

WEBVTT

NOTE duration:"00:28:29"

NOTE recognizability:0.821

NOTE language:en-us

NOTE Confidence: 0.78186381

00:00:09.920 --> 00:00:13.460 Welcome back. To the Yale Liver

NOTE Confidence: 0.78186381

00:00:13.460 --> 00:00:15.332 Diamond Jubilee, this session

NOTE Confidence: 0.78186381

00:00:15.332 --> 00:00:16.880 is being recorded. Thank you.

NOTE Confidence: 0.791871176666667

00:00:22.230 --> 00:00:25.368 Good morning and welcome back and.

NOTE Confidence: 0.791871176666667

00:00:25.370 --> 00:00:27.729 No, next speaker is doctor Scott Friedman,

NOTE Confidence: 0.791871176666667

00:00:27.730 --> 00:00:30.005 who's professor and chief of liver diseases

NOTE Confidence: 0.791871176666667

00:00:30.005 --> 00:00:32.270 and Dean for therapeutic discovery

NOTE Confidence: 0.791871176666667

00:00:32.270 --> 00:00:34.769 at Icahn School of Medicine at Mount

NOTE Confidence: 0.791871176666667

00:00:34.769 --> 00:00:37.034 Sinai and the title of his talk will

NOTE Confidence: 0.791871176666667

00:00:37.034 --> 00:00:39.279 be the future of academic pathology.

NOTE Confidence: 0.791871176666667

00:00:39.280 --> 00:00:41.860 Dr. Friedman. Please, go ahead.

NOTE Confidence: 0.791871176666667

00:00:41.860 --> 00:00:44.412 Thank you Doctor Dozier and just want to

NOTE Confidence: 0.791871176666667

00:00:44.412 --> 00:00:46.970 thank the organizers Michael and Mario,

NOTE Confidence: 0.791871176666667

00:00:46.970 --> 00:00:49.418 and Jim. It's really a deep honor to
NOTE Confidence: 0.791871176666667

00:00:49.418 --> 00:00:51.935 be included in this August presentation
NOTE Confidence: 0.791871176666667

00:00:51.935 --> 00:00:53.771 celebrating an extraordinary milestone
NOTE Confidence: 0.791871176666667

00:00:53.771 --> 00:00:56.420 in an extraordinary institution.
NOTE Confidence: 0.791871176666667

00:00:56.420 --> 00:00:58.868 I need to thank and wish to thank the
NOTE Confidence: 0.791871176666667

00:00:58.868 --> 00:01:00.813 funders who've kept me continuously
NOTE Confidence: 0.791871176666667

00:01:00.813 --> 00:01:03.440 funded since 1986, primarily the NDK,
NOTE Confidence: 0.791871176666667

00:01:03.440 --> 00:01:06.170 as well as the NI AAA.
NOTE Confidence: 0.791871176666667

00:01:06.170 --> 00:01:08.305 Uh, I thought that it would be
NOTE Confidence: 0.791871176666667

00:01:08.305 --> 00:01:10.332 informative to define what we mean
NOTE Confidence: 0.791871176666667

00:01:10.332 --> 00:01:11.385 by academic hepatology.
NOTE Confidence: 0.791871176666667

00:01:11.390 --> 00:01:13.342 Since we use this phrase a lot and
NOTE Confidence: 0.791871176666667

00:01:13.342 --> 00:01:15.310 it's the focus of my own comments,
NOTE Confidence: 0.791871176666667

00:01:15.310 --> 00:01:17.683 I define it as the science practice
NOTE Confidence: 0.791871176666667

00:01:17.683 --> 00:01:19.574 or advancement of liver disease
NOTE Confidence: 0.791871176666667

00:01:19.574 --> 00:01:21.584 by an academic Medical Center,

NOTE Confidence: 0.791871176666667
00:01:21.590 --> 00:01:22.910 and this can include of course,
NOTE Confidence: 0.791871176666667
00:01:22.910 --> 00:01:24.135 all the elements you've already
NOTE Confidence: 0.791871176666667
00:01:24.135 --> 00:01:24.870 heard about that,
NOTE Confidence: 0.791871176666667
00:01:24.870 --> 00:01:27.180 so epitomized the Yale Liver
NOTE Confidence: 0.791871176666667
00:01:27.180 --> 00:01:29.550 Program research, clinical practice,
NOTE Confidence: 0.791871176666667
00:01:29.550 --> 00:01:31.710 education, advocacy, outreach,
NOTE Confidence: 0.791871176666667
00:01:31.710 --> 00:01:32.680 and collaboration.
NOTE Confidence: 0.870721392454545
00:01:36.340 --> 00:01:38.476 I have some links to yell that may
NOTE Confidence: 0.870721392454545
00:01:38.476 --> 00:01:40.673 not be obvious to even my friends
NOTE Confidence: 0.870721392454545
00:01:40.673 --> 00:01:43.120 at Yale who I've known for decades.
NOTE Confidence: 0.870721392454545
00:01:43.120 --> 00:01:43.933 Name Sheila Sherlock,
NOTE Confidence: 0.870721392454545
00:01:43.933 --> 00:01:45.559 who was closely connected to Yale
NOTE Confidence: 0.870721392454545
00:01:45.559 --> 00:01:47.211 and whose name was mentioned by
NOTE Confidence: 0.870721392454545
00:01:47.211 --> 00:01:48.541 Dean Brown early this morning,
NOTE Confidence: 0.870721392454545
00:01:48.550 --> 00:01:50.535 actually hosted me for a
NOTE Confidence: 0.870721392454545

00:01:50.535 --> 00:01:52.052 student elective in 1977.
NOTE Confidence: 0.870721392454545

00:01:52.052 --> 00:01:53.984 I was very proud of that.
NOTE Confidence: 0.870721392454545

00:01:53.990 --> 00:01:55.895 It consolidated my deep passion
NOTE Confidence: 0.870721392454545

00:01:55.895 --> 00:01:58.305 for liver disease and of course
NOTE Confidence: 0.870721392454545

00:01:58.305 --> 00:02:00.927 indirectly linked me TL more directly.
NOTE Confidence: 0.870721392454545

00:02:00.930 --> 00:02:03.218 I've been a member of the Yale Liver
NOTE Confidence: 0.870721392454545

00:02:03.218 --> 00:02:05.250 Center External Advisory Board since 2006.
NOTE Confidence: 0.870721392454545

00:02:05.250 --> 00:02:07.595 I've been chair, I think since around 2014.
NOTE Confidence: 0.870721392454545

00:02:07.595 --> 00:02:10.186 I have to be Frank and saying it's one of
NOTE Confidence: 0.870721392454545

00:02:10.186 --> 00:02:12.475 the absolute highlights of my academic year.
NOTE Confidence: 0.870721392454545

00:02:12.480 --> 00:02:14.328 I love hearing about the science.
NOTE Confidence: 0.870721392454545

00:02:14.330 --> 00:02:16.364 Love interacting with the senior and
NOTE Confidence: 0.870721392454545

00:02:16.364 --> 00:02:18.834 junior members of the Yale Liver Center
NOTE Confidence: 0.870721392454545

00:02:18.834 --> 00:02:20.940 and hearing the latest and greatest,
NOTE Confidence: 0.870721392454545

00:02:20.940 --> 00:02:23.030 which has been a continuous
NOTE Confidence: 0.870721392454545

00:02:23.030 --> 00:02:24.702 stream of extraordinary science

NOTE Confidence: 0.870721392454545
00:02:24.702 --> 00:02:26.579 and clinical achievement.
NOTE Confidence: 0.870721392454545
00:02:26.580 --> 00:02:30.356 My own academic research started at US UCSF.
NOTE Confidence: 0.870721392454545
00:02:30.360 --> 00:02:32.490 This is a paper that described
NOTE Confidence: 0.870721392454545
00:02:32.490 --> 00:02:34.712 the first isolation of what we
NOTE Confidence: 0.870721392454545
00:02:34.712 --> 00:02:36.602 then call to Patrick Lipocytes,
NOTE Confidence: 0.870721392454545
00:02:36.610 --> 00:02:38.554 and now are commonly known as a paddock.
NOTE Confidence: 0.870721392454545
00:02:38.560 --> 00:02:39.154 Stellate cells,
NOTE Confidence: 0.870721392454545
00:02:39.154 --> 00:02:41.961 I show this in part because it was presented
NOTE Confidence: 0.870721392454545
00:02:41.961 --> 00:02:44.558 at the UCSF Liver Center Advisory Board,
NOTE Confidence: 0.870721392454545
00:02:44.560 --> 00:02:46.919 a member of which was Jim Boyer.
NOTE Confidence: 0.870721392454545
00:02:46.920 --> 00:02:47.745 So thanks Jim,
NOTE Confidence: 0.870721392454545
00:02:47.745 --> 00:02:50.099 I'm sure you had some positive things to say.
NOTE Confidence: 0.870721392454545
00:02:50.100 --> 00:02:53.047 I got my pilot feasibility funding and
NOTE Confidence: 0.870721392454545
00:02:53.047 --> 00:02:56.676 that led to this story and also to NIH.
NOTE Confidence: 0.870721392454545
00:02:56.680 --> 00:02:57.054 Funding.
NOTE Confidence: 0.870721392454545

00:02:57.054 --> 00:02:58.550 On the other hand,
NOTE Confidence: 0.870721392454545

00:02:58.550 --> 00:03:00.150 academic hepatology isn't always
NOTE Confidence: 0.870721392454545

00:03:00.150 --> 00:03:02.938 a better roses, and I share this.
NOTE Confidence: 0.870721392454545

00:03:02.938 --> 00:03:04.129 My first critique,
NOTE Confidence: 0.870721392454545

00:03:04.130 --> 00:03:06.048 which was actually a K award submission,
NOTE Confidence: 0.870721392454545

00:03:06.050 --> 00:03:07.354 sent concurrently with an
NOTE Confidence: 0.870721392454545

00:03:07.354 --> 00:03:08.984 R1 on the same topic.
NOTE Confidence: 0.870721392454545

00:03:08.990 --> 00:03:11.790 They had completely divergent reviews,
NOTE Confidence: 0.870721392454545

00:03:11.790 --> 00:03:14.316 and here's the agony of academic
NOTE Confidence: 0.870721392454545

00:03:14.316 --> 00:03:16.000 hepatology or academic medicine.
NOTE Confidence: 0.870721392454545

00:03:16.000 --> 00:03:17.626 This is what the reviewer said
NOTE Confidence: 0.870721392454545

00:03:17.626 --> 00:03:19.398 after I had established a method
NOTE Confidence: 0.870721392454545

00:03:19.398 --> 00:03:20.670 for isolating stellate cells.
NOTE Confidence: 0.870721392454545

00:03:20.670 --> 00:03:22.608 The major weaknesses of this application
NOTE Confidence: 0.870721392454545

00:03:22.608 --> 00:03:24.847 cast doubt on the validity of any
NOTE Confidence: 0.870721392454545

00:03:24.847 --> 00:03:26.629 data obtained and may impair Dr.

NOTE Confidence: 0.870721392454545
00:03:26.630 --> 00:03:28.250 Friedman's ability to compete for research.
NOTE Confidence: 0.870721392454545
00:03:28.250 --> 00:03:30.540 Running as an independent investigator.
NOTE Confidence: 0.870721392454545
00:03:30.540 --> 00:03:32.220 Thankfully I had great support in
NOTE Confidence: 0.870721392454545
00:03:32.220 --> 00:03:34.630 the form of my mentor Monty Bissell,
NOTE Confidence: 0.870721392454545
00:03:34.630 --> 00:03:36.538 and he encouraged me to just
NOTE Confidence: 0.870721392454545
00:03:36.538 --> 00:03:38.560 move on and things went well.
NOTE Confidence: 0.870721392454545
00:03:38.560 --> 00:03:41.402 That and other paths in my career
NOTE Confidence: 0.870721392454545
00:03:41.402 --> 00:03:44.026 have been highlighted by this article
NOTE Confidence: 0.870721392454545
00:03:44.026 --> 00:03:46.072 published in Hepatology in 2015,
NOTE Confidence: 0.870721392454545
00:03:46.072 --> 00:03:48.520 for which I also need to thank Jim Boyer
NOTE Confidence: 0.870721392454545
00:03:48.581 --> 00:03:50.893 since he was the editor of the series
NOTE Confidence: 0.870721392454545
00:03:50.893 --> 00:03:52.899 who invited me to write this piece.
NOTE Confidence: 0.870721392454545
00:03:52.900 --> 00:03:54.058 God, I hate to interrupt you,
NOTE Confidence: 0.870721392454545
00:03:54.060 --> 00:03:55.422 but if you could put your
NOTE Confidence: 0.870721392454545
00:03:55.422 --> 00:03:56.330 slides into presentation view,
NOTE Confidence: 0.870721392454545

00:03:56.330 --> 00:03:57.452 they're not advancing.
NOTE Confidence: 0.870721392454545

00:03:57.452 --> 00:03:58.948 I can't hear you,
NOTE Confidence: 0.870721392454545

00:03:58.950 --> 00:04:01.085 sorry if you can put your slides
NOTE Confidence: 0.870721392454545

00:04:01.085 --> 00:04:02.340 into the presentation view.
NOTE Confidence: 0.870721392454545

00:04:02.340 --> 00:04:03.650 They're not advancing right now,
NOTE Confidence: 0.870721392454545

00:04:03.650 --> 00:04:05.720 there you go.
NOTE Confidence: 0.870721392454545

00:04:05.720 --> 00:04:06.380 Better yet,
NOTE Confidence: 0.870721392454545

00:04:06.380 --> 00:04:08.360 just hit that button one more
NOTE Confidence: 0.870721392454545

00:04:08.360 --> 00:04:10.249 time that presentation view.
NOTE Confidence: 0.795417116666667

00:04:14.410 --> 00:04:16.858 The screen down at the bottom.
NOTE Confidence: 0.795417116666667

00:04:16.860 --> 00:04:19.037 There is no screen at the bottom.
NOTE Confidence: 0.795417116666667

00:04:19.040 --> 00:04:21.746 The little that looks like a.
NOTE Confidence: 0.795417116666667

00:04:21.750 --> 00:04:24.690 Yep, that right there OK?
NOTE Confidence: 0.795417116666667

00:04:24.690 --> 00:04:26.620 So I'll use this to advance Sharon, OK?
NOTE Confidence: 0.85977118125

00:04:28.630 --> 00:04:31.894 OK, so you can still hear me everybody.
NOTE Confidence: 0.71432989

00:04:34.600 --> 00:04:36.456 Yes yeah, thank you.

NOTE Confidence: 0.71432989

00:04:36.456 --> 00:04:38.677 OK, so let let me now really focus

NOTE Confidence: 0.71432989

00:04:38.677 --> 00:04:41.068 on the on the major elements I was

NOTE Confidence: 0.71432989

00:04:41.068 --> 00:04:43.295 invited to opine about by Michael and

NOTE Confidence: 0.71432989

00:04:43.295 --> 00:04:45.655 Mario and Jim and before we move to

NOTE Confidence: 0.71432989

00:04:45.660 --> 00:04:47.460 the future of academic hepatology,

NOTE Confidence: 0.71432989

00:04:47.460 --> 00:04:50.099 I think it's worth reviewing the past,

NOTE Confidence: 0.71432989

00:04:50.100 --> 00:04:52.038 much of which has been highlighted

NOTE Confidence: 0.71432989

00:04:52.038 --> 00:04:53.330 by the previous speakers.

NOTE Confidence: 0.71432989

00:04:53.330 --> 00:04:55.154 There are tremendous organizational

NOTE Confidence: 0.71432989

00:04:55.154 --> 00:04:56.328 successes. And remember,

NOTE Confidence: 0.71432989

00:04:56.328 --> 00:04:59.742 I started in the field as a fellow in 1982,

NOTE Confidence: 0.71432989

00:04:59.742 --> 00:05:01.614 and so I've been blessed to

NOTE Confidence: 0.71432989

00:05:01.614 --> 00:05:03.810 see many of the developments,

NOTE Confidence: 0.71432989

00:05:03.810 --> 00:05:05.097 both academic, organizational,

NOTE Confidence: 0.71432989

00:05:05.097 --> 00:05:07.242 and scientific that have already

NOTE Confidence: 0.71432989

00:05:07.242 --> 00:05:08.690 been highlighted by others.
NOTE Confidence: 0.71432989

00:05:08.690 --> 00:05:11.730 But the field or the world of academic
NOTE Confidence: 0.71432989

00:05:11.730 --> 00:05:14.546 hepatology is a is a great success story,
NOTE Confidence: 0.71432989

00:05:14.550 --> 00:05:17.924 both in terms of government and foundations.
NOTE Confidence: 0.71432989

00:05:17.930 --> 00:05:19.905 I think collectively the field
NOTE Confidence: 0.71432989

00:05:19.905 --> 00:05:21.485 established during this period.
NOTE Confidence: 0.71432989

00:05:21.490 --> 00:05:23.425 Hepatology is a discrete discipline
NOTE Confidence: 0.71432989

00:05:23.425 --> 00:05:25.716 based on the initial leadership of
NOTE Confidence: 0.71432989

00:05:25.716 --> 00:05:27.788 Jerry Klatskin as well as Hans Popper,
NOTE Confidence: 0.71432989

00:05:27.790 --> 00:05:30.060 Fenton Schaffner and many others.
NOTE Confidence: 0.71432989

00:05:30.060 --> 00:05:32.376 The emergence of N IDK digestive
NOTE Confidence: 0.71432989

00:05:32.376 --> 00:05:34.560 disease centers and research networks,
NOTE Confidence: 0.71432989

00:05:34.560 --> 00:05:36.583 some of which you heard about from
NOTE Confidence: 0.71432989

00:05:36.583 --> 00:05:38.218 Jay Hoofnagle just a moment ago.
NOTE Confidence: 0.71432989

00:05:38.220 --> 00:05:40.999 The growth of foundations of many types
NOTE Confidence: 0.71432989

00:05:40.999 --> 00:05:43.101 supporting patients and research in

NOTE Confidence: 0.71432989

00:05:43.101 --> 00:05:45.211 really advancing both visibility and

NOTE Confidence: 0.71432989

00:05:45.211 --> 00:05:47.737 progress and liver disease and more

NOTE Confidence: 0.71432989

00:05:47.737 --> 00:05:49.722 recently the development or establishment

NOTE Confidence: 0.71432989

00:05:49.722 --> 00:05:52.072 of a liver focused study section.

NOTE Confidence: 0.71432989

00:05:52.072 --> 00:05:54.400 HBP that at least allow the

NOTE Confidence: 0.71432989

00:05:54.475 --> 00:05:57.097 appropriate level of expertise to be

NOTE Confidence: 0.71432989

00:05:57.097 --> 00:05:59.470 reviewing grants and liver disease.

NOTE Confidence: 0.71432989

00:05:59.470 --> 00:06:02.080 On the organizational side of

NOTE Confidence: 0.71432989

00:06:02.080 --> 00:06:03.646 the professional association,

NOTE Confidence: 0.71432989

00:06:03.650 --> 00:06:06.130 path has exploded with growth

NOTE Confidence: 0.71432989

00:06:06.130 --> 00:06:07.618 of professional organizations.

NOTE Confidence: 0.71432989

00:06:07.620 --> 00:06:09.408 Of those who see listed here,

NOTE Confidence: 0.71432989

00:06:09.410 --> 00:06:11.246 exceptional quality peer

NOTE Confidence: 0.71432989

00:06:11.246 --> 00:06:12.470 reviewed publication.

NOTE Confidence: 0.71432989

00:06:12.470 --> 00:06:14.165 Very strong representation

NOTE Confidence: 0.71432989

00:06:14.165 --> 00:06:16.201 of women already ASO's.
NOTE Confidence: 0.71432989

00:06:16.201 --> 00:06:18.247 40% of the members are women.
NOTE Confidence: 0.71432989

00:06:18.250 --> 00:06:20.266 50% of committee members.
NOTE Confidence: 0.71432989

00:06:20.266 --> 00:06:22.610 55% of the current governing board
NOTE Confidence: 0.71432989

00:06:22.610 --> 00:06:24.450 and increasing outreach to patients
NOTE Confidence: 0.71432989

00:06:24.514 --> 00:06:27.268 in underserved communities as well as
NOTE Confidence: 0.71432989

00:06:27.268 --> 00:06:28.645 international consortium partnering.
NOTE Confidence: 0.71432989

00:06:28.650 --> 00:06:30.021 I've also characterized.
NOTE Confidence: 0.71432989

00:06:30.021 --> 00:06:32.763 Some of these facets of growth.
NOTE Confidence: 0.71432989

00:06:32.770 --> 00:06:33.586 Don't want advancing,
NOTE Confidence: 0.71432989

00:06:33.586 --> 00:06:35.970 so we're going to pull them up for you.
NOTE Confidence: 0.71432989

00:06:35.970 --> 00:06:38.458 OK, Madison's gonna pull them up for you.
NOTE Confidence: 0.71432989

00:06:38.460 --> 00:06:38.830 OK.
NOTE Confidence: 0.899101685

00:06:41.350 --> 00:06:42.646 Just let her know which slide.
NOTE Confidence: 0.899101685

00:06:42.650 --> 00:06:44.480 Once she pulls it up, OK.
NOTE Confidence: 0.7643088383333333

00:06:46.560 --> 00:06:47.412 Yeah, they were advancing

NOTE Confidence: 0.764308838333333

00:06:47.412 --> 00:06:48.398 on mine, so I apologize.

NOTE Confidence: 0.764308838333333

00:06:48.398 --> 00:06:49.700 I'm not sure what the problem is.

NOTE Confidence: 0.764308838333333

00:06:49.700 --> 00:06:52.318 I'm in Chrome. I please advance ahead.

NOTE Confidence: 0.9011827625

00:07:22.860 --> 00:07:25.188 OK, great, so I'll pick up from here.

NOTE Confidence: 0.9011827625

00:07:25.190 --> 00:07:25.666 Apologies again.

NOTE Confidence: 0.9011827625

00:07:25.666 --> 00:07:27.332 I'm not sure what the problem was,

NOTE Confidence: 0.9011827625

00:07:27.340 --> 00:07:30.499 but we'll forge on. So, as I noted,

NOTE Confidence: 0.9011827625

00:07:30.499 --> 00:07:33.020 I've been in the business for 40 years.

NOTE Confidence: 0.9011827625

00:07:33.020 --> 00:07:34.328 I think you heard a little

NOTE Confidence: 0.9011827625

00:07:34.328 --> 00:07:35.200 bit about this earlier,

NOTE Confidence: 0.9011827625

00:07:35.200 --> 00:07:38.056 but I think Jim reviewed some of this.

NOTE Confidence: 0.9011827625

00:07:38.060 --> 00:07:39.980 Basically, when I was a fellow we had,

NOTE Confidence: 0.9011827625

00:07:39.980 --> 00:07:41.858 in my view, for treatments and

NOTE Confidence: 0.9011827625

00:07:41.858 --> 00:07:42.797 plus maybe cholestyramine,

NOTE Confidence: 0.9011827625

00:07:42.800 --> 00:07:44.936 Lasix, Lactulose, aldactone,

NOTE Confidence: 0.9011827625

00:07:44.936 --> 00:07:47.464 and Prednisone the best we had
NOTE Confidence: 0.9011827625

00:07:47.464 --> 00:07:49.120 was an HBV vaccine was imminent.
NOTE Confidence: 0.9011827625

00:07:49.120 --> 00:07:50.650 In fact, I was vaccinated
NOTE Confidence: 0.9011827625

00:07:50.650 --> 00:07:52.440 and during the end of my.
NOTE Confidence: 0.9011827625

00:07:52.440 --> 00:07:54.729 First year as a fellow next please.
NOTE Confidence: 0.9195585375

00:07:57.790 --> 00:08:01.190 Look at 2022 next.
NOTE Confidence: 0.9195585375

00:08:01.190 --> 00:08:03.032 Curative HCV treatment.
NOTE Confidence: 0.9195585375

00:08:03.032 --> 00:08:05.488 Suppressive hepatitis B&D treatments.
NOTE Confidence: 0.9195585375

00:08:05.490 --> 00:08:07.022 Liver transplantation and I'll
NOTE Confidence: 0.9195585375

00:08:07.022 --> 00:08:09.320 return to that in a minute.
NOTE Confidence: 0.9195585375

00:08:09.320 --> 00:08:10.780 Gene therapies, some of which
NOTE Confidence: 0.9195585375

00:08:10.780 --> 00:08:12.620 are being approved as we speak,
NOTE Confidence: 0.9195585375

00:08:12.620 --> 00:08:13.640 refined immunosuppressives
NOTE Confidence: 0.9195585375

00:08:13.640 --> 00:08:15.680 for immune liver disease.
NOTE Confidence: 0.9195585375

00:08:15.680 --> 00:08:18.620 Go ahead FXR agonist approved for
NOTE Confidence: 0.9195585375

00:08:18.620 --> 00:08:22.150 at PBC and being tested in Nash.

NOTE Confidence: 0.9195585375
00:08:22.150 --> 00:08:23.862 And medical and immunological
NOTE Confidence: 0.9195585375
00:08:23.862 --> 00:08:25.574 therapies for liver cancer.
NOTE Confidence: 0.9195585375
00:08:25.580 --> 00:08:27.080 So an extraordinary breadth
NOTE Confidence: 0.9195585375
00:08:27.080 --> 00:08:29.330 of of progress in a single
NOTE Confidence: 0.9195585375
00:08:29.403 --> 00:08:31.279 career and single interval,
NOTE Confidence: 0.9195585375
00:08:31.280 --> 00:08:33.152 and Yale has been at the
NOTE Confidence: 0.9195585375
00:08:33.152 --> 00:08:34.400 forefront of virtually all
NOTE Confidence: 0.9195585375
00:08:34.469 --> 00:08:36.280 of these these areas next.
NOTE Confidence: 0.8958190333333333
00:08:40.120 --> 00:08:41.716 So let's look to the future.
NOTE Confidence: 0.8958190333333333
00:08:41.720 --> 00:08:43.075 If we think about academic
NOTE Confidence: 0.8958190333333333
00:08:43.075 --> 00:08:44.159 hepatology in the future,
NOTE Confidence: 0.8958190333333333
00:08:44.160 --> 00:08:46.800 there are really two elements next.
NOTE Confidence: 0.8958190333333333
00:08:46.800 --> 00:08:48.555 1st is the scientific future
NOTE Confidence: 0.8958190333333333
00:08:48.555 --> 00:08:50.646 which based on the trajectory of
NOTE Confidence: 0.8958190333333333
00:08:50.646 --> 00:08:52.550 progress till now I think is a
NOTE Confidence: 0.8958190333333333

00:08:52.550 --> 00:08:54.249 very bright and sunny outlook.
NOTE Confidence: 0.8958190333333333

00:08:54.250 --> 00:08:55.858 On the other hand,
NOTE Confidence: 0.8958190333333333

00:08:55.858 --> 00:08:57.868 next the organizational future I
NOTE Confidence: 0.8958190333333333

00:08:57.868 --> 00:09:00.460 believe continues to have storm clouds,
NOTE Confidence: 0.8958190333333333

00:09:00.460 --> 00:09:02.385 not because of scientific reasons
NOTE Confidence: 0.8958190333333333

00:09:02.385 --> 00:09:04.672 but because of uncertainty and
NOTE Confidence: 0.8958190333333333

00:09:04.672 --> 00:09:06.936 inconsistency and how hepatology
NOTE Confidence: 0.8958190333333333

00:09:06.936 --> 00:09:09.200 is organized within departments
NOTE Confidence: 0.8958190333333333

00:09:09.273 --> 00:09:11.428 and divisions and how their
NOTE Confidence: 0.8958190333333333

00:09:11.428 --> 00:09:13.583 important work is supported next.
NOTE Confidence: 0.8958190333333333

00:09:13.590 --> 00:09:15.903 So let me first start with the good news,
NOTE Confidence: 0.8958190333333333

00:09:15.910 --> 00:09:17.378 the scientific future next.
NOTE Confidence: 0.858847706470588

00:09:20.080 --> 00:09:22.228 It's, I think almost axiomatic to
NOTE Confidence: 0.858847706470588

00:09:22.228 --> 00:09:24.075 remind us that hepatology really
NOTE Confidence: 0.858847706470588

00:09:24.075 --> 00:09:26.157 lies at the crossroad of science.
NOTE Confidence: 0.858847706470588

00:09:26.160 --> 00:09:27.444 That's the Times Square.

NOTE Confidence: 0.858847706470588
00:09:27.444 --> 00:09:29.370 If you will of of medicine.
NOTE Confidence: 0.858847706470588
00:09:29.370 --> 00:09:33.026 In my view, all of these major biologic
NOTE Confidence: 0.858847706470588
00:09:33.026 --> 00:09:35.700 advances and biologic movements,
NOTE Confidence: 0.858847706470588
00:09:35.700 --> 00:09:37.656 shall we say are really hard
NOTE Confidence: 0.858847706470588
00:09:37.656 --> 00:09:40.079 at the heart of liver disease,
NOTE Confidence: 0.858847706470588
00:09:40.080 --> 00:09:42.460 pathobiology and the homeostasis
NOTE Confidence: 0.858847706470588
00:09:42.460 --> 00:09:44.278 in particular, regeneration,
NOTE Confidence: 0.858847706470588
00:09:44.278 --> 00:09:47.418 which still remains quite mysterious,
NOTE Confidence: 0.858847706470588
00:09:47.420 --> 00:09:49.786 but of course holds the key to.
NOTE Confidence: 0.858847706470588
00:09:49.790 --> 00:09:52.688 A lot of progress, I'm sure next
NOTE Confidence: 0.858847706470588
00:09:52.690 --> 00:09:54.310 and without going into much detail,
NOTE Confidence: 0.858847706470588
00:09:54.310 --> 00:09:56.515 I think as much as we can expand our
NOTE Confidence: 0.858847706470588
00:09:56.515 --> 00:09:58.348 minds to think about the future,
NOTE Confidence: 0.858847706470588
00:09:58.350 --> 00:09:59.054 I don't.
NOTE Confidence: 0.858847706470588
00:09:59.054 --> 00:10:01.166 I believe we we can't even
NOTE Confidence: 0.858847706470588

00:10:01.166 --> 00:10:03.033 accurately predict all the ways
NOTE Confidence: 0.858847706470588

00:10:03.033 --> 00:10:05.223 the these fields will advance and
NOTE Confidence: 0.858847706470588

00:10:05.223 --> 00:10:06.830 intersect and ultimately improve
NOTE Confidence: 0.858847706470588

00:10:06.830 --> 00:10:09.176 the lives of our patients next.
NOTE Confidence: 0.92205043

00:10:11.540 --> 00:10:12.160 So next.
NOTE Confidence: 0.845655883333333

00:10:14.640 --> 00:10:16.812 In terms of the some of
NOTE Confidence: 0.845655883333333

00:10:16.812 --> 00:10:17.898 the specific successes,
NOTE Confidence: 0.845655883333333

00:10:17.900 --> 00:10:19.460 I want to highlight a couple of areas.
NOTE Confidence: 0.845655883333333

00:10:19.460 --> 00:10:22.488 One is diagnostics next.
NOTE Confidence: 0.845655883333333

00:10:22.490 --> 00:10:23.756 There's pathology and
NOTE Confidence: 0.845655883333333

00:10:23.756 --> 00:10:25.444 increasing reliance on AI.
NOTE Confidence: 0.845655883333333

00:10:25.450 --> 00:10:26.832 Artificial intelligence
NOTE Confidence: 0.845655883333333

00:10:26.832 --> 00:10:29.596 driven biopsy analysis next.
NOTE Confidence: 0.845655883333333

00:10:29.600 --> 00:10:30.748 There are noninvasive diagnostics
NOTE Confidence: 0.845655883333333

00:10:30.748 --> 00:10:32.806 and I'm going to highlight one in
NOTE Confidence: 0.845655883333333

00:10:32.806 --> 00:10:34.226 particular in the subsequent slide,

NOTE Confidence: 0.8456558833333333
00:10:34.230 --> 00:10:35.760 but there are imaging advances,
NOTE Confidence: 0.8456558833333333
00:10:35.760 --> 00:10:36.842 proteolytic profiling
NOTE Confidence: 0.8456558833333333
00:10:36.842 --> 00:10:39.006 and function tests next.
NOTE Confidence: 0.891550303
00:10:41.110 --> 00:10:43.098 And let me highlight for you one
NOTE Confidence: 0.891550303
00:10:43.098 --> 00:10:44.877 of those advances that illustrates
NOTE Confidence: 0.891550303
00:10:44.877 --> 00:10:46.605 how engineering is converging
NOTE Confidence: 0.891550303
00:10:46.605 --> 00:10:48.333 on liver disease diagnostics.
NOTE Confidence: 0.891550303
00:10:48.340 --> 00:10:51.004 This is a an evolving but not yet
NOTE Confidence: 0.891550303
00:10:51.004 --> 00:10:52.750 approved diagnostic Full disclosure.
NOTE Confidence: 0.891550303
00:10:52.750 --> 00:10:53.990 I consult for the company.
NOTE Confidence: 0.891550303
00:10:53.990 --> 00:10:55.770 Their name is Glympse bio.
NOTE Confidence: 0.891550303
00:10:55.770 --> 00:10:57.810 I'm fascinated by their technology
NOTE Confidence: 0.891550303
00:10:57.810 --> 00:10:59.850 because what they effectively do
NOTE Confidence: 0.891550303
00:10:59.918 --> 00:11:02.564 is create a series of mass barcoded
NOTE Confidence: 0.891550303
00:11:02.564 --> 00:11:04.757 protease substrates hooked to a peg
NOTE Confidence: 0.891550303

00:11:04.757 --> 00:11:06.749 carrier and administered to the patient.
NOTE Confidence: 0.891550303

00:11:06.750 --> 00:11:09.214 And as those substrates are cleaved by
NOTE Confidence: 0.891550303

00:11:09.214 --> 00:11:11.800 specific enzymes in the liver they generate.
NOTE Confidence: 0.891550303

00:11:11.800 --> 00:11:15.778 Mass in mass bar code that mass bar coded
NOTE Confidence: 0.891550303

00:11:15.778 --> 00:11:19.063 peptides that can be assessed by mass
NOTE Confidence: 0.891550303

00:11:19.063 --> 00:11:22.320 spectrometry to yield a signature next.
NOTE Confidence: 0.891550303

00:11:22.320 --> 00:11:24.615 And so in that way one can look next.
NOTE Confidence: 0.891550303

00:11:24.620 --> 00:11:28.311 One can look to correlate specific
NOTE Confidence: 0.891550303

00:11:28.311 --> 00:11:30.766 RNA expression with the activity
NOTE Confidence: 0.891550303

00:11:30.766 --> 00:11:33.750 of the proteases that encode them.
NOTE Confidence: 0.891550303

00:11:33.750 --> 00:11:36.396 Or is that are encoded by them and at
NOTE Confidence: 0.891550303

00:11:36.396 --> 00:11:38.957 least in one phase in phase two study?
NOTE Confidence: 0.891550303

00:11:38.960 --> 00:11:40.927 This looks like a very promising technique.
NOTE Confidence: 0.891550303

00:11:40.930 --> 00:11:44.087 I'm not showing this really so much
NOTE Confidence: 0.891550303

00:11:44.087 --> 00:11:46.385 to highlight this technology as much
NOTE Confidence: 0.891550303

00:11:46.385 --> 00:11:48.997 to under score the convergence of new

NOTE Confidence: 0.891550303

00:11:48.997 --> 00:11:50.757 technologies that are really driven

NOTE Confidence: 0.891550303

00:11:50.757 --> 00:11:53.025 by bioengineers as in this case that

NOTE Confidence: 0.891550303

00:11:53.025 --> 00:11:54.753 will certainly look to the liver

NOTE Confidence: 0.891550303

00:11:54.760 --> 00:11:58.900 for insights and applications next.

NOTE Confidence: 0.891550303

00:11:58.900 --> 00:12:02.628 Next in terms of treatments,

NOTE Confidence: 0.891550303

00:12:02.628 --> 00:12:05.810 a whole list of emerging therapies next.

NOTE Confidence: 0.891550303

00:12:05.810 --> 00:12:08.186 Nash therapies, which I'll review shortly,

NOTE Confidence: 0.891550303

00:12:08.190 --> 00:12:11.221 and a fibrotic S for parenchymal and

NOTE Confidence: 0.891550303

00:12:11.221 --> 00:12:14.019 biliary fibrosis gene therapies for Nash.

NOTE Confidence: 0.891550303

00:12:14.020 --> 00:12:14.403 Next,

NOTE Confidence: 0.891550303

00:12:14.403 --> 00:12:16.318 regenerative medicine is in forms

NOTE Confidence: 0.891550303

00:12:16.318 --> 00:12:18.520 that we can't even envision.

NOTE Confidence: 0.891550303

00:12:18.520 --> 00:12:20.840 I'm going to talk a little bit more

NOTE Confidence: 0.891550303

00:12:20.840 --> 00:12:23.689 about car T therapy and Nash therapies next.

NOTE Confidence: 0.891550303

00:12:23.690 --> 00:12:24.878 And of course,

NOTE Confidence: 0.891550303

00:12:24.878 --> 00:12:25.670 Geno Transplantation,
NOTE Confidence: 0.891550303

00:12:25.670 --> 00:12:27.534 which I will have a few words to
NOTE Confidence: 0.891550303

00:12:27.534 --> 00:12:28.730 say about next please.
NOTE Confidence: 0.907104966666667

00:12:31.820 --> 00:12:33.518 So without going into much detail,
NOTE Confidence: 0.907104966666667

00:12:33.520 --> 00:12:35.585 this shows the vibrancy of
NOTE Confidence: 0.907104966666667

00:12:35.585 --> 00:12:37.237 the the therapeutic space.
NOTE Confidence: 0.907104966666667

00:12:37.240 --> 00:12:38.648 For non alcoholic steatohepatitis
NOTE Confidence: 0.907104966666667

00:12:38.648 --> 00:12:40.760 these are the targets that are
NOTE Confidence: 0.907104966666667

00:12:40.825 --> 00:12:42.389 represented by different therapies
NOTE Confidence: 0.907104966666667

00:12:42.389 --> 00:12:44.344 and approaches that are currently
NOTE Confidence: 0.907104966666667

00:12:44.344 --> 00:12:46.559 in phase two or phase three trials.
NOTE Confidence: 0.907104966666667

00:12:46.560 --> 00:12:49.160 They can include efforts to reduce liver fat,
NOTE Confidence: 0.907104966666667

00:12:49.160 --> 00:12:51.428 improve insulin resistance,
NOTE Confidence: 0.907104966666667

00:12:51.428 --> 00:12:52.940 treat inflammation,
NOTE Confidence: 0.907104966666667

00:12:52.940 --> 00:12:54.854 improve the oxidant state of and
NOTE Confidence: 0.907104966666667

00:12:54.854 --> 00:12:56.886 health of the hepatocyte as well

NOTE Confidence: 0.907104966666667
00:12:56.886 --> 00:12:58.270 as direct acting antibiotics.
NOTE Confidence: 0.907104966666667
00:12:58.270 --> 00:13:00.062 So look at all these therapies and
NOTE Confidence: 0.907104966666667
00:13:00.062 --> 00:13:01.856 appreciate these are all born on the back.
NOTE Confidence: 0.907104966666667
00:13:01.860 --> 00:13:04.515 Or on the the hard work of basic and
NOTE Confidence: 0.907104966666667
00:13:04.515 --> 00:13:06.459 translational science that is already
NOTE Confidence: 0.907104966666667
00:13:06.459 --> 00:13:08.439 now translating into enormous potential
NOTE Confidence: 0.907104966666667
00:13:08.439 --> 00:13:10.490 for patients with this disease.
NOTE Confidence: 0.907104966666667
00:13:10.490 --> 00:13:12.182 Next, and in particular,
NOTE Confidence: 0.907104966666667
00:13:12.182 --> 00:13:14.720 currently there are at least as
NOTE Confidence: 0.907104966666667
00:13:14.798 --> 00:13:17.350 of a little over a year ago there
NOTE Confidence: 0.907104966666667
00:13:17.350 --> 00:13:19.536 were 73 drugs in phase two and
NOTE Confidence: 0.907104966666667
00:13:19.536 --> 00:13:21.270 nine drugs in phase three.
NOTE Confidence: 0.907104966666667
00:13:21.270 --> 00:13:23.587 For Nash, none have been approved yet,
NOTE Confidence: 0.907104966666667
00:13:23.590 --> 00:13:25.286 but I'm not at all daunted by this.
NOTE Confidence: 0.907104966666667
00:13:25.290 --> 00:13:27.930 I think we're closing in on the key
NOTE Confidence: 0.907104966666667

00:13:27.930 --> 00:13:30.195 pathways that drive Nash and the
NOTE Confidence: 0.907104966666667

00:13:30.195 --> 00:13:32.499 prospects long term for for therapies.
NOTE Confidence: 0.907104966666667

00:13:32.500 --> 00:13:34.525 For this disease and other
NOTE Confidence: 0.907104966666667

00:13:34.525 --> 00:13:36.145 fibrotic disorders is extremely
NOTE Confidence: 0.907104966666667

00:13:36.145 --> 00:13:37.759 price right next please.
NOTE Confidence: 0.864405922

00:13:40.370 --> 00:13:43.560 Let's let's skip this slide, please.
NOTE Confidence: 0.8867997

00:13:48.050 --> 00:13:51.695 Next slide. So let me talk a
NOTE Confidence: 0.8867997

00:13:51.695 --> 00:13:53.676 little bit about a novel therapy
NOTE Confidence: 0.8867997

00:13:53.676 --> 00:13:56.070 that is utilizing car T cells,
NOTE Confidence: 0.8867997

00:13:56.070 --> 00:13:58.320 which is chimeric antigen receptor T
NOTE Confidence: 0.8867997

00:13:58.320 --> 00:14:01.106 cells and focus in particular next on
NOTE Confidence: 0.8867997

00:14:01.106 --> 00:14:03.927 the role of the senescent stellate cell.
NOTE Confidence: 0.8867997

00:14:03.930 --> 00:14:05.925 So what you're looking at here is
NOTE Confidence: 0.8867997

00:14:05.925 --> 00:14:07.748 a template that we created many
NOTE Confidence: 0.8867997

00:14:07.748 --> 00:14:09.862 years ago that has provided a great.
NOTE Confidence: 0.8867997

00:14:09.870 --> 00:14:12.579 I would say insight into how the

NOTE Confidence: 0.8867997

00:14:12.579 --> 00:14:14.890 hepatic stellate cell generates scar.

NOTE Confidence: 0.8867997

00:14:14.890 --> 00:14:18.369 The cells are activated from injury signals

NOTE Confidence: 0.8867997

00:14:18.369 --> 00:14:21.210 from hepatocytes primarily or from calandria.

NOTE Confidence: 0.8867997

00:14:21.210 --> 00:14:23.149 Sides in the case of biliary disease,

NOTE Confidence: 0.8867997

00:14:23.150 --> 00:14:26.021 and it leads to a perpetuation phase that is

NOTE Confidence: 0.8867997

00:14:26.021 --> 00:14:28.477 comprised of several phenotypic changes that,

NOTE Confidence: 0.8867997

00:14:28.480 --> 00:14:30.240 collectively I would say,

NOTE Confidence: 0.8867997

00:14:30.240 --> 00:14:32.791 conspire to make scar next, please.

NOTE Confidence: 0.8867997

00:14:32.791 --> 00:14:35.599 Now what we've learned over the last few

NOTE Confidence: 0.8867997

00:14:35.599 --> 00:14:38.289 years is that Stella cells can disappear,

NOTE Confidence: 0.8867997

00:14:38.290 --> 00:14:40.155 and they can also regress

NOTE Confidence: 0.8867997

00:14:40.155 --> 00:14:41.647 so they can deactivate,

NOTE Confidence: 0.8867997

00:14:41.650 --> 00:14:44.060 and they can undergo apoptosis.

NOTE Confidence: 0.8867997

00:14:44.060 --> 00:14:45.185 And in particular,

NOTE Confidence: 0.8867997

00:14:45.185 --> 00:14:47.810 more recent studies show that they can

NOTE Confidence: 0.8867997

00:14:47.877 --> 00:14:49.605 also transition to a senescent phenotype
NOTE Confidence: 0.8867997

00:14:49.605 --> 00:14:51.899 that is thought to be especially pro.
NOTE Confidence: 0.8867997

00:14:51.900 --> 00:14:54.190 Inflammatory and pro fibrotic and
NOTE Confidence: 0.8867997

00:14:54.190 --> 00:14:57.063 so others have thought have sought
NOTE Confidence: 0.8867997

00:14:57.063 --> 00:15:00.087 therapies to deplete these pro fibrotic.
NOTE Confidence: 0.8867997

00:15:00.090 --> 00:15:00.705 So, in essence,
NOTE Confidence: 0.8867997

00:15:00.705 --> 00:15:02.485 cells let me show you one approach that
NOTE Confidence: 0.8867997

00:15:02.485 --> 00:15:03.960 we've been peripherally involved with.
NOTE Confidence: 0.8867997

00:15:03.960 --> 00:15:06.120 Next please.
NOTE Confidence: 0.8867997

00:15:06.120 --> 00:15:09.264 So this is a study that was really
NOTE Confidence: 0.8867997

00:15:09.264 --> 00:15:12.587 developed and pioneered by the lab of Scott.
NOTE Confidence: 0.8867997

00:15:12.590 --> 00:15:14.800 Lowe had a peripheral role,
NOTE Confidence: 0.8867997

00:15:14.800 --> 00:15:17.061 but it was really his and Michelle
NOTE Confidence: 0.8867997

00:15:17.061 --> 00:15:18.791 sidelines efforts that generated a
NOTE Confidence: 0.8867997

00:15:18.791 --> 00:15:20.546 totally new approach to treating
NOTE Confidence: 0.8867997

00:15:20.546 --> 00:15:22.696 liver disease and what they did

NOTE Confidence: 0.8867997

00:15:22.696 --> 00:15:24.421 is they generated specific car

NOTE Confidence: 0.8867997

00:15:24.421 --> 00:15:26.692 chimeric antigen receptor T cells by

NOTE Confidence: 0.8867997

00:15:26.692 --> 00:15:28.657 identifying a receptor on stellate

NOTE Confidence: 0.8867997

00:15:28.657 --> 00:15:30.558 cells that you par receptor.

NOTE Confidence: 0.8867997

00:15:30.560 --> 00:15:32.590 That seems to characterize only

NOTE Confidence: 0.8867997

00:15:32.590 --> 00:15:34.538 the senescence stellate cells and

NOTE Confidence: 0.8867997

00:15:34.538 --> 00:15:36.446 these accumulate and create a pro.

NOTE Confidence: 0.8867997

00:15:36.450 --> 00:15:37.862 Inflammatory pro fibrotic environment

NOTE Confidence: 0.8867997

00:15:37.862 --> 00:15:40.353 so they showed in this animal model

NOTE Confidence: 0.8867997

00:15:40.353 --> 00:15:42.236 either CL4 or also a Nash model

NOTE Confidence: 0.8867997

00:15:42.236 --> 00:15:44.317 that if they induce the disease and

NOTE Confidence: 0.8867997

00:15:44.317 --> 00:15:46.273 then at six weeks they administer

NOTE Confidence: 0.8867997

00:15:46.273 --> 00:15:48.293 these U PAR directed car T cells

NOTE Confidence: 0.8867997

00:15:48.293 --> 00:15:49.735 that had a dramatic impact.

NOTE Confidence: 0.8867997

00:15:49.735 --> 00:15:52.150 What you can see on the different

NOTE Confidence: 0.8867997

00:15:52.150 --> 00:15:54.899 boxes on the right is that the Sirius
NOTE Confidence: 0.8867997

00:15:54.899 --> 00:15:57.320 red staining in the untreated was
NOTE Confidence: 0.8867997

00:15:57.320 --> 00:15:59.875 dramatically reduced when the stellate
NOTE Confidence: 0.8867997

00:15:59.875 --> 00:16:02.182 cells senescent cells were depleted,
NOTE Confidence: 0.8867997

00:16:02.182 --> 00:16:04.884 as was the beta gal staining which
NOTE Confidence: 0.8867997

00:16:04.884 --> 00:16:07.429 is a marker of senescence next.
NOTE Confidence: 0.8867997

00:16:07.430 --> 00:16:09.745 And that's correlated with these
NOTE Confidence: 0.8867997

00:16:09.745 --> 00:16:12.266 quantitative readouts of decreased fibrotic
NOTE Confidence: 0.8867997

00:16:12.266 --> 00:16:15.055 area and decreased beta gal expression.
NOTE Confidence: 0.8867997

00:16:15.055 --> 00:16:15.470 Now,
NOTE Confidence: 0.8867997

00:16:15.470 --> 00:16:18.328 what was probably more exciting to me
NOTE Confidence: 0.8867997

00:16:18.328 --> 00:16:20.688 is the last bar graph you see there,
NOTE Confidence: 0.8867997

00:16:20.690 --> 00:16:22.618 where in fact there was an almost doubling
NOTE Confidence: 0.8867997

00:16:22.618 --> 00:16:24.588 of the serum album of these animals,
NOTE Confidence: 0.8867997

00:16:24.590 --> 00:16:26.774 which speaks to a relationship we
NOTE Confidence: 0.8867997

00:16:26.774 --> 00:16:28.650 don't really understand well about.

NOTE Confidence: 0.8867997

00:16:28.650 --> 00:16:30.754 The connection between more

NOTE Confidence: 0.8867997

00:16:30.754 --> 00:16:32.858 fibrosis and less regeneration,

NOTE Confidence: 0.8867997

00:16:32.860 --> 00:16:35.326 or conversely when fibrosis goes down,

NOTE Confidence: 0.8867997

00:16:35.330 --> 00:16:36.422 regeneration and liver function

NOTE Confidence: 0.8867997

00:16:36.422 --> 00:16:37.787 may improve and so that.

NOTE Confidence: 0.8867997

00:16:37.790 --> 00:16:40.266 Represents an incredibly important

NOTE Confidence: 0.8867997

00:16:40.266 --> 00:16:43.361 future area of investigation that

NOTE Confidence: 0.8867997

00:16:43.361 --> 00:16:45.720 hopefully others will return to next.

NOTE Confidence: 0.750018416842105

00:16:48.020 --> 00:16:51.086 So this car T cell approach has

NOTE Confidence: 0.750018416842105

00:16:51.086 --> 00:16:54.090 also been utilized by a lab run

NOTE Confidence: 0.750018416842105

00:16:54.090 --> 00:16:56.085 by Jonathan Epstein at Penn.

NOTE Confidence: 0.750018416842105

00:16:56.090 --> 00:16:58.300 Interestingly, for those who were

NOTE Confidence: 0.750018416842105

00:16:58.300 --> 00:17:01.120 connected to the Harvard Medical Complex,

NOTE Confidence: 0.750018416842105

00:17:01.120 --> 00:17:03.500 Jonathan's dad was Frank Epstein.

NOTE Confidence: 0.750018416842105

00:17:03.500 --> 00:17:05.000 He happened to be my chair

NOTE Confidence: 0.750018416842105

00:17:05.000 --> 00:17:06.000 at the Beth Israel,
NOTE Confidence: 0.750018416842105

00:17:06.000 --> 00:17:08.404 and it was an iconic renal scientist,
NOTE Confidence: 0.750018416842105

00:17:08.404 --> 00:17:11.124 and Jonathan is an equally
NOTE Confidence: 0.750018416842105

00:17:11.124 --> 00:17:12.756 extraordinary cardiology scientist,
NOTE Confidence: 0.750018416842105

00:17:12.760 --> 00:17:14.716 and let me summarize this paper,
NOTE Confidence: 0.750018416842105

00:17:14.720 --> 00:17:16.880 which really represents a new approach,
NOTE Confidence: 0.750018416842105

00:17:16.880 --> 00:17:19.076 not necessarily for liver fibrosis yet,
NOTE Confidence: 0.750018416842105

00:17:19.080 --> 00:17:21.960 but certainly applicable there next.
NOTE Confidence: 0.750018416842105

00:17:21.960 --> 00:17:24.980 And what Jonathan did is.
NOTE Confidence: 0.750018416842105

00:17:24.980 --> 00:17:28.036 What he Jonathan did is he worked with
NOTE Confidence: 0.750018416842105

00:17:28.040 --> 00:17:30.595 the M RNA vaccine experts at Penn,
NOTE Confidence: 0.750018416842105

00:17:30.600 --> 00:17:33.561 and rather than administer the car T
NOTE Confidence: 0.750018416842105

00:17:33.561 --> 00:17:35.419 cells following transduction ex vivo.
NOTE Confidence: 0.750018416842105

00:17:35.420 --> 00:17:38.059 What he and his collaborators did is
NOTE Confidence: 0.750018416842105

00:17:38.059 --> 00:17:40.156 they created lipid nanoparticles not
NOTE Confidence: 0.750018416842105

00:17:40.156 --> 00:17:42.832 unlike the Moderna and Pfizer vaccines

NOTE Confidence: 0.750018416842105
00:17:42.832 --> 00:17:45.931 in which this was administered to
NOTE Confidence: 0.750018416842105
00:17:45.931 --> 00:17:48.714 animals with cardiac fibrosis and the
NOTE Confidence: 0.750018416842105
00:17:48.714 --> 00:17:50.862 lipid nanoparticles effectively program
NOTE Confidence: 0.750018416842105
00:17:50.862 --> 00:17:54.970 T cells to make and car cells in vivo.
NOTE Confidence: 0.750018416842105
00:17:54.970 --> 00:17:57.466 The CARS T cells were directed to a
NOTE Confidence: 0.750018416842105
00:17:57.466 --> 00:17:59.558 protein called the FIBROBLASTIC activation
NOTE Confidence: 0.750018416842105
00:17:59.558 --> 00:18:01.898 peptide and it cleared fibrosis.
NOTE Confidence: 0.750018416842105
00:18:01.900 --> 00:18:03.844 As you see in the third panel of
NOTE Confidence: 0.750018416842105
00:18:03.844 --> 00:18:05.419 the fibrotic heart on the right,
NOTE Confidence: 0.750018416842105
00:18:05.420 --> 00:18:08.138 so we're into a whole new world now where
NOTE Confidence: 0.750018416842105
00:18:08.138 --> 00:18:10.908 in vivo Carty therapies may be useful,
NOTE Confidence: 0.750018416842105
00:18:10.910 --> 00:18:11.879 using lipid nanoparticles,
NOTE Confidence: 0.750018416842105
00:18:11.879 --> 00:18:13.817 which are of course very safe
NOTE Confidence: 0.750018416842105
00:18:13.817 --> 00:18:15.812 and well tested in the COVID
NOTE Confidence: 0.750018416842105
00:18:15.812 --> 00:18:17.427 vaccines to deplete specific cells,
NOTE Confidence: 0.750018416842105

00:18:17.430 --> 00:18:19.380 whether they're pro fibrotic or others.

NOTE Confidence: 0.750018416842105

00:18:19.380 --> 00:18:21.908 So stay tuned to this area of growth,

NOTE Confidence: 0.750018416842105

00:18:21.910 --> 00:18:23.944 it could impact not only fibrotic

NOTE Confidence: 0.750018416842105

00:18:23.944 --> 00:18:25.300 diseases but other diseases.

NOTE Confidence: 0.750018416842105

00:18:25.300 --> 00:18:27.130 Where there are specific clones of

NOTE Confidence: 0.750018416842105

00:18:27.130 --> 00:18:29.110 cells that are disease causing next.

NOTE Confidence: 0.89129436

00:18:31.860 --> 00:18:35.480 Next and let's skip this slide

NOTE Confidence: 0.89129436

00:18:35.480 --> 00:18:37.290 and the next one. I apologize.

NOTE Confidence: 0.89129436

00:18:37.290 --> 00:18:40.273 I had added these slides after I sent

NOTE Confidence: 0.89129436

00:18:40.273 --> 00:18:43.350 them on to you folks at the let's

NOTE Confidence: 0.89129436

00:18:43.350 --> 00:18:46.302 clear this great next slide. Good.

NOTE Confidence: 0.89129436

00:18:46.302 --> 00:18:49.950 So what about xenotransplantation?

NOTE Confidence: 0.89129436

00:18:49.950 --> 00:18:53.824 We heard about this incredible advance

NOTE Confidence: 0.89129436

00:18:53.824 --> 00:18:55.588 with a Pickard transplanted into an

NOTE Confidence: 0.89129436

00:18:55.588 --> 00:18:57.669 American man at University of Maryland.

NOTE Confidence: 0.89129436

00:18:57.670 --> 00:19:00.070 Only about six weeks ago.

NOTE Confidence: 0.89129436

00:19:00.070 --> 00:19:01.960 Interestingly, it was highlighted not

NOTE Confidence: 0.89129436

00:19:01.960 --> 00:19:04.290 only in this journal artificial organs.

NOTE Confidence: 0.89129436

00:19:04.290 --> 00:19:06.162 But literally there is a journal

NOTE Confidence: 0.89129436

00:19:06.162 --> 00:19:07.098 called Pig Progress.

NOTE Confidence: 0.89129436

00:19:07.100 --> 00:19:08.525 And of course it's interesting

NOTE Confidence: 0.89129436

00:19:08.525 --> 00:19:10.280 to the pig industry as well,

NOTE Confidence: 0.89129436

00:19:10.280 --> 00:19:11.540 but more in the mainstream.

NOTE Confidence: 0.89129436

00:19:11.540 --> 00:19:13.325 Next, the New York Times

NOTE Confidence: 0.89129436

00:19:13.325 --> 00:19:15.160 highlighted this as well next.

NOTE Confidence: 0.717092012307692

00:19:17.270 --> 00:19:19.538 And and highlighting the man received the

NOTE Confidence: 0.717092012307692

00:19:19.538 --> 00:19:22.798 heart from a genetically altered pig. So I,

NOTE Confidence: 0.717092012307692

00:19:22.798 --> 00:19:25.556 without getting into much of the science,

NOTE Confidence: 0.717092012307692

00:19:25.560 --> 00:19:27.906 remember that the the scientific basis

NOTE Confidence: 0.717092012307692

00:19:27.906 --> 00:19:31.123 of this is to use CRISPR technologies

NOTE Confidence: 0.717092012307692

00:19:31.123 --> 00:19:34.846 to effectively delete any genes that

NOTE Confidence: 0.717092012307692

00:19:34.846 --> 00:19:38.886 could drive immuno intolerance and
NOTE Confidence: 0.717092012307692

00:19:38.886 --> 00:19:42.490 could also lead to transmission of
NOTE Confidence: 0.717092012307692

00:19:42.490 --> 00:19:44.470 any pig endogenous retroviruses.
NOTE Confidence: 0.717092012307692

00:19:44.470 --> 00:19:47.038 So with the advent of CRISPR.
NOTE Confidence: 0.717092012307692

00:19:47.040 --> 00:19:48.636 Technology comes the prospect
NOTE Confidence: 0.717092012307692

00:19:48.636 --> 00:19:51.030 of actually humanizing a pig not
NOTE Confidence: 0.717092012307692

00:19:51.096 --> 00:19:52.770 only to be used for heart,
NOTE Confidence: 0.717092012307692

00:19:52.770 --> 00:19:54.387 but of course for liver as well,
NOTE Confidence: 0.717092012307692

00:19:54.390 --> 00:19:56.208 and that hasn't been described yet,
NOTE Confidence: 0.717092012307692

00:19:56.210 --> 00:19:58.480 but I believe it represents
NOTE Confidence: 0.717092012307692

00:19:58.480 --> 00:19:59.842 a potentially transformative
NOTE Confidence: 0.717092012307692

00:19:59.842 --> 00:20:01.888 technology that could change our,
NOTE Confidence: 0.717092012307692

00:20:01.890 --> 00:20:03.210 translational and clinical
NOTE Confidence: 0.717092012307692

00:20:03.210 --> 00:20:04.530 world at hepatology.
NOTE Confidence: 0.717092012307692

00:20:04.530 --> 00:20:05.256 Next, please.
NOTE Confidence: 0.717092012307692

00:20:05.256 --> 00:20:08.160 So what are the what would the impact

NOTE Confidence: 0.717092012307692
00:20:08.231 --> 00:20:10.576 of liver transplantation be next?
NOTE Confidence: 0.717092012307692
00:20:10.580 --> 00:20:11.339 First of all,
NOTE Confidence: 0.717092012307692
00:20:11.339 --> 00:20:12.857 lives would be saved for patients
NOTE Confidence: 0.717092012307692
00:20:12.857 --> 00:20:14.497 dying of end stage liver disease
NOTE Confidence: 0.717092012307692
00:20:14.497 --> 00:20:15.832 because it would in principle
NOTE Confidence: 0.717092012307692
00:20:15.888 --> 00:20:17.370 no longer be a supply shortage,
NOTE Confidence: 0.717092012307692
00:20:17.370 --> 00:20:19.820 which of course limits access
NOTE Confidence: 0.717092012307692
00:20:19.820 --> 00:20:21.780 to transplant the next.
NOTE Confidence: 0.717092012307692
00:20:21.780 --> 00:20:24.258 It would also present major ethical
NOTE Confidence: 0.717092012307692
00:20:24.258 --> 00:20:26.560 challenges around liver transplant candidacy.
NOTE Confidence: 0.717092012307692
00:20:26.560 --> 00:20:29.098 Does everybody who have advanced liver
NOTE Confidence: 0.717092012307692
00:20:29.098 --> 00:20:32.006 disease of any cause at any institution
NOTE Confidence: 0.717092012307692
00:20:32.006 --> 00:20:35.536 equally qualify because it would,
NOTE Confidence: 0.717092012307692
00:20:35.540 --> 00:20:36.074 potentially,
NOTE Confidence: 0.717092012307692
00:20:36.074 --> 00:20:37.142 you know,
NOTE Confidence: 0.717092012307692

00:20:37.142 --> 00:20:39.278 expand enormously the availability
NOTE Confidence: 0.717092012307692

00:20:39.278 --> 00:20:40.880 of donor organs.
NOTE Confidence: 0.717092012307692

00:20:40.880 --> 00:20:43.888 And that in turn next could have a
NOTE Confidence: 0.717092012307692

00:20:43.888 --> 00:20:46.352 major impact on how hepatologists
NOTE Confidence: 0.717092012307692

00:20:46.352 --> 00:20:48.528 and liver transplant surgeons
NOTE Confidence: 0.717092012307692

00:20:48.528 --> 00:20:51.409 interact next and could also have
NOTE Confidence: 0.717092012307692

00:20:51.409 --> 00:20:52.516 significant economic implications.
NOTE Confidence: 0.717092012307692

00:20:52.516 --> 00:20:55.382 And I can't really predict whether it would
NOTE Confidence: 0.717092012307692

00:20:55.382 --> 00:20:57.176 actually decrease or increase the cost.
NOTE Confidence: 0.717092012307692

00:20:57.180 --> 00:20:59.244 One could argue it could decrease
NOTE Confidence: 0.717092012307692

00:20:59.244 --> 00:21:01.040 the cost by transplanting patients
NOTE Confidence: 0.717092012307692

00:21:01.040 --> 00:21:02.845 before they have or require
NOTE Confidence: 0.717092012307692

00:21:02.845 --> 00:21:04.781 highly intensive care and lengthy
NOTE Confidence: 0.717092012307692

00:21:04.781 --> 00:21:06.916 postoperative stays in the hospital.
NOTE Confidence: 0.717092012307692

00:21:06.920 --> 00:21:07.980 On the other hand,
NOTE Confidence: 0.717092012307692

00:21:07.980 --> 00:21:09.305 the number of transplants could

NOTE Confidence: 0.717092012307692

00:21:09.305 --> 00:21:11.126 go up so precipitously that that.

NOTE Confidence: 0.717092012307692

00:21:11.130 --> 00:21:12.950 And impose a disproportionate

NOTE Confidence: 0.717092012307692

00:21:12.950 --> 00:21:16.218 burden on the health care costs for

NOTE Confidence: 0.717092012307692

00:21:16.218 --> 00:21:18.518 patients with liver disease next.

NOTE Confidence: 0.717092012307692

00:21:18.520 --> 00:21:19.054 Of course,

NOTE Confidence: 0.717092012307692

00:21:19.054 --> 00:21:21.569 it also is bad news for pigs next and

NOTE Confidence: 0.717092012307692

00:21:21.569 --> 00:21:23.795 in one of my favorite pseudo journals,

NOTE Confidence: 0.717092012307692

00:21:23.800 --> 00:21:27.811 The Onion I share with you this

NOTE Confidence: 0.717092012307692

00:21:27.811 --> 00:21:29.506 euphemistic headline that pig

NOTE Confidence: 0.717092012307692

00:21:29.506 --> 00:21:30.994 dies waiting for transplanted

NOTE Confidence: 0.717092012307692

00:21:30.994 --> 00:21:32.530 heart given to human.

NOTE Confidence: 0.717092012307692

00:21:32.530 --> 00:21:35.240 So there will be implications

NOTE Confidence: 0.717092012307692

00:21:35.240 --> 00:21:38.610 both for man and pig next.

NOTE Confidence: 0.717092012307692

00:21:38.610 --> 00:21:41.809 So let's look at the storm clouds,

NOTE Confidence: 0.717092012307692

00:21:41.810 --> 00:21:44.202 or at least the Gray clouds that I

NOTE Confidence: 0.717092012307692

00:21:44.202 --> 00:21:46.289 believe continue to hover over academic
NOTE Confidence: 0.717092012307692

00:21:46.289 --> 00:21:48.431 hepatology and some of the challenges,
NOTE Confidence: 0.717092012307692

00:21:48.440 --> 00:21:50.008 and maybe some of the solutions next.
NOTE Confidence: 0.928526556666667

00:21:52.430 --> 00:21:54.746 So first, let's think about funding.
NOTE Confidence: 0.928526556666667

00:21:54.750 --> 00:21:57.725 The NDK is a spectacular success story.
NOTE Confidence: 0.928526556666667

00:21:57.730 --> 00:21:59.390 Jay Hoofnagle highlighted that beautifully
NOTE Confidence: 0.928526556666667

00:21:59.390 --> 00:22:02.229 in this talk just a few minutes ago next,
NOTE Confidence: 0.928526556666667

00:22:02.230 --> 00:22:05.680 and you can open this whole slide, please.
NOTE Confidence: 0.928526556666667

00:22:05.680 --> 00:22:06.598 Right there, great.
NOTE Confidence: 0.928526556666667

00:22:06.598 --> 00:22:09.455 So if if we compare for example the National
NOTE Confidence: 0.928526556666667

00:22:09.455 --> 00:22:11.723 Cancer Institute and IDK and this is
NOTE Confidence: 0.928526556666667

00:22:11.723 --> 00:22:14.160 some back of the envelope calculations,
NOTE Confidence: 0.928526556666667

00:22:14.160 --> 00:22:16.904 the prevalence of cancer 18 and a
NOTE Confidence: 0.928526556666667

00:22:16.904 --> 00:22:19.167 half million which includes mostly
NOTE Confidence: 0.928526556666667

00:22:19.167 --> 00:22:21.179 survivors and new cases.
NOTE Confidence: 0.928526556666667

00:22:21.180 --> 00:22:22.520 The prevalence of liver disease

NOTE Confidence: 0.928526556666667
00:22:22.520 --> 00:22:24.260 around four and a half million
NOTE Confidence: 0.928526556666667
00:22:24.260 --> 00:22:25.900 mortality you see listed here,
NOTE Confidence: 0.928526556666667
00:22:25.900 --> 00:22:28.030 but if we effectively take the
NOTE Confidence: 0.928526556666667
00:22:28.030 --> 00:22:30.482 total funding for cancer AT10CI and
NOTE Confidence: 0.928526556666667
00:22:30.482 --> 00:22:33.578 normalize that per number of patients,
NOTE Confidence: 0.928526556666667
00:22:33.580 --> 00:22:35.988 the eighteen 5,000,000 and do the same
NOTE Confidence: 0.928526556666667
00:22:35.988 --> 00:22:38.060 calculation for liver disease patients,
NOTE Confidence: 0.928526556666667
00:22:38.060 --> 00:22:40.238 my calculation is that patients with
NOTE Confidence: 0.928526556666667
00:22:40.238 --> 00:22:42.481 cancer have on average almost twice
NOTE Confidence: 0.928526556666667
00:22:42.481 --> 00:22:44.659 the funding per patient of research
NOTE Confidence: 0.928526556666667
00:22:44.659 --> 00:22:46.990 dollars as those with liver disease.
NOTE Confidence: 0.928526556666667
00:22:46.990 --> 00:22:49.720 And so this really represents an inequity.
NOTE Confidence: 0.928526556666667
00:22:49.720 --> 00:22:51.384 And I think we all understand what the.
NOTE Confidence: 0.928526556666667
00:22:51.390 --> 00:22:53.850 Challenges are in public awareness
NOTE Confidence: 0.928526556666667
00:22:53.850 --> 00:22:56.310 and public perceptions around liver
NOTE Confidence: 0.928526556666667

00:22:56.386 --> 00:22:59.200 disease and liver disease research next.
NOTE Confidence: 0.928526556666667

00:22:59.200 --> 00:23:01.656 Another way to look at it in terms
NOTE Confidence: 0.928526556666667

00:23:01.656 --> 00:23:04.528 of NIH support is through the support
NOTE Confidence: 0.928526556666667

00:23:04.528 --> 00:23:07.660 of different centers and so the NCI
NOTE Confidence: 0.928526556666667

00:23:07.660 --> 00:23:09.855 has 71 designated cancer centers.
NOTE Confidence: 0.928526556666667

00:23:09.860 --> 00:23:12.340 There are broken down as you see here.
NOTE Confidence: 0.928526556666667

00:23:12.340 --> 00:23:12.670 Next,
NOTE Confidence: 0.928526556666667

00:23:12.670 --> 00:23:15.310 the NI AAA has 23 centers of three
NOTE Confidence: 0.928526556666667

00:23:15.310 --> 00:23:18.017 of which are directed to alcohol,
NOTE Confidence: 0.928526556666667

00:23:18.020 --> 00:23:19.040 associated liver disease.
NOTE Confidence: 0.928526556666667

00:23:19.040 --> 00:23:20.740 And as we know next.
NOTE Confidence: 0.602764612125

00:23:22.930 --> 00:23:25.930 The and I the NDK supports 3 centers.
NOTE Confidence: 0.602764612125

00:23:25.930 --> 00:23:29.066 Yale, of course being the premier center.
NOTE Confidence: 0.602764612125

00:23:29.070 --> 00:23:31.610 But again, to my view,
NOTE Confidence: 0.602764612125

00:23:31.610 --> 00:23:34.172 an inequity in terms of recognizing the
NOTE Confidence: 0.602764612125

00:23:34.172 --> 00:23:36.892 unmet need and of course the return

NOTE Confidence: 0.602764612125

00:23:36.892 --> 00:23:38.827 on investment that these centers

NOTE Confidence: 0.602764612125

00:23:38.827 --> 00:23:41.097 and other one funded investigators

NOTE Confidence: 0.602764612125

00:23:41.097 --> 00:23:43.821 yield for liver disease research and

NOTE Confidence: 0.602764612125

00:23:43.830 --> 00:23:45.810 progress in the field and ultimately

NOTE Confidence: 0.602764612125

00:23:45.810 --> 00:23:47.130 improve treatments for patients.

NOTE Confidence: 0.602764612125

00:23:47.130 --> 00:23:49.890 Next slide please.

NOTE Confidence: 0.602764612125

00:23:49.890 --> 00:23:52.977 So where are we currently in terms of how

NOTE Confidence: 0.602764612125

00:23:52.977 --> 00:23:55.860 academic hepatology fits within the universe,

NOTE Confidence: 0.602764612125

00:23:55.860 --> 00:23:57.970 or of an academic center?

NOTE Confidence: 0.602764612125

00:23:57.970 --> 00:24:00.133 Almost all liver programs are within GI

NOTE Confidence: 0.602764612125

00:24:00.133 --> 00:24:02.090 divisions with three to four exceptions.

NOTE Confidence: 0.602764612125

00:24:02.090 --> 00:24:03.728 We at Mount Sinai, one of them.

NOTE Confidence: 0.602764612125

00:24:03.730 --> 00:24:04.284 Traditionally,

NOTE Confidence: 0.602764612125

00:24:04.284 --> 00:24:07.608 since our founding in the 1960s.

NOTE Confidence: 0.602764612125

00:24:07.610 --> 00:24:09.110 The challenge is that hospitals

NOTE Confidence: 0.602764612125

00:24:09.110 --> 00:24:10.610 and health systems reward clinical
NOTE Confidence: 0.602764612125

00:24:10.665 --> 00:24:11.850 productivity and revenues,
NOTE Confidence: 0.602764612125

00:24:11.850 --> 00:24:13.524 particularly transplant more
NOTE Confidence: 0.602764612125

00:24:13.524 --> 00:24:15.764 than academic success, and so,
NOTE Confidence: 0.602764612125

00:24:15.764 --> 00:24:16.610 as a result,
NOTE Confidence: 0.602764612125

00:24:16.610 --> 00:24:17.842 freestanding liver divisions like
NOTE Confidence: 0.602764612125

00:24:17.842 --> 00:24:19.690 ours really have a hard time
NOTE Confidence: 0.602764612125

00:24:19.749 --> 00:24:21.017 generating a positive revenue
NOTE Confidence: 0.602764612125

00:24:21.017 --> 00:24:22.575 stream based on their RV's.
NOTE Confidence: 0.602764612125

00:24:22.575 --> 00:24:24.570 Since we don't have any support at
NOTE Confidence: 0.602764612125

00:24:24.570 --> 00:24:26.549 all from the transplant program,
NOTE Confidence: 0.602764612125

00:24:26.550 --> 00:24:28.478 and these competing incentives
NOTE Confidence: 0.602764612125

00:24:28.478 --> 00:24:31.272 have led to next several features,
NOTE Confidence: 0.602764612125

00:24:31.272 --> 00:24:34.328 but I like to summarize it as the
NOTE Confidence: 0.602764612125

00:24:34.328 --> 00:24:36.990 clinical tail wagging the academic dog,
NOTE Confidence: 0.602764612125

00:24:36.990 --> 00:24:37.486 of course.

NOTE Confidence: 0.602764612125

00:24:37.486 --> 00:24:38.974 This is different than every center

NOTE Confidence: 0.602764612125

00:24:38.974 --> 00:24:41.008 and I may sound a little bit cynical,

NOTE Confidence: 0.602764612125

00:24:41.010 --> 00:24:42.888 cynical based on my own experience,

NOTE Confidence: 0.602764612125

00:24:42.890 --> 00:24:45.053 but it is challenging to get the

NOTE Confidence: 0.602764612125

00:24:45.053 --> 00:24:46.802 attention of healthcare systems and

NOTE Confidence: 0.602764612125

00:24:46.802 --> 00:24:49.082 hospitals when transplant is such an

NOTE Confidence: 0.602764612125

00:24:49.082 --> 00:24:51.574 extraordinary resource in terms of

NOTE Confidence: 0.602764612125

00:24:51.574 --> 00:24:56.420 revenues and and the need for resources next.

NOTE Confidence: 0.602764612125

00:24:56.420 --> 00:24:57.680 So what is the solution?

NOTE Confidence: 0.602764612125

00:24:57.680 --> 00:24:59.220 You can open this please.

NOTE Confidence: 0.602764612125

00:24:59.220 --> 00:25:02.034 We need to align incentives between

NOTE Confidence: 0.602764612125

00:25:02.034 --> 00:25:03.910 academic hepatology and transplant

NOTE Confidence: 0.602764612125

00:25:03.985 --> 00:25:06.080 and create win win situations

NOTE Confidence: 0.602764612125

00:25:06.080 --> 00:25:07.337 with shared success.

NOTE Confidence: 0.602764612125

00:25:07.340 --> 00:25:09.300 I think we need to recognize the

NOTE Confidence: 0.602764612125

00:25:09.300 --> 00:25:10.877 unique value value of academic
NOTE Confidence: 0.602764612125

00:25:10.877 --> 00:25:12.899 hepatology as a source of creativity,
NOTE Confidence: 0.602764612125

00:25:12.900 --> 00:25:14.088 knowledge and talent.
NOTE Confidence: 0.602764612125

00:25:14.088 --> 00:25:16.464 We need to acknowledge the downstream
NOTE Confidence: 0.602764612125

00:25:16.464 --> 00:25:18.455 positive financial impact of caring
NOTE Confidence: 0.602764612125

00:25:18.455 --> 00:25:20.365 for patients with liver disease.
NOTE Confidence: 0.602764612125

00:25:20.370 --> 00:25:21.064 Of course,
NOTE Confidence: 0.602764612125

00:25:21.064 --> 00:25:22.799 improve awareness and funding of
NOTE Confidence: 0.602764612125

00:25:22.799 --> 00:25:24.920 liver disease and engage the public
NOTE Confidence: 0.602764612125

00:25:24.920 --> 00:25:26.966 something that the ASLD has really
NOTE Confidence: 0.602764612125

00:25:26.966 --> 00:25:28.788 started to focus on tremendously,
NOTE Confidence: 0.602764612125

00:25:28.790 --> 00:25:30.572 and I do believe that successful
NOTE Confidence: 0.602764612125

00:25:30.572 --> 00:25:31.166 begets success.
NOTE Confidence: 0.602764612125

00:25:31.170 --> 00:25:33.010 Meaning as more liver disease
NOTE Confidence: 0.602764612125

00:25:33.010 --> 00:25:33.746 treatments emerge,
NOTE Confidence: 0.602764612125

00:25:33.750 --> 00:25:35.724 we need to leverage these successes

NOTE Confidence: 0.602764612125

00:25:35.724 --> 00:25:37.466 to highlight the return on

NOTE Confidence: 0.602764612125

00:25:37.466 --> 00:25:39.281 investment by the public academic

NOTE Confidence: 0.602764612125

00:25:39.281 --> 00:25:41.070 medical centers and founders next.

NOTE Confidence: 0.893313541428571

00:25:43.450 --> 00:25:45.767 So if I look to the future,

NOTE Confidence: 0.893313541428571

00:25:45.770 --> 00:25:47.510 I think on the scientific side

NOTE Confidence: 0.893313541428571

00:25:47.510 --> 00:25:50.001 we all agree that there will be

NOTE Confidence: 0.893313541428571

00:25:50.001 --> 00:25:51.693 unparalleled scientific success that

NOTE Confidence: 0.893313541428571

00:25:51.693 --> 00:25:54.170 will translate into new diagnostics and

NOTE Confidence: 0.893313541428571

00:25:54.170 --> 00:25:56.462 treatments to improve and save lives.

NOTE Confidence: 0.893313541428571

00:25:56.470 --> 00:25:58.738 And some of the obvious places where

NOTE Confidence: 0.893313541428571

00:25:58.738 --> 00:26:01.158 growth and success are most imminent

NOTE Confidence: 0.893313541428571

00:26:01.158 --> 00:26:03.010 include liver regeneration therapies,

NOTE Confidence: 0.893313541428571

00:26:03.010 --> 00:26:05.290 of which there are some in clinical trials,

NOTE Confidence: 0.893313541428571

00:26:05.290 --> 00:26:06.902 antibiotics and gene therapies,

NOTE Confidence: 0.893313541428571

00:26:06.902 --> 00:26:09.320 and treatment of monogenic and even

NOTE Confidence: 0.893313541428571

00:26:09.380 --> 00:26:11.650 complex genetic diseases that include

NOTE Confidence: 0.893313541428571

00:26:11.650 --> 00:26:13.466 Nash better cancer treatments.

NOTE Confidence: 0.893313541428571

00:26:13.470 --> 00:26:15.710 For primary liver cancer and

NOTE Confidence: 0.893313541428571

00:26:15.710 --> 00:26:17.495 cholangiocarcinoma, and of course,

NOTE Confidence: 0.893313541428571

00:26:17.495 --> 00:26:19.275 the prospect of revolutionary

NOTE Confidence: 0.893313541428571

00:26:19.275 --> 00:26:21.244 advances in transplantation and

NOTE Confidence: 0.893313541428571

00:26:21.244 --> 00:26:22.957 in particular xenotransplantation

NOTE Confidence: 0.893313541428571

00:26:22.960 --> 00:26:24.084 on the organizational style.

NOTE Confidence: 0.893313541428571

00:26:24.084 --> 00:26:26.568 A side I think we still face challenges

NOTE Confidence: 0.893313541428571

00:26:26.568 --> 00:26:28.056 within academic medical Centers

NOTE Confidence: 0.893313541428571

00:26:28.056 --> 00:26:30.660 for the discipline to find a model

NOTE Confidence: 0.893313541428571

00:26:30.660 --> 00:26:32.415 with stable financial footing that

NOTE Confidence: 0.893313541428571

00:26:32.415 --> 00:26:34.509 really recognizes the unique and

NOTE Confidence: 0.893313541428571

00:26:34.509 --> 00:26:36.824 deep contribution of hepatology to

NOTE Confidence: 0.893313541428571

00:26:36.824 --> 00:26:39.497 the success of an academic center,

NOTE Confidence: 0.893313541428571

00:26:39.500 --> 00:26:41.702 I think Mario Strasser Bosco showed

NOTE Confidence: 0.893313541428571

00:26:41.702 --> 00:26:43.620 how important the Yale liver.

NOTE Confidence: 0.893313541428571

00:26:43.620 --> 00:26:46.357 Center has been as a effectively a

NOTE Confidence: 0.893313541428571

00:26:46.357 --> 00:26:48.901 nucleating entity that has pulled in

NOTE Confidence: 0.893313541428571

00:26:48.901 --> 00:26:51.061 and generated success from departments

NOTE Confidence: 0.893313541428571

00:26:51.061 --> 00:26:53.649 all around the Yale Medical School,

NOTE Confidence: 0.893313541428571

00:26:53.650 --> 00:26:55.456 and so we need to recognize this,

NOTE Confidence: 0.893313541428571

00:26:55.460 --> 00:26:57.926 and of course rewarded as best we can to

NOTE Confidence: 0.893313541428571

00:26:57.926 --> 00:26:59.969 enhance progress and create synergies.

NOTE Confidence: 0.893313541428571

00:26:59.970 --> 00:27:00.910 Next,

NOTE Confidence: 0.893313541428571

00:27:00.910 --> 00:27:01.850 please.

NOTE Confidence: 0.893313541428571

00:27:01.850 --> 00:27:04.073 So if we look to the past or we

NOTE Confidence: 0.893313541428571

00:27:04.073 --> 00:27:05.349 look to the future,

NOTE Confidence: 0.893313541428571

00:27:05.350 --> 00:27:07.492 Yale Liver Center has been there

NOTE Confidence: 0.893313541428571

00:27:07.492 --> 00:27:09.274 both the past accomplishments that

NOTE Confidence: 0.893313541428571

00:27:09.274 --> 00:27:11.618 I and so many of the speakers have

NOTE Confidence: 0.893313541428571

00:27:11.618 --> 00:27:13.358 highlighted and the future successes
NOTE Confidence: 0.893313541428571

00:27:13.358 --> 00:27:15.362 that we surely can anticipate will
NOTE Confidence: 0.893313541428571

00:27:15.362 --> 00:27:17.266 be linked to the success of the
NOTE Confidence: 0.893313541428571

00:27:17.266 --> 00:27:19.269 Yale Liver program and importantly,
NOTE Confidence: 0.893313541428571

00:27:19.270 --> 00:27:21.190 the Yale Liver Center next.
NOTE Confidence: 0.893313541428571

00:27:21.190 --> 00:27:24.166 And so I want to close by acknowledging
NOTE Confidence: 0.893313541428571

00:27:24.166 --> 00:27:26.390 and congratulating the Yale liver program
NOTE Confidence: 0.893313541428571

00:27:26.390 --> 00:27:29.390 for their 75 years of leadership and success.
NOTE Confidence: 0.893313541428571

00:27:29.390 --> 00:27:31.040 It's one of the extraordinary
NOTE Confidence: 0.893313541428571

00:27:31.040 --> 00:27:31.700 success stories.
NOTE Confidence: 0.893313541428571

00:27:31.700 --> 00:27:34.220 In my career, I'm deeply honored to
NOTE Confidence: 0.893313541428571

00:27:34.220 --> 00:27:36.818 be involved as a member of the ABA,
NOTE Confidence: 0.893313541428571

00:27:36.820 --> 00:27:38.759 and especially honored as well to be
NOTE Confidence: 0.893313541428571

00:27:38.759 --> 00:27:40.748 included in this program this morning.
NOTE Confidence: 0.893313541428571

00:27:40.750 --> 00:27:42.208 So with that, I'll close and
NOTE Confidence: 0.893313541428571

00:27:42.208 --> 00:27:44.030 thank you all for your attention.

NOTE Confidence: 0.893313541428571
00:27:44.030 --> 00:27:46.984 Thanks very much Doctor Friedman and justice.
NOTE Confidence: 0.893313541428571
00:27:46.990 --> 00:27:48.042 Short comment.
NOTE Confidence: 0.893313541428571
00:27:48.042 --> 00:27:49.620 From Jim Boyle,
NOTE Confidence: 0.893313541428571
00:27:49.620 --> 00:27:50.885 who says he remembers your
NOTE Confidence: 0.893313541428571
00:27:50.885 --> 00:27:52.472 presentation as a fellow to the
NOTE Confidence: 0.893313541428571
00:27:52.472 --> 00:27:54.116 Advisory Board like it was yesterday,
NOTE Confidence: 0.893313541428571
00:27:54.120 --> 00:27:56.238 and he thanks for for your
NOTE Confidence: 0.893313541428571
00:27:56.238 --> 00:27:57.650 support of the saddle.
NOTE Confidence: 0.893313541428571
00:27:57.650 --> 00:27:59.864 So thank you very much for a great talk.
NOTE Confidence: 0.893313541428571
00:27:59.870 --> 00:28:00.899 OK, my pleasure.