

WEBVTT

NOTE duration:"00:37:21"

NOTE recognizability:0.935

NOTE language:en-us

NOTE Confidence: 0.9227024

00:00:00.000 --> 00:00:01.465 So our next speaker is

NOTE Confidence: 0.9227024

00:00:01.465 --> 00:00:03.000 Doctor Harlan Kremoltz.

NOTE Confidence: 0.9227024

00:00:03.000 --> 00:00:05.838 He's a cardiologist here and Harold

NOTE Confidence: 0.9227024

00:00:05.840 --> 00:00:09.398 H Hines junior professor of Medicine.

NOTE Confidence: 0.9227024

00:00:09.400 --> 00:00:12.440 Doctor Kremoltz went to IS from Ohio.

NOTE Confidence: 0.9227024

00:00:12.440 --> 00:00:15.320 He went to Yale for undergrad

NOTE Confidence: 0.9227024

00:00:15.320 --> 00:00:17.520 HMS or Harvard Med School,

NOTE Confidence: 0.9227024

00:00:17.520 --> 00:00:20.232 and then went on to the School of

NOTE Confidence: 0.9227024

00:00:20.232 --> 00:00:22.359 Public Health at Harvard as well.

NOTE Confidence: 0.9227024

00:00:22.360 --> 00:00:24.000 He's a distinguished scientist of

NOTE Confidence: 0.9227024

00:00:24.000 --> 00:00:25.570 the American Heart Association and

NOTE Confidence: 0.9227024

00:00:25.570 --> 00:00:27.871 a member of the National Academy of

NOTE Confidence: 0.9227024

00:00:27.871 --> 00:00:29.981 Medicine and has served as a member of

NOTE Confidence: 0.9227024

00:00:29.981 --> 00:00:33.529 the advisory committee for for the NIH.
NOTE Confidence: 0.9227024

00:00:33.530 --> 00:00:37.170 So I'll give you the floor. Yeah.
NOTE Confidence: 0.9278211

00:00:44.760 --> 00:00:46.266 Thank you. And Nicole just told
NOTE Confidence: 0.9278211

00:00:46.266 --> 00:00:48.078 me I don't have to end it too.
NOTE Confidence: 0.9278211

00:00:48.080 --> 00:00:49.928 So I appreciate that.
NOTE Confidence: 0.9278211

00:00:49.928 --> 00:00:51.912 But maybe that's not merciful
NOTE Confidence: 0.9278211

00:00:51.912 --> 00:00:54.600 for the audience. I'm not sure.
NOTE Confidence: 0.9278211

00:00:54.600 --> 00:00:56.320 So I'm so happy to be here today.
NOTE Confidence: 0.9278211

00:00:56.320 --> 00:00:58.093 I'm so happy to be here at the inaugural
NOTE Confidence: 0.9278211

00:00:58.093 --> 00:01:00.078 of the Center for Infection and Immunity.
NOTE Confidence: 0.9278211

00:01:00.080 --> 00:01:02.600 I'm so privileged to work with Akiko Iwasaki,
NOTE Confidence: 0.9278211

00:01:02.600 --> 00:01:06.317 who is just an extraordinary individual and
NOTE Confidence: 0.9278211

00:01:06.320 --> 00:01:08.600 both as a scientist and as a collaborator.
NOTE Confidence: 0.9278211

00:01:08.600 --> 00:01:10.892 And I also want to call
NOTE Confidence: 0.9278211

00:01:10.892 --> 00:01:12.038 out Vernali Bhattachary,
NOTE Confidence: 0.9278211

00:01:12.040 --> 00:01:14.864 who has been just a key individual in

NOTE Confidence: 0.9278211

00:01:14.864 --> 00:01:17.508 anything that I've been able to do with

NOTE Confidence: 0.9278211

00:01:17.508 --> 00:01:19.788 the Iwasaki lab and and for whom I'm.

NOTE Confidence: 0.9278211

00:01:19.788 --> 00:01:20.559 I'm really grateful.

NOTE Confidence: 0.9278211

00:01:20.560 --> 00:01:22.315 And she embodies really everything

NOTE Confidence: 0.9278211

00:01:22.315 --> 00:01:24.070 that's good about science and

NOTE Confidence: 0.9278211

00:01:24.128 --> 00:01:25.718 collaboration and generosity.

NOTE Confidence: 0.9278211

00:01:25.720 --> 00:01:27.226 And it's really my privilege and

NOTE Confidence: 0.9278211

00:01:27.226 --> 00:01:29.159 honor to be able to work with her.

NOTE Confidence: 0.9278211

00:01:29.160 --> 00:01:30.204 And thank you,

NOTE Confidence: 0.9278211

00:01:30.204 --> 00:01:32.640 Bernali for for being in that position.

NOTE Confidence: 0.9278211

00:01:32.640 --> 00:01:34.120 I want to thank you for the swag.

NOTE Confidence: 0.9278211

00:01:34.120 --> 00:01:35.400 I think that's so cool.

NOTE Confidence: 0.9278211

00:01:35.400 --> 00:01:35.896 I have.

NOTE Confidence: 0.9278211

00:01:35.896 --> 00:01:37.384 This thing isn't like the Taylor

NOTE Confidence: 0.9278211

00:01:37.384 --> 00:01:38.694 Swift concert where you get to

NOTE Confidence: 0.9278211

00:01:38.694 --> 00:01:39.608 wear the the bracelets.
NOTE Confidence: 0.9278211

00:01:39.608 --> 00:01:40.400 So thank you.
NOTE Confidence: 0.9278211

00:01:40.400 --> 00:01:41.984 I'm going to wear that the rest of
NOTE Confidence: 0.9278211

00:01:41.984 --> 00:01:43.796 the day and to be very proud of that.
NOTE Confidence: 0.9278211

00:01:43.800 --> 00:01:45.360 The.
NOTE Confidence: 0.9278211

00:01:45.360 --> 00:01:47.232 So Bernali and I are kind of doing
NOTE Confidence: 0.9278211

00:01:47.232 --> 00:01:48.960 a little dance around the talk.
NOTE Confidence: 0.9278211

00:01:48.960 --> 00:01:50.332 So she's going to talk a little
NOTE Confidence: 0.9278211

00:01:50.332 --> 00:01:51.616 bit about some of the studies
NOTE Confidence: 0.9278211

00:01:51.616 --> 00:01:52.918 in the mechanics of the studies
NOTE Confidence: 0.9278211

00:01:52.918 --> 00:01:54.078 that we're doing together.
NOTE Confidence: 0.9278211

00:01:54.080 --> 00:01:56.005 And I changed my title because to
NOTE Confidence: 0.9278211

00:01:56.005 --> 00:01:58.255 yield to a little bit of what she's
NOTE Confidence: 0.9278211

00:01:58.255 --> 00:02:00.055 going to talk about it and I'm just
NOTE Confidence: 0.9278211

00:02:00.055 --> 00:02:01.709 going to talk about a collaboration on
NOTE Confidence: 0.9278211

00:02:01.709 --> 00:02:03.808 the way to impact and to share some

NOTE Confidence: 0.9278211

00:02:03.808 --> 00:02:05.705 thoughts with you a little bit about.

NOTE Confidence: 0.9278211

00:02:05.710 --> 00:02:08.068 So I also Lisa said this,

NOTE Confidence: 0.9278211

00:02:08.070 --> 00:02:09.645 I feel a little bit like a

NOTE Confidence: 0.9278211

00:02:09.645 --> 00:02:11.110 stranger in a strange land.

NOTE Confidence: 0.9278211

00:02:11.110 --> 00:02:13.147 This isn't a natural thing for me.

NOTE Confidence: 0.9278211

00:02:13.150 --> 00:02:14.730 I'm a cardiologist and also

NOTE Confidence: 0.9278211

00:02:14.730 --> 00:02:16.310 I do very applied research,

NOTE Confidence: 0.9278211

00:02:16.310 --> 00:02:17.924 very different than the typical things

NOTE Confidence: 0.9278211

00:02:17.924 --> 00:02:20.070 that are going on in the tack building.

NOTE Confidence: 0.9278211

00:02:20.070 --> 00:02:23.294 I have a a group where Center for

NOTE Confidence: 0.9278211

00:02:23.294 --> 00:02:25.569 Outcomes research and evaluation are.

NOTE Confidence: 0.9278211

00:02:25.569 --> 00:02:27.243 You may not be as familiar

NOTE Confidence: 0.9278211

00:02:27.243 --> 00:02:28.810 with what outcomes research is.

NOTE Confidence: 0.9278211

00:02:28.810 --> 00:02:30.538 So I just want to frame for a

NOTE Confidence: 0.9278211

00:02:30.538 --> 00:02:32.010 little bit what what this is.

NOTE Confidence: 0.9278211

00:02:32.010 --> 00:02:35.830 So outcomes research evaluates and
NOTE Confidence: 0.9278211

00:02:35.830 --> 00:02:37.980 optimize health outcomes for individual
NOTE Confidence: 0.9278211

00:02:37.980 --> 00:02:39.337 patients and for populations.
NOTE Confidence: 0.9278211

00:02:39.337 --> 00:02:41.500 It's not so much about a particular
NOTE Confidence: 0.9278211

00:02:41.559 --> 00:02:43.294 technique as it is a driven approach
NOTE Confidence: 0.9278211

00:02:43.294 --> 00:02:45.246 to say that we want our work to
NOTE Confidence: 0.9278211

00:02:45.246 --> 00:02:47.280 be consequential and to have
NOTE Confidence: 0.9278211

00:02:47.280 --> 00:02:48.930 tangible impact on people's lives.
NOTE Confidence: 0.9278211

00:02:48.930 --> 00:02:51.155 It emphasizes what's important to
NOTE Confidence: 0.9278211

00:02:51.155 --> 00:02:53.780 patients and people, the end result.
NOTE Confidence: 0.9278211

00:02:53.780 --> 00:02:55.930 So we're interested in surrogates
NOTE Confidence: 0.9278211

00:02:55.930 --> 00:02:58.486 and markers on the way to actually,
NOTE Confidence: 0.9278211

00:02:58.490 --> 00:03:00.324 what does it matter for each individual?
NOTE Confidence: 0.9278211

00:03:00.330 --> 00:03:01.554 We don't want to say we've
NOTE Confidence: 0.9278211

00:03:01.554 --> 00:03:02.370 improved your lab test.
NOTE Confidence: 0.9278211

00:03:02.370 --> 00:03:03.648 We don't want to say we've

NOTE Confidence: 0.9278211

00:03:03.648 --> 00:03:04.287 improved your profile.

NOTE Confidence: 0.9278211

00:03:04.290 --> 00:03:05.890 We want to know that you feel better.

NOTE Confidence: 0.9278211

00:03:05.890 --> 00:03:07.249 We want to know that your life is better.

NOTE Confidence: 0.9278211

00:03:07.250 --> 00:03:08.642 We don't want to know whether

NOTE Confidence: 0.9278211

00:03:08.642 --> 00:03:10.089 people are living longer and better.

NOTE Confidence: 0.9278211

00:03:10.090 --> 00:03:12.490 It's a it's a orientation we

NOTE Confidence: 0.9278211

00:03:12.490 --> 00:03:14.090 seek to understand mechanisms,

NOTE Confidence: 0.93980336

00:03:14.090 --> 00:03:15.562 identify targets, test strategies.

NOTE Confidence: 0.93980336

00:03:15.562 --> 00:03:17.770 That may sound familiar to you,

NOTE Confidence: 0.93980336

00:03:17.770 --> 00:03:20.634 but but it's on the way to actually

NOTE Confidence: 0.93980336

00:03:20.634 --> 00:03:22.768 knowing that people are better.

NOTE Confidence: 0.93980336

00:03:22.770 --> 00:03:23.910 It involves discovery,

NOTE Confidence: 0.93980336

00:03:23.910 --> 00:03:25.050 accountability and improvement,

NOTE Confidence: 0.93980336

00:03:25.050 --> 00:03:27.258 discovery of new approaches,

NOTE Confidence: 0.93980336

00:03:27.258 --> 00:03:30.570 accountability for what we're actually doing.

NOTE Confidence: 0.93980336

00:03:30.570 --> 00:03:32.046 You know, what is it that we can say
NOTE Confidence: 0.93980336

00:03:32.046 --> 00:03:33.488 the current level of performances,
NOTE Confidence: 0.93980336

00:03:33.490 --> 00:03:35.770 What is it that's actually happening?
NOTE Confidence: 0.93980336

00:03:35.770 --> 00:03:37.386 An improvement in an
NOTE Confidence: 0.93980336

00:03:37.386 --> 00:03:39.406 aspiration to do ever better.
NOTE Confidence: 0.93980336

00:03:39.410 --> 00:03:41.090 And we're very results oriented.
NOTE Confidence: 0.93980336

00:03:41.090 --> 00:03:42.610 I mean, in the end of the day,
NOTE Confidence: 0.93980336

00:03:42.610 --> 00:03:45.090 I want to know like what actually happened.
NOTE Confidence: 0.93980336

00:03:45.090 --> 00:03:47.205 And if I'm going to try to help Lisa,
NOTE Confidence: 0.93980336

00:03:47.210 --> 00:03:48.855 I don't want to tell her about
NOTE Confidence: 0.93980336

00:03:48.855 --> 00:03:50.369 papers published or grants obtained.
NOTE Confidence: 0.93980336

00:03:50.370 --> 00:03:52.621 I want to talk to her about we've
NOTE Confidence: 0.93980336

00:03:52.621 --> 00:03:55.267 actually in enhanced her ability to
NOTE Confidence: 0.93980336

00:03:55.267 --> 00:03:58.297 help people and not just her ability,
NOTE Confidence: 0.93980336

00:03:58.300 --> 00:04:00.100 but that people actually are better,
NOTE Confidence: 0.93980336

00:04:00.100 --> 00:04:02.980 people are better as a result.

NOTE Confidence: 0.93980336

00:04:02.980 --> 00:04:04.897 So some of the key questions that we address,

NOTE Confidence: 0.93980336

00:04:04.900 --> 00:04:06.671 we may ask how do we improve

NOTE Confidence: 0.93980336

00:04:06.671 --> 00:04:07.177 healthcare performance?

NOTE Confidence: 0.93980336

00:04:07.180 --> 00:04:07.654 You know,

NOTE Confidence: 0.93980336

00:04:07.654 --> 00:04:09.313 there's this large gap between what we

NOTE Confidence: 0.93980336

00:04:09.313 --> 00:04:10.830 actually know today and what's actually

NOTE Confidence: 0.93980336

00:04:10.830 --> 00:04:12.639 being delivered on the front lines and

NOTE Confidence: 0.93980336

00:04:12.639 --> 00:04:13.979 what's being achieved for patients.

NOTE Confidence: 0.93980336

00:04:13.980 --> 00:04:15.415 While Covid's a different thing

NOTE Confidence: 0.93980336

00:04:15.415 --> 00:04:16.850 because actually we know nothing

NOTE Confidence: 0.93980336

00:04:16.902 --> 00:04:18.336 about how to make people better.

NOTE Confidence: 0.93980336

00:04:18.340 --> 00:04:20.048 But there are lots of areas of

NOTE Confidence: 0.93980336

00:04:20.048 --> 00:04:21.680 medicine where we know things but

NOTE Confidence: 0.93980336

00:04:21.680 --> 00:04:23.080 but it's not being translated.

NOTE Confidence: 0.93980336

00:04:23.080 --> 00:04:25.243 We ask how can we identify target

NOTE Confidence: 0.93980336

00:04:25.243 --> 00:04:27.317 and address factors that can be
NOTE Confidence: 0.93980336

00:04:27.317 --> 00:04:28.715 transformative for health and
NOTE Confidence: 0.93980336

00:04:28.715 --> 00:04:30.290 and we're very much interested
NOTE Confidence: 0.93980336

00:04:30.290 --> 00:04:31.760 in multimodal data coming in.
NOTE Confidence: 0.93980336

00:04:31.760 --> 00:04:33.836 So biological data has great utility
NOTE Confidence: 0.93980336

00:04:33.836 --> 00:04:36.118 but but social context can actually
NOTE Confidence: 0.93980336

00:04:36.118 --> 00:04:37.798 have more powerful influences.
NOTE Confidence: 0.93980336

00:04:37.800 --> 00:04:39.370 You may understand them as
NOTE Confidence: 0.93980336

00:04:39.370 --> 00:04:39.998 epigenetic influences,
NOTE Confidence: 0.93980336

00:04:40.000 --> 00:04:42.200 but we understand them as,
NOTE Confidence: 0.93980336

00:04:42.200 --> 00:04:42.764 you know,
NOTE Confidence: 0.93980336

00:04:42.764 --> 00:04:44.456 where people live and the exposures
NOTE Confidence: 0.93980336

00:04:44.456 --> 00:04:46.608 that they have and the lives and
NOTE Confidence: 0.93980336

00:04:46.608 --> 00:04:48.268 the stressors that they experience
NOTE Confidence: 0.93980336

00:04:48.268 --> 00:04:50.509 can have profound impacts on on
NOTE Confidence: 0.93980336

00:04:50.509 --> 00:04:52.349 modifying the disease process that

NOTE Confidence: 0.93980336

00:04:52.414 --> 00:04:54.078 they're that they're encountering

NOTE Confidence: 0.93980336

00:04:54.078 --> 00:04:56.158 or facing or recovering from.

NOTE Confidence: 0.93980336

00:04:56.160 --> 00:04:57.880 How do we give more voice to patients?

NOTE Confidence: 0.93980336

00:04:57.880 --> 00:04:59.448 How do we put them in a more

NOTE Confidence: 0.93980336

00:04:59.448 --> 00:04:59.840 powerful position?

NOTE Confidence: 0.93980336

00:04:59.840 --> 00:05:01.472 How do we beat the information

NOTE Confidence: 0.93980336

00:05:01.472 --> 00:05:03.417 asymmetry that has been historic and

NOTE Confidence: 0.93980336

00:05:03.417 --> 00:05:04.626 hierarchical paternalistic profession

NOTE Confidence: 0.93980336

00:05:04.626 --> 00:05:06.919 that where people have tended to

NOTE Confidence: 0.93980336

00:05:06.919 --> 00:05:08.501 walk in the room and just tell

NOTE Confidence: 0.93980336

00:05:08.501 --> 00:05:12.218 people what to do in a modern era,

NOTE Confidence: 0.93980336

00:05:12.220 --> 00:05:13.669 we're going to break down those barriers

NOTE Confidence: 0.93980336

00:05:13.669 --> 00:05:15.236 and make sure that even people with

NOTE Confidence: 0.93980336

00:05:15.236 --> 00:05:16.366 various levels of health literacy

NOTE Confidence: 0.93980336

00:05:16.366 --> 00:05:17.786 can have a basic understanding of

NOTE Confidence: 0.93980336

00:05:17.786 --> 00:05:19.174 what the tradeoffs are between the
NOTE Confidence: 0.93980336

00:05:19.174 --> 00:05:20.578 options that are available to them.
NOTE Confidence: 0.93980336

00:05:20.580 --> 00:05:22.338 Based on how we stream forward.
NOTE Confidence: 0.93980336

00:05:22.340 --> 00:05:23.900 How do we best promote HealthEquity?
NOTE Confidence: 0.93980336

00:05:23.900 --> 00:05:25.160 We're doing a horrific job
NOTE Confidence: 0.93980336

00:05:25.160 --> 00:05:26.420 of this in this country.
NOTE Confidence: 0.93980336

00:05:26.420 --> 00:05:27.980 We have an unjust system.
NOTE Confidence: 0.93980336

00:05:27.980 --> 00:05:29.396 We have people who are disadvantaged
NOTE Confidence: 0.93980336

00:05:29.396 --> 00:05:31.324 merely by the color of their skin or
NOTE Confidence: 0.93980336

00:05:31.324 --> 00:05:32.494 the circumstances of their birth.
NOTE Confidence: 0.93980336

00:05:32.500 --> 00:05:34.900 And they're they're in a category
NOTE Confidence: 0.93980336

00:05:34.900 --> 00:05:37.198 where they are are are largely
NOTE Confidence: 0.93980336

00:05:37.198 --> 00:05:39.394 going to live shorter lives and
NOTE Confidence: 0.93980336

00:05:39.394 --> 00:05:41.697 and at with higher comorbidity
NOTE Confidence: 0.93980336

00:05:41.700 --> 00:05:43.338 and worse function as they age
NOTE Confidence: 0.93980336

00:05:43.338 --> 00:05:44.987 because of the station that they

NOTE Confidence: 0.93980336

00:05:44.987 --> 00:05:46.499 are in their lives having nothing

NOTE Confidence: 0.93980336

00:05:46.499 --> 00:05:48.276 to do with intrinsic biology and

NOTE Confidence: 0.93980336

00:05:48.276 --> 00:05:50.100 everything to do with the social

NOTE Confidence: 0.9430491

00:05:50.100 --> 00:05:51.508 context of their lives.

NOTE Confidence: 0.9430491

00:05:51.508 --> 00:05:53.620 And it's something that demands our

NOTE Confidence: 0.9430491

00:05:53.683 --> 00:05:55.820 attention and how can we improve

NOTE Confidence: 0.9430491

00:05:55.820 --> 00:05:57.100 the knowledge generation pipelines.

NOTE Confidence: 0.9430491

00:05:57.100 --> 00:05:58.816 Our research is slow and sluggish.

NOTE Confidence: 0.9430491

00:05:58.820 --> 00:06:00.878 It's expensive and it's often not

NOTE Confidence: 0.9430491

00:06:00.878 --> 00:06:02.868 responsive to the needs of what

NOTE Confidence: 0.9430491

00:06:02.868 --> 00:06:04.536 people are asking us for.

NOTE Confidence: 0.9430491

00:06:04.540 --> 00:06:06.826 And so I'm all for the very basic science

NOTE Confidence: 0.9430491

00:06:06.826 --> 00:06:09.097 of unlocking secrets of the universe,

NOTE Confidence: 0.9430491

00:06:09.100 --> 00:06:11.571 helping us understand some of the basic

NOTE Confidence: 0.9430491

00:06:11.571 --> 00:06:14.058 beautiful ways in which biology unfolds.

NOTE Confidence: 0.9430491

00:06:14.060 --> 00:06:15.691 But actually I'm more focused on how

NOTE Confidence: 0.9430491

00:06:15.691 --> 00:06:17.722 do we make sure that that's in the

NOTE Confidence: 0.9430491

00:06:17.722 --> 00:06:20.352 service of actually promoting better,

NOTE Confidence: 0.9430491

00:06:20.352 --> 00:06:22.542 better life, better better humanity.

NOTE Confidence: 0.9430491

00:06:22.542 --> 00:06:24.546 You know what are we doing

NOTE Confidence: 0.9430491

00:06:24.546 --> 00:06:26.458 to actually improve things.

NOTE Confidence: 0.9430491

00:06:26.460 --> 00:06:28.260 So and I want to be able to do

NOTE Confidence: 0.9430491

00:06:28.260 --> 00:06:30.057 this quickly test things faster.

NOTE Confidence: 0.9430491

00:06:30.060 --> 00:06:31.260 You look at long COVID,

NOTE Confidence: 0.9430491

00:06:31.260 --> 00:06:32.814 the the knowledge gaps are so profound,

NOTE Confidence: 0.9430491

00:06:32.820 --> 00:06:34.580 part of what Bernalli will mention to us,

NOTE Confidence: 0.9430491

00:06:34.580 --> 00:06:35.900 we're trying to build platforms

NOTE Confidence: 0.9430491

00:06:35.900 --> 00:06:37.220 so that we can reload.

NOTE Confidence: 0.9430491

00:06:37.220 --> 00:06:39.020 Not we're not building bespoke

NOTE Confidence: 0.9430491

00:06:39.020 --> 00:06:40.310 research projects, not huntergatherer.

NOTE Confidence: 0.9430491

00:06:40.310 --> 00:06:42.526 How do we go out, have an idea,

NOTE Confidence: 0.9430491

00:06:42.526 --> 00:06:44.098 build something up only to break

NOTE Confidence: 0.9430491

00:06:44.098 --> 00:06:45.540 it down when we're done?

NOTE Confidence: 0.9430491

00:06:45.540 --> 00:06:46.860 How can we do industrial farming

NOTE Confidence: 0.9430491

00:06:46.860 --> 00:06:47.740 where we build it,

NOTE Confidence: 0.9430491

00:06:47.740 --> 00:06:49.987 we've got the platforms and we just

NOTE Confidence: 0.9430491

00:06:49.987 --> 00:06:52.079 can continue to ask new questions

NOTE Confidence: 0.9430491

00:06:52.079 --> 00:06:53.844 rapidly and efficiently and be

NOTE Confidence: 0.9430491

00:06:53.844 --> 00:06:55.938 able to keep cycling through.

NOTE Confidence: 0.9430491

00:06:55.940 --> 00:06:57.356 And people who are working with

NOTE Confidence: 0.9430491

00:06:57.356 --> 00:06:58.868 us know that they're going to

NOTE Confidence: 0.9430491

00:06:58.868 --> 00:06:59.900 be honored and respected.

NOTE Confidence: 0.9430491

00:06:59.900 --> 00:07:00.792 We're going to listen.

NOTE Confidence: 0.9430491

00:07:00.792 --> 00:07:02.429 We're going to try to make the

NOTE Confidence: 0.9430491

00:07:02.429 --> 00:07:03.958 studies in a way that delights them,

NOTE Confidence: 0.9430491

00:07:03.960 --> 00:07:06.039 that they feel that they would do

NOTE Confidence: 0.9430491

00:07:06.039 --> 00:07:08.097 it again because of the way that
NOTE Confidence: 0.9430491

00:07:08.097 --> 00:07:10.118 we interact with them and be able
NOTE Confidence: 0.9430491

00:07:10.118 --> 00:07:11.954 to create an entirely new approach
NOTE Confidence: 0.9430491

00:07:11.960 --> 00:07:13.185 from the very hierarchical where
NOTE Confidence: 0.9430491

00:07:13.185 --> 00:07:13.920 people are subjects.
NOTE Confidence: 0.9430491

00:07:13.920 --> 00:07:15.838 We don't use the word subjects anymore.
NOTE Confidence: 0.9430491

00:07:15.840 --> 00:07:17.400 We we think that that's entirely
NOTE Confidence: 0.9430491

00:07:17.400 --> 00:07:18.714 different construct king and a
NOTE Confidence: 0.9430491

00:07:18.714 --> 00:07:20.324 queen and a subjects and they just
NOTE Confidence: 0.9430491

00:07:20.324 --> 00:07:21.457 follow directions and what they
NOTE Confidence: 0.9430491

00:07:21.457 --> 00:07:22.920 don't do what you tell them they're
NOTE Confidence: 0.9430491

00:07:22.920 --> 00:07:24.334 lost the following I got and chase
NOTE Confidence: 0.9430491

00:07:24.334 --> 00:07:25.399 them and bring them back.
NOTE Confidence: 0.9430491

00:07:25.400 --> 00:07:27.110 They're in studies are supposed to
NOTE Confidence: 0.9430491

00:07:27.110 --> 00:07:29.111 help them and they they leave in
NOTE Confidence: 0.9430491

00:07:29.111 --> 00:07:30.436 drove because they're so alienated

NOTE Confidence: 0.9430491

00:07:30.436 --> 00:07:32.501 by the way in which we do research

NOTE Confidence: 0.9430491

00:07:32.501 --> 00:07:34.504 we we do it in ways and makes it

NOTE Confidence: 0.9430491

00:07:34.504 --> 00:07:36.324 difficult for them to to participate

NOTE Confidence: 0.9430491

00:07:36.324 --> 00:07:39.208 and and doesn't ennoble them in any

NOTE Confidence: 0.9430491

00:07:39.208 --> 00:07:41.228 way and and I participate in research

NOTE Confidence: 0.9430491

00:07:41.228 --> 00:07:43.430 that I always say I'm ashamed to say

NOTE Confidence: 0.9430491

00:07:43.430 --> 00:07:45.360 where I finished the studies and I

NOTE Confidence: 0.9430491

00:07:45.360 --> 00:07:46.938 didn't tell people what we found.

NOTE Confidence: 0.9430491

00:07:46.940 --> 00:07:49.460 I mean that's the ultimate disrespect.

NOTE Confidence: 0.9430491

00:07:49.460 --> 00:07:50.986 People are in these studies and they

NOTE Confidence: 0.9430491

00:07:50.986 --> 00:07:52.540 didn't we just told them it's over.

NOTE Confidence: 0.9430491

00:07:52.540 --> 00:07:53.779 But we we didn't even do them.

NOTE Confidence: 0.9430491

00:07:53.780 --> 00:07:56.316 The honor of saying by the way here's

NOTE Confidence: 0.9430491

00:07:56.316 --> 00:07:58.838 what your efforts helped us to learn.

NOTE Confidence: 0.9430491

00:07:58.840 --> 00:08:01.000 They they we were exploiting them.

NOTE Confidence: 0.9430491

00:08:01.000 --> 00:08:02.440 They were just working for us.
NOTE Confidence: 0.9430491

00:08:02.440 --> 00:08:04.623 They we were they we weren't bringing
NOTE Confidence: 0.9430491

00:08:04.623 --> 00:08:07.024 them in as partners and refused to
NOTE Confidence: 0.9430491

00:08:07.024 --> 00:08:09.300 participate in that kind of research anymore.
NOTE Confidence: 0.9430491

00:08:09.300 --> 00:08:11.760 And I was socialized about that.
NOTE Confidence: 0.9430491

00:08:11.760 --> 00:08:13.755 I mean that's how we were taught.
NOTE Confidence: 0.9430491

00:08:13.760 --> 00:08:14.040 So
NOTE Confidence: 0.9322316

00:08:16.360 --> 00:08:18.362 and I'm just saying ultimately you know
NOTE Confidence: 0.9322316

00:08:18.362 --> 00:08:20.496 it's about the people and and we have
NOTE Confidence: 0.9322316

00:08:20.496 --> 00:08:21.840 to approach our research with humility.
NOTE Confidence: 0.9322316

00:08:21.840 --> 00:08:23.408 You know, it's not like we're the
NOTE Confidence: 0.9322316

00:08:23.408 --> 00:08:24.769 smartest people in the room and
NOTE Confidence: 0.9322316

00:08:24.769 --> 00:08:26.059 and everyone just should listen to
NOTE Confidence: 0.9322316

00:08:26.059 --> 00:08:27.764 us until we say it's a matter of
NOTE Confidence: 0.9322316

00:08:27.764 --> 00:08:29.150 us having that humility about our
NOTE Confidence: 0.9322316

00:08:29.203 --> 00:08:30.637 ideas and wanting to test them,

NOTE Confidence: 0.9322316

00:08:30.640 --> 00:08:32.248 figuring out what we can do to help

NOTE Confidence: 0.9322316

00:08:32.248 --> 00:08:33.559 and knowing if we're successful.

NOTE Confidence: 0.9322316

00:08:33.560 --> 00:08:35.435 It's because we've worked synergistically

NOTE Confidence: 0.9322316

00:08:35.435 --> 00:08:37.967 and in a complementary way with those

NOTE Confidence: 0.9322316

00:08:37.967 --> 00:08:40.053 people who are experts in their own

NOTE Confidence: 0.9322316

00:08:40.053 --> 00:08:42.118 disease because they live it every day.

NOTE Confidence: 0.9322316

00:08:42.120 --> 00:08:44.752 And so we've got to be able to

NOTE Confidence: 0.9322316

00:08:44.752 --> 00:08:47.317 understand how we create that synergism.

NOTE Confidence: 0.9322316

00:08:47.320 --> 00:08:50.072 So you know it.

NOTE Confidence: 0.9322316

00:08:50.072 --> 00:08:52.480 I think a very fortuitous thing occurred

NOTE Confidence: 0.9322316

00:08:52.547 --> 00:08:54.779 when I met Akiko and it occurred to

NOTE Confidence: 0.9322316

00:08:54.779 --> 00:08:56.300 me that that maybe there was some

NOTE Confidence: 0.9322316

00:08:56.300 --> 00:08:57.620 opportunities for us to come together.

NOTE Confidence: 0.9322316

00:08:57.620 --> 00:09:00.105 And she's been such a gracious and

NOTE Confidence: 0.9322316

00:09:00.105 --> 00:09:01.540 generous collaborator who immediately

NOTE Confidence: 0.9322316

00:09:01.540 --> 00:09:03.340 embraced all of these ideas,
NOTE Confidence: 0.9322316

00:09:03.340 --> 00:09:05.284 moving from mouse models now to
NOTE Confidence: 0.9322316

00:09:05.284 --> 00:09:07.075 working with people and immediately
NOTE Confidence: 0.9322316

00:09:07.075 --> 00:09:09.566 wanting to to work in the way with
NOTE Confidence: 0.9322316

00:09:09.566 --> 00:09:11.112 people that would honor and respect.
NOTE Confidence: 0.9322316

00:09:11.112 --> 00:09:12.576 Of course that's part of her,
NOTE Confidence: 0.9322316

00:09:12.580 --> 00:09:14.505 the way she operates in every different
NOTE Confidence: 0.9322316

00:09:14.505 --> 00:09:16.778 direction of of her life and in her science.
NOTE Confidence: 0.9322316

00:09:16.780 --> 00:09:18.748 And and so we thought you know that
NOTE Confidence: 0.9322316

00:09:18.748 --> 00:09:20.495 this would be good to bring the
NOTE Confidence: 0.9322316

00:09:20.495 --> 00:09:22.060 groups together and work together.
NOTE Confidence: 0.9322316

00:09:22.060 --> 00:09:24.599 And in our approaches that were one team,
NOTE Confidence: 0.9322316

00:09:24.600 --> 00:09:25.850 even though we have different
NOTE Confidence: 0.9322316

00:09:25.850 --> 00:09:26.600 areas of expertise.
NOTE Confidence: 0.9322316

00:09:26.600 --> 00:09:28.637 Our goal is to make a difference
NOTE Confidence: 0.9322316

00:09:28.640 --> 00:09:32.280 the how matters the how means it.

NOTE Confidence: 0.9322316

00:09:32.280 --> 00:09:34.240 It's not like just get the results

NOTE Confidence: 0.9322316

00:09:34.240 --> 00:09:36.560 with and doesn't matter how people

NOTE Confidence: 0.9322316

00:09:36.560 --> 00:09:38.192 feel when they're participating

NOTE Confidence: 0.9322316

00:09:38.192 --> 00:09:40.160 or or or you know how we,

NOTE Confidence: 0.9322316

00:09:40.160 --> 00:09:42.295 you know what happens as a result

NOTE Confidence: 0.9322316

00:09:42.295 --> 00:09:43.519 collateral damage because you

NOTE Confidence: 0.9322316

00:09:43.519 --> 00:09:45.255 know we're just trying to pound on

NOTE Confidence: 0.9322316

00:09:45.255 --> 00:09:47.156 people to get get all the work done.

NOTE Confidence: 0.9322316

00:09:47.160 --> 00:09:49.230 It has to be in a way that we

NOTE Confidence: 0.9322316

00:09:49.230 --> 00:09:51.418 are even among the researchers,

NOTE Confidence: 0.9322316

00:09:51.420 --> 00:09:53.588 recognizing that everyone deserves

NOTE Confidence: 0.9322316

00:09:53.588 --> 00:09:55.214 to be respected,

NOTE Confidence: 0.9322316

00:09:55.220 --> 00:09:57.012 that people are working hard and how

NOTE Confidence: 0.9322316

00:09:57.012 --> 00:09:58.771 do we create the conditions where

NOTE Confidence: 0.9322316

00:09:58.771 --> 00:10:00.649 people can excel to the greatest

NOTE Confidence: 0.9322316

00:10:00.649 --> 00:10:02.219 extent while at the same time,
NOTE Confidence: 0.9322316

00:10:02.220 --> 00:10:02.814 you know,
NOTE Confidence: 0.9322316

00:10:02.814 --> 00:10:04.893 we need to make progress together so
NOTE Confidence: 0.9322316

00:10:04.900 --> 00:10:08.020 that the how we approach this is important.
NOTE Confidence: 0.9322316

00:10:08.020 --> 00:10:10.378 It's a sensibility within Akiko's lab.
NOTE Confidence: 0.9322316

00:10:10.380 --> 00:10:12.214 I've seen that from the very beginning
NOTE Confidence: 0.9322316

00:10:12.220 --> 00:10:14.166 bring together the best lab and applied
NOTE Confidence: 0.9322316

00:10:14.166 --> 00:10:16.186 science and and see through its see
NOTE Confidence: 0.9322316

00:10:16.186 --> 00:10:18.016 it through the application benefit.
NOTE Confidence: 0.9322316

00:10:18.020 --> 00:10:19.805 Often times the very strongest
NOTE Confidence: 0.9322316

00:10:19.805 --> 00:10:21.233 scientific groups aren't necessarily
NOTE Confidence: 0.9322316

00:10:21.233 --> 00:10:22.838 working with strongest clinical groups
NOTE Confidence: 0.9322316

00:10:22.838 --> 00:10:24.638 and the clinical groups are just
NOTE Confidence: 0.9322316

00:10:24.685 --> 00:10:26.357 like trying to get tests in the in
NOTE Confidence: 0.9322316

00:10:26.357 --> 00:10:27.944 the basic science groups you're just
NOTE Confidence: 0.9322316

00:10:27.944 --> 00:10:29.522 trying to get subjects participants.

NOTE Confidence: 0.9322316

00:10:29.522 --> 00:10:32.330 But you know when we're trying to do

NOTE Confidence: 0.9322316

00:10:32.396 --> 00:10:34.780 this in a way that's a true partnership.

NOTE Confidence: 0.9322316

00:10:34.780 --> 00:10:37.000 We're also trying to partner

NOTE Confidence: 0.9322316

00:10:37.000 --> 00:10:39.220 this this aspect of it.

NOTE Confidence: 0.9322316

00:10:39.220 --> 00:10:41.388 If I can figure out how to go

NOTE Confidence: 0.9322316

00:10:41.388 --> 00:10:44.632 forward that's a metaphor problem.

NOTE Confidence: 0.9322316

00:10:44.632 --> 00:10:48.240 So the, so we've launched 2 studies.

NOTE Confidence: 0.9322316

00:10:48.240 --> 00:10:50.634 Again, Bernali will go into more detail.

NOTE Confidence: 0.9322316

00:10:50.640 --> 00:10:52.280 I'm just going to mention one is in

NOTE Confidence: 0.9413401

00:10:52.280 --> 00:10:53.712 a digital observational study.

NOTE Confidence: 0.9413401

00:10:53.712 --> 00:10:55.860 So these are digital and decentralized

NOTE Confidence: 0.9413401

00:10:55.920 --> 00:10:57.480 and we call them democratized.

NOTE Confidence: 0.9413401

00:10:57.480 --> 00:10:59.020 Democratized in this context

NOTE Confidence: 0.9413401

00:10:59.020 --> 00:11:00.560 really means full access.

NOTE Confidence: 0.9413401

00:11:00.560 --> 00:11:02.366 We're we're trying to let people select

NOTE Confidence: 0.9413401

00:11:02.366 --> 00:11:04.119 themselves to be part of the studies.
NOTE Confidence: 0.9413401

00:11:04.120 --> 00:11:04.732 You may say,
NOTE Confidence: 0.9413401

00:11:04.732 --> 00:11:05.956 well doesn't bring very high selection.
NOTE Confidence: 0.9413401

00:11:05.960 --> 00:11:07.360 You know what happens normally
NOTE Confidence: 0.9413401

00:11:07.360 --> 00:11:08.200 in clinical practice?
NOTE Confidence: 0.9413401

00:11:08.200 --> 00:11:10.516 The doctor walks in and decides,
NOTE Confidence: 0.9413401

00:11:10.520 --> 00:11:10.982 Gee, are you.
NOTE Confidence: 0.9413401

00:11:10.982 --> 00:11:12.294 I wonder if you'd be a good person
NOTE Confidence: 0.9413401

00:11:12.294 --> 00:11:13.464 for statement and all the people
NOTE Confidence: 0.9413401

00:11:13.464 --> 00:11:14.917 who might be eligible for study it.
NOTE Confidence: 0.9413401

00:11:14.920 --> 00:11:16.200 They're in a busy day.
NOTE Confidence: 0.9413401

00:11:16.200 --> 00:11:16.730 You know,
NOTE Confidence: 0.9413401

00:11:16.730 --> 00:11:18.730 they may look at the person and say,
NOTE Confidence: 0.9413401

00:11:18.730 --> 00:11:20.496 you know, I don't know, do we have time?
NOTE Confidence: 0.9413401

00:11:20.496 --> 00:11:21.896 Is it going to be hard to
NOTE Confidence: 0.9413401

00:11:21.896 --> 00:11:22.876 explain to this person?

NOTE Confidence: 0.9413401

00:11:22.880 --> 00:11:24.440 I mean, that's why we get this selection.

NOTE Confidence: 0.9413401

00:11:24.440 --> 00:11:25.960 And who gets into studies.

NOTE Confidence: 0.9413401

00:11:25.960 --> 00:11:27.328 Maybe they look at people with

NOTE Confidence: 0.9413401

00:11:27.328 --> 00:11:28.468 lower health literacy and think

NOTE Confidence: 0.9413401

00:11:28.468 --> 00:11:29.916 this is going to be take too long.

NOTE Confidence: 0.9413401

00:11:29.920 --> 00:11:30.895 You know that they're it's

NOTE Confidence: 0.9413401

00:11:30.895 --> 00:11:31.675 not equipped for this.

NOTE Confidence: 0.9413401

00:11:31.680 --> 00:11:33.276 We're trying to figure out can

NOTE Confidence: 0.9413401

00:11:33.276 --> 00:11:34.880 we create the means by which

NOTE Confidence: 0.9413401

00:11:34.880 --> 00:11:36.320 we can reach out to people,

NOTE Confidence: 0.9413401

00:11:36.320 --> 00:11:37.960 make them aware of these kind of studies,

NOTE Confidence: 0.9413401

00:11:37.960 --> 00:11:39.479 make it easy for them to join,

NOTE Confidence: 0.9413401

00:11:39.480 --> 00:11:40.320 make it so they don't have

NOTE Confidence: 0.9413401

00:11:40.320 --> 00:11:41.080 to take time off work.

NOTE Confidence: 0.9413401

00:11:41.080 --> 00:11:42.040 If you're an hourly worker,

NOTE Confidence: 0.9413401

00:11:42.040 --> 00:11:43.926 taking any time off work to participate

NOTE Confidence: 0.9413401

00:11:43.926 --> 00:11:45.137 in study can be a great burden.

NOTE Confidence: 0.9413401

00:11:45.140 --> 00:11:46.804 Can we make it so that the people

NOTE Confidence: 0.9413401

00:11:46.804 --> 00:11:48.855 can join us and can we make it so we

NOTE Confidence: 0.9413401

00:11:48.855 --> 00:11:50.259 can ship drugs to people's houses?

NOTE Confidence: 0.9413401

00:11:50.260 --> 00:11:51.772 Can we make it so we can collect

NOTE Confidence: 0.9413401

00:11:51.772 --> 00:11:52.739 bloods at their homes?

NOTE Confidence: 0.9413401

00:11:52.740 --> 00:11:54.476 Can we make it so that people can

NOTE Confidence: 0.9413401

00:11:54.476 --> 00:11:56.506 do this so that we minimize the

NOTE Confidence: 0.9413401

00:11:56.506 --> 00:11:59.136 burden and enhance the experience?

NOTE Confidence: 0.9413401

00:11:59.140 --> 00:12:00.550 So we have the listen studies

NOTE Confidence: 0.9413401

00:12:00.550 --> 00:12:01.255 and observational study,

NOTE Confidence: 0.9413401

00:12:01.260 --> 00:12:05.544 the Paxil C trial as a as a phase

NOTE Confidence: 0.9413401

00:12:05.544 --> 00:12:07.508 two investigation on new drug

NOTE Confidence: 0.9413401

00:12:07.508 --> 00:12:09.740 randomized trial Paxil for 15 days.

NOTE Confidence: 0.9413401

00:12:09.740 --> 00:12:11.644 But we're also in the course of this

NOTE Confidence: 0.9413401

00:12:11.644 --> 00:12:13.975 trying to build and test new ways of

NOTE Confidence: 0.9413401

00:12:13.975 --> 00:12:15.750 doing this knowledge generation pipelines.

NOTE Confidence: 0.9413401

00:12:15.750 --> 00:12:17.577 If we've got large numbers of people

NOTE Confidence: 0.9413401

00:12:17.577 --> 00:12:19.057 with these conditions now we can

NOTE Confidence: 0.9413401

00:12:19.057 --> 00:12:20.569 quickly enroll them in trials that we

NOTE Confidence: 0.9413401

00:12:20.618 --> 00:12:22.148 can quickly get them into studies.

NOTE Confidence: 0.9413401

00:12:22.150 --> 00:12:25.323 They're they're eager and and it's

NOTE Confidence: 0.9413401

00:12:25.323 --> 00:12:27.588 a readiness cohort that's in.

NOTE Confidence: 0.9413401

00:12:27.590 --> 00:12:29.438 But it's important for us again

NOTE Confidence: 0.9413401

00:12:29.438 --> 00:12:30.670 not to be exploitive,

NOTE Confidence: 0.9413401

00:12:30.670 --> 00:12:32.280 but to be participatory in

NOTE Confidence: 0.9413401

00:12:32.280 --> 00:12:34.221 partnering in ways that they feel

NOTE Confidence: 0.9413401

00:12:34.221 --> 00:12:36.069 that they want to stay with us,

NOTE Confidence: 0.9413401

00:12:36.070 --> 00:12:37.186 they can leave at any time.

NOTE Confidence: 0.9413401

00:12:37.190 --> 00:12:39.377 And then how do we use all the digital

NOTE Confidence: 0.9413401

00:12:39.377 --> 00:12:41.267 strategies to move the data and collect it?

NOTE Confidence: 0.9413401

00:12:41.270 --> 00:12:43.988 Another thing that we've done together,

NOTE Confidence: 0.9413401

00:12:43.990 --> 00:12:46.390 which has been a remarkable

NOTE Confidence: 0.9413401

00:12:46.390 --> 00:12:47.830 experience for me,

NOTE Confidence: 0.9413401

00:12:47.830 --> 00:12:50.574 is actually give people in our studies

NOTE Confidence: 0.9413401

00:12:50.574 --> 00:12:53.110 direct access to the investigators.

NOTE Confidence: 0.9413401

00:12:53.110 --> 00:12:54.710 So this is like something

NOTE Confidence: 0.9413401

00:12:54.710 --> 00:12:55.670 people generally thought,

NOTE Confidence: 0.9413401

00:12:55.670 --> 00:12:55.795 well,

NOTE Confidence: 0.9413401

00:12:55.795 --> 00:12:56.545 that seems like a bad idea.

NOTE Confidence: 0.9413401

00:12:56.550 --> 00:12:57.595 Aren't you going to contaminate

NOTE Confidence: 0.9413401

00:12:57.595 --> 00:12:58.990 the study or what does this do?

NOTE Confidence: 0.9413401

00:12:58.990 --> 00:13:01.240 Well it turns out if you have a town

NOTE Confidence: 0.9413401

00:13:01.240 --> 00:13:03.078 hall where you invite people who

NOTE Confidence: 0.9413401

00:13:03.078 --> 00:13:05.366 are in your studies to come and and

NOTE Confidence: 0.9413401

00:13:05.366 --> 00:13:07.190 you just pick a time lots of people

NOTE Confidence: 0.93745863

00:13:07.245 --> 00:13:08.740 show up. We've had you know at

NOTE Confidence: 0.93745863

00:13:08.740 --> 00:13:10.470 a random time we pick because we

NOTE Confidence: 0.93745863

00:13:10.470 --> 00:13:11.995 we can't schedule with everyone.

NOTE Confidence: 0.93745863

00:13:12.000 --> 00:13:14.736 We have 2000 people in the listen study

NOTE Confidence: 0.93745863

00:13:14.736 --> 00:13:18.125 now and you know 10% of people show

NOTE Confidence: 0.93745863

00:13:18.125 --> 00:13:21.984 up and they we we're still working

NOTE Confidence: 0.93745863

00:13:21.984 --> 00:13:24.140 on this how to optimize this they

NOTE Confidence: 0.93745863

00:13:24.140 --> 00:13:26.072 love Akiko that there's no surprise

NOTE Confidence: 0.93745863

00:13:26.072 --> 00:13:27.968 it's like and it's it's thrilling

NOTE Confidence: 0.93745863

00:13:27.968 --> 00:13:29.840 for them to have an opportunity.

NOTE Confidence: 0.93745863

00:13:29.840 --> 00:13:31.916 We we're we're careful about things

NOTE Confidence: 0.93745863

00:13:31.916 --> 00:13:35.127 we can and can't say what we can and

NOTE Confidence: 0.93745863

00:13:35.127 --> 00:13:37.160 can't disclose about what's going on.

NOTE Confidence: 0.93745863

00:13:37.160 --> 00:13:38.642 But we're we're telling them as

NOTE Confidence: 0.93745863

00:13:38.642 --> 00:13:40.610 much as we can and and we're trying

NOTE Confidence: 0.93745863

00:13:40.610 --> 00:13:42.080 to listen to their suggestions and
NOTE Confidence: 0.93745863

00:13:42.127 --> 00:13:43.567 what are their concerns and and
NOTE Confidence: 0.93745863

00:13:43.567 --> 00:13:45.129 what are the questions and how can
NOTE Confidence: 0.93745863

00:13:45.129 --> 00:13:46.227 we be a resource to them.
NOTE Confidence: 0.93745863

00:13:46.230 --> 00:13:48.255 But it it ties us to them in ways
NOTE Confidence: 0.93745863

00:13:48.255 --> 00:13:50.388 that has never been possible before.
NOTE Confidence: 0.93745863

00:13:50.390 --> 00:13:52.833 And I've found one of the best
NOTE Confidence: 0.93745863

00:13:52.833 --> 00:13:55.240 experiences I've had my entire academic
NOTE Confidence: 0.93745863

00:13:55.240 --> 00:13:58.070 career is to attend these these.
NOTE Confidence: 0.93745863

00:13:58.070 --> 00:14:00.566 And you know there was one where Akiko
NOTE Confidence: 0.93745863

00:14:00.566 --> 00:14:02.674 really presented the entire time and the
NOTE Confidence: 0.93745863

00:14:02.674 --> 00:14:04.778 number of hearts and claps at the end.
NOTE Confidence: 0.93745863

00:14:04.780 --> 00:14:05.564 You know,
NOTE Confidence: 0.93745863

00:14:05.564 --> 00:14:07.649 I found it so touching really
NOTE Confidence: 0.93745863

00:14:07.649 --> 00:14:09.770 honestly that we were in the same
NOTE Confidence: 0.93745863

00:14:09.833 --> 00:14:11.912 virtual room with people who are in

NOTE Confidence: 0.93745863

00:14:11.912 --> 00:14:14.268 our studies and we were also able

NOTE Confidence: 0.93745863

00:14:14.268 --> 00:14:16.018 to express directly our appreciation

NOTE Confidence: 0.93745863

00:14:16.020 --> 00:14:17.820 for their involvement in the studies.

NOTE Confidence: 0.93745863

00:14:17.820 --> 00:14:18.828 It it was,

NOTE Confidence: 0.93745863

00:14:18.828 --> 00:14:21.180 I think it's an innovation that way.

NOTE Confidence: 0.93745863

00:14:21.180 --> 00:14:22.545 So some findings,

NOTE Confidence: 0.93745863

00:14:22.545 --> 00:14:25.050 this isn't meant to be anything

NOTE Confidence: 0.93745863

00:14:25.050 --> 00:14:26.660 more than just giving you a sense.

NOTE Confidence: 0.93745863

00:14:26.660 --> 00:14:29.285 So one thing is we use validated assays, so.

NOTE Confidence: 0.93745863

00:14:29.285 --> 00:14:31.355 So we're trying to triangulate different

NOTE Confidence: 0.93745863

00:14:31.355 --> 00:14:32.474 information, clinical information,

NOTE Confidence: 0.93745863

00:14:32.474 --> 00:14:33.248 testing information.

NOTE Confidence: 0.93745863

00:14:33.248 --> 00:14:35.570 Ultimately we're we're going to link

NOTE Confidence: 0.93745863

00:14:35.621 --> 00:14:37.609 to wearables so we can get information

NOTE Confidence: 0.93745863

00:14:37.609 --> 00:14:39.690 coming from sensors that people are wearing.

NOTE Confidence: 0.93745863

00:14:39.690 --> 00:14:41.882 So a lot of real world information but
NOTE Confidence: 0.93745863

00:14:41.882 --> 00:14:43.888 also patient reported outcome measures.
NOTE Confidence: 0.93745863

00:14:43.890 --> 00:14:45.246 So for people in the lab,
NOTE Confidence: 0.93745863

00:14:45.250 --> 00:14:46.250 you know you're thinking about
NOTE Confidence: 0.93745863

00:14:46.250 --> 00:14:47.050 assays all the time.
NOTE Confidence: 0.93745863

00:14:47.050 --> 00:14:48.529 They've got different
NOTE Confidence: 0.93745863

00:14:48.529 --> 00:14:50.008 characteristics and properties.
NOTE Confidence: 0.93745863

00:14:50.010 --> 00:14:51.246 You want them to be reproducible,
NOTE Confidence: 0.93745863

00:14:51.250 --> 00:14:52.994 you want them to be reflective of the
NOTE Confidence: 0.93745863

00:14:52.994 --> 00:14:54.810 whatever it is you think you're measuring.
NOTE Confidence: 0.93745863

00:14:54.810 --> 00:14:57.010 The analytic validity is important
NOTE Confidence: 0.93745863

00:14:57.010 --> 00:14:58.956 and you know in the in clinical
NOTE Confidence: 0.93745863

00:14:58.956 --> 00:15:00.953 research there are tools that are
NOTE Confidence: 0.93745863

00:15:00.953 --> 00:15:02.421 about patients reporting their
NOTE Confidence: 0.93745863

00:15:02.421 --> 00:15:04.253 experience that have undergone quite
NOTE Confidence: 0.93745863

00:15:04.253 --> 00:15:06.257 a lot of testing and validation.

NOTE Confidence: 0.93745863

00:15:06.260 --> 00:15:07.472 Their psychometric properties are

NOTE Confidence: 0.93745863

00:15:07.472 --> 00:15:09.517 quite strong that we think we can

NOTE Confidence: 0.93745863

00:15:09.517 --> 00:15:11.119 rely on them and we have a lot of

NOTE Confidence: 0.93745863

00:15:11.167 --> 00:15:13.135 reference populations to compare them to.

NOTE Confidence: 0.93745863

00:15:13.140 --> 00:15:14.918 This is just an example and you

NOTE Confidence: 0.93745863

00:15:14.918 --> 00:15:16.699 look at these and go like what?

NOTE Confidence: 0.93745863

00:15:16.700 --> 00:15:17.980 What's so special about this?

NOTE Confidence: 0.93745863

00:15:17.980 --> 00:15:19.836 In the past seven days I felt worthless

NOTE Confidence: 0.93745863

00:15:19.836 --> 00:15:20.654 about helpless, felt depressed.

NOTE Confidence: 0.93745863

00:15:20.654 --> 00:15:21.964 And you can put never, rarely,

NOTE Confidence: 0.93745863

00:15:21.964 --> 00:15:23.236 sometimes, often, always.

NOTE Confidence: 0.93745863

00:15:23.236 --> 00:15:26.741 But but these have been through so many

NOTE Confidence: 0.93745863

00:15:26.741 --> 00:15:28.976 rounds of testing for understandability,

NOTE Confidence: 0.93745863

00:15:28.980 --> 00:15:30.234 context, validity,

NOTE Confidence: 0.93745863

00:15:30.234 --> 00:15:33.576 a whole range of criteria to

NOTE Confidence: 0.93745863

00:15:33.576 --> 00:15:34.606 be able to determine that,
NOTE Confidence: 0.93745863

00:15:34.610 --> 00:15:35.490 yeah, we can use them.
NOTE Confidence: 0.93745863

00:15:35.490 --> 00:15:37.595 They produce results that that
NOTE Confidence: 0.93745863

00:15:37.595 --> 00:15:39.279 can compare across populations
NOTE Confidence: 0.93745863

00:15:39.279 --> 00:15:40.928 and have some meaning.
NOTE Confidence: 0.93745863

00:15:40.930 --> 00:15:42.498 And so you know,
NOTE Confidence: 0.93745863

00:15:42.498 --> 00:15:44.750 we that for example the Promise
NOTE Confidence: 0.93745863

00:15:44.750 --> 00:15:46.610 29 which we're using in
NOTE Confidence: 0.93617696

00:15:46.682 --> 00:15:49.314 the Paxil C trial can be put translated
NOTE Confidence: 0.93617696

00:15:49.314 --> 00:15:51.689 into a scale from zero to 100.
NOTE Confidence: 0.93617696

00:15:51.690 --> 00:15:53.700 And for example, the promise cut
NOTE Confidence: 0.93617696

00:15:53.700 --> 00:15:55.770 points of that can correlate,
NOTE Confidence: 0.93617696

00:15:55.770 --> 00:15:57.465 have some interpretability with regard
NOTE Confidence: 0.93617696

00:15:57.465 --> 00:15:59.720 to what the person's overall health is.
NOTE Confidence: 0.93617696

00:15:59.720 --> 00:16:01.785 But because there are a lot of
NOTE Confidence: 0.93617696

00:16:01.785 --> 00:16:03.405 specific questions you can dig

NOTE Confidence: 0.93617696

00:16:03.405 --> 00:16:05.080 into what's driving their results.

NOTE Confidence: 0.93617696

00:16:05.080 --> 00:16:07.328 What is it that led to the findings

NOTE Confidence: 0.93617696

00:16:07.328 --> 00:16:09.400 that that we have And it gives a,

NOTE Confidence: 0.93617696

00:16:09.400 --> 00:16:11.890 we can, we can do computational

NOTE Confidence: 0.93617696

00:16:11.890 --> 00:16:13.960 phenotyping on their clinical data.

NOTE Confidence: 0.93617696

00:16:13.960 --> 00:16:15.373 But we can also when we have a lot

NOTE Confidence: 0.93617696

00:16:15.373 --> 00:16:16.760 of data about their experience,

NOTE Confidence: 0.93617696

00:16:16.760 --> 00:16:20.640 their symptoms their their

NOTE Confidence: 0.93617696

00:16:20.640 --> 00:16:22.240 how their lives are led,

NOTE Confidence: 0.93617696

00:16:22.240 --> 00:16:23.885 then it also gives us a chance

NOTE Confidence: 0.93617696

00:16:23.885 --> 00:16:26.107 to to to phenotype based on that.

NOTE Confidence: 0.93617696

00:16:26.110 --> 00:16:27.550 And it can be as simple as this.

NOTE Confidence: 0.93617696

00:16:27.550 --> 00:16:30.707 I mean this is the EQ5D visual analog

NOTE Confidence: 0.93617696

00:16:30.707 --> 00:16:33.950 scale where again you think this is gosh,

NOTE Confidence: 0.93617696

00:16:33.950 --> 00:16:35.270 this is so simple why you know some

NOTE Confidence: 0.93617696

00:16:35.270 --> 00:16:36.826 of you must have done this overnight.
NOTE Confidence: 0.93617696

00:16:36.830 --> 00:16:39.125 But but you know this is a tool that
NOTE Confidence: 0.93617696

00:16:39.125 --> 00:16:41.736 has been tested in in millions of
NOTE Confidence: 0.93617696

00:16:41.736 --> 00:16:43.908 individuals in different kinds of
NOTE Confidence: 0.93617696

00:16:43.908 --> 00:16:45.630 populations for interpretability,
NOTE Confidence: 0.93617696

00:16:45.630 --> 00:16:48.024 meaning and so forth about just saying,
NOTE Confidence: 0.93617696

00:16:48.030 --> 00:16:50.190 you know we would like you to indicate
NOTE Confidence: 0.93617696

00:16:50.190 --> 00:16:52.381 on this scale how good or bad is
NOTE Confidence: 0.93617696

00:16:52.381 --> 00:16:54.269 your health today in your opinion.
NOTE Confidence: 0.93617696

00:16:54.270 --> 00:16:56.414 And you you say like the thing about
NOTE Confidence: 0.93617696

00:16:56.414 --> 00:16:59.120 it is when people report how they feel,
NOTE Confidence: 0.93617696

00:16:59.120 --> 00:17:00.924 they're intrinsically correct because
NOTE Confidence: 0.93617696

00:17:00.924 --> 00:17:02.728 that's that's their impression
NOTE Confidence: 0.93617696

00:17:02.728 --> 00:17:04.840 of how they feel that day.
NOTE Confidence: 0.93617696

00:17:04.840 --> 00:17:06.824 And of course lots of things can affect
NOTE Confidence: 0.93617696

00:17:06.824 --> 00:17:09.586 it but we're trying to get some sense

NOTE Confidence: 0.93617696

00:17:09.586 --> 00:17:12.424 of a draw a line you know across this

NOTE Confidence: 0.93617696

00:17:12.424 --> 00:17:14.200 scale that represents where you are.

NOTE Confidence: 0.93617696

00:17:14.200 --> 00:17:16.240 The zero is the worst imaginable

NOTE Confidence: 0.93617696

00:17:16.240 --> 00:17:18.373 health state and 100 is the

NOTE Confidence: 0.93617696

00:17:18.373 --> 00:17:19.780 best imaginable health state.

NOTE Confidence: 0.93617696

00:17:19.780 --> 00:17:22.230 And if you look like in surveys

NOTE Confidence: 0.93617696

00:17:22.230 --> 00:17:24.480 of the United States adults,

NOTE Confidence: 0.93617696

00:17:24.480 --> 00:17:26.442 of course it varies a little

NOTE Confidence: 0.93617696

00:17:26.442 --> 00:17:29.000 bit by age you may have this is

NOTE Confidence: 0.93617696

00:17:29.000 --> 00:17:30.120 showing you different scales,

NOTE Confidence: 0.93617696

00:17:30.120 --> 00:17:34.812 but the the the black line is the

NOTE Confidence: 0.93617696

00:17:34.812 --> 00:17:37.402 EQ online vast that would be like

NOTE Confidence: 0.93617696

00:17:37.402 --> 00:17:39.240 equivalent to what we're doing.

NOTE Confidence: 0.93617696

00:17:39.240 --> 00:17:40.576 And you can see that you know in

NOTE Confidence: 0.93617696

00:17:40.576 --> 00:17:41.717 the younger group it's about 80,

NOTE Confidence: 0.93617696

00:17:41.720 --> 00:17:43.400 it can dip down that there are
NOTE Confidence: 0.93617696
00:17:43.400 --> 00:17:43.880 different ones.
NOTE Confidence: 0.93617696
00:17:43.880 --> 00:17:46.010 Sometimes it suggests for the United
NOTE Confidence: 0.93617696
00:17:46.010 --> 00:17:47.754 States population maybe around 80
NOTE Confidence: 0.93617696
00:17:47.754 --> 00:17:49.886 overall and it can correlate to how
NOTE Confidence: 0.93617696
00:17:49.886 --> 00:17:51.592 people say excellent, very good,
NOTE Confidence: 0.93617696
00:17:51.592 --> 00:17:53.136 good, fair or poor.
NOTE Confidence: 0.93617696
00:17:53.140 --> 00:17:56.065 But you can see you're like 70 to 80
NOTE Confidence: 0.93617696
00:17:56.065 --> 00:17:58.060 EQ vast for for the general population,
NOTE Confidence: 0.93617696
00:17:58.060 --> 00:17:59.980 which by the way that's not
NOTE Confidence: 0.93617696
00:17:59.980 --> 00:18:00.940 the healthy population.
NOTE Confidence: 0.93617696
00:18:00.940 --> 00:18:03.460 That's just the general population all
NOTE Confidence: 0.93617696
00:18:03.460 --> 00:18:05.140 things considered including people
NOTE Confidence: 0.93617696
00:18:05.207 --> 00:18:08.020 who who have health issues going on.
NOTE Confidence: 0.93617696
00:18:08.020 --> 00:18:10.736 And then if you look at us,
NOTE Confidence: 0.93617696
00:18:10.740 --> 00:18:12.553 the people who are in the listen

NOTE Confidence: 0.93617696
00:18:12.553 --> 00:18:14.569 study who are reporting long COVID,
NOTE Confidence: 0.93617696
00:18:14.570 --> 00:18:15.594 these are the distributions.
NOTE Confidence: 0.93617696
00:18:15.594 --> 00:18:18.005 So you can see in the far left this
NOTE Confidence: 0.93617696
00:18:18.005 --> 00:18:19.637 is just the overall distribution with
NOTE Confidence: 0.93617696
00:18:19.637 --> 00:18:21.692 a line sort of going down at 50 and
NOTE Confidence: 0.93617696
00:18:21.692 --> 00:18:23.628 and and maybe if we had more people
NOTE Confidence: 0.93617696
00:18:23.628 --> 00:18:25.970 that would be fully a normal distribution.
NOTE Confidence: 0.93617696
00:18:25.970 --> 00:18:27.330 It's got a little bit of this notch.
NOTE Confidence: 0.9317699
00:18:27.330 --> 00:18:28.920 I think it you know maybe
NOTE Confidence: 0.9317699
00:18:28.920 --> 00:18:30.210 more people fills it in.
NOTE Confidence: 0.9317699
00:18:30.210 --> 00:18:32.286 I think it's probably normally distributed.
NOTE Confidence: 0.9317699
00:18:32.290 --> 00:18:34.495 But you know, we're we're down 50
NOTE Confidence: 0.9317699
00:18:34.495 --> 00:18:37.170 or less and a lot of people much
NOTE Confidence: 0.9317699
00:18:37.170 --> 00:18:39.535 lower that that's very poor health.
NOTE Confidence: 0.9317699
00:18:39.535 --> 00:18:42.265 It's it's fair or poor health.
NOTE Confidence: 0.9317699

00:18:42.270 --> 00:18:42.710 And we by the way,
NOTE Confidence: 0.9317699

00:18:42.710 --> 00:18:43.830 just compared men and women,
NOTE Confidence: 0.9317699

00:18:43.830 --> 00:18:45.030 young and old.
NOTE Confidence: 0.9317699

00:18:45.030 --> 00:18:46.630 We looked at different,
NOTE Confidence: 0.9317699

00:18:46.630 --> 00:18:51.388 different waves of the of the virus.
NOTE Confidence: 0.9317699

00:18:51.390 --> 00:18:53.582 We were able to look from people's reports
NOTE Confidence: 0.9317699

00:18:53.582 --> 00:18:56.305 of 25 most prevalent symptoms in our group.
NOTE Confidence: 0.9317699

00:18:56.310 --> 00:18:57.642 Others have reported this.
NOTE Confidence: 0.9317699

00:18:57.642 --> 00:18:59.702 This isn't necessarily a breakthrough stuff,
NOTE Confidence: 0.9317699

00:18:59.702 --> 00:19:02.084 but I'm just giving you an idea
NOTE Confidence: 0.9317699

00:19:02.084 --> 00:19:04.150 of the kind of data we have 99
NOTE Confidence: 0.9317699

00:19:04.150 --> 00:19:05.910 symptoms that are collected.
NOTE Confidence: 0.9317699

00:19:05.910 --> 00:19:07.110 These are the most common ones,
NOTE Confidence: 0.9317699

00:19:07.110 --> 00:19:09.637 but we're able to in pretty clear
NOTE Confidence: 0.9317699

00:19:09.637 --> 00:19:11.128 detail characterized these people's
NOTE Confidence: 0.9317699

00:19:11.128 --> 00:19:13.186 experience and begin to look at

NOTE Confidence: 0.9317699
00:19:13.186 --> 00:19:15.440 not just calling it long COVID
NOTE Confidence: 0.9317699
00:19:15.440 --> 00:19:16.988 and everybody's got everything,
NOTE Confidence: 0.9317699
00:19:16.990 --> 00:19:18.874 but that actually there are some
NOTE Confidence: 0.9317699
00:19:18.874 --> 00:19:20.467 specific clusters within this where
NOTE Confidence: 0.9317699
00:19:20.467 --> 00:19:22.420 there are not only do we think
NOTE Confidence: 0.9317699
00:19:22.420 --> 00:19:23.590 they're underlying mechanisms,
NOTE Confidence: 0.9317699
00:19:23.590 --> 00:19:24.750 long COVID may be different,
NOTE Confidence: 0.9317699
00:19:24.750 --> 00:19:26.784 but it's it's being reflected in
NOTE Confidence: 0.9317699
00:19:26.784 --> 00:19:28.589 different ways that that people
NOTE Confidence: 0.9317699
00:19:28.589 --> 00:19:29.750 are manifesting it.
NOTE Confidence: 0.9317699
00:19:29.750 --> 00:19:31.070 They're not all the same,
NOTE Confidence: 0.9317699
00:19:31.070 --> 00:19:31.598 but again,
NOTE Confidence: 0.9317699
00:19:31.598 --> 00:19:32.918 if you're practitioner right now
NOTE Confidence: 0.9317699
00:19:32.918 --> 00:19:34.548 you you you're just keep seeing
NOTE Confidence: 0.9317699
00:19:34.548 --> 00:19:35.858 people with lots of symptoms.
NOTE Confidence: 0.9317699

00:19:35.860 --> 00:19:37.806 We need tools that are helping to
NOTE Confidence: 0.9317699

00:19:37.806 --> 00:19:40.030 take an inventory of symptoms and then
NOTE Confidence: 0.9317699

00:19:40.030 --> 00:19:41.695 to help in multidimensional space,
NOTE Confidence: 0.9317699

00:19:41.700 --> 00:19:43.820 sort of locate you who's who are your
NOTE Confidence: 0.9317699

00:19:43.820 --> 00:19:45.089 neighbors versus some other neighbors
NOTE Confidence: 0.9317699

00:19:45.089 --> 00:19:47.049 who are you like We got to start
NOTE Confidence: 0.9317699

00:19:47.049 --> 00:19:48.813 building a taxonomy that helps us
NOTE Confidence: 0.9317699

00:19:48.813 --> 00:19:50.930 understand this with greater nuance
NOTE Confidence: 0.9317699

00:19:50.930 --> 00:19:54.620 than just calling everyone long COVID.
NOTE Confidence: 0.9317699

00:19:54.620 --> 00:19:56.318 This is the frequency of treatments
NOTE Confidence: 0.9317699

00:19:56.318 --> 00:19:58.140 tried among long COVID participants.
NOTE Confidence: 0.9317699

00:19:58.140 --> 00:19:59.956 And by the way it goes down to,
NOTE Confidence: 0.9317699

00:19:59.960 --> 00:20:01.240 I mean these are categories.
NOTE Confidence: 0.9317699

00:20:01.240 --> 00:20:02.698 But when you actually within each
NOTE Confidence: 0.9317699

00:20:02.698 --> 00:20:03.955 of these categories and these
NOTE Confidence: 0.9317699

00:20:03.955 --> 00:20:05.365 people are trying like I think

NOTE Confidence: 0.9317699

00:20:05.365 --> 00:20:06.849 the average number of people have

NOTE Confidence: 0.9317699

00:20:06.849 --> 00:20:08.074 tried like 88 different things.

NOTE Confidence: 0.9317699

00:20:08.080 --> 00:20:09.008 You know,

NOTE Confidence: 0.9317699

00:20:09.008 --> 00:20:09.936 it's like,

NOTE Confidence: 0.9317699

00:20:09.936 --> 00:20:12.020 so it's just a remarkable amount

NOTE Confidence: 0.9317699

00:20:12.020 --> 00:20:14.704 of and of 1 trying things without

NOTE Confidence: 0.9317699

00:20:14.704 --> 00:20:17.174 really any systematic collection of

NOTE Confidence: 0.9317699

00:20:17.174 --> 00:20:19.399 information about what it brings.

NOTE Confidence: 0.9317699

00:20:19.400 --> 00:20:22.000 But it shows you the level of desperation

NOTE Confidence: 0.9317699

00:20:22.000 --> 00:20:24.676 that exists within this this group,

NOTE Confidence: 0.9317699

00:20:24.680 --> 00:20:26.730 that that they're trying everything.

NOTE Confidence: 0.9317699

00:20:26.730 --> 00:20:27.426 Because they're the,

NOTE Confidence: 0.9317699

00:20:27.426 --> 00:20:27.890 you know,

NOTE Confidence: 0.9317699

00:20:27.890 --> 00:20:30.074 they they they feel that their

NOTE Confidence: 0.9317699

00:20:30.074 --> 00:20:32.610 current life is untenable and are so

NOTE Confidence: 0.9317699

00:20:32.610 --> 00:20:34.602 desperate to find relief that that

NOTE Confidence: 0.9317699

00:20:34.602 --> 00:20:36.258 they're willing to go after everything

NOTE Confidence: 0.9317699

00:20:36.258 --> 00:20:37.807 and anything comes up on Facebook.

NOTE Confidence: 0.9317699

00:20:37.810 --> 00:20:39.730 And and I've seen this stuff

NOTE Confidence: 0.9317699

00:20:39.730 --> 00:20:41.010 like gambling block stuff.

NOTE Confidence: 0.9317699

00:20:41.010 --> 00:20:41.770 I haven't don't know what

NOTE Confidence: 0.9317699

00:20:41.770 --> 00:20:42.530 to make of it either.

NOTE Confidence: 0.9317699

00:20:42.530 --> 00:20:43.646 They had on the national news,

NOTE Confidence: 0.9317699

00:20:43.650 --> 00:20:45.006 one person went to Cleveland Clinic,

NOTE Confidence: 0.9317699

00:20:45.010 --> 00:20:46.210 had it done and then the

NOTE Confidence: 0.9317699

00:20:46.210 --> 00:20:47.010 patient goes like it,

NOTE Confidence: 0.9317699

00:20:47.010 --> 00:20:47.392 you know,

NOTE Confidence: 0.9317699

00:20:47.392 --> 00:20:48.729 it's like the people had water thrown

NOTE Confidence: 0.9317699

00:20:48.729 --> 00:20:50.223 on them and then they would stand

NOTE Confidence: 0.9317699

00:20:50.223 --> 00:20:51.488 up from their wheelchair in the in,

NOTE Confidence: 0.9317699

00:20:51.490 --> 00:20:53.170 you know, and they can walk again.

NOTE Confidence: 0.9317699

00:20:53.170 --> 00:20:56.061 You know it's like I don't know

NOTE Confidence: 0.9317699

00:20:56.061 --> 00:20:57.720 like maybe the water is magic.

NOTE Confidence: 0.9317699

00:20:57.720 --> 00:20:58.809 I don't know.

NOTE Confidence: 0.9317699

00:20:58.809 --> 00:21:02.728 But you know it's like I I I think we

NOTE Confidence: 0.9317699

00:21:02.728 --> 00:21:05.717 at in the Academy have an obligation

NOTE Confidence: 0.92955905

00:21:05.720 --> 00:21:07.610 to be able to help people

NOTE Confidence: 0.92955905

00:21:07.610 --> 00:21:09.178 understand what what happens and

NOTE Confidence: 0.92955905

00:21:09.178 --> 00:21:10.748 and what can make people better.

NOTE Confidence: 0.92955905

00:21:10.748 --> 00:21:12.806 I'm I'm happy if that person smelled

NOTE Confidence: 0.92955905

00:21:12.806 --> 00:21:15.160 the coffee but I do before I begin

NOTE Confidence: 0.92955905

00:21:15.160 --> 00:21:17.160 to start doing that on hundreds of

NOTE Confidence: 0.92955905

00:21:17.160 --> 00:21:19.200 thousands of people would like to

NOTE Confidence: 0.92955905

00:21:19.200 --> 00:21:21.352 have some basis to to to believe

NOTE Confidence: 0.92955905

00:21:21.352 --> 00:21:22.865 that it's it's actually working.

NOTE Confidence: 0.92955905

00:21:22.865 --> 00:21:25.811 So we you know we we we're looking at

NOTE Confidence: 0.92955905

00:21:25.811 --> 00:21:28.123 these in different ways this is symptom
NOTE Confidence: 0.92955905

00:21:28.123 --> 00:21:29.821 severity it's a different thing which
NOTE Confidence: 0.92955905

00:21:29.821 --> 00:21:32.484 is on in this case 100 unlike the vast
NOTE Confidence: 0.92955905

00:21:32.484 --> 00:21:35.200 score is like my symptoms are unbearable.
NOTE Confidence: 0.92955905

00:21:35.200 --> 00:21:37.264 So we're asking people on the worst days
NOTE Confidence: 0.92955905

00:21:37.264 --> 00:21:39.784 how bad are your symptoms and we're
NOTE Confidence: 0.92955905

00:21:39.784 --> 00:21:43.396 up around 80 or even higher for some people.
NOTE Confidence: 0.92955905

00:21:43.400 --> 00:21:44.639 I mean, people are saying not only,
NOTE Confidence: 0.92955905

00:21:44.640 --> 00:21:47.200 I mean these symptoms are coming and going,
NOTE Confidence: 0.92955905

00:21:47.200 --> 00:21:48.747 but so that's the other thing When
NOTE Confidence: 0.92955905

00:21:48.747 --> 00:21:50.208 you captured in any given moment,
NOTE Confidence: 0.92955905

00:21:50.210 --> 00:21:52.130 they could be feeling better in that moment.
NOTE Confidence: 0.92955905

00:21:52.130 --> 00:21:54.380 But if you ask them overall in the last
NOTE Confidence: 0.92955905

00:21:54.380 --> 00:21:56.724 two weeks how how bad is the worst day?
NOTE Confidence: 0.92955905

00:21:56.730 --> 00:21:58.930 They're saying it's horrific, right?
NOTE Confidence: 0.92955905

00:21:58.930 --> 00:21:59.968 So we have to be thinking,

NOTE Confidence: 0.92955905

00:21:59.970 --> 00:22:02.077 how do we capture this because it's

NOTE Confidence: 0.92955905

00:22:02.077 --> 00:22:03.449 about capturing periods of time.

NOTE Confidence: 0.92955905

00:22:03.450 --> 00:22:04.922 It's also about understanding

NOTE Confidence: 0.92955905

00:22:04.922 --> 00:22:06.762 how things track over time.

NOTE Confidence: 0.92955905

00:22:06.770 --> 00:22:08.822 We also ask a whole bunch

NOTE Confidence: 0.92955905

00:22:08.822 --> 00:22:09.848 of psychosocial questions,

NOTE Confidence: 0.92955905

00:22:09.850 --> 00:22:11.768 but this is just some for example,

NOTE Confidence: 0.92955905

00:22:11.770 --> 00:22:15.890 how many felt fearful and a lot

NOTE Confidence: 0.92955905

00:22:15.890 --> 00:22:19.740 of people feel that way and 16%

NOTE Confidence: 0.92955905

00:22:19.740 --> 00:22:22.700 that feel often feel anxious.

NOTE Confidence: 0.92955905

00:22:22.700 --> 00:22:24.226 A lot of people feel anxious, feel worried.

NOTE Confidence: 0.92955905

00:22:24.226 --> 00:22:25.927 I mean these people are in

NOTE Confidence: 0.92955905

00:22:25.927 --> 00:22:27.419 terrible shape with regard to that.

NOTE Confidence: 0.92955905

00:22:27.420 --> 00:22:29.140 We asked about transportation challenges,

NOTE Confidence: 0.92955905

00:22:29.140 --> 00:22:31.018 we asked about insecurity about food,

NOTE Confidence: 0.92955905

00:22:31.020 --> 00:22:32.820 we asked about insecurity about housing.
NOTE Confidence: 0.92955905

00:22:32.820 --> 00:22:35.108 I mean these people in a very tenuous
NOTE Confidence: 0.92955905

00:22:35.108 --> 00:22:36.979 position with regard to their lives.
NOTE Confidence: 0.92955905

00:22:36.980 --> 00:22:38.924 Their incomes have often been been
NOTE Confidence: 0.92955905

00:22:38.924 --> 00:22:40.798 cut off because they're unable to
NOTE Confidence: 0.92955905

00:22:40.798 --> 00:22:42.210 work and they're they don't have
NOTE Confidence: 0.92955905

00:22:42.210 --> 00:22:44.020 a a big safety net behind them.
NOTE Confidence: 0.92955905

00:22:44.020 --> 00:22:46.396 And then a lot of them are socially
NOTE Confidence: 0.92955905

00:22:46.396 --> 00:22:48.262 isolated and depressed and these
NOTE Confidence: 0.92955905

00:22:48.262 --> 00:22:49.566 weren't preexisting conditions but
NOTE Confidence: 0.92955905

00:22:49.566 --> 00:22:51.835 these have come up as a result
NOTE Confidence: 0.92955905

00:22:51.835 --> 00:22:53.047 of what they're experiencing.
NOTE Confidence: 0.92955905

00:22:53.050 --> 00:22:55.290 We also are looking at people we're calling,
NOTE Confidence: 0.92955905

00:22:55.290 --> 00:22:56.202 I'm calling so far,
NOTE Confidence: 0.92955905

00:22:56.202 --> 00:22:58.270 I don't know if I'm still keep going
NOTE Confidence: 0.92955905

00:22:58.270 --> 00:23:00.370 on this yet post vaccination syndrome.

NOTE Confidence: 0.92955905

00:23:00.370 --> 00:23:01.201 But you know,

NOTE Confidence: 0.92955905

00:23:01.201 --> 00:23:03.140 the idea that there are some people

NOTE Confidence: 0.92955905

00:23:03.203 --> 00:23:05.626 who started developing a bunch of

NOTE Confidence: 0.92955905

00:23:05.626 --> 00:23:08.956 symptoms in in a period that was very

NOTE Confidence: 0.92955905

00:23:08.956 --> 00:23:11.018 short after they got their vaccination,

NOTE Confidence: 0.92955905

00:23:11.018 --> 00:23:12.959 maybe within six days after they got

NOTE Confidence: 0.92955905

00:23:12.959 --> 00:23:14.744 their vaccination that's had a long tail.

NOTE Confidence: 0.92955905

00:23:14.750 --> 00:23:16.350 Now people have said they've got a lot,

NOTE Confidence: 0.92955905

00:23:16.350 --> 00:23:17.430 they sounds like long COVID.

NOTE Confidence: 0.92955905

00:23:17.430 --> 00:23:18.006 It's true.

NOTE Confidence: 0.92955905

00:23:18.006 --> 00:23:19.734 They have a large number of

NOTE Confidence: 0.92955905

00:23:19.734 --> 00:23:20.310 different symptoms.

NOTE Confidence: 0.92955905

00:23:20.310 --> 00:23:22.990 But in some of the research we're doing,

NOTE Confidence: 0.92955905

00:23:22.990 --> 00:23:24.410 we can actually differentiate the

NOTE Confidence: 0.92955905

00:23:24.410 --> 00:23:26.058 pattern of the symptoms and people

NOTE Confidence: 0.92955905

00:23:26.058 --> 00:23:27.687 if I just give you a bunch of
NOTE Confidence: 0.92955905

00:23:27.740 --> 00:23:29.228 people with a bunch of symptoms,
NOTE Confidence: 0.92955905

00:23:29.230 --> 00:23:31.001 then I say predict which ones have
NOTE Confidence: 0.92955905

00:23:31.001 --> 00:23:32.589 long COVID and which ones have
NOTE Confidence: 0.92955905

00:23:32.590 --> 00:23:33.742 this post vaccination syndrome.
NOTE Confidence: 0.92955905

00:23:33.742 --> 00:23:35.715 When you look at it, you might say,
NOTE Confidence: 0.92955905

00:23:35.715 --> 00:23:35.890 well,
NOTE Confidence: 0.92955905

00:23:35.890 --> 00:23:36.940 let's just look like a bunch
NOTE Confidence: 0.9322333

00:23:36.976 --> 00:23:38.187 of people got a bunch of symptoms.
NOTE Confidence: 0.9322333

00:23:38.190 --> 00:23:39.870 But if you actually do,
NOTE Confidence: 0.9322333

00:23:39.870 --> 00:23:41.781 you know, if you look at it
NOTE Confidence: 0.9322333

00:23:41.781 --> 00:23:42.890 mathematically and prediction wise,
NOTE Confidence: 0.9322333

00:23:42.890 --> 00:23:44.570 you actually can predict which ones of
NOTE Confidence: 0.9322333

00:23:44.570 --> 00:23:46.290 them have post vaccination syndrome,
NOTE Confidence: 0.9322333

00:23:46.290 --> 00:23:47.690 which ones have long COVID,
NOTE Confidence: 0.9322333

00:23:47.690 --> 00:23:49.130 which I think gives some credence

NOTE Confidence: 0.9322333

00:23:49.130 --> 00:23:50.843 to the fact that these may

NOTE Confidence: 0.9322333

00:23:50.843 --> 00:23:52.167 have some overlapping features,

NOTE Confidence: 0.9322333

00:23:52.170 --> 00:23:53.242 but they're actually distinctive.

NOTE Confidence: 0.9322333

00:23:53.242 --> 00:23:55.296 And I think we're going to be able

NOTE Confidence: 0.9322333

00:23:55.296 --> 00:23:56.682 to show for the first time this,

NOTE Confidence: 0.9322333

00:23:56.690 --> 00:23:59.530 this distinctive nature of it.

NOTE Confidence: 0.9322333

00:23:59.530 --> 00:24:01.585 And Andrew Wangston doing some

NOTE Confidence: 0.9322333

00:24:01.585 --> 00:24:04.075 I think very great work kind of

NOTE Confidence: 0.9322333

00:24:04.075 --> 00:24:05.407 working with these individuals

NOTE Confidence: 0.9322333

00:24:05.407 --> 00:24:07.424 that again just like if if people

NOTE Confidence: 0.9322333

00:24:07.424 --> 00:24:09.130 with long COVID get dismissed,

NOTE Confidence: 0.9322333

00:24:09.130 --> 00:24:11.191 these people get dismissed doubly because

NOTE Confidence: 0.9322333

00:24:11.191 --> 00:24:12.697 they fall into the political maelstrom.

NOTE Confidence: 0.9322333

00:24:12.700 --> 00:24:14.268 And and nobody wants to talk about

NOTE Confidence: 0.9322333

00:24:14.268 --> 00:24:16.432 it and I think it can it can be true

NOTE Confidence: 0.9322333

00:24:16.432 --> 00:24:17.650 that the vaccines were a miracle
NOTE Confidence: 0.9322333

00:24:17.701 --> 00:24:18.973 and saved millions of lives and
NOTE Confidence: 0.9322333

00:24:18.973 --> 00:24:20.703 that there were a number of people
NOTE Confidence: 0.9322333

00:24:20.703 --> 00:24:21.815 who were adversely affected.
NOTE Confidence: 0.9322333

00:24:21.820 --> 00:24:24.052 Both things can be true and if we're
NOTE Confidence: 0.9322333

00:24:24.052 --> 00:24:25.618 truly scientists we're not going to
NOTE Confidence: 0.9322333

00:24:25.620 --> 00:24:28.253 to shy away from investigation of
NOTE Confidence: 0.9322333

00:24:28.253 --> 00:24:29.797 this even though we know that we may
NOTE Confidence: 0.9322333

00:24:29.797 --> 00:24:31.337 put ourselves in a position where
NOTE Confidence: 0.9322333

00:24:31.340 --> 00:24:33.128 what we talk about maybe weaponized
NOTE Confidence: 0.9322333

00:24:33.128 --> 00:24:35.229 by others who have agendas that are
NOTE Confidence: 0.9322333

00:24:35.229 --> 00:24:37.203 different than ours but we we have
NOTE Confidence: 0.9322333

00:24:37.261 --> 00:24:38.988 to keep pushing forward with but
NOTE Confidence: 0.9322333

00:24:38.988 --> 00:24:40.234 what we think is the right thing
NOTE Confidence: 0.9322333

00:24:40.234 --> 00:24:41.829 to do and and and try to do this
NOTE Confidence: 0.9322333

00:24:41.829 --> 00:24:43.735 and again Kiko at every step has

NOTE Confidence: 0.9322333

00:24:43.735 --> 00:24:46.174 been I think so strong about this

NOTE Confidence: 0.9322333

00:24:46.174 --> 00:24:47.690 too and I'm so appreciate that.

NOTE Confidence: 0.9322333

00:24:47.690 --> 00:24:48.915 So the top lines of what we've

NOTE Confidence: 0.9322333

00:24:48.915 --> 00:24:50.699 done so far and you look at these

NOTE Confidence: 0.9322333

00:24:50.699 --> 00:24:51.667 groups highly symptomatic group

NOTE Confidence: 0.9322333

00:24:51.667 --> 00:24:53.128 that we've been able to assemble.

NOTE Confidence: 0.9322333

00:24:53.130 --> 00:24:54.762 I do think it's a subset of the

NOTE Confidence: 0.9322333

00:24:54.762 --> 00:24:56.367 people with long COVID but but this

NOTE Confidence: 0.9322333

00:24:56.367 --> 00:24:58.018 is the where we're going to find

NOTE Confidence: 0.9322333

00:24:58.018 --> 00:24:59.386 clues where we're going to find

NOTE Confidence: 0.9322333

00:24:59.386 --> 00:25:01.662 clues is where there's the most

NOTE Confidence: 0.9322333

00:25:01.662 --> 00:25:03.927 manifestation of what people have.

NOTE Confidence: 0.9322333

00:25:03.930 --> 00:25:04.229 Right.

NOTE Confidence: 0.9322333

00:25:04.229 --> 00:25:05.126 Let's start there.

NOTE Confidence: 0.9322333

00:25:05.126 --> 00:25:07.604 And so we're able to assemble I think

NOTE Confidence: 0.9322333

00:25:07.604 --> 00:25:09.809 large numbers of people who are highly
NOTE Confidence: 0.9322333

00:25:09.809 --> 00:25:11.417 symptomatic A diversity of symptom
NOTE Confidence: 0.9322333

00:25:11.417 --> 00:25:13.271 profiles that were beginning to be
NOTE Confidence: 0.9322333

00:25:13.280 --> 00:25:15.360 able to differentiate and characterize
NOTE Confidence: 0.9322333

00:25:15.360 --> 00:25:18.160 so that that that they're different.
NOTE Confidence: 0.9322333

00:25:18.160 --> 00:25:18.702 Tianna Joe,
NOTE Confidence: 0.9322333

00:25:18.702 --> 00:25:20.328 medical student has been doing some
NOTE Confidence: 0.9322333

00:25:20.328 --> 00:25:22.415 great work looking at people who are
NOTE Confidence: 0.9322333

00:25:22.415 --> 00:25:23.611 complaining of internal vibrations
NOTE Confidence: 0.9322333

00:25:23.611 --> 00:25:25.340 and and tremors and how they're
NOTE Confidence: 0.9322333

00:25:25.340 --> 00:25:26.720 different from people who don't
NOTE Confidence: 0.9322333

00:25:26.720 --> 00:25:28.489 have that as a prominent symptom.
NOTE Confidence: 0.9322333

00:25:28.489 --> 00:25:30.223 And and actually again you can
NOTE Confidence: 0.9322333

00:25:30.223 --> 00:25:32.230 based on the pattern of symptoms
NOTE Confidence: 0.9322333

00:25:32.230 --> 00:25:34.396 outside of that symptom you can
NOTE Confidence: 0.9322333

00:25:34.396 --> 00:25:36.000 differentiate them and and so we can,

NOTE Confidence: 0.9322333

00:25:36.000 --> 00:25:37.890 we can begin to start to understand

NOTE Confidence: 0.9322333

00:25:37.890 --> 00:25:39.920 these are clues we're on a search now.

NOTE Confidence: 0.9322333

00:25:39.920 --> 00:25:41.306 We're looking for any clues that

NOTE Confidence: 0.9322333

00:25:41.306 --> 00:25:42.758 help us begin to understand and

NOTE Confidence: 0.9322333

00:25:42.758 --> 00:25:44.438 more that we can look at this

NOTE Confidence: 0.9322333

00:25:44.438 --> 00:25:46.428 better off we are people have tried

NOTE Confidence: 0.9322333

00:25:46.428 --> 00:25:47.560 many treatments without relief.

NOTE Confidence: 0.9322333

00:25:47.560 --> 00:25:49.544 They have substantial psychosocial

NOTE Confidence: 0.9322333

00:25:49.544 --> 00:25:51.159 burden and extensive opportunities

NOTE Confidence: 0.9322333

00:25:51.159 --> 00:25:52.651 for their extensive opportunities

NOTE Confidence: 0.9322333

00:25:52.651 --> 00:25:54.320 for impact for all of us.

NOTE Confidence: 0.9322333

00:25:54.320 --> 00:25:55.768 And and I'll say one more thing that

NOTE Confidence: 0.9322333

00:25:55.768 --> 00:25:57.316 there are a lot of people in this group

NOTE Confidence: 0.93840873

00:25:57.320 --> 00:26:00.040 who were completely healthy before.

NOTE Confidence: 0.93840873

00:26:00.040 --> 00:26:02.688 So that's not just a group who was

NOTE Confidence: 0.93840873

00:26:02.688 --> 00:26:04.749 struggling with their health before.
NOTE Confidence: 0.93840873

00:26:04.750 --> 00:26:06.112 And that's again what makes me
NOTE Confidence: 0.93840873

00:26:06.112 --> 00:26:07.390 think there were marathon runners,
NOTE Confidence: 0.93840873

00:26:07.390 --> 00:26:09.070 there were people who are highly active.
NOTE Confidence: 0.93840873

00:26:09.070 --> 00:26:10.630 Now. It's not that we're just
NOTE Confidence: 0.93840873

00:26:10.630 --> 00:26:11.670 interested in those people,
NOTE Confidence: 0.93840873

00:26:11.670 --> 00:26:14.022 but again that those people may give us
NOTE Confidence: 0.93840873

00:26:14.022 --> 00:26:15.980 the opportunity to really look at clues
NOTE Confidence: 0.93840873

00:26:15.980 --> 00:26:17.830 because the where we find contrast,
NOTE Confidence: 0.93840873

00:26:17.830 --> 00:26:20.630 where we find things that that puzzle us,
NOTE Confidence: 0.93840873

00:26:20.630 --> 00:26:22.230 why did that happen then?
NOTE Confidence: 0.93840873

00:26:22.230 --> 00:26:23.934 That's where I think we can
NOTE Confidence: 0.93840873

00:26:23.934 --> 00:26:24.786 find rich opportunities.
NOTE Confidence: 0.93840873

00:26:24.790 --> 00:26:26.122 And our interest is looking at
NOTE Confidence: 0.93840873

00:26:26.122 --> 00:26:27.896 contrast by age, sex, race,
NOTE Confidence: 0.93840873

00:26:27.896 --> 00:26:30.108 ethnicity differences, timing differences.

NOTE Confidence: 0.93840873
00:26:30.110 --> 00:26:31.350 You know, when did when did it occur?
NOTE Confidence: 0.93840873
00:26:31.350 --> 00:26:32.810 How long did it last?
NOTE Confidence: 0.93840873
00:26:32.810 --> 00:26:35.410 What what, what did it change by waves,
NOTE Confidence: 0.93840873
00:26:35.410 --> 00:26:35.986 trajectory differences?
NOTE Confidence: 0.93840873
00:26:35.986 --> 00:26:38.002 Can we start to plot these out
NOTE Confidence: 0.93840873
00:26:38.002 --> 00:26:39.808 with latent class analyses and see,
NOTE Confidence: 0.93840873
00:26:39.810 --> 00:26:40.256 you know,
NOTE Confidence: 0.93840873
00:26:40.256 --> 00:26:42.330 this person is going up and down like this,
NOTE Confidence: 0.93840873
00:26:42.330 --> 00:26:43.890 this person's starting to get better.
NOTE Confidence: 0.93840873
00:26:43.890 --> 00:26:44.886 You know, what are the different?
NOTE Confidence: 0.93840873
00:26:44.890 --> 00:26:47.158 How do we begin to differentiate people
NOTE Confidence: 0.93840873
00:26:47.158 --> 00:26:48.514 based on trajectories, syndrome,
NOTE Confidence: 0.93840873
00:26:48.514 --> 00:26:50.818 contrast like what Tianna's doing with
NOTE Confidence: 0.93840873
00:26:50.818 --> 00:26:53.326 with the vibrations or we look pots Yes no,
NOTE Confidence: 0.93840873
00:26:53.330 --> 00:26:54.338 we look tinnitus.
NOTE Confidence: 0.93840873

00:26:54.338 --> 00:26:55.340 Yes no, Like.
NOTE Confidence: 0.93840873

00:26:55.340 --> 00:26:57.650 Are there clues here about people who
NOTE Confidence: 0.93840873

00:26:57.650 --> 00:26:59.508 primarily have one driving symptom?
NOTE Confidence: 0.93840873

00:26:59.510 --> 00:27:01.099 I think the the problem with the
NOTE Confidence: 0.93840873

00:27:01.099 --> 00:27:02.662 taxonomy that came up in JAMA that
NOTE Confidence: 0.93840873

00:27:02.662 --> 00:27:03.916 came out of the project recover
NOTE Confidence: 0.93840873

00:27:03.963 --> 00:27:05.517 was that they were wanted us to
NOTE Confidence: 0.93840873

00:27:05.517 --> 00:27:06.640 count symptoms and when you got
NOTE Confidence: 0.93840873

00:27:06.640 --> 00:27:07.390 to a certain number count,
NOTE Confidence: 0.93840873

00:27:07.390 --> 00:27:08.790 they were some of them were weighted,
NOTE Confidence: 0.93840873

00:27:08.790 --> 00:27:10.230 you got a score and they said bang,
NOTE Confidence: 0.93840873

00:27:10.230 --> 00:27:11.250 that's that's social.
NOTE Confidence: 0.93840873

00:27:11.250 --> 00:27:12.270 With long COVID,
NOTE Confidence: 0.93840873

00:27:12.270 --> 00:27:13.920 you know there's some people just
NOTE Confidence: 0.93840873

00:27:13.920 --> 00:27:15.521 have one symptom but it's intense
NOTE Confidence: 0.93840873

00:27:15.521 --> 00:27:17.700 and and I think it still can be post

NOTE Confidence: 0.93840873

00:27:17.700 --> 00:27:19.704 infectious in nature or post vaccination,
NOTE Confidence: 0.93840873

00:27:19.710 --> 00:27:20.136 computational,
NOTE Confidence: 0.93840873

00:27:20.136 --> 00:27:22.266 clinical and lab phenotype correlation.
NOTE Confidence: 0.93840873

00:27:22.270 --> 00:27:23.390 Of course, this is the Holy Grail
NOTE Confidence: 0.93840873

00:27:23.390 --> 00:27:24.707 of what we want to be able to do.
NOTE Confidence: 0.93840873

00:27:24.710 --> 00:27:26.220 Take all the information coming
NOTE Confidence: 0.93840873

00:27:26.220 --> 00:27:26.824 in clinically,
NOTE Confidence: 0.93840873

00:27:26.830 --> 00:27:28.447 take the information coming in from the
NOTE Confidence: 0.93840873

00:27:28.447 --> 00:27:30.506 lab and see where do we see the overlaps.
NOTE Confidence: 0.93840873

00:27:30.510 --> 00:27:31.986 I mean, where are the correlations,
NOTE Confidence: 0.93840873

00:27:31.990 --> 00:27:34.230 what can we learn together from this?
NOTE Confidence: 0.93840873

00:27:34.230 --> 00:27:36.246 I think ultimately we want to
NOTE Confidence: 0.93840873

00:27:36.246 --> 00:27:37.590 be doing taxonomy development,
NOTE Confidence: 0.93840873

00:27:37.590 --> 00:27:39.950 strategy testing and much more.
NOTE Confidence: 0.93840873

00:27:39.950 --> 00:27:41.070 I think the goals are,
NOTE Confidence: 0.93840873

00:27:41.070 --> 00:27:42.806 I think we understand it is what
NOTE Confidence: 0.93840873

00:27:42.806 --> 00:27:43.790 we want to do.
NOTE Confidence: 0.93840873

00:27:43.790 --> 00:27:44.969 We understand it,
NOTE Confidence: 0.93840873

00:27:44.969 --> 00:27:47.730 we can treat and mitigate or cure it
NOTE Confidence: 0.93840873

00:27:47.730 --> 00:27:49.550 and ultimately we can prevent it,
NOTE Confidence: 0.93840873

00:27:49.550 --> 00:27:52.390 that this is what our marching orders are.
NOTE Confidence: 0.93840873

00:27:52.390 --> 00:27:54.390 This is where we want to be in 10 years,
NOTE Confidence: 0.93840873

00:27:54.390 --> 00:27:57.338 five years, 6-6 months.
NOTE Confidence: 0.93840873

00:27:57.338 --> 00:27:59.676 If somebody in here is really smart,
NOTE Confidence: 0.93840873

00:27:59.680 --> 00:28:00.760 I'm looking for that person.
NOTE Confidence: 0.93840873

00:28:00.760 --> 00:28:04.036 Now, who's that going to be?
NOTE Confidence: 0.93840873

00:28:04.040 --> 00:28:05.639 Progress requires teamwork,
NOTE Confidence: 0.93840873

00:28:05.639 --> 00:28:07.873 trust and tenacity and the courage
NOTE Confidence: 0.93840873

00:28:07.873 --> 00:28:09.139 to believe that anything is possible
NOTE Confidence: 0.93840873

00:28:09.139 --> 00:28:10.039 If we work together,
NOTE Confidence: 0.93840873

00:28:10.040 --> 00:28:11.636 that that's the spirit that we're

NOTE Confidence: 0.93840873

00:28:11.636 --> 00:28:13.610 trying to bring to this effort.

NOTE Confidence: 0.93840873

00:28:13.610 --> 00:28:15.560 The goal is better outcomes.

NOTE Confidence: 0.93840873

00:28:15.560 --> 00:28:17.317 Let's work together to make it so.

NOTE Confidence: 0.93840873

00:28:17.320 --> 00:28:18.552 This is a poem.

NOTE Confidence: 0.93840873

00:28:18.552 --> 00:28:20.902 I want to say just that one member

NOTE Confidence: 0.93840873

00:28:20.902 --> 00:28:22.157 of Listen gave us which,

NOTE Confidence: 0.93840873

00:28:22.160 --> 00:28:24.045 which I'm not saying everyone's

NOTE Confidence: 0.93840873

00:28:24.045 --> 00:28:25.553 had this experience but

NOTE Confidence: 0.93844604

00:28:25.560 --> 00:28:27.640 but I'll let you read it. But

NOTE Confidence: 0.93060917

00:28:51.490 --> 00:28:53.650 I thought she was far too kind to us.

NOTE Confidence: 0.93060917

00:28:53.650 --> 00:28:56.026 But it did show me that maybe we're

NOTE Confidence: 0.93060917

00:28:56.026 --> 00:28:58.326 making some success in trying to build

NOTE Confidence: 0.93060917

00:28:58.330 --> 00:29:01.410 a study that people feel truly part of.

NOTE Confidence: 0.93060917

00:29:01.410 --> 00:29:02.250 And as Lisa was saying,

NOTE Confidence: 0.93060917

00:29:02.250 --> 00:29:04.256 what she's trying to clinic, listening,

NOTE Confidence: 0.93060917

00:29:04.256 --> 00:29:06.686 acknowledging and engaging and earnestly

NOTE Confidence: 0.93060917

00:29:06.686 --> 00:29:10.171 is the same thing that we're trying to

NOTE Confidence: 0.93060917

00:29:10.171 --> 00:29:13.010 do within the the research side as well.

NOTE Confidence: 0.93060917

00:29:13.010 --> 00:29:16.294 And and we have work to do

NOTE Confidence: 0.93060917

00:29:16.294 --> 00:29:17.702 this this isn't an end.

NOTE Confidence: 0.93060917

00:29:17.702 --> 00:29:19.117 This is just encouraging us

NOTE Confidence: 0.93060917

00:29:19.117 --> 00:29:20.875 to continue along with that.

NOTE Confidence: 0.93060917

00:29:20.875 --> 00:29:22.983 There's so many people to thank who've

NOTE Confidence: 0.93060917

00:29:22.983 --> 00:29:24.900 been part of this and I'm sure left it

NOTE Confidence: 0.93060917

00:29:24.953 --> 00:29:26.629 out because I did this really quickly.

NOTE Confidence: 0.93060917

00:29:26.629 --> 00:29:28.423 But it's been just a remarkable

NOTE Confidence: 0.93060917

00:29:28.423 --> 00:29:30.161 team effort and anyone who wants

NOTE Confidence: 0.93060917

00:29:30.161 --> 00:29:31.727 to join us is very welcome.

NOTE Confidence: 0.93060917

00:29:31.730 --> 00:29:32.170 Thank you.

NOTE Confidence: 0.932286

00:29:54.400 --> 00:29:58.160 Okay, right. Thanks. Great talk.

NOTE Confidence: 0.932286

00:29:58.160 --> 00:30:01.408 So I just have a question about the

NOTE Confidence: 0.932286

00:30:01.410 --> 00:30:05.688 tax Levid long COVID, any potential,

NOTE Confidence: 0.932286

00:30:05.690 --> 00:30:06.970 you know, predictions on when

NOTE Confidence: 0.932286

00:30:06.970 --> 00:30:08.250 you might have some readouts.

NOTE Confidence: 0.932286

00:30:08.250 --> 00:30:10.147 I think you might have said that

NOTE Confidence: 0.932286

00:30:10.147 --> 00:30:11.888 it's a randomized phase two study.

NOTE Confidence: 0.932286

00:30:11.890 --> 00:30:14.140 So I'm just curious about, you know,

NOTE Confidence: 0.932286

00:30:14.140 --> 00:30:15.965 when you might anticipate some

NOTE Confidence: 0.932286

00:30:15.965 --> 00:30:17.290 readouts for that for that study.

NOTE Confidence: 0.9363449

00:30:17.290 --> 00:30:20.602 So I'm hoping after the first of the year,

NOTE Confidence: 0.9363449

00:30:20.610 --> 00:30:22.050 you know it's actually actively

NOTE Confidence: 0.9363449

00:30:22.050 --> 00:30:23.490 enrolling anyone who's knows people

NOTE Confidence: 0.9363449

00:30:23.538 --> 00:30:24.876 who have long COVID who would

NOTE Confidence: 0.9363449

00:30:24.876 --> 00:30:26.249 like to participate in the trial.

NOTE Confidence: 0.9363449

00:30:26.250 --> 00:30:28.090 We'd love to include them.

NOTE Confidence: 0.9363449

00:30:28.090 --> 00:30:30.099 It it, it includes people who were

NOTE Confidence: 0.9363449

00:30:30.099 --> 00:30:32.079 had good or excellent health before
NOTE Confidence: 0.9363449

00:30:32.079 --> 00:30:34.529 and now have fair or poor health
NOTE Confidence: 0.9363449

00:30:34.530 --> 00:30:36.970 attributed to long COVID now.
NOTE Confidence: 0.9363449

00:30:36.970 --> 00:30:39.084 And I think one of the most
NOTE Confidence: 0.9363449

00:30:39.090 --> 00:30:40.458 interesting parts, it's decentralized.
NOTE Confidence: 0.9363449

00:30:40.458 --> 00:30:42.168 I like the the platform,
NOTE Confidence: 0.9363449

00:30:42.170 --> 00:30:45.220 but also that the fact that Akiko's
NOTE Confidence: 0.9363449

00:30:45.220 --> 00:30:49.070 lab is doing deep immunophenotyping
NOTE Confidence: 0.9363449

00:30:49.070 --> 00:30:52.102 before treatment and and then after
NOTE Confidence: 0.9363449

00:30:52.102 --> 00:30:54.806 treatment And because it may give us
NOTE Confidence: 0.9363449

00:30:54.806 --> 00:30:57.287 clues about who are responders and who fits,
NOTE Confidence: 0.9363449

00:30:57.287 --> 00:30:58.301 because if we do think that
NOTE Confidence: 0.9363449

00:30:58.301 --> 00:30:59.380 there are multiple mechanisms,
NOTE Confidence: 0.9363449

00:30:59.380 --> 00:31:00.402 we don't want to just say what
NOTE Confidence: 0.9363449

00:31:00.402 --> 00:31:01.100 was the average result.
NOTE Confidence: 0.9363449

00:31:01.100 --> 00:31:02.378 I was just pointing average result.

NOTE Confidence: 0.9363449

00:31:02.380 --> 00:31:03.850 But we don't want to actually

NOTE Confidence: 0.9363449

00:31:03.850 --> 00:31:05.934 dig in deeper to say, you know,

NOTE Confidence: 0.9363449

00:31:05.934 --> 00:31:08.853 even if the average result isn't there,

NOTE Confidence: 0.9363449

00:31:08.860 --> 00:31:10.690 maybe there were some people who

NOTE Confidence: 0.9363449

00:31:10.690 --> 00:31:11.968 did have remarkable improvement.

NOTE Confidence: 0.9363449

00:31:11.968 --> 00:31:14.306 And is there any clues to that

NOTE Confidence: 0.9363449

00:31:14.306 --> 00:31:15.811 within the the immuno phenotyping?

NOTE Confidence: 0.9363449

00:31:15.811 --> 00:31:16.128 So,

NOTE Confidence: 0.9363449

00:31:16.128 --> 00:31:18.738 but I'm hoping after the first of the year.

NOTE Confidence: 0.92000526

00:31:22.660 --> 00:31:25.620 Yeah, so I'm wondering about this question.

NOTE Confidence: 0.92000526

00:31:25.620 --> 00:31:29.979 So if you consider a plot with on Y axis

NOTE Confidence: 0.9387038

00:31:32.140 --> 00:31:34.110 health state and then there's

NOTE Confidence: 0.9387038

00:31:34.110 --> 00:31:35.686 somewhere threshold where we

NOTE Confidence: 0.9387038

00:31:35.686 --> 00:31:37.779 anyone below threshold is healthy,

NOTE Confidence: 0.9387038

00:31:37.780 --> 00:31:40.000 above threshold is not healthy and

NOTE Confidence: 0.9387038

00:31:40.000 --> 00:31:42.260 has some symptoms with some names.
NOTE Confidence: 0.9387038

00:31:42.260 --> 00:31:45.130 But below threshold the healthy range is
NOTE Confidence: 0.9387038

00:31:45.130 --> 00:31:48.656 not all the same though it varies a lot,
NOTE Confidence: 0.9387038

00:31:48.660 --> 00:31:50.860 some much closer to the
NOTE Confidence: 0.9387038

00:31:50.860 --> 00:31:52.180 threshold than others.
NOTE Confidence: 0.9387038

00:31:52.180 --> 00:31:55.043 And the question is and and for
NOTE Confidence: 0.9387038

00:31:55.043 --> 00:31:56.878 different reasons some somebody's
NOTE Confidence: 0.9387038

00:31:56.878 --> 00:32:00.060 kidneys at not that 100% but at
NOTE Confidence: 0.9387038

00:32:00.060 --> 00:32:02.820 19 somebody's liver and so forth.
NOTE Confidence: 0.9387038

00:32:02.820 --> 00:32:06.072 And then the question is when
NOTE Confidence: 0.9387038

00:32:06.072 --> 00:32:09.080 something like this infection or
NOTE Confidence: 0.9387038

00:32:09.080 --> 00:32:11.948 vaccine or or whatever challenge
NOTE Confidence: 0.9387038

00:32:11.948 --> 00:32:14.396 hits people who close up to
NOTE Confidence: 0.9387038

00:32:14.396 --> 00:32:17.095 thresholds as the ones that maybe
NOTE Confidence: 0.9387038

00:32:17.095 --> 00:32:19.415 will develop a particular illness.
NOTE Confidence: 0.9387038

00:32:19.420 --> 00:32:23.900 And in the case of long COVID,

NOTE Confidence: 0.9387038

00:32:23.900 --> 00:32:27.540 I wonder whether these the common symptoms

NOTE Confidence: 0.9387038

00:32:27.540 --> 00:32:30.672 that people develop have some relation

NOTE Confidence: 0.9387038

00:32:30.672 --> 00:32:34.494 to what where these people are on on

NOTE Confidence: 0.9387038

00:32:34.494 --> 00:32:36.179 their health status below threshold.

NOTE Confidence: 0.9387038

00:32:36.180 --> 00:32:38.340 They all were healthy before and

NOTE Confidence: 0.9387038

00:32:38.340 --> 00:32:40.270 then something happened and then

NOTE Confidence: 0.9387038

00:32:40.270 --> 00:32:42.395 this strange relations with very

NOTE Confidence: 0.9387038

00:32:42.395 --> 00:32:44.239 young athletic women suddenly

NOTE Confidence: 0.9387038

00:32:44.239 --> 00:32:46.699 developing something that way off.

NOTE Confidence: 0.9387038

00:32:46.700 --> 00:32:48.386 And the reason I'm thinking that

NOTE Confidence: 0.9387038

00:32:48.386 --> 00:32:50.619 is I got like terrible tinnitus

NOTE Confidence: 0.9387038

00:32:50.620 --> 00:32:53.866 I think after my booster shot,

NOTE Confidence: 0.9387038

00:32:53.870 --> 00:32:56.430 but I had very mild tonight as before.

NOTE Confidence: 0.9387038

00:32:56.430 --> 00:32:58.299 And that's what made me think that

NOTE Confidence: 0.9387038

00:32:58.299 --> 00:33:00.520 if you have some predisposition to

NOTE Confidence: 0.9387038

00:33:00.520 --> 00:33:03.345 something you just slightly off,
NOTE Confidence: 0.9387038

00:33:03.350 --> 00:33:05.130 then something hits some information
NOTE Confidence: 0.9387038

00:33:05.130 --> 00:33:07.306 or whatever and that's what you're
NOTE Confidence: 0.9387038

00:33:07.306 --> 00:33:08.308 going to develop.
NOTE Confidence: 0.9387038

00:33:08.310 --> 00:33:10.382 Will you be able to capture these
NOTE Confidence: 0.9387038

00:33:10.382 --> 00:33:11.790 types of relations in your,
NOTE Confidence: 0.9387038

00:33:11.790 --> 00:33:13.239 I mean do you you probably will
NOTE Confidence: 0.9387038

00:33:13.239 --> 00:33:14.836 have all the data to to find that
NOTE Confidence: 0.9387038

00:33:14.836 --> 00:33:16.230 if there is such a relation?
NOTE Confidence: 0.9294219

00:33:16.670 --> 00:33:19.114 I think it's a really good question
NOTE Confidence: 0.9294219

00:33:19.114 --> 00:33:20.822 and you know we have the chance
NOTE Confidence: 0.9294219

00:33:20.822 --> 00:33:22.553 to collect more data and be more
NOTE Confidence: 0.9294219

00:33:22.553 --> 00:33:23.748 specific about what we want.
NOTE Confidence: 0.9294219

00:33:23.750 --> 00:33:24.614 Obviously there's some recall
NOTE Confidence: 0.9294219

00:33:24.614 --> 00:33:25.910 bias that some people can have,
NOTE Confidence: 0.9294219

00:33:25.910 --> 00:33:28.150 but but to report whether you had

NOTE Confidence: 0.9294219

00:33:28.150 --> 00:33:29.962 prior tinnitus, most people should be

NOTE Confidence: 0.9294219

00:33:29.962 --> 00:33:33.868 able to tell us if it in that case.

NOTE Confidence: 0.9294219

00:33:33.870 --> 00:33:37.140 Yeah, I think I mean the beauty

NOTE Confidence: 0.9294219

00:33:37.140 --> 00:33:38.925 of this is it's an active live

NOTE Confidence: 0.9294219

00:33:38.925 --> 00:33:40.630 community that we're interacting with.

NOTE Confidence: 0.9294219

00:33:40.630 --> 00:33:41.870 So as we come up,

NOTE Confidence: 0.9294219

00:33:41.870 --> 00:33:43.606 it may be that we haven't collected

NOTE Confidence: 0.9294219

00:33:43.606 --> 00:33:45.226 enough information to be able to do that.

NOTE Confidence: 0.9294219

00:33:45.230 --> 00:33:46.466 But because you have that idea,

NOTE Confidence: 0.9294219

00:33:46.470 --> 00:33:48.622 we should say we we should go back

NOTE Confidence: 0.9294219

00:33:48.622 --> 00:33:50.838 and and collect that information.

NOTE Confidence: 0.9294219

00:33:50.840 --> 00:33:52.000 There's another feature here though,

NOTE Confidence: 0.9294219

00:33:52.000 --> 00:33:54.080 I think that's important that you just said,

NOTE Confidence: 0.9294219

00:33:54.080 --> 00:33:56.852 like I really don't like dichotomous

NOTE Confidence: 0.9294219

00:33:56.852 --> 00:33:57.314 variables.

NOTE Confidence: 0.9294219

00:33:57.320 --> 00:33:59.432 I I I really think that they are
NOTE Confidence: 0.9294219

00:33:59.432 --> 00:34:01.307 reductionists in nature and they
NOTE Confidence: 0.9294219

00:34:01.307 --> 00:34:02.600 obscure important relationships.
NOTE Confidence: 0.9294219

00:34:02.600 --> 00:34:04.434 So the degree to which we can
NOTE Confidence: 0.9294219

00:34:04.434 --> 00:34:05.402 collect spectrum, you know,
NOTE Confidence: 0.9294219

00:34:05.402 --> 00:34:06.949 not just saying did you have it
NOTE Confidence: 0.9294219

00:34:06.949 --> 00:34:08.330 before and someone says no because
NOTE Confidence: 0.9294219

00:34:08.330 --> 00:34:10.156 it was really just a little bit and
NOTE Confidence: 0.9294219

00:34:10.156 --> 00:34:11.852 it didn't didn't really bother them.
NOTE Confidence: 0.9294219

00:34:11.852 --> 00:34:13.440 You know, we want to say no,
NOTE Confidence: 0.9294219

00:34:13.440 --> 00:34:14.360 no from zero to 100.
NOTE Confidence: 0.9294219

00:34:14.360 --> 00:34:16.640 0 means you absolutely had none.
NOTE Confidence: 0.9294219

00:34:16.640 --> 00:34:17.795 And then you know how how much
NOTE Confidence: 0.9294219

00:34:17.795 --> 00:34:18.600 did you have before?
NOTE Confidence: 0.9294219

00:34:18.600 --> 00:34:20.520 We need to start moving towards,
NOTE Confidence: 0.9294219

00:34:20.520 --> 00:34:23.080 I think, higher dimensional information.

NOTE Confidence: 0.9294219

00:34:23.080 --> 00:34:24.316 So that just like you said,

NOTE Confidence: 0.9294219

00:34:24.320 --> 00:34:25.000 it's not just saying, oh,

NOTE Confidence: 0.9294219

00:34:25.000 --> 00:34:26.560 you were healthy and not healthy,

NOTE Confidence: 0.9294219

00:34:26.560 --> 00:34:27.026 but like,

NOTE Confidence: 0.9294219

00:34:27.026 --> 00:34:28.424 how healthy were you and what

NOTE Confidence: 0.9294219

00:34:28.424 --> 00:34:29.960 and what did that mean before?

NOTE Confidence: 0.9294219

00:34:29.960 --> 00:34:31.358 And I totally agree with you.

NOTE Confidence: 0.9294219

00:34:31.360 --> 00:34:32.767 I do know that there's some people

NOTE Confidence: 0.9294219

00:34:32.767 --> 00:34:34.079 in here who had low levels,

NOTE Confidence: 0.9294219

00:34:34.080 --> 00:34:35.936 something that was totally

NOTE Confidence: 0.9294219

00:34:35.936 --> 00:34:37.960 amplified by and maybe, you know,

NOTE Confidence: 0.9294219

00:34:37.960 --> 00:34:39.358 you talk a lot of homeostasis.

NOTE Confidence: 0.9294219

00:34:39.360 --> 00:34:42.160 It's something was keeping things in check.

NOTE Confidence: 0.9294219

00:34:42.160 --> 00:34:42.960 And also by the way,

NOTE Confidence: 0.9294219

00:34:42.960 --> 00:34:44.940 their own perceptions of their body,

NOTE Confidence: 0.9294219

00:34:44.940 --> 00:34:46.836 how they react to their feelings
NOTE Confidence: 0.9294219

00:34:46.836 --> 00:34:48.940 within their body is changing too.
NOTE Confidence: 0.9294219

00:34:48.940 --> 00:34:50.644 But there's a whole science of
NOTE Confidence: 0.9294219

00:34:50.644 --> 00:34:51.780 sort of people's perception.
NOTE Confidence: 0.9294219

00:34:51.780 --> 00:34:52.920 Some people can really feel
NOTE Confidence: 0.9294219

00:34:52.920 --> 00:34:54.060 their heartbeats all the time.
NOTE Confidence: 0.9294219

00:34:54.060 --> 00:34:56.308 You know, it's like is it amplifying our
NOTE Confidence: 0.9294219

00:34:56.308 --> 00:34:58.100 sensitivity to things within our body?
NOTE Confidence: 0.9294219

00:34:58.100 --> 00:34:59.747 And then how do we that may be a
NOTE Confidence: 0.9294219

00:34:59.747 --> 00:35:01.008 whole different group that that's
NOTE Confidence: 0.9294219

00:35:01.008 --> 00:35:02.890 a whole thing for that we need
NOTE Confidence: 0.9294219

00:35:02.890 --> 00:35:04.375 to understand and not dismisses.
NOTE Confidence: 0.9294219

00:35:04.380 --> 00:35:05.100 That's all in your head,
NOTE Confidence: 0.9294219

00:35:05.100 --> 00:35:07.500 yet it's in your head, it's in your body too.
NOTE Confidence: 0.9294219

00:35:07.500 --> 00:35:08.700 We're going to take one more
NOTE Confidence: 0.9294219

00:35:08.700 --> 00:35:09.500 question and then we're

NOTE Confidence: 0.94060665

00:35:09.500 --> 00:35:10.660 going to go on break.

NOTE Confidence: 0.9288315

00:35:12.890 --> 00:35:14.810 Really. So fantastic. Thank you.

NOTE Confidence: 0.9288315

00:35:20.050 --> 00:35:23.330 But so I totally agree.

NOTE Confidence: 0.9288315

00:35:23.330 --> 00:35:25.301 This is a story that I hear so often

NOTE Confidence: 0.9288315

00:35:25.301 --> 00:35:27.188 in the patients who come to see me

NOTE Confidence: 0.9288315

00:35:27.188 --> 00:35:29.483 is that I had this thing and several

NOTE Confidence: 0.9288315

00:35:29.483 --> 00:35:31.259 people said this, it was annoying.

NOTE Confidence: 0.9288315

00:35:31.259 --> 00:35:33.240 I had COVID it kicked it up

NOTE Confidence: 0.9288315

00:35:33.307 --> 00:35:35.090 to being a very big problem.

NOTE Confidence: 0.9288315

00:35:35.090 --> 00:35:36.610 So I see that a lot.

NOTE Confidence: 0.9288315

00:35:36.610 --> 00:35:38.930 So I think that's an interesting thing and

NOTE Confidence: 0.9288315

00:35:38.930 --> 00:35:41.447 I'd love to see you start to measure that.

NOTE Confidence: 0.9288315

00:35:41.450 --> 00:35:44.492 My question has to do with the amount of

NOTE Confidence: 0.9288315

00:35:44.492 --> 00:35:46.928 suffering in that graph that you showed.

NOTE Confidence: 0.9288315

00:35:46.930 --> 00:35:48.274 Is there a way,

NOTE Confidence: 0.9288315

00:35:48.274 --> 00:35:51.160 or have you considered a way to find
NOTE Confidence: 0.9288315

00:35:51.160 --> 00:35:53.746 out how much the uncertainty about what
NOTE Confidence: 0.9288315

00:35:53.746 --> 00:35:56.210 they have and how long it's going to
NOTE Confidence: 0.9288315

00:35:56.280 --> 00:35:58.968 last and whether they'll ever get better,
NOTE Confidence: 0.9288315

00:35:58.970 --> 00:36:00.488 how much that plays a role?
NOTE Confidence: 0.9288315

00:36:00.490 --> 00:36:01.630 Because I think yes,
NOTE Confidence: 0.9288315

00:36:01.630 --> 00:36:02.770 people are physically suffering,
NOTE Confidence: 0.9288315

00:36:02.770 --> 00:36:04.926 but there's a lot of psychic suffering.
NOTE Confidence: 0.9288315

00:36:04.930 --> 00:36:06.554 I mean, we don't know what it
NOTE Confidence: 0.9288315

00:36:06.554 --> 00:36:08.448 is and we don't even have it.
NOTE Confidence: 0.9288315

00:36:08.450 --> 00:36:10.166 So is are you measuring that?
NOTE Confidence: 0.937341450000001

00:36:10.770 --> 00:36:12.975 Yeah. I I think that in some of this
NOTE Confidence: 0.937341450000001

00:36:12.975 --> 00:36:14.536 measurement of people feeling fearful
NOTE Confidence: 0.937341450000001

00:36:14.536 --> 00:36:16.432 and anxious and uncertain and losing
NOTE Confidence: 0.937341450000001

00:36:16.490 --> 00:36:18.410 hope and we we have some of those
NOTE Confidence: 0.937341450000001

00:36:18.410 --> 00:36:20.214 dimensions of course they there can

NOTE Confidence: 0.937341450000001

00:36:20.214 --> 00:36:21.869 be reverse causation and people

NOTE Confidence: 0.937341450000001

00:36:21.869 --> 00:36:24.207 who you know it's like is that a

NOTE Confidence: 0.937341450000001

00:36:24.207 --> 00:36:26.448 modifying factor or is it a consequence

NOTE Confidence: 0.937341450000001

00:36:26.448 --> 00:36:28.123 of what they're they're feeling.

NOTE Confidence: 0.937341450000001

00:36:28.130 --> 00:36:29.912 I think if we continue to

NOTE Confidence: 0.937341450000001

00:36:29.912 --> 00:36:30.803 follow people longitudinally,

NOTE Confidence: 0.937341450000001

00:36:30.810 --> 00:36:32.763 maybe we'll get a better sense that

NOTE Confidence: 0.937341450000001

00:36:32.763 --> 00:36:34.591 certainly the way the the reception

NOTE Confidence: 0.937341450000001

00:36:34.591 --> 00:36:36.457 people have had within the medical

NOTE Confidence: 0.937341450000001

00:36:36.457 --> 00:36:38.920 system has tend to be in be an

NOTE Confidence: 0.937341450000001

00:36:38.920 --> 00:36:40.840 exacerbating factor obviously with

NOTE Confidence: 0.937341450000001

00:36:40.840 --> 00:36:42.952 regard to their their desperation

NOTE Confidence: 0.937341450000001

00:36:42.952 --> 00:36:44.968 feeling that no one believes them

NOTE Confidence: 0.937341450000001

00:36:44.968 --> 00:36:46.719 or understands them or or wants to.

NOTE Confidence: 0.937341450000001

00:36:46.720 --> 00:36:48.120 You know, people are just lost patience.

NOTE Confidence: 0.937341450000001

00:36:48.120 --> 00:36:50.160 With me it's enough already like you know,
NOTE Confidence: 0.937341450000001

00:36:50.160 --> 00:36:51.516 it's like it's been enough time.
NOTE Confidence: 0.937341450000001

00:36:51.520 --> 00:36:53.277 You know, you should be getting better
NOTE Confidence: 0.937341450000001

00:36:53.277 --> 00:36:54.919 and people just don't feel better.
NOTE Confidence: 0.937341450000001

00:36:54.920 --> 00:36:56.360 But I think it's a really good point.
NOTE Confidence: 0.937341450000001

00:36:56.360 --> 00:36:58.235 Lisa, what's something we should
NOTE Confidence: 0.937341450000001

00:36:58.235 --> 00:36:59.360 be looking into?
NOTE Confidence: 0.937341450000001

00:36:59.360 --> 00:36:59.710 Thank you.
NOTE Confidence: 0.937341450000001

00:36:59.710 --> 00:37:00.760 I know we're a little bit.
NOTE Confidence: 0.937341450000001

00:37:00.760 --> 00:37:00.920 Thank
NOTE Confidence: 0.93711364

00:37:05.800 --> 00:37:05.880 you.
NOTE Confidence: 0.9189609

00:37:07.320 --> 00:37:08.804 So we'll we'll only break for 5
NOTE Confidence: 0.9189609

00:37:08.804 --> 00:37:10.596 minutes to set up for the next session,
NOTE Confidence: 0.9189609

00:37:10.600 --> 00:37:13.000 so grab some coffee every minute.
NOTE Confidence: 0.9189609

00:37:13.000 --> 00:37:14.120 It was worth it. Harlan.
NOTE Confidence: 0.9189609

00:37:14.120 --> 00:37:15.464 I'm glad. I'm glad.

NOTE Confidence: 0.9189609

00:37:15.464 --> 00:37:17.480 And the discussion and the questions?

NOTE Confidence: 0.9189609

00:37:17.480 --> 00:37:19.330 We need to get you all in the same room

NOTE Confidence: 0.9189609

00:37:19.383 --> 00:37:20.997 to discuss these topics at length.