WEBVTT

NOTE duration: "01:01:15.136"

NOTE Confidence: 0.9458947

00:00:01.520 --> 00:00:02.820 Good afternoon, everyone.

NOTE Confidence: 0.99631864

00:00:03.840 --> 00:00:04.960 Thank you so much for

NOTE Confidence: 0.99631864

00:00:04.960 --> 00:00:05.460 coming.

NOTE Confidence: 0.9789847

00:00:06.160 --> 00:00:07.620 They're not listening to me.

NOTE Confidence: 0.969178

00:00:08.240 --> 00:00:10.019 Lots of excitement around lunchtime.

NOTE Confidence: 0.98590636

00:00:15.384 --> 00:00:16.204 Good afternoon.

NOTE Confidence: 0.98889303

00:00:17.465 --> 00:00:18.505 Thank you so much for

NOTE Confidence: 0.98889303

00:00:18.505 --> 00:00:19.005 coming,

NOTE Confidence: 0.9831405

00:00:19.545 --> 00:00:20.045 today.

NOTE Confidence: 0.9989176

00:00:20.664 --> 00:00:22.744 It's a special event today

NOTE Confidence: 0.9989176

00:00:22.744 --> 00:00:23.805 for all of us.

NOTE Confidence: 0.9985424

00:00:24.505 --> 00:00:26.285 I have an honor to

NOTE Confidence: 0.9996209

00:00:26.664 --> 00:00:27.164 introduce

NOTE Confidence: 0.8458371

00:00:27.544 --> 00:00:28.044 our,

NOTE Confidence: 0.9833365

00:00:29.449 --> 00:00:29.949 recipient

NOTE Confidence: 0.897894

00:00:30.250 --> 00:00:31.449 of the William Barris,

NOTE Confidence: 0.75979745

00:00:31.770 --> 00:00:34.190 McCallister Lectureship Award for excellent

NOTE Confidence: 0.75979745

00:00:34.250 --> 00:00:35.630 in excellence in surgical

NOTE Confidence: 0.9405143

00:00:36.170 --> 00:00:38.030 pathology, doctor William Travis.

NOTE Confidence: 0.97986627

00:00:38.809 --> 00:00:41.050 Doctor Travis doesn't need any

NOTE Confidence: 0.97986627

00:00:41.050 --> 00:00:41.550 introduction.

NOTE Confidence: 0.9345581

00:00:42.345 --> 00:00:44.265 Anybody who's been practicing surgical

NOTE Confidence: 0.9345581

00:00:44.265 --> 00:00:44.765 pathology

NOTE Confidence: 0.9457512

00:00:45.704 --> 00:00:47.385 know about doctor Travis, but

NOTE Confidence: 0.9457512

00:00:47.385 --> 00:00:48.504 I'm going to do introduction

NOTE Confidence: 0.9457512

00:00:48.504 --> 00:00:51.305 anyway, Bill, because it's it's

NOTE Confidence: 0.9457512

00:00:51.305 --> 00:00:53.145 a huge honor to have

NOTE Confidence: 0.9457512

00:00:53.145 --> 00:00:54.684 doctor Travis with us today.

NOTE Confidence: 0.9977194

00:00:54.985 --> 00:00:56.925 He started his tremendous career

NOTE Confidence: 0.97376776

00:00:57.560 --> 00:00:59.000 as a medical student at

NOTE Confidence: 0.97376776

00:00:59.000 --> 00:01:00.220 University of Florida,

NOTE Confidence: 0.97520673

00:01:00.920 --> 00:01:03.180 then went into a pathology

NOTE Confidence: 0.8694567

00:01:03.960 --> 00:01:04.940 at the Harvard

NOTE Confidence: 0.90447634

00:01:05.479 --> 00:01:06.540 School of Medicine,

NOTE Confidence: 0.986532

00:01:07.959 --> 00:01:09.420 went to clinical pathology

NOTE Confidence: 0.80164856

00:01:09.800 --> 00:01:11.100 at a Mayo Clinic,

NOTE Confidence: 0.96287

00:01:11.655 --> 00:01:14.055 and basically spent significant amount

NOTE Confidence: 0.96287

00:01:14.055 --> 00:01:15.335 of his career or time

NOTE Confidence: 0.96287

00:01:15.335 --> 00:01:17.194 of his career at NIH,

NOTE Confidence: 0.96287

00:01:17.335 --> 00:01:17.835 NCI,

NOTE Confidence: 0.96757376

00:01:18.375 --> 00:01:19.194 and AFIP.

NOTE Confidence: 0.98930615

00:01:20.055 --> 00:01:21.335 And it's always shocking to

NOTE Confidence: 0.98930615

00:01:21.335 --> 00:01:22.375 me to know that he's

NOTE Confidence: 0.98930615

00:01:22.375 --> 00:01:23.815 been for twenty years at

NOTE Confidence: 0.98930615

00:01:23.815 --> 00:01:25.355 Memorial Sloan Kettering

NOTE Confidence: 0.942566

00:01:25.890 --> 00:01:26.550 as attending,

NOTE Confidence: 0.7435518

00:01:27.330 --> 00:01:27.910 a pathologist

NOTE Confidence: 0.8604706

00:01:28.530 --> 00:01:30.370 and, as a director of

NOTE Confidence: 0.8604706

00:01:30.370 --> 00:01:32.290 excellent outstanding, probably the best

NOTE Confidence: 0.8604706

00:01:32.290 --> 00:01:32.790 thoracic

NOTE Confidence: 0.9973511

00:01:33.170 --> 00:01:34.390 service in the country.

NOTE Confidence: 0.9550822

00:01:35.250 --> 00:01:36.150 Doctor Travis,

NOTE Confidence: 0.9917204

00:01:36.930 --> 00:01:39.110 has over five hundred publications,

NOTE Confidence: 0.9451458

00:01:40.545 --> 00:01:42.145 huge impact on our field

NOTE Confidence: 0.9451458

00:01:42.145 --> 00:01:43.665 of thoracic pathology, but I

NOTE Confidence: 0.9451458

00:01:43.665 --> 00:01:45.105 would say probably the most

NOTE Confidence: 0.9451458

00:01:45.105 --> 00:01:46.625 important work, and this is

NOTE Confidence: 0.9451458

00:01:46.625 --> 00:01:48.705 my think thinking bill, is

NOTE Confidence: 0.9451458

00:01:48.705 --> 00:01:50.145 really in the classification of

NOTE Confidence: 0.9451458

00:01:50.145 --> 00:01:50.645 adenocarcinoma

NOTE Confidence: 0.94556963

00:01:51.505 --> 00:01:53.025 as well as neuroendocrine tumors

NOTE Confidence: 0.94556963

00:01:53.025 --> 00:01:53.845 of the lung.

NOTE Confidence: 0.91831136

00:01:54.705 --> 00:01:56.145 He really defined, I would

NOTE Confidence: 0.91831136

00:01:56.145 --> 00:01:57.560 say, he's the godfather of

NOTE Confidence: 0.91831136

00:01:57.560 --> 00:02:00.140 the modern, thoracic surgical pathology.

NOTE Confidence: 0.98888516

00:02:01.240 --> 00:02:02.920 He's been a recipient of

NOTE Confidence: 0.98888516

00:02:02.920 --> 00:02:04.920 numerous awards. I would just

NOTE Confidence: 0.98888516

00:02:04.920 --> 00:02:07.020 like to single out the,

NOTE Confidence: 0.85805786

00:02:07.880 --> 00:02:09.980 Mary Mathews Award for Excellence

NOTE Confidence: 0.85805786

00:02:10.040 --> 00:02:11.660 in Research from the ISLC.

NOTE Confidence: 0.9427132

00:02:12.735 --> 00:02:14.175 He's the founding father of

NOTE Confidence: 0.9427132

00:02:14.175 --> 00:02:16.115 the Pulmonary Pathology Society.

NOTE Confidence: 0.9121217

00:02:17.294 --> 00:02:18.415 He's been chair he was

NOTE Confidence: 0.9121217

00:02:18.415 --> 00:02:19.615 the chair and one of

NOTE Confidence: 0.9121217

00:02:19.615 --> 00:02:21.635 the founders of the pathology

NOTE Confidence: 0.9121217

00:02:21.775 --> 00:02:23.475 committee of the International Association

NOTE Confidence: 0.9121217

00:02:23.535 --> 00:02:24.735 for the Study of Lung

NOTE Confidence: 0.9121217

00:02:24.735 --> 00:02:25.235 Cancer.

NOTE Confidence: 0.9374924

00:02:26.389 --> 00:02:28.790 And he's been editor on

NOTE Confidence: 0.9374924

00:02:28.790 --> 00:02:31.350 four WHO books, hopefully the

NOTE Confidence: 0.9374924

00:02:31.350 --> 00:02:32.570 fifth one as well.

NOTE Confidence: 0.9835119

00:02:33.190 --> 00:02:33.510 And,

NOTE Confidence: 0.98910236

00:02:33.990 --> 00:02:35.669 most importantly, I think what's

NOTE Confidence: 0.98910236

00:02:35.669 --> 00:02:36.970 close to all of us

NOTE Confidence: 0.92886114

00:02:37.350 --> 00:02:38.710 who are actually, you know,

NOTE Confidence: 0.92886114

00:02:38.710 --> 00:02:40.435 I I grew next watching

NOTE Confidence: 0.92886114

00:02:40.575 --> 00:02:42.115 actually and learning from him

NOTE Confidence: 0.92886114

00:02:42.255 --> 00:02:43.535 and some other mentors as

NOTE Confidence: 0.92886114

00:02:43.535 --> 00:02:44.655 well that he's in a

NOTE Confidence: 0.92886114

00:02:44.655 --> 00:02:45.794 tremendous mentor

NOTE Confidence: 0.8978621

00:02:46.255 --> 00:02:47.615 to many, many, the list

NOTE Confidence: 0.8978621

00:02:47.615 --> 00:02:49.794 of, his mentees really long.

NOTE Confidence: 0.9981124

00:02:50.335 --> 00:02:51.855 And, as I told him

NOTE Confidence: 0.9981124

00:02:51.855 --> 00:02:52.595 this morning,

NOTE Confidence: 0.9013256

00:02:52.980 --> 00:02:54.820 he's been mentored from Gen

NOTE Confidence: 0.9013256

00:02:54.820 --> 00:02:56.340 z from Gen x to

NOTE Confidence: 0.9013256

00:02:56.340 --> 00:02:57.400 Gen z now.

NOTE Confidence: 0.92368925

00:02:57.780 --> 00:02:59.620 And basically, in every single

NOTE Confidence: 0.92368925

00:02:59.620 --> 00:03:00.980 generation, if you can name

NOTE Confidence: 0.92368925

00:03:00.980 --> 00:03:03.139 one outstanding pathologist, that pathologist

NOTE Confidence: 0.92368925

00:03:03.139 --> 00:03:04.340 is actually trained by Bill.

NOTE Confidence: 0.92368925

00:03:04.340 --> 00:03:05.860 So it's a great honor

NOTE Confidence: 0.92368925

00:03:05.860 --> 00:03:06.660 to have a Bill here

NOTE Confidence: 0.92368925

00:03:06.660 --> 00:03:07.880 with us, doctor Travis.

NOTE Confidence: 0.9989031

00:03:08.475 --> 00:03:10.315 And, but before we go

NOTE Confidence: 0.9989031

00:03:10.315 --> 00:03:10.955 into the,

NOTE Confidence: 0.8994226

00:03:11.514 --> 00:03:12.955 his lecture and kind of

NOTE Confidence: 0.8994226

00:03:12.955 --> 00:03:14.635 like overview overview that is

NOTE Confidence: 0.8994226

00:03:14.635 --> 00:03:15.995 Bill said of like past

NOTE Confidence: 0.8994226

00:03:15.995 --> 00:03:17.275 thirty years of his career

NOTE Confidence: 0.8994226

00:03:17.275 --> 00:03:18.255 and his experiences,

NOTE Confidence: 0.9060498

00:03:18.875 --> 00:03:19.995 I would like to say

NOTE Confidence: 0.9060498

00:03:19.995 --> 00:03:21.195 a few words why we

NOTE Confidence: 0.9060498

00:03:21.195 --> 00:03:23.355 selected, doctor Bill Travis for

NOTE Confidence: 0.9060498

00:03:23.355 --> 00:03:25.770 the William Barris McAllister lecture.

NOTE Confidence: 0.9060498

00:03:25.910 --> 00:03:26.950 So just a few words

NOTE Confidence: 0.9060498

00:03:26.950 --> 00:03:28.169 about Doctor. McAllister.

NOTE Confidence: 0.91918117

00:03:28.470 --> 00:03:29.510 He was a graduate of

NOTE Confidence: 0.91918117

00:03:29.510 --> 00:03:31.030 Yale College and of a

NOTE Confidence: 0.91918117

00:03:31.030 --> 00:03:33.270 John Hopkins Medical School and

NOTE Confidence: 0.91918117

00:03:33.270 --> 00:03:34.870 the Department of Pathology. He

NOTE Confidence: 0.91918117

00:03:34.870 --> 00:03:36.230 came actually back here to

NOTE Confidence: 0.91918117

00:03:36.230 --> 00:03:36.730 Yale

NOTE Confidence: 0.9678851

00:03:37.145 --> 00:03:38.105 and served as the Chief

NOTE Confidence: 0.9678851

00:03:38.105 --> 00:03:39.245 of Surgical Pathology

NOTE Confidence: 0.9843929

00:03:39.785 --> 00:03:41.225 for twenty five years from

NOTE Confidence: 0.9843929

00:03:41.225 --> 00:03:42.905 nineteen fifty three to nineteen

NOTE Confidence: 0.9843929

00:03:42.905 --> 00:03:43.885 seventy eight.

NOTE Confidence: 0.9500685

00:03:44.425 --> 00:03:46.205 He was an outstanding diagnostic

NOTE Confidence: 0.9500685

00:03:46.345 --> 00:03:46.845 pathologist,

NOTE Confidence: 0.790987

00:03:47.305 --> 00:03:47.805 educator,

NOTE Confidence: 0.95009035

00:03:48.345 --> 00:03:49.385 he was included in the

NOTE Confidence: 0.95009035

00:03:49.385 --> 00:03:50.985 science as well as, in

NOTE Confidence: 0.95009035

00:03:50.985 --> 00:03:51.965 art of medicine.

NOTE Confidence: 0.9463426

00:03:52.345 --> 00:03:53.370 He He was an extraordinary

NOTE Confidence: 0.85458744

00:03:53.670 --> 00:03:55.670 mentor, advisor, and friend to

NOTE Confidence: 0.85458744

00:03:55.670 --> 00:03:58.390 student, residents, covert coworkers, and

NOTE Confidence: 0.85458744

00:03:58.390 --> 00:03:59.850 physicians from all disciplines.

NOTE Confidence: 0.97261137

00:04:00.390 --> 00:04:01.830 And I think doctor Travis

NOTE Confidence: 0.97261137

00:04:01.830 --> 00:04:03.190 is more than deserving this,

NOTE Confidence: 0.97261137

00:04:03.430 --> 00:04:05.350 lectureship award. So Bill, thank

NOTE Confidence: 0.97261137

00:04:05.350 --> 00:04:06.790 you so much for coming

NOTE Confidence: 0.97261137

00:04:06.790 --> 00:04:08.144 to us today. It's really

NOTE Confidence: 0.97261137

00:04:08.144 --> 00:04:08.885 my pleasure

NOTE Confidence: 0.9455719

00:04:09.665 --> 00:04:10.864 to give you a little

NOTE Confidence: 0.9455719

00:04:10.864 --> 00:04:11.924 talking of appreciation.

NOTE Confidence: 0.45259932

00:04:13.424 --> 00:04:14.245 Just to view.

NOTE Confidence: 0.91512585

00:04:28.529 --> 00:04:29.889 Thank you so much, Sonia.

NOTE Confidence: 0.91512585

00:04:29.889 --> 00:04:30.930 It's a real pleasure to

NOTE Confidence: 0.91512585

00:04:30.930 --> 00:04:31.909 be here and

NOTE Confidence: 0.97233975

00:04:33.305 --> 00:04:34.745 to talk about a subject

NOTE Confidence: 0.97233975

00:04:34.745 --> 00:04:36.345 that is very, near and

NOTE Confidence: 0.97233975

00:04:36.345 --> 00:04:37.225 dear to me and has

NOTE Confidence: 0.97233975

00:04:37.225 --> 00:04:38.205 been really

NOTE Confidence: 0.9543445

00:04:38.665 --> 00:04:40.025 a major focus of my

NOTE Confidence: 0.9543445

00:04:40.025 --> 00:04:40.525 career.

NOTE Confidence: 0.853484

00:04:41.305 --> 00:04:41.805 I,

NOTE Confidence: 0.9944736

00:04:43.145 --> 00:04:43.964 must say

NOTE Confidence: 0.8960224

00:04:45.145 --> 00:04:46.185 let me try to keep

NOTE Confidence: 0.8960224

00:04:46.185 --> 00:04:47.404 track of time here.

NOTE Confidence: 0.9729902

00:04:52.060 --> 00:04:53.919 The topic is historical classification

NOTE Confidence: 0.9729902

00:04:54.060 --> 00:04:55.900 of lung cancer and interstitial

NOTE Confidence: 0.9729902

00:04:55.900 --> 00:04:56.639 lung disease.

NOTE Confidence: 0.99454373

00:04:57.180 --> 00:04:58.620 And to get invited to

NOTE Confidence: 0.99454373

00:04:58.620 --> 00:04:59.900 come to Yale to talk

NOTE Confidence: 0.99454373

00:04:59.900 --> 00:05:01.199 about thoracic pathology,

NOTE Confidence: 0.9996894

00:05:01.580 --> 00:05:02.159 I was

NOTE Confidence: 0.994054

00:05:02.685 --> 00:05:04.785 really amazed going through the

NOTE Confidence: 0.994054

00:05:04.925 --> 00:05:05.425 historical

NOTE Confidence: 0.9903284

00:05:06.205 --> 00:05:07.964 leaders of thoracic pathology that

NOTE Confidence: 0.9903284

00:05:07.964 --> 00:05:08.625 have been

NOTE Confidence: 0.882637

00:05:09.085 --> 00:05:10.065 in this department.

NOTE Confidence: 0.94088864

00:05:10.365 --> 00:05:10.845 And,

NOTE Confidence: 0.9955287

00:05:11.404 --> 00:05:12.605 it's a real honor and

NOTE Confidence: 0.9955287

00:05:12.605 --> 00:05:13.985 privilege to be able to

NOTE Confidence: 0.97746235

00:05:14.539 --> 00:05:15.620 sort of follow in in

NOTE Confidence: 0.97746235

00:05:15.620 --> 00:05:15.660 these,

NOTE Confidence: 0.98812455

00:05:17.180 --> 00:05:18.620 footsteps. And, of course, doctor

NOTE Confidence: 0.98812455

00:05:18.620 --> 00:05:19.120 Homer

NOTE Confidence: 0.8408839

00:05:19.580 --> 00:05:21.839 and Daisik are the current,

NOTE Confidence: 0.98826736

00:05:22.220 --> 00:05:23.660 primary leaders, and I'm sure

NOTE Confidence: 0.98826736

00:05:23.660 --> 00:05:24.779 there'll be many more in

NOTE Confidence: 0.98826736

00:05:24.779 --> 00:05:25.440 the future.

NOTE Confidence: 0.98781794

00:05:26.805 --> 00:05:28.345 I had the privilege of,

NOTE Confidence: 0.89234257

00:05:29.125 --> 00:05:31.305 writing this lifetime achievement award

NOTE Confidence: 0.89234257

00:05:31.365 --> 00:05:31.865 article,

NOTE Confidence: 0.97868615

00:05:32.725 --> 00:05:34.345 in honor of doctor Yesner.

NOTE Confidence: 0.9933642

00:05:35.045 --> 00:05:36.085 Most of you look like

NOTE Confidence: 0.9933642

00:05:36.085 --> 00:05:37.685 you're probably too young to

NOTE Confidence: 0.9933642

00:05:37.685 --> 00:05:39.045 have known doctor Yesner, but

NOTE Confidence: 0.9933642

00:05:39.045 --> 00:05:40.245 I had the privilege to

NOTE Confidence: 0.9933642

00:05:40.245 --> 00:05:41.365 overlap with him a little

NOTE Confidence: 0.9933642

00:05:41.365 --> 00:05:41.865 bit.

NOTE Confidence: 0.97547

00:05:42.529 --> 00:05:44.050 And, you can read this

NOTE Confidence: 0.97547

00:05:44.050 --> 00:05:45.250 if you would like. He

NOTE Confidence: 0.97547

00:05:45.250 --> 00:05:46.790 certainly had a huge impact,

NOTE Confidence: 0.96908134

00:05:48.290 --> 00:05:50.450 on thoracic pathology, lung cancer

NOTE Confidence: 0.96908134

00:05:50.450 --> 00:05:52.630 in particular, and the WHO

NOTE Confidence: 0.96908134

00:05:52.770 --> 00:05:53.270 classification.

NOTE Confidence: 0.9750193

00:05:54.450 --> 00:05:55.810 And currently, you have a

NOTE Confidence: 0.9750193

13

00:05:55.810 --> 00:05:56.310 wonderful

NOTE Confidence: 0.972532

00:05:58.645 --> 00:06:00.745 lung pathology research team here,

NOTE Confidence: 0.9303416

00:06:01.365 --> 00:06:02.805 in the department, and,

NOTE Confidence: 0.97342616

00:06:03.125 --> 00:06:04.404 I've had the privilege of

NOTE Confidence: 0.97342616

00:06:04.404 --> 00:06:04.904 working,

NOTE Confidence: 0.9857447

00:06:05.764 --> 00:06:07.125 side by side with,

NOTE Confidence: 0.9874083

00:06:07.604 --> 00:06:08.824 most of these individuals,

NOTE Confidence: 0.97356796

00:06:10.085 --> 00:06:10.585 particularly,

NOTE Confidence: 0.8967571

00:06:11.604 --> 00:06:14.500 Kurt, David, Katarina, who overlapped

NOTE Confidence: 0.8967571

00:06:14.560 --> 00:06:15.600 a little bit when,

NOTE Confidence: 0.9438661

00:06:16.480 --> 00:06:17.779 she was still at MSK

NOTE Confidence: 0.9438661

00:06:17.920 --> 00:06:19.140 and I had just arrived.

NOTE Confidence: 0.9519513

00:06:19.839 --> 00:06:21.680 And then, Frank Detterbeck has

NOTE Confidence: 0.9519513

00:06:21.680 --> 00:06:22.500 been a

NOTE Confidence: 0.84587693

00:06:22.880 --> 00:06:23.360 very,

NOTE Confidence: 0.9992592

00:06:23.760 --> 00:06:25.620 close friend over many years

NOTE Confidence: 0.9114472

00:06:26.154 --> 00:06:27.675 and a collaborator on many

NOTE Confidence: 0.9114472

00:06:27.675 --> 00:06:28.154 important,

NOTE Confidence: 0.95804703

00:06:28.475 --> 00:06:30.574 projects, particularly lung cancer staging.

NOTE Confidence: 0.99575275

00:06:31.995 --> 00:06:33.115 So the outline of the

NOTE Confidence: 0.99575275

00:06:33.115 --> 00:06:34.395 talk is to talk about

NOTE Confidence: 0.99575275

00:06:34.395 --> 00:06:35.995 the history and approach to,

NOTE Confidence: 0.9390383

00:06:36.395 --> 00:06:38.175 WHO lung cancer classification.

NOTE Confidence: 0.98372406

00:06:39.669 --> 00:06:40.789 But the focus of this

NOTE Confidence: 0.98372406

00:06:40.789 --> 00:06:42.650 will be the sort of

NOTE Confidence: 0.98372406

00:06:42.949 --> 00:06:44.870 inner workings and logistics of

NOTE Confidence: 0.98372406

00:06:44.870 --> 00:06:46.310 the two thousand eleven lung

NOTE Confidence: 0.98372406

00:06:46.310 --> 00:06:46.810 adenocarcinoma

NOTE Confidence: 0.8673092

00:06:47.270 --> 00:06:48.889 classification where we address,

NOTE Confidence: 0.9957663

00:06:50.710 --> 00:06:52.710 both advanced lung cancers and

NOTE Confidence: 0.9957663

00:06:52.710 --> 00:06:53.770 resected adenocarcinomas.

NOTE Confidence: 0.98826927

00:06:55.135 --> 00:06:56.654 And then I've also been

NOTE Confidence: 0.98826927

00:06:56.654 --> 00:06:58.115 privileged to be involved with

NOTE Confidence: 0.98826927

00:06:58.335 --> 00:07:00.595 classifications of interstitial lung disease.

NOTE Confidence: 0.9616908

00:07:02.095 --> 00:07:03.855 So I highlighted some of

NOTE Confidence: 0.9616908

00:07:03.855 --> 00:07:05.935 the individuals who've been key

NOTE Confidence: 0.9616908

00:07:05.935 --> 00:07:08.015 members and, Sonia, you wanna

NOTE Confidence: 0.9616908

00:07:08.015 --> 00:07:09.154 see your picture here.

NOTE Confidence: 0.8137176

00:07:12.320 --> 00:07:12.820 So,

NOTE Confidence: 0.99701965

00:07:13.440 --> 00:07:14.340 as as

NOTE Confidence: 0.9598106

00:07:14.640 --> 00:07:15.300 a Yale,

NOTE Confidence: 0.9764431

00:07:15.680 --> 00:07:17.360 pathologist who I've been very

NOTE Confidence: 0.9764431

00:07:17.360 --> 00:07:19.040 involved with over the years

NOTE Confidence: 0.9764431

00:07:19.040 --> 00:07:19.860 in classification

NOTE Confidence: 0.9573971

00:07:20.480 --> 00:07:20.980 of,

NOTE Confidence: 0.93349457

00:07:21.840 --> 00:07:22.740 lung cancer,

NOTE Confidence: 0.9996991

00:07:23.895 --> 00:07:25.035 My career started

NOTE Confidence: 0.9612668

00:07:25.415 --> 00:07:27.575 with classification of neuroendocrine lung

NOTE Confidence: 0.9612668

00:07:27.575 --> 00:07:29.275 tumors, and then as,

NOTE Confidence: 0.96573204

00:07:29.815 --> 00:07:32.135 doctor Dasik mentioned, being involved

NOTE Confidence: 0.96573204

00:07:32.135 --> 00:07:33.595 with the last four WHO

NOTE Confidence: 0.96573204

00:07:33.735 --> 00:07:34.235 classifications

NOTE Confidence: 0.9826146

00:07:35.415 --> 00:07:37.095 of lung, pleural, and thymic

NOTE Confidence: 0.9826146

00:07:37.095 --> 00:07:37.595 tumors.

NOTE Confidence: 0.9942596

00:07:39.180 --> 00:07:39.819 And then,

NOTE Confidence: 0.99855703

00:07:40.539 --> 00:07:41.680 the adenocarcinoma

NOTE Confidence: 0.9812543

00:07:42.220 --> 00:07:43.500 classification, I would say, is

NOTE Confidence: 0.9812543

00:07:43.500 --> 00:07:44.000 probably

NOTE Confidence: 0.98674905

00:07:44.940 --> 00:07:45.919 one of the most,

NOTE Confidence: 0.9726788

00:07:47.500 --> 00:07:49.419 amazing experiences that I have

NOTE Confidence: 0.9726788

00:07:49.419 --> 00:07:51.020 been involved with as a

NOTE Confidence: 0.9726788

00:07:51.020 --> 00:07:51.520 professional

NOTE Confidence: 0.9655142

00:07:52.139 --> 00:07:54.220 from the classification standpoint, and

NOTE Confidence: 0.9655142

00:07:54.220 --> 00:07:55.555 and we'll get into that.

NOTE Confidence: 0.9655142

00:07:55.555 --> 00:07:56.695 So what is the WHO

NOTE Confidence: 0.9655142

00:07:56.755 --> 00:07:59.155 classification? It's a pathologic and

NOTE Confidence: 0.9655142

00:07:59.155 --> 00:08:00.215 genetic classification

NOTE Confidence: 0.97742885

00:08:01.235 --> 00:08:03.175 and grading of human tumors

NOTE Confidence: 0.97742885

00:08:03.235 --> 00:08:04.595 designed to be accepted and

NOTE Confidence: 0.97742885

00:08:04.595 --> 00:08:05.415 used worldwide.

NOTE Confidence: 0.9993743

00:08:06.435 --> 00:08:07.095 It provides

NOTE Confidence: 0.9817914

00:08:07.510 --> 00:08:10.490 standard criteria for, pathology diagnosis

NOTE Confidence: 0.9817914

00:08:10.710 --> 00:08:12.010 and clinical practice,

NOTE Confidence: 0.96967906

00:08:12.950 --> 00:08:13.930 cancer registration,

NOTE Confidence: 0.9925304

00:08:14.230 --> 00:08:14.730 epidemiologic

NOTE Confidence: 0.97685325

00:08:15.190 --> 00:08:15.690 studies,

NOTE Confidence: 0.9884652

00:08:16.390 --> 00:08:18.250 and clinical trials and research.

NOTE Confidence: 0.9523989

00:08:21.005 --> 00:08:23.345 So since the first WHO,

NOTE Confidence: 0.9798326

00:08:23.885 --> 00:08:25.805 was published in nineteen sixty

NOTE Confidence: 0.9798326

00:08:25.805 --> 00:08:26.305 seven,

NOTE Confidence: 0.9887611

00:08:26.845 --> 00:08:28.285 where it was basically based

NOTE Confidence: 0.9887611

00:08:28.285 --> 00:08:30.065 on H and E, stains,

NOTE Confidence: 0.943657

00:08:30.685 --> 00:08:33.085 we've had increasing complexity adding

NOTE Confidence: 0.943657

00:08:33.085 --> 00:08:35.509 mucin stains, electron microscopy, then

NOTE Confidence: 0.943657

00:08:35.509 --> 00:08:36.009 immunohistochemistry,

NOTE Confidence: 0.97242033

00:08:38.069 --> 00:08:38.550 then,

NOTE Confidence: 0.9706583

00:08:38.949 --> 00:08:41.769 genetics, cytology, and radiology. And,

NOTE Confidence: 0.9706583

00:08:41.829 --> 00:08:43.529 of course, this makes everything

NOTE Confidence: 0.9706583

00:08:43.589 --> 00:08:44.410 more complex,

NOTE Confidence: 0.98895854

00:08:45.350 --> 00:08:46.649 but it has

NOTE Confidence: 0.9846407

00:08:47.265 --> 00:08:48.885 made our role as pathologists

NOTE Confidence: 0.9991441

00:08:49.265 --> 00:08:50.165 to be increasingly

NOTE Confidence: 0.9999497

00:08:50.705 --> 00:08:51.205 relevant

NOTE Confidence: 0.93879396

00:08:51.825 --> 00:08:53.205 for clinical practice.

NOTE Confidence: 0.99909616

00:08:55.665 --> 00:08:56.165 So

NOTE Confidence: 0.9918787

00:08:57.345 --> 00:08:58.545 in order to design a

NOTE Confidence: 0.9918787

00:08:58.545 --> 00:08:59.045 classification,

NOTE Confidence: 0.9826018

00:08:59.425 --> 00:09:00.145 you have to,

NOTE Confidence: 0.9989266

00:09:00.545 --> 00:09:01.045 identify

NOTE Confidence: 0.92386115

00:09:01.425 --> 00:09:02.165 a need,

NOTE Confidence: 0.9953272

00:09:02.780 --> 00:09:04.700 for a classification or an

NOTE Confidence: 0.9953272

00:09:04.700 --> 00:09:05.200 update

NOTE Confidence: 0.8129884

00:09:06.220 --> 00:09:06.700 and,

NOTE Confidence: 0.9939626

00:09:07.260 --> 00:09:08.480 involve key stakeholders.

NOTE Confidence: 0.9825148

00:09:09.340 --> 00:09:10.620 And as we've learned in

NOTE Confidence: 0.9825148

00:09:10.620 --> 00:09:12.380 the last years, having a

NOTE Confidence: 0.9825148

00:09:12.380 --> 00:09:12.880 multidisciplinary,

NOTE Confidence: 0.9673552

00:09:15.100 --> 00:09:16.559 committee is very important.

NOTE Confidence: 0.97249705

00:09:17.905 --> 00:09:19.205 Then you have to obtain

NOTE Confidence: 0.97249705

00:09:19.425 --> 00:09:20.565 society sponsorship.

NOTE Confidence: 0.99548036

00:09:21.105 --> 00:09:22.065 Then you have to build

NOTE Confidence: 0.99548036

00:09:22.065 --> 00:09:22.725 an expert,

NOTE Confidence: 0.9737578

00:09:23.665 --> 00:09:24.165 multidisciplinary

NOTE Confidence: 0.8549344

00:09:24.705 --> 00:09:25.925 and collaborative team,

NOTE Confidence: 0.9895813

00:09:26.625 --> 00:09:28.005 provide strong leadership,

NOTE Confidence: 0.99957895

00:09:29.345 --> 00:09:30.085 run meetings

NOTE Confidence: 0.99580127

00:09:30.545 --> 00:09:31.665 in a way to achieve

NOTE Confidence: 0.99580127

00:09:31.665 --> 00:09:32.165 consensus,

NOTE Confidence: 0.9992859

00:09:33.110 --> 00:09:33.930 and then analyze

NOTE Confidence: 0.99905324

00:09:34.790 --> 00:09:36.790 evidence to support whatever changes

NOTE Confidence: 0.99905324

00:09:36.790 --> 00:09:38.330 you're planning to make.

NOTE Confidence: 0.84451044

00:09:40.390 --> 00:09:42.410 It should be, prompt comprehensive,

NOTE Confidence: 0.90009624

00:09:43.110 --> 00:09:44.630 leaving a minimal number of

NOTE Confidence: 0.90009624

00:09:44.630 --> 00:09:46.470 tumors unclassified. There always is

NOTE Confidence: 0.90009624

21

00:09:46.470 --> 00:09:48.090 gonna be unclassified tumors.

NOTE Confidence: 0.938039

00:09:48.865 --> 00:09:49.905 It should be as simple

NOTE Confidence: 0.938039

00:09:49.905 --> 00:09:50.565 as possible,

NOTE Confidence: 0.9857296

00:09:51.985 --> 00:09:53.525 precise with clear definitions.

NOTE Confidence: 0.96523213

00:09:54.785 --> 00:09:56.405 Morphology is the foundation,

NOTE Confidence: 0.9616286

00:09:57.745 --> 00:10:00.005 although we certainly are,

NOTE Confidence: 0.94455594

00:10:00.945 --> 00:10:02.565 cognizant of the need to,

NOTE Confidence: 0.93446875

00:10:03.140 --> 00:10:06.200 involve ancillary techniques, particular molecular

NOTE Confidence: 0.93446875

00:10:06.260 --> 00:10:07.480 techniques these days.

NOTE Confidence: 0.9809474

00:10:08.179 --> 00:10:09.240 And it should be

NOTE Confidence: 0.7750357

00:10:10.020 --> 00:10:10.520 sufficiently

NOTE Confidence: 0.99516493

00:10:10.900 --> 00:10:12.980 reproducible to allow pathologists to

NOTE Confidence: 0.99516493

00:10:12.980 --> 00:10:13.480 type

NOTE Confidence: 0.9833785

00:10:13.860 --> 00:10:15.720 a tumor, the same way.

NOTE Confidence: 0.97594947

00:10:16.675 --> 00:10:18.054 And we like to retain

NOTE Confidence: 0.9893647

00:10:18.355 --> 00:10:20.135 time honored terms and concepts

NOTE Confidence: 0.9893647

00:10:20.355 --> 00:10:21.255 until evidence,

NOTE Confidence: 0.9987563

00:10:21.635 --> 00:10:22.135 justifies

NOTE Confidence: 0.9880717

00:10:22.515 --> 00:10:23.175 a change.

NOTE Confidence: 0.97684413

00:10:25.155 --> 00:10:26.595 So when we started the

NOTE Confidence: 0.97684413

00:10:26.595 --> 00:10:28.135 two thousand eleven adenocarcinoma

NOTE Confidence: 0.73326504

00:10:28.595 --> 00:10:29.070 classification,

NOTE Confidence: 0.8384209

00:10:31.550 --> 00:10:32.050 multidisciplinary,

NOTE Confidence: 0.93293744

00:10:32.990 --> 00:10:34.610 classification of lung adenocarcinoma

NOTE Confidence: 0.90365267

00:10:35.309 --> 00:10:36.850 that could become an international

NOTE Confidence: 0.90365267

00:10:37.070 --> 00:10:37.570 standard.

NOTE Confidence: 0.9018118

00:10:38.670 --> 00:10:39.650 We sought sponsorship

NOTE Confidence: 0.83558786

00:10:40.030 --> 00:10:41.710 through the International Association of

NOTE Confidence: 0.83558786

00:10:41.710 --> 00:10:43.010 the Study of Lung Cancer,

NOTE Confidence: 0.83558786

00:10:43.070 --> 00:10:43.570 ISLC,

NOTE Confidence: 0.94107115

00:10:45.095 --> 00:10:47.115 American Thoracic Society, and European

NOTE Confidence: 0.94107115

00:10:47.255 --> 00:10:49.255 response Respiratory Society. It was

NOTE Confidence: 0.94107115

00:10:49.255 --> 00:10:50.715 not trivial to get

NOTE Confidence: 0.98311764

00:10:51.175 --> 00:10:52.934 any one of these, groups

NOTE Confidence: 0.98311764

00:10:52.934 --> 00:10:54.395 to support the project.

NOTE Confidence: 0.9822114

00:10:55.735 --> 00:10:57.575 So we designed a core

NOTE Confidence: 0.9822114

00:10:57.575 --> 00:10:58.075 multidisciplinary

NOTE Confidence: 0.93855345

00:10:58.695 --> 00:10:59.429 panel that,

NOTE Confidence: 0.989967

00:11:00.149 --> 00:11:02.010 attended the meetings in person.

NOTE Confidence: 0.8284014

00:11:04.070 --> 00:11:05.429 They directed the system

NOTE Confidence: 0.9681964

00:11:05.830 --> 00:11:07.529 systematic review and,

NOTE Confidence: 0.9272286

00:11:09.190 --> 00:11:11.050 helped to write the document.

NOTE Confidence: 0.9637073

00:11:12.605 --> 00:11:13.885 So that was a finite

NOTE Confidence: 0.9637073

00:11:13.885 --> 00:11:16.365 relatively small group, although thirty

NOTE Confidence: 0.9637073

00:11:16.365 --> 00:11:17.425 to forty people.

NOTE Confidence: 0.9540473

00:11:19.165 --> 00:11:20.925 And then we had a

NOTE Confidence: 0.9540473

00:11:20.925 --> 00:11:22.524 reviewer group, and this is

NOTE Confidence: 0.9540473

00:11:22.524 --> 00:11:24.204 a great concept. These are

NOTE Confidence: 0.9540473

00:11:24.204 --> 00:11:25.725 people who reviewed the document.

NOTE Confidence: 0.9540473

00:11:25.725 --> 00:11:27.184 They were sent in advance.

NOTE Confidence: 0.995207

00:11:27.770 --> 00:11:29.690 This was distributed to over

NOTE Confidence: 0.995207

00:11:29.690 --> 00:11:30.970 a hundred people all over

NOTE Confidence: 0.995207

00:11:30.970 --> 00:11:31.630 the world,

NOTE Confidence: 0.68594575

00:11:32.650 --> 00:11:33.150 soliciting

NOTE Confidence: 0.9828959

00:11:33.530 --> 00:11:35.210 their feedback. So they were

NOTE Confidence: 0.9828959

00:11:35.210 --> 00:11:35.710 then,

NOTE Confidence: 0.99940616

00:11:36.650 --> 00:11:37.870 the local champions

NOTE Confidence: 0.9810437

00:11:38.490 --> 00:11:40.010 of the classification, which is

NOTE Confidence: 0.9810437

00:11:40.010 --> 00:11:41.290 very important because we had

NOTE Confidence: 0.9810437

00:11:41.290 --> 00:11:42.590 a lot of major changes,

NOTE Confidence: 0.9998462

00:11:43.555 --> 00:11:44.215 to implement.

NOTE Confidence: 0.9823895

00:11:46.675 --> 00:11:48.595 So as this project was

NOTE Confidence: 0.9823895

00:11:48.595 --> 00:11:50.035 starting, I guess I had

NOTE Confidence: 0.9823895

00:11:50.035 --> 00:11:51.875 some sixth sense that this

NOTE Confidence: 0.9823895

00:11:51.875 --> 00:11:52.995 was really gonna be a

NOTE Confidence: 0.9823895

00:11:52.995 --> 00:11:54.195 big deal. I had no

NOTE Confidence: 0.9823895

00:11:54.195 --> 00:11:54.695 idea

NOTE Confidence: 0.98041695

00:11:55.155 --> 00:11:56.195 what a big deal it

NOTE Confidence: 0.98041695

00:11:56.195 --> 00:11:57.415 would turn out to be,

NOTE Confidence: 0.972647

00:11:59.280 --> 00:12:00.820 But I felt very inadequate,

NOTE Confidence: 0.99875575

00:12:02.080 --> 00:12:03.380 in terms of my ability

NOTE Confidence: 0.99034435

00:12:03.760 --> 00:12:05.360 to run a meeting and

NOTE Confidence: 0.99034435

00:12:05.360 --> 00:12:07.140 to bring people together.

NOTE Confidence: 0.9635049

00:12:07.840 --> 00:12:09.120 And so I ran across

NOTE Confidence: 0.9635049

00:12:09.120 --> 00:12:10.580 this book in my research,

NOTE Confidence: 0.78848934

00:12:11.040 --> 00:12:11.540 facilitator's

NOTE Confidence: 0.99806386

00:12:12.000 --> 00:12:12.820 guide to

NOTE Confidence: 0.99377656

00:12:13.425 --> 00:12:13.925 Participatory

26

NOTE Confidence: 0.9839897

00:12:14.304 --> 00:12:15.205 Decision Making.

NOTE Confidence: 0.9865084

00:12:15.585 --> 00:12:16.625 And I just pulled out

NOTE Confidence: 0.9865084

00:12:16.625 --> 00:12:17.445 one of the,

NOTE Confidence: 0.91132784

00:12:18.865 --> 00:12:20.245 illustrations from this.

NOTE Confidence: 0.9857291

00:12:20.865 --> 00:12:22.965 And it's very helpful because

NOTE Confidence: 0.95216686

00:12:23.825 --> 00:12:25.745 it outlines the dynamics where

NOTE Confidence: 0.95216686

00:12:25.745 --> 00:12:26.865 in the beginning, you have

NOTE Confidence: 0.95216686

00:12:26.865 --> 00:12:28.705 divergent thinking. So you try

NOTE Confidence: 0.95216686

00:12:28.705 --> 00:12:30.540 to just get everyone to

NOTE Confidence: 0.95216686

00:12:30.679 --> 00:12:31.819 share their ideas.

NOTE Confidence: 0.9209795

00:12:33.079 --> 00:12:34.600 Then you go into this

NOTE Confidence: 0.9209795

00:12:34.600 --> 00:12:35.100 struggle

NOTE Confidence: 0.9585782

00:12:35.559 --> 00:12:37.420 in the service of integration.

NOTE Confidence: 0.94446146

00:12:38.440 --> 00:12:40.360 And then there's a sort

NOTE Confidence: 0.94446146

00:12:40.360 --> 00:12:42.120 of concluding phase, which you

NOTE Confidence: 0.94446146

00:12:42.120 --> 00:12:43.425 hope happens, doesn't

NOTE Confidence: 0.89305174

00:12:43.804 --> 00:12:45.645 necessarily have to happen, of

NOTE Confidence: 0.89305174

00:12:45.645 --> 00:12:46.625 convergent thinking.

NOTE Confidence: 0.97895557

00:12:47.645 --> 00:12:49.745 And that middle zone is

NOTE Confidence: 0.97895557

00:12:49.885 --> 00:12:51.505 also called the groan zone.

NOTE Confidence: 0.99782324

00:12:52.445 --> 00:12:53.985 And, I've always

NOTE Confidence: 0.9980025

00:12:54.684 --> 00:12:55.505 really felt

NOTE Confidence: 0.88054246

00:12:55.885 --> 00:12:56.945 in all classification

NOTE Confidence: 0.98456097

00:12:57.325 --> 00:12:58.980 efforts that I've led, it's

NOTE Confidence: 0.98456097

00:12:58.980 --> 00:12:59.640 so important

NOTE Confidence: 0.9791509

00:13:00.420 --> 00:13:01.540 to really get to the

NOTE Confidence: 0.9791509

00:13:01.540 --> 00:13:03.459 core issues and let people

NOTE Confidence: 0.9791509

00:13:03.459 --> 00:13:05.220 say whatever they want, feel

NOTE Confidence: 0.9791509

00:13:05.220 --> 00:13:06.420 free to say whatever they

NOTE Confidence: 0.9791509

00:13:06.420 --> 00:13:08.420 want, most importantly, that they

NOTE Confidence: 0.9791509

00:13:08.420 --> 00:13:09.880 all feel listened to

NOTE Confidence: 0.98729193

00:13:11.115 --> 00:13:13.054 so that if even if,

NOTE Confidence: 0.9982268

00:13:14.075 --> 00:13:15.434 the consensus goes in a

NOTE Confidence: 0.9982268

00:13:15.434 --> 00:13:17.355 different direction, they still are

NOTE Confidence: 0.9982268

00:13:17.355 --> 00:13:18.655 willing to take ownership

NOTE Confidence: 0.96961266

00:13:19.275 --> 00:13:20.715 that the conclusion is what

NOTE Confidence: 0.96961266

00:13:20.715 --> 00:13:22.175 is best for the field

NOTE Confidence: 0.96961266

00:13:22.235 --> 00:13:22.735 and,

NOTE Confidence: 0.76726806

00:13:23.675 --> 00:13:23.995 the,

NOTE Confidence: 0.9971957

00:13:25.300 --> 00:13:27.160 summary opinion of the group.

NOTE Confidence: 0.9701771

00:13:27.860 --> 00:13:29.139 So that but that groan

NOTE Confidence: 0.9701771

00:13:29.139 --> 00:13:30.440 zone can be very painful.

NOTE Confidence: 0.9701771

00:13:30.500 --> 00:13:30.819 And,

NOTE Confidence: 0.979269

00:13:31.540 --> 00:13:33.059 you'd really if you don't

NOTE Confidence: 0.979269

00:13:33.059 --> 00:13:34.100 ever go through that, then

NOTE Confidence: 0.979269

00:13:34.100 --> 00:13:35.379 what you're doing probably isn't

NOTE Confidence: 0.979269

00:13:35.379 --> 00:13:36.040 that important.

NOTE Confidence: 0.93779385

00:13:37.054 --> 00:13:39.054 So it's an important point

NOTE Confidence: 0.93779385

00:13:39.054 --> 00:13:40.975 for all you young folks

NOTE Confidence: 0.93779385

00:13:40.975 --> 00:13:42.834 to realize that disagreements

NOTE Confidence: 0.9477937

00:13:44.255 --> 00:13:46.095 are quite acceptable and actually

NOTE Confidence: 0.9477937

00:13:46.095 --> 00:13:47.695 will help make whatever you

NOTE Confidence: 0.9477937

00:13:47.695 --> 00:13:48.515 come up with

NOTE Confidence: 0.99560714

00:13:48.860 --> 00:13:50.140 to be a much stronger

NOTE Confidence: 0.99560714

00:13:50.140 --> 00:13:51.580 foundation. And if you never

NOTE Confidence: 0.99560714

00:13:51.580 --> 00:13:53.740 go into digging into those

NOTE Confidence: 0.99560714

00:13:53.740 --> 00:13:54.240 disagreements,

NOTE Confidence: 0.9808237

00:13:54.940 --> 00:13:56.220 before you come to,

NOTE Confidence: 0.985005

00:13:56.620 --> 00:13:57.120 consensus,

NOTE Confidence: 0.9919199

00:13:57.740 --> 00:13:58.940 you you maybe you haven't

NOTE Confidence: 0.9919199

00:13:58.940 --> 00:14:00.300 really done your job in

NOTE Confidence: 0.9919199

00:14:00.300 --> 00:14:01.760 the best possible way.

NOTE Confidence: 0.9814495

00:14:03.675 --> 00:14:05.275 So my my wife is

NOTE Confidence: 0.9814495

00:14:05.275 --> 00:14:06.815 a, cancer epidemiologist,

NOTE Confidence: 0.9782609

00:14:07.275 --> 00:14:08.015 and she,

NOTE Confidence: 0.99986446

00:14:08.955 --> 00:14:10.575 was invited to attend

NOTE Confidence: 0.9997746

00:14:11.275 --> 00:14:12.015 a meeting

NOTE Confidence: 0.99657035

00:14:12.395 --> 00:14:13.615 at the Bellagio

NOTE Confidence: 0.9468149

00:14:13.915 --> 00:14:15.775 Center in Bellagio, Italy.

NOTE Confidence: 0.97852445

00:14:16.280 --> 00:14:17.160 And it gave me an

NOTE Confidence: 0.97852445

00:14:17.160 --> 00:14:18.360 idea, which is one of

NOTE Confidence: 0.97852445

00:14:18.360 --> 00:14:19.480 the most beautiful places in

NOTE Confidence: 0.97852445

00:14:19.480 --> 00:14:20.440 the world if you've never

NOTE Confidence: 0.97852445

00:14:20.440 --> 00:14:21.100 been there.

NOTE Confidence: 0.97256875

00:14:21.960 --> 00:14:22.460 So,

NOTE Confidence: 0.9875466

00:14:23.720 --> 00:14:25.900 the Rockefeller Foundation has

NOTE Confidence: 0.9993218

00:14:26.520 --> 00:14:28.380 the best property in Bellagio.

NOTE Confidence: 0.9993218

00:14:28.520 --> 00:14:29.660 It's on the tip

NOTE Confidence: 0.97824967

00:14:30.135 --> 00:14:32.055 facing Lake Como and the

NOTE Confidence: 0.97824967

00:14:32.055 --> 00:14:32.955 Swiss Alps.

NOTE Confidence: 0.9911025

00:14:33.575 --> 00:14:35.655 And from the vistas that

NOTE Confidence: 0.9911025

00:14:35.655 --> 00:14:37.435 you can, see from this,

NOTE Confidence: 0.97534186

00:14:38.215 --> 00:14:40.215 incredible place, there's a conference

NOTE Confidence: 0.97534186

00:14:40.215 --> 00:14:41.975 center. And you apply for

NOTE Confidence: 0.97534186

00:14:41.975 --> 00:14:43.415 a grant, and if you

NOTE Confidence: 0.97534186

00:14:43.415 --> 00:14:44.615 get approved, you can take

NOTE Confidence: 0.97534186

00:14:44.615 --> 00:14:45.595 a meeting there.

NOTE Confidence: 0.98304874

00:14:47.200 --> 00:14:48.260 So this is

NOTE Confidence: 0.989085

00:14:48.880 --> 00:14:51.140 the very core writing group,

NOTE Confidence: 0.953629

00:14:51.600 --> 00:14:52.420 from our,

NOTE Confidence: 0.9205599

00:14:54.080 --> 00:14:55.300 ISLC committee.

NOTE Confidence: 0.9990933

00:14:56.240 --> 00:14:56.740 And

NOTE Confidence: 0.99929494

00:14:59.645 --> 00:15:00.605 what I was able to

NOTE Confidence: 0.99929494

00:15:00.605 --> 00:15:01.485 do in a place like

NOTE Confidence: 0.99929494

00:15:01.485 --> 00:15:02.545 this was

NOTE Confidence: 0.99787647

00:15:02.925 --> 00:15:05.665 really push everybody's buttons

NOTE Confidence: 0.96970576

00:15:06.285 --> 00:15:07.565 to really bring out we

NOTE Confidence: 0.96970576

00:15:07.565 --> 00:15:09.325 had really difficult issues to

NOTE Confidence: 0.96970576

00:15:09.325 --> 00:15:10.065 sort through.

NOTE Confidence: 0.9488794

00:15:10.730 --> 00:15:12.649 And, so you would think

NOTE Confidence: 0.9488794

00:15:12.649 --> 00:15:14.250 people were almost at the

NOTE Confidence: 0.9488794

00:15:14.250 --> 00:15:15.610 point of blows with very

NOTE Confidence: 0.9488794

00:15:15.610 --> 00:15:17.449 strong disagreements, and then you

NOTE Confidence: 0.9488794

00:15:17.449 --> 00:15:18.569 go to a break and

NOTE Confidence: 0.9488794

00:15:18.569 --> 00:15:20.490 you, lower the shades and

NOTE Confidence: 0.9488794

00:15:20.490 --> 00:15:21.370 you look out of this

NOTE Confidence: 0.9488794

00:15:21.370 --> 00:15:22.904 view and you go, ah.

NOTE Confidence: 0.9488794

00:15:22.904 --> 00:15:23.485 You just

NOTE Confidence: 0.9639117

00:15:23.865 --> 00:15:25.785 you know, we're everything's fine,

NOTE Confidence: 0.9639117

00:15:25.785 --> 00:15:27.065 and, you know, we're we're

NOTE Confidence: 0.9639117

00:15:27.065 --> 00:15:28.685 we're in this together. And

NOTE Confidence: 0.98429567

00:15:29.144 --> 00:15:30.425 so it's the beauty of

NOTE Confidence: 0.98429567

00:15:30.425 --> 00:15:31.945 having a a resource like

NOTE Confidence: 0.98429567

00:15:31.945 --> 00:15:33.065 that. So that's the kind

NOTE Confidence: 0.98429567

00:15:33.065 --> 00:15:34.584 of thing as a leader

NOTE Confidence: 0.98429567

00:15:34.584 --> 00:15:35.404 of a project,

NOTE Confidence: 0.9993823

00:15:36.185 --> 00:15:38.040 when it's really difficult to

NOTE Confidence: 0.9993823

00:15:38.120 --> 00:15:39.740 come up with creative ideas

NOTE Confidence: 0.971035

00:15:40.519 --> 00:15:42.300 to help your, committee

NOTE Confidence: 0.954555

00:15:43.160 --> 00:15:44.600 work hard but enjoy the

NOTE Confidence: 0.954555

00:15:44.600 --> 00:15:45.980 work that's being done.

NOTE Confidence: 0.9487249

00:15:47.720 --> 00:15:49.480 In that, book that I

NOTE Confidence: 0.9487249

00:15:49.480 --> 00:15:51.480 mentioned, the idea of chart

NOTE Confidence: 0.9487249

00:15:51.480 --> 00:15:52.839 writing came up, and this

NOTE Confidence: 0.9487249

00:15:52.839 --> 00:15:53.339 is

NOTE Confidence: 0.94211835

00:15:53.834 --> 00:15:55.834 incredibly valuable. Here you see,

NOTE Confidence: 0.95447886

00:15:57.274 --> 00:15:59.295 you get these large yellow,

NOTE Confidence: 0.7935308

00:16:00.714 --> 00:16:01.214 pads

NOTE Confidence: 0.9937841

00:16:01.754 --> 00:16:03.375 with sticky on the top.

NOTE Confidence: 0.9759847

00:16:03.915 --> 00:16:05.774 As the discussion goes on,

NOTE Confidence: 0.9759847

00:16:05.995 --> 00:16:08.110 you have a chart writer

NOTE Confidence: 0.9759847

00:16:08.110 --> 00:16:10.270 who summarizes the various points

NOTE Confidence: 0.9759847

00:16:10.270 --> 00:16:11.330 that are being made.

NOTE Confidence: 0.9683528

00:16:11.870 --> 00:16:13.230 And you need someone who

NOTE Confidence: 0.9683528

00:16:13.230 --> 00:16:15.810 can write legibly and also,

NOTE Confidence: 0.96972066

00:16:16.990 --> 00:16:18.850 well summarize what's being said.

NOTE Confidence: 0.9896991

00:16:19.630 --> 00:16:20.670 And then you post them

NOTE Confidence: 0.9896991

00:16:20.670 --> 00:16:21.810 all around the room.

NOTE Confidence: 0.9547847

00:16:22.515 --> 00:16:24.115 And then these create minutes

NOTE Confidence: 0.9547847

00:16:24.115 --> 00:16:25.635 of your meeting. So, you

NOTE Confidence: 0.9547847

00:16:25.635 --> 00:16:26.595 walk out, you take a

NOTE Confidence: 0.9547847

00:16:26.595 --> 00:16:27.575 picture of these,

NOTE Confidence: 0.96569794

00:16:28.195 --> 00:16:29.095 digital picture,

NOTE Confidence: 0.9826084

00:16:29.715 --> 00:16:30.835 and you have a a

NOTE Confidence: 0.9826084

00:16:30.835 --> 00:16:32.375 permanent record of those.

NOTE Confidence: 0.97134686

00:16:32.835 --> 00:16:34.935 And, this was incredibly valuable,

NOTE Confidence: 0.96871525

00:16:35.560 --> 00:16:37.000 and it was fun for

NOTE Confidence: 0.96871525

00:16:37.000 --> 00:16:37.959 me to go back and

NOTE Confidence: 0.96871525

00:16:37.959 --> 00:16:38.779 look at these.

NOTE Confidence: 0.9493214

00:16:41.079 --> 00:16:42.279 The other thing we did

NOTE Confidence: 0.9493214

00:16:42.279 --> 00:16:44.060 is we did this ATS

NOTE Confidence: 0.9493214

00:16:44.199 --> 00:16:45.319 required us to do a

NOTE Confidence: 0.9493214

00:16:45.319 --> 00:16:46.459 systematic review.

NOTE Confidence: 0.85135365

00:16:46.839 --> 00:16:47.879 Here you can see we

NOTE Confidence: 0.85135365

00:16:47.879 --> 00:16:49.240 had a Marco Gold, a

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NOTE Confidence: 0.85135365

00:16:49.240 --> 00:16:49.740 methodologist,

NOTE Confidence: 0.9368914

00:16:51.035 --> 00:16:52.735 and, all the data was

NOTE Confidence: 0.9368914

00:16:53.035 --> 00:16:54.715 entered from the systematic review

NOTE Confidence: 0.9368914

00:16:54.715 --> 00:16:55.835 in an Excel file. And

NOTE Confidence: 0.9368914

00:16:55.835 --> 00:16:56.975 you could see we had,

NOTE Confidence: 0.99763453

00:16:57.835 --> 00:17:00.255 categories of oncology, pathology, radiology,

NOTE Confidence: 0.9058117

00:17:00.715 --> 00:17:02.095 molecular, and surgery.

NOTE Confidence: 0.99736005

00:17:02.970 --> 00:17:04.570 And, this was a huge

NOTE Confidence: 0.99736005

00:17:04.570 --> 00:17:05.070 work

NOTE Confidence: 0.8932748

00:17:05.609 --> 00:17:05.929 and,

NOTE Confidence: 0.9826017

00:17:06.410 --> 00:17:07.950 created a very strong foundation

NOTE Confidence: 0.9826017

00:17:08.090 --> 00:17:09.850 for the conclusions we made.

NOTE Confidence: 0.9826017

00:17:09.850 --> 00:17:10.830 This is the article,

NOTE Confidence: 0.98059094

00:17:11.450 --> 00:17:12.490 and you can see we

NOTE Confidence: 0.98059094

00:17:12.490 --> 00:17:13.710 had a very,

NOTE Confidence: 0.9830176

00:17:14.090 --> 00:17:14.590 multidisciplinary

NOTE Confidence: 0.89631724

00:17:15.130 --> 00:17:16.510 group, pathologists, cytopathologists,

NOTE Confidence: 0.99774194

00:17:16.890 --> 00:17:18.190 radiologists, pulmonologists,

NOTE Confidence: 0.94519114

00:17:19.555 --> 00:17:21.635 oncologists, molecular experts, and a

NOTE Confidence: 0.94519114

00:17:21.635 --> 00:17:22.135 methodologist.

NOTE Confidence: 0.99321145

00:17:24.115 --> 00:17:25.895 So out of this classification,

NOTE Confidence: 0.9988589

00:17:26.195 --> 00:17:27.175 there were multiple

NOTE Confidence: 0.9982915

00:17:27.715 --> 00:17:28.775 paradigm shifts

NOTE Confidence: 0.99220335

00:17:29.315 --> 00:17:30.595 in how we think about

NOTE Confidence: 0.99220335

00:17:30.595 --> 00:17:32.595 diagnosis and classification of lung

NOTE Confidence: 0.99220335

00:17:32.595 --> 00:17:33.095 cancer.

NOTE Confidence: 0.99194837

00:17:33.649 --> 00:17:35.409 We were focusing on lung

NOTE Confidence: 0.99194837

00:17:35.409 --> 00:17:35.909 adenocarcinoma,

NOTE Confidence: 0.8975722

00:17:36.529 --> 00:17:37.429 but in fact,

NOTE Confidence: 0.9905002

00:17:41.090 --> 00:17:41.889 a lot of the work

NOTE Confidence: 0.9905002

00:17:41.889 --> 00:17:43.409 we did spilled over into

NOTE Confidence: 0.9905002

00:17:43.409 --> 00:17:44.230 other tumors.

NOTE Confidence: 0.98971117

00:17:44.690 --> 00:17:45.190 Importantly,

NOTE Confidence: 0.94198745

00:17:46.005 --> 00:17:47.685 how we distinguish adenov from

NOTE Confidence: 0.94198745

00:17:47.685 --> 00:17:48.665 squamous carcinoma.

NOTE Confidence: 0.9871788

00:17:49.285 --> 00:17:50.984 So there were breakthrough discoveries

NOTE Confidence: 0.9871788

00:17:51.125 --> 00:17:52.565 happening at the same time

NOTE Confidence: 0.9871788

00:17:52.565 --> 00:17:54.885 in the medical oncology and

NOTE Confidence: 0.9871788

00:17:54.885 --> 00:17:55.945 molecular world

NOTE Confidence: 0.9719116

00:17:56.565 --> 00:17:59.125 with, breakthrough discoveries of, the

NOTE Confidence: 0.9719116

00:17:59.125 --> 00:17:59.625 eGFR

NOTE Confidence: 0.69643736

00:18:00.244 --> 00:18:01.065 ALT story,

NOTE Confidence: 0.9990557

00:18:02.200 --> 00:18:02.700 as

NOTE Confidence: 0.83264744

00:18:03.560 --> 00:18:05.740 a potential powerful molecular targets.

NOTE Confidence: 0.9917076

00:18:06.680 --> 00:18:07.960 And these led to a

NOTE Confidence: 0.9917076

00:18:07.960 --> 00:18:09.720 genetic revolution where, you know,

NOTE Confidence: 0.9917076

00:18:09.720 --> 00:18:10.440 every time you go to

NOTE Confidence: 0.9917076

00:18:10.440 --> 00:18:11.640 a lung cancer meeting, you

NOTE Confidence: 0.9917076

00:18:11.640 --> 00:18:12.360 sit on the edge of

NOTE Confidence: 0.9917076

00:18:12.360 --> 00:18:14.360 your seat. What's the next

NOTE Confidence: 0.9917076

00:18:14.360 --> 00:18:15.980 gene that's being discovered?

NOTE Confidence: 0.9904008

00:18:17.414 --> 00:18:18.695 We didn't have that before,

NOTE Confidence: 0.9904008

00:18:18.695 --> 00:18:19.815 but this was all going

NOTE Confidence: 0.9904008

00:18:19.815 --> 00:18:20.774 on at the time we

NOTE Confidence: 0.9904008

00:18:20.774 --> 00:18:23.115 were doing this classification project.

NOTE Confidence: 0.99588954

00:18:23.894 --> 00:18:25.914 The concept of personalized medicine

NOTE Confidence: 0.99588954

00:18:25.975 --> 00:18:27.674 and the role that pathologists,

NOTE Confidence: 0.9752422

00:18:28.615 --> 00:18:30.475 are playing in personalized medicine.

NOTE Confidence: 0.9752422

00:18:30.534 --> 00:18:31.034 So

NOTE Confidence: 0.9849229

00:18:31.540 --> 00:18:33.240 what we call adenor squamous

NOTE Confidence: 0.95296186

00:18:33.540 --> 00:18:35.700 drives how the patient gets

NOTE Confidence: 0.95296186

00:18:35.859 --> 00:18:37.300 how the tumor gets worked

NOTE Confidence: 0.95296186

00:18:37.300 --> 00:18:39.060 up and what tests you're

NOTE Confidence: 0.95296186

00:18:39.060 --> 00:18:40.420 going to do and then

NOTE Confidence: 0.95296186

00:18:40.420 --> 00:18:41.540 how the patient's going to

NOTE Confidence: 0.95296186

00:18:41.540 --> 00:18:42.200 get treated.

NOTE Confidence: 0.95984703

00:18:43.060 --> 00:18:44.180 So we developed a whole

NOTE Confidence: 0.95984703

00:18:44.180 --> 00:18:46.375 new approach to, small biopsies

NOTE Confidence: 0.95984703

00:18:46.375 --> 00:18:47.115 and cytology.

NOTE Confidence: 0.954169

00:18:47.494 --> 00:18:48.615 It had never been done

NOTE Confidence: 0.954169

00:18:48.615 --> 00:18:50.315 before in WHO classifications.

NOTE Confidence: 0.9581267

00:18:52.295 --> 00:18:53.835 There was a a legacy

NOTE Confidence: 0.9581267

00:18:53.895 --> 00:18:56.234 term called bronchiolo alveolar carcinoma

NOTE Confidence: 0.9581267

00:18:56.375 --> 00:18:57.115 or BAC.

NOTE Confidence: 0.9216939

00:18:58.670 --> 00:19:00.830 We chose to abandon that

NOTE Confidence: 0.9216939

00:19:00.830 --> 00:19:01.970 because we recognized,

NOTE Confidence: 0.94669116

00:19:03.230 --> 00:19:04.050 new entities,

NOTE Confidence: 0.9893715

00:19:04.430 --> 00:19:04.930 adenocarcinoma

NOTE Confidence: 0.8030572

00:19:05.309 --> 00:19:06.750 and site two, minimally invasive

NOTE Confidence: 0.8030572

00:19:06.750 --> 00:19:07.250 adenocarcinoma,

NOTE Confidence: 0.8057048

00:19:10.125 --> 00:19:11.585 lipidic predominant adenocarcinoma,

NOTE Confidence: 0.98823786

00:19:12.285 --> 00:19:13.665 invasive mucinous adenocarcinoma.

NOTE Confidence: 0.976862

00:19:15.405 --> 00:19:16.705 We learned about multidisciplinary

NOTE Confidence: 0.9457979

00:19:17.165 --> 00:19:17.665 correlations,

NOTE Confidence: 0.9409684

00:19:18.445 --> 00:19:21.345 radiologic pathologic correlations, how lipidic

NOTE Confidence: 0.9797926

00:19:21.645 --> 00:19:23.565 patterns correlated with ground glass

NOTE Confidence: 0.9797926

00:19:23.565 --> 00:19:24.305 on CT

NOTE Confidence: 0.9236658

00:19:25.060 --> 00:19:27.220 or invasive patterns correlated with

NOTE Confidence: 0.9236658

00:19:27.220 --> 00:19:29.400 solder solid patterns on CT.

NOTE Confidence: 0.98163927

00:19:30.020 --> 00:19:31.060 This led to a whole

NOTE Confidence: 0.98163927

00:19:31.060 --> 00:19:33.000 new concept of TNM staging,

NOTE Confidence: 0.9619551

00:19:33.780 --> 00:19:35.540 which actually existed in other

NOTE Confidence: 0.9619551

00:19:35.540 --> 00:19:37.320 organ systems like breast cancer,

NOTE Confidence: 0.95499104

00:19:38.725 --> 00:19:40.404 for decades. We had never

NOTE Confidence: 0.95499104

00:19:40.404 --> 00:19:40.904 had

NOTE Confidence: 0.997223

00:19:41.205 --> 00:19:41.945 the framework

NOTE Confidence: 0.75225735

00:19:42.244 --> 00:19:43.784 of, of pathology

NOTE Confidence: 0.9987953

00:19:44.164 --> 00:19:44.664 patterns

NOTE Confidence: 0.99860024

00:19:45.205 --> 00:19:46.744 to implement this. Now

NOTE Confidence: 0.87158525

00:19:47.445 --> 00:19:48.664 we regard

NOTE Confidence: 0.9499987

00:19:49.365 --> 00:19:50.424 invasive size

NOTE Confidence: 0.99528134

00:19:50.725 --> 00:19:51.544 by CT

NOTE Confidence: 0.939112

00:19:51.924 --> 00:19:53.924 according to the solid size,

NOTE Confidence: 0.939112

00:19:53.924 --> 00:19:54.300 not,

NOTE Confidence: 0.99961233

00:19:54.780 --> 00:19:56.000 the total size

NOTE Confidence: 0.903966

00:19:56.540 --> 00:19:58.400 excluding the ground glass component.

NOTE Confidence: 0.903966

00:19:58.460 --> 00:20:00.220 And similarly, by pathology, we

NOTE Confidence: 0.903966

00:20:00.220 --> 00:20:01.200 only include

NOTE Confidence: 0.9902058

00:20:01.740 --> 00:20:03.580 the invasive size and not

NOTE Confidence: 0.9902058

00:20:03.580 --> 00:20:04.800 the lipidic component.

NOTE Confidence: 0.9859818

00:20:05.100 --> 00:20:06.560 This was a major change

NOTE Confidence: 0.9859818

00:20:06.700 --> 00:20:07.760 impacting staging.

NOTE Confidence: 0.9945337

00:20:08.775 --> 00:20:09.975 So as I mentioned, we

NOTE Confidence: 0.9945337

00:20:09.975 --> 00:20:11.755 developed a whole new classification

NOTE Confidence: 0.92883426

00:20:12.135 --> 00:20:14.475 for, small biopsies and cytology.

NOTE Confidence: 0.87154627

00:20:18.375 --> 00:20:19.835 It was really amazing.

NOTE Confidence: 0.9598619

00:20:20.375 --> 00:20:22.395 When we started this effort,

NOTE Confidence: 0.99918276

00:20:22.980 --> 00:20:23.480 within

NOTE Confidence: 0.9996053

00:20:23.859 --> 00:20:24.520 an hour

NOTE Confidence: 0.99229354

00:20:24.900 --> 00:20:26.040 so we created

NOTE Confidence: 0.9968601

00:20:27.300 --> 00:20:29.160 a list of key questions

NOTE Confidence: 0.9968601

00:20:29.460 --> 00:20:30.740 for each specialty and for

NOTE Confidence: 0.9968601

00:20:30.740 --> 00:20:32.260 the overall project. Within an

NOTE Confidence: 0.9968601

00:20:32.260 --> 00:20:33.480 hour of the first

NOTE Confidence: 0.99563986

00:20:34.020 --> 00:20:35.240 meeting we had,

NOTE Confidence: 0.9781135

00:20:35.540 --> 00:20:36.840 the medical oncologist

NOTE Confidence: 0.99929726

00:20:37.220 --> 00:20:37.960 told us

NOTE Confidence: 0.9536066

00:20:40.895 --> 00:20:42.095 that two thirds of lung

NOTE Confidence: 0.9536066

00:20:42.095 --> 00:20:44.015 cancer patients presented in advanced

NOTE Confidence: 0.9536066

00:20:44.015 --> 00:20:44.515 stages.

NOTE Confidence: 0.873381

00:20:45.535 --> 00:20:48.115 So the WHO classification historically

NOTE Confidence: 0.9352654

00:20:48.575 --> 00:20:50.994 only addressed resected disease,

NOTE Confidence: 0.9971117

00:20:51.295 --> 00:20:52.275 resected tumors.

NOTE Confidence: 0.9996897

00:20:53.870 --> 00:20:54.370 So

NOTE Confidence: 0.97685754

00:20:55.310 --> 00:20:56.270 what we were doing in

NOTE Confidence: 0.97685754

00:20:56.270 --> 00:20:58.290 the WHO was really irrelevant

NOTE Confidence: 0.96553546

00:20:59.150 --> 00:21:00.270 to the majority of lung

NOTE Confidence: 0.96553546

00:21:00.270 --> 00:21:01.710 cancer patients. Boy, I tell

NOTE Confidence: 0.96553546

00:21:01.710 --> 00:21:02.610 you, when that

NOTE Confidence: 0.9935415

00:21:03.470 --> 00:21:04.690 message came out,

NOTE Confidence: 0.9998039

00:21:05.484 --> 00:21:06.784 I was just astonished.

NOTE Confidence: 0.9994473

00:21:07.404 --> 00:21:08.365 So we had a whole

NOTE Confidence: 0.9994473

00:21:08.365 --> 00:21:09.505 new work to do

NOTE Confidence: 0.9060631

00:21:09.965 --> 00:21:11.644 to address the small biopsies

NOTE Confidence: 0.9060631

00:21:11.644 --> 00:21:13.585 in cytology. And, you know,

NOTE Confidence: 0.9699757

00:21:13.885 --> 00:21:15.565 it's in the twenty twenty

NOTE Confidence: 0.9699757

00:21:15.565 --> 00:21:16.764 one book. It's the first

NOTE Confidence: 0.9699757

00:21:16.764 --> 00:21:17.264 chapter.

NOTE Confidence: 0.9548325

00:21:17.940 --> 00:21:19.220 I bet very few people

NOTE Confidence: 0.9548325

00:21:19.220 --> 00:21:20.419 read it, but it's actually

NOTE Confidence: 0.9548325

00:21:20.419 --> 00:21:21.779 the most important chapter in

NOTE Confidence: 0.9548325

00:21:21.779 --> 00:21:22.519 the whole book,

NOTE Confidence: 0.9989302

00:21:23.059 --> 00:21:24.899 because it addresses the majority

NOTE Confidence: 0.9989302

00:21:24.899 --> 00:21:26.200 of lung cancer patients.

NOTE Confidence: 0.93819803

00:21:26.580 --> 00:21:27.380 So now I hope you

NOTE Confidence: 0.93819803

00:21:27.380 --> 00:21:28.179 all go home and read

NOTE Confidence: 0.93819803

00:21:28.179 --> 00:21:28.679 it.

NOTE Confidence: 0.97057873

00:21:31.475 --> 00:21:32.355 So just to give you

NOTE Confidence: 0.97057873

00:21:32.355 --> 00:21:34.295 an idea of the percentage

NOTE Confidence: 0.97057873

00:21:34.355 --> 00:21:35.795 or the numbers of patients,

NOTE Confidence: 0.97057873

00:21:35.795 --> 00:21:37.015 in twenty twenty four,

NOTE Confidence: 0.9918714

00:21:38.035 --> 00:21:39.655 the American Cancer Society,

NOTE Confidence: 0.9693477

00:21:40.595 --> 00:21:42.275 predicts there are gonna be

NOTE Confidence: 0.9693477

00:21:42.275 --> 00:21:43.395 two hundred and over two

NOTE Confidence: 0.9693477

00:21:43.395 --> 00:21:44.915 hundred and thirty four thousand

NOTE Confidence: 0.9693477

00:21:44.915 --> 00:21:46.215 lung cancer patients.

NOTE Confidence: 0.99937975

00:21:46.890 --> 00:21:48.090 If you take out the

NOTE Confidence: 0.99937975

00:21:48.090 --> 00:21:49.850 estimated fifteen percent of small

NOTE Confidence: 0.99937975

00:21:49.850 --> 00:21:50.350 cell,

NOTE Confidence: 0.99909276

00:21:50.730 --> 00:21:52.010 you're left with about two

NOTE Confidence: 0.99909276

00:21:52.010 --> 00:21:53.470 hundred thousand cases.

NOTE Confidence: 0.99207854

00:21:54.490 --> 00:21:55.530 And then if you take

NOTE Confidence: 0.99207854

00:21:55.530 --> 00:21:57.710 the seventy percent of advanced

NOTE Confidence: 0.99207854

00:21:57.850 --> 00:21:58.330 stage,

NOTE Confidence: 0.9573192

00:21:58.650 --> 00:22:00.090 patients, it's, like, a hundred

NOTE Confidence: 0.9573192

00:22:00.090 --> 00:22:01.965 and forty thousand patients. It's

NOTE Confidence: 0.9573192

00:22:01.965 --> 00:22:04.125 a major public, health problem.

NOTE Confidence: 0.9573192

00:22:04.125 --> 00:22:04.625 So,

NOTE Confidence: 0.98018956

00:22:05.244 --> 00:22:06.525 we really had a major

NOTE Confidence: 0.98018956

00:22:06.525 --> 00:22:07.805 job to do to address

NOTE Confidence: 0.98018956

00:22:07.805 --> 00:22:08.685 that. And that was a

NOTE Confidence: 0.98018956

00:22:08.685 --> 00:22:10.125 huge work, which I think

NOTE Confidence: 0.98018956

00:22:10.125 --> 00:22:10.625 has,

NOTE Confidence: 0.99954414

00:22:11.165 --> 00:22:12.785 been a very valuable contribution.

NOTE Confidence: 0.9625801

00:22:15.090 --> 00:22:15.490 So,

NOTE Confidence: 0.9616561

00:22:16.850 --> 00:22:18.210 I know many of you,

NOTE Confidence: 0.9616561

00:22:18.210 --> 00:22:19.910 certainly those involved in thoracic,

NOTE Confidence: 0.9616561

00:22:19.970 --> 00:22:21.170 are very well aware of

NOTE Confidence: 0.9616561

00:22:21.170 --> 00:22:22.390 this, discovery.

NOTE Confidence: 0.99902487

00:22:23.170 --> 00:22:23.910 This is

NOTE Confidence: 0.92532134

00:22:25.410 --> 00:22:26.710 a patient with

NOTE Confidence: 0.98181534

00:22:27.734 --> 00:22:29.355 advanced lung adenocarcinoma

NOTE Confidence: 0.99482274

00:22:29.895 --> 00:22:30.635 with bilateral

NOTE Confidence: 0.97833085

00:22:31.335 --> 00:22:32.555 extensive infiltrates.

NOTE Confidence: 0.9645428

00:22:35.494 --> 00:22:37.255 And for whatever reason, this

NOTE Confidence: 0.9645428

00:22:37.255 --> 00:22:38.395 patient was given,

NOTE Confidence: 0.98254794

00:22:38.935 --> 00:22:39.435 gefitinib,

NOTE Confidence: 0.9944731

00:22:39.895 --> 00:22:41.415 which is a tyrosine kinase

NOTE Confidence: 0.9944731

00:22:41.415 --> 00:22:42.475 inhibitor that

NOTE Confidence: 0.9660843

00:22:42.869 --> 00:22:44.010 targets the EGFR,

NOTE Confidence: 0.49905223

00:22:44.550 --> 00:22:45.050 mutation,

NOTE Confidence: 0.92504996

00:22:46.230 --> 00:22:47.690 the EGFR gene.

NOTE Confidence: 0.9858884

00:22:48.790 --> 00:22:50.550 In five days, look at

NOTE Confidence: 0.9858884

00:22:50.550 --> 00:22:51.210 what happened.

NOTE Confidence: 0.969342

00:22:53.510 --> 00:22:54.010 And

NOTE Confidence: 0.9970307

00:22:54.390 --> 00:22:55.510 they had no idea what

NOTE Confidence: 0.9970307

00:22:55.510 --> 00:22:56.170 had happened.

NOTE Confidence: 0.9810754

00:22:56.744 --> 00:22:58.605 This was an empirical observation,

NOTE Confidence: 0.99824446

00:22:58.905 --> 00:23:00.425 and only later was it

NOTE Confidence: 0.99824446

00:23:00.425 --> 00:23:02.025 figured out that it was

NOTE Confidence: 0.99824446

00:23:02.025 --> 00:23:02.525 because,

NOTE Confidence: 0.8904746

00:23:03.225 --> 00:23:04.445 it tar this,

NOTE Confidence: 0.99963963

00:23:04.744 --> 00:23:05.885 drug targets

NOTE Confidence: 0.97221863

00:23:06.425 --> 00:23:08.525 the EGFR gene. But

NOTE Confidence: 0.94074905

00:23:10.260 --> 00:23:11.780 I know and I expect

NOTE Confidence: 0.94074905

00:23:11.780 --> 00:23:12.820 that many of you were

NOTE Confidence: 0.94074905

00:23:12.820 --> 00:23:13.720 at this meeting,

NOTE Confidence: 0.9986952

00:23:15.060 --> 00:23:16.200 here at Yale

NOTE Confidence: 0.9617382

00:23:16.580 --> 00:23:18.500 that was sponsored to celebrate

NOTE Confidence: 0.9617382

00:23:18.500 --> 00:23:19.720 the twentieth anniversary

NOTE Confidence: 0.97309643

00:23:20.420 --> 00:23:22.040 of the discovery of EGFR

NOTE Confidence: 0.97309643

00:23:22.100 --> 00:23:22.600 mutations

NOTE Confidence: 0.985669

00:23:22.900 --> 00:23:23.640 and development

NOTE Confidence: 0.995216

00:23:23.940 --> 00:23:26.015 of tyrosine kinase inhibitors.

NOTE Confidence: 0.99949956

00:23:26.555 --> 00:23:27.055 So

NOTE Confidence: 0.9647421

00:23:27.835 --> 00:23:29.355 congratulations to all of you

NOTE Confidence: 0.9647421

00:23:29.355 --> 00:23:31.115 for organizing that and hosting

NOTE Confidence: 0.9647421

00:23:31.115 --> 00:23:31.855 it here

NOTE Confidence: 0.9643953

00:23:32.235 --> 00:23:34.155 at Yale. And you have

NOTE Confidence: 0.9643953

00:23:34.155 --> 00:23:35.455 all the major players,

NOTE Confidence: 0.9970768

00:23:37.035 --> 00:23:37.935 at that meeting.

NOTE Confidence: 0.99931777

00:23:40.240 --> 00:23:40.740 So

NOTE Confidence: 0.96522135

00:23:41.760 --> 00:23:43.700 there were two papers published,

NOTE Confidence: 0.96522135

00:23:43.760 --> 00:23:45.440 one in science and one

NOTE Confidence: 0.96522135

00:23:45.440 --> 00:23:46.740 in New England Journal.

NOTE Confidence: 0.9776775

00:23:48.800 --> 00:23:50.740 Two weeks before, I was

NOTE Confidence: 0.9857718

00:23:51.794 --> 00:23:53.715 going to Zurich, Switzerland to

NOTE Confidence: 0.9857718

00:23:53.715 --> 00:23:55.794 finish the final edits on

NOTE Confidence: 0.9857718

00:23:55.794 --> 00:23:57.335 the two thousand four WHO

NOTE Confidence: 0.9857718

00:23:57.475 --> 00:23:57.975 book.

NOTE Confidence: 0.9972473

00:23:58.914 --> 00:24:00.274 And when I when I

NOTE Confidence: 0.9972473

00:24:00.274 --> 00:24:01.095 got there,

NOTE Confidence: 0.82819414

00:24:02.674 --> 00:24:03.575 Paul Klyhuis,

NOTE Confidence: 0.94406575

00:24:04.115 --> 00:24:05.335 he could word,

NOTE Confidence: 0.9991277

00:24:06.510 --> 00:24:07.410 he could edit

NOTE Confidence: 0.9461871

00:24:08.110 --> 00:24:10.030 live the document. I told

NOTE Confidence: 0.9461871

00:24:10.030 --> 00:24:11.070 him we gotta put these

NOTE Confidence: 0.9461871

00:24:11.070 --> 00:24:12.530 references in the book.

NOTE Confidence: 0.998425

00:24:13.070 --> 00:24:13.570 So

NOTE Confidence: 0.95610005

00:24:14.510 --> 00:24:16.670 here, there's one sentence. We

NOTE Confidence: 0.95610005

00:24:16.670 --> 00:24:18.770 had no idea how incredibly

NOTE Confidence: 0.95610005

00:24:18.910 --> 00:24:20.030 important this was going to

NOTE Confidence: 0.95610005

00:24:20.030 --> 00:24:21.764 be. There's one sentence at

NOTE Confidence: 0.95610005

00:24:21.764 --> 00:24:22.984 the bottom of a paragraph

NOTE Confidence: 0.95610005

00:24:23.044 --> 00:24:24.404 in these two references. We

NOTE Confidence: 0.95610005

00:24:24.404 --> 00:24:25.365 just slipped them in at

NOTE Confidence: 0.95610005

00:24:25.365 --> 00:24:26.184 the last minute.

NOTE Confidence: 0.98331326

00:24:26.565 --> 00:24:27.705 And I have to say,

NOTE Confidence: 0.89007616

00:24:28.244 --> 00:24:30.264 in retrospect, I'm I'm very

NOTE Confidence: 0.9819522

00:24:30.644 --> 00:24:31.845 proud and happy that we

NOTE Confidence: 0.9819522

00:24:31.845 --> 00:24:33.284 did that, but we really

NOTE Confidence: 0.9819522

00:24:33.284 --> 00:24:34.890 had no clue that this

NOTE Confidence: 0.9819522

00:24:34.890 --> 00:24:35.890 was going to be the

NOTE Confidence: 0.9819522

00:24:35.890 --> 00:24:37.410 beginning of the most one

NOTE Confidence: 0.9819522

00:24:37.410 --> 00:24:38.550 of the most incredible

NOTE Confidence: 0.9977455

00:24:39.410 --> 00:24:40.950 stories in all of oncology,

NOTE Confidence: 0.9977455

00:24:41.090 --> 00:24:42.310 not just lung cancer.

NOTE Confidence: 0.9958559

00:24:43.570 --> 00:24:44.850 So as we were starting

NOTE Confidence: 0.9958559

00:24:44.850 --> 00:24:45.670 this adenocarcinoma

NOTE Confidence: 0.9986593

00:24:46.210 --> 00:24:47.590 classification, we were

NOTE Confidence: 0.999949

00:24:49.025 --> 00:24:49.525 happy

NOTE Confidence: 0.91762996

00:24:49.905 --> 00:24:51.184 that data like this was

NOTE Confidence: 0.91762996

00:24:51.184 --> 00:24:52.945 emerging. This is a study

NOTE Confidence: 0.91762996

00:24:52.945 --> 00:24:53.905 published in the New England

NOTE Confidence: 0.91762996

00:24:53.905 --> 00:24:55.285 Journal by Tony Mok,

NOTE Confidence: 0.94568324

00:24:56.225 --> 00:24:57.025 looking at,

NOTE Confidence: 0.99756086

00:24:57.585 --> 00:24:58.645 Asian patients,

NOTE Confidence: 0.922997

00:24:59.184 --> 00:25:00.565 mostly never smokers,

NOTE Confidence: 0.9300915

00:25:01.184 --> 00:25:02.804 who had eGFR mutations,

NOTE Confidence: 0.9809896

00:25:04.679 --> 00:25:05.880 or some had them and

NOTE Confidence: 0.9809896

00:25:05.880 --> 00:25:06.780 some did not.

NOTE Confidence: 0.97455597

00:25:07.159 --> 00:25:08.280 And what they were able

NOTE Confidence: 0.97455597

00:25:08.280 --> 00:25:09.400 to show is over here

NOTE Confidence: 0.97455597

00:25:09.400 --> 00:25:10.520 on the left, if there

NOTE Confidence: 0.97455597

00:25:10.520 --> 00:25:11.980 was an eGFR mutation,

NOTE Confidence: 0.89647436

00:25:14.119 --> 00:25:15.340 comparing in green,

NOTE Confidence: 0.9970196

00:25:16.520 --> 00:25:17.900 tyrosine kinase inhibitor

NOTE Confidence: 0.9408786

00:25:18.825 --> 00:25:19.325 versus,

NOTE Confidence: 0.9988594

00:25:20.105 --> 00:25:21.164 conventional chemotherapy

NOTE Confidence: 0.8426281

00:25:21.465 --> 00:25:22.205 in yellow,

NOTE Confidence: 0.96239483

00:25:23.145 --> 00:25:24.184 that if there was an

NOTE Confidence: 0.96239483

00:25:24.184 --> 00:25:25.244 EGFR mutation,

NOTE Confidence: 0.9991107

00:25:26.024 --> 00:25:27.085 there was a significant

NOTE Confidence: 0.9840897

00:25:27.865 --> 00:25:30.125 improvement in progression free survival.

NOTE Confidence: 0.9989874

00:25:32.150 --> 00:25:32.650 But

NOTE Confidence: 0.9494352

00:25:33.750 --> 00:25:34.250 if

NOTE Confidence: 0.99012077

00:25:34.869 --> 00:25:36.250 there was no mutation,

NOTE Confidence: 0.98177797

00:25:37.109 --> 00:25:39.049 these patients actually did worse.

NOTE Confidence: 0.9616608

00:25:39.910 --> 00:25:41.530 And we were really struggling.

NOTE Confidence: 0.9616608

00:25:41.590 --> 00:25:43.130 Should we write in our

NOTE Confidence: 0.9616608

00:25:43.350 --> 00:25:45.850 classification document that patients should,

NOTE Confidence: 0.9596325

00:25:47.145 --> 00:25:47.965 should receive,

NOTE Confidence: 0.9200465

00:25:49.305 --> 00:25:51.465 eGFR mutation testing because that

NOTE Confidence: 0.9200465

00:25:51.465 --> 00:25:53.065 was that was debatable at

NOTE Confidence: 0.9200465

00:25:53.065 --> 00:25:54.365 the time. There was argument

NOTE Confidence: 0.9200465

00:25:54.425 --> 00:25:55.465 about whether we should do

NOTE Confidence: 0.9200465

00:25:55.465 --> 00:25:56.825 that. But it was based

NOTE Confidence: 0.9200465

00:25:56.825 --> 00:25:58.265 on literature like this that

NOTE Confidence: 0.9200465

00:25:58.265 --> 00:25:58.765 we

NOTE Confidence: 0.9863238

00:25:59.320 --> 00:26:00.840 felt it should be recommended

NOTE Confidence: 0.9863238

00:26:00.840 --> 00:26:02.440 that all patients with advanced

NOTE Confidence: 0.9863238

00:26:02.440 --> 00:26:03.260 lung adenocarcinomas

NOTE Confidence: 0.9796228

00:26:03.720 --> 00:26:05.880 should routinely be tested for

NOTE Confidence: 0.9796228

00:26:05.880 --> 00:26:07.900 eGFR mutation. And, of course,

NOTE Confidence: 0.9796228

00:26:08.119 --> 00:26:09.320 now we have all sorts

NOTE Confidence: 0.9796228

00:26:09.320 --> 00:26:09.900 of other,

NOTE Confidence: 0.9906563

00:26:11.080 --> 00:26:12.600 driver mutations that we look

NOTE Confidence: 0.9906563

00:26:12.600 --> 00:26:13.100 for.

NOTE Confidence: 0.9699181

00:26:13.555 --> 00:26:15.155 But, that that was a

NOTE Confidence: 0.9699181

00:26:15.155 --> 00:26:16.615 big deal. And,

NOTE Confidence: 0.9728451

00:26:17.955 --> 00:26:19.255 but that was all happening

NOTE Confidence: 0.9728451

00:26:19.395 --> 00:26:20.355 at the time we were

NOTE Confidence: 0.9728451

00:26:20.355 --> 00:26:21.395 working on this. It was

NOTE Confidence: 0.9728451

00:26:21.395 --> 00:26:22.855 very, very exciting time.

NOTE Confidence: 0.9992216

00:26:23.875 --> 00:26:25.015 So we were

NOTE Confidence: 0.993351

00:26:25.555 --> 00:26:26.775 then looking at

NOTE Confidence: 0.5390479

00:26:27.715 --> 00:26:28.115 different,

NOTE Confidence: 0.999233

00:26:30.359 --> 00:26:32.300 reasons to separate adenocarcinoma

NOTE Confidence: 0.99066764

00:26:32.840 --> 00:26:34.060 from squamous carcinoma.

NOTE Confidence: 0.95312333

00:26:35.000 --> 00:26:35.320 And,

NOTE Confidence: 0.99880326

00:26:36.200 --> 00:26:37.340 and one of the

NOTE Confidence: 0.9823359

00:26:37.720 --> 00:26:39.260 reasons were for adenocarcinomas,

NOTE Confidence: 0.9662556

00:26:40.680 --> 00:26:42.780 the eGFR story I've mentioned,

NOTE Confidence: 0.9662556

00:26:42.920 --> 00:26:44.635 but also ALK was being

NOTE Confidence: 0.9662556

00:26:44.635 --> 00:26:45.935 discovered at that time,

NOTE Confidence: 0.98336154

00:26:46.395 --> 00:26:47.915 and patients would respond to

NOTE Confidence: 0.98336154

00:26:47.915 --> 00:26:48.415 crizotinib.

NOTE Confidence: 0.98955315

00:26:50.475 --> 00:26:52.075 And then patients who had

NOTE Confidence: 0.98955315

00:26:52.075 --> 00:26:52.575 adenocarcinoma

NOTE Confidence: 0.99410254

00:26:53.115 --> 00:26:54.795 also were who did not

NOTE Confidence: 0.99410254

00:26:54.795 --> 00:26:56.234 have one of these driver

NOTE Confidence: 0.99410254

00:26:56.234 --> 00:26:56.734 mutations

NOTE Confidence: 0.9801786

00:26:57.580 --> 00:26:58.619 were thought to be more

NOTE Confidence: 0.9801786

00:26:58.619 --> 00:27:00.000 responsive to Pemetrexate.

NOTE Confidence: 0.95889574

00:27:01.100 --> 00:27:01.980 And then there was some

NOTE Confidence: 0.95889574

00:27:01.980 --> 00:27:04.220 evidence that patients with squamous

NOTE Confidence: 0.95889574

00:27:04.220 --> 00:27:04.960 cell carcinomas,

NOTE Confidence: 0.98206264

00:27:05.740 --> 00:27:07.600 were susceptible to pulmonary,

NOTE Confidence: 0.99819285

00:27:08.540 --> 00:27:09.040 hemorrhage

NOTE Confidence: 0.90094626

00:27:09.340 --> 00:27:10.080 if they,

NOTE Confidence: 0.9718634

00:27:11.345 --> 00:27:12.085 got bevacizumab.

NOTE Confidence: 0.8502101

00:27:13.185 --> 00:27:14.305 So there were all these

NOTE Confidence: 0.8502101

00:27:14.305 --> 00:27:16.385 reasons why before we just

NOTE Confidence: 0.8502101

00:27:16.385 --> 00:27:18.065 said, Oh, it's a non

NOTE Confidence: 0.8502101

00:27:18.065 --> 00:27:19.425 small cell carcinoma, not all

NOTE Confidence: 0.8502101

00:27:19.425 --> 00:27:20.065 the way to specify it.

NOTE Confidence: 0.8502101

00:27:20.065 --> 00:27:20.805 Who cares?

NOTE Confidence: 0.95993143

00:27:21.185 --> 00:27:22.705 Now it was important that

NOTE Confidence: 0.95993143

00:27:22.705 --> 00:27:23.205 we

NOTE Confidence: 0.96573937

00:27:23.690 --> 00:27:24.809 go to the extra effort

NOTE Confidence: 0.96573937

00:27:24.809 --> 00:27:26.730 to distinguish adenine from squamous

NOTE Confidence: 0.96573937

00:27:26.730 --> 00:27:28.109 carcinoma as pathologists.

NOTE Confidence: 0.9815469

00:27:29.770 --> 00:27:31.230 And, I'll never forget,

NOTE Confidence: 0.9984437

00:27:32.650 --> 00:27:33.309 you know

NOTE Confidence: 0.9500788

00:27:34.410 --> 00:27:35.530 you know, when you work

NOTE Confidence: 0.9500788

00:27:35.530 --> 00:27:36.970 on a WHO, you kinda

NOTE Confidence: 0.9500788

00:27:36.970 --> 00:27:37.929 like to think you know

NOTE Confidence: 0.9500788

00:27:37.929 --> 00:27:39.255 what's going on. And,

NOTE Confidence: 0.9620327

00:27:40.135 --> 00:27:41.415 I'll never forget, I signed

NOTE Confidence: 0.9620327

00:27:41.415 --> 00:27:42.455 this case out because we

NOTE Confidence: 0.9620327

00:27:42.455 --> 00:27:43.755 didn't think we needed immunohistochemistry

NOTE Confidence: 0.98273104

00:27:44.295 --> 00:27:46.315 to diagnose squamous cell carcinoma.

NOTE Confidence: 0.9888467

00:27:46.775 --> 00:27:47.494 I mean, look at that

NOTE Confidence: 0.9888467

00:27:47.494 --> 00:27:48.615 tumor on the left. It's

NOTE Confidence: 0.9888467

00:27:48.615 --> 00:27:50.395 got all this abundant eosinophilic

NOTE Confidence: 0.9833449

00:27:50.775 --> 00:27:51.275 cytoplasm,

NOTE Confidence: 0.9974832

00:27:51.575 --> 00:27:52.075 sharp

NOTE Confidence: 0.9929423

00:27:52.530 --> 00:27:54.290 cytoplasmic borders. I even think

NOTE Confidence: 0.9929423

00:27:54.290 --> 00:27:55.750 I can see some intracellular

NOTE Confidence: 0.9929423

00:27:55.970 --> 00:27:56.470 bridges.

NOTE Confidence: 0.9786098

00:27:56.930 --> 00:27:58.290 So that's a tumor I

NOTE Confidence: 0.9786098

00:27:58.290 --> 00:27:59.650 signed out without doing any

NOTE Confidence: 0.9786098

00:27:59.650 --> 00:28:00.150 immunostains

NOTE Confidence: 0.9828052

00:28:00.530 --> 00:28:02.530 as squamous carcinoma. And I

NOTE Confidence: 0.9828052

00:28:02.530 --> 00:28:03.410 get a call from the

NOTE Confidence: 0.9828052

00:28:03.410 --> 00:28:03.910 oncologist.

NOTE Confidence: 0.9513233

00:28:05.895 --> 00:28:06.935 By the way, we found

NOTE Confidence: 0.9513233

00:28:06.935 --> 00:28:07.835 out this patient

NOTE Confidence: 0.8471475

00:28:08.455 --> 00:28:10.215 has an EGFR mutation, can

NOTE Confidence: 0.8471475

00:28:10.215 --> 00:28:11.435 you go back and look?

NOTE Confidence: 0.8471475

00:28:11.655 --> 00:28:13.255 And so we did a

NOTE Confidence: 0.8471475

00:28:13.255 --> 00:28:13.755 TTF1,

NOTE Confidence: 0.9486268

00:28:14.055 --> 00:28:15.255 you can see it's positive

NOTE Confidence: 0.9486268

00:28:15.255 --> 00:28:16.615 and there's even some mucin

NOTE Confidence: 0.9486268

00:28:16.615 --> 00:28:17.435 in the tumor.

NOTE Confidence: 0.96547925

00:28:18.030 --> 00:28:18.530 So,

NOTE Confidence: 0.99937975

00:28:19.470 --> 00:28:20.770 we then came up

NOTE Confidence: 0.9976584

00:28:21.230 --> 00:28:21.970 these are

NOTE Confidence: 0.66417456

00:28:23.869 --> 00:28:24.369 tumors

NOTE Confidence: 0.9608496

00:28:24.750 --> 00:28:25.250 where

NOTE Confidence: 0.9865468

00:28:25.630 --> 00:28:26.990 if we do a TTF

NOTE Confidence: 0.9865468

00:28:26.990 --> 00:28:28.430 and a p forty, the

NOTE Confidence: 0.9865468

00:28:28.430 --> 00:28:29.570 recognition of

NOTE Confidence: 0.95691574

00:28:30.045 --> 00:28:31.325 P forty as an immune

NOTE Confidence: 0.95691574

00:28:31.325 --> 00:28:33.345 stain marker for squamous carcinoma,

NOTE Confidence: 0.9973238

00:28:34.445 --> 00:28:35.805 was just coming out as

NOTE Confidence: 0.9973238

00:28:35.805 --> 00:28:36.845 we were working on this

NOTE Confidence: 0.9973238

00:28:36.845 --> 00:28:37.345 classification.

NOTE Confidence: 0.86378133

00:28:39.485 --> 00:28:41.185 So we look for TTF

NOTE Confidence: 0.9706045

00:28:43.059 --> 00:28:43.559 positivity,

NOTE Confidence: 0.93047136

00:28:45.139 --> 00:28:46.759 and p forty negativity.

NOTE Confidence: 0.9970215

00:28:47.299 --> 00:28:48.179 And as you see on

NOTE Confidence: 0.9970215

00:28:48.179 --> 00:28:48.759 the left,

NOTE Confidence: 0.9675019

00:28:49.059 --> 00:28:50.919 if there's no morphologic evidence

NOTE Confidence: 0.9675019

00:28:51.139 --> 00:28:53.220 of gladiator morphology, we call

NOTE Confidence: 0.9675019

00:28:53.220 --> 00:28:54.759 it non small cell favor.

NOTE Confidence: 0.9995373

00:28:56.294 --> 00:28:56.794 Adenocarcinoma

NOTE Confidence: 0.9220129

00:28:57.495 --> 00:28:58.855 and on the right, if

NOTE Confidence: 0.9220129

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00:28:58.855 --> 00:29:00.695 it's p forty positive, TTF

NOTE Confidence: 0.9220129

00:29:00.695 --> 00:29:02.054 negative, we say non small

NOTE Confidence: 0.9220129

00:29:02.054 --> 00:29:02.794 cell favor

NOTE Confidence: 0.9098833

00:29:03.254 --> 00:29:03.754 squamous.

NOTE Confidence: 0.98517257

00:29:04.375 --> 00:29:05.495 And there are tables, I

NOTE Confidence: 0.98517257

00:29:05.495 --> 00:29:06.455 won't go through all of

NOTE Confidence: 0.98517257

00:29:06.455 --> 00:29:07.894 this, but, we created a

NOTE Confidence: 0.98517257

00:29:07.894 --> 00:29:09.754 whole set of terminology for

NOTE Confidence: 0.92143095

00:29:11.120 --> 00:29:12.820 classification in small biopsies.

NOTE Confidence: 0.99454427

00:29:14.080 --> 00:29:14.580 So

NOTE Confidence: 0.74731195

00:29:15.039 --> 00:29:15.539 previously,

NOTE Confidence: 0.9613778

00:29:16.880 --> 00:29:18.820 in literature and in clinical

NOTE Confidence: 0.9613778

00:29:18.880 --> 00:29:20.720 trials, anywhere from twenty to

NOTE Confidence: 0.9613778

00:29:20.720 --> 00:29:22.340 forty percent of tumors,

NOTE Confidence: 0.98021185

00:29:23.505 --> 00:29:25.605 in advanced patients were classified

NOTE Confidence: 0.98021185

00:29:25.665 --> 00:29:27.185 as non small cell carcinoma

NOTE Confidence: 0.98021185

00:29:27.185 --> 00:29:27.685 NOS.

NOTE Confidence: 0.9955013

00:29:28.065 --> 00:29:29.605 By introducing these immunostains

NOTE Confidence: 0.9965407

00:29:30.145 --> 00:29:31.365 in our recommendations,

NOTE Confidence: 0.9744914

00:29:32.145 --> 00:29:33.345 our goal was to reduce

NOTE Confidence: 0.9744914

00:29:33.345 --> 00:29:34.225 that to less than five

NOTE Confidence: 0.9744914

00:29:34.225 --> 00:29:35.265 percent. And I think we've

NOTE Confidence: 0.9744914

00:29:35.265 --> 00:29:36.965 done that in clinical practice.

NOTE Confidence: 0.9805091

00:29:39.090 --> 00:29:40.710 Here's a table. Again,

NOTE Confidence: 0.9921422

00:29:41.250 --> 00:29:42.530 I'm not sure anybody reads

NOTE Confidence: 0.9921422

00:29:42.530 --> 00:29:43.650 this, but it's probably one

NOTE Confidence: 0.9921422

00:29:43.650 --> 00:29:44.710 of the most important

NOTE Confidence: 0.9929306

00:29:45.250 --> 00:29:47.250 things to look at, because

NOTE Confidence: 0.9929306

00:29:47.250 --> 00:29:48.450 it impacts on the small

NOTE Confidence: 0.9929306

00:29:48.450 --> 00:29:48.950 biopsy

NOTE Confidence: 0.99717116

00:29:49.330 --> 00:29:49.830 diagnosis.

NOTE Confidence: 0.90567064

00:29:51.684 --> 00:29:53.365 There are good, guidelines for

NOTE Confidence: 0.90567064

00:29:53.365 --> 00:29:54.985 good, clinical practice

NOTE Confidence: 0.9450305

00:29:55.524 --> 00:29:57.044 in, in approaching this whole

NOTE Confidence: 0.9450305

00:29:57.044 --> 00:29:57.945 problem. This

NOTE Confidence: 0.9668665

00:29:58.565 --> 00:30:00.085 is tabled from the chapter

NOTE Confidence: 0.9668665

00:30:00.085 --> 00:30:01.445 one in the twenty twenty

NOTE Confidence: 0.9668665

00:30:01.445 --> 00:30:02.184 one WHO.

NOTE Confidence: 0.993378

00:30:03.559 --> 00:30:04.059 And

NOTE Confidence: 0.89446276

00:30:04.360 --> 00:30:05.980 simple basic things,

NOTE Confidence: 0.888877

00:30:07.559 --> 00:30:08.840 such as are shown in

NOTE Confidence: 0.888877

00:30:08.840 --> 00:30:10.220 this particular slide,

NOTE Confidence: 0.9688819

00:30:11.080 --> 00:30:12.540 given to me by Natasha

NOTE Confidence: 0.9688819

00:30:12.600 --> 00:30:14.460 Rekman, my colleague at Memorial.

NOTE Confidence: 0.99979526

00:30:15.255 --> 00:30:16.215 So if you ever get

NOTE Confidence: 0.99979526

00:30:16.215 --> 00:30:16.875 a block

NOTE Confidence: 0.9998423

00:30:17.255 --> 00:30:17.995 that has

66

NOTE Confidence: 0.9932768

00:30:18.535 --> 00:30:20.235 so they do a biopsy.

NOTE Confidence: 0.9090499

00:30:21.175 --> 00:30:23.095 They take two cores. And

NOTE Confidence: 0.9090499

00:30:23.095 --> 00:30:23.995 in the PathLab,

NOTE Confidence: 0.9824781

00:30:24.295 --> 00:30:25.495 they put both cores in

NOTE Confidence: 0.9824781

00:30:25.495 --> 00:30:26.235 one block.

NOTE Confidence: 0.9664547

00:30:27.175 --> 00:30:28.750 And I go through this

NOTE Confidence: 0.9664547

00:30:28.750 --> 00:30:30.429 with it happens at Memorial

NOTE Confidence: 0.9664547

00:30:30.429 --> 00:30:31.090 even though

NOTE Confidence: 0.92552197

00:30:32.110 --> 00:30:33.630 the PAs have been instructed

NOTE Confidence: 0.92552197

00:30:33.630 --> 00:30:34.690 not to do this.

NOTE Confidence: 0.9752071

00:30:35.630 --> 00:30:36.590 I I put the slide

NOTE Confidence: 0.9752071

00:30:36.590 --> 00:30:37.710 under the microscope, and I

NOTE Confidence: 0.9752071

00:30:37.710 --> 00:30:38.830 asked the fellows, what's the

NOTE Confidence: 0.9752071

00:30:38.830 --> 00:30:39.870 first thing that we should

NOTE Confidence: 0.9752071

00:30:39.870 --> 00:30:40.990 do? And they start talking

NOTE Confidence: 0.9752071

00:30:40.990 --> 00:30:42.450 about stains and everything.

NOTE Confidence: 0.9826693

00:30:42.750 --> 00:30:44.485 And I say, we go

NOTE Confidence: 0.9826693

00:30:44.485 --> 00:30:45.445 to the lab and ask

NOTE Confidence: 0.9826693

00:30:45.445 --> 00:30:46.885 them to divide the tissue

NOTE Confidence: 0.9826693

00:30:46.885 --> 00:30:48.164 and make two blocks out

NOTE Confidence: 0.9826693

00:30:48.164 --> 00:30:49.445 of this. So we can

NOTE Confidence: 0.9826693

00:30:49.445 --> 00:30:50.664 use one for immunohistochemistry

NOTE Confidence: 0.9891375

00:30:51.205 --> 00:30:52.565 and the other for molecular

NOTE Confidence: 0.9891375

00:30:52.565 --> 00:30:53.065 testing.

NOTE Confidence: 0.96501195

00:30:53.845 --> 00:30:55.044 And that's one of the

NOTE Confidence: 0.96501195

00:30:55.044 --> 00:30:56.664 major goals of this whole

NOTE Confidence: 0.96733403

00:30:57.049 --> 00:30:58.650 small biopsy story is to

NOTE Confidence: 0.96733403

00:30:58.650 --> 00:31:00.970 minimize stains to maximize tissue

NOTE Confidence: 0.96733403

00:31:00.970 --> 00:31:02.190 for molecular testing.

NOTE Confidence: 0.99396795

00:31:04.090 --> 00:31:05.289 And this is a history

NOTE Confidence: 0.99396795

00:31:05.289 --> 00:31:06.429 of molecular testing,

NOTE Confidence: 0.9667378

00:31:07.130 --> 00:31:08.650 at Memorial, and I'm not

NOTE Confidence: 0.9667378

00:31:08.650 --> 00:31:09.610 gonna go through this in

NOTE Confidence: 0.9667378

00:31:09.610 --> 00:31:10.110 detail.

NOTE Confidence: 0.94850165

00:31:10.490 --> 00:31:11.115 But but you can see

NOTE Confidence: 0.94850165

00:31:11.115 --> 00:31:13.275 we basically started only doing

NOTE Confidence: 0.94850165

00:31:13.275 --> 00:31:14.895 eGFR mutation analysis,

NOTE Confidence: 0.74790573

00:31:16.395 --> 00:31:17.295 by a PCR,

NOTE Confidence: 0.9797206

00:31:17.915 --> 00:31:19.055 technique. And now,

NOTE Confidence: 0.9343994

00:31:19.595 --> 00:31:21.115 we just added on Tuesday,

NOTE Confidence: 0.9343994

00:31:21.115 --> 00:31:22.495 I found out we're doing

NOTE Confidence: 0.9343994

00:31:22.555 --> 00:31:24.255 a new MSK REACT.

NOTE Confidence: 0.99704915

00:31:24.679 --> 00:31:26.039 Our impact takes two to

NOTE Confidence: 0.99704915

00:31:26.039 --> 00:31:26.780 three weeks.

NOTE Confidence: 0.9913827

00:31:27.160 --> 00:31:28.360 That used to be three

NOTE Confidence: 0.9913827

00:31:28.360 --> 00:31:29.559 to four weeks. They've gotten

NOTE Confidence: 0.9913827

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00:31:29.559 --> 00:31:30.539 that to be shorter.

NOTE Confidence: 0.97567713

00:31:31.240 --> 00:31:32.780 But with MSK React,

NOTE Confidence: 0.8139179

00:31:33.480 --> 00:31:33.980 and,

NOTE Confidence: 0.6968076

00:31:34.840 --> 00:31:36.059 an Adela fusion,

NOTE Confidence: 0.9964113

00:31:36.440 --> 00:31:36.940 panel,

NOTE Confidence: 0.9901912

00:31:37.625 --> 00:31:39.065 we can get virtually all

NOTE Confidence: 0.9901912

00:31:39.065 --> 00:31:40.665 the major genes that we

NOTE Confidence: 0.9901912

00:31:40.665 --> 00:31:42.685 would expect to see abnormal

NOTE Confidence: 0.9901912

00:31:42.825 --> 00:31:43.325 abnormal

NOTE Confidence: 0.9605798

00:31:44.025 --> 00:31:45.545 in lung cancer in,

NOTE Confidence: 0.9634902

00:31:46.265 --> 00:31:47.485 four to five days.

NOTE Confidence: 0.94225717

00:31:47.945 --> 00:31:49.305 And we're just getting started

NOTE Confidence: 0.94225717

00:31:49.305 --> 00:31:50.845 on this. And I predict

NOTE Confidence: 0.94225717

00:31:50.905 --> 00:31:52.125 for young people,

NOTE Confidence: 0.9809763

00:31:52.930 --> 00:31:53.430 these

NOTE Confidence: 0.9258971

00:31:53.890 --> 00:31:55.010 these molecular tests will be,

NOTE Confidence: 0.9258971

00:31:55.010 --> 00:31:55.510 like,

NOTE Confidence: 0.8770824

00:31:55.970 --> 00:31:57.430 one or two day immunosy

NOTE Confidence: 0.8770824

00:31:57.490 --> 00:31:58.530 chemistry test,

NOTE Confidence: 0.99840164

00:31:59.090 --> 00:31:59.990 before your

NOTE Confidence: 0.9857479

00:32:00.290 --> 00:32:01.650 careers are over. Who knows

NOTE Confidence: 0.9857479

00:32:01.650 --> 00:32:02.530 what you'll be doing in

NOTE Confidence: 0.9857479

00:32:02.530 --> 00:32:03.810 thirty years? I get excited

NOTE Confidence: 0.9857479

00:32:03.810 --> 00:32:04.870 to think about that.

NOTE Confidence: 0.9646683

00:32:05.644 --> 00:32:07.085 And we're fortunate that,

NOTE Confidence: 0.95771253

00:32:07.565 --> 00:32:09.504 for ALK rearrangements, immunohistochemistry,

NOTE Confidence: 0.8952337

00:32:10.524 --> 00:32:11.965 there are several antibodies. We

NOTE Confidence: 0.8952337

00:32:11.965 --> 00:32:12.865 use the D5F3,

NOTE Confidence: 0.98506105

00:32:13.884 --> 00:32:14.784 highly specific.

NOTE Confidence: 0.9900795

00:32:16.125 --> 00:32:17.245 You can do FISH if

NOTE Confidence: 0.9900795

00:32:17.245 --> 00:32:18.144 you have doubts.

NOTE Confidence: 0.9340165

00:32:19.470 --> 00:32:21.310 Now Archer also is another

NOTE Confidence: 0.9340165

00:32:21.310 --> 00:32:22.430 way. There are all kinds

NOTE Confidence: 0.9340165

00:32:22.430 --> 00:32:23.810 of molecular ways to

NOTE Confidence: 0.98549664

00:32:24.190 --> 00:32:25.250 investigate this.

NOTE Confidence: 0.9951794

00:32:27.710 --> 00:32:28.210 And

NOTE Confidence: 0.967783

00:32:28.750 --> 00:32:30.270 this is from Lynette Scholl

NOTE Confidence: 0.967783

00:32:30.270 --> 00:32:31.090 up at the Brigham

NOTE Confidence: 0.96241325

00:32:31.725 --> 00:32:33.025 where in their,

NOTE Confidence: 0.99661666

00:32:33.725 --> 00:32:34.225 data,

NOTE Confidence: 0.9992299

00:32:35.245 --> 00:32:37.245 only about seventeen percent of

NOTE Confidence: 0.9992299

00:32:37.245 --> 00:32:38.865 lung cancers have no driver.

NOTE Confidence: 0.99156237

00:32:39.165 --> 00:32:40.125 When you think about the

NOTE Confidence: 0.99156237

00:32:40.125 --> 00:32:42.125 molecular revolution that we've been

NOTE Confidence: 0.99156237

00:32:42.125 --> 00:32:43.165 in over the last twenty

NOTE Confidence: 0.99156237

00:32:43.165 --> 00:32:44.625 years, it's mind boggling

NOTE Confidence: 0.9818023

00:32:45.165 --> 00:32:46.304 and very exciting.

NOTE Confidence: 0.9307301

00:32:47.010 --> 00:32:48.290 And what I like, because

NOTE Confidence: 0.9307301

00:32:48.290 --> 00:32:50.370 my career is devoted to

NOTE Confidence: 0.9307301

00:32:50.370 --> 00:32:50.870 training

NOTE Confidence: 0.964682

00:32:51.770 --> 00:32:52.270 of,

NOTE Confidence: 0.949817

00:32:53.490 --> 00:32:55.190 thoracic pathology fellows,

NOTE Confidence: 0.99878895

00:32:55.730 --> 00:32:57.090 is we're attracting some of

NOTE Confidence: 0.99878895

00:32:57.090 --> 00:32:58.150 the best residents

NOTE Confidence: 0.99845695

00:32:59.054 --> 00:33:00.754 to our fellowship training program

NOTE Confidence: 0.93133414

00:33:01.294 --> 00:33:02.654 because what we do is

NOTE Confidence: 0.93133414

00:33:02.654 --> 00:33:05.315 so unbelievably excite unbelievably exciting.

NOTE Confidence: 0.8821987

00:33:05.934 --> 00:33:07.875 And here you can see,

NOTE Confidence: 0.8949236

00:33:09.294 --> 00:33:10.335 this is just an article

NOTE Confidence: 0.8949236

00:33:10.335 --> 00:33:11.695 from new at New England

NOTE Confidence: 0.8949236

00:33:11.695 --> 00:33:12.095 Journal,

NOTE Confidence: 0.87497056

00:33:13.460 --> 00:33:15.560 from the MGH group where

NOTE Confidence: 0.9661605

00:33:17.220 --> 00:33:18.680 over seventy percent,

NOTE Confidence: 0.9991237

00:33:20.180 --> 00:33:21.240 overall survival

NOTE Confidence: 0.97811353

00:33:22.340 --> 00:33:24.420 for advanced lung cancer patients.

NOTE Confidence: 0.97811353

00:33:24.420 --> 00:33:25.620 These are patients that would

NOTE Confidence: 0.97811353

00:33:25.620 --> 00:33:27.240 die in weeks to months.

NOTE Confidence: 0.96974385

00:33:28.865 --> 00:33:30.725 There's over seventy percent,

NOTE Confidence: 0.9915971

00:33:32.225 --> 00:33:34.085 survival here. It's just

NOTE Confidence: 0.915102

00:33:34.785 --> 00:33:36.805 mind boggling the impact that's

NOTE Confidence: 0.8020595

00:33:38.225 --> 00:33:39.185 going on with,

NOTE Confidence: 0.9830781

00:33:39.585 --> 00:33:40.805 all of these targeted,

NOTE Confidence: 0.99828005

00:33:42.225 --> 00:33:43.765 molecular targeted therapies.

NOTE Confidence: 0.8930179

00:33:44.880 --> 00:33:47.040 So that's in summary for

NOTE Confidence: 0.8930179

00:33:47.040 --> 00:33:48.900 the advanced lung cancer patients.

NOTE Confidence: 0.89365435

00:33:49.920 --> 00:33:51.780 We define criteria and terminology

NOTE Confidence: 0.95976716

00:33:52.240 --> 00:33:53.940 for small biopsies and cytology.

NOTE Confidence: 0.9681542

00:33:55.120 --> 00:33:57.300 We develop more accurate histologic

NOTE Confidence: 0.9681542

00:33:57.520 --> 00:33:58.020 subtyping.

NOTE Confidence: 0.9168938

00:33:59.145 --> 00:34:00.845 We developed a whole strategic

NOTE Confidence: 0.99954516

00:34:01.145 --> 00:34:01.645 management

NOTE Confidence: 0.9089591

00:34:02.585 --> 00:34:04.285 approach to small biopsies

NOTE Confidence: 0.8403665

00:34:05.305 --> 00:34:06.365 and streamlining

NOTE Confidence: 0.99908936

00:34:06.665 --> 00:34:08.525 the workflow for molecular testing

NOTE Confidence: 0.96227294

00:34:08.905 --> 00:34:09.785 and the need for a

NOTE Confidence: 0.96227294

00:34:09.785 --> 00:34:10.844 local multidisciplinary

NOTE Confidence: 0.99768364

00:34:11.385 --> 00:34:11.885 team.

NOTE Confidence: 0.9723298

00:34:13.500 --> 00:34:14.780 And you can see, I

NOTE Confidence: 0.9723298

00:34:14.780 --> 00:34:15.280 mean,

NOTE Confidence: 0.99562836

00:34:15.820 --> 00:34:16.620 there are all kinds of

NOTE Confidence: 0.99562836

00:34:16.620 --> 00:34:17.980 things that have contributed to

NOTE Confidence: 0.99562836

00:34:17.980 --> 00:34:19.260 the rapid drop in lung

NOTE Confidence: 0.99562836

00:34:19.260 --> 00:34:20.160 cancer mortality,

NOTE Confidence: 0.9287894

00:34:22.860 --> 00:34:23.360 including,

NOTE Confidence: 0.9739203

00:34:23.980 --> 00:34:25.200 cessation of smoking,

NOTE Confidence: 0.88863826

00:34:25.500 --> 00:34:27.420 introduction of c CT screening

NOTE Confidence: 0.88863826

00:34:27.420 --> 00:34:28.640 or throughout the world,

NOTE Confidence: 0.9935266

00:34:29.235 --> 00:34:30.775 and more in the US.

NOTE Confidence: 0.82356226

00:34:35.795 --> 00:34:37.095 But, we as pathologists

NOTE Confidence: 0.9762416

00:34:37.955 --> 00:34:39.155 are right smack in the

NOTE Confidence: 0.9762416

00:34:39.155 --> 00:34:40.535 middle of contributing

NOTE Confidence: 0.98572683

00:34:40.835 --> 00:34:42.950 to this, reduction in mortality

NOTE Confidence: 0.98572683

00:34:43.010 --> 00:34:44.370 because of the what we've

NOTE Confidence: 0.98572683

00:34:44.370 --> 00:34:45.330 been able to bring to

NOTE Confidence: 0.98572683

00:34:45.330 --> 00:34:45.989 the table

NOTE Confidence: 0.96677345

00:34:46.530 --> 00:34:48.610 in helping to make earlier

NOTE Confidence: 0.96677345

00:34:48.610 --> 00:34:49.110 diagnoses,

NOTE Confidence: 0.9502207

00:34:52.290 --> 00:34:53.030 more accurate,

NOTE Confidence: 0.8529561

00:34:53.730 --> 00:34:56.614 pathologic classification in our role

NOTE Confidence: 0.8529561

00:34:56.614 --> 00:34:56.855 in,

NOTE Confidence: 0.99913275

00:34:57.815 --> 00:34:59.655 contributing to the whole process

NOTE Confidence: 0.99913275

00:34:59.655 --> 00:35:00.875 of molecular testing.

NOTE Confidence: 0.99606997

00:35:01.255 --> 00:35:02.454 So I always make this

NOTE Confidence: 0.99606997

00:35:02.454 --> 00:35:03.415 point when I give this

NOTE Confidence: 0.99606997

00:35:03.415 --> 00:35:05.675 talk to our, pathology fellows

NOTE Confidence: 0.9536601

00:35:06.454 --> 00:35:08.295 is what you are doing.

NOTE Confidence: 0.9536601

00:35:08.295 --> 00:35:09.575 It seems like a lot

NOTE Confidence: 0.9536601

00:35:09.575 --> 00:35:11.335 of mundane pushing around of

NOTE Confidence: 0.9536601

00:35:11.335 --> 00:35:13.070 blocks and slides and ordering

NOTE Confidence: 0.9536601

00:35:13.070 --> 00:35:13.570 things,

NOTE Confidence: 0.99440205

00:35:13.950 --> 00:35:15.390 but it's making a huge

NOTE Confidence: 0.99440205

00:35:15.390 --> 00:35:17.330 difference in, patients' lives.

NOTE Confidence: 0.99660814

00:35:19.310 --> 00:35:21.570 Okay. Surgically resected lung adenocarcinomas.

NOTE Confidence: 0.995838

00:35:23.390 --> 00:35:24.130 So we

NOTE Confidence: 0.98748004

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00:35:24.975 --> 00:35:27.315 also made significant advances here

NOTE Confidence: 0.98748004

00:35:27.455 --> 00:35:29.235 in predicting survival and recurrence.

NOTE Confidence: 0.9478752

00:35:29.855 --> 00:35:31.215 We define, as I mentioned

NOTE Confidence: 0.9478752

00:35:31.215 --> 00:35:33.135 earlier, AIS and MIA to

NOTE Confidence: 0.9478752

00:35:33.135 --> 00:35:34.575 have one hundred percent or

NOTE Confidence: 0.9478752

00:35:34.575 --> 00:35:35.715 near one hundred percent

NOTE Confidence: 0.9396081

00:35:37.055 --> 00:35:39.055 disease free survival if completely

NOTE Confidence: 0.9396081

00:35:39.055 --> 00:35:39.555 resected.

NOTE Confidence: 0.91354114

00:35:41.440 --> 00:35:43.620 It led to allowing better

NOTE Confidence: 0.91354114

00:35:43.760 --> 00:35:45.460 radiologic pathologic correlations,

NOTE Confidence: 0.9269485

00:35:46.960 --> 00:35:48.320 impacted T and M staging.

NOTE Confidence: 0.9269485

00:35:48.320 --> 00:35:49.920 I've mentioned the invasive size,

NOTE Confidence: 0.9269485

00:35:49.920 --> 00:35:51.700 also comparing multiple tumors.

NOTE Confidence: 0.9749441

00:35:53.184 --> 00:35:55.105 And then predicting survival benefit

NOTE Confidence: 0.9749441

00:35:55.105 --> 00:35:55.984 in patients with,

NOTE Confidence: 0.9214114

00:35:56.385 --> 00:35:57.525 adjuvant cisplatinum

NOTE Confidence: 0.9346676

00:35:57.825 --> 00:35:58.645 based therapy.

NOTE Confidence: 0.98805857

00:36:00.785 --> 00:36:01.765 So this is

NOTE Confidence: 0.94446707

00:36:02.305 --> 00:36:03.505 the pattern of a non

NOTE Confidence: 0.94446707

00:36:03.505 --> 00:36:04.005 mucinous,

NOTE Confidence: 0.96595234

00:36:04.704 --> 00:36:05.664 what we used to call

NOTE Confidence: 0.96595234

00:36:05.664 --> 00:36:06.164 bronchioloalveolar

NOTE Confidence: 0.9168908

00:36:06.944 --> 00:36:07.444 carcinoma.

NOTE Confidence: 0.996036

00:36:07.744 --> 00:36:08.244 And

NOTE Confidence: 0.98695934

00:36:09.260 --> 00:36:10.380 this was a huge work

NOTE Confidence: 0.98695934

00:36:10.380 --> 00:36:11.500 to come up with a

NOTE Confidence: 0.98695934

00:36:11.500 --> 00:36:13.260 term that was better, and

NOTE Confidence: 0.98695934

00:36:13.260 --> 00:36:14.540 we came up with this

NOTE Confidence: 0.98695934

00:36:14.540 --> 00:36:15.040 lipidic,

NOTE Confidence: 0.9496352

00:36:15.739 --> 00:36:16.239 pattern,

NOTE Confidence: 0.926342

00:36:16.780 --> 00:36:18.060 which I think has served

NOTE Confidence: 0.926342

00:36:18.060 --> 00:36:19.520 to be quite useful.

NOTE Confidence: 0.9145654

00:36:20.619 --> 00:36:22.380 And, the old concept of

NOTE Confidence: 0.9145654

00:36:22.380 --> 00:36:22.880 bronchiolalveolar

NOTE Confidence: 0.9713237

00:36:23.260 --> 00:36:24.734 carcinoma, I've already alluded to

NOTE Confidence: 0.9713237

00:36:24.734 --> 00:36:26.335 this, we split it into

NOTE Confidence: 0.9713237

00:36:26.335 --> 00:36:27.315 five different

NOTE Confidence: 0.97100925

00:36:27.775 --> 00:36:29.795 categories that we currently recognize,

NOTE Confidence: 0.97320724

00:36:30.414 --> 00:36:31.295 and I've already,

NOTE Confidence: 0.99717844

00:36:31.775 --> 00:36:33.315 mentioned each one of those.

NOTE Confidence: 0.9914636

00:36:35.295 --> 00:36:35.795 And

NOTE Confidence: 0.9994717

00:36:37.869 --> 00:36:39.090 it's very important

NOTE Confidence: 0.99630165

00:36:41.550 --> 00:36:43.310 to remember where you're coming

NOTE Confidence: 0.99630165

00:36:43.310 --> 00:36:45.150 from and remember it in

NOTE Confidence: 0.99630165

00:36:45.150 --> 00:36:46.609 a respectful way.

NOTE Confidence: 0.9990632

00:36:47.070 --> 00:36:48.190 So maybe you have an

NOTE Confidence: 0.9990632

00:36:48.190 --> 00:36:48.690 idea

NOTE Confidence: 0.99422896

00:36:49.150 --> 00:36:50.590 of how to improve something,

NOTE Confidence: 0.99422896

00:36:50.590 --> 00:36:51.469 but the way you go

NOTE Confidence: 0.99422896

00:36:51.469 --> 00:36:51.969 about

NOTE Confidence: 0.9995854

00:36:52.795 --> 00:36:54.795 implementing that idea is not

NOTE Confidence: 0.9995854

00:36:54.795 --> 00:36:56.395 to bash the people that

NOTE Confidence: 0.9995854

00:36:56.395 --> 00:36:57.375 came before you

NOTE Confidence: 0.9699249

00:36:57.915 --> 00:36:59.035 and say that it was

NOTE Confidence: 0.9699249

00:36:59.035 --> 00:37:00.795 wrong or it's not good

NOTE Confidence: 0.9699249

00:37:00.795 --> 00:37:02.475 and what I'm doing is

NOTE Confidence: 0.9699249

00:37:02.475 --> 00:37:02.975 better,

NOTE Confidence: 0.9992127

00:37:03.915 --> 00:37:05.995 but to recognize and give

NOTE Confidence: 0.9992127

00:37:05.995 --> 00:37:07.215 respect to the

NOTE Confidence: 0.98478496

00:37:08.030 --> 00:37:09.170 predecessors. And

NOTE Confidence: 0.91794825

00:37:09.630 --> 00:37:11.469 so you're seeing here on

NOTE Confidence: 0.91794825

00:37:11.469 --> 00:37:13.310 the left survival curves from,

NOTE Confidence: 0.91794825

00:37:13.710 --> 00:37:15.089 what I call an earthquake

NOTE Confidence: 0.91794825

00:37:15.230 --> 00:37:16.050 paper paper,

NOTE Confidence: 0.98721653

00:37:17.950 --> 00:37:18.450 where,

NOTE Confidence: 0.95619154

00:37:19.390 --> 00:37:21.150 Masayuki Noguchi, who you see

NOTE Confidence: 0.95619154

00:37:21.150 --> 00:37:22.364 on the top, and it

NOTE Confidence: 0.95619154

00:37:22.364 --> 00:37:23.905 was really Yukio Shimasada's

NOTE Confidence: 0.75825906

00:37:25.085 --> 00:37:25.585 brainchild

NOTE Confidence: 0.9936864

00:37:26.285 --> 00:37:26.785 idea

NOTE Confidence: 0.94633895

00:37:27.645 --> 00:37:29.565 to identify a pattern of

NOTE Confidence: 0.94633895

00:37:29.565 --> 00:37:30.305 lung adenocarcinoma,

NOTE Confidence: 0.89660794

00:37:31.245 --> 00:37:32.285 and they called it a

NOTE Confidence: 0.89660794

00:37:32.285 --> 00:37:33.505 Noguchi classification

NOTE Confidence: 0.89050525

00:37:33.885 --> 00:37:35.260 and type a and b

NOTE Confidence: 0.89050525

00:37:35.260 --> 00:37:36.539 were what we would call

NOTE Confidence: 0.89050525

00:37:36.539 --> 00:37:37.839 AIS and MIA.

NOTE Confidence: 0.9495418

00:37:39.260 --> 00:37:40.299 And then a type c,

NOTE Confidence: 0.9495418

00:37:40.299 --> 00:37:41.500 which we would think of

NOTE Confidence: 0.9495418

00:37:41.500 --> 00:37:43.579 as a lipidic predominant adenoid

NOTE Confidence: 0.9495418

00:37:43.579 --> 00:37:44.799 in our current thinking,

NOTE Confidence: 0.9895151

00:37:45.180 --> 00:37:47.200 and then overtly invasive adenocarcinomas.

NOTE Confidence: 0.9942593

00:37:48.815 --> 00:37:49.775 But it was a big

NOTE Confidence: 0.9942593

00:37:49.775 --> 00:37:51.614 deal because we were coming

NOTE Confidence: 0.9942593

00:37:51.614 --> 00:37:52.735 up with something that was

NOTE Confidence: 0.9942593

00:37:52.735 --> 00:37:54.655 going to change everybody from

NOTE Confidence: 0.9942593

00:37:54.655 --> 00:37:56.355 quoting the Gucci classification,

NOTE Confidence: 0.9935762

00:37:56.735 --> 00:37:58.114 which I think he liked.

NOTE Confidence: 0.6260515

00:38:00.255 --> 00:38:00.755 So

NOTE Confidence: 0.99926054

00:38:01.580 --> 00:38:02.460 I always

NOTE Confidence: 0.9681203

00:38:02.860 --> 00:38:04.219 and it's I don't know

NOTE Confidence: 0.9681203

00:38:04.219 --> 00:38:05.420 how it happened. It just

NOTE Confidence: 0.9681203

00:38:05.420 --> 00:38:07.120 is something that I innately

NOTE Confidence: 0.97249144

00:38:07.580 --> 00:38:09.120 had an instinct to do,

NOTE Confidence: 0.9886551

00:38:09.980 --> 00:38:11.580 because of the work that

NOTE Confidence: 0.9886551

00:38:11.580 --> 00:38:12.880 I have done in my

NOTE Confidence: 0.95450336

00:38:15.494 --> 00:38:17.094 academic work and the places

NOTE Confidence: 0.95450336

00:38:17.094 --> 00:38:17.974 I was able to work,

NOTE Confidence: 0.95450336

00:38:17.974 --> 00:38:18.714 like AFIP,

NOTE Confidence: 0.98560095

00:38:19.415 --> 00:38:20.694 I got invited all over

NOTE Confidence: 0.98560095

00:38:20.694 --> 00:38:21.655 the world, and I made

NOTE Confidence: 0.98560095

00:38:21.655 --> 00:38:23.335 a point to go to

NOTE Confidence: 0.98560095

00:38:23.335 --> 00:38:25.114 these places and make friends

NOTE Confidence: 0.9928589

00:38:25.989 --> 00:38:26.710 with these,

NOTE Confidence: 0.9942046

00:38:27.110 --> 00:38:29.110 international colleagues. So when it

NOTE Confidence: 0.9942046

00:38:29.110 --> 00:38:29.930 came down

NOTE Confidence: 0.9721771

00:38:30.790 --> 00:38:32.310 to disagreeing with a colleague

NOTE Confidence: 0.9721771

00:38:32.310 --> 00:38:33.830 where the consensus is not

NOTE Confidence: 0.9721771

00:38:33.830 --> 00:38:35.190 going maybe in the direction

NOTE Confidence: 0.9721771

00:38:35.190 --> 00:38:36.330 that they would prefer,

NOTE Confidence: 0.94588345

00:38:37.350 --> 00:38:38.730 they knew we were friends,

NOTE Confidence: 0.9620342

00:38:39.185 --> 00:38:40.785 And I cared about them

NOTE Confidence: 0.9620342

00:38:40.785 --> 00:38:41.525 as people,

NOTE Confidence: 0.8957514

00:38:41.825 --> 00:38:42.625 and you can see up

NOTE Confidence: 0.8957514

00:38:42.625 --> 00:38:43.585 there, I play golf with

NOTE Confidence: 0.8957514

00:38:43.585 --> 00:38:44.165 an Noguchi,

NOTE Confidence: 0.95653886

00:38:45.025 --> 00:38:46.305 and he's much better golfer

NOTE Confidence: 0.95653886

00:38:46.305 --> 00:38:47.125 than I am.

NOTE Confidence: 0.9947856

00:38:48.385 --> 00:38:49.445 But, you know,

NOTE Confidence: 0.9600765

00:38:49.984 --> 00:38:52.050 really treat your colleagues as,

NOTE Confidence: 0.9723835

00:38:52.770 --> 00:38:54.690 friends and spend time with

NOTE Confidence: 0.9723835

00:38:54.690 --> 00:38:55.190 them.

NOTE Confidence: 0.89313304

00:38:55.650 --> 00:38:57.090 Now with the by Zoom

NOTE Confidence: 0.89313304

00:38:57.090 --> 00:38:58.630 and all of this remote,

NOTE Confidence: 0.98432875

00:38:59.250 --> 00:39:00.630 working and interacting,

NOTE Confidence: 0.99162465

00:39:01.489 --> 00:39:02.230 it really,

NOTE Confidence: 0.97721463

00:39:02.690 --> 00:39:03.750 is not the same.

NOTE Confidence: 0.94414985

00:39:04.145 --> 00:39:05.105 So put in the extra

NOTE Confidence: 0.94414985

00:39:05.105 --> 00:39:06.724 effort. And Yuki Yoshimasada

NOTE Confidence: 0.8502963

00:39:07.585 --> 00:39:08.705 regard as a mentor, that's

NOTE Confidence: 0.8502963

00:39:08.705 --> 00:39:10.085 a whole another whole story.

NOTE Confidence: 0.91029704

00:39:12.464 --> 00:39:13.844 So at the time,

NOTE Confidence: 0.91888976

00:39:14.145 --> 00:39:16.305 he was defining BAC as

NOTE Confidence: 0.91888976

00:39:16.305 --> 00:39:18.065 having a hundred percent disease

NOTE Confidence: 0.91888976

00:39:18.065 --> 00:39:18.805 free survival.

NOTE Confidence: 0.9860929

00:39:19.739 --> 00:39:21.680 Our clinical colleagues were calling

NOTE Confidence: 0.99205685

00:39:22.060 --> 00:39:22.560 BAC

NOTE Confidence: 0.9241916

00:39:23.020 --> 00:39:25.100 advanced BAC with poor survival.

NOTE Confidence: 0.9241916

00:39:25.100 --> 00:39:26.140 And you can see here,

NOTE Confidence: 0.9241916

00:39:26.140 --> 00:39:27.500 three year survival, twenty to

NOTE Confidence: 0.9241916

00:39:27.500 --> 00:39:28.320 thirty percent.

NOTE Confidence: 0.92698956

00:39:29.020 --> 00:39:30.140 I was saying, how in

NOTE Confidence: 0.92698956

00:39:30.140 --> 00:39:31.020 the world can we be

NOTE Confidence: 0.92698956

00:39:31.020 --> 00:39:32.380 using the same term for

NOTE Confidence: 0.92698956

00:39:32.380 --> 00:39:33.760 such different tumors?

NOTE Confidence: 0.9996801

00:39:34.245 --> 00:39:35.365 And that was part of

NOTE Confidence: 0.9996801

00:39:35.365 --> 00:39:36.025 the justification

NOTE Confidence: 0.99694145

00:39:36.485 --> 00:39:37.685 for coming up with a

NOTE Confidence: 0.99694145

00:39:37.685 --> 00:39:38.425 new classification.

NOTE Confidence: 0.96929216

00:39:38.965 --> 00:39:40.565 So here's the classification. We

NOTE Confidence: 0.96929216

00:39:40.565 --> 00:39:41.065 had,

NOTE Confidence: 0.74264586

00:39:41.685 --> 00:39:42.185 preinvasive,

NOTE Confidence: 0.9597394

00:39:42.885 --> 00:39:44.245 on the lipidic side. We

NOTE Confidence: 0.9597394

00:39:44.245 --> 00:39:45.305 had the preinvasive

NOTE Confidence: 0.9919655

00:39:45.605 --> 00:39:48.500 lesions of atypical adenomatous hyperplasia,

NOTE Confidence: 0.9919655

87

00:39:48.719 --> 00:39:49.219 adenocarcinoma

NOTE Confidence: 0.8964133

00:39:49.600 --> 00:39:51.520 in situ. Defined very carefully

NOTE Confidence: 0.8964133

00:39:51.520 --> 00:39:53.200 is three sonometers or less

NOTE Confidence: 0.8964133

00:39:53.200 --> 00:39:53.860 in size,

NOTE Confidence: 0.92832226

00:39:54.480 --> 00:39:55.860 no invasive component.

NOTE Confidence: 0.88524765

00:39:56.239 --> 00:39:57.200 Most of these are non

NOTE Confidence: 0.88524765

00:39:57.200 --> 00:39:59.140 mucinous rare mucinous variants.

NOTE Confidence: 0.91628146

00:39:59.585 --> 00:40:01.825 And minimally invasive also, three

NOTE Confidence: 0.91628146

00:40:01.825 --> 00:40:03.125 sonometers or less,

NOTE Confidence: 0.92969245

00:40:03.984 --> 00:40:06.005 lipidic predominant with a size

NOTE Confidence: 0.97144234

00:40:06.305 --> 00:40:08.404 of invasive component, five millimeters

NOTE Confidence: 0.97144234

00:40:08.464 --> 00:40:09.204 or less.

NOTE Confidence: 0.9647565

00:40:09.984 --> 00:40:10.484 And

NOTE Confidence: 0.9587733

00:40:10.785 --> 00:40:11.904 in order to make those

NOTE Confidence: 0.9587733

00:40:11.904 --> 00:40:13.904 diagnoses, the entire tumor must

NOTE Confidence: 0.9587733

00:40:13.904 --> 00:40:14.724 must be sampled.

NOTE Confidence: 0.9778215

00:40:15.480 --> 00:40:16.359 And if you don't have

NOTE Confidence: 0.9778215

00:40:16.359 --> 00:40:17.480 that, you just call it

NOTE Confidence: 0.9778215

00:40:17.480 --> 00:40:19.980 lipidic predominant and mention that,

NOTE Confidence: 0.9778215

00:40:20.119 --> 00:40:21.320 you know, we could not

NOTE Confidence: 0.9778215

00:40:21.320 --> 00:40:22.859 exclude an invasive component.

NOTE Confidence: 0.91995156

00:40:23.400 --> 00:40:24.619 So here is a,

NOTE Confidence: 0.9897127

00:40:25.719 --> 00:40:26.219 AIS,

NOTE Confidence: 0.7794521

00:40:26.680 --> 00:40:27.420 a pure

NOTE Confidence: 0.9862387

00:40:27.800 --> 00:40:28.940 lipidic lesion.

NOTE Confidence: 0.9693809

00:40:29.645 --> 00:40:30.545 As you look,

NOTE Confidence: 0.96421343

00:40:31.165 --> 00:40:32.364 closely, you can see there's

NOTE Confidence: 0.96421343

00:40:32.364 --> 00:40:33.585 no invasive component.

NOTE Confidence: 0.97863865

00:40:34.605 --> 00:40:35.964 By CT, here you see

NOTE Confidence: 0.97863865

00:40:35.964 --> 00:40:37.165 it's a pure ground glass

NOTE Confidence: 0.97863865

00:40:37.165 --> 00:40:37.665 lesion.

NOTE Confidence: 0.9833906

00:40:39.405 --> 00:40:40.685 And one of the things

NOTE Confidence: 0.9833906

00:40:40.685 --> 00:40:42.045 about classification is have a

NOTE Confidence: 0.9833906

00:40:42.045 --> 00:40:43.665 little fun along the way.

NOTE Confidence: 0.9483325

00:40:44.390 --> 00:40:45.530 Enjoy your life.

NOTE Confidence: 0.96127546

00:40:45.910 --> 00:40:47.590 And it became apparent that

NOTE Confidence: 0.96127546

00:40:47.590 --> 00:40:48.790 there was this in situ

NOTE Confidence: 0.96127546

00:40:48.790 --> 00:40:49.290 wine.

NOTE Confidence: 0.8779541

00:40:49.910 --> 00:40:50.550 And so,

NOTE Confidence: 0.9608173

00:40:51.989 --> 00:40:52.710 I got a case of

NOTE Confidence: 0.9608173

00:40:52.710 --> 00:40:53.989 in situ wine, and we

NOTE Confidence: 0.9608173

00:40:53.989 --> 00:40:54.810 had our consensus.

NOTE Confidence: 0.9929374

00:40:55.830 --> 00:40:56.630 You see me in the

NOTE Confidence: 0.9929374

00:40:56.630 --> 00:40:58.250 back holding the bottle up.

NOTE Confidence: 0.9018111

00:40:58.645 --> 00:40:59.145 And,

NOTE Confidence: 0.9991355

00:40:59.765 --> 00:41:00.805 once again, you know, you

NOTE Confidence: 0.9991355

00:41:00.805 --> 00:41:02.185 have all these people arguing

NOTE Confidence: 0.9926927

00:41:02.485 --> 00:41:03.625 and, you know,

NOTE Confidence: 0.9574252

00:41:04.405 --> 00:41:06.485 going after subjects from different

NOTE Confidence: 0.9574252

00:41:06.485 --> 00:41:06.985 perspectives,

NOTE Confidence: 0.9878728

00:41:07.605 --> 00:41:08.565 and all you need is

NOTE Confidence: 0.9878728

00:41:08.565 --> 00:41:10.085 a little wine to bring

NOTE Confidence: 0.9878728

00:41:10.085 --> 00:41:10.825 the consensus.

NOTE Confidence: 0.9626697

00:41:11.969 --> 00:41:13.750 So but have have fun

NOTE Confidence: 0.9626697

00:41:13.969 --> 00:41:15.590 as you do this. And,

NOTE Confidence: 0.9598376

00:41:18.050 --> 00:41:19.250 during a meeting, having an

NOTE Confidence: 0.9598376

00:41:19.250 --> 00:41:20.770 icebreaker thing like that is

NOTE Confidence: 0.9598376

00:41:20.770 --> 00:41:22.369 very handy. So this is

NOTE Confidence: 0.9598376

00:41:22.369 --> 00:41:23.969 the ninety nine and two

NOTE Confidence: 0.9598376

00:41:23.969 --> 00:41:25.969 thousand four, classification where we

NOTE Confidence: 0.9598376

00:41:25.969 --> 00:41:27.030 had mixed subtype

NOTE Confidence: 0.9990831

00:41:27.625 --> 00:41:28.605 as number one

NOTE Confidence: 0.9658912

00:41:29.305 --> 00:41:30.844 along with these other patterns.

NOTE Confidence: 0.9658912

00:41:30.905 --> 00:41:32.745 And the problem was, in

NOTE Confidence: 0.9658912

00:41:32.745 --> 00:41:33.945 retrospect, of course, we didn't

NOTE Confidence: 0.9658912

00:41:33.945 --> 00:41:34.905 think about it as we

NOTE Confidence: 0.9658912

00:41:34.905 --> 00:41:36.685 were using that term,

NOTE Confidence: 0.9645407

00:41:38.265 --> 00:41:39.545 is is that, you know,

NOTE Confidence: 0.9645407

00:41:39.545 --> 00:41:40.585 this is from a study

NOTE Confidence: 0.9645407

00:41:40.585 --> 00:41:41.705 of cases we had at

NOTE Confidence: 0.9645407

00:41:41.705 --> 00:41:42.364 at Memorial,

NOTE Confidence: 0.9752287

00:41:43.760 --> 00:41:45.040 less than one percent of

NOTE Confidence: 0.9752287

00:41:45.040 --> 00:41:46.739 the cases were BAC.

NOTE Confidence: 0.9104002

00:41:47.200 --> 00:41:48.960 Everything else was mixed up

NOTE Confidence: 0.9104002

00:41:48.960 --> 00:41:49.460 type.

NOTE Confidence: 0.9985567

00:41:50.000 --> 00:41:50.980 It was ridiculous.

NOTE Confidence: 0.9907442

00:41:51.599 --> 00:41:53.040 So so when you're trying

NOTE Confidence: 0.9907442

00:41:53.040 --> 00:41:54.640 to do survival, there's there's

92

NOTE Confidence: 0.9907442

00:41:54.640 --> 00:41:55.920 no chance to do any

NOTE Confidence: 0.9907442

00:41:55.920 --> 00:41:56.420 survival.

NOTE Confidence: 0.9989026

00:41:57.005 --> 00:41:58.445 So I was privileged to

NOTE Confidence: 0.9989026

00:41:58.445 --> 00:41:59.745 have two wonderful,

NOTE Confidence: 0.9771038

00:42:00.205 --> 00:42:01.805 fellows from Japan come work

NOTE Confidence: 0.9771038

00:42:01.805 --> 00:42:02.545 with us,

NOTE Confidence: 0.9775113

00:42:03.325 --> 00:42:04.145 Aki Yoshizawa

NOTE Confidence: 0.9633814

00:42:04.445 --> 00:42:05.585 on the left and,

NOTE Confidence: 0.975301

00:42:06.364 --> 00:42:07.805 Noriko Motoyi on the right.

NOTE Confidence: 0.975301

00:42:07.805 --> 00:42:09.185 Noriko and I spent

NOTE Confidence: 0.9928616

00:42:09.485 --> 00:42:10.765 many, many hours over the

NOTE Confidence: 0.9928616

00:42:10.765 --> 00:42:12.465 microscope looking at

NOTE Confidence: 0.91640496

00:42:12.910 --> 00:42:14.110 a hundred cases from the

NOTE Confidence: 0.91640496

00:42:14.110 --> 00:42:15.870 director's challenge. They're subject of

NOTE Confidence: 0.91640496

00:42:15.870 --> 00:42:16.610 this publication.

NOTE Confidence: 0.97166836

00:42:17.469 --> 00:42:18.750 And somehow or another, we

NOTE Confidence: 0.97166836

00:42:18.750 --> 00:42:19.790 came up with this idea

NOTE Confidence: 0.97166836

00:42:19.790 --> 00:42:21.969 of comprehensive histologic subtyping,

NOTE Confidence: 0.9989826

00:42:22.989 --> 00:42:24.989 estimating percentages of the different

NOTE Confidence: 0.9989826

00:42:24.989 --> 00:42:25.489 patterns.

NOTE Confidence: 0.9855044

00:42:26.375 --> 00:42:28.614 And, then Aki Yoshizawa came

NOTE Confidence: 0.9855044

00:42:28.614 --> 00:42:29.734 along behind, and I'll show

NOTE Confidence: 0.9855044

00:42:29.734 --> 00:42:30.694 you his paper in a

NOTE Confidence: 0.9855044

00:42:30.694 --> 00:42:32.535 moment, and actually did a

NOTE Confidence: 0.9855044

00:42:32.535 --> 00:42:34.454 survival analysis based on that

NOTE Confidence: 0.9855044

00:42:34.454 --> 00:42:36.775 concept. So this was the

NOTE Confidence: 0.9855044

00:42:36.775 --> 00:42:37.835 proposed classification

NOTE Confidence: 0.95015806

00:42:38.214 --> 00:42:39.114 by the ISLC.

NOTE Confidence: 0.9571076

00:42:40.100 --> 00:42:42.020 And, without going through it

NOTE Confidence: 0.9571076

00:42:42.020 --> 00:42:43.000 on all detail,

NOTE Confidence: 0.9982816

00:42:43.460 --> 00:42:43.960 this

NOTE Confidence: 0.9989193

00:42:44.260 --> 00:42:45.560 concept of comprehensive

NOTE Confidence: 0.9933345

00:42:46.100 --> 00:42:47.320 histologic subtyping

NOTE Confidence: 0.99046767

00:42:48.180 --> 00:42:49.640 in five percent increments

NOTE Confidence: 0.9515766

00:42:52.755 --> 00:42:53.494 was like

NOTE Confidence: 0.9672037

00:42:53.875 --> 00:42:55.474 a key opening a magic

NOTE Confidence: 0.9672037

00:42:55.474 --> 00:42:55.974 box.

NOTE Confidence: 0.98839784

00:42:57.555 --> 00:42:59.075 Because once we had this

NOTE Confidence: 0.98839784

00:42:59.075 --> 00:42:59.575 tool,

NOTE Confidence: 0.9774272

00:43:00.515 --> 00:43:01.494 all of a sudden,

NOTE Confidence: 0.99420255

00:43:02.835 --> 00:43:04.114 papers that we were writing

NOTE Confidence: 0.99420255

00:43:04.114 --> 00:43:05.094 about lung adenocarcinoma,

NOTE Confidence: 0.9678954

00:43:05.714 --> 00:43:06.934 trying to predict prognosis,

NOTE Confidence: 0.97249407

00:43:07.234 --> 00:43:08.800 and really beating our head

NOTE Confidence: 0.97249407

00:43:08.800 --> 00:43:09.780 against the wall.

NOTE Confidence: 0.9887231

00:43:11.920 --> 00:43:13.380 These are the various patterns,

NOTE Confidence: 0.99909604

00:43:13.839 --> 00:43:15.059 which I won't go into.

NOTE Confidence: 0.98565155

00:43:15.760 --> 00:43:16.480 All of a sudden, we

NOTE Confidence: 0.98565155

00:43:16.480 --> 00:43:17.619 were able to stratify

NOTE Confidence: 0.9287904

00:43:18.239 --> 00:43:20.099 these subtypes in a more

NOTE Confidence: 0.9287904

00:43:20.319 --> 00:43:20.819 meaningful,

NOTE Confidence: 0.94728756

00:43:22.400 --> 00:43:22.900 percentages.

NOTE Confidence: 0.9998087

00:43:24.135 --> 00:43:24.795 And then

NOTE Confidence: 0.9796246

00:43:25.655 --> 00:43:27.415 I literally almost fell out

NOTE Confidence: 0.9796246

00:43:27.415 --> 00:43:29.335 of my chair when we

NOTE Confidence: 0.9796246

00:43:29.335 --> 00:43:30.935 did the first survival analysis.

NOTE Confidence: 0.9796246

00:43:30.935 --> 00:43:32.155 This is the first paper

NOTE Confidence: 0.9994798

00:43:32.614 --> 00:43:34.395 to show the prognostic significance

NOTE Confidence: 0.9686922

00:43:35.255 --> 00:43:36.614 of the various patterns. And

NOTE Confidence: 0.9686922

00:43:36.614 --> 00:43:37.915 we had the low grade

NOTE Confidence: 0.9686922

00:43:37.975 --> 00:43:38.475 AIS,

NOTE Confidence: 0.74509627

00:43:38.829 --> 00:43:40.290 MIA, lipidic predominant,

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NOTE Confidence: 0.9401034

00:43:40.750 --> 00:43:43.469 intermediate grade, papillary and acinar,

NOTE Confidence: 0.9401034

00:43:43.469 --> 00:43:44.849 and then the higher grade,

NOTE Confidence: 0.96404785

00:43:45.630 --> 00:43:46.130 patterns.

NOTE Confidence: 0.8694067

00:43:46.829 --> 00:43:47.150 And,

NOTE Confidence: 0.9865532

00:43:48.270 --> 00:43:49.469 and the rest is history.

NOTE Confidence: 0.9865532

00:43:49.469 --> 00:43:50.510 I mean, this has now

NOTE Confidence: 0.9865532

00:43:50.510 --> 00:43:51.710 been shown in study after

NOTE Confidence: 0.9865532

00:43:51.710 --> 00:43:52.210 study.

NOTE Confidence: 0.94837785

00:43:53.465 --> 00:43:54.925 Yes, what I call,

NOTE Confidence: 0.9928872

00:43:56.265 --> 00:43:57.885 you know, fifty five percent

NOTE Confidence: 0.7559394

00:43:58.665 --> 00:43:59.165 lipidic,

NOTE Confidence: 0.92780125

00:43:59.945 --> 00:44:01.864 Sonya may call fifty five

NOTE Confidence: 0.92780125

00:44:01.864 --> 00:44:03.545 percent acid or it. There's

NOTE Confidence: 0.92780125

00:44:03.545 --> 00:44:04.585 gotta be some degree of

NOTE Confidence: 0.92780125

00:44:04.585 --> 00:44:05.885 disagreement. It's okay.

NOTE Confidence: 0.92337173

00:44:06.745 --> 00:44:07.705 I mean, once you get

NOTE Confidence: 0.92337173

00:44:07.705 --> 00:44:10.160 into that middle range, it

NOTE Confidence: 0.92337173

00:44:10.420 --> 00:44:10.960 you know,

NOTE Confidence: 0.9861039

00:44:12.619 --> 00:44:13.660 you just have to think

NOTE Confidence: 0.9861039

00:44:13.660 --> 00:44:14.460 back, and a lot of

NOTE Confidence: 0.9861039

00:44:14.460 --> 00:44:16.160 people today don't think back.

NOTE Confidence: 0.9795741

00:44:16.619 --> 00:44:17.900 Before we had this tool,

NOTE Confidence: 0.9795741

00:44:17.900 --> 00:44:18.800 we had nothing.

NOTE Confidence: 0.9766216

00:44:19.820 --> 00:44:20.859 I mean, all we had

NOTE Confidence: 0.9766216

00:44:20.859 --> 00:44:23.234 was BAC, which in Japan

NOTE Confidence: 0.9766216

00:44:23.234 --> 00:44:24.355 may be more common, but

NOTE Confidence: 0.9766216

00:44:24.355 --> 00:44:26.614 here in North America, very

NOTE Confidence: 0.9766216

00:44:26.914 --> 00:44:27.414 uncommon.

NOTE Confidence: 0.9938877

00:44:28.275 --> 00:44:28.775 So,

NOTE Confidence: 0.9505566

00:44:29.635 --> 00:44:30.914 you know, can we do

NOTE Confidence: 0.9505566

00:44:30.914 --> 00:44:32.535 better? And there are attempts

NOTE Confidence: 0.9505566

00:44:32.755 --> 00:44:34.135 to make things better.

NOTE Confidence: 0.950688

00:44:34.994 --> 00:44:36.194 But this was a big,

NOTE Confidence: 0.950688

00:44:36.194 --> 00:44:37.894 big progress. And here you

NOTE Confidence: 0.9327424

00:44:38.300 --> 00:44:39.739 can see now I'm going

NOTE Confidence: 0.9327424

00:44:39.739 --> 00:44:41.920 to show radiologic pathologic correlation.

NOTE Confidence: 0.9574104

00:44:45.099 --> 00:44:46.140 This is a tumor that

NOTE Confidence: 0.9574104

00:44:46.140 --> 00:44:47.660 shows lipidic on the bottom,

NOTE Confidence: 0.9574104

00:44:47.660 --> 00:44:49.099 an invasive component on the

NOTE Confidence: 0.9574104

00:44:49.099 --> 00:44:50.380 right. This is high power

NOTE Confidence: 0.9574104

00:44:50.380 --> 00:44:51.200 of the lipidic

NOTE Confidence: 0.96455985

00:44:51.895 --> 00:44:53.175 and high power of the

NOTE Confidence: 0.96455985

00:44:53.175 --> 00:44:54.155 acinar pattern.

NOTE Confidence: 0.9745205

00:44:54.535 --> 00:44:55.815 And from this tumor, you

NOTE Confidence: 0.9745205

00:44:55.815 --> 00:44:57.095 can see it's a part

NOTE Confidence: 0.9745205

00:44:57.095 --> 00:44:58.695 solid lesion you have on

NOTE Confidence: 0.9745205

00:44:58.695 --> 00:44:59.195 CT,

NOTE Confidence: 0.9774166

00:44:59.975 --> 00:45:01.355 mostly ground glass,

NOTE Confidence: 0.95728195

00:45:02.215 --> 00:45:03.735 which measures about four point

NOTE Confidence: 0.95728195

00:45:03.735 --> 00:45:04.475 two centimeters,

NOTE Confidence: 0.9967754

00:45:05.090 --> 00:45:06.710 and then a solid component

NOTE Confidence: 0.9967754

00:45:06.770 --> 00:45:08.150 measuring about fifteen

NOTE Confidence: 0.91286933

00:45:08.530 --> 00:45:09.750 one point five centimeters.

NOTE Confidence: 0.9912237

00:45:10.770 --> 00:45:11.270 And

NOTE Confidence: 0.73239535

00:45:11.810 --> 00:45:12.310 basically,

NOTE Confidence: 0.9748217

00:45:12.770 --> 00:45:14.630 in our reports, we document

NOTE Confidence: 0.9988829

00:45:15.330 --> 00:45:16.950 the percentage of the

NOTE Confidence: 0.956061

00:45:17.484 --> 00:45:19.484 lipidic versus the other patterns,

NOTE Confidence: 0.956061

00:45:19.484 --> 00:45:20.925 which would be invasive patterns.

NOTE Confidence: 0.956061

00:45:20.925 --> 00:45:22.844 Here is sixty five percent

NOTE Confidence: 0.956061

00:45:22.844 --> 00:45:23.344 lipidic,

NOTE Confidence: 0.90421396

00:45:24.445 --> 00:45:25.825 thirty five percent invasive.

NOTE Confidence: 0.9603122

00:45:27.005 --> 00:45:29.744 And sometimes the invasive components

NOTE Confidence: 0.9603122

00:45:29.805 --> 00:45:31.390 are on different slides, multiple

NOTE Confidence: 0.9603122

00:45:31.390 --> 00:45:32.510 slides, you can't stick a

NOTE Confidence: 0.9603122

00:45:32.510 --> 00:45:33.410 ruler on it.

NOTE Confidence: 0.99466497

00:45:33.869 --> 00:45:34.830 And so what we do

NOTE Confidence: 0.99466497

00:45:34.830 --> 00:45:36.190 is we take the total

NOTE Confidence: 0.99466497

00:45:36.190 --> 00:45:38.030 size and multiply it times

NOTE Confidence: 0.99466497

00:45:38.030 --> 00:45:39.489 the percentage of the invasive

NOTE Confidence: 0.99466497

00:45:39.550 --> 00:45:40.050 components.

NOTE Confidence: 0.9934203

00:45:40.989 --> 00:45:42.610 And you can see this

NOTE Confidence: 0.97712237

00:45:43.585 --> 00:45:45.445 downstage this particular tumor

NOTE Confidence: 0.9681508

00:45:45.905 --> 00:45:47.685 from T2B to T1B.

NOTE Confidence: 0.9720736

00:45:49.665 --> 00:45:50.945 And Frank, I hope you're

NOTE Confidence: 0.9720736

00:45:50.945 --> 00:45:52.945 on watching. I wanted to

NOTE Confidence: 0.9720736

00:45:52.945 --> 00:45:53.905 give a shout out to

NOTE Confidence: 0.9720736

00:45:53.905 --> 00:45:54.405 you.

NOTE Confidence: 0.9744362

00:45:55.105 --> 00:45:56.225 I'm trying to identify all

NOTE Confidence: 0.9744362

00:45:56.225 --> 00:45:56.965 the Yale

NOTE Confidence: 0.98759747

00:45:57.505 --> 00:45:59.125 input on these efforts.

NOTE Confidence: 0.980031

00:46:01.160 --> 00:46:03.020 We published this article about

NOTE Confidence: 0.980031

00:46:03.079 --> 00:46:04.059 how to use,

NOTE Confidence: 0.96997297

00:46:05.000 --> 00:46:06.779 this apply the new classification

NOTE Confidence: 0.9402318

00:46:07.160 --> 00:46:08.760 to TNM staging in the

NOTE Confidence: 0.9402318

00:46:08.760 --> 00:46:10.779 part solid, part lipidic tumors.

NOTE Confidence: 0.99334323

00:46:11.400 --> 00:46:11.900 And

NOTE Confidence: 0.98797214

00:46:13.485 --> 00:46:14.705 so this was the proposal

NOTE Confidence: 0.98797214

00:46:14.765 --> 00:46:15.665 that we made.

NOTE Confidence: 0.90984994

00:46:17.485 --> 00:46:18.225 So for

NOTE Confidence: 0.95628

00:46:18.525 --> 00:46:19.985 AIS, we have

NOTE Confidence: 0.9448713

00:46:21.005 --> 00:46:21.505 TIS

NOTE Confidence: 0.82381076

00:46:21.805 --> 00:46:24.225 for parentheses AIS for adenocarcinoma

NOTE Confidence: 0.92457956

00:46:24.605 --> 00:46:26.925 in situ, SCIS for squamous

NOTE Confidence: 0.92457956

00:46:26.925 --> 00:46:28.145 carcinoma in situ,

NOTE Confidence: 0.9168805

00:46:28.780 --> 00:46:29.600 and T1AMI

NOTE Confidence: 0.98125744

00:46:30.300 --> 00:46:31.920 for minimally invasive adenocarcinoma.

NOTE Confidence: 0.9532506

00:46:32.460 --> 00:46:33.760 And then we use invasive

NOTE Confidence: 0.9532506

00:46:33.820 --> 00:46:34.320 size

NOTE Confidence: 0.9378039

00:46:34.780 --> 00:46:36.140 rather than total size for

NOTE Confidence: 0.9378039

00:46:36.140 --> 00:46:36.880 these partlipidic,

NOTE Confidence: 0.9543433

00:46:37.180 --> 00:46:38.480 non mucinous adenocarcinoma.

NOTE Confidence: 0.9555574

00:46:39.740 --> 00:46:40.620 And here, this is a

NOTE Confidence: 0.9555574

00:46:40.620 --> 00:46:42.140 study from Memorial where we

NOTE Confidence: 0.9555574

00:46:42.140 --> 00:46:42.880 looked at

NOTE Confidence: 0.9525267

00:46:46.465 --> 00:46:48.465 over seventeen hundred patients and

NOTE Confidence: 0.9525267

00:46:48.465 --> 00:46:49.925 using invasive size

NOTE Confidence: 0.8578414

00:46:50.545 --> 00:46:51.285 in this

NOTE Confidence: 0.9496995

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00:46:51.665 --> 00:46:53.344 survival curve on the left,

NOTE Confidence: 0.9496995

00:46:53.344 --> 00:46:54.305 we have a much better

NOTE Confidence: 0.9496995

00:46:54.305 --> 00:46:55.825 separation than if we use

NOTE Confidence: 0.9496995

00:46:55.825 --> 00:46:56.725 total size.

NOTE Confidence: 0.9214316

00:46:58.219 --> 00:46:59.260 So here's a,

NOTE Confidence: 0.9815568

00:46:59.900 --> 00:47:02.380 study where we identified that

NOTE Confidence: 0.9815568

00:47:02.380 --> 00:47:04.000 small percentages of micropapillary,

NOTE Confidence: 0.99929565

00:47:05.420 --> 00:47:06.640 had a significant

NOTE Confidence: 0.9613549

00:47:06.940 --> 00:47:08.319 impact on outcomes.

NOTE Confidence: 0.9886557

00:47:11.265 --> 00:47:12.005 And this

NOTE Confidence: 0.9995644

00:47:12.704 --> 00:47:13.924 was one of the observations

NOTE Confidence: 0.9995644

00:47:14.145 --> 00:47:15.424 that led me to thinking

NOTE Confidence: 0.9995644

00:47:15.424 --> 00:47:15.924 about

NOTE Confidence: 0.8267294

00:47:18.464 --> 00:47:20.085 the concept of STAS.

NOTE Confidence: 0.93606055

00:47:21.105 --> 00:47:22.464 And there are two articles

NOTE Confidence: 0.93606055

00:47:22.464 --> 00:47:24.085 published in this past year,

NOTE Confidence: 0.9507092

00:47:24.800 --> 00:47:26.099 one from the ISLC

NOTE Confidence: 0.91938126

00:47:27.280 --> 00:47:29.200 database, another is a review

NOTE Confidence: 0.91938126

00:47:29.200 --> 00:47:30.960 article, and there's this is

NOTE Confidence: 0.91938126

00:47:30.960 --> 00:47:32.080 the pro article, there was

NOTE Confidence: 0.91938126

00:47:32.080 --> 00:47:33.460 a con article as well.

NOTE Confidence: 0.94592535

00:47:33.840 --> 00:47:35.359 But I encourage you to

NOTE Confidence: 0.94592535

00:47:35.359 --> 00:47:37.280 consider reading this. Don't have

NOTE Confidence: 0.94592535

00:47:37.280 --> 00:47:38.320 time to go into that

NOTE Confidence: 0.94592535

00:47:38.320 --> 00:47:38.820 concept,

NOTE Confidence: 0.9618803

00:47:39.535 --> 00:47:40.975 but it's something that really

NOTE Confidence: 0.9618803

00:47:40.975 --> 00:47:42.195 came out of this classification

NOTE Confidence: 0.9618803

00:47:42.415 --> 00:47:42.915 effort.

NOTE Confidence: 0.97198796

00:47:43.215 --> 00:47:44.655 The ISLC came up with

NOTE Confidence: 0.97198796

00:47:44.655 --> 00:47:46.255 a grading system, which was

NOTE Confidence: 0.97198796

00:47:46.255 --> 00:47:47.935 possible because of this concept

NOTE Confidence: 0.97198796

00:47:47.935 --> 00:47:49.955 of comprehensive histologic subtyping.

NOTE Confidence: 0.88725954

00:47:50.815 --> 00:47:52.415 So well differentiated, this is

NOTE Confidence: 0.88725954

00:47:52.415 --> 00:47:52.529 for non mucinous adenocarcinomas, well

NOTE Confidence: 0.88725954

00:47:52.529 --> 00:47:53.075 differentiated tumors, lipitic

NOTE Confidence: 0.39046198

00:47:53.375 --> 00:47:53.875 predominant

NOTE Confidence: 0.7062651

00:47:54.719 --> 00:47:55.619 differentiated tumors,

NOTE Confidence: 0.51538116

00:47:56.480 --> 00:47:56.980 lipitic

NOTE Confidence: 0.8832484

00:47:57.760 --> 00:47:58.359 predominant with no or less

NOTE Confidence: 0.8832484

00:47:58.359 --> 00:47:59.200 than twenty percent of high

NOTE Confidence: 0.8832484

00:47:59.200 --> 00:48:01.599 grade patterns, moderately differentiated, acinar

NOTE Confidence: 0.8832484

00:48:01.599 --> 00:48:03.040 or papillary predominant with no

NOTE Confidence: 0.8832484

00:48:03.040 --> 00:48:03.940 or less than

NOTE Confidence: 0.9409957

00:48:04.239 --> 00:48:05.760 high grade patterns, and the

NOTE Confidence: 0.9409957

00:48:05.760 --> 00:48:07.520 poorly differentiated is any tumor

NOTE Confidence: 0.9409957

00:48:07.520 --> 00:48:09.355 with twenty percent or more

NOTE Confidence: 0.9409957

00:48:09.355 --> 00:48:10.655 of the high grade patterns.

NOTE Confidence: 0.95169765

00:48:11.035 --> 00:48:12.235 You can see the survival

NOTE Confidence: 0.95169765

00:48:12.235 --> 00:48:13.835 curve on the left. High

NOTE Confidence: 0.95169765

00:48:13.835 --> 00:48:15.535 grade patterns are solid micropapillary

NOTE Confidence: 0.95169765

00:48:15.835 --> 00:48:17.915 and cribriform are complex plans.

NOTE Confidence: 0.95169765

00:48:17.915 --> 00:48:19.135 And this has been validated

NOTE Confidence: 0.95169765

00:48:19.195 --> 00:48:20.335 in multiple studies.

NOTE Confidence: 0.82942265

00:48:20.955 --> 00:48:22.395 And I know some of

NOTE Confidence: 0.82942265

00:48:22.395 --> 00:48:24.175 you are the young folks

NOTE Confidence: 0.86153466

00:48:25.380 --> 00:48:26.440 artificial intelligence.

NOTE Confidence: 0.96570444

00:48:27.299 --> 00:48:28.900 So we've applied AI to

NOTE Confidence: 0.96570444

00:48:28.900 --> 00:48:30.599 this, model, and

NOTE Confidence: 0.974774

00:48:30.900 --> 00:48:31.719 it beautifully

NOTE Confidence: 0.9767499

00:48:32.420 --> 00:48:34.119 separates out the ISLC

NOTE Confidence: 0.9988855

00:48:34.420 --> 00:48:34.920 grades.

NOTE Confidence: 0.911782

00:48:37.135 --> 00:48:38.735 Okay. I'm gonna briefly touch

NOTE Confidence: 0.911782

00:48:38.735 --> 00:48:40.175 on interstitial lung disease. This

NOTE Confidence: 0.911782

00:48:40.175 --> 00:48:41.295 has got to go very

NOTE Confidence: 0.911782

00:48:41.295 --> 00:48:41.795 quickly.

NOTE Confidence: 0.98568153

00:48:42.335 --> 00:48:43.775 I've been privileged to,

NOTE Confidence: 0.9721796

00:48:44.175 --> 00:48:45.235 be involved with,

NOTE Confidence: 0.9963416

00:48:45.775 --> 00:48:46.275 classifications

NOTE Confidence: 0.8744339

00:48:46.655 --> 00:48:48.895 of idiopathic interstitial amoneus in

NOTE Confidence: 0.8744339

00:48:48.895 --> 00:48:50.355 two thousand and two, twenty

NOTE Confidence: 0.8744339

00:48:50.415 --> 00:48:50.915 thirteen,

NOTE Confidence: 0.96178436

00:48:51.530 --> 00:48:52.890 and currently is one ongoing.

NOTE Confidence: 0.5345628

00:48:54.210 --> 00:48:54.710 This,

NOTE Confidence: 0.96335363

00:48:55.530 --> 00:48:57.210 the principles learned there were

NOTE Confidence: 0.96335363

00:48:57.210 --> 00:48:58.829 applied for pediatric

NOTE Confidence: 0.978626

00:48:59.210 --> 00:49:00.750 interstitial lung disease classification.

NOTE Confidence: 0.94389594

00:49:02.010 --> 00:49:03.849 We, did a workshop on

NOTE Confidence: 0.94389594

00:49:03.849 --> 00:49:05.770 nonspecific interstitial pneumonia when I

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NOTE Confidence: 0.94389594

00:49:05.770 --> 00:49:06.989 was still at the AFIP.

NOTE Confidence: 0.94051915

00:49:08.625 --> 00:49:09.985 And I was involved with

NOTE Confidence: 0.94051915

00:49:09.985 --> 00:49:11.985 the IPF guidelines for both

NOTE Confidence: 0.94051915

00:49:11.985 --> 00:49:13.344 the ATS and ERS and

NOTE Confidence: 0.94051915

00:49:13.344 --> 00:49:15.185 the Fleischner Society in twenty

NOTE Confidence: 0.94051915

00:49:15.185 --> 00:49:15.685 eighteen.

NOTE Confidence: 0.98326653

00:49:16.305 --> 00:49:17.285 And then recently

NOTE Confidence: 0.77675676

00:49:17.665 --> 00:49:18.165 hypersensitivity

NOTE Confidence: 0.9450997

00:49:18.625 --> 00:49:19.844 pneumonitis guidelines.

NOTE Confidence: 0.943934

00:49:20.859 --> 00:49:22.719 So these are historical classifications

NOTE Confidence: 0.943934

00:49:22.940 --> 00:49:24.800 by Doctor. Liebau from

NOTE Confidence: 0.98613644

00:49:25.500 --> 00:49:26.800 Yale, one of your

NOTE Confidence: 0.7725731

00:49:27.420 --> 00:49:28.320 former faculty,

NOTE Confidence: 0.997945

00:49:29.099 --> 00:49:29.599 and

NOTE Confidence: 0.8767612

00:49:29.980 --> 00:49:30.800 Anna Katzenstein.

NOTE Confidence: 0.93608725

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00:49:31.579 --> 00:49:33.040 This is a group of

NOTE Confidence: 0.9843693

00:49:34.175 --> 00:49:36.355 from the two thousand two,

NOTE Confidence: 0.71614254

00:49:36.815 --> 00:49:37.315 classification.

NOTE Confidence: 0.981306

00:49:38.175 --> 00:49:39.055 And I wanted to give

NOTE Confidence: 0.981306

00:49:39.055 --> 00:49:40.175 a shout out. I went

NOTE Confidence: 0.981306

00:49:40.175 --> 00:49:41.315 back and I saw

NOTE Confidence: 0.78305453

00:49:41.855 --> 00:49:43.315 that, doctor Mathay,

NOTE Confidence: 0.9646409

00:49:44.015 --> 00:49:45.215 who some of the older

NOTE Confidence: 0.9646409

00:49:45.215 --> 00:49:46.515 people probably know,

NOTE Confidence: 0.94758195

00:49:47.469 --> 00:49:48.290 very illustrious,

NOTE Confidence: 0.94061947

00:49:49.310 --> 00:49:49.810 pulmonologist.

NOTE Confidence: 0.99238116

00:49:50.430 --> 00:49:51.310 He was one of our

NOTE Confidence: 0.99238116

00:49:51.310 --> 00:49:51.810 reviewers.

NOTE Confidence: 0.98419243

00:49:52.190 --> 00:49:52.910 He's a part of the

NOTE Confidence: 0.98419243

00:49:52.910 --> 00:49:53.810 reviewer panel.

NOTE Confidence: 0.9710519

00:49:56.350 --> 00:49:56.850 So,

NOTE Confidence: 0.97908646

00:49:57.630 --> 00:49:59.150 in two thousand two, we

NOTE Confidence: 0.97908646

00:49:59.150 --> 00:50:01.225 were able to crystallize narrowing

NOTE Confidence: 0.97908646

00:50:01.225 --> 00:50:02.765 the definition of the UIP

NOTE Confidence: 0.97908646

00:50:02.825 --> 00:50:04.665 pattern, introduce the concept of

NOTE Confidence: 0.97908646

00:50:04.665 --> 00:50:05.165 NSIP,

NOTE Confidence: 0.9649141

00:50:06.185 --> 00:50:08.344 recognize these other patterns, and,

NOTE Confidence: 0.9649141

00:50:08.665 --> 00:50:09.965 the importance of radiology,

NOTE Confidence: 0.8021695

00:50:11.225 --> 00:50:11.625 to,

NOTE Confidence: 0.97295094

00:50:12.185 --> 00:50:14.125 recognize the UIP pattern,

NOTE Confidence: 0.9998591

00:50:14.790 --> 00:50:15.850 minimally invasive

NOTE Confidence: 0.91102505

00:50:16.310 --> 00:50:16.810 thoracoscopic

NOTE Confidence: 0.7588396

00:50:17.190 --> 00:50:17.690 surgery,

NOTE Confidence: 0.99944025

00:50:17.989 --> 00:50:18.489 and

NOTE Confidence: 0.9436236

00:50:19.190 --> 00:50:20.950 publication of large series. This

NOTE Confidence: 0.9436236

00:50:20.950 --> 00:50:21.770 is the classification.

NOTE Confidence: 0.9941282

00:50:22.550 --> 00:50:23.989 By the way, NSIP was

NOTE Confidence: 0.9941282

00:50:23.989 --> 00:50:25.930 regarded as a provisional category.

NOTE Confidence: 0.9927719

00:50:26.864 --> 00:50:28.785 So we had morphologic patterns,

NOTE Confidence: 0.9927719

00:50:28.785 --> 00:50:29.285 histologic

NOTE Confidence: 0.851354

00:50:29.585 --> 00:50:30.945 and by CT, and then

NOTE Confidence: 0.851354

00:50:30.945 --> 00:50:32.005 clinical diagnoses.

NOTE Confidence: 0.97707015

00:50:33.344 --> 00:50:35.045 This is the NSIP project.

NOTE Confidence: 0.98515683

00:50:36.785 --> 00:50:38.065 In our two thousand two

NOTE Confidence: 0.98515683

00:50:38.065 --> 00:50:38.565 classification,

NOTE Confidence: 0.9912142

00:50:39.570 --> 00:50:40.930 under each entity, we had

NOTE Confidence: 0.9912142

00:50:40.930 --> 00:50:42.130 a list of areas of

NOTE Confidence: 0.9912142

00:50:42.130 --> 00:50:42.630 uncertainty.

NOTE Confidence: 0.98897153

00:50:43.570 --> 00:50:44.530 And one of the nice

NOTE Confidence: 0.98897153

00:50:44.530 --> 00:50:46.210 things was when we went

NOTE Confidence: 0.98897153

00:50:46.210 --> 00:50:47.489 back in two thousand thirteen,

NOTE Confidence: 0.98897153

00:50:47.489 --> 00:50:48.610 we found we had actually

NOTE Confidence: 0.98897153

00:50:48.610 --> 00:50:49.110 addressed,

NOTE Confidence: 0.98590153

00:50:50.050 --> 00:50:51.750 many of these, concerns.

NOTE Confidence: 0.9934951

00:50:52.355 --> 00:50:53.395 And that's part of the

NOTE Confidence: 0.9934951

00:50:53.395 --> 00:50:55.094 idea of doing classifications

NOTE Confidence: 0.9977148

00:50:55.395 --> 00:50:56.535 and updating them.

NOTE Confidence: 0.9692239

00:50:57.234 --> 00:50:58.594 The the idea is that

NOTE Confidence: 0.9692239

00:50:58.594 --> 00:50:59.094 you

NOTE Confidence: 0.99702626

00:50:59.395 --> 00:51:00.594 have learned something in the

NOTE Confidence: 0.99702626

00:51:00.594 --> 00:51:01.094 meantime,

NOTE Confidence: 0.9951195

00:51:01.555 --> 00:51:02.594 but it really helps to

NOTE Confidence: 0.9951195

00:51:02.594 --> 00:51:03.895 outline what are the,

NOTE Confidence: 0.9887561

00:51:04.434 --> 00:51:05.795 what is the remaining work

NOTE Confidence: 0.9887561

00:51:05.795 --> 00:51:06.614 to be done.

NOTE Confidence: 0.93529224

00:51:07.940 --> 00:51:08.900 Then this is the two

NOTE Confidence: 0.93529224

00:51:08.900 --> 00:51:09.719 thousand thirteen,

NOTE Confidence: 0.9342451

113

00:51:10.099 --> 00:51:10.599 classification.

NOTE Confidence: 0.9493768

00:51:11.539 --> 00:51:12.420 We have fun.

NOTE Confidence: 0.9779838

00:51:13.059 --> 00:51:13.859 This is one of my

NOTE Confidence: 0.9779838

00:51:13.859 --> 00:51:15.380 Japanese colleagues put this in

NOTE Confidence: 0.9779838

00:51:15.380 --> 00:51:17.079 Japanese. I've had this translated

NOTE Confidence: 0.9779838

00:51:17.140 --> 00:51:18.259 into all kinds of different

NOTE Confidence: 0.9779838

00:51:18.259 --> 00:51:18.759 languages.

NOTE Confidence: 0.8981706

00:51:19.140 --> 00:51:20.099 It's fun in the middle

NOTE Confidence: 0.8981706

00:51:20.099 --> 00:51:20.819 of a talk to just

NOTE Confidence: 0.8981706

00:51:20.819 --> 00:51:21.859 to flop up a slide

NOTE Confidence: 0.8981706

00:51:21.859 --> 00:51:22.359 and

NOTE Confidence: 0.9989619

00:51:22.755 --> 00:51:23.795 see what all the local

NOTE Confidence: 0.9989619

00:51:23.795 --> 00:51:24.855 people have to

NOTE Confidence: 0.9925315

00:51:25.875 --> 00:51:26.914 say. So this is the

NOTE Confidence: 0.9925315

00:51:26.914 --> 00:51:29.015 two thousand thirteen IAP classification.

NOTE Confidence: 0.9994896

00:51:29.474 --> 00:51:30.434 I don't have time to

NOTE Confidence: 0.9994896

00:51:30.434 --> 00:51:31.335 go through that.

NOTE Confidence: 0.9988765

00:51:32.194 --> 00:51:33.075 One thing I would say

NOTE Confidence: 0.9988765

00:51:33.075 --> 00:51:33.575 is

NOTE Confidence: 0.9652496

00:51:34.114 --> 00:51:35.555 there was an emerging entity

NOTE Confidence: 0.9652496

00:51:35.555 --> 00:51:37.015 of idiopathic pleuroperenchymal

NOTE Confidence: 0.8926072

00:51:37.394 --> 00:51:37.894 fibroelastosis,

NOTE Confidence: 0.9104714

00:51:39.210 --> 00:51:40.570 And we really debated, should

NOTE Confidence: 0.9104714

00:51:40.570 --> 00:51:41.450 it be in, should it

NOTE Confidence: 0.9104714

00:51:41.450 --> 00:51:42.670 be out? And,

NOTE Confidence: 0.9809012

00:51:43.290 --> 00:51:44.010 you know, it was one

NOTE Confidence: 0.9809012

00:51:44.010 --> 00:51:44.590 of these,

NOTE Confidence: 0.9658938

00:51:45.770 --> 00:51:47.150 not so clear issues.

NOTE Confidence: 0.9923256

00:51:47.609 --> 00:51:48.489 And in the end, we

NOTE Confidence: 0.9923256

00:51:48.489 --> 00:51:49.790 decided to put it in.

NOTE Confidence: 0.9792085

00:51:50.250 --> 00:51:51.130 And as I look back,

NOTE Confidence: 0.9792085

00:51:51.130 --> 00:51:51.930 it's one of the best

NOTE Confidence: 0.9792085

00:51:51.930 --> 00:51:52.890 things that we did. It's

NOTE Confidence: 0.9792085

00:51:52.890 --> 00:51:55.225 a small uncommon entity, but

NOTE Confidence: 0.9792085

00:51:55.225 --> 00:51:56.985 there's been a real explosion

NOTE Confidence: 0.9792085

00:51:56.985 --> 00:51:58.665 of literature about this and

NOTE Confidence: 0.9792085

00:51:58.665 --> 00:51:59.805 much better understanding.

NOTE Confidence: 0.99785566

00:52:00.585 --> 00:52:02.025 So when you do a

NOTE Confidence: 0.99785566

00:52:02.025 --> 00:52:02.525 classification,

NOTE Confidence: 0.985522

00:52:03.705 --> 00:52:05.645 adding certain things really can

NOTE Confidence: 0.99716383

00:52:06.400 --> 00:52:07.680 draw attention to it and

NOTE Confidence: 0.99716383

00:52:07.680 --> 00:52:08.420 help people

NOTE Confidence: 0.8738947

00:52:09.440 --> 00:52:10.900 recognize it more frequently.

NOTE Confidence: 0.983894

00:52:12.239 --> 00:52:13.460 And I'm not an alcoholic,

NOTE Confidence: 0.9800552

00:52:15.280 --> 00:52:16.100 but honeycombing

NOTE Confidence: 0.9997084

00:52:16.480 --> 00:52:17.300 is an important

NOTE Confidence: 0.9662021

00:52:18.000 --> 00:52:19.440 feature seen by CT and

NOTE Confidence: 0.9662021

00:52:19.440 --> 00:52:22.035 pathology for interstitial disease. And

NOTE Confidence: 0.9662021

00:52:22.035 --> 00:52:23.714 I was asked to lead

NOTE Confidence: 0.9662021

00:52:23.714 --> 00:52:25.015 a session at the Fleischner

NOTE Confidence: 0.9662021

00:52:25.234 --> 00:52:25.734 back

NOTE Confidence: 0.92756903

00:52:27.315 --> 00:52:28.535 in many years ago.

NOTE Confidence: 0.90817374

00:52:29.555 --> 00:52:30.755 And I was I looked,

NOTE Confidence: 0.90817374

00:52:30.755 --> 00:52:32.535 is there a honeycomb wine?

NOTE Confidence: 0.90817374

00:52:32.755 --> 00:52:34.035 And sure enough, there's a

NOTE Confidence: 0.90817374

00:52:34.035 --> 00:52:35.015 honeycomb wine.

NOTE Confidence: 0.8933651

00:52:35.559 --> 00:52:36.839 Now, the In situ wine

NOTE Confidence: 0.8933651

00:52:36.839 --> 00:52:37.960 is really good. This is

NOTE Confidence: 0.8933651

00:52:37.960 --> 00:52:38.460 horrible.

NOTE Confidence: 0.679441

00:52:39.400 --> 00:52:39.900 So

NOTE Confidence: 0.99606574

00:52:40.279 --> 00:52:41.319 don't go out and buy

NOTE Confidence: 0.99606574

00:52:41.319 --> 00:52:42.619 any honeycomb wine.

NOTE Confidence: 0.89707595

00:52:43.239 --> 00:52:44.279 And here you can see

NOTE Confidence: 0.89707595

00:52:44.279 --> 00:52:45.980 once again, you know, and

NOTE Confidence: 0.89707595

00:52:46.200 --> 00:52:47.819 there were some serious arguments

NOTE Confidence: 0.89707595

00:52:47.880 --> 00:52:48.619 this morning,

NOTE Confidence: 0.92139536

00:52:49.135 --> 00:52:50.435 but everyone's smiling,

NOTE Confidence: 0.97813654

00:52:51.935 --> 00:52:53.315 and holding up their,

NOTE Confidence: 0.9678116

00:52:53.775 --> 00:52:55.295 honeycomb wine. By the way,

NOTE Confidence: 0.9678116

00:52:55.295 --> 00:52:56.895 I've switched it out for

NOTE Confidence: 0.9678116

00:52:56.895 --> 00:52:58.655 a I emptied the honeycomb

NOTE Confidence: 0.9678116

00:52:58.655 --> 00:52:59.535 wine and put it in

NOTE Confidence: 0.9678116

00:52:59.535 --> 00:53:00.595 a real good wine.

NOTE Confidence: 0.9694164

00:53:02.020 --> 00:53:03.060 And this has happened this

NOTE Confidence: 0.9694164

00:53:03.060 --> 00:53:04.660 is what happens when people

NOTE Confidence: 0.9694164

00:53:04.660 --> 00:53:05.940 have drunk the honeycomb wine,

NOTE Confidence: 0.9694164

00:53:05.940 --> 00:53:07.000 get a little drunk.

NOTE Confidence: 0.9402435

00:53:07.780 --> 00:53:09.160 So in two thousand thirteen,

NOTE Confidence: 0.9402435

00:53:09.300 --> 00:53:10.100 you know, we had made

NOTE Confidence: 0.9402435

00:53:10.100 --> 00:53:12.280 progress. So NSIP was accepted,

NOTE Confidence: 0.9635229

00:53:12.739 --> 00:53:13.480 and defined.

NOTE Confidence: 0.9928803

00:53:14.225 --> 00:53:15.825 We had better understanding of

NOTE Confidence: 0.9928803

00:53:15.825 --> 00:53:17.685 smoking related interstitial disease.

NOTE Confidence: 0.9921134

00:53:18.465 --> 00:53:20.065 One of the really important

NOTE Confidence: 0.9921134

00:53:20.065 --> 00:53:21.445 things here was a disease

NOTE Confidence: 0.9921134

00:53:21.505 --> 00:53:22.485 behavior classification.

NOTE Confidence: 0.9792898

00:53:24.065 --> 00:53:26.485 Tumor classification, especially with genetics,

NOTE Confidence: 0.9091489

00:53:27.985 --> 00:53:28.645 can be

NOTE Confidence: 0.9676384

00:53:29.000 --> 00:53:30.599 much more precise. In ILD,

NOTE Confidence: 0.9676384

00:53:30.599 --> 00:53:32.059 things are more

NOTE Confidence: 0.93436694

00:53:34.760 --> 00:53:35.880 complicated. And this is one

NOTE Confidence: 0.93436694

00:53:35.880 --> 00:53:37.579 of the white papers on

NOTE Confidence: 0.93436694

00:53:37.799 --> 00:53:40.380 classification of idiopathic and diagnosis

NOTE Confidence: 0.93436694

00:53:40.520 --> 00:53:42.380 of idiopathic pulmonary fibrosis.

NOTE Confidence: 0.9994006

00:53:43.485 --> 00:53:45.585 These are two documents on

NOTE Confidence: 0.9936365

00:53:46.125 --> 00:53:46.625 hypersensitivity

NOTE Confidence: 0.8123971

00:53:47.165 --> 00:53:47.665 pneumonitis.

NOTE Confidence: 0.96999055

00:53:49.005 --> 00:53:50.365 And we're working on the

NOTE Confidence: 0.96999055

00:53:50.365 --> 00:53:52.605 twenty twenty five ATS ERS

NOTE Confidence: 0.96999055

00:53:52.605 --> 00:53:54.765 IAP classification, so stay tuned

NOTE Confidence: 0.96999055

00:53:54.765 --> 00:53:55.425 for that.

NOTE Confidence: 0.9858118

00:53:57.430 --> 00:53:58.630 So one of the important

NOTE Confidence: 0.9858118

00:53:58.630 --> 00:54:00.250 things in completing a classification

NOTE Confidence: 0.98409814

00:54:00.630 --> 00:54:02.870 is disseminate the draft in

NOTE Confidence: 0.98409814

00:54:02.870 --> 00:54:03.370 advance.

NOTE Confidence: 0.99497056

00:54:03.989 --> 00:54:05.210 Don't keep it secret.

NOTE Confidence: 0.9231239

00:54:05.910 --> 00:54:06.890 The the broader

NOTE Confidence: 0.9857619

00:54:07.350 --> 00:54:08.090 the distribution

NOTE Confidence: 0.96447873

00:54:09.110 --> 00:54:10.469 and and feedback, the better

NOTE Confidence: 0.96447873

00:54:10.469 --> 00:54:11.290 it will be.

NOTE Confidence: 0.9232275

00:54:12.795 --> 00:54:14.015 Enjoy the journey.

NOTE Confidence: 0.91799474

00:54:14.875 --> 00:54:16.155 Make friends out of the

NOTE Confidence: 0.91799474

00:54:16.155 --> 00:54:17.435 colleagues even if you have

NOTE Confidence: 0.91799474

00:54:17.435 --> 00:54:18.255 strong disagreements.

NOTE Confidence: 0.99270487

00:54:18.955 --> 00:54:20.474 Let make sure everybody knows

NOTE Confidence: 0.99270487

00:54:20.474 --> 00:54:21.455 you're good friends.

NOTE Confidence: 0.95260906

00:54:22.955 --> 00:54:24.555 Having a final editing session

NOTE Confidence: 0.95260906

00:54:24.555 --> 00:54:26.155 is really important. We learned

NOTE Confidence: 0.95260906

00:54:26.155 --> 00:54:27.215 this with the WHO.

NOTE Confidence: 0.6182376

00:54:28.100 --> 00:54:29.000 Paul Klyhus

NOTE Confidence: 0.9836218

00:54:29.460 --> 00:54:31.080 had us go to Zurich

NOTE Confidence: 0.9200029

00:54:32.580 --> 00:54:33.940 and to Lyon to do

NOTE Confidence: 0.9200029

00:54:33.940 --> 00:54:34.840 final editings.

NOTE Confidence: 0.9600278

00:54:35.460 --> 00:54:37.219 It's astonishing with a book

NOTE Confidence: 0.9600278

00:54:37.219 --> 00:54:38.340 like the WHO, all the

NOTE Confidence: 0.9600278

00:54:38.340 --> 00:54:39.380 things you find at the

NOTE Confidence: 0.9600278

00:54:39.380 --> 00:54:40.040 last minute.

NOTE Confidence: 0.9719675

00:54:40.835 --> 00:54:42.694 And remember, no no classification

NOTE Confidence: 0.9719675

00:54:42.835 --> 00:54:43.494 is perfect.

NOTE Confidence: 0.9091521

00:54:44.275 --> 00:54:45.555 So people who get out

NOTE Confidence: 0.9091521

00:54:45.555 --> 00:54:46.835 and try to bash your

NOTE Confidence: 0.9091521

00:54:46.835 --> 00:54:48.035 classification and say,

NOTE Confidence: 0.9082452

00:54:48.434 --> 00:54:49.894 they got all that wrong.

NOTE Confidence: 0.992344

00:54:51.555 --> 00:54:52.055 Don't

NOTE Confidence: 0.96921027

00:54:55.160 --> 00:54:56.680 be respectful of who went

NOTE Confidence: 0.96921027

00:54:56.680 --> 00:54:58.840 before and just realize that

NOTE Confidence: 0.96921027

00:54:58.840 --> 00:55:00.040 we're all in a journey

NOTE Confidence: 0.96921027

00:55:00.040 --> 00:55:01.660 to improve what we're doing.

NOTE Confidence: 0.969633

00:55:03.320 --> 00:55:04.440 So I've gone through,

NOTE Confidence: 0.9900499

00:55:05.400 --> 00:55:06.840 the history and approach to

122

NOTE Confidence: 0.9900499

00:55:06.840 --> 00:55:07.820 WHO classification,

NOTE Confidence: 0.98524857

00:55:08.915 --> 00:55:09.955 talked about the two thousand

NOTE Confidence: 0.98524857

00:55:09.955 --> 00:55:10.855 eleven adenocarcinoma

NOTE Confidence: 0.99803823

00:55:11.315 --> 00:55:11.815 classification

NOTE Confidence: 0.81091595

00:55:12.755 --> 00:55:14.135 and ILD classification.

NOTE Confidence: 0.9742422

00:55:14.835 --> 00:55:15.155 And I

NOTE Confidence: 0.9679443

00:55:15.795 --> 00:55:16.775 sorry. I can't

NOTE Confidence: 0.9988446

00:55:17.155 --> 00:55:18.135 finish without

NOTE Confidence: 0.9770915

00:55:18.515 --> 00:55:19.555 giving a shout out to

NOTE Confidence: 0.9770915

00:55:19.555 --> 00:55:21.315 my colleagues. This is our

NOTE Confidence: 0.9770915

00:55:21.315 --> 00:55:22.055 our faculty,

NOTE Confidence: 0.92590094

00:55:22.915 --> 00:55:24.455 absolutely amazing team,

NOTE Confidence: 0.9550195

00:55:25.450 --> 00:55:27.370 faculty at Memorial, and these

NOTE Confidence: 0.9550195

00:55:27.370 --> 00:55:28.350 are our fellows.

NOTE Confidence: 0.9912506

00:55:28.890 --> 00:55:30.570 We have an ACGME accredited

NOTE Confidence: 0.9912506

00:55:30.570 --> 00:55:31.850 training program. We have three

NOTE Confidence: 0.9912506

00:55:31.850 --> 00:55:33.130 fellows per year. The three

NOTE Confidence: 0.9912506

00:55:33.130 --> 00:55:33.950 on the top

NOTE Confidence: 0.9919114

00:55:34.330 --> 00:55:35.770 are our fellows, and we

NOTE Confidence: 0.9919114

00:55:35.770 --> 00:55:37.310 have openings starting

NOTE Confidence: 0.9586993

00:55:38.055 --> 00:55:39.494 in July of twenty twenty

NOTE Confidence: 0.9586993

00:55:39.494 --> 00:55:40.614 seven. We're filled all the

NOTE Confidence: 0.9586993

00:55:40.614 --> 00:55:42.135 way through there. So if

NOTE Confidence: 0.9586993

00:55:42.135 --> 00:55:43.255 any of you interested in

NOTE Confidence: 0.9586993

00:55:43.255 --> 00:55:45.094 thoracic pathology, it's an amazing

NOTE Confidence: 0.9586993

00:55:45.094 --> 00:55:45.594 field.

NOTE Confidence: 0.9828914

00:55:45.974 --> 00:55:46.935 You can call up and

NOTE Confidence: 0.9828914

00:55:46.935 --> 00:55:47.734 talk to any one of

NOTE Confidence: 0.9828914

00:55:47.734 --> 00:55:48.395 these colleagues.

NOTE Confidence: 0.91886216

00:55:49.335 --> 00:55:50.855 Oh, oh, oh, okay. I'm

NOTE Confidence: 0.91886216

00:55:50.855 --> 00:55:51.355 sorry.

NOTE Confidence: 0.9315009

00:55:52.630 --> 00:55:53.510 I don't want you to

NOTE Confidence: 0.9315009

00:55:53.510 --> 00:55:55.210 defect from doctor Dasik. Sorry.

NOTE Confidence: 0.94619524

00:55:55.590 --> 00:55:56.790 But if she fails, then

NOTE Confidence: 0.94619524

00:55:56.790 --> 00:55:57.690 there's an extra

NOTE Confidence: 0.8939576

00:55:58.630 --> 00:55:59.770 person. Anyway,

NOTE Confidence: 0.8048806

00:56:00.390 --> 00:56:00.890 we

NOTE Confidence: 0.9682915

00:56:01.190 --> 00:56:02.710 really wanna support your team

NOTE Confidence: 0.9682915

00:56:02.710 --> 00:56:04.630 here, and, I'm sorry. I

NOTE Confidence: 0.9682915

00:56:04.630 --> 00:56:06.570 didn't mean to recruit away.

NOTE Confidence: 0.99474806

00:56:07.935 --> 00:56:08.915 Okay. Thank

NOTE Confidence: 0.99989307

00:56:10.635 --> 00:56:11.135 you

NOTE Confidence: 0.99921143

00:56:12.855 --> 00:56:13.355 very

NOTE Confidence: 0.99905694

00:56:15.075 --> 00:56:15.575 much.

NOTE Confidence: 0.94039893

00:56:17.295 --> 00:56:18.755 Any questions, comments?

NOTE Confidence: 0.94467837

00:56:20.700 --> 00:56:22.619 Yes. It's amazing to see

NOTE Confidence: 0.94467837

00:56:22.619 --> 00:56:24.300 how much of the black

NOTE Confidence: 0.94467837

00:56:24.300 --> 00:56:25.820 box of genetic drivers has

NOTE Confidence: 0.94467837

00:56:25.820 --> 00:56:27.580 shrunk, due to our knowledge,

NOTE Confidence: 0.94467837

00:56:27.580 --> 00:56:29.520 but still seventeen percent is

NOTE Confidence: 0.90574837

00:56:29.980 --> 00:56:31.900 a decent chunk without any

NOTE Confidence: 0.90574837

00:56:31.900 --> 00:56:32.800 known drivers.

NOTE Confidence: 0.9515863

00:56:33.545 --> 00:56:35.385 What's kinda on the horizon

NOTE Confidence: 0.9515863

00:56:35.385 --> 00:56:36.585 of what people think might

NOTE Confidence: 0.9515863

00:56:36.585 --> 00:56:37.245 be driving

NOTE Confidence: 0.8142352

00:56:37.705 --> 00:56:39.725 those non genetic identifiable causes?

NOTE Confidence: 0.9222109

00:56:41.465 --> 00:56:42.665 Well, there's some a lot

NOTE Confidence: 0.9222109

00:56:42.665 --> 00:56:43.165 of,

NOTE Confidence: 0.914373

00:56:44.825 --> 00:56:45.325 molecular,

NOTE Confidence: 0.99840266

00:56:46.025 --> 00:56:46.525 clinical

NOTE Confidence: 0.97839516

00:56:46.825 --> 00:56:48.844 power going into just that.

NOTE Confidence: 0.9586058

00:56:49.329 --> 00:56:50.950 And there's a there's a

NOTE Confidence: 0.9586058

00:56:51.010 --> 00:56:53.030 whole study trying to identify

NOTE Confidence: 0.9586058

00:56:53.089 --> 00:56:54.630 the so called driverless,

NOTE Confidence: 0.9710472

00:56:55.969 --> 00:56:56.469 adenocarcinomas.

NOTE Confidence: 0.94978267

00:56:57.569 --> 00:56:58.609 And I don't know what's

NOTE Confidence: 0.94978267

00:56:58.609 --> 00:56:59.489 gonna be found. I mean,

NOTE Confidence: 0.94978267

00:56:59.489 --> 00:57:00.450 there have been attempts at

NOTE Confidence: 0.94978267

00:57:00.450 --> 00:57:01.589 this before without,

NOTE Confidence: 0.9959081

00:57:03.364 --> 00:57:04.244 so some of it is

NOTE Confidence: 0.9959081

00:57:04.244 --> 00:57:04.984 the sensitivity

NOTE Confidence: 0.9433523

00:57:05.364 --> 00:57:07.125 of the testing methods that

NOTE Confidence: 0.9433523

00:57:07.125 --> 00:57:07.785 we have.

NOTE Confidence: 0.99673307

00:57:08.805 --> 00:57:09.305 And

NOTE Confidence: 0.8973157

00:57:11.364 --> 00:57:12.964 remember, when I started pathology

NOTE Confidence: 0.8973157

00:57:12.964 --> 00:57:13.464 training,

NOTE Confidence: 0.8719036

00:57:14.484 --> 00:57:15.685 some few years ago, forty

NOTE Confidence: 0.8719036

00:57:15.685 --> 00:57:16.425 years ago,

NOTE Confidence: 0.92765343

00:57:16.960 --> 00:57:18.660 We didn't have immunosic chemistry.

NOTE Confidence: 0.96737176

00:57:19.840 --> 00:57:20.800 Now look at what we

NOTE Confidence: 0.96737176

00:57:20.800 --> 00:57:22.160 have. So I look at

NOTE Confidence: 0.96737176

00:57:22.160 --> 00:57:23.840 you and you've got probably

NOTE Confidence: 0.96737176

00:57:23.840 --> 00:57:25.360 thirty years, forty years in

NOTE Confidence: 0.96737176

00:57:25.360 --> 00:57:26.260 front of you.

NOTE Confidence: 0.94126016

00:57:26.720 --> 00:57:27.620 Can you imagine

NOTE Confidence: 0.94462377

00:57:28.240 --> 00:57:29.360 what you're gonna be doing

NOTE Confidence: 0.94462377

00:57:29.360 --> 00:57:30.800 in thirty, forty? You probably

NOTE Confidence: 0.94462377

00:57:30.800 --> 00:57:32.605 can't. I mean, there's probably

NOTE Confidence: 0.94462377

00:57:32.605 --> 00:57:34.365 gonna be discover all kinds

NOTE Confidence: 0.94462377

00:57:34.365 --> 00:57:35.585 of discoveries made.

NOTE Confidence: 0.9493729

00:57:37.805 --> 00:57:39.005 So just a matter of

NOTE Confidence: 0.9493729

00:57:39.005 --> 00:57:40.125 time. There are a lot

NOTE Confidence: 0.9493729

00:57:40.125 --> 00:57:41.345 of really smart people,

NOTE Confidence: 0.9995134

00:57:41.725 --> 00:57:42.225 working

NOTE Confidence: 0.965312

00:57:42.765 --> 00:57:44.205 on exactly the question you

NOTE Confidence: 0.965312

00:57:44.205 --> 00:57:45.325 asked. That's a great question.

NOTE Confidence: 0.965312

00:57:45.325 --> 00:57:46.465 I don't know the answer.

NOTE Confidence: 0.98770165

00:57:47.490 --> 00:57:48.610 A lot of really smart

NOTE Confidence: 0.98770165

00:57:48.610 --> 00:57:49.830 people working on it.

NOTE Confidence: 0.8500414

00:57:51.810 --> 00:57:52.470 Yeah. Yes.

NOTE Confidence: 0.6537457

00:57:52.770 --> 00:57:54.450 With Staph, there is any

NOTE Confidence: 0.6537457

00:57:54.450 --> 00:57:56.530 value in chasing Staph on

NOTE Confidence: 0.6537457

00:57:56.530 --> 00:57:57.430 frozen section?

NOTE Confidence: 0.99890834

00:57:58.050 --> 00:57:58.930 Oh, I'm glad you asked

NOTE Confidence: 0.99890834

00:57:58.930 --> 00:58:00.070 that question. So

NOTE Confidence: 0.8978977

00:58:02.075 --> 00:58:03.595 can stats be detected on

NOTE Confidence: 0.8978977

00:58:03.595 --> 00:58:05.035 frozen? And I would say

NOTE Confidence: 0.8978977

00:58:05.035 --> 00:58:05.535 yes,

NOTE Confidence: 0.99546784

00:58:06.795 --> 00:58:08.894 but it's very difficult. And

NOTE Confidence: 0.99546784

00:58:09.115 --> 00:58:09.775 should it

NOTE Confidence: 0.9995201

00:58:11.275 --> 00:58:13.055 be recommended to be done

NOTE Confidence: 0.9741959

00:58:13.674 --> 00:58:15.275 by pathologists of the day?

NOTE Confidence: 0.9741959

00:58:15.275 --> 00:58:16.414 And I would say absolutely

NOTE Confidence: 0.9741959

00:58:16.555 --> 00:58:17.055 not.

NOTE Confidence: 0.9635251

00:58:21.170 --> 00:58:22.690 And if there's any doubt

NOTE Confidence: 0.9635251

00:58:22.690 --> 00:58:24.330 or uncertainty whether it really

NOTE Confidence: 0.9635251

00:58:24.530 --> 00:58:26.390 it's real status or not,

NOTE Confidence: 0.9635251

00:58:26.450 --> 00:58:27.750 it should not be called.

NOTE Confidence: 0.83565146

00:58:28.609 --> 00:58:28.930 And,

NOTE Confidence: 0.94417554

00:58:29.825 --> 00:58:31.525 and, you know, at Memorial,

NOTE Confidence: 0.9304561

00:58:31.905 --> 00:58:33.345 art even at a place

NOTE Confidence: 0.9304561

00:58:33.345 --> 00:58:34.005 like Memorial,

NOTE Confidence: 0.71732426

00:58:34.545 --> 00:58:35.105 the the the frozen are

NOTE Confidence: 0.71732426

00:58:35.105 --> 00:58:36.385 done by the pathologist of

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NOTE Confidence: 0.71732426

00:58:36.385 --> 00:58:36.965 the day,

NOTE Confidence: 0.9976531

00:58:37.505 --> 00:58:38.645 and they don't always,

NOTE Confidence: 0.99914944

00:58:39.345 --> 00:58:40.005 you know,

NOTE Confidence: 0.9984838

00:58:40.625 --> 00:58:41.905 call us to go down

NOTE Confidence: 0.9984838

00:58:41.905 --> 00:58:42.645 and look.

NOTE Confidence: 0.9574733

00:58:44.140 --> 00:58:45.020 I have to say, I

NOTE Confidence: 0.9574733

00:58:45.020 --> 00:58:46.300 think every time I've been

NOTE Confidence: 0.9574733

00:58:46.300 --> 00:58:47.840 asked, which hasn't maybe

NOTE Confidence: 0.99526036

00:58:48.380 --> 00:58:49.500 half a dozen times in

NOTE Confidence: 0.99526036

00:58:49.500 --> 00:58:50.800 the last ten years,

NOTE Confidence: 0.981056

00:58:51.740 --> 00:58:53.020 a surgeon will ask that

NOTE Confidence: 0.981056

00:58:53.020 --> 00:58:53.520 question.

NOTE Confidence: 0.89640236

00:58:55.955 --> 00:58:57.255 You know, I've been right,

NOTE Confidence: 0.9605398

00:58:57.795 --> 00:58:59.315 but if I'm not sure,

NOTE Confidence: 0.9605398

00:58:59.315 --> 00:59:00.535 I just I don't call.

NOTE Confidence: 0.9840323

00:59:01.075 --> 00:59:02.275 So I I don't think

NOTE Confidence: 0.9840323

00:59:02.275 --> 00:59:04.055 it's something for prime time.

NOTE Confidence: 0.92640734

00:59:05.075 --> 00:59:05.575 Yeah.

NOTE Confidence: 0.83812654

00:59:09.970 --> 00:59:10.470 Yes.

NOTE Confidence: 0.72303635

00:59:11.730 --> 00:59:12.850 Yeah. Question. We have a

NOTE Confidence: 0.72303635

00:59:12.850 --> 00:59:13.590 left field.

NOTE Confidence: 0.6679757

00:59:14.050 --> 00:59:16.150 It's interesting. The lipidic pattern

NOTE Confidence: 0.6679757

00:59:16.290 --> 00:59:17.810 that we defined now is

NOTE Confidence: 0.6679757

00:59:17.970 --> 00:59:19.250 I know there's some insight

NOTE Confidence: 0.6679757

00:59:19.250 --> 00:59:19.990 you were with.

NOTE Confidence: 0.8289114

00:59:21.730 --> 00:59:22.550 And the

NOTE Confidence: 0.93234617

00:59:22.965 --> 00:59:23.685 some of them, as you

NOTE Confidence: 0.93234617

00:59:23.685 --> 00:59:25.625 point out, when they're diagnosed

NOTE Confidence: 0.93234617

00:59:25.685 --> 00:59:26.185 clinically,

NOTE Confidence: 0.70729023

00:59:27.045 --> 00:59:28.005 which you're based in your

NOTE Confidence: 0.70729023

00:59:28.005 --> 00:59:29.545 studies, I do very well.

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NOTE Confidence: 0.60632247

00:59:30.005 --> 00:59:31.605 I I'm trying to oh,

NOTE Confidence: 0.60632247

00:59:31.605 --> 00:59:32.105 yes.

NOTE Confidence: 0.6667481

00:59:34.085 --> 00:59:35.285 And do you know I

NOTE Confidence: 0.6667481

00:59:35.445 --> 00:59:36.265 this is anecdotal.

NOTE Confidence: 0.80853194

00:59:36.565 --> 00:59:37.465 So my experience

NOTE Confidence: 0.8183559

00:59:37.850 --> 00:59:38.430 of autopsies,

NOTE Confidence: 0.73376936

00:59:39.130 --> 00:59:40.090 if you look at very

NOTE Confidence: 0.73376936

00:59:40.090 --> 00:59:41.630 much, the lab you find

NOTE Confidence: 0.73376936

00:59:41.930 --> 00:59:42.430 histologic,

NOTE Confidence: 0.6045677

00:59:42.810 --> 00:59:43.310 lipids,

NOTE Confidence: 0.9641986

00:59:44.330 --> 00:59:44.830 atypical

NOTE Confidence: 0.54680824

00:59:45.370 --> 00:59:47.390 adenos and psyche very common,

NOTE Confidence: 0.9321308

00:59:48.090 --> 00:59:49.390 and they're never present.

NOTE Confidence: 0.7552799

00:59:50.505 --> 00:59:51.545 But those are different in

NOTE Confidence: 0.7552799

00:59:51.545 --> 00:59:53.005 any of these just such

NOTE Confidence: 0.7552799

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00:59:53.065 --> 00:59:54.664 slow growing or new vision

NOTE Confidence: 0.7552799

00:59:54.664 --> 00:59:56.424 bursts, like, sometimes we think

NOTE Confidence: 0.7552799

00:59:56.424 --> 00:59:58.345 too. Has anybody actually looked

NOTE Confidence: 0.7552799

00:59:58.345 --> 00:59:59.884 at autopsy incidents?

NOTE Confidence: 0.94101524

01:00:01.545 --> 01:00:03.964 So Arbanda Frere, did a

NOTE Confidence: 0.94101524

01:00:04.100 --> 01:00:05.220 autopsy study, I think, looking

NOTE Confidence: 0.94101524

01:00:05.220 --> 01:00:07.380 at atypical adenomas hypoplasia. I'll

NOTE Confidence: 0.94101524

01:00:07.380 --> 01:00:08.340 I'll try to find that

NOTE Confidence: 0.94101524

01:00:08.340 --> 01:00:09.800 and send that to you.

NOTE Confidence: 0.90491205

01:00:10.260 --> 01:00:11.220 This should be easy to

NOTE Confidence: 0.90491205

01:00:11.220 --> 01:00:11.720 find.

NOTE Confidence: 0.98246723

01:00:12.260 --> 01:00:13.540 And, I forget what the

NOTE Confidence: 0.98246723

01:00:13.540 --> 01:00:15.060 percentage was of cases where

NOTE Confidence: 0.98246723

01:00:15.060 --> 01:00:15.960 he found it.

NOTE Confidence: 0.852492

01:00:16.415 --> 01:00:17.795 It's very high, I suspect.

NOTE Confidence: 0.97861075

01:00:18.494 --> 01:00:19.695 Yeah. It was it was

NOTE Confidence: 0.97861075

01:00:19.695 --> 01:00:20.835 it was a reasonable,

NOTE Confidence: 0.96738195

01:00:21.375 --> 01:00:23.055 percentage of of of,

NOTE Confidence: 0.9536526

01:00:23.535 --> 01:00:24.195 of cases.

NOTE Confidence: 0.75552094

01:00:25.055 --> 01:00:25.555 So,

NOTE Confidence: 0.69162536

01:00:26.335 --> 01:00:27.955 incident a different hit.

NOTE Confidence: 0.9960527

01:00:28.960 --> 01:00:29.460 No.

NOTE Confidence: 0.9045382

01:00:29.760 --> 01:00:31.280 But clearly, in an autopsy

NOTE Confidence: 0.9045382

01:00:31.280 --> 01:00:32.720 setting, it's an incidental finding

NOTE Confidence: 0.9045382

01:00:32.720 --> 01:00:34.020 of no clinical significance.

NOTE Confidence: 0.92187876

01:00:36.320 --> 01:00:38.320 But, there are definitely cases

NOTE Confidence: 0.92187876

01:00:38.320 --> 01:00:38.820 where

NOTE Confidence: 0.98182076

01:00:39.920 --> 01:00:41.600 the lungs are just riddled

NOTE Confidence: 0.98182076

01:00:41.600 --> 01:00:42.100 with

NOTE Confidence: 0.8512361

01:00:43.545 --> 01:00:46.045 various lipidic adenos and,

NOTE Confidence: 0.7937114

01:00:47.145 --> 01:00:48.045 often multicentric

NOTE Confidence: 0.7049368

01:00:48.505 --> 01:00:49.005 Ah.

NOTE Confidence: 0.97621185

01:00:49.625 --> 01:00:51.005 And we we see those,

NOTE Confidence: 0.9986781

01:00:51.625 --> 01:00:52.905 on a regular basis in

NOTE Confidence: 0.9986781

01:00:52.905 --> 01:00:54.045 our clinical practice.

NOTE Confidence: 0.80067676

01:00:57.240 --> 01:00:58.200 I mean, Ah is a

NOTE Confidence: 0.80067676

01:00:58.200 --> 01:01:00.380 precursor for an admin person.

NOTE Confidence: 0.80067676

01:01:00.520 --> 01:01:01.020 Yes.

NOTE Confidence: 0.9919761

01:01:01.480 --> 01:01:02.360 I saw a hand go

NOTE Confidence: 0.9919761

01:01:02.360 --> 01:01:02.860 up.

NOTE Confidence: 0.9966542

01:01:06.921 --> 01:01:07.821 Anybody else?

NOTE Confidence: 0.9342107

01:01:11.481 --> 01:01:12.841 Well, it's been a pleasure

NOTE Confidence: 0.9342107

01:01:12.841 --> 01:01:13.641 to speak with all of

NOTE Confidence: 0.9342107

01:01:13.641 --> 01:01:14.281 you and,