 advanced HCC such that we can now

NOTE Confidence: 0.876169278333333  
00:04:49.960 --> 00:04:51.550 offer multiple lines of therapy,  
NOTE Confidence: 0.876169278333333  
00:04:51.550 --> 00:04:53.758 we see continued challenges in our  
NOTE Confidence: 0.876169278333333  
00:04:53.758 --> 00:04:55.640 efforts just to screen patients  
NOTE Confidence: 0.876169278333333  
00:04:55.640 --> 00:04:57.730 at risk to be able to diagnose  
NOTE Confidence: 0.876169278333333  
00:04:57.730 --> 00:04:59.130 this cancer at early stages.  
NOTE Confidence: 0.876169278333333  
00:04:59.130 --> 00:05:01.070 When a cure is achievable,  
NOTE Confidence: 0.876169278333333  
00:05:01.070 --> 00:05:03.275 we see tremendous potential to  
NOTE Confidence: 0.876169278333333  
00:05:03.275 --> 00:05:05.039 understand the molecular classification  
NOTE Confidence: 0.876169278333333  
00:05:05.039 --> 00:05:07.339 and landscape of mutations in HTC.  
NOTE Confidence: 0.876169278333333  
00:05:07.340 --> 00:05:09.140 But this has yet to inform  
NOTE Confidence: 0.876169278333333  
00:05:09.140 --> 00:05:10.782 clinical guidance and we continue  
NOTE Confidence: 0.876169278333333  
00:05:10.782 --> 00:05:13.074 to marvel at the complexity of  
NOTE Confidence: 0.876169278333333  
00:05:13.074 --> 00:05:15.129 this heterogeneous cancer and the  
NOTE Confidence: 0.876169278333333  
00:05:15.129 --> 00:05:16.821 interplay between underlying liver  
NOTE Confidence: 0.876169278333333  
00:05:16.821 --> 00:05:18.972 disease tumorigenesis and the liver  
NOTE Confidence: 0.876169278333333

00:05:18.972 --> 00:05:20.780 and the tumor microenvironment.  
NOTE Confidence: 0.921347215384615

00:05:23.290 --> 00:05:25.565 So let's talk a little bit about  
NOTE Confidence: 0.921347215384615

00:05:25.565 --> 00:05:27.529 milestones and liver cancer at Yale.  
NOTE Confidence: 0.921347215384615

00:05:27.530 --> 00:05:29.552 The growth and evolution of our  
NOTE Confidence: 0.921347215384615

00:05:29.552 --> 00:05:31.303 programs and liver cancer have  
NOTE Confidence: 0.921347215384615

00:05:31.303 --> 00:05:32.988 fostered scientific discovery in the  
NOTE Confidence: 0.921347215384615

00:05:32.988 --> 00:05:35.408 liver in the in the liver center.  
NOTE Confidence: 0.921347215384615

00:05:35.410 --> 00:05:37.702 Dr Shaza Bosco returned to Yale  
NOTE Confidence: 0.921347215384615

00:05:37.702 --> 00:05:39.658 in 2005 and implementing the  
NOTE Confidence: 0.921347215384615

00:05:39.658 --> 00:05:42.010 successes of his program in Bergamo.  
NOTE Confidence: 0.921347215384615

00:05:42.010 --> 00:05:43.854 He established a multidisciplinary  
NOTE Confidence: 0.921347215384615

00:05:43.854 --> 00:05:46.710 liver tumor conference in early 2006.  
NOTE Confidence: 0.921347215384615

00:05:46.710 --> 00:05:49.460 While Hepatology and transplant surgery  
NOTE Confidence: 0.921347215384615

00:05:49.460 --> 00:05:52.550 clinics have been colocalized since then,  
NOTE Confidence: 0.921347215384615

00:05:52.550 --> 00:05:54.800 2011 marked the first colocalized  
NOTE Confidence: 0.921347215384615

00:05:54.800 --> 00:05:57.516 hepatology and oncology clinic to serve

NOTE Confidence: 0.921347215384615  
00:05:57.516 --> 00:05:59.874 the needs of advanced HCC patients.  
NOTE Confidence: 0.921347215384615  
00:05:59.880 --> 00:06:02.316 The integration of care across the  
NOTE Confidence: 0.921347215384615  
00:06:02.316 --> 00:06:04.984 continuum from early to advanced HCC is  
NOTE Confidence: 0.921347215384615  
00:06:04.984 --> 00:06:07.805 a focus for the future so that patients  
NOTE Confidence: 0.921347215384615  
00:06:07.805 --> 00:06:10.260 identify with an integrated team.  
NOTE Confidence: 0.921347215384615  
00:06:10.260 --> 00:06:11.526 Over the years,  
NOTE Confidence: 0.921347215384615  
00:06:11.526 --> 00:06:13.636 outreach efforts have increased our  
NOTE Confidence: 0.921347215384615  
00:06:13.636 --> 00:06:16.391 catchment such that we see the majority of  
NOTE Confidence: 0.921347215384615  
00:06:16.391 --> 00:06:19.030 liver cancers in the state of Connecticut.  
NOTE Confidence: 0.921347215384615  
00:06:19.030 --> 00:06:20.640 As the Liver Center's clinical  
NOTE Confidence: 0.921347215384615  
00:06:20.640 --> 00:06:21.606 core has grown,  
NOTE Confidence: 0.921347215384615  
00:06:21.610 --> 00:06:23.390 we have developed a biorepository  
NOTE Confidence: 0.921347215384615  
00:06:23.390 --> 00:06:25.170 of blood and tissue samples.  
NOTE Confidence: 0.921347215384615  
00:06:25.170 --> 00:06:25.596 However,  
NOTE Confidence: 0.921347215384615  
00:06:25.596 --> 00:06:28.152 we aspire to participate in coordinated  
NOTE Confidence: 0.921347215384615

00:06:28.152 --> 00:06:30.383 university wide efforts to develop a  
NOTE Confidence: 0.921347215384615

00:06:30.383 --> 00:06:32.159 robust repository that can serve as  
NOTE Confidence: 0.921347215384615

00:06:32.159 --> 00:06:34.528 a shared resource for investigators,  
NOTE Confidence: 0.921347215384615

00:06:34.530 --> 00:06:36.498 and I'm sure Doctor Lou will  
NOTE Confidence: 0.921347215384615

00:06:36.498 --> 00:06:37.810 speak more on this.  
NOTE Confidence: 0.921347215384615

00:06:37.810 --> 00:06:39.970 In partnership with pathology,  
NOTE Confidence: 0.921347215384615

00:06:39.970 --> 00:06:41.911 radiology, and interventional radiology,  
NOTE Confidence: 0.921347215384615

00:06:41.911 --> 00:06:44.246 we've developed a database of  
NOTE Confidence: 0.921347215384615

00:06:44.246 --> 00:06:45.890 carefully annotated phenotypes,  
NOTE Confidence: 0.921347215384615

00:06:45.890 --> 00:06:46.916 dovetailing clinical,  
NOTE Confidence: 0.921347215384615

00:06:46.916 --> 00:06:47.429 histological,  
NOTE Confidence: 0.921347215384615

00:06:47.429 --> 00:06:49.994 and imaging phenotypes with the  
NOTE Confidence: 0.921347215384615

00:06:49.994 --> 00:06:52.246 aspirational goal of developing a  
NOTE Confidence: 0.921347215384615

00:06:52.246 --> 00:06:54.176 robust informatics core that can  
NOTE Confidence: 0.921347215384615

00:06:54.176 --> 00:06:56.376 facilitate deep learning and other  
NOTE Confidence: 0.921347215384615

00:06:56.376 --> 00:06:58.188 analytical methodologies to advance

NOTE Confidence: 0.921347215384615  
00:06:58.188 --> 00:07:00.238 our understanding of the pathogenesis  
NOTE Confidence: 0.921347215384615  
00:07:00.238 --> 00:07:02.990 of HCC and the care of our patients.  
NOTE Confidence: 0.903683258666667  
00:07:05.030 --> 00:07:07.074 If you build robust clinical programs on  
NOTE Confidence: 0.903683258666667  
00:07:07.074 --> 00:07:09.310 a background of a strong legacy of basic,  
NOTE Confidence: 0.903683258666667  
00:07:09.310 --> 00:07:11.142 translational, and clinical science,  
NOTE Confidence: 0.903683258666667  
00:07:11.142 --> 00:07:12.974 the collaborations and publications  
NOTE Confidence: 0.903683258666667  
00:07:12.974 --> 00:07:14.928 follow over the past 20 years,  
NOTE Confidence: 0.903683258666667  
00:07:14.930 --> 00:07:16.796 we've seen a steady growth of  
NOTE Confidence: 0.903683258666667  
00:07:16.796 --> 00:07:18.441 publications on primary liver cancer  
NOTE Confidence: 0.903683258666667  
00:07:18.441 --> 00:07:20.499 among liver center members and the  
NOTE Confidence: 0.903683258666667  
00:07:20.499 --> 00:07:22.110 broader Yale Scientific community.  
NOTE Confidence: 0.903683258666667  
00:07:22.110 --> 00:07:24.852 And here you see HTC and  
NOTE Confidence: 0.903683258666667  
00:07:24.852 --> 00:07:26.223 Colangelo carcinoma publications.  
NOTE Confidence: 0.903683258666667  
00:07:26.230 --> 00:07:27.480 Over the past 20 years.  
NOTE Confidence: 0.895456758  
00:07:29.810 --> 00:07:31.802 What we should aspire to is  
NOTE Confidence: 0.895456758

00:07:31.802 --> 00:07:33.130 an integrated value based,  
NOTE Confidence: 0.895456758

00:07:33.130 --> 00:07:34.693 patient centered approach,  
NOTE Confidence: 0.895456758

00:07:34.693 --> 00:07:37.298 while multidisciplinary tumor board is  
NOTE Confidence: 0.895456758

00:07:37.298 --> 00:07:40.587 a very important piece of the puzzle.  
NOTE Confidence: 0.895456758

00:07:40.590 --> 00:07:42.258 To provide aspirational cure,  
NOTE Confidence: 0.895456758

00:07:42.258 --> 00:07:44.343 we need a programmatic approach  
NOTE Confidence: 0.895456758

00:07:44.343 --> 00:07:46.198 that fosters the simultaneous  
NOTE Confidence: 0.895456758

00:07:46.198 --> 00:07:48.488 practice of medicine and science,  
NOTE Confidence: 0.895456758

00:07:48.490 --> 00:07:51.787 and this requires central team based intake.  
NOTE Confidence: 0.895456758

00:07:51.790 --> 00:07:54.850 Truly integrated clinics and informatics.  
NOTE Confidence: 0.895456758

00:07:54.850 --> 00:07:57.265 A learning practice across all  
NOTE Confidence: 0.895456758

00:07:57.265 --> 00:07:59.197 disciplines with prospective electronic  
NOTE Confidence: 0.895456758

00:07:59.197 --> 00:08:01.568 health record based data capture  
NOTE Confidence: 0.895456758

00:08:01.568 --> 00:08:03.388 and ongoing outcomes assessment.  
NOTE Confidence: 0.895456758

00:08:03.390 --> 00:08:06.210 A proactive approach to the clinical  
NOTE Confidence: 0.895456758

00:08:06.210 --> 00:08:08.090 trial landscape tackling fundamental

NOTE Confidence: 0.895456758

00:08:08.157 --> 00:08:10.537 questions suitable to our population.

NOTE Confidence: 0.895456758

00:08:10.540 --> 00:08:14.020 And measuring patient reported outcomes.

NOTE Confidence: 0.895456758

00:08:14.020 --> 00:08:15.270 To have point of care,

NOTE Confidence: 0.895456758

00:08:15.270 --> 00:08:16.714 study enrollment in biobanking

NOTE Confidence: 0.895456758

00:08:16.714 --> 00:08:19.311 and a team based appraisal of the

NOTE Confidence: 0.895456758

00:08:19.311 --> 00:08:21.513 Gray areas where we have consensus

NOTE Confidence: 0.895456758

00:08:21.513 --> 00:08:23.340 driven center specific approaches.

NOTE Confidence: 0.895456758

00:08:23.340 --> 00:08:25.490 We examine our practices and

NOTE Confidence: 0.895456758

00:08:25.490 --> 00:08:27.210 we use scientific protocols.

NOTE Confidence: 0.897958667

00:08:29.460 --> 00:08:31.536 So what will it take to

NOTE Confidence: 0.897958667

00:08:31.536 --> 00:08:32.920 realize the path ahead?

NOTE Confidence: 0.897958667

00:08:32.920 --> 00:08:34.702 It will take a vision that

NOTE Confidence: 0.897958667

00:08:34.702 --> 00:08:35.593 transcends the disciplines.

NOTE Confidence: 0.897958667

00:08:35.600 --> 00:08:38.198 Objectivity, trust, collaboration,

NOTE Confidence: 0.897958667

00:08:38.198 --> 00:08:40.796 breaking down silos,

NOTE Confidence: 0.897958667

00:08:40.800 --> 00:08:43.720 investment prioritization, data management,

NOTE Confidence: 0.897958667

00:08:43.720 --> 00:08:48.710 informatics and a lot of hard work.

NOTE Confidence: 0.897958667

00:08:48.710 --> 00:08:51.110 But the future really is now,

NOTE Confidence: 0.897958667

00:08:51.110 --> 00:08:53.738 as we all feel the technological

NOTE Confidence: 0.897958667

00:08:53.738 --> 00:08:55.490 advances that facilitate discovery.

NOTE Confidence: 0.897958667

00:08:55.490 --> 00:08:57.824 Currently we're sitting on a gold

NOTE Confidence: 0.897958667

00:08:57.824 --> 00:09:00.289 mine of historical and future data,

NOTE Confidence: 0.897958667

00:09:00.290 --> 00:09:01.690 clinical, genetic,

NOTE Confidence: 0.897958667

00:09:01.690 --> 00:09:03.790 histological, and radiographic.

NOTE Confidence: 0.897958667

00:09:03.790 --> 00:09:05.890 We're in an era where high

NOTE Confidence: 0.897958667

00:09:05.890 --> 00:09:07.290 throughput analysis facilitates the

NOTE Confidence: 0.897958667

00:09:07.356 --> 00:09:09.446 acquisition of thousands of features,

NOTE Confidence: 0.897958667

00:09:09.450 --> 00:09:11.515 many of which we may not predict

NOTE Confidence: 0.897958667

00:09:11.515 --> 00:09:13.785 that may have risk, prognostic,

NOTE Confidence: 0.897958667

00:09:13.785 --> 00:09:16.770 and therapeutic relevance.

NOTE Confidence: 0.897958667

00:09:16.770 --> 00:09:18.990 The research agenda is vast,

NOTE Confidence: 0.897958667

00:09:18.990 --> 00:09:21.342 one that should take us from bench to

NOTE Confidence: 0.897958667

00:09:21.342 --> 00:09:23.341 bedside and back in an environment

NOTE Confidence: 0.897958667

00:09:23.341 --> 00:09:25.357 that attracts and trains a strong

NOTE Confidence: 0.897958667

00:09:25.425 --> 00:09:27.409 pipeline of physician scientists.

NOTE Confidence: 0.897958667

00:09:27.410 --> 00:09:29.615 We need to keep the patient front

NOTE Confidence: 0.897958667

00:09:29.615 --> 00:09:31.680 and center as an integral member

NOTE Confidence: 0.897958667

00:09:31.680 --> 00:09:33.774 of a culture of team science

NOTE Confidence: 0.897958667

00:09:33.774 --> 00:09:36.100 with the objective of providing

NOTE Confidence: 0.897958667

00:09:36.100 --> 00:09:38.485 personalized medicine in all domains,

NOTE Confidence: 0.897958667

00:09:38.490 --> 00:09:40.438 particularly access to care

NOTE Confidence: 0.897958667

00:09:40.438 --> 00:09:42.386 for prevention and screening.

NOTE Confidence: 0.897958667

00:09:42.390 --> 00:09:45.100 Early diagnosis with imaging liquid

NOTE Confidence: 0.897958667

00:09:45.100 --> 00:09:47.268 biopsy and tissue prospects.

NOTE Confidence: 0.897958667

00:09:47.270 --> 00:09:49.375 Clinical blood based imaging and

NOTE Confidence: 0.897958667

00:09:49.375 --> 00:09:51.059 tissue biomarkers for detection,

NOTE Confidence: 0.897958667

00:09:51.060 --> 00:09:53.640 prognosis and response to treatment  
NOTE Confidence: 0.897958667

00:09:53.640 --> 00:09:55.905 mechanisms of pathogenesis and tumor  
NOTE Confidence: 0.897958667

00:09:55.905 --> 00:09:58.797 behavior order and timing of treatments  
NOTE Confidence: 0.897958667

00:09:58.797 --> 00:10:01.001 and sequential classification across  
NOTE Confidence: 0.897958667

00:10:01.001 --> 00:10:03.756 stage migration and stage shift  
NOTE Confidence: 0.897958667

00:10:03.760 --> 00:10:07.570 and delivery of value based care.  
NOTE Confidence: 0.897958667

00:10:07.570 --> 00:10:09.495 In addition to all the departments and  
NOTE Confidence: 0.897958667

00:10:09.495 --> 00:10:11.535 sections in the School of Medicine that  
NOTE Confidence: 0.897958667

00:10:11.535 --> 00:10:13.690 are represented in the Yale Liver Center,  
NOTE Confidence: 0.897958667

00:10:13.690 --> 00:10:15.724 we have great current and future  
NOTE Confidence: 0.897958667

00:10:15.724 --> 00:10:17.080 opportunities for synergy with  
NOTE Confidence: 0.897958667

00:10:17.134 --> 00:10:18.910 the Yale School of Public Health,  
NOTE Confidence: 0.897958667

00:10:18.910 --> 00:10:19.802 the VA,  
NOTE Confidence: 0.897958667

00:10:19.802 --> 00:10:22.032 the Department of Public Health  
NOTE Confidence: 0.897958667

00:10:22.032 --> 00:10:23.970 and patient advocacy groups.  
NOTE Confidence: 0.897958667

00:10:23.970 --> 00:10:24.538 With that,

NOTE Confidence: 0.897958667

00:10:24.538 --> 00:10:26.242 I'd like to again thank Michael

NOTE Confidence: 0.897958667

00:10:26.242 --> 00:10:28.155 and Maria for organizing this event

NOTE Confidence: 0.897958667

00:10:28.155 --> 00:10:29.765 and giving me this opportunity

NOTE Confidence: 0.897958667

00:10:29.765 --> 00:10:31.347 at the Yale Liver Center.

NOTE Confidence: 0.897958667

00:10:31.350 --> 00:10:32.394 Nothing is impossible,

NOTE Confidence: 0.897958667

00:10:32.394 --> 00:10:34.830 which is one of Michael's favorite sayings,

NOTE Confidence: 0.897958667

00:10:34.830 --> 00:10:37.566 and here's to the next 75 years of dreaming.

NOTE Confidence: 0.897958667

00:10:37.570 --> 00:10:38.638 Big thinking,

NOTE Confidence: 0.897958667

00:10:38.638 --> 00:10:41.308 big and letting our patients

NOTE Confidence: 0.897958667

00:10:41.308 --> 00:10:45.530 be our inspiration. Thank you.

NOTE Confidence: 0.967996266666667

00:10:45.530 --> 00:10:46.529 Thanks very much.