WEBVTT

NOTE duration:"01:04:43"

NOTE recognizability:0.871

NOTE language:en-us

NOTE Confidence: 0.788754128571429

00:00:00.000 --> 00:00:02.394 So our first speaker is Pam Kuntz,

NOTE Confidence: 0.788754128571429

00:00:02.400 --> 00:00:03.864 who is associate professor

NOTE Confidence: 0.788754128571429

00:00:03.864 --> 00:00:05.328 of medical oncology here,

NOTE Confidence: 0.788754128571429

00:00:05.330 --> 00:00:07.367 director of the Center for GI Cancer.

NOTE Confidence: 0.788754128571429

00:00:07.370 --> 00:00:09.785 As the chief of GI Medical Oncology

NOTE Confidence: 0.788754128571429

00:00:09.790 --> 00:00:11.548 and the Vice Chief of Diversity,

NOTE Confidence: 0.788754128571429

00:00:11.550 --> 00:00:14.388 Equity and inclusion for medical oncology,

NOTE Confidence: 0.788754128571429

00:00:14.390 --> 00:00:15.845 she received her medical degree

NOTE Confidence: 0.788754128571429

00:00:15.845 --> 00:00:17.300 from Dartmouth and Residency and

NOTE Confidence: 0.788754128571429

00:00:17.352 --> 00:00:18.808 Fellowship Training at Stanford,

NOTE Confidence: 0.788754128571429

00:00:18.810 --> 00:00:20.765 where she joined the faculty

NOTE Confidence: 0.788754128571429

00:00:20.765 --> 00:00:24.330 and she joined us now.

NOTE Confidence: 0.788754128571429

00:00:24.330 --> 00:00:26.166 2020 She is an international leader

NOTE Confidence: 0.788754128571429

00:00:26.166 --> 00:00:28.282 in the clinical care of patients

NOTE Confidence: 0.788754128571429

00:00:28.282 --> 00:00:30.101 with neuroendocrine tumors conducting

NOTE Confidence: 0.788754128571429

00:00:30.101 --> 00:00:33.527 important clinical trials in this area.

NOTE Confidence: 0.788754128571429

00:00:33.530 --> 00:00:35.246 And as well as translational science

NOTE Confidence: 0.788754128571429

00:00:35.246 --> 00:00:37.170 for patients with this rare diagnosis,

NOTE Confidence: 0.788754128571429

00:00:37.170 --> 00:00:39.522 she's also a vocal advocate for women

NOTE Confidence: 0.788754128571429

00:00:39.522 --> 00:00:41.210 and underrepresented groups in medicine.

NOTE Confidence: 0.788754128571429

00:00:41.210 --> 00:00:41.966 And recently,

NOTE Confidence: 0.788754128571429

00:00:41.966 --> 00:00:44.990 the women leader in oncology named her the

NOTE Confidence: 0.788754128571429

00:00:44.990 --> 00:00:48.084 2021 Women Women oncologist of the Year,

NOTE Confidence: 0.788754128571429

00:00:48.090 --> 00:00:49.681 so we're very happy to hear, and

NOTE Confidence: 0.788754128571429

00:00:49.681 --> 00:00:51.667 we'll hear about GI neuroendocrine tumors.

NOTE Confidence: 0.788754128571429

00:00:51.670 --> 00:00:53.710 I suspect from Pam.

NOTE Confidence: 0.788754128571429

00:00:53.710 --> 00:00:54.730 Thank you.

NOTE Confidence: 0.788754128571429

00:00:54.730 --> 00:00:56.920 Thanks, Dan.

NOTE Confidence: 0.776436492857143

00:00:56.920 --> 00:00:58.632 I can switch here.

NOTE Confidence: 0.776436492857143

00:00:58.632 --> 00:01:01.644 There has that looks OK all right excellent.

NOTE Confidence: 0.776436492857143

00:01:01.644 --> 00:01:03.252 So thanks so much for the

NOTE Confidence: 0.776436492857143

00:01:03.252 --> 00:01:04.260 opportunity to speak today.

NOTE Confidence: 0.776436492857143

00:01:04.260 --> 00:01:06.759 I will in fact be talking about

NOTE Confidence: 0.776436492857143

00:01:06.759 --> 00:01:09.178 neuroendocrine tumors and establishing the

NOTE Confidence: 0.776436492857143

00:01:09.178 --> 00:01:12.008 Yale and neuroendocrine tumor program.

NOTE Confidence: 0.776436492857143

00:01:12.010 --> 00:01:13.879 I'd like to highlight this is broadly

NOTE Confidence: 0.776436492857143

00:01:13.879 --> 00:01:15.939 part of the Center for GI cancers.

NOTE Confidence: 0.776436492857143

00:01:15.940 --> 00:01:18.298 We have a new Twitter handle

NOTE Confidence: 0.776436492857143

00:01:18.298 --> 00:01:20.380 and email which is here.

NOTE Confidence: 0.776436492857143

00:01:20.380 --> 00:01:23.000 These are my disclosures.

NOTE Confidence: 0.776436492857143

00:01:23.000 --> 00:01:24.550 I'm going to go over.

NOTE Confidence: 0.776436492857143

00:01:24.550 --> 00:01:27.700 I'm just a brief outline of epidemiology,

NOTE Confidence: 0.776436492857143

00:01:27.700 --> 00:01:30.085 nomenclature, and some key characteristics

NOTE Confidence: 0.776436492857143

00:01:30.085 --> 00:01:32.470 of Nets that impact treatment.

NOTE Confidence: 0.776436492857143

00:01:32.470 --> 00:01:34.650 We'll talk some about treatments,

NOTE Confidence: 0.776436492857143

00:01:34.650 --> 00:01:36.264 some clinical trials in which I've

NOTE Confidence: 0.776436492857143

00:01:36.264 --> 00:01:38.099 been involved over the last few years,

NOTE Confidence: 0.776436492857143

00:01:38.100 --> 00:01:39.678 and why we should create a.

NOTE Confidence: 0.776436492857143

00:01:39.680 --> 00:01:41.224 Net program at Yale,

NOTE Confidence: 0.776436492857143

00:01:41.224 --> 00:01:44.261 and then we'll finish with some future

NOTE Confidence: 0.776436492857143

00:01:44.261 --> 00:01:46.817 clinical and research opportunities.

NOTE Confidence: 0.776436492857143

00:01:46.820 --> 00:01:48.818 I like starting with a little bit of history,

NOTE Confidence: 0.776436492857143

00:01:48.820 --> 00:01:51.277 and I think this this one is

NOTE Confidence: 0.776436492857143

00:01:51.277 --> 00:01:52.595 especially important, so.

NOTE Confidence: 0.776436492857143

00:01:52.595 --> 00:01:55.055 Neuroendocrine tumors were recognized

NOTE Confidence: 0.776436492857143

00:01:55.055 --> 00:01:59.412 in the late 1800s and early 1900s.

NOTE Confidence: 0.776436492857143

00:01:59.412 --> 00:02:01.296 The term carcinoid,

NOTE Confidence: 0.776436492857143

00:02:01.300 --> 00:02:02.828 which means cancer like,

NOTE Confidence: 0.776436492857143

00:02:02.828 --> 00:02:05.120 has been attributed to doctor or

NOTE Confidence: 0.776436492857143

00:02:05.192 --> 00:02:07.337 Bender for a German pathologist.

NOTE Confidence: 0.776436492857143

00:02:07.340 --> 00:02:09.860 He felt that these had five key

NOTE Confidence: 0.776436492857143

00:02:09.860 --> 00:02:11.699 characteristics that they were small,

NOTE Confidence: 0.776436492857143

00:02:11.700 --> 00:02:14.084 and multifocal had undifferentiated

NOTE Confidence: 0.776436492857143

00:02:14.084 --> 00:02:15.276 cellular formations,

NOTE Confidence: 0.776436492857143

00:02:15.280 --> 00:02:16.768 well defined borders,

NOTE Confidence: 0.776436492857143

00:02:16.768 --> 00:02:18.256 no metastatic potential,

NOTE Confidence: 0.776436492857143

00:02:18.260 --> 00:02:20.660 and we're slow growing and harmless,

NOTE Confidence: 0.776436492857143

00:02:20.660 --> 00:02:22.250 though this was a very

NOTE Confidence: 0.776436492857143

00:02:22.250 --> 00:02:23.522 important contribution to the.

NOTE Confidence: 0.776436492857143

00:02:23.530 --> 00:02:25.762 Field we now know that these

NOTE Confidence: 0.776436492857143

00:02:25.762 --> 00:02:28.710 tumors are can in fact metastasize.

NOTE Confidence: 0.776436492857143

00:02:28.710 --> 00:02:30.950 They are in fact cancers,

NOTE Confidence: 0.776436492857143

00:02:30.950 --> 00:02:32.585 and unfortunately this

NOTE Confidence: 0.776436492857143

00:02:32.585 --> 00:02:35.310 really held back the field.

NOTE Confidence: 0.776436492857143

00:02:35.310 --> 00:02:35.928 In fact,

NOTE Confidence: 0.776436492857143

00:02:35.928 --> 00:02:37.782 for many many years these were

NOTE Confidence: 0.776436492857143

00:02:37.782 --> 00:02:39.194 not incorporated or included

NOTE Confidence: 0.776436492857143

00:02:39.194 --> 00:02:40.289 in cancer registries,

NOTE Confidence: 0.776436492857143

00:02:40.290 --> 00:02:42.660 and therefore it made epidemiologic

NOTE Confidence: 0.776436492857143

00:02:42.660 --> 00:02:45.030 and other studies very difficult.

NOTE Confidence: 0.776436492857143

00:02:45.030 --> 00:02:48.173 So we Fast forward to the 1980s

NOTE Confidence: 0.776436492857143

00:02:48.173 --> 00:02:50.498 when we developed streptozotocin

NOTE Confidence: 0.776436492857143

00:02:50.498 --> 00:02:53.701 and octreotide for the treatment

NOTE Confidence: 0.776436492857143

00:02:53.701 --> 00:02:55.609 of neuroendocrine tumors and

NOTE Confidence: 0.776436492857143

00:02:55.609 --> 00:02:56.563 hormone hypersecretion.

NOTE Confidence: 0.776436492857143

00:02:56.570 --> 00:02:59.314 And then there was really a desert

NOTE Confidence: 0.776436492857143

00:02:59.314 --> 00:03:01.061 of therapeutic and diagnostic

NOTE Confidence: 0.776436492857143

00:03:01.061 --> 00:03:03.526 advances for almost 30 years.

NOTE Confidence: 0.776436492857143

00:03:03.530 --> 00:03:06.757 And then you can see an explosion

NOTE Confidence: 0.776436492857143

00:03:06.757 --> 00:03:09.044 of research starting in 2011

NOTE Confidence: 0.776436492857143

00:03:09.044 --> 00:03:11.480 with a number of FDA approvals

NOTE Confidence: 0.776436492857143

00:03:11.480 --> 00:03:13.175 for everolimus and student Neb

NOTE Confidence: 0.776436492857143

00:03:13.175 --> 00:03:15.110 and pancreatic Nets and so on.

NOTE Confidence: 0.776436492857143

00:03:15.110 --> 00:03:16.538 I'm going to go into a little

NOTE Confidence: 0.776436492857143

00:03:16.538 --> 00:03:17.559 bit more detail on this.

NOTE Confidence: 0.776436492857143

00:03:17.560 --> 00:03:20.683 Up on the top we see that there are

NOTE Confidence: 0.776436492857143

00:03:20.683 --> 00:03:23.558 actually 3 new novel imaging modalities,

NOTE Confidence: 0.776436492857143

00:03:23.560 --> 00:03:25.672 three types of PET scans with

NOTE Confidence: 0.776436492857143

00:03:25.672 --> 00:03:26.376 different radioisotopes.

NOTE Confidence: 0.776436492857143

00:03:26.380 --> 00:03:27.864 Those have really completely

NOTE Confidence: 0.776436492857143

00:03:27.864 --> 00:03:29.719 replaced the use of octreoscan,

NOTE Confidence: 0.776436492857143

00:03:29.720 --> 00:03:32.096 so it's been an exciting time

NOTE Confidence: 0.776436492857143

00:03:32.096 --> 00:03:34.350 to be in the field.

NOTE Confidence: 0.776436492857143

00:03:34.350 --> 00:03:36.975 I'd like to also really dispel the

NOTE Confidence: 0.776436492857143

00:03:36.975 --> 00:03:39.789 myth that Nets are really that rare,

NOTE Confidence: 0.776436492857143

00:03:39.790 --> 00:03:42.160 so they are in fact low,

NOTE Confidence: 0.776436492857143

00:03:42.160 --> 00:03:43.920 have a low incidence rate,

NOTE Confidence: 0.776436492857143

00:03:43.920 --> 00:03:45.245 so that's the number of

NOTE Confidence: 0.776436492857143

00:03:45.245 --> 00:03:46.305 patients diagnosed per year,

NOTE Confidence: 0.776436492857143

00:03:46.310 --> 00:03:48.438 and we can see that in this figure

NOTE Confidence: 0.776436492857143

00:03:48.438 --> 00:03:50.575 from a seer epidemiologic study in

NOTE Confidence: 0.776436492857143

00:03:50.575 --> 00:03:53.272 yellow is the incidence of Nets the

NOTE Confidence: 0.776436492857143

00:03:53.272 --> 00:03:55.547 corresponding Y axis is on the left,

NOTE Confidence: 0.776436492857143

00:03:55.550 --> 00:03:58.430 so at present we have about 7 to

NOTE Confidence: 0.776436492857143

00:03:58.430 --> 00:04:00.706 8 diagnosis per 100,000 patients

NOTE Confidence: 0.776436492857143

00:04:00.706 --> 00:04:02.670 in the United States.

NOTE Confidence: 0.776436492857143

00:04:02.670 --> 00:04:04.658 However, in the figure on the right.

NOTE Confidence: 0.776436492857143

00:04:04.660 --> 00:04:07.194 I like to also describe that these

NOTE Confidence: 0.776436492857143

00:04:07.194 --> 00:04:09.592 are a higher prevalent cancer

NOTE Confidence: 0.776436492857143

00:04:09.592 --> 00:04:12.056 than was previously recognized.

NOTE Confidence: 0.776436492857143

00:04:12.060 --> 00:04:12.828 The prevalence,

NOTE Confidence: 0.776436492857143

00:04:12.828 --> 00:04:14.748 meaning the number of patients

NOTE Confidence: 0.776436492857143

00:04:14.748 --> 00:04:15.900 alive at any

NOTE Confidence: 0.917390070833333

00:04:15.969 --> 00:04:18.630 given time and the net prevalence actually

NOTE Confidence: 0.917390070833333

00:04:18.630 --> 00:04:21.508 exceeds that of stomach and pancreatic

NOTE Confidence: 0.917390070833333

00:04:21.508 --> 00:04:23.892 adenocarcinoma combined, so I think

NOTE Confidence: 0.917390070833333

00:04:23.892 --> 00:04:25.476 it's a bigger public health problem.

NOTE Confidence: 0.917390070833333

00:04:25.480 --> 00:04:27.436 Many primary care,

NOTE Confidence: 0.917390070833333

00:04:27.436 --> 00:04:31.348 general oncologists will see these patients.

NOTE Confidence: 0.917390070833333

00:04:31.350 --> 00:04:33.370 Nets are epithelial neoplasms that

NOTE Confidence: 0.917390070833333

00:04:33.370 --> 00:04:34.986 are derived from neuroendocrine

NOTE Confidence: 0.917390070833333

00:04:34.986 --> 00:04:36.569 cells throughout the body.

NOTE Confidence: 0.917390070833333

00:04:36.570 --> 00:04:38.562 As Dan said, I may officially

NOTE Confidence: 0.917390070833333

00:04:38.562 --> 00:04:40.730 a card carrying GI oncologist,

NOTE Confidence: 0.917390070833333

00:04:40.730 --> 00:04:43.021 but they do in fact happen throughout

NOTE Confidence: 0.917390070833333

00:04:43.021 --> 00:04:45.247 the body GI tract most commonly

NOTE Confidence: 0.917390070833333

00:04:45.247 --> 00:04:47.349 followed by lungs and then other.

NOTE Confidence: 0.917390070833333

00:04:47.350 --> 00:04:49.426 And I actually see Nets of

NOTE Confidence: 0.917390070833333

00:04:49.426 --> 00:04:50.810 almost every primary site.

NOTE Confidence: 0.917390070833333

00:04:50.810 --> 00:04:54.010 I just saw a base of Skull net last week,

NOTE Confidence: 0.917390070833333

00:04:54.010 --> 00:04:56.936 so most grow slowly in comparison with

NOTE Confidence: 0.917390070833333

00:04:56.936 --> 00:04:58.190 their adenocarcinoma counterparts.

NOTE Confidence: 0.917390070833333

00:04:58.190 --> 00:05:00.596 The majority are sporadic with only

NOTE Confidence: 0.917390070833333

00:05:00.596 --> 00:05:02.900 the minority associated with inherited.

NOTE Confidence: 0.917390070833333

00:05:02.900 --> 00:05:06.968 Familial syndromes such as M1 MEN 2,

NOTE Confidence: 0.917390070833333

00:05:06.968 --> 00:05:07.640 von Hippel,

NOTE Confidence: 0.917390070833333

00:05:07.640 --> 00:05:09.628 Lindau and Neurofibroma Fibromatosis

NOTE Confidence: 0.917390070833333

00:05:09.628 --> 00:05:12.113 on pathognomonic for this disease

NOTE Confidence: 0.917390070833333

00:05:12.113 --> 00:05:14.310 or the presence of somatostatin

NOTE Confidence: 0.917390070833333

00:05:14.310 --> 00:05:17.240 receptors on the surface of the cells.

NOTE Confidence: 0.917390070833333

00:05:17.240 --> 00:05:20.943 There are five types and over 80% of

NOTE Confidence: 0.917390070833333

00:05:20.943 --> 00:05:22.958 Nets over express somatostatin receptor

NOTE Confidence: 0.917390070833333

00:05:22.958 --> 00:05:26.262 type 2 and we can take great advantage

NOTE Confidence: 0.917390070833333

00:05:26.262 --> 00:05:29.191 of this in terms of diagnostics and

NOTE Confidence: 0.917390070833333

00:05:29.191 --> 00:05:32.215 therapeutics and we'll talk about that also.

NOTE Confidence: 0.917390070833333

00:05:32.220 --> 00:05:33.730 And just a brief mention,

NOTE Confidence: 0.917390070833333

00:05:33.730 --> 00:05:35.902 this is a really cursory overview

NOTE Confidence: 0.917390070833333

00:05:35.902 --> 00:05:36.988 of net biology,

NOTE Confidence: 0.917390070833333

00:05:36.990 --> 00:05:39.630 but I did want to to bring this

NOTE Confidence: 0.917390070833333

00:05:39.630 --> 00:05:41.236 in large scale.

NOTE Confidence: 0.917390070833333

00:05:41.236 --> 00:05:43.788 Chromosomal alterations are common.

NOTE Confidence: 0.917390070833333

00:05:43.790 --> 00:05:46.894 Tumor mutation burden is low in the net,

NOTE Confidence: 0.917390070833333

00:05:46.900 --> 00:05:49.066 so that's the lower grade grade

NOTE Confidence: 0.917390070833333

00:05:49.066 --> 00:05:50.510 1/2 nor underprint tumors.

NOTE Confidence: 0.917390070833333

00:05:50.510 --> 00:05:53.270 It's higher in neuroendocrine carcinomas,

NOTE Confidence: 0.917390070833333

00:05:53.270 --> 00:05:55.958 that's the Grade 3 or poorly

NOTE Confidence: 0.917390070833333

00:05:55.958 --> 00:05:57.256 differentiated recurrent somatic

NOTE Confidence: 0.917390070833333

00:05:57.256 --> 00:05:58.948 mutations are actually rare.

NOTE Confidence: 0.917390070833333

00:05:58.950 --> 00:06:00.540 There have been a number

NOTE Confidence: 0.917390070833333

00:06:00.540 --> 00:06:01.812 of fairly recent studies.

NOTE Confidence: 0.917390070833333

00:06:01.820 --> 00:06:03.352 So in pancreatic net,

NOTE Confidence: 0.917390070833333

00:06:03.352 --> 00:06:05.267 we will say somatic mutations

NOTE Confidence: 0.917390070833333

00:06:05.267 --> 00:06:08.190 in MN dachsund fate Terex we see

NOTE Confidence: 0.917390070833333

00:06:08.190 --> 00:06:09.834 mtor pathway gene mutations,

NOTE Confidence: 0.917390070833333

00:06:09.840 --> 00:06:10.650 mute YH,

NOTE Confidence: 0.917390070833333

00:06:10.650 --> 00:06:13.485 check two and bracket two and there

NOTE Confidence: 0.917390070833333

00:06:13.485 --> 00:06:16.616 are proposed or hypothesized at least

NOTE Confidence: 0.917390070833333

00:06:16.616 --> 00:06:19.061 four different molecular subtypes of

NOTE Confidence: 0.917390070833333

00:06:19.061 --> 00:06:21.148 pancreatic Nets and in small bowels

NOTE Confidence: 0.917390070833333

00:06:21.148 --> 00:06:25.070 we will see mutations in CDKN 1B.

NOTE Confidence: 0.917390070833333

00:06:25.070 --> 00:06:27.010 Tumor grade progression does

NOTE Confidence: 0.917390070833333

00:06:27.010 --> 00:06:28.950 occur in pancreatic Nets,

NOTE Confidence: 0.917390070833333

00:06:28.950 --> 00:06:30.650 and we have seen clonal

NOTE Confidence: 0.917390070833333

00:06:30.650 --> 00:06:32.010 evolution patterns as well.

NOTE Confidence: 0.917390070833333

00:06:32.010 --> 00:06:33.672 There was a very elegant study

NOTE Confidence: 0.917390070833333

00:06:33.672 --> 00:06:35.450 done by friends and colleagues.

NOTE Confidence: 0.917390070833333

00:06:35.450 --> 00:06:38.264 Doctors Nature Raj and Diane Reidy Lagunes

NOTE Confidence: 0.917390070833333

00:06:38.264 --> 00:06:40.770 at memorial that demonstrated this,

NOTE Confidence: 0.917390070833333

00:06:40.770 --> 00:06:43.104 and then germline alterations are also

NOTE Confidence: 0.917390070833333

00:06:43.104 --> 00:06:45.190 more common than previously thought.

NOTE Confidence: 0.917390070833333

00:06:45.190 --> 00:06:49.088 So in the Scarpa Nature Paper from 2017,

NOTE Confidence: 0.917390070833333

00:06:49.088 --> 00:06:51.078 17% of quote sporadic pancreatic

NOTE Confidence: 0.917390070833333

00:06:51.078 --> 00:06:53.350 Nets actually had germline mutations.

NOTE Confidence: 0.924400735714286

00:06:55.430 --> 00:06:57.285 In terms of the diagnostic work up,

NOTE Confidence: 0.924400735714286

00:06:57.290 --> 00:07:00.468 the mainstay of imaging is cross sectional,

NOTE Confidence: 0.924400735714286

00:07:00.470 --> 00:07:03.228 so either a multiphasic CT and that

NOTE Confidence: 0.924400735714286

00:07:03.228 --> 00:07:06.086 is key when you order a net CT.

NOTE Confidence: 0.924400735714286

00:07:06.090 --> 00:07:08.810 So you have to order it as multiphysics

NOTE Confidence: 0.924400735714286

00:07:08.810 --> 00:07:10.569 specifically with an arterial phase

NOTE Confidence: 0.924400735714286

00:07:10.570 --> 00:07:13.255 and or MRI somatostatin receptor

NOTE Confidence: 0.924400735714286

00:07:13.255 --> 00:07:15.940 imaging complements the cross sectional

NOTE Confidence: 0.924400735714286

00:07:16.022 --> 00:07:18.447 imaging octreoscan has been completely

NOTE Confidence: 0.924400735714286

00:07:18.447 --> 00:07:21.305 replaced by the gallium 60 Dota

NOTE Confidence: 0.924400735714286

00:07:21.305 --> 00:07:24.022 Tate or Copper 64 Dota Tate Pets.

NOTE Confidence: 0.924400735714286

00:07:24.022 --> 00:07:26.500 We still occasionally will use FTG.

NOTE Confidence: 0.924400735714286

00:07:26.500 --> 00:07:28.614 But that's really only for high grade,

NOTE Confidence: 0.924400735714286

00:07:28.620 --> 00:07:31.458 poorly differentiated disease.

NOTE Confidence: 0.924400735714286

00:07:31.460 --> 00:07:34.020 And as you can see in the figure on the left,

NOTE Confidence: 0.924400735714286

00:07:34.020 --> 00:07:36.524 this is a cross section through the liver

NOTE Confidence: 0.924400735714286

00:07:36.524 --> 00:07:38.778 with two hypervascular liver lesions shown

NOTE Confidence: 0.924400735714286

00:07:38.778 --> 00:07:41.680 in the arterial phase of the CT scan.

NOTE Confidence: 0.924400735714286

00:07:41.680 --> 00:07:42.936 So that's really important,

NOTE Confidence: 0.924400735714286

00:07:42.936 --> 00:07:45.198 as these can be missed if that

NOTE Confidence: 0.924400735714286

00:07:45.198 --> 00:07:46.778 arterial phase is not done.

NOTE Confidence: 0.924400735714286

00:07:46.780 --> 00:07:49.978 We also tissue diagnosis is important.

NOTE Confidence: 0.924400735714286

00:07:49.980 --> 00:07:52.444 We try to find the primary site as

NOTE Confidence: 0.924400735714286

00:07:52.444 --> 00:07:54.760 there are some differences in FDA

NOTE Confidence: 0.924400735714286

00:07:54.760 --> 00:07:57.709 approvals by primary site and then key

NOTE Confidence: 0.924400735714286

00:07:57.709 --> 00:07:59.889 minimum data elements on pathology

NOTE Confidence: 0.924400735714286

00:07:59.889 --> 00:08:02.766 include WHN grade Ki 67 mitotic

NOTE Confidence: 0.924400735714286

00:08:02.766 --> 00:08:05.376 index and degree of differentiation.

NOTE Confidence: 0.924400735714286

00:08:05.380 --> 00:08:07.270 Tumor markers are not all that

NOTE Confidence: 0.924400735714286

00:08:07.270 --> 00:08:08.215 helpful for Nets.

NOTE Confidence: 0.924400735714286

00:08:08.220 --> 00:08:10.404 In fact, Crimina, which has historically

NOTE Confidence: 0.924400735714286

00:08:10.404 --> 00:08:11.860 been used pretty widely,

NOTE Confidence: 0.924400735714286

00:08:11.860 --> 00:08:13.400 is in fact falling out of favor.

NOTE Confidence: 0.924400735714286

00:08:13.400 --> 00:08:15.610 I don't use it anywhere.

NOTE Confidence: 0.924400735714286

00:08:15.610 --> 00:08:17.466 24 hour urine 5.

NOTE Confidence: 0.924400735714286

00:08:17.466 --> 00:08:17.930 HIA,

NOTE Confidence: 0.924400735714286

00:08:17.930 --> 00:08:19.988 which is a metabolite of serotonin,

NOTE Confidence: 0.924400735714286

00:08:19.990 --> 00:08:22.402 is useful for those patients in

NOTE Confidence: 0.924400735714286

00:08:22.402 --> 00:08:23.608 whom it's elevated,

NOTE Confidence: 0.924400735714286

00:08:23.610 --> 00:08:25.662 and then they're all also other

NOTE Confidence: 0.924400735714286

00:08:25.662 --> 00:08:26.346 specific peptides.

NOTE Confidence: 0.924400735714286

00:08:26.350 --> 00:08:28.690 Any means which will speak about.

NOTE Confidence: 0.924400735714286

00:08:28.690 --> 00:08:31.831 So I like to think of six key patient

NOTE Confidence: 0.924400735714286

00:08:31.831 --> 00:08:33.498 characteristics that impact treatment

NOTE Confidence: 0.924400735714286

00:08:33.498 --> 00:08:35.988 will go over these briefly hormone

NOTE Confidence: 0.924400735714286

00:08:35.988 --> 00:08:38.887 status stage and burden of disease grade

NOTE Confidence: 0.924400735714286

00:08:38.887 --> 00:08:41.128 and differentiation pace of growth,

NOTE Confidence: 0.924400735714286

00:08:41.128 --> 00:08:44.268 primary site and somatostatin receptor

NOTE Confidence: 0.924400735714286

00:08:44.268 --> 00:08:48.309 status on these all yield potential

NOTE Confidence: 0.924400735714286

00:08:48.310 --> 00:08:49.470 clinical and research questions.

NOTE Confidence: 0.924400735714286

00:08:49.470 --> 00:08:51.909 So I I think it also helps frame

NOTE Confidence: 0.924400735714286

00:08:51.909 --> 00:08:53.835 the rest of the conversation today.

NOTE Confidence: 0.924400735714286

00:08:53.840 --> 00:08:55.940 So in terms of hormone status,

NOTE Confidence: 0.924400735714286

00:08:55.940 --> 00:08:58.295 we divide patients into functional

NOTE Confidence: 0.924400735714286

00:08:58.295 --> 00:08:59.708 and non functional.

NOTE Confidence: 0.924400735714286

00:08:59.710 --> 00:09:02.090 Functional refers to patients having

NOTE Confidence: 0.924400735714286

00:09:02.090 --> 00:09:04.470 symptoms from a measurable hormone.

NOTE Confidence: 0.924400735714286

00:09:04.470 --> 00:09:06.966 Carcinoid syndrome is the classic example,

NOTE Confidence: 0.924400735714286

00:09:06.970 --> 00:09:09.178 so this happens in about 10% of

NOTE Confidence: 0.924400735714286

00:09:09.178 --> 00:09:11.266 small intestine Nets and this is

NOTE Confidence: 0.924400735714286

00:09:11.266 --> 00:09:13.240 due to production of serotonin.

NOTE Confidence: 0.924400735714286

00:09:13.240 --> 00:09:15.140 Patients may have flushing and

NOTE Confidence: 0.924400735714286

00:09:15.140 --> 00:09:16.660 venous telangiectasia shown in

NOTE Confidence: 0.924400735714286

00:09:16.660 --> 00:09:18.268 the picture on the left.

NOTE Confidence: 0.924400735714286

00:09:18.270 --> 00:09:20.130 Patients are often misdiagnosed

NOTE Confidence: 0.924400735714286

00:09:20.130 --> 00:09:21.525 as having rosacea.

NOTE Confidence: 0.924400735714286

00:09:21.530 --> 00:09:24.290 They can have diarrhea, bronchospasm.

NOTE Confidence: 0.924400735714286

00:09:24.290 --> 00:09:25.080 Valvular fibrosis,

NOTE Confidence: 0.924400735714286

00:09:25.080 --> 00:09:27.450 as seen in that second picture

NOTE Confidence: 0.924400735714286

00:09:27.450 --> 00:09:30.146 which is fibrosis of the pulmonary

NOTE Confidence: 0.924400735714286

00:09:30.146 --> 00:09:31.520 and tricuspid valves?

NOTE Confidence: 0.924400735714286

00:09:31.520 --> 00:09:33.830 Pancreatic Nets can also secrete

NOTE Confidence: 0.924400735714286

00:09:33.830 --> 00:09:36.140 hormones in about 40 percent.

NOTE Confidence: 0.924400735714286

00:09:36.140 --> 00:09:37.680 40% of the time.

NOTE Confidence: 0.924400735714286

00:09:37.680 --> 00:09:38.835 Most commonly insulin,

NOTE Confidence: 0.924400735714286

00:09:38.840 --> 00:09:40.370 followed by gastrin,

NOTE Confidence: 0.924400735714286

00:09:40.370 --> 00:09:42.920 Glucagon and wezo intestinal polypeptide,

NOTE Confidence: 0.924400735714286

00:09:42.920 --> 00:09:44.515 and the symptoms are defined

NOTE Confidence: 0.924400735714286

00:09:44.515 --> 00:09:46.350 by the hormones to create it.

NOTE Confidence: 0.924400735714286

00:09:46.350 --> 00:09:49.236 And then nonfunctional Nets are patients

NOTE Confidence: 0.924400735714286

00:09:49.236 --> 00:09:52.126 who are asymptomatic or have symptoms

NOTE Confidence: 0.924400735714286

00:09:52.126 --> 00:09:54.778 that are not from hormone access.

NOTE Confidence: 0.924400735714286

00:09:54.780 --> 00:09:56.200 Stage and burden of disease.

NOTE Confidence: 0.924400735714286

00:09:56.200 --> 00:09:57.420 It's important to think about.

NOTE Confidence: 0.924400735714286

00:09:57.420 --> 00:10:00.360 Do they have localized or metastatic disease,

NOTE Confidence: 0.924400735714286

00:10:00.360 --> 00:10:00.770 liver,

NOTE Confidence: 0.924400735714286

00:10:00.770 --> 00:10:01.180 dominant,

NOTE Confidence: 0.924400735714286

00:10:01.180 --> 00:10:03.640 or widely metastatic or low volume

NOTE Confidence: 0.924400735714286

00:10:03.640 --> 00:10:06.299 or high volume and aren't new dodo

NOTE Confidence: 0.924400735714286

00:10:06.299 --> 00:10:08.907 pets really are the best tool to

NOTE Confidence: 0.924400735714286

00:10:08.907 --> 00:10:11.199 help us determine extent of disease?

NOTE Confidence: 0.924400735714286

00:10:11.200 --> 00:10:12.480 So as you can see on the left,

NOTE Confidence: 0.839235135882353

00:10:12.480 --> 00:10:14.376 this is a localized pancreatic net

NOTE Confidence: 0.839235135882353

00:10:14.376 --> 00:10:16.686 with you can see the pancreatic net

NOTE Confidence: 0.839235135882353

00:10:16.686 --> 00:10:18.878 here in the middle liver dominant

NOTE Confidence: 0.839235135882353

00:10:18.878 --> 00:10:21.512 disease with a liver really filled

NOTE Confidence: 0.839235135882353

00:10:21.512 --> 00:10:24.328 with with tumor metastatic disease.

NOTE Confidence: 0.839235135882353

00:10:24.330 --> 00:10:26.310 And then widely metastatic disease,

NOTE Confidence: 0.839235135882353

00:10:26.310 --> 00:10:29.582 and this is these are actually bone lesions

NOTE Confidence: 0.839235135882353

00:10:29.582 --> 00:10:32.700 throughout the axial skeleton. I'm a JCC.

NOTE Confidence: 0.839235135882353

00:10:32.700 --> 00:10:34.650 Staging follows other solid tumors,

NOTE Confidence: 0.839235135882353

00:10:34.650 --> 00:10:36.909 but the key point I want to make from

NOTE Confidence: 0.839235135882353

00:10:36.909 --> 00:10:39.017 this slide is that Nets were actually

NOTE Confidence: 0.839235135882353

00:10:39.017 --> 00:10:41.649 only added to the AJC staging as of 2010,

NOTE Confidence: 0.839235135882353

00:10:41.650 --> 00:10:44.488 so relatively new.

NOTE Confidence: 0.839235135882353

00:10:44.490 --> 00:10:46.980 Grade and differentiation is important,

NOTE Confidence: 0.839235135882353

00:10:46.980 --> 00:10:49.380 I just have highlighted the two

NOTE Confidence: 0.839235135882353

00:10:49.380 --> 00:10:51.410 most recent WHO classification

NOTE Confidence: 0.839235135882353

00:10:51.410 --> 00:10:54.485 for thoracic and digestive Nets.

NOTE Confidence: 0.839235135882353

00:10:54.490 --> 00:10:57.556 They are, I'd say loosely related,

NOTE Confidence: 0.839235135882353

00:10:57.560 --> 00:10:59.842 but there are some nuances and suffice

NOTE Confidence: 0.839235135882353

00:10:59.842 --> 00:11:02.516 it to say that the nomenclature and

NOTE Confidence: 0.839235135882353

00:11:02.516 --> 00:11:05.222 evolution of The Who classification and

NOTE Confidence: 0.839235135882353

00:11:05.222 --> 00:11:08.680 what we call these tumors is complicated

NOTE Confidence: 0.839235135882353

00:11:08.759 --> 00:11:11.189 and has changed a lot overtime.

NOTE Confidence: 0.839235135882353

00:11:11.190 --> 00:11:12.884 I'd like to just bring you to

NOTE Confidence: 0.839235135882353

00:11:12.884 --> 00:11:14.288 this right column of the 2019.

NOTE Confidence: 0.839235135882353

00:11:14.290 --> 00:11:18.091 Adjusted WHL classification so we now have

NOTE Confidence: 0.839235135882353

00:11:18.091 --> 00:11:21.318 well differentiated grade 1/2 and three Nets,

NOTE Confidence: 0.839235135882353

00:11:21.320 --> 00:11:24.357 and then a poorly differentiated carcinoma

NOTE Confidence: 0.839235135882353

00:11:24.357 --> 00:11:28.893 so that word carcinoma implies that it is

NOTE Confidence: 0.839235135882353

00:11:28.893 --> 00:11:33.048 grade 3 and has a Ki 67 greater than 20%.

NOTE Confidence: 0.839235135882353

00:11:33.050 --> 00:11:35.066 So piece of growth matters also,

NOTE Confidence: 0.839235135882353

00:11:35.070 --> 00:11:37.182 so I may need a patient who has

NOTE Confidence: 0.839235135882353

00:11:37.182 --> 00:11:39.228 had stable disease for many years,

NOTE Confidence: 0.839235135882353

00:11:39.230 --> 00:11:42.209 or I may meet a patient who has rapidly

NOTE Confidence: 0.839235135882353

00:11:42.209 --> 00:11:43.984 progressive metastatic disease and that

NOTE Confidence: 0.839235135882353

00:11:43.984 --> 00:11:47.090 matters in terms of how I select therapy.

NOTE Confidence: 0.839235135882353

00:11:47.090 --> 00:11:48.134 Primary site matters,

NOTE Confidence: 0.839235135882353

00:11:48.134 --> 00:11:51.071 as I'd mentioned some of our FDA approvals

NOTE Confidence: 0.839235135882353

00:11:51.071 --> 00:11:53.669 are really dependent on primary site,

NOTE Confidence: 0.839235135882353

00:11:53.670 --> 00:11:55.298 so for one example,

NOTE Confidence: 0.839235135882353

00:11:55.298 --> 00:11:56.926 sunitinib is only approved

NOTE Confidence: 0.839235135882353

00:11:56.926 --> 00:11:58.150 for pancreatic Nets,

NOTE Confidence: 0.839235135882353

00:11:58.150 --> 00:12:01.590 not for other primary sites.

NOTE Confidence: 0.839235135882353

00:12:01.590 --> 00:12:03.696 And then lastly of these characteristics,

NOTE Confidence: 0.839235135882353

00:12:03.700 --> 00:12:04.752 somatostatin receptor,

NOTE Confidence: 0.839235135882353

00:12:04.752 --> 00:12:07.908 is our newest characteristic that matters.

NOTE Confidence: 0.839235135882353

00:12:07.910 --> 00:12:10.094 This is just a really nice example of

NOTE Confidence: 0.839235135882353

00:12:10.094 --> 00:12:12.449 this same patient who had an octreoscan,

NOTE Confidence: 0.839235135882353

00:12:12.450 --> 00:12:14.880 so that's our older imaging tool.

NOTE Confidence: 0.839235135882353

00:12:14.880 --> 00:12:16.925 It required patients coming back

NOTE Confidence: 0.839235135882353

00:12:16.925 --> 00:12:19.689 to the facility two days in a row,

NOTE Confidence: 0.839235135882353

00:12:19.690 --> 00:12:22.245 and then our newer gallium 68 dotatate

NOTE Confidence: 0.839235135882353

00:12:22.245 --> 00:12:25.070 pet that has much higher resolution.

NOTE Confidence: 0.839235135882353

00:12:25.070 --> 00:12:26.470 I'll just highlight a couple

NOTE Confidence: 0.839235135882353

00:12:26.470 --> 00:12:27.310 of interesting points,

NOTE Confidence: 0.839235135882353

00:12:27.310 --> 00:12:29.242 so the pituitary gland is normally

NOTE Confidence: 0.839235135882353

00:12:29.242 --> 00:12:31.398 a little bit positive on this as is.

NOTE Confidence: 0.839235135882353

00:12:31.400 --> 00:12:34.328 Be or as are the liver has

NOTE Confidence: 0.839235135882353

00:12:34.328 --> 00:12:35.180 some normal background,

NOTE Confidence: 0.839235135882353

00:12:35.180 --> 00:12:36.674 but then spleen and that it's

NOTE Confidence: 0.839235135882353

00:12:36.674 --> 00:12:37.670 concentrated in the latter.

NOTE Confidence: 0.934096590625

00:12:39.840 --> 00:12:42.324 So just a brief overview of what we have

NOTE Confidence: 0.934096590625

00:12:42.324 --> 00:12:44.919 in terms of tools for hormone control.

NOTE Confidence: 0.934096590625

00:12:44.920 --> 00:12:47.488 So somatostatin analogs are the mainstay

NOTE Confidence: 0.934096590625

00:12:47.488 --> 00:12:50.499 of how we treat functional Nets,

NOTE Confidence: 0.934096590625

00:12:50.500 --> 00:12:51.727 primarily carcinoid syndrome.

NOTE Confidence: 0.934096590625

00:12:51.727 --> 00:12:54.590 There are two approved agents in the

NOTE Confidence: 0.934096590625

00:12:54.652 --> 00:12:57.116 United States, octreotide and lanreotide.

NOTE Confidence: 0.934096590625

00:12:57.116 --> 00:13:00.840 These are both approved for hormone control.

NOTE Confidence: 0.934096590625

00:13:00.840 --> 00:13:03.348 They have the same affinity for

NOTE Confidence: 0.934096590625

00:13:03.348 --> 00:13:05.440 somatostatin receptors 2 and five.

NOTE Confidence: 0.934096590625

00:13:05.440 --> 00:13:07.645 The main difference is that octreotide has

NOTE Confidence: 0.934096590625

00:13:07.645 --> 00:13:10.389 comes in both a short and a long acting form.

NOTE Confidence: 0.934096590625

00:13:10.390 --> 00:13:12.730 It is an intramuscular injection whereas

NOTE Confidence: 0.934096590625

00:13:12.730 --> 00:13:15.109 lanreotide only has a long acting,

NOTE Confidence: 0.934096590625

00:13:15.110 --> 00:13:17.990 4 minutes, a deep subq injection

NOTE Confidence: 0.934096590625

00:13:17.990 --> 00:13:20.090 pass rate is a third form.

NOTE Confidence: 0.934096590625

00:13:20.090 --> 00:13:21.270 It's approved in the US,

NOTE Confidence: 0.934096590625

00:13:21.270 --> 00:13:23.454 in Europe for cushions.

NOTE Confidence: 0.934096590625

00:13:23.454 --> 00:13:26.993 And then on the right is actually a new

NOTE Confidence: 0.934096590625

00:13:26.993 --> 00:13:30.160 agent that is a was approved a few years

NOTE Confidence: 0.934096590625

00:13:30.160 --> 00:13:32.822 ago on the basis of improving diarrhea

NOTE Confidence: 0.934096590625

00:13:32.822 --> 00:13:35.000 for patients with carcinoid syndrome,

NOTE Confidence: 0.934096590625

00:13:35.000 --> 00:13:37.156 diarrhea, telotristat blocks, TPH.

NOTE Confidence: 0.934096590625

00:13:37.156 --> 00:13:41.040 It's the rate limiting enzyme in the

NOTE Confidence: 0.934096590625

00:13:41.040 --> 00:13:43.855 conversion of tryptophan to serotonin.

NOTE Confidence: 0.934096590625

00:13:43.860 --> 00:13:45.666 So I participated in this clinical

NOTE Confidence: 0.934096590625

00:13:45.666 --> 00:13:48.347 trial when I was at Stanford and it

NOTE Confidence: 0.934096590625

00:13:48.347 --> 00:13:50.117 reduces on average bound movements,

NOTE Confidence: 0.934096590625

00:13:50.120 --> 00:13:51.320 about two per day.

NOTE Confidence: 0.934096590625

00:13:51.320 --> 00:13:53.950 You may not think that is clinically.

NOTE Confidence: 0.934096590625

00:13:53.950 --> 00:13:55.280 Important, but it often helps

NOTE Confidence: 0.934096590625

00:13:55.280 --> 00:13:56.970 get patients out of the house,

NOTE Confidence: 0.934096590625

00:13:56.970 --> 00:13:59.400 so it's again and it's oral,

NOTE Confidence: 0.934096590625

00:13:59.400 --> 00:14:03.010 so that's great for patients.

NOTE Confidence: 0.934096590625

00:14:03.010 --> 00:14:04.195 There are a number of

NOTE Confidence: 0.934096590625

00:14:04.195 --> 00:14:05.143 tools for tumor control.

NOTE Confidence: 0.934096590625

00:14:05.150 --> 00:14:07.030 They fall into four categories,

NOTE Confidence: 0.934096590625

00:14:07.030 --> 00:14:09.730 somatostatin analogs, biologics,

NOTE Confidence: 0.934096590625

00:14:09.730 --> 00:14:11.530 cytotoxic chemotherapy,

NOTE Confidence: 0.934096590625

00:14:11.530 --> 00:14:12.794 and PRRT,

NOTE Confidence: 0.934096590625

00:14:12.794 --> 00:14:15.322 which is peptide receptor

NOTE Confidence: 0.934096590625

00:14:15.322 --> 00:14:16.586 radionuclide therapy.

NOTE Confidence: 0.934096590625

00:14:16.590 --> 00:14:18.438 I am going to focus today just

NOTE Confidence: 0.934096590625

00:14:18.438 --> 00:14:19.779 talking about two of these,

NOTE Confidence: 0.934096590625

00:14:19.780 --> 00:14:21.634 so we're going to talk about

NOTE Confidence: 0.934096590625

00:14:21.634 --> 00:14:23.167 tempos Olamide and capecitabine on

NOTE Confidence: 0.934096590625

00:14:23.167 --> 00:14:24.619 the basis of a large randomized

NOTE Confidence: 0.934096590625

00:14:24.619 --> 00:14:26.427 trial that I lead through the NC,

NOTE Confidence: 0.934096590625

00:14:26.430 --> 00:14:29.190 TN and also the crescendo dictate,

NOTE Confidence: 0.934096590625

00:14:29.190 --> 00:14:32.960 which is our sort of first and only so far.

NOTE Confidence: 0.934096590625

00:14:32.960 --> 00:14:35.016 On peptide receptor radiotherapy

NOTE Confidence: 0.934096590625

00:14:35.016 --> 00:14:36.558 for this disease.

NOTE Confidence: 0.934096590625

00:14:36.560 --> 00:14:38.224 So this was a study and I think

NOTE Confidence: 0.934096590625

00:14:38.224 --> 00:14:39.997 if there are any trainees on that,

NOTE Confidence: 0.934096590625

00:14:40.000 --> 00:14:42.448 I started getting involved with E

NOTE Confidence: 0.934096590625

00:14:42.448 --> 00:14:44.488 Cogen the national clinical trial

NOTE Confidence: 0.934096590625

00:14:44.488 --> 00:14:46.534 network as a fellow and junior

NOTE Confidence: 0.934096590625

00:14:46.534 --> 00:14:49.056 faculty it was a great opportunity

NOTE Confidence: 0.934096590625

00:14:49.056 --> 00:14:50.964 for networking and mentorship.

NOTE Confidence: 0.934096590625

00:14:50.970 --> 00:14:53.140 Through that I helped to develop this

NOTE Confidence: 0.934096590625

00:14:53.140 --> 00:14:55.056 randomized study for patients with

NOTE Confidence: 0.934096590625

00:14:55.056 --> 00:14:56.891 progressive, metastatic pancreatic Nets.

NOTE Confidence: 0.934096590625

00:14:56.891 --> 00:14:59.520 Grade one and two half received

NOTE Confidence: 0.934096590625

00:14:59.520 --> 00:15:01.920 10s Olumide alone and half received

NOTE Confidence: 0.934096590625

00:15:01.920 --> 00:15:03.699 capecitabine and Thomas Alameda.

NOTE Confidence: 0.934096590625

00:15:03.700 --> 00:15:04.137 Together,

NOTE Confidence: 0.934096590625

00:15:04.137 --> 00:15:06.759 the maximum duration was 13 cycles

NOTE Confidence: 0.934096590625

00:15:06.759 --> 00:15:08.540 to about one year,

NOTE Confidence: 0.934096590625

00:15:08.540 --> 00:15:11.675 and the primary endpoint was

NOTE Confidence: 0.934096590625

00:15:11.675 --> 00:15:13.556 progression free survival.

NOTE Confidence: 0.934096590625

00:15:13.560 --> 00:15:15.894 So this study indicated a benefit

NOTE Confidence: 0.934096590625

00:15:15.894 --> 00:15:18.355 of the combination arm with a

NOTE Confidence: 0.934096590625

00:15:18.355 --> 00:15:20.023 median progression free survival

NOTE Confidence: 0.934096590625

00:15:20.023 --> 00:15:23.366 of 22.7 months versus 14.4 months

NOTE Confidence: 0.934096590625

00:15:23.366 --> 00:15:27.190 with a hazard ratio of .58.

NOTE Confidence: 0.934096590625

00:15:27.190 --> 00:15:30.942 And the overall survival also showed a

NOTE Confidence: 0.934096590625

00:15:30.942 --> 00:15:32.550 statistically significant difference.

NOTE Confidence: 0.934096590625

00:15:32.550 --> 00:15:34.326 The median in the Thames Olumide

NOTE Confidence: 0.934096590625

00:15:34.326 --> 00:15:36.864 alone arm was 38 months and it was

NOTE Confidence: 0.934096590625

00:15:36.864 --> 00:15:40.660 not reached in the combination arm.

NOTE Confidence: 0.934096590625

00:15:40.660 --> 00:15:42.319 And then in terms of response rate,

NOTE Confidence: 0.934096590625

00:15:42.320 --> 00:15:44.336 this is actually a combination that

NOTE Confidence: 0.934096590625

00:15:44.336 --> 00:15:46.576 yields one of the highest response

NOTE Confidence: 0.934096590625

00:15:46.576 --> 00:15:48.656 rates of any available agent,

NOTE Confidence: 0.934096590625

00:15:48.660 --> 00:15:51.019 so the response rate for the combination

NOTE Confidence: 0.934096590625

00:15:51.019 --> 00:15:55.815 arm was 33% and the single agent arm 27.8%.

NOTE Confidence: 0.934096590625

00:15:55.815 --> 00:15:58.185 These were not powered to determine

NOTE Confidence: 0.934096590625

00:15:58.185 --> 00:15:59.999 a difference between the arms,

NOTE Confidence: 0.934096590625

00:16:00.000 --> 00:16:02.586 but but I think another important

NOTE Confidence: 0.934096590625

00:16:02.586 --> 00:16:04.310 takeaway is that both

NOTE Confidence: 0.916516976666667

00:16:04.391 --> 00:16:09.470 agents yield approximately a 30% record rate.

NOTE Confidence: 0.916516976666667

00:16:09.470 --> 00:16:12.694 So moving on to talk about Sonata Staten

NOTE Confidence: 0.916516976666667

00:16:12.694 --> 00:16:15.490 receptors also just a brief history.

NOTE Confidence: 0.916516976666667

00:16:15.490 --> 00:16:18.550 Somatostatin was sequenced in 1963.

NOTE Confidence: 0.916516976666667

00:16:18.550 --> 00:16:20.530 It's a naturally occurring peptide,

NOTE Confidence: 0.916516976666667

00:16:20.530 --> 00:16:22.889 but has a very short half life,

NOTE Confidence: 0.916516976666667

00:16:22.890 --> 00:16:25.992 so analogs were later developed in

NOTE Confidence: 0.916516976666667

00:16:25.992 --> 00:16:29.060 order to be clinically practical.

NOTE Confidence: 0.916516976666667

00:16:29.060 --> 00:16:31.484 There are two Nobel prizes on this list.

NOTE Confidence: 0.916516976666667

00:16:31.490 --> 00:16:33.826 The first is in the 1970s for

NOTE Confidence: 0.916516976666667

00:16:33.826 --> 00:16:36.416 doctors Gilman and Shelly on

NOTE Confidence: 0.916516976666667

00:16:36.416 --> 00:16:39.300 the discovery of somatostatin.

NOTE Confidence: 0.916516976666667

00:16:39.300 --> 00:16:41.440 And then later in 2012,

NOTE Confidence: 0.916516976666667

00:16:41.440 --> 00:16:43.005 doctors could Belka and Lefkowicz

NOTE Confidence: 0.916516976666667

00:16:43.005 --> 00:16:45.219 were awarded the Nobel Prize for their

NOTE Confidence: 0.916516976666667

00:16:45.219 --> 00:16:47.007 discovery of G protein coupled receptors

NOTE Confidence: 0.916516976666667

00:16:47.007 --> 00:16:49.169 to which somatostatin receptors belong.

NOTE Confidence: 0.9313929875

00:16:51.230 --> 00:16:53.008 So I'd like to introduce you next

NOTE Confidence: 0.9313929875

00:16:53.008 --> 00:16:54.669 to the concept of theranostics,

NOTE Confidence: 0.9313929875

00:16:54.670 --> 00:16:56.530 and this is really important as

NOTE Confidence: 0.9313929875

00:16:56.530 --> 00:16:58.155 we think about developing our

NOTE Confidence: 0.9313929875

00:16:58.155 --> 00:16:59.785 yield or under consumer program.

NOTE Confidence: 0.9313929875

00:16:59.790 --> 00:17:02.002 So imagine you have a group of

NOTE Confidence: 0.9313929875

00:17:02.002 --> 00:17:03.780 patients you'd like to determine

NOTE Confidence: 0.9313929875

00:17:03.780 --> 00:17:06.306 whether they have a specific target.

NOTE Confidence: 0.9313929875

00:17:06.310 --> 00:17:08.330 You have a diagnostic imaging

NOTE Confidence: 0.9313929875

00:17:08.330 --> 00:17:10.350 tool that actually helps select

NOTE Confidence: 0.9313929875

00:17:10.416 --> 00:17:12.270 who in fact has that target,

NOTE Confidence: 0.9313929875

00:17:12.270 --> 00:17:13.896 and then you have a targeted

NOTE Confidence: 0.9313929875

00:17:13.896 --> 00:17:15.710 therapy that goes to that target.

NOTE Confidence: 0.9313929875

00:17:15.710 --> 00:17:18.175 So Theranostics is using the

NOTE Confidence: 0.9313929875

00:17:18.175 --> 00:17:20.640 same target for both therapy.

NOTE Confidence: 0.9313929875

00:17:20.640 --> 00:17:23.150 And diagnostics.

NOTE Confidence: 0.9313929875

00:17:23.150 --> 00:17:24.809 I like to think of this using

NOTE Confidence: 0.9313929875

00:17:24.809 --> 00:17:26.299 a lock and key analogy,

NOTE Confidence: 0.9313929875

00:17:26.300 --> 00:17:28.970 so the lock is that target,

NOTE Confidence: 0.9313929875

00:17:28.970 --> 00:17:30.174 or the somatostatin receptor

NOTE Confidence: 0.9313929875

00:17:30.174 --> 00:17:31.679 in the case of Nets,

NOTE Confidence: 0.9313929875

00:17:31.680 --> 00:17:34.716 the key is the peptide or

NOTE Confidence: 0.9313929875

00:17:34.716 --> 00:17:36.740 octreotide in our case,

NOTE Confidence: 0.9313929875

00:17:36.740 --> 00:17:39.890 and the reporting unit is the

NOTE Confidence: 0.9313929875

00:17:39.890 --> 00:17:41.990 payload or the radioisotope.

NOTE Confidence: 0.9313929875

00:17:41.990 --> 00:17:43.490 So the diagnostics for Nets.

NOTE Confidence: 0.9313929875

00:17:43.490 --> 00:17:45.730 I walked you through this a little bit,

NOTE Confidence: 0.9313929875

00:17:45.730 --> 00:17:47.900 but it actually dates back to the 1980s,

NOTE Confidence: 0.9313929875

00:17:47.900 --> 00:17:50.770 and using I won I won 23,

NOTE Confidence: 0.9313929875

00:17:50.770 --> 00:17:51.828 labeled octreotide,

NOTE Confidence: 0.9313929875

00:17:51.828 --> 00:17:55.002 but then it's been through this

NOTE Confidence: 0.9313929875

00:17:55.002 --> 00:17:57.459 entire evolution of Indian 111

NOTE Confidence: 0.9313929875

00:17:57.459 --> 00:17:59.649 which is Indian 111 octreotide.

NOTE Confidence: 0.9313929875

00:17:59.650 --> 00:18:01.822 And so that's the octreoscan that

NOTE Confidence: 0.9313929875

00:18:01.822 --> 00:18:04.678 was approved in 1994 and then in

NOTE Confidence: 0.9313929875

00:18:04.678 --> 00:18:07.422 the 2000s we've had gallium 68,

NOTE Confidence: 0.9313929875

00:18:07.422 --> 00:18:10.082 dotatate pet gallium 68 Doda

NOTE Confidence: 0.9313929875

00:18:10.082 --> 00:18:13.890 talk pet and copper 64 dodat 8.

NOTE Confidence: 0.9313929875

00:18:13.890 --> 00:18:15.652 So that and there is.

NOTE Confidence: 0.9313929875

00:18:15.652 --> 00:18:16.936 I put the reference in here.

NOTE Confidence: 0.9313929875

00:18:16.940 --> 00:18:19.604 There's a great article that's an

NOTE Confidence: 0.9313929875

00:18:19.604 --> 00:18:22.133 appropriate use criteria for these

NOTE Confidence: 0.9313929875

00:18:22.133 --> 00:18:24.829 somatostatin receptor imaging modalities.

NOTE Confidence: 0.9313929875

00:18:24.830 --> 00:18:26.150 Therapy is similarly we can

NOTE Confidence: 0.9313929875

00:18:26.150 --> 00:18:27.730 think about the lock and key.

NOTE Confidence: 0.9313929875

00:18:27.730 --> 00:18:29.044 I use this analogy quite a

NOTE Confidence: 0.9313929875

00:18:29.044 --> 00:18:30.610 bit when I talk to patients.

NOTE Confidence: 0.9313929875

00:18:30.610 --> 00:18:32.690 So for peptide receptor radionuclide

NOTE Confidence: 0.9313929875

00:18:32.690 --> 00:18:35.188 therapy there has also been an

NOTE Confidence: 0.9313929875

00:18:35.188 --> 00:18:36.592 evolution first using Indian

NOTE Confidence: 0.9313929875

00:18:36.592 --> 00:18:38.731 111 in the 2000s using yttrium

NOTE Confidence: 0.9313929875

00:18:38.731 --> 00:18:40.950 90 and then later in the 2000s.

NOTE Confidence: 0.9313929875

00:18:40.950 --> 00:18:45.246 Evaluation of lutetium 177 dooda tape.

NOTE Confidence: 0.9313929875

00:18:45.250 --> 00:18:47.322 It was this clinical trial that I

NOTE Confidence: 0.9313929875

00:18:47.322 --> 00:18:49.018 had the opportunity to lead while

NOTE Confidence: 0.9313929875

00:18:49.018 --> 00:18:52.434 I was at Stanford and this was an

NOTE Confidence: 0.9313929875

00:18:52.434 --> 00:18:54.858 international multicenter randomized trial.

NOTE Confidence: 0.9313929875

00:18:54.860 --> 00:18:57.525 Get randomized patients with midgut

NOTE Confidence: 0.9313929875

00:18:57.525 --> 00:19:00.674 or small intestine narendran tumors 2

NOTE Confidence: 0.9313929875

00:19:00.674 --> 00:19:03.116 to one to receive 4 administrations.

NOTE Confidence: 0.9313929875

00:19:03.120 --> 00:19:06.490 Ivy of this this radioisotope

NOTE Confidence: 0.9313929875

00:19:06.490 --> 00:19:09.860 lutetium dotatate at 200 millicurie

NOTE Confidence: 0.9313929875

00:19:09.966 --> 00:19:12.870 versus high dose octreotide.

NOTE Confidence: 0.9313929875

00:19:12.870 --> 00:19:15.670 This was a positive study,

NOTE Confidence: 0.9313929875

00:19:15.670 --> 00:19:17.705 so the primary endpoint was

NOTE Confidence: 0.9313929875

00:19:17.705 --> 00:19:18.926 progression free survival.

NOTE Confidence: 0.9313929875

00:19:18.930 --> 00:19:22.430 It showed a hazard ratio of .21 and

NOTE Confidence: 0.9313929875

00:19:22.430 --> 00:19:25.710 this is one of our in the median.

NOTE Confidence: 0.9313929875

00:19:25.710 --> 00:19:28.310 PFS was not reached at the time of the study,

NOTE Confidence: 0.9313929875

00:19:28.310 --> 00:19:31.028 but is approximately 2 1/2 years.

NOTE Confidence: 0.9313929875

00:19:31.030 --> 00:19:32.315 The overall survival had not

NOTE Confidence: 0.9313929875

00:19:32.315 --> 00:19:34.329 been reached at the time of this

NOTE Confidence: 0.9313929875

00:19:34.329 --> 00:19:35.007 initial publication.

NOTE Confidence: 0.9313929875

00:19:35.010 --> 00:19:36.828 It's since has been reported actually.

NOTE Confidence: 0.9313929875

00:19:36.830 --> 00:19:37.682 Just ask, oh,

NOTE Confidence: 0.9313929875

00:19:37.682 --> 00:19:39.386 this year it did not officially

NOTE Confidence: 0.9313929875

00:19:39.386 --> 00:19:41.149 meet statistical significance,

NOTE Confidence: 0.9313929875

00:19:41.150 --> 00:19:42.910 but was a clinical difference.

NOTE Confidence: 0.9313929875

00:19:42.910 --> 00:19:43.762 Of one year.

NOTE Confidence: 0.9313929875

00:19:43.762 --> 00:19:45.750 So on the basis of this study,

NOTE Confidence: 0.9313929875

00:19:45.750 --> 00:19:48.110 this was FDA approved in January of 2018.

NOTE Confidence: 0.9313929875

00:19:48.110 --> 00:19:50.238 It was really fun to be part of

NOTE Confidence: 0.9313929875

00:19:50.238 --> 00:19:52.800 a process of kind of a a novel

NOTE Confidence: 0.9313929875

00:19:52.800 --> 00:19:54.264 class getting FDA approved,

NOTE Confidence: 0.9313929875

00:19:54.270 --> 00:19:57.966 and then the clinical implementation of that.

NOTE Confidence: 0.9313929875

00:19:57.970 --> 00:20:00.064 I'd also like to sort of

NOTE Confidence: 0.9313929875

00:20:00.064 --> 00:20:02.060 postulate that's not a statin.

NOTE Confidence: 0.9313929875

00:20:02.060 --> 00:20:04.840 Receptors are a perfect target,

NOTE Confidence: 0.9313929875

00:20:04.840 --> 00:20:06.290 I'll just mention for other

NOTE Confidence: 0.9313929875

00:20:06.290 --> 00:20:07.740 agents that are in very

NOTE Confidence: 0.873074789230769

00:20:07.801 --> 00:20:08.938 early phase studies.

NOTE Confidence: 0.873074789230769

00:20:08.940 --> 00:20:12.432 But Letitia Satureia tide is acineta

NOTE Confidence: 0.873074789230769

00:20:12.432 --> 00:20:15.334 Staten receptor antagonist so that

NOTE Confidence: 0.873074789230769

00:20:15.334 --> 00:20:18.208 Ludo date is actually an agonist.

NOTE Confidence: 0.873074789230769

00:20:18.210 --> 00:20:20.292 This was an early phase study

NOTE Confidence: 0.873074789230769

00:20:20.292 --> 00:20:22.445 that actually had quite a bit

NOTE Confidence: 0.873074789230769

00:20:22.445 --> 00:20:24.175 of grade 4K metalogic toxicity.

NOTE Confidence: 0.873074789230769

00:20:24.180 --> 00:20:26.100 They that led to some dose reductions and

NOTE Confidence: 0.873074789230769

00:20:26.100 --> 00:20:28.029 they are pursuing that in later phase.

NOTE Confidence: 0.873074789230769

00:20:28.030 --> 00:20:30.622 Committees PEN 221 is a peptide

NOTE Confidence: 0.873074789230769

00:20:30.622 --> 00:20:32.350 drug conjugate with DM,

NOTE Confidence: 0.873074789230769

00:20:32.350 --> 00:20:35.458 one that also just recently completed

NOTE Confidence: 0.873074789230769

00:20:35.458 --> 00:20:38.907 a small phase two trial and did

NOTE Confidence: 0.873074789230769

00:20:38.907 --> 00:20:41.469 not have a modest benefit rate.

NOTE Confidence: 0.873074789230769

00:20:41.470 --> 00:20:45.646 No PR's, but had an 88% on stable disease

NOTE Confidence: 0.873074789230769

00:20:45.646 --> 00:20:48.930 rate to do to Mab is a Sonata Staten

NOTE Confidence: 0.873074789230769

00:20:48.930 --> 00:20:51.503 receptor 2 CD 3 bispecific antibody

NOTE Confidence: 0.873074789230769

00:20:51.503 --> 00:20:54.790 also just completed a phase one study.

NOTE Confidence: 0.873074789230769

00:20:54.790 --> 00:20:58.342 Modest response rates but hadn't had a 55.

NOTE Confidence: 0.873074789230769

00:20:58.342 --> 00:21:00.550 Percent stable disease rate.

NOTE Confidence: 0.873074789230769

00:21:00.550 --> 00:21:00.998 Of note.

NOTE Confidence: 0.873074789230769

00:21:00.998 --> 00:21:02.342 I'll just mention I didn't go

NOTE Confidence: 0.873074789230769

00:21:02.342 --> 00:21:03.468 into detail in this today,

NOTE Confidence: 0.873074789230769

00:21:03.470 --> 00:21:05.260 but single agent checkpoint inhibitors

NOTE Confidence: 0.873074789230769

00:21:05.260 --> 00:21:08.368 do not work in low grade nor consumers.

NOTE Confidence: 0.873074789230769

00:21:08.370 --> 00:21:10.722 So the idea of trying to use

NOTE Confidence: 0.873074789230769

00:21:10.722 --> 00:21:12.263 combination approaches is very

NOTE Confidence: 0.873074789230769

00:21:12.263 --> 00:21:14.865 attractive and then led to 12 dot M.

NOTE Confidence: 0.873074789230769

00:21:14.870 --> 00:21:16.710 Tate is an alpha emitter.

NOTE Confidence: 0.873074789230769

00:21:16.710 --> 00:21:19.650 PRT alpha emitters are felt to be.

NOTE Confidence: 0.873074789230769

00:21:19.650 --> 00:21:21.714 I'm have fewer side effects and

NOTE Confidence: 0.873074789230769

00:21:21.714 --> 00:21:23.690 have more tumor cell killing.

NOTE Confidence: 0.873074789230769

00:21:23.690 --> 00:21:25.335 This just completed a phase or in

NOTE Confidence: 0.873074789230769

00:21:25.335 --> 00:21:26.990 the middle of a phase one trial.

NOTE Confidence: 0.873074789230769

00:21:26.990 --> 00:21:28.878 They just reported some.

NOTE Confidence: 0.873074789230769

00:21:28.878 --> 00:21:29.704 Early results,

NOTE Confidence: 0.873074789230769

00:21:29.704 --> 00:21:31.828 so in their first ten patients

NOTE Confidence: 0.873074789230769

00:21:31.828 --> 00:21:34.429 there was a response rate of 80%.

NOTE Confidence: 0.873074789230769

00:21:34.430 --> 00:21:36.614 So we are all very excited about

NOTE Confidence: 0.873074789230769

00:21:36.614 --> 00:21:38.689 the idea of alpha emitters,

NOTE Confidence: 0.873074789230769

00:21:38.690 --> 00:21:40.778 and so stay tuned on that.

NOTE Confidence: 0.873074789230769

00:21:40.780 --> 00:21:43.356 And then I did a tweet Oriel kind

NOTE Confidence: 0.873074789230769

00:21:43.356 --> 00:21:45.975 of on this medicine receptors as

NOTE Confidence: 0.873074789230769

00:21:45.975 --> 00:21:48.801 part of a Twitter tumor board.

NOTE Confidence: 0.873074789230769

00:21:48.810 --> 00:21:50.301 So what do we know about Nets

NOTE Confidence: 0.873074789230769

00:21:50.301 --> 00:21:51.992 as we start thinking about

NOTE Confidence: 0.873074789230769

00:21:51.992 --> 00:21:53.489 translational research questions?

NOTE Confidence: 0.873074789230769

00:21:53.490 --> 00:21:55.338 Well, we know there are chronic cancer.

NOTE Confidence: 0.873074789230769

00:21:55.340 --> 00:21:57.100 We know somatostatin receptors

NOTE Confidence: 0.873074789230769

00:21:57.100 --> 00:21:58.420 are unique target.

NOTE Confidence: 0.873074789230769

00:21:58.420 --> 00:22:00.012 Somatic mutations are rare.

NOTE Confidence: 0.873074789230769

00:22:00.012 --> 00:22:02.400 Tumor mutation burden is low and

NOTE Confidence: 0.873074789230769

00:22:02.474 --> 00:22:04.599 germline mutations are more common

NOTE Confidence: 0.873074789230769

00:22:04.599 --> 00:22:07.324 than was once appreciated and existing

NOTE Confidence: 0.873074789230769

00:22:07.324 --> 00:22:10.096 biomarkers or imperfect and we have a

NOTE Confidence: 0.873074789230769

00:22:10.096 --> 00:22:11.860 number of treatments that yield stability.

NOTE Confidence: 0.873074789230769

00:22:11.860 --> 00:22:13.192 Hodo dictates those progression

NOTE Confidence: 0.873074789230769

00:22:13.192 --> 00:22:15.190 and shrinks tumors in the optimal

NOTE Confidence: 0.873074789230769

00:22:15.243 --> 00:22:17.361 sequence of therapies is unknown and

NOTE Confidence: 0.873074789230769

00:22:17.361 --> 00:22:18.773 most patients receive therapies.

NOTE Confidence: 0.873074789230769

00:22:18.780 --> 00:22:21.888 From this experience years of toxicity.

NOTE Confidence: 0.873074789230769

00:22:21.890 --> 00:22:25.070 So how can we optimize PRT?

NOTE Confidence: 0.873074789230769

00:22:25.070 --> 00:22:26.926 How could we take better advantage of this?

NOTE Confidence: 0.873074789230769

00:22:26.930 --> 00:22:28.268 Meta Staten receptor?

NOTE Confidence: 0.873074789230769

00:22:28.268 --> 00:22:30.052 Can we identify resistance

NOTE Confidence: 0.873074789230769

00:22:30.052 --> 00:22:31.770 mechanisms and overcome them?

NOTE Confidence: 0.873074789230769

00:22:31.770 --> 00:22:33.900 And how can we develop predictive

NOTE Confidence: 0.873074789230769

00:22:33.900 --> 00:22:35.320 and prognostic biomarkers so

NOTE Confidence: 0.873074789230769

00:22:35.377 --> 00:22:36.980 the bar is low in the field?

NOTE Confidence: 0.873074789230769

00:22:36.980 --> 00:22:37.682 Needs your help,

NOTE Confidence: 0.873074789230769

00:22:37.682 --> 00:22:39.989 so this is part of my plea to the

NOTE Confidence: 0.873074789230769

00:22:39.989 --> 00:22:41.819 Cancer Center community to help me

NOTE Confidence: 0.873074789230769

00:22:41.819 --> 00:22:43.266 start thinking about translational

NOTE Confidence: 0.873074789230769

00:22:43.266 --> 00:22:46.174 questions as we develop teams for research.

NOTE Confidence: 0.873074789230769

00:22:46.174 --> 00:22:49.946 So one such team that I'm part of

NOTE Confidence: 0.873074789230769

00:22:49.946 --> 00:22:52.636 is the National Cancer Institute.

NOTE Confidence: 0.873074789230769

00:22:52.640 --> 00:22:54.775 Under Consumer task force that I chair,

NOTE Confidence: 0.873074789230769

00:22:54.780 --> 00:22:57.055 I had the opportunity to lead a

NOTE Confidence: 0.873074789230769

00:22:57.055 --> 00:22:58.415 clinical trial planning meeting

NOTE Confidence: 0.873074789230769

00:22:58.415 --> 00:22:59.790 this past year with.

NOTE Confidence: 0.873074789230769

00:22:59.790 --> 00:23:02.190 The objective was to really think

NOTE Confidence: 0.873074789230769

00:23:02.190 --> 00:23:04.500 about treatment in the era of PRT.

NOTE Confidence: 0.873074789230769

00:23:04.500 --> 00:23:06.380 I'll bring you down to the bottom here.

NOTE Confidence: 0.873074789230769

00:23:06.380 --> 00:23:07.960 Our deliverables are in manuscript

NOTE Confidence: 0.873074789230769

00:23:07.960 --> 00:23:09.224 that is in process.

NOTE Confidence: 0.873074789230769

00:23:09.230 --> 00:23:11.348 But really the deliverables are clinical

NOTE Confidence: 0.873074789230769

00:23:11.348 --> 00:23:13.820 trials and so we now out of this.

NOTE Confidence: 0.810262798333333

00:23:13.820 --> 00:23:17.812 Like many month process have a PRT re

NOTE Confidence: 0.810262798333333

00:23:17.812 --> 00:23:20.271 treatment clinical trial started or

NOTE Confidence: 0.810262798333333

00:23:20.271 --> 00:23:21.748 in development I should say and then

NOTE Confidence: 0.810262798333333

00:23:21.748 --> 00:23:23.517 we have working groups on looking at.

NOTE Confidence: 0.810262798333333

00:23:23.520 --> 00:23:28.336 PRT plus DNA damage repair PRT plus

NOTE Confidence: 0.810262798333333

00:23:28.340 --> 00:23:30.632 IO PRT and liver directed therapy

NOTE Confidence: 0.810262798333333

00:23:30.632 --> 00:23:32.770 ended in some dosimetry studies.

NOTE Confidence: 0.810262798333333

00:23:32.770 --> 00:23:35.490 So why build a net program at Yale?

NOTE Confidence: 0.810262798333333

00:23:35.490 --> 00:23:37.562 I hope I've shown you that there is

NOTE Confidence: 0.810262798333333

00:23:37.562 --> 00:23:39.773 a real renaissance in net research

NOTE Confidence: 0.810262798333333

00:23:39.773 --> 00:23:41.808 in terms of increased publications

NOTE Confidence: 0.810262798333333

00:23:41.808 --> 00:23:43.270 and clinical trials.

NOTE Confidence: 0.810262798333333

00:23:43.270 --> 00:23:45.496 The volume of net patients at

NOTE Confidence: 0.810262798333333

00:23:45.496 --> 00:23:46.609 YCC is increasing.

NOTE Confidence: 0.810262798333333

00:23:46.610 --> 00:23:47.657 There's significant downstream

NOTE Confidence: 0.810262798333333

00:23:47.657 --> 00:23:50.100 revenue of patients who have a high

NOTE Confidence: 0.810262798333333

00:23:50.162 --> 00:23:51.938 prevalent disease and are in our

NOTE Confidence: 0.810262798333333

00:23:51.938 --> 00:23:53.820 health care systems for a long time.

NOTE Confidence: 0.810262798333333

00:23:53.820 --> 00:23:55.516 We have the multidisciplinary

NOTE Confidence: 0.810262798333333

00:23:55.516 --> 00:23:57.510 expertise for metal, concert, junk,

NOTE Confidence: 0.810262798333333

00:23:57.510 --> 00:24:00.189 and endocrine and IR, a nuke Med.

NOTE Confidence: 0.810262798333333

00:24:00.189 --> 00:24:02.667 Our clinical trial portfolio is growing.

NOTE Confidence: 0.810262798333333

00:24:02.670 --> 00:24:04.230 There is philanthropic interest.

NOTE Confidence: 0.810262798333333

00:24:04.230 --> 00:24:06.180 I'd like to specifically thank

NOTE Confidence: 0.810262798333333

00:24:06.180 --> 00:24:08.152 the Alan and Cheryl Lipson fund

NOTE Confidence: 0.810262798333333

00:24:08.152 --> 00:24:10.410 for a generous and multi year gift

NOTE Confidence: 0.810262798333333

00:24:10.410 --> 00:24:12.115 that we have recently received.

NOTE Confidence: 0.810262798333333

00:24:12.120 --> 00:24:14.268 And really the timing is right.

NOTE Confidence: 0.810262798333333

00:24:14.270 --> 00:24:16.657 I think that with my arrival to

NOTE Confidence: 0.810262798333333

00:24:16.657 --> 00:24:18.565 Yale and really a convergence

NOTE Confidence: 0.810262798333333

00:24:18.565 --> 00:24:20.585 of all of this expertise,

NOTE Confidence: 0.810262798333333

00:24:20.590 --> 00:24:22.456 it's very exciting and we have

NOTE Confidence: 0.810262798333333

00:24:22.456 --> 00:24:24.816 identified Nets as one of our four key

NOTE Confidence: 0.810262798333333

00:24:24.816 --> 00:24:26.930 programs in the Center for GI cancers.

NOTE Confidence: 0.810262798333333

00:24:26.930 --> 00:24:28.994 So I have just a few minutes remaining.

NOTE Confidence: 0.810262798333333

00:24:29.000 --> 00:24:30.212 I'm going to kind of try

NOTE Confidence: 0.810262798333333

00:24:30.212 --> 00:24:31.020 to breeze through this,

NOTE Confidence: 0.810262798333333

00:24:31.020 --> 00:24:32.966 but our Yale net program is cold.

NOTE Confidence: 0.810262798333333

00:24:32.970 --> 00:24:34.562 By myself, dark crime.

NOTE Confidence: 0.810262798333333

00:24:34.562 --> 00:24:36.950 We are adding Doctor Mary McCoy

NOTE Confidence: 0.810262798333333

00:24:37.029 --> 00:24:39.080 and we have currently a monthly.

NOTE Confidence: 0.810262798333333

00:24:39.080 --> 00:24:41.510 Net support group and I'm sort

NOTE Confidence: 0.810262798333333

00:24:41.510 --> 00:24:44.070 of the anchor medical oncologist.

NOTE Confidence: 0.810262798333333

00:24:44.070 --> 00:24:46.688 And we are planning a PRT clinic.

NOTE Confidence: 0.810262798333333

00:24:46.690 --> 00:24:49.270 Some efforts around a nutrition education

NOTE Confidence: 0.810262798333333

00:24:49.270 --> 00:24:51.871 and a new theranostics program that

NOTE Confidence: 0.810262798333333

00:24:51.871 --> 00:24:54.289 Doctor Abovyan will be leading that

NOTE Confidence: 0.810262798333333

00:24:54.289 --> 00:24:56.515 will really have benefits beyond

NOTE Confidence: 0.810262798333333

00:24:56.515 --> 00:24:59.203 neuroendocrine to include Neuro and Gu.

NOTE Confidence: 0.810262798333333

00:24:59.210 --> 00:24:59.951 As I've mentioned,

NOTE Confidence: 0.810262798333333

00:24:59.951 --> 00:25:00.939 we have clinical trials.

NOTE Confidence: 0.810262798333333

00:25:00.940 --> 00:25:03.356 We just opened our first one and actually

NOTE Confidence: 0.810262798333333

00:25:03.356 --> 00:25:05.624 our first patient is enrolling on the

NOTE Confidence: 0.810262798333333

00:25:05.624 --> 00:25:07.879 net are two clinical trial this week.

NOTE Confidence: 0.810262798333333

00:25:07.880 --> 00:25:09.425 We have a biorepository enriched

NOTE Confidence: 0.810262798333333

00:25:09.425 --> 00:25:12.062 with net cases and we have a number

NOTE Confidence: 0.810262798333333

00:25:12.062 --> 00:25:13.434 of transitional team brands,

NOTE Confidence: 0.810262798333333

00:25:13.440 --> 00:25:15.720 one of which we just submitted last week.

NOTE Confidence: 0.810262798333333

00:25:15.720 --> 00:25:18.120 On looking at sex differences

NOTE Confidence: 0.810262798333333

00:25:18.120 --> 00:25:19.560 in neuroendocrine tumors.

NOTE Confidence: 0.810262798333333

00:25:19.560 --> 00:25:21.816 This is the net are two clinical trial.

NOTE Confidence: 0.810262798333333

00:25:21.820 --> 00:25:23.800 It's a randomized phase three

NOTE Confidence: 0.810262798333333

00:25:23.800 --> 00:25:25.780 trial for patients with advanced,

NOTE Confidence: 0.810262798333333

00:25:25.780 --> 00:25:27.880 well differentiated GI in order

NOTE Confidence: 0.810262798333333

00:25:27.880 --> 00:25:29.560 consumers that are slightly

NOTE Confidence: 0.810262798333333

00:25:29.560 --> 00:25:31.700 higher grade than the number one,

NOTE Confidence: 0.810262798333333

00:25:31.700 --> 00:25:35.459 and it's randomized loot 8 versus octreotide.

NOTE Confidence: 0.810262798333333

00:25:35.460 --> 00:25:37.452 I have a whole list of my wish

NOTE Confidence: 0.810262798333333

00:25:37.452 --> 00:25:39.460 list of other clinical trials.

NOTE Confidence: 0.810262798333333

00:25:39.460 --> 00:25:41.782 These are all NC TN trials that are in

NOTE Confidence: 0.810262798333333

00:25:41.782 --> 00:25:44.155 queue to hopefully open in the next year.

NOTE Confidence: 0.810262798333333

00:25:44.160 --> 00:25:46.200 This is a new alpha emitter as I'd

NOTE Confidence: 0.810262798333333

00:25:46.200 --> 00:25:47.791 mentioned where there's a lot of

NOTE Confidence: 0.810262798333333

00:25:47.791 --> 00:25:49.680 excitement about this and I serve on

NOTE Confidence: 0.810262798333333

00:25:49.680 --> 00:25:51.474 the steering committee for this study.

NOTE Confidence: 0.810262798333333

00:25:51.480 --> 00:25:54.549 So a shout out to the bio GI tumor

NOTE Confidence: 0.810262798333333

00:25:54.549 --> 00:25:57.027 biorepository led by Doctor John Kunstmann.

NOTE Confidence: 0.810262798333333

00:25:57.030 --> 00:25:59.970 It's been established for almost a decade,

NOTE Confidence: 0.810262798333333

00:25:59.970 --> 00:26:02.112 and I'd like to highlight that it's

NOTE Confidence: 0.810262798333333

00:26:02.112 --> 00:26:03.390 really enriched fernette cases,

NOTE Confidence: 0.810262798333333

00:26:03.390 --> 00:26:06.309 so we have 106 net tissue samples,

NOTE Confidence: 0.810262798333333

00:26:06.310 --> 00:26:09.054 70 of which are fresh frozen and you

NOTE Confidence: 0.810262798333333

00:26:09.054 --> 00:26:10.836 can see the breakdown of diseases

NOTE Confidence: 0.810262798333333

00:26:10.836 --> 00:26:11.430 and they're

NOTE Confidence: 0.929551083571429

00:26:11.487 --> 00:26:12.999 all associated with plasma,

NOTE Confidence: 0.929551083571429

00:26:13.000 --> 00:26:16.336 so a great opportunity for collaboration.

NOTE Confidence: 0.929551083571429

00:26:16.340 --> 00:26:18.118 And then lastly, in terms of education,

NOTE Confidence: 0.929551083571429

00:26:18.120 --> 00:26:19.520 we launched our Patient

NOTE Confidence: 0.929551083571429

00:26:19.520 --> 00:26:20.920 Education initiative in November.

NOTE Confidence: 0.929551083571429

00:26:20.920 --> 00:26:23.136 We have a CMU series planned and a

NOTE Confidence: 0.929551083571429

00:26:23.136 --> 00:26:25.400 number of trainees already involved.

NOTE Confidence: 0.929551083571429

00:26:25.400 --> 00:26:27.367 Carolyn Gordons of Pgy 2 who's helping

NOTE Confidence: 0.929551083571429

00:26:27.367 --> 00:26:30.239 to do a review paper on sex differences

NOTE Confidence: 0.929551083571429

00:26:30.239 --> 00:26:32.199 and or under commute classrooms.

NOTE Confidence: 0.929551083571429

00:26:32.200 --> 00:26:34.528 They shall shrikumar is helping with

NOTE Confidence: 0.929551083571429

00:26:34.528 --> 00:26:37.454 a pathology project in jamies Ang just

NOTE Confidence: 0.929551083571429

00:26:37.454 --> 00:26:40.058 completed a really wonderful JCO oncology

NOTE Confidence: 0.929551083571429

00:26:40.058 --> 00:26:42.270 practice review so please join us we

NOTE Confidence: 0.929551083571429

00:26:42.270 --> 00:26:44.539 have on Thursdays I'd like to highlight it.

NOTE Confidence: 0.929551083571429

00:26:44.540 --> 00:26:46.248 We have a great.

NOTE Confidence: 0.929551083571429

00:26:46.248 --> 00:26:48.383 In our series on Thursday

NOTE Confidence: 0.929551083571429

00:26:48.383 --> 00:26:50.349 afternoons from 4:15 to 5:00,

NOTE Confidence: 0.929551083571429

00:26:50.350 --> 00:26:52.126 and I think I'll end there.

NOTE Confidence: 0.929551083571429

00:26:52.130 --> 00:26:53.786 So, you know, we're really excited

NOTE Confidence: 0.929551083571429

00:26:53.786 --> 00:26:54.890 about building this program.

NOTE Confidence: 0.929551083571429

00:26:54.890 --> 00:26:56.546 I think our next step is

NOTE Confidence: 0.929551083571429

00:26:56.546 --> 00:26:58.728 really building on some of the

NOTE Confidence: 0.929551083571429

00:26:58.728 --> 00:27:00.249 translational research opportunities,

NOTE Confidence: 0.929551083571429

00:27:00.250 --> 00:27:00.880 so thanks.

NOTE Confidence: 0.86450185

00:27:02.030 --> 00:27:03.690 Thank you, Pam. Very exciting.

NOTE Confidence: 0.86450185

00:27:03.690 --> 00:27:05.820 Particularly these tremendous

NOTE Confidence: 0.86450185

00:27:05.820 --> 00:27:07.950 advances in therapy.

NOTE Confidence: 0.86450185

00:27:07.950 --> 00:27:09.890 Those are very impressive capital.

NOTE Confidence: 0.86450185

00:27:09.890 --> 00:27:12.180 Higher plots.

NOTE Confidence: 0.86450185

00:27:12.180 --> 00:27:14.105 So are there questions while

NOTE Confidence: 0.86450185

00:27:14.105 --> 00:27:15.972 we're waiting I-1 quick one.

NOTE Confidence: 0.86450185

00:27:15.972 --> 00:27:18.520 There's a huge increase since the 1970s.

NOTE Confidence: 0.86450185

00:27:18.520 --> 00:27:20.627 Is that just better diagnosis or is

NOTE Confidence: 0.86450185

00:27:20.627 --> 00:27:22.170 it incidents actually increasing?

NOTE Confidence: 0.912398866

00:27:23.000 --> 00:27:24.220 So that's a great question.

NOTE Confidence: 0.912398866

00:27:24.220 --> 00:27:26.195 I think that the diagnostics

NOTE Confidence: 0.912398866

00:27:26.195 --> 00:27:27.775 or have clearly improved.

NOTE Confidence: 0.912398866

00:27:27.780 --> 00:27:30.132 I think that we're seeing incidentally

NOTE Confidence: 0.912398866

00:27:30.132 --> 00:27:32.235 discovered GI Nets through colonoscopies

NOTE Confidence: 0.912398866

00:27:32.235 --> 00:27:34.595 to specifically rectal and colon,

NOTE Confidence: 0.912398866

00:27:34.600 --> 00:27:36.100 but I think that it

NOTE Confidence: 0.912398866

00:27:36.100 --> 00:27:37.300 probably goes beyond that,

NOTE Confidence: 0.912398866

00:27:37.300 --> 00:27:39.244 and so some hypotheses have been

NOTE Confidence: 0.912398866

00:27:39.244 --> 00:27:40.540 are there environmental risks

NOTE Confidence: 0.912398866

00:27:40.599 --> 00:27:42.375 that we have not yet picked up on.

NOTE Confidence: 0.912398866

00:27:42.380 --> 00:27:43.899 So I think some of its diagnostics,

NOTE Confidence: 0.912398866

00:27:43.900 --> 00:27:45.365 but some of it's something

NOTE Confidence: 0.912398866

00:27:45.365 --> 00:27:46.537 we don't yet understand.

NOTE Confidence: 0.866711835

00:27:48.340 --> 00:27:50.482 And you may have said this, but I missed it.

NOTE Confidence: 0.866711835

00:27:50.482 --> 00:27:52.300 Do you sometimes have patience with

NOTE Confidence: 0.866711835

00:27:52.359 --> 00:27:54.689 different primaries and different sites?

NOTE Confidence: 0.895372974

00:27:56.530 --> 00:27:58.080 That would be really infrequent,

NOTE Confidence: 0.895372974

00:27:58.080 --> 00:28:00.551 but can happen with some of our

NOTE Confidence: 0.895372974

00:28:00.551 --> 00:28:01.926 inherited syndromes, but usually

NOTE Confidence: 0.895372974

00:28:01.926 --> 00:28:03.924 they have a single primary site.

NOTE Confidence: 0.921798330909091

00:28:05.990 --> 00:28:07.785 Are there other questions in

NOTE Confidence: 0.921798330909091

00:28:07.785 --> 00:28:10.010 the chat or raise your hand?

NOTE Confidence: 0.911120924

00:28:15.130 --> 00:28:17.290 Well, I have another question we

NOTE Confidence: 0.911120924

00:28:17.290 --> 00:28:19.246 talk about briefly before we started.

NOTE Confidence: 0.911120924

00:28:19.250 --> 00:28:22.440 Has anyone looked for viruses in

NOTE Confidence: 0.911120924

00:28:22.440 --> 00:28:23.790 these tumors? I'm asking 'cause

NOTE Confidence: 0.911120924

00:28:23.790 --> 00:28:25.389 as we'll hear the next one,

NOTE Confidence: 0.911120924

00:28:25.390 --> 00:28:27.250 there is a virus involvement.

NOTE Confidence: 0.890498788888889

00:28:28.940 --> 00:28:30.168 So Dan, good question

NOTE Confidence: 0.890498788888889

00:28:30.168 --> 00:28:31.703 and not to my knowledge,

NOTE Confidence: 0.890498788888889

00:28:31.710 --> 00:28:34.027 and as I was sharing with you,

NOTE Confidence: 0.890498788888889

00:28:34.030 --> 00:28:37.030 I think that in this particular

NOTE Confidence: 0.890498788888889

00:28:37.030 --> 00:28:38.810 field the bar is pretty low.

NOTE Confidence: 0.890498788888889

00:28:38.810 --> 00:28:40.790 The the clinical science interestingly

NOTE Confidence: 0.890498788888889

00:28:40.790 --> 00:28:43.630 was way ahead of some of the basic

NOTE Confidence: 0.890498788888889

00:28:43.630 --> 00:28:45.990 understandings of the molecular biology,

NOTE Confidence: 0.890498788888889

00:28:45.990 --> 00:28:48.382 and in fact we knew that M Tor

NOTE Confidence: 0.890498788888889

00:28:48.382 --> 00:28:50.169 inhibitors worked clinically before.

NOTE Confidence: 0.890498788888889

00:28:50.170 --> 00:28:52.288 We knew that there were entire

NOTE Confidence: 0.890498788888889

00:28:52.288 --> 00:28:53.500 pathway mutations, somatic mutations.

NOTE Confidence: 0.890498788888889

00:28:53.500 --> 00:28:55.500 So I think there are a lot of

NOTE Confidence: 0.890498788888889

00:28:55.555 --> 00:28:56.885 really great questions we still

NOTE Confidence: 0.890498788888889

00:28:56.885 --> 00:28:58.580 need to ask in this field.

NOTE Confidence: 0.790213188181818

00:29:00.130 --> 00:29:01.246 Well, it's great that we have

NOTE Confidence: 0.790213188181818

00:29:01.246 --> 00:29:02.210 such a strong program here.

NOTE Confidence: 0.790213188181818

00:29:02.210 --> 00:29:03.656 Oh, thank you for doing that.

NOTE Confidence: 0.790213188181818

00:29:03.660 --> 00:29:05.185 I'm seeing whether questions we'll

NOTE Confidence: 0.790213188181818

00:29:05.185 --> 00:29:07.210 move on to our second speaker,

NOTE Confidence: 0.790213188181818

00:29:07.210 --> 00:29:08.562 so there's one quick.

NOTE Confidence: 0.790213188181818

00:29:08.562 --> 00:29:09.914 There is one question.

NOTE Confidence: 0.790213188181818

00:29:09.920 --> 00:29:10.880 I'm sorry.

NOTE Confidence: 0.790213188181818

00:29:10.880 --> 00:29:14.240 It just came in from Jeremy Jaycox.

NOTE Confidence: 0.790213188181818

00:29:14.240 --> 00:29:14.968 Do you see that?

NOTE Confidence: 0.92802095

00:29:17.680 --> 00:29:21.405 Yes. Had a dominant features of

NOTE Confidence: 0.92802095

00:29:21.405 --> 00:29:23.040 non STR Nets biologically and

NOTE Confidence: 0.92802095

00:29:23.104 --> 00:29:25.344 clinically compared to those that

NOTE Confidence: 0.92802095

00:29:25.344 --> 00:29:27.136 are somatostatin receptor positive,

NOTE Confidence: 0.92802095

00:29:27.140 --> 00:29:29.330 so that's another great question.

NOTE Confidence: 0.92802095

00:29:29.330 --> 00:29:31.826 I would say typically the patients

NOTE Confidence: 0.92802095

00:29:31.826 --> 00:29:34.022 who are noncitizen receptor avid

NOTE Confidence: 0.92802095

00:29:34.022 --> 00:29:35.850 have more aggressive disease.

NOTE Confidence: 0.92802095

00:29:35.850 --> 00:29:37.290 They tend to have lost.

NOTE Confidence: 0.92802095

00:29:37.290 --> 00:29:39.198 That's in Edison receptor

NOTE Confidence: 0.92802095

00:29:39.198 --> 00:29:40.629 as they differentiate,

NOTE Confidence: 0.92802095

00:29:40.630 --> 00:29:43.326 so it usually are the grade 3 poorly

NOTE Confidence: 0.92802095

00:29:43.326 --> 00:29:45.069 differentiated in order consumers.

NOTE Confidence: 0.92802095

00:29:45.070 --> 00:29:46.226 I'm as I mentioned,

NOTE Confidence: 0.92802095

00:29:46.226 --> 00:29:48.310 we can see great evolution over time,

NOTE Confidence: 0.92802095

00:29:48.310 --> 00:29:50.200 so sometimes a patient who may have

NOTE Confidence: 0.92802095

00:29:50.200 --> 00:29:51.950 initially been SSTR positive can lose.

NOTE Confidence: 0.92802095

00:29:51.950 --> 00:29:52.190 That

NOTE Confidence: 0.882307798333333

00:29:54.140 --> 00:29:56.858 and another question are there supportive

NOTE Confidence: 0.882307798333333

00:29:56.860 --> 00:29:59.510 services unique for this population?

NOTE Confidence: 0.633058035

00:30:01.550 --> 00:30:04.928 So so yes, and I actually,

NOTE Confidence: 0.633058035

00:30:04.930 --> 00:30:07.009 I'm really eager to work Terrace Hampton.

NOTE Confidence: 0.633058035

00:30:07.010 --> 00:30:08.270 I have talked some about this,

NOTE Confidence: 0.633058035

00:30:08.270 --> 00:30:10.106 but I think particularly for the

NOTE Confidence: 0.633058035

00:30:10.106 --> 00:30:12.139 grade one and two under consumers

NOTE Confidence: 0.633058035

00:30:12.139 --> 00:30:14.383 defined as a more chronic cancer,

NOTE Confidence: 0.633058035

00:30:14.390 --> 00:30:15.990 the chronicity of their

NOTE Confidence: 0.633058035

00:30:15.990 --> 00:30:17.220 survivorship issues, I think,

NOTE Confidence: 0.633058035

00:30:17.220 --> 00:30:18.510 is a really unique aspect that

NOTE Confidence: 0.633058035

00:30:18.510 --> 00:30:20.126 we need to pay more attention to.

NOTE Confidence: 0.633058035

00:30:20.130 --> 00:30:22.178 So hopefully we'll have

NOTE Confidence: 0.633058035

00:30:22.178 --> 00:30:23.714 more dedicated services.

NOTE Confidence: 0.839316141428571

00:30:24.690 --> 00:30:27.345 And and finally, what about

NOTE Confidence: 0.839316141428571

00:30:27.345 --> 00:30:28.407 differentiation therapy?

NOTE Confidence: 0.839316141428571

00:30:28.410 --> 00:30:31.158 Isaac Kim has a question on that point,

NOTE Confidence: 0.70385482625

00:30:31.690 --> 00:30:36.426 yes, so in fact one wish list for

NOTE Confidence: 0.70385482625

00:30:36.430 --> 00:30:38.806 2022 is to actually bring together

NOTE Confidence: 0.70385482625

00:30:38.806 --> 00:30:40.837 a multidisciplinary group of people

NOTE Confidence: 0.70385482625

00:30:40.837 --> 00:30:43.141 to to examine new under condition

NOTE Confidence: 0.70385482625

00:30:43.141 --> 00:30:44.850 ciation across specialties.

NOTE Confidence: 0.70385482625

00:30:44.850 --> 00:30:47.856 So bringing GUGI thoracic

NOTE Confidence: 0.70385482625

00:30:47.856 --> 00:30:50.108 folks together to release.

NOTE Confidence: 0.70385482625

00:30:50.110 --> 00:30:52.161 Think about this as a team or

NOTE Confidence: 0.70385482625

00:30:52.161 --> 00:30:52.747 underground differentiation.

NOTE Confidence: 0.70385482625

00:30:52.750 --> 00:30:54.250 It can be an end differentiation

NOTE Confidence: 0.70385482625

00:30:54.250 --> 00:30:55.858 for many cancer types and I think.

NOTE Confidence: 0.70385482625

00:30:55.860 --> 00:30:57.510 We know very little about that.

NOTE Confidence: 0.843998448571428

00:30:58.600 --> 00:31:00.217 OK terrific, thank you for other people.

NOTE Confidence: 0.843998448571428

00:31:00.220 --> 00:31:01.268 Have questions.

NOTE Confidence: 0.843998448571428

00:31:01.268 --> 00:31:03.888 You should contact Pam directly.

NOTE Confidence: 0.843998448571428

00:31:03.890 --> 00:31:06.598 Our second speaker today.

NOTE Confidence: 0.843998448571428

00:31:06.600 --> 00:31:08.380 Get my little sheet out.

NOTE Confidence: 0.843998448571428

00:31:08.380 --> 00:31:11.194 Is is Kelly Olino from partement surgery?

NOTE Confidence: 0.843998448571428

00:31:11.200 --> 00:31:12.915 She's an assistant professor and

NOTE Confidence: 0.843998448571428

00:31:12.915 --> 00:31:15.036 received her medical training at Johns

NOTE Confidence: 0.843998448571428

00:31:15.036 --> 00:31:16.828 Hopkins and also residency there.

NOTE Confidence: 0.843998448571428

00:31:16.828 --> 00:31:18.276 Then a fellowship at

NOTE Confidence: 0.843998448571428

00:31:18.276 --> 00:31:19.660 Memorial Sloan Kettering.

NOTE Confidence: 0.843998448571428

00:31:19.660 --> 00:31:21.916 She came to Yale from the University of

NOTE Confidence: 0.843998448571428

00:31:21.916 --> 00:31:23.920 Texas Medical Branch and while in Texas,

NOTE Confidence: 0.843998448571428

00:31:23.920 --> 00:31:26.696 she was recognized as a Texas Rising Star,

NOTE Confidence: 0.843998448571428

00:31:26.700 --> 00:31:28.550 a Lone Star, a Provost,

NOTE Confidence: 0.843998448571428

00:31:28.550 --> 00:31:30.765 scholar and recipient of the

NOTE Confidence: 0.843998448571428

00:31:30.765 --> 00:31:32.537 Society for Surgical Oncology,

NOTE Confidence: 0.843998448571428

00:31:32.540 --> 00:31:34.325 Clinical Investigation Award.

NOTE Confidence: 0.843998448571428

00:31:34.325 --> 00:31:37.300 Interested in terminology including Melanoma.

NOTE Confidence: 0.843998448571428

00:31:37.300 --> 00:31:39.010 And her clinical specialties include

NOTE Confidence: 0.843998448571428

00:31:39.010 --> 00:31:40.720 treatment of patients with Melanoma,

NOTE Confidence: 0.843998448571428

00:31:40.720 --> 00:31:43.234 Merkel cell cancer which will hear

NOTE Confidence: 0.843998448571428

00:31:43.234 --> 00:31:45.959 about today and other other cancers

NOTE Confidence: 0.843998448571428

00:31:45.960 --> 00:31:49.090 and also interested in developing.

NOTE Confidence: 0.843998448571428

00:31:49.090 --> 00:31:49.946 Clinical trials,

NOTE Confidence: 0.843998448571428

00:31:49.946 --> 00:31:51.658 including immune therapy for

NOTE Confidence: 0.843998448571428

00:31:51.658 --> 00:31:53.737 these diseases and like what

NOTE Confidence: 0.843998448571428

00:31:53.737 --> 00:31:55.326 we just heard about merkle's,

NOTE Confidence: 0.843998448571428

00:31:55.326 --> 00:31:56.910 is a neuroendocrine tumor

NOTE Confidence: 0.843998448571428

00:31:56.910 --> 00:31:58.078 with the virus association,

NOTE Confidence: 0.843998448571428

00:31:58.078 --> 00:31:59.830 which makes it interesting to me.

NOTE Confidence: 0.843998448571428

00:31:59.830 --> 00:32:00.870 So I'm very interested in

NOTE Confidence: 0.843998448571428

00:32:00.870 --> 00:32:02.120 hearing what Kelly has to say.

NOTE Confidence: 0.923697

00:32:05.360 --> 00:32:06.108 OK, it looks good.

NOTE Confidence: 0.902238968

00:32:07.110 --> 00:32:09.246 Great thank you.

NOTE Confidence: 0.902238968

00:32:09.246 --> 00:32:11.736 So, again, another neuroendocrine

NOTE Confidence: 0.902238968

00:32:11.736 --> 00:32:14.401 tumor and again another instance

NOTE Confidence: 0.902238968

00:32:14.401 --> 00:32:17.507 where it really was a here at Yale.

NOTE Confidence: 0.902238968

00:32:17.510 --> 00:32:20.022 Seeing more and more of a disease process

NOTE Confidence: 0.902238968

00:32:20.022 --> 00:32:22.347 and really relying on our skin cancer,

NOTE Confidence: 0.902238968

00:32:22.350 --> 00:32:24.782 spore and multidisciplinary networks

NOTE Confidence: 0.902238968

00:32:24.782 --> 00:32:27.822 actually build a relatively new

NOTE Confidence: 0.902238968

00:32:27.822 --> 00:32:30.030 program for a rare disease.

NOTE Confidence: 0.902238968

00:32:30.030 --> 00:32:32.460 So I have no disclosures,

NOTE Confidence: 0.902238968

00:32:32.460 --> 00:32:34.427 so today we'll talk about an update

NOTE Confidence: 0.902238968

00:32:34.427 --> 00:32:35.940 on the incidence, the management,

NOTE Confidence: 0.902238968

00:32:35.940 --> 00:32:38.285 and the treatment of Merkel cell carcinoma.

NOTE Confidence: 0.902238968

00:32:38.290 --> 00:32:40.450 And then we'll go into specifically

NOTE Confidence: 0.902238968

00:32:40.450 --> 00:32:42.753 some more recent work that we've

NOTE Confidence: 0.902238968

00:32:42.753 --> 00:32:45.141 done looking at our vast experience

NOTE Confidence: 0.902238968

00:32:45.141 --> 00:32:47.046 and benchmarking that against

NOTE Confidence: 0.902238968

00:32:47.046 --> 00:32:48.088 national guidelines,

NOTE Confidence: 0.902238968

00:32:48.090 --> 00:32:49.038 and then briefly.

NOTE Confidence: 0.902238968

00:32:49.038 --> 00:32:50.934 I'll mention some of the new

NOTE Confidence: 0.902238968

00:32:50.934 --> 00:32:52.329 research again supported through

NOTE Confidence: 0.902238968

00:32:52.329 --> 00:32:54.363 the score and through the the

NOTE Confidence: 0.902238968

00:32:54.363 --> 00:32:56.273 great relationships that we have

NOTE Confidence: 0.902238968

00:32:56.273 --> 00:32:58.158 through our skin cancer program.

NOTE Confidence: 0.6860527

00:33:01.060 --> 00:33:05.182 So. Merkel cell was first described as

NOTE Confidence: 0.6860527

00:33:05.182 --> 00:33:07.559 a true bickler carcinoma of the skin,

NOTE Confidence: 0.6860527

00:33:07.560 --> 00:33:10.530 and it wasn't until 1978 that it was first

NOTE Confidence: 0.6860527

00:33:10.530 --> 00:33:12.669 coined to even be a neuroendocrine tumor.

NOTE Confidence: 0.6860527

00:33:12.670 --> 00:33:13.918 However, at that time,

NOTE Confidence: 0.6860527

00:33:13.918 --> 00:33:16.190 thought to be derived from Merkel cells,

NOTE Confidence: 0.6860527

00:33:16.190 --> 00:33:18.506 which is actually not the case.

NOTE Confidence: 0.6860527

00:33:18.510 --> 00:33:20.646 It wasn't until 2008 that there

NOTE Confidence: 0.6860527

00:33:20.646 --> 00:33:23.332 was the discovery of a Merkel cell

NOTE Confidence: 0.6860527

00:33:23.332 --> 00:33:25.708 polyoma virus which is fairly endemic,

NOTE Confidence: 0.6860527

00:33:25.710 --> 00:33:28.237 as even being a causative factor in.

NOTE Confidence: 0.6860527

00:33:28.240 --> 00:33:31.616 In addition to UV radiation for this disease.

NOTE Confidence: 0.6860527

00:33:31.620 --> 00:33:34.004 And to be quite as we still don't

NOTE Confidence: 0.6860527

00:33:34.004 --> 00:33:36.535 even know what the cell of origin is,

NOTE Confidence: 0.6860527

00:33:36.540 --> 00:33:38.250 there's been some hypothesis that this

NOTE Confidence: 0.6860527

00:33:38.250 --> 00:33:40.720 may be from a pre pro fiesel which

NOTE Confidence: 0.6860527

00:33:40.720 --> 00:33:42.628 would fit somewhat with the increased

NOTE Confidence: 0.6860527

00:33:42.685 --> 00:33:44.660 incidence in patients with lymphoma.

NOTE Confidence: 0.6860527

00:33:44.660 --> 00:33:46.606 Other work is focused on dermal stem

NOTE Confidence: 0.6860527

00:33:46.606 --> 00:33:48.720 cells as well as dermal fibroblasts,

NOTE Confidence: 0.6860527

00:33:48.720 --> 00:33:53.074 but it's still a work in progress.

NOTE Confidence: 0.6860527

00:33:53.080 --> 00:33:54.652 As opposed to Melanoma,

NOTE Confidence: 0.6860527

00:33:54.652 --> 00:33:57.170 where we speak about the ABC's we

NOTE Confidence: 0.6860527

00:33:57.170 --> 00:33:58.820 use our vowels for Merkel cell.

NOTE Confidence: 0.6860527

00:33:58.820 --> 00:34:02.155 So it's the AEIOU's and these

NOTE Confidence: 0.6860527

00:34:02.155 --> 00:34:04.780 are known to be asymptomatic.

NOTE Confidence: 0.6860527

00:34:04.780 --> 00:34:05.686 They're not painful.

NOTE Confidence: 0.6860527

00:34:05.686 --> 00:34:08.203 The big thing with these and how they

NOTE Confidence: 0.6860527

00:34:08.203 --> 00:34:10.597 behave differently is their rate of growth.

NOTE Confidence: 0.6860527

00:34:10.600 --> 00:34:12.319 When we look about when we look at Merkel

NOTE Confidence: 0.6860527

00:34:12.319 --> 00:34:14.173 cell and the ones that I'm showing you here,

NOTE Confidence: 0.6860527

00:34:14.180 --> 00:34:15.844 one is an intransit picture on the right,

NOTE Confidence: 0.6860527

00:34:15.850 --> 00:34:17.914 but the other ones which are

NOTE Confidence: 0.6860527

00:34:17.914 --> 00:34:19.795 seeing we measure Merkel cells

NOTE Confidence: 0.6860527

00:34:19.795 --> 00:34:21.425 in centimeters versus Melanoma.

NOTE Confidence: 0.6860527

00:34:21.425 --> 00:34:23.000 We really measure that in.

NOTE Confidence: 0.6860527

00:34:23.000 --> 00:34:25.540 Millimeters or fractions of millimeters,

NOTE Confidence: 0.6860527

00:34:25.540 --> 00:34:28.222 so this expanding rapidly of a of a non

NOTE Confidence: 0.6860527

00:34:28.222 --> 00:34:30.235 pigmented mass really should open the

NOTE Confidence: 0.6860527

00:34:30.235 --> 00:34:32.798 thought that this could be a Merkel cell.

NOTE Confidence: 0.6860527

00:34:32.800 --> 00:34:35.264 It's more likely to be found in

NOTE Confidence: 0.6860527

00:34:35.264 --> 00:34:36.880 patients with immunosupression older

NOTE Confidence: 0.6860527

00:34:36.880 --> 00:34:40.240 patients and again can be associated

NOTE Confidence: 0.6860527

00:34:40.240 --> 00:34:43.252 with UV exposure and about if you

NOTE Confidence: 0.6860527

00:34:43.252 --> 00:34:45.436 one looks about 90% of each patient

NOTE Confidence: 0.6860527

00:34:45.436 --> 00:34:47.410 will have more than or equal to

NOTE Confidence: 0.6860527

00:34:47.470 --> 00:34:49.330 three of these characteristics.

NOTE Confidence: 0.828741832857143

00:34:52.090 --> 00:34:53.425 He immunohistological diagnosis

NOTE Confidence: 0.828741832857143

00:34:53.425 --> 00:34:56.095 is always based upon the primary

NOTE Confidence: 0.828741832857143

00:34:56.095 --> 00:34:58.548 skin lesion and generally speaking,

NOTE Confidence: 0.828741832857143

00:34:58.550 --> 00:35:00.830 most patients will present about 50%

NOTE Confidence: 0.828741832857143

00:35:00.830 --> 00:35:03.626 of the time with localized disease,

NOTE Confidence: 0.828741832857143

00:35:03.630 --> 00:35:05.202 35% with nodal disease,

NOTE Confidence: 0.828741832857143

00:35:05.202 --> 00:35:07.374 and about 15% of patients at

NOTE Confidence: 0.828741832857143

00:35:07.374 --> 00:35:09.104 the time of presentation with

NOTE Confidence: 0.828741832857143

00:35:09.104 --> 00:35:11.850 metastatic disease and up to 15%

NOTE Confidence: 0.828741832857143

00:35:11.850 --> 00:35:13.638 can present with an unknown primary.

NOTE Confidence: 0.88831801

00:35:16.000 --> 00:35:19.570 So as far as management for

NOTE Confidence: 0.88831801

00:35:19.570 --> 00:35:21.819 localized or Merkel cell carcinoma,

NOTE Confidence: 0.88831801

00:35:21.819 --> 00:35:23.937 it really is a surgical disease.

NOTE Confidence: 0.88831801

00:35:23.940 --> 00:35:26.268 So we recommend that we do a wide

NOTE Confidence: 0.88831801

00:35:26.268 --> 00:35:28.408 local excision with one to two

NOTE Confidence: 0.88831801

00:35:28.408 --> 00:35:29.896 centimeter margins when possible,

NOTE Confidence: 0.88831801

00:35:29.900 --> 00:35:32.455 you should perform a Sentinel node biopsy,

NOTE Confidence: 0.88831801

00:35:32.460 --> 00:35:34.992 again, with the caveat being the

NOTE Confidence: 0.88831801

00:35:34.992 --> 00:35:37.329 demographic population who can be high

NOTE Confidence: 0.88831801

00:35:37.329 --> 00:35:39.633 risk and elderly and may not be the

NOTE Confidence: 0.88831801

00:35:39.704 --> 00:35:42.319 best candidates for general anesthesia.

NOTE Confidence: 0.88831801

00:35:42.320 --> 00:35:43.610 Again, adjuvant radiation,

NOTE Confidence: 0.88831801

00:35:43.610 --> 00:35:46.190 which is very different than Melanoma.

NOTE Confidence: 0.88831801

00:35:46.190 --> 00:35:47.950 Merkel cells are exquisitely

NOTE Confidence: 0.88831801

00:35:47.950 --> 00:35:49.270 sensitive to radiotherapy,

NOTE Confidence: 0.88831801

00:35:49.270 --> 00:35:50.950 and again are much larger.

NOTE Confidence: 0.88831801

00:35:50.950 --> 00:35:53.365 The only times when we really don't

NOTE Confidence: 0.88831801

00:35:53.365 --> 00:35:55.363 consider radiation again for a given

NOTE Confidence: 0.88831801

00:35:55.363 --> 00:35:57.163 patient would be very small tumors,

NOTE Confidence: 0.88831801

00:35:57.170 --> 00:35:58.758 less than a centimeter,

NOTE Confidence: 0.88831801

00:35:58.758 --> 00:36:00.346 no lymphovascular invasion in

NOTE Confidence: 0.88831801

00:36:00.346 --> 00:36:02.368 the setting of a widely margin.

NOTE Confidence: 0.88831801

00:36:02.370 --> 00:36:03.088 Negative resection.

NOTE Confidence: 0.88831801

00:36:03.088 --> 00:36:05.601 There are times two that if a

NOTE Confidence: 0.88831801

00:36:05.601 --> 00:36:07.658 primary is unable to be respected.

NOTE Confidence: 0.88831801

00:36:07.660 --> 00:36:09.988 For example, very poor surgical candidate.

NOTE Confidence: 0.88831801

00:36:09.990 --> 00:36:13.175 You could have just local

NOTE Confidence: 0.88831801

00:36:13.175 --> 00:36:14.449 palliative radiation.

NOTE Confidence: 0.88831801

00:36:14.450 --> 00:36:16.574 Similar to Melanoma Sentinel,

NOTE Confidence: 0.88831801

00:36:16.574 --> 00:36:19.229 nodes are important prognostic value.

NOTE Confidence: 0.88831801

00:36:19.230 --> 00:36:20.658 Now, in the case of a

NOTE Confidence: 0.88831801

00:36:20.658 --> 00:36:21.610 clinically positive lymph node,

NOTE Confidence: 0.88831801

00:36:21.610 --> 00:36:23.128 so a patient presents with a

NOTE Confidence: 0.88831801

00:36:23.128 --> 00:36:24.669 lymph node that you can feel.

NOTE Confidence: 0.88831801

00:36:24.670 --> 00:36:25.705 In that case,

NOTE Confidence: 0.88831801

00:36:25.705 --> 00:36:27.775 the recommendation is that we still

NOTE Confidence: 0.88831801

00:36:27.775 --> 00:36:30.367 perform a therapeutic lymph node dissection,

NOTE Confidence: 0.88831801

00:36:30.370 --> 00:36:33.035 and it's controversial whether or

NOTE Confidence: 0.88831801

00:36:33.035 --> 00:36:35.167 not additional adjuvant radiation

NOTE Confidence: 0.88831801

00:36:35.167 --> 00:36:37.629 therapy is needed in that context.

NOTE Confidence: 0.88831801

00:36:37.630 --> 00:36:40.205 If someone undergoes a Sentinel

NOTE Confidence: 0.88831801

00:36:40.205 --> 00:36:41.750 lymph node procedure,

NOTE Confidence: 0.88831801

00:36:41.750 --> 00:36:43.182 if it's positive again,

NOTE Confidence: 0.88831801

00:36:43.182 --> 00:36:46.010 the options are to to go further.

NOTE Confidence: 0.88831801

00:36:46.010 --> 00:36:47.564 Surgical treatment.

NOTE Confidence: 0.88831801

00:36:47.564 --> 00:36:52.226 Or to actually undergo radiotherapy again,

NOTE Confidence: 0.88831801

00:36:52.230 --> 00:36:55.058 there's lots of series that are all

NOTE Confidence: 0.88831801

00:36:55.058 --> 00:36:57.420 retrospective in nature as we have

NOTE Confidence: 0.88831801

00:36:57.420 --> 00:36:59.568 no prospective data looking at this.

NOTE Confidence: 0.88831801

00:36:59.570 --> 00:37:01.466 And again, even if you're a central node,

NOTE Confidence: 0.88831801

00:37:01.470 --> 00:37:03.252 negative patient, again,

NOTE Confidence: 0.88831801

00:37:03.252 --> 00:37:04.768 fairly controversial radiotherapy.

NOTE Confidence: 0.88831801

00:37:04.768 --> 00:37:07.064 We typically would use here at Yale.

NOTE Confidence: 0.88831801

00:37:07.070 --> 00:37:09.038 There are some centers that still use that,

NOTE Confidence: 0.88831801

00:37:09.040 --> 00:37:10.272 and that really is,

NOTE Confidence: 0.88831801

00:37:10.272 --> 00:37:10.888 for instance,

NOTE Confidence: 0.88831801

00:37:10.890 --> 00:37:12.885 is particularly in head and neck cancers,

NOTE Confidence: 0.88831801

00:37:12.890 --> 00:37:15.249 where if you thought that your nodal

NOTE Confidence: 0.88831801

00:37:15.249 --> 00:37:17.314 mapping was poor or inaccurate that

NOTE Confidence: 0.88831801

00:37:17.314 --> 00:37:19.624 you could offer that to a patient

NOTE Confidence: 0.88831801

00:37:19.630 --> 00:37:21.770 adjutant therapy currently for Merkel

NOTE Confidence: 0.88831801

00:37:21.770 --> 00:37:24.416 still is just under investigation and

NOTE Confidence: 0.88831801

00:37:24.416 --> 00:37:26.200 actively ongoing clinical trials,

NOTE Confidence: 0.88831801

00:37:26.200 --> 00:37:27.248 including the stamp trial,

NOTE Confidence: 0.88831801

00:37:27.248 --> 00:37:28.820 which we have open at Yale.

NOTE Confidence: 0.879137373

00:37:31.230 --> 00:37:33.690 So for metastatic Merkel cell carcinoma

NOTE Confidence: 0.879137373

00:37:33.690 --> 00:37:35.984 used to be chemotherapy, first line

NOTE Confidence: 0.879137373

00:37:35.984 --> 00:37:37.946 with the topside and platinum agents.

NOTE Confidence: 0.879137373

00:37:37.950 --> 00:37:40.986 Those had very short lived responses,

NOTE Confidence: 0.879137373

00:37:40.990 --> 00:37:44.668 lots of toxicity, so we're abandoned

NOTE Confidence: 0.879137373

00:37:44.668 --> 00:37:47.986 beginning with two clinical trials that

NOTE Confidence: 0.879137373

00:37:47.986 --> 00:37:50.938 were completed and published both initially

NOTE Confidence: 0.879137373

00:37:50.938 --> 00:37:54.369 in 2016 and then updated in 2019 and 2020.

NOTE Confidence: 0.879137373

00:37:54.370 --> 00:37:57.730 Looking at pembrolizumab as frontline

NOTE Confidence: 0.879137373

00:37:57.730 --> 00:38:00.940 for metastatic disease with 50%

NOTE Confidence: 0.879137373

00:38:00.940 --> 00:38:02.720 overall response rates, which was.

NOTE Confidence: 0.879137373

00:38:02.720 --> 00:38:04.575 Which is fantastic compared to

NOTE Confidence: 0.879137373

00:38:04.575 --> 00:38:06.880 what we we saw historically with

NOTE Confidence: 0.879137373

00:38:06.880 --> 00:38:08.800 chemotherapy and then with PDL.

NOTE Confidence: 0.879137373

00:38:08.800 --> 00:38:11.862 One agents have a limo map with 33%

NOTE Confidence: 0.879137373

00:38:11.862 --> 00:38:13.794 just looking at the overall response

NOTE Confidence: 0.879137373

00:38:13.794 --> 00:38:16.365 rates and this again continues to grow

NOTE Confidence: 0.879137373

00:38:16.365 --> 00:38:18.295 and expand with additional clinical

NOTE Confidence: 0.879137373

00:38:18.295 --> 00:38:20.267 trials focused on immune therapy.

NOTE Confidence: 0.873954812222222

00:38:22.630 --> 00:38:26.045 So Merkel cell carcinoma is

NOTE Confidence: 0.873954812222222

00:38:26.045 --> 00:38:28.777 very interesting because of.

NOTE Confidence: 0.873954812222222

00:38:28.780 --> 00:38:31.054 The end product of your disease

NOTE Confidence: 0.873954812222222

00:38:31.054 --> 00:38:32.570 looks exactly the same.

NOTE Confidence: 0.873954812222222

00:38:32.570 --> 00:38:35.360 However, there are two completely

NOTE Confidence: 0.873954812222222

00:38:35.360 --> 00:38:36.760 distinct pathophysiology

NOTE Confidence: 0.873954812222222

00:38:36.760 --> 00:38:40.120 underlying the the tumorigenesis.

NOTE Confidence: 0.873954812222222

00:38:40.120 --> 00:38:40.915 Interestingly, as well,

NOTE Confidence: 0.873954812222222

00:38:40.915 --> 00:38:42.240 depending on where you live,

NOTE Confidence: 0.873954812222222

00:38:42.240 --> 00:38:43.836 for example, the US and Europe,

NOTE Confidence: 0.873954812222222

00:38:43.840 --> 00:38:46.213 about 20% of Merkel cell carcinomas are

NOTE Confidence: 0.873954812222222

00:38:46.213 --> 00:38:49.314 what we call what we think to be UV related,

NOTE Confidence: 0.873954812222222

00:38:49.320 --> 00:38:51.910 very different.

NOTE Confidence: 0.873954812222222

00:38:51.910 --> 00:38:52.778 Then Australia.

NOTE Confidence: 0.873954812222222

00:38:52.778 --> 00:38:55.816 In in the United States and Europe,

NOTE Confidence: 0.873954812222222

00:38:55.820 --> 00:38:58.790 again we see much more prevalent

NOTE Confidence: 0.873954812222222

00:38:58.790 --> 00:39:00.770 Merkel cell polyomavirus related

NOTE Confidence: 0.873954812222222

00:39:00.847 --> 00:39:02.406 disease and was interested

NOTE Confidence: 0.873954812222222

00:39:02.406 --> 00:39:03.774 again about this polyomavirus.

NOTE Confidence: 0.873954812222222

00:39:03.780 --> 00:39:06.265 It's really endemic it if you one

NOTE Confidence: 0.873954812222222

00:39:06.265 --> 00:39:08.619 looks from China to South America,

NOTE Confidence: 0.873954812222222

00:39:08.620 --> 00:39:10.498 it wouldn't were to swab patients.

NOTE Confidence: 0.873954812222222

00:39:10.500 --> 00:39:11.790 You know,

NOTE Confidence: 0.873954812222222

00:39:11.790 --> 00:39:14.370 usually this polyomaviruses found

NOTE Confidence: 0.873954812222222

00:39:14.370 --> 00:39:16.521 during childhood 6080% of people

NOTE Confidence: 0.873954812222222

00:39:16.521 --> 00:39:18.900 will be colonized if you take out a

NOTE Confidence: 0.873954812222222

00:39:18.900 --> 00:39:20.754 squamous cell or basal cell cancer.

NOTE Confidence: 0.873954812222222

00:39:20.760 --> 00:39:22.920 And if you look for Merkel cell polyomavirus,

NOTE Confidence: 0.873954812222222

00:39:22.920 --> 00:39:24.501 you'll see that in up to 25%

NOTE Confidence: 0.873954812222222

00:39:24.501 --> 00:39:25.404 of those samples.

NOTE Confidence: 0.873954812222222

00:39:25.404 --> 00:39:27.725 Even though it's not related to that

NOTE Confidence: 0.873954812222222

00:39:27.725 --> 00:39:30.970 Physiology, at least that we think.

NOTE Confidence: 0.873954812222222

00:39:30.970 --> 00:39:31.694 And again,

NOTE Confidence: 0.873954812222222

00:39:31.694 --> 00:39:33.866 any infection with a polyomaviruses really

NOTE Confidence: 0.873954812222222

00:39:33.866 --> 00:39:35.936 asymptomatic and we have patients come in.

NOTE Confidence: 0.873954812222222

00:39:35.940 --> 00:39:36.418 They're very,

NOTE Confidence: 0.873954812222222

00:39:36.418 --> 00:39:37.852 very concerned that they're going to

NOTE Confidence: 0.873954812222222

00:39:37.852 --> 00:39:39.688 give this to their spouse or their partner.

NOTE Confidence: 0.873954812222222

00:39:39.690 --> 00:39:40.456 But again,

NOTE Confidence: 0.873954812222222

00:39:40.456 --> 00:39:43.137 this is not something that that's really

NOTE Confidence: 0.873954812222222

00:39:43.137 --> 00:39:45.884 of concern as far as being contagious,

NOTE Confidence: 0.873954812222222

00:39:45.884 --> 00:39:46.968 and again,

NOTE Confidence: 0.873954812222222

00:39:46.968 --> 00:39:49.678 the UV mediated Merkel cell.

NOTE Confidence: 0.873954812222222

00:39:49.680 --> 00:39:51.060 Again, we don't know what the

NOTE Confidence: 0.873954812222222

00:39:51.060 --> 00:39:52.540 what the cell of origin is.

NOTE Confidence: 0.873954812222222

00:39:52.540 --> 00:39:54.808 However, what we know is that

NOTE Confidence: 0.873954812222222

00:39:54.808 --> 00:39:55.942 there's Burley mutations,

NOTE Confidence: 0.873954812222222

00:39:55.950 --> 00:39:58.318 particularly in RB one,

NOTE Confidence: 0.873954812222222

00:39:58.318 --> 00:40:00.618 and those become founder

NOTE Confidence: 0.873954812222222

00:40:00.618 --> 00:40:03.208 mutations in P53 and RB-1.

NOTE Confidence: 0.873954812222222

00:40:03.210 --> 00:40:05.884 And when we look at the metastases

NOTE Confidence: 0.873954812222222

00:40:05.890 --> 00:40:08.686 later in patients on autopsy study,

NOTE Confidence: 0.873954812222222

00:40:08.690 --> 00:40:10.390 we'll see that those are

NOTE Confidence: 0.873954812222222

00:40:10.390 --> 00:40:11.410 really clonal nature.

NOTE Confidence: 0.873954812222222

00:40:11.410 --> 00:40:12.102 However,

NOTE Confidence: 0.873954812222222

00:40:12.102 --> 00:40:14.870 for virally mediated polyomavirus

NOTE Confidence: 0.873954812222222

00:40:14.870 --> 00:40:16.946 associated Merkel cell,

NOTE Confidence: 0.873954812222222

00:40:16.950 --> 00:40:19.426 what you see is actually a critical

NOTE Confidence: 0.873954812222222

00:40:19.426 --> 00:40:21.066 event where there's viral integration

NOTE Confidence: 0.873954812222222

00:40:21.066 --> 00:40:23.122 and there's a small and a large

NOTE Confidence: 0.873954812222222

00:40:23.122 --> 00:40:24.646 T cell antigen and Merkel cell

NOTE Confidence: 0.873954812222222

00:40:24.701 --> 00:40:26.729 and what happens is that actually

NOTE Confidence: 0.873954812222222

00:40:26.729 --> 00:40:28.081 gets incorporate actually very

NOTE Confidence: 0.873954812222222

00:40:28.090 --> 00:40:30.850 close to where the the RB 1 gene

NOTE Confidence: 0.873954812222222

00:40:30.850 --> 00:40:33.487 is and what happens is that.

NOTE Confidence: 0.873954812222222

00:40:33.490 --> 00:40:35.695 Along T cell antigen as you look

NOTE Confidence: 0.873954812222222

00:40:35.695 --> 00:40:37.270 downstream that becomes truncated,

NOTE Confidence: 0.873954812222222

00:40:37.270 --> 00:40:40.532 it becomes a trophic factor and actually

NOTE Confidence: 0.873954812222222

00:40:40.532 --> 00:40:42.990 drives further growth of the tumor.

NOTE Confidence: 0.873954812222222

00:40:42.990 --> 00:40:43.323 Now,

NOTE Confidence: 0.873954812222222

00:40:43.323 --> 00:40:45.654 the things that are interesting in the

NOTE Confidence: 0.873954812222222

00:40:45.654 --> 00:40:47.670 UV associated Merkel cell carcinoma.

NOTE Confidence: 0.873954812222222

00:40:47.670 --> 00:40:50.580 This is very high in neoantigen

NOTE Confidence: 0.873954812222222

00:40:50.580 --> 00:40:52.806 burden as well as a high overall

NOTE Confidence: 0.873954812222222

00:40:52.806 --> 00:40:54.094 tumor mutational burden compared

NOTE Confidence: 0.873954812222222

00:40:54.094 --> 00:40:55.750 to that of the viral one.

NOTE Confidence: 0.873954812222222

00:40:55.750 --> 00:40:56.262 However,

NOTE Confidence: 0.873954812222222

00:40:56.262 --> 00:41:00.358 that has a viral T cell antigen expression,

NOTE Confidence: 0.873954812222222

00:41:00.360 --> 00:41:01.178 and interestingly,

NOTE Confidence: 0.873954812222222

00:41:01.178 --> 00:41:03.632 the responses to immune therapy are

NOTE Confidence: 0.873954812222222

00:41:03.632 --> 00:41:06.500 exactly the same regardless of the etiology.

NOTE Confidence: 0.894604984615385

00:41:09.050 --> 00:41:10.422 Why is this important?

NOTE Confidence: 0.894604984615385

00:41:10.422 --> 00:41:13.284 You know such a rare cancer is that

NOTE Confidence: 0.894604984615385

00:41:13.284 --> 00:41:15.468 it's actually growing and you know

NOTE Confidence: 0.894604984615385

00:41:15.468 --> 00:41:17.983 similar to the the question that was

NOTE Confidence: 0.894604984615385

00:41:17.983 --> 00:41:20.520 just asked of Doctor Kuntzman Dr.

NOTE Confidence: 0.894604984615385

00:41:20.520 --> 00:41:22.818 Kunz. We were actually really curious

NOTE Confidence: 0.894604984615385

00:41:22.818 --> 00:41:25.740 as to why we were seeing this.

NOTE Confidence: 0.894604984615385

00:41:25.740 --> 00:41:27.455 So this is a multidisciplinary

NOTE Confidence: 0.894604984615385

00:41:27.455 --> 00:41:29.650 effort really headed by Dan Jacobs,

NOTE Confidence: 0.894604984615385

00:41:29.650 --> 00:41:33.340 who is now a first year, head and neck.

NOTE Confidence: 0.894604984615385

00:41:33.340 --> 00:41:35.710 Surgical resident and this was done

NOTE Confidence: 0.894604984615385

00:41:35.710 --> 00:41:38.380 with myself or medical oncology group.

NOTE Confidence: 0.894604984615385

00:41:38.380 --> 00:41:41.697 Ben Judson from otolaryngology and Doctor

NOTE Confidence: 0.894604984615385

00:41:41.697 --> 00:41:43.636 Zhang from the School of Public Health.

NOTE Confidence: 0.894604984615385

00:41:43.640 --> 00:41:45.710 Really trying to answer the

NOTE Confidence: 0.894604984615385

00:41:45.710 --> 00:41:48.292 question so how we underwent this

NOTE Confidence: 0.894604984615385

00:41:48.292 --> 00:41:50.472 analysis is doing something called

NOTE Confidence: 0.894604984615385

00:41:50.472 --> 00:41:52.960 a age period cohort analysis,

NOTE Confidence: 0.894604984615385

00:41:52.960 --> 00:41:54.325 again similar to what's happening

NOTE Confidence: 0.894604984615385

00:41:54.325 --> 00:41:55.144 with neuroendocrine tumors

NOTE Confidence: 0.894604984615385

00:41:55.144 --> 00:41:56.599 and a lot of other cancers.

NOTE Confidence: 0.894604984615385

00:41:56.600 --> 00:41:57.785 Even thyroid cancer.

NOTE Confidence: 0.894604984615385

00:41:57.785 --> 00:41:59.760 When we're seeing increasing incidence,

NOTE Confidence: 0.894604984615385

00:41:59.760 --> 00:42:01.536 you want to say is this related to

NOTE Confidence: 0.894604984615385

00:42:01.536 --> 00:42:03.267 aging of the population which is?

NOTE Confidence: 0.894604984615385

00:42:03.270 --> 00:42:05.274 Really important for Merkel cell or

NOTE Confidence: 0.894604984615385

00:42:05.274 --> 00:42:07.895 as it related to the calendar period

NOTE Confidence: 0.894604984615385

00:42:07.895 --> 00:42:10.325 of diagnosis and the calendar period

NOTE Confidence: 0.894604984615385

00:42:10.325 --> 00:42:12.467 effect really is looking at well,

NOTE Confidence: 0.894604984615385

00:42:12.470 --> 00:42:14.330 are we better at detecting this?

NOTE Confidence: 0.894604984615385

00:42:14.330 --> 00:42:16.178 Are we more aware of the diagnosis

NOTE Confidence: 0.894604984615385

00:42:16.178 --> 00:42:18.364 and so that will affect equally affect

NOTE Confidence: 0.894604984615385

00:42:18.364 --> 00:42:20.735 people across all ages and then the

NOTE Confidence: 0.894604984615385

00:42:20.735 --> 00:42:22.595 last thing is really really important

NOTE Confidence: 0.894604984615385

00:42:22.595 --> 00:42:24.718 is the birth cohort and that really

NOTE Confidence: 0.894604984615385

00:42:24.718 --> 00:42:27.290 says are there real changes in risk factors?

NOTE Confidence: 0.894604984615385

00:42:27.290 --> 00:42:29.546 Is there something actually changing in

NOTE Confidence: 0.894604984615385

00:42:29.546 --> 00:42:31.433 the environment that's explaining the

NOTE Confidence: 0.894604984615385

00:42:31.433 --> 00:42:33.377 increase in incidence that we're seeing?

NOTE Confidence: 0.894604984615385

00:42:33.380 --> 00:42:34.349 In Merkel cell,

NOTE Confidence: 0.894604984615385

00:42:34.349 --> 00:42:36.610 we thought that this was a really

NOTE Confidence: 0.894604984615385

00:42:36.680 --> 00:42:38.660 important analysis to be done.

NOTE Confidence: 0.894604984615385

00:42:38.660 --> 00:42:41.068 Even though this is a rare disease,

NOTE Confidence: 0.894604984615385

00:42:41.070 --> 00:42:43.464 so we were able to do is we looked

NOTE Confidence: 0.894604984615385

00:42:43.464 --> 00:42:45.622 and use SEER data and we're able

NOTE Confidence: 0.894604984615385

00:42:45.622 --> 00:42:48.123 to get it over 3700 patients again.

NOTE Confidence: 0.894604984615385

00:42:48.123 --> 00:42:50.709 We saw what one would expect.

NOTE Confidence: 0.894604984615385

00:42:50.710 --> 00:42:51.035 Again,

NOTE Confidence: 0.894604984615385

00:42:51.035 --> 00:42:53.310 this is usually a male dominated disease,

NOTE Confidence: 0.894604984615385

00:42:53.310 --> 00:42:54.470 almost exquisite,

NOTE Confidence: 0.894604984615385

00:42:54.470 --> 00:42:56.790 almost exclusively found in

NOTE Confidence: 0.894604984615385

00:42:56.790 --> 00:42:58.046 Caucasians this year.

NOTE Confidence: 0.894604984615385

00:42:58.046 --> 00:43:00.074 Registry data becomes a little tricky

NOTE Confidence: 0.894604984615385

00:43:00.074 --> 00:43:02.217 'cause it just turns out by chance

NOTE Confidence: 0.894604984615385

00:43:02.217 --> 00:43:04.013 that the areas that are actually

NOTE Confidence: 0.894604984615385

00:43:04.013 --> 00:43:06.011 involved in this year registry happen

NOTE Confidence: 0.894604984615385

00:43:06.011 --> 00:43:08.970 to be some of the higher volume.

NOTE Confidence: 0.894604984615385

00:43:08.970 --> 00:43:10.930 Tertiary referral centres from

NOTE Confidence: 0.894604984615385

00:43:10.930 --> 00:43:13.659 Merkel cell in the country so you

NOTE Confidence: 0.894604984615385

00:43:13.659 --> 00:43:16.172 know that that data was was a

NOTE Confidence: 0.894604984615385

00:43:16.172 --> 00:43:17.900 little difficult to interpret,

NOTE Confidence: 0.894604984615385

00:43:17.900 --> 00:43:19.340 but again, we saw you know,

NOTE Confidence: 0.894604984615385

00:43:19.340 --> 00:43:21.330 head and neck primarily again

NOTE Confidence: 0.894604984615385

00:43:21.330 --> 00:43:23.889 just what we would expect to

NOTE Confidence: 0.894604984615385

00:43:23.889 --> 00:43:25.857 see localized regional disease.

NOTE Confidence: 0.894604984615385

00:43:25.860 --> 00:43:28.998 But the the APC analysis itself.

NOTE Confidence: 0.894604984615385

00:43:29.000 --> 00:43:30.925 What you can see here in panel

NOTE Confidence: 0.894604984615385

00:43:30.925 --> 00:43:32.998 A is what you would expect.

NOTE Confidence: 0.894604984615385

00:43:33.000 --> 00:43:35.352 So if we look at by the calendar

NOTE Confidence: 0.894604984615385

00:43:35.352 --> 00:43:36.720 period of diagnosis,

NOTE Confidence: 0.894604984615385

00:43:36.720 --> 00:43:39.032 right so that the the time that we've

NOTE Confidence: 0.894604984615385

00:43:39.032 --> 00:43:41.672 diagnosed and we look at age older patients,

NOTE Confidence: 0.894604984615385

00:43:41.672 --> 00:43:44.096 particularly with improving diagnostics,

NOTE Confidence: 0.894604984615385

00:43:44.100 --> 00:43:47.670 were seen in more age adjusted

NOTE Confidence: 0.894604984615385

00:43:47.670 --> 00:43:49.455 incidence rates happening.

NOTE Confidence: 0.894604984615385

00:43:49.460 --> 00:43:52.180 And we see that in men and women.

NOTE Confidence: 0.894604984615385

00:43:52.180 --> 00:43:52.842 More interestingly,

NOTE Confidence: 0.894604984615385

00:43:52.842 --> 00:43:54.884 if you look at panel C&D,

NOTE Confidence: 0.894604984615385

00:43:54.884 --> 00:43:58.340 when we look at the birth cohort effect now,

NOTE Confidence: 0.894604984615385

00:43:58.340 --> 00:44:00.488 compared by age and having looking

NOTE Confidence: 0.894604984615385

00:44:00.488 --> 00:44:02.660 at the age adjusted incidence,

NOTE Confidence: 0.894604984615385

00:44:02.660 --> 00:44:05.168 they're still seeing actually an important

NOTE Confidence: 0.894604984615385

00:44:05.168 --> 00:44:07.750 association due to the birth cohort,

NOTE Confidence: 0.894604984615385

00:44:07.750 --> 00:44:09.180 which really points to that.

NOTE Confidence: 0.894604984615385

00:44:09.180 --> 00:44:09.830 Despite that,

NOTE Confidence: 0.894604984615385

00:44:09.830 --> 00:44:12.430 the that we're better and more aware of

NOTE Confidence: 0.914520824482759

00:44:12.500 --> 00:44:14.414 diagnosing Merkel cell and that we

NOTE Confidence: 0.914520824482759

00:44:14.414 --> 00:44:16.904 know that this is a disease that's

NOTE Confidence: 0.914520824482759

00:44:16.904 --> 00:44:19.196 more prevalent in the aging population,

NOTE Confidence: 0.914520824482759

00:44:19.200 --> 00:44:21.546 there does appear to be something

NOTE Confidence: 0.914520824482759

00:44:21.546 --> 00:44:23.256 that has changed. Overtime,

NOTE Confidence: 0.914520824482759

00:44:23.256 --> 00:44:25.936 that's an environmental risk factor,

NOTE Confidence: 0.914520824482759

00:44:25.940 --> 00:44:27.879 although we don't know what that is.

NOTE Confidence: 0.871875370625

00:44:30.640 --> 00:44:32.548 So and again, this is this is just part

NOTE Confidence: 0.871875370625

00:44:32.548 --> 00:44:34.540 of the the conclusions of that paper.

NOTE Confidence: 0.871875370625

00:44:34.540 --> 00:44:36.508 Once again, just saying that the

NOTE Confidence: 0.871875370625

00:44:36.508 --> 00:44:39.307 the effect of how good we are at

NOTE Confidence: 0.871875370625

00:44:39.307 --> 00:44:41.431 diagnosing this is really leveling out,

NOTE Confidence: 0.871875370625

00:44:41.440 --> 00:44:44.176 yet the incidence is still going on going up.

NOTE Confidence: 0.871875370625

00:44:44.180 --> 00:44:46.595 And that's not just explained by that.

NOTE Confidence: 0.871875370625

00:44:46.600 --> 00:44:48.270 The aging of the population.

NOTE Confidence: 0.942329574166667

00:44:51.960 --> 00:44:53.794 So the second thing that I wanted

NOTE Confidence: 0.942329574166667

00:44:53.794 --> 00:44:55.733 to show again is some original

NOTE Confidence: 0.942329574166667

00:44:55.733 --> 00:44:57.911 work again put together by our

NOTE Confidence: 0.942329574166667

00:44:57.911 --> 00:44:59.338 multidisciplinary team here at Yale.

NOTE Confidence: 0.942329574166667

00:44:59.340 --> 00:45:02.546 Looking at our near 20 year experience

NOTE Confidence: 0.942329574166667

00:45:02.546 --> 00:45:05.129 taking care of this disease.

NOTE Confidence: 0.942329574166667

00:45:05.130 --> 00:45:07.446 And once again, this is work.

NOTE Confidence: 0.942329574166667

00:45:07.450 --> 00:45:08.302 Put together.

NOTE Confidence: 0.942329574166667

00:45:08.302 --> 00:45:10.432 The registry really brought together

NOTE Confidence: 0.942329574166667

00:45:10.432 --> 00:45:13.088 by Andrew Esposito who's one of our

NOTE Confidence: 0.942329574166667

00:45:13.088 --> 00:45:14.723 general surgery residents as well

NOTE Confidence: 0.942329574166667

00:45:14.723 --> 00:45:17.171 as Dan Jacobs who had worked on the

NOTE Confidence: 0.942329574166667

00:45:17.171 --> 00:45:18.790 other APC cohort analysis paper.

NOTE Confidence: 0.942329574166667

00:45:18.790 --> 00:45:20.770 And they really built this up.

NOTE Confidence: 0.942329574166667

00:45:20.770 --> 00:45:23.416 And then with the support of

NOTE Confidence: 0.942329574166667

00:45:23.416 --> 00:45:25.016 our Yale spore program,

NOTE Confidence: 0.942329574166667

00:45:25.016 --> 00:45:26.806 is also now the registry,

NOTE Confidence: 0.942329574166667

00:45:26.810 --> 00:45:28.530 being maintained by Ray Bowman,

NOTE Confidence: 0.942329574166667

00:45:28.530 --> 00:45:30.644 who who is a wonderful and really

NOTE Confidence: 0.942329574166667

00:45:30.644 --> 00:45:33.290 helps us with even our Melanoma program.

NOTE Confidence: 0.942329574166667

00:45:33.290 --> 00:45:35.186 So again, when we look at just our.

NOTE Confidence: 0.942329574166667

00:45:35.190 --> 00:45:36.586 20 year Yale experience.

NOTE Confidence: 0.942329574166667

00:45:36.586 --> 00:45:38.680 What we see are similar clinical

NOTE Confidence: 0.942329574166667

00:45:38.749 --> 00:45:40.559 pathologic features to what one

NOTE Confidence: 0.942329574166667

00:45:40.559 --> 00:45:42.615 would find at other centers when

NOTE Confidence: 0.942329574166667

00:45:42.615 --> 00:45:44.330 we look at the cause of death,

NOTE Confidence: 0.942329574166667

00:45:44.330 --> 00:45:46.410 what we see is only about 36%

NOTE Confidence: 0.942329574166667

00:45:46.410 --> 00:45:49.210 of our patients that we see are

NOTE Confidence: 0.942329574166667

00:45:49.210 --> 00:45:51.459 actually dying from Merkel cell.

NOTE Confidence: 0.942329574166667

00:45:51.460 --> 00:45:53.020 We see them recurring at rates

NOTE Confidence: 0.942329574166667

00:45:53.020 --> 00:45:54.840 that are similar to other centers.

NOTE Confidence: 0.942329574166667

00:45:54.840 --> 00:45:57.495 We do have a little bit more of an

NOTE Confidence: 0.942329574166667

00:45:57.495 --> 00:45:59.379 enriched in transit population,

NOTE Confidence: 0.942329574166667

00:45:59.380 --> 00:46:01.872 which may be due to how things

NOTE Confidence: 0.942329574166667

00:46:01.872 --> 00:46:04.034 are referred to us all. Be it.

NOTE Confidence: 0.942329574166667

00:46:04.034 --> 00:46:05.456 Even when we see patients who

NOTE Confidence: 0.942329574166667

00:46:05.456 --> 00:46:06.720 presented with de Novo disease,

NOTE Confidence: 0.942329574166667

00:46:06.720 --> 00:46:09.816 I do see more intransit disease

NOTE Confidence: 0.942329574166667

00:46:09.820 --> 00:46:11.794 than what I would expect if one

NOTE Confidence: 0.942329574166667

00:46:11.794 --> 00:46:13.720 were to compare that to Melanoma,

NOTE Confidence: 0.942329574166667

00:46:13.720 --> 00:46:15.981 and I think that Merkel cell does

NOTE Confidence: 0.942329574166667

00:46:15.981 --> 00:46:18.120 have very different biologic behavior.

NOTE Confidence: 0.942329574166667

00:46:18.120 --> 00:46:18.451 Again,

NOTE Confidence: 0.942329574166667

00:46:18.451 --> 00:46:20.437 when we look at our final

NOTE Confidence: 0.942329574166667

00:46:20.437 --> 00:46:21.430 pathologic stage again.

NOTE Confidence: 0.942329574166667

00:46:21.430 --> 00:46:23.575 We're seeing similar presentation as

NOTE Confidence: 0.942329574166667

00:46:23.575 --> 00:46:26.734 to what we would be seeing around

NOTE Confidence: 0.942329574166667

00:46:26.734 --> 00:46:29.548 the country at high volume centers.

NOTE Confidence: 0.942329574166667

00:46:29.550 --> 00:46:32.350 So the trends in treatment again with

NOTE Confidence: 0.942329574166667

00:46:32.350 --> 00:46:34.599 newer approvals, there's been very,

NOTE Confidence: 0.942329574166667

00:46:34.599 --> 00:46:37.014 very quick adoption of increasing

NOTE Confidence: 0.942329574166667

00:46:37.014 --> 00:46:39.083 frequency of immunotherapy for

NOTE Confidence: 0.942329574166667

00:46:39.083 --> 00:46:41.648 systemic therapy for patients who

NOTE Confidence: 0.942329574166667

00:46:41.648 --> 00:46:44.480 are eligible with the concomitant

NOTE Confidence: 0.942329574166667

00:46:44.480 --> 00:46:46.307 decrease in chemotherapy.

NOTE Confidence: 0.942329574166667

00:46:46.310 --> 00:46:48.263 The radiation therapy.

NOTE Confidence: 0.942329574166667

00:46:48.263 --> 00:46:50.867 Again, some of this,

NOTE Confidence: 0.942329574166667

00:46:50.870 --> 00:46:51.502 I think,

NOTE Confidence: 0.942329574166667

00:46:51.502 --> 00:46:53.398 is that we're having more patients

NOTE Confidence: 0.942329574166667

00:46:53.398 --> 00:46:56.167 who have better systemic treatment options.

NOTE Confidence: 0.942329574166667

00:46:56.170 --> 00:46:58.270 And some of the earlier patients

NOTE Confidence: 0.942329574166667

00:46:58.270 --> 00:47:01.112 who are seen because I think of

NOTE Confidence: 0.942329574166667

00:47:01.112 --> 00:47:02.936 improved recognition amongst the

NOTE Confidence: 0.942329574166667

00:47:02.936 --> 00:47:05.040 dermatologic community in the state.

NOTE Confidence: 0.942329574166667

00:47:05.040 --> 00:47:07.335 So I think that that explains a little bit

NOTE Confidence: 0.942329574166667

00:47:07.335 --> 00:47:09.868 of this decrease in the radiation receipt.

NOTE Confidence: 0.942329574166667

00:47:09.870 --> 00:47:10.632 But again,

NOTE Confidence: 0.942329574166667

00:47:10.632 --> 00:47:13.680 if we look at our initial nodal management.

NOTE Confidence: 0.942329574166667

00:47:13.680 --> 00:47:16.774 We're we're right on par with where

NOTE Confidence: 0.942329574166667

00:47:16.774 --> 00:47:19.580 we would expect our group to be.

NOTE Confidence: 0.942329574166667

00:47:19.580 --> 00:47:22.296 And our management is following yet again,

NOTE Confidence: 0.942329574166667

00:47:22.300 --> 00:47:25.025 national Trends 1 looks at

NOTE Confidence: 0.942329574166667

00:47:25.025 --> 00:47:26.660 surgical resection rates.

NOTE Confidence: 0.942329574166667

00:47:26.660 --> 00:47:28.960 The rates in which you're

NOTE Confidence: 0.942329574166667

00:47:28.960 --> 00:47:30.340 appropriately staging patients,

NOTE Confidence: 0.942329574166667

00:47:30.340 --> 00:47:33.976 nodal basins and those patients who

NOTE Confidence: 0.942329574166667

00:47:33.976 --> 00:47:36.400 are receiving non-surgical management.

NOTE Confidence: 0.942329574166667

00:47:36.400 --> 00:47:38.220 Again, what we're seeing here.

NOTE Confidence: 0.942329574166667

00:47:38.220 --> 00:47:39.900 And this is the data that we

NOTE Confidence: 0.942329574166667

00:47:39.900 --> 00:47:41.279 had pulled from SEER is is.

NOTE Confidence: 0.942329574166667

00:47:41.280 --> 00:47:43.310 We're very much on target with where

NOTE Confidence: 0.942329574166667

00:47:43.310 --> 00:47:45.240 we would expect our program to be,

NOTE Confidence: 0.942329574166667

00:47:45.240 --> 00:47:48.280 and in aligned with what's going on or

NOTE Confidence: 0.942329574166667

00:47:48.280 --> 00:47:51.446 across the nation in high volume centers.

NOTE Confidence: 0.942329574166667

00:47:51.450 --> 00:47:54.267 But one thing that that started to bother me,

NOTE Confidence: 0.942329574166667

00:47:54.270 --> 00:47:56.550 the more that I learned about Merkel cell,

NOTE Confidence: 0.942329574166667

00:47:56.550 --> 00:47:58.308 we thought it was a great

NOTE Confidence: 0.942329574166667

00:47:58.308 --> 00:47:59.480 opportunity when we were

NOTE Confidence: 0.886165911666667

00:47:59.541 --> 00:48:01.093 looking at our institutional

NOTE Confidence: 0.886165911666667

00:48:01.093 --> 00:48:03.053 series was there's many, many,

NOTE Confidence: 0.886165911666667

00:48:03.053 --> 00:48:05.645 many papers that were being published

NOTE Confidence: 0.886165911666667

00:48:05.645 --> 00:48:08.520 as retrospective series and they

NOTE Confidence: 0.886165911666667

00:48:08.520 --> 00:48:11.419 were really solely using overall

NOTE Confidence: 0.886165911666667

00:48:11.419 --> 00:48:13.989 survival as their outcome measure

NOTE Confidence: 0.886165911666667

00:48:13.989 --> 00:48:17.170 for trying to make conclusions.

NOTE Confidence: 0.886165911666667

00:48:17.170 --> 00:48:18.090 And we said, you know,

NOTE Confidence: 0.886165911666667

00:48:18.090 --> 00:48:19.470 this doesn't really sound right.

NOTE Confidence: 0.886165911666667

00:48:19.470 --> 00:48:20.806 We think there's competing

NOTE Confidence: 0.886165911666667

00:48:20.806 --> 00:48:21.808 causes of mortality.

NOTE Confidence: 0.886165911666667

00:48:21.810 --> 00:48:23.644 We had done our APC cohort analysis.

NOTE Confidence: 0.886165911666667

00:48:23.650 --> 00:48:24.922 We we know that age was

NOTE Confidence: 0.886165911666667

00:48:24.922 --> 00:48:26.090 driving a lot of this,

NOTE Confidence: 0.886165911666667

00:48:26.090 --> 00:48:28.034 so we said which you know no one

NOTE Confidence: 0.886165911666667

00:48:28.034 --> 00:48:29.807 had looked just for this specific

NOTE Confidence: 0.886165911666667

00:48:29.807 --> 00:48:31.342 disease before as we said.

NOTE Confidence: 0.886165911666667

00:48:31.350 --> 00:48:33.090 Does this make any sense?

NOTE Confidence: 0.886165911666667

00:48:33.090 --> 00:48:35.955 Should people be writing retrospective

NOTE Confidence: 0.886165911666667

00:48:35.955 --> 00:48:38.635 papers using things like the NCDB

NOTE Confidence: 0.886165911666667

00:48:38.635 --> 00:48:40.740 which doesn't have disease specific

NOTE Confidence: 0.886165911666667

00:48:40.809 --> 00:48:43.465 survival in it and writing you know how

NOTE Confidence: 0.886165911666667

00:48:43.465 --> 00:48:45.969 we should be managing a rare cancer?

NOTE Confidence: 0.886165911666667

00:48:45.970 --> 00:48:47.356 And the answer you know as you

NOTE Confidence: 0.886165911666667

00:48:47.356 --> 00:48:48.640 can see here nicely illustrated

NOTE Confidence: 0.886165911666667

00:48:48.640 --> 00:48:49.928 is we really shouldn't.

NOTE Confidence: 0.886165911666667

00:48:49.930 --> 00:48:51.995 So if one looks at by age

NOTE Confidence: 0.886165911666667

00:48:51.995 --> 00:48:53.760 if we break this down.

NOTE Confidence: 0.886165911666667

00:48:53.760 --> 00:48:55.288 Patients who are 64,

NOTE Confidence: 0.886165911666667

00:48:55.288 --> 00:48:57.855 which is young for Merkel cell up

NOTE Confidence: 0.886165911666667

00:48:57.855 --> 00:48:59.750 until about two years or so, right?

NOTE Confidence: 0.886165911666667

00:48:59.750 --> 00:49:01.670 Those patients and even up to three years.

NOTE Confidence: 0.886165911666667

00:49:01.670 --> 00:49:02.762 Those patients are actually

NOTE Confidence: 0.886165911666667

00:49:02.762 --> 00:49:04.127 dying from their Merkel cell.

NOTE Confidence: 0.886165911666667

00:49:04.130 --> 00:49:07.100 When we get to the more extremes of care,

NOTE Confidence: 0.886165911666667

00:49:07.100 --> 00:49:08.560 right?

NOTE Confidence: 0.886165911666667

00:49:08.560 --> 00:49:11.976 Your patients beginning at age 65 to 74,

NOTE Confidence: 0.886165911666667

00:49:11.976 --> 00:49:13.836 but particularly those about 75.

NOTE Confidence: 0.886165911666667

00:49:13.840 --> 00:49:15.646 Many of those patients, and again,

NOTE Confidence: 0.886165911666667

00:49:15.650 --> 00:49:17.494 we're talking about patients

NOTE Confidence: 0.886165911666667

00:49:17.494 --> 00:49:18.877 who are immunosuppressed.

NOTE Confidence: 0.886165911666667

00:49:18.880 --> 00:49:21.379 They're actually not dying from Merkel cell,

NOTE Confidence: 0.886165911666667

00:49:21.380 --> 00:49:24.540 so it just makes us pause and say,

NOTE Confidence: 0.886165911666667

00:49:24.540 --> 00:49:25.780 you know, we just need to be very,

NOTE Confidence: 0.886165911666667

00:49:25.780 --> 00:49:26.608 very careful,

NOTE Confidence: 0.886165911666667

00:49:26.608 --> 00:49:28.678 particularly on these retrospective data.

NOTE Confidence: 0.886165911666667

00:49:28.680 --> 00:49:30.220 How we're looking at it.

NOTE Confidence: 0.886165911666667

00:49:30.220 --> 00:49:30.932 So again,

NOTE Confidence: 0.886165911666667

00:49:30.932 --> 00:49:33.424 because we had our own cohort where

NOTE Confidence: 0.886165911666667

00:49:33.424 --> 00:49:36.481 we could look at recurrence disease,

NOTE Confidence: 0.886165911666667

00:49:36.481 --> 00:49:40.686 specific survival and overall survival.

NOTE Confidence: 0.886165911666667

00:49:40.690 --> 00:49:41.162 We said,

NOTE Confidence: 0.886165911666667

00:49:41.162 --> 00:49:41.398 well,

NOTE Confidence: 0.886165911666667

00:49:41.398 --> 00:49:43.629 let's take a look at that in our own

NOTE Confidence: 0.886165911666667

00:49:43.629 --> 00:49:45.693 cohort and what things that we saw that

NOTE Confidence: 0.886165911666667

00:49:45.757 --> 00:49:47.847 were associated with overall survival.

NOTE Confidence: 0.886165911666667

00:49:47.850 --> 00:49:48.410 Again,

NOTE Confidence: 0.886165911666667

00:49:48.410 --> 00:49:51.210 what you would expect age

NOTE Confidence: 0.886165911666667

00:49:51.210 --> 00:49:54.010 female sex was protective.

NOTE Confidence: 0.886165911666667

00:49:54.010 --> 00:49:56.230 If you are immunocompromised again,

NOTE Confidence: 0.886165911666667

00:49:56.230 --> 00:49:58.967 you know it makes sense that your

NOTE Confidence: 0.886165911666667

00:49:58.967 --> 00:50:01.498 mortality would be affected by that.

NOTE Confidence: 0.886165911666667

00:50:01.500 --> 00:50:02.844 It more advanced disease.

NOTE Confidence: 0.886165911666667

00:50:02.844 --> 00:50:04.860 If you've had in transit disease,

NOTE Confidence: 0.886165911666667

00:50:04.860 --> 00:50:06.615 but usually if it's really

NOTE Confidence: 0.886165911666667

00:50:06.615 --> 00:50:08.019 related to the disease.

NOTE Confidence: 0.886165911666667

00:50:08.020 --> 00:50:10.260 One of the things that your overall

NOTE Confidence: 0.886165911666667

00:50:10.260 --> 00:50:12.864 and then your your disease disease

NOTE Confidence: 0.886165911666667

00:50:12.864 --> 00:50:15.056 specific survival really should.

NOTE Confidence: 0.886165911666667

00:50:15.060 --> 00:50:15.904 Sorry guys,

NOTE Confidence: 0.886165911666667

00:50:15.904 --> 00:50:17.592 should really actually match

NOTE Confidence: 0.886165911666667

00:50:17.592 --> 00:50:19.960 up and hear the disease.

NOTE Confidence: 0.886165911666667

00:50:19.960 --> 00:50:21.768 Specific survival and those

NOTE Confidence: 0.886165911666667

00:50:21.768 --> 00:50:23.576 factors for overall survival

NOTE Confidence: 0.886165911666667

00:50:23.576 --> 00:50:25.670 are actually quite discordant.

NOTE Confidence: 0.886165911666667

00:50:25.670 --> 00:50:27.728 The things when we look at

NOTE Confidence: 0.886165911666667

00:50:27.728 --> 00:50:28.757 disease specific survival,

NOTE Confidence: 0.886165911666667

00:50:28.760 --> 00:50:31.024 the thing that stood out the most was

NOTE Confidence: 0.886165911666667

00:50:31.024 --> 00:50:32.887 actually patients who were active smokers.

NOTE Confidence: 0.886165911666667

00:50:32.890 --> 00:50:35.515 With the hazard ratio up to 14,

NOTE Confidence: 0.886165911666667

00:50:35.520 --> 00:50:36.884 which actually hadn't been

NOTE Confidence: 0.886165911666667

00:50:36.884 --> 00:50:37.566 previously described,

NOTE Confidence: 0.886165911666667

00:50:37.570 --> 00:50:39.782 but subsequently there's been one or two

NOTE Confidence: 0.886165911666667

00:50:39.782 --> 00:50:42.158 papers which have also echoed this finding.

NOTE Confidence: 0.886165911666667

00:50:42.160 --> 00:50:43.216 But really,

NOTE Confidence: 0.886165911666667

00:50:43.216 --> 00:50:45.328 some discrepancy and again,

NOTE Confidence: 0.886165911666667

00:50:45.330 --> 00:50:48.780 our our institutional cohort is limited

NOTE Confidence: 0.886165911666667

00:50:48.780 --> 00:50:50.530 because we don't have thousands of patients,

NOTE Confidence: 0.886165911666667

00:50:50.530 --> 00:50:52.522 we only have hundreds.

NOTE Confidence: 0.886165911666667

00:50:52.522 --> 00:50:53.518 But again,

NOTE Confidence: 0.886165911666667

00:50:53.520 --> 00:50:56.817 it really made us almost add an

NOTE Confidence: 0.886165911666667

00:50:56.817 --> 00:50:59.609 editorial to the paper itself,

NOTE Confidence: 0.886165911666667

00:50:59.610 --> 00:51:02.166 which then was published in the

NOTE Confidence: 0.886165911666667

00:51:02.166 --> 00:51:03.870 Annals of Surgical Oncology.

NOTE Confidence: 0.886165911666667

00:51:03.870 --> 00:51:05.580 So the overall conclusions are

NOTE Confidence: 0.886165911666667

00:51:05.580 --> 00:51:07.290 the surgical and the medical

NOTE Confidence: 0.886165911666667

00:51:07.351 --> 00:51:09.039 management continue to evolve

NOTE Confidence: 0.886165911666667

00:51:09.039 --> 00:51:10.305 with the utilization,

NOTE Confidence: 0.809158702857143

00:51:10.310 --> 00:51:12.034 particularly of immune therapy.

NOTE Confidence: 0.809158702857143

00:51:12.034 --> 00:51:14.634 For our paper. What we found was

NOTE Confidence: 0.809158702857143

00:51:14.634 --> 00:51:16.264 that there was little consistency

NOTE Confidence: 0.809158702857143

00:51:16.264 --> 00:51:17.852 between factors associated with

NOTE Confidence: 0.809158702857143

00:51:17.852 --> 00:51:19.847 overall and disease specific survival

NOTE Confidence: 0.809158702857143

00:51:19.847 --> 00:51:22.029 for Merkel cell carcinoma patients.

NOTE Confidence: 0.809158702857143

00:51:22.030 --> 00:51:23.250 And, as I mentioned,

NOTE Confidence: 0.809158702857143

00:51:23.250 --> 00:51:24.470 competing risk for mortality,

NOTE Confidence: 0.809158702857143

00:51:24.470 --> 00:51:26.142 particularly these older or

NOTE Confidence: 0.809158702857143

00:51:26.142 --> 00:51:27.814 immunosuppressed Merkel cell patients

NOTE Confidence: 0.809158702857143

00:51:27.814 --> 00:51:30.549 makes the use of overall survival 8

NOTE Confidence: 0.809158702857143

00:51:30.549 --> 00:51:32.389 poor surrogate for therapeutic outcomes,

NOTE Confidence: 0.809158702857143

00:51:32.390 --> 00:51:34.350 particularly these retrospective analysis.

NOTE Confidence: 0.809158702857143

00:51:34.350 --> 00:51:38.073 And there are hundreds of papers that I

NOTE Confidence: 0.809158702857143

00:51:38.073 --> 00:51:40.227 think that this statement applies to.

NOTE Confidence: 0.809158702857143

00:51:40.230 --> 00:51:41.175 So moving forward,

NOTE Confidence: 0.809158702857143

00:51:41.175 --> 00:51:43.779 I think that as a Community it would

NOTE Confidence: 0.809158702857143

00:51:43.779 --> 00:51:45.747 for these rare diseases we really

NOTE Confidence: 0.809158702857143

00:51:45.747 --> 00:51:48.043 need to get more work together

NOTE Confidence: 0.809158702857143

00:51:48.043 --> 00:51:49.699 for more prospective data.

NOTE Confidence: 0.924644303461538

00:51:52.590 --> 00:51:55.054 And then just finally and then I'll

NOTE Confidence: 0.924644303461538

00:51:55.054 --> 00:51:57.564 pause for questions I just wanted to

NOTE Confidence: 0.924644303461538

00:51:57.564 --> 00:51:59.640 just briefly highlight just one segue

NOTE Confidence: 0.924644303461538

00:51:59.706 --> 00:52:02.268 into some of the translational research.

NOTE Confidence: 0.924644303461538

00:52:02.270 --> 00:52:05.175 Again, that's been aided with

NOTE Confidence: 0.924644303461538

00:52:05.175 --> 00:52:07.499 the skin cancer score.

NOTE Confidence: 0.924644303461538

00:52:07.500 --> 00:52:11.486 So again, we have we talk about a similar

NOTE Confidence: 0.924644303461538

00:52:11.486 --> 00:52:13.576 disease with two separate ideologies,

NOTE Confidence: 0.924644303461538

00:52:13.580 --> 00:52:15.568 almost similar to some of what we

NOTE Confidence: 0.924644303461538

00:52:15.568 --> 00:52:17.658 see now with HPV related tumors.

NOTE Confidence: 0.924644303461538

00:52:17.660 --> 00:52:18.746 You can have squamous cell tumors

NOTE Confidence: 0.924644303461538

00:52:18.746 --> 00:52:19.700 of the head and neck,

NOTE Confidence: 0.924644303461538

00:52:19.700 --> 00:52:21.252 summer virally, associated summer,

NOTE Confidence: 0.924644303461538

00:52:21.252 --> 00:52:23.192 non virally associated in UV.

NOTE Confidence: 0.924644303461538

00:52:23.200 --> 00:52:25.396 So a lot of work that's been done in

NOTE Confidence: 0.924644303461538

00:52:25.396 --> 00:52:27.835 other fields and now seeing that there's

NOTE Confidence: 0.924644303461538

00:52:27.835 --> 00:52:30.276 response to immune therapy really allows you

NOTE Confidence: 0.924644303461538

00:52:30.276 --> 00:52:32.887 to look at things scientifically in a very,

NOTE Confidence: 0.924644303461538

00:52:32.887 --> 00:52:35.456 very interesting way where you can see

NOTE Confidence: 0.924644303461538

00:52:35.456 --> 00:52:37.518 viral associated non viral associated.

NOTE Confidence: 0.924644303461538

00:52:37.520 --> 00:52:40.112 And see what are the resistance

NOTE Confidence: 0.924644303461538

00:52:40.112 --> 00:52:42.829 patterns that can develop in both and.

NOTE Confidence: 0.924644303461538

00:52:42.830 --> 00:52:44.246 We had looked at this again.

NOTE Confidence: 0.924644303461538

00:52:44.250 --> 00:52:46.490 You know, again, immune therapy being used.

NOTE Confidence: 0.924644303461538

00:52:46.490 --> 00:52:48.569 But again when we're looking at resistance,

NOTE Confidence: 0.924644303461538

00:52:48.570 --> 00:52:50.908 there's work that's been headed by Jeffy,

NOTE Confidence: 0.924644303461538

00:52:50.910 --> 00:52:52.090 Shizuka and Jessica Way,

NOTE Confidence: 0.924644303461538

00:52:52.090 --> 00:52:53.270 and now Alex Frey,

NOTE Confidence: 0.924644303461538

00:52:53.270 --> 00:52:55.769 who's a surgical resident in Jeff's lab,

NOTE Confidence: 0.924644303461538

00:52:55.770 --> 00:52:57.618 is really looking at novel ways

NOTE Confidence: 0.924644303461538

00:52:57.618 --> 00:52:59.749 that we can take fresh tissue.

NOTE Confidence: 0.924644303461538

00:52:59.750 --> 00:53:00.181 Again,

NOTE Confidence: 0.924644303461538

00:53:00.181 --> 00:53:02.767 building upon our strengths in our

NOTE Confidence: 0.924644303461538

00:53:02.767 --> 00:53:05.829 Melanoma program with the score and really

NOTE Confidence: 0.924644303461538

00:53:05.829 --> 00:53:07.949 looking at these different conditions

NOTE Confidence: 0.924644303461538

00:53:07.949 --> 00:53:10.567 and then getting really great data,

NOTE Confidence: 0.924644303461538

00:53:10.570 --> 00:53:11.785 even unlimited samples,

NOTE Confidence: 0.924644303461538

00:53:11.785 --> 00:53:12.190 and.

NOTE Confidence: 0.924644303461538

00:53:12.190 --> 00:53:15.236 And this is work that that Jeff has

NOTE Confidence: 0.924644303461538

00:53:15.236 --> 00:53:16.958 has been doing with myself and others,

NOTE Confidence: 0.924644303461538

00:53:16.960 --> 00:53:18.960 and really pushing forward again.

NOTE Confidence: 0.924644303461538

00:53:18.960 --> 00:53:21.040 But all of our data is too preliminary

NOTE Confidence: 0.924644303461538

00:53:21.040 --> 00:53:23.380 to kind of show in a setting like this,

NOTE Confidence: 0.924644303461538

00:53:23.380 --> 00:53:25.837 but I'd like to say that maybe a year

NOTE Confidence: 0.924644303461538

00:53:25.837 --> 00:53:28.578 or two from now that we may have new

NOTE Confidence: 0.924644303461538

00:53:28.578 --> 00:53:30.784 targets or new ways that we could

NOTE Confidence: 0.924644303461538

00:53:30.784 --> 00:53:34.330 look at things ex vivo to make better

NOTE Confidence: 0.924644303461538

00:53:34.330 --> 00:53:37.680 targeted treatment for these patients.

NOTE Confidence: 0.924644303461538

00:53:37.680 --> 00:53:38.340 So again,

NOTE Confidence: 0.924644303461538

00:53:38.340 --> 00:53:40.320 thank you everyone for your time,

NOTE Confidence: 0.924644303461538

00:53:40.320 --> 00:53:41.710 and I'll pause for questions.

NOTE Confidence: 0.857187081666667

00:53:46.960 --> 00:53:48.720 Well, thank you Kelly.

NOTE Confidence: 0.857187081666667

00:53:48.720 --> 00:53:49.600 Very interesting.

NOTE Confidence: 0.857187081666667

00:53:49.600 --> 00:53:50.640 I'll start with a question.

NOTE Confidence: 0.857187081666667

00:53:50.640 --> 00:53:53.008 While people are gathering

NOTE Confidence: 0.857187081666667

00:53:53.008 --> 00:53:54.784 their own questions.

NOTE Confidence: 0.857187081666667

00:53:54.790 --> 00:53:56.470 Is there any prospect for a

NOTE Confidence: 0.857187081666667

00:53:56.470 --> 00:53:58.053 vaccine against Merkel cell virus?

NOTE Confidence: 0.857187081666667

00:53:58.053 --> 00:53:59.458 I know it's a relatively

NOTE Confidence: 0.857187081666667

00:53:59.458 --> 00:54:00.897 rare disease which is going

NOTE Confidence: 0.857187081666667

00:54:00.897 --> 00:54:01.989 to make that difficult,

NOTE Confidence: 0.857187081666667

00:54:01.990 --> 00:54:03.354 but with new technology,

NOTE Confidence: 0.857187081666667

00:54:03.354 --> 00:54:04.718 maybe not so crazy.

NOTE Confidence: 0.905029176

00:54:06.190 --> 00:54:08.030 So it's a great question.

NOTE Confidence: 0.905029176

00:54:08.030 --> 00:54:10.730 So for the polyoma virus itself,

NOTE Confidence: 0.905029176

00:54:10.730 --> 00:54:11.334 they're probably.

NOTE Confidence: 0.905029176

00:54:11.334 --> 00:54:13.750 It doesn't make sense to make a virus,

NOTE Confidence: 0.905029176

00:54:13.750 --> 00:54:15.430 but you know it sounds like

NOTE Confidence: 0.905029176

00:54:15.430 --> 00:54:16.923 you've been listening into Jeff

NOTE Confidence: 0.905029176

00:54:16.923 --> 00:54:18.207 and his research meetings.

NOTE Confidence: 0.905029176

00:54:18.210 --> 00:54:20.303 You know with some of the new

NOTE Confidence: 0.905029176

00:54:20.303 --> 00:54:21.924 technologies that we've seen with

NOTE Confidence: 0.905029176

00:54:21.924 --> 00:54:23.579 COVID vaccination and so forth,

NOTE Confidence: 0.905029176

00:54:23.580 --> 00:54:25.953 there may be a role for development

NOTE Confidence: 0.905029176

00:54:25.953 --> 00:54:28.094 because there are T cell antigens

NOTE Confidence: 0.905029176

00:54:28.094 --> 00:54:30.206 with this similar to something like

NOTE Confidence: 0.905029176

00:54:30.206 --> 00:54:32.906 HPV where there may be ways that you

NOTE Confidence: 0.905029176

00:54:32.906 --> 00:54:35.231 can do combination of a vaccination.

NOTE Confidence: 0.905029176

00:54:35.231 --> 00:54:37.913 Approach almost similar to wait Akiko

NOTE Confidence: 0.905029176

00:54:37.920 --> 00:54:39.978 Iwasawa's doing with the cervical cancer.

NOTE Confidence: 0.905029176

00:54:39.980 --> 00:54:42.520 So I think that that would be a great field.

NOTE Confidence: 0.905029176

00:54:42.520 --> 00:54:45.442 And if there's any experts that want to

NOTE Confidence: 0.905029176

00:54:45.442 --> 00:54:47.958 work with Jeff and I just give me an email.

NOTE Confidence: 0.856779182

00:54:49.230 --> 00:54:50.840 OK, great so there are some questions

NOTE Confidence: 0.856779182

00:54:50.840 --> 00:54:52.062 in the chat. Do you want to?

NOTE Confidence: 0.856779182

00:54:52.062 --> 00:54:53.045 Can you read them or do you

NOTE Confidence: 0.856779182

00:54:53.045 --> 00:54:56.400 want me to read them? Uhm?

NOTE Confidence: 0.923242232

00:54:56.400 --> 00:54:58.720 Insights into the differences in

NOTE Confidence: 0.923242232

00:54:58.720 --> 00:55:01.040 biology in the younger patients.

NOTE Confidence: 0.923242232

00:55:01.040 --> 00:55:04.944 So the patients I I worry about patients

NOTE Confidence: 0.923242232

00:55:04.944 --> 00:55:08.318 particularly who are less than 60 years old,

NOTE Confidence: 0.923242232

00:55:08.320 --> 00:55:09.740 and if those patients who

NOTE Confidence: 0.923242232

00:55:09.740 --> 00:55:11.460 are less than 40 years old,

NOTE Confidence: 0.923242232

00:55:11.460 --> 00:55:12.984 you almost want to double check

NOTE Confidence: 0.923242232

00:55:12.984 --> 00:55:14.890 that you have the right diagnosis.

NOTE Confidence: 0.923242232

00:55:14.890 --> 00:55:17.602 So as you're seeing from part of that

NOTE Confidence: 0.923242232

00:55:17.602 --> 00:55:20.078 analysis that we looked at between

NOTE Confidence: 0.923242232

00:55:20.078 --> 00:55:21.806 mortality and overall survival.

NOTE Confidence: 0.923242232

00:55:21.810 --> 00:55:22.492 Again, anecdotally,

NOTE Confidence: 0.923242232

00:55:22.492 --> 00:55:24.538 I think that the disease is

NOTE Confidence: 0.923242232

00:55:24.538 --> 00:55:26.279 more is more aggressive.

NOTE Confidence: 0.923242232

00:55:26.280 --> 00:55:28.680 I think we may see more metastatic disease.

NOTE Confidence: 0.923242232

00:55:28.680 --> 00:55:30.619 You don't have to re look at.

NOTE Confidence: 0.923242232

00:55:30.620 --> 00:55:33.324 Look at that specifically,

NOTE Confidence: 0.923242232

00:55:33.324 --> 00:55:35.192 but there's there's certain thing

NOTE Confidence: 0.923242232

00:55:35.192 --> 00:55:37.220 that's driving that in a different way.

NOTE Confidence: 0.923242232

00:55:37.220 --> 00:55:38.858 To have that earlier and again,

NOTE Confidence: 0.923242232

00:55:38.860 --> 00:55:40.215 these younger patients that we're

NOTE Confidence: 0.923242232

00:55:40.215 --> 00:55:41.299 seeing them in interesting,

NOTE Confidence: 0.923242232

00:55:41.300 --> 00:55:42.698 they're not immunocompromised.

NOTE Confidence: 0.652937554

00:55:45.040 --> 00:55:46.400 Just Clark has a question,

NOTE Confidence: 0.652937554

00:55:46.400 --> 00:55:48.540 is there a specific tissue

NOTE Confidence: 0.652937554

00:55:48.540 --> 00:55:50.680 or reservoir for the virus?

NOTE Confidence: 0.652937554

00:55:50.680 --> 00:55:52.390 Among many people who have it.

NOTE Confidence: 0.935801606

00:55:53.050 --> 00:55:57.790 It's just on the skin. It's good.

NOTE Confidence: 0.935801606

00:55:57.790 --> 00:55:59.666 There's some plot, and there may be

NOTE Confidence: 0.935801606

00:55:59.666 --> 00:56:01.308 some reservoir also in the GI tract,

NOTE Confidence: 0.935801606

00:56:01.310 --> 00:56:04.068 but usually it's a conventional skin flora.

NOTE Confidence: 0.817917780526316

00:56:06.600 --> 00:56:07.896 Brenda emails asked overtime.

NOTE Confidence: 0.817917780526316

00:56:07.896 --> 00:56:10.224 Is there a difference in the proportion

NOTE Confidence: 0.817917780526316

00:56:10.224 --> 00:56:12.808 of cases at a UV versus virus associated?

NOTE Confidence: 0.809017882

00:56:14.390 --> 00:56:15.880 So from our own cohort,

NOTE Confidence: 0.809017882

00:56:15.880 --> 00:56:17.995 unfortunately we're not able to

NOTE Confidence: 0.809017882

00:56:17.995 --> 00:56:20.110 answer that question we're creating,

NOTE Confidence: 0.809017882

00:56:20.110 --> 00:56:21.154 hopefully a TMI.

NOTE Confidence: 0.809017882

00:56:21.154 --> 00:56:23.242 We're trying to get that together

NOTE Confidence: 0.809017882

00:56:23.250 --> 00:56:24.950 because there wasn't a difference

NOTE Confidence: 0.809017882

00:56:24.950 --> 00:56:26.650 in how patients were treated.

NOTE Confidence: 0.809017882

00:56:26.650 --> 00:56:28.434 They historically at Yale.

NOTE Confidence: 0.809017882

00:56:28.434 --> 00:56:30.664 The immunohistochemistry stain for the

NOTE Confidence: 0.809017882

00:56:30.664 --> 00:56:33.248 polyoma virus in Merkel cells wasn't done,

NOTE Confidence: 0.809017882

00:56:33.250 --> 00:56:34.798 but we're very close to having

NOTE Confidence: 0.809017882

00:56:34.798 --> 00:56:36.606 all of that put together to

NOTE Confidence: 0.809017882

00:56:36.606 --> 00:56:38.406 start looking at that clinically.

NOTE Confidence: 0.809017882

00:56:38.410 --> 00:56:39.770 And like I said retrospectively,

NOTE Confidence: 0.809017882

00:56:39.770 --> 00:56:41.246 we're hoping to be able to look at that.

NOTE Confidence: 0.679238274285714

00:56:42.620 --> 00:56:45.320 And or HIV patients that

NOTE Confidence: 0.679238274285714

00:56:45.320 --> 00:56:47.108 increase risk. Of this tumor,

NOTE Confidence: 0.696586504

00:56:47.140 --> 00:56:48.980 not if they're well controlled,

NOTE Confidence: 0.696586504

00:56:48.980 --> 00:56:52.890 so more are CML patients.

NOTE Confidence: 0.696586504

00:56:52.890 --> 00:56:56.145 I worry about those, and then probably

NOTE Confidence: 0.696586504

00:56:56.145 --> 00:56:58.356 just general Immunosenescence is

NOTE Confidence: 0.696586504

00:56:58.356 --> 00:57:01.620 probably important post transplant.

NOTE Confidence: 0.696586504

00:57:01.620 --> 00:57:03.804 We don't see their their higher

NOTE Confidence: 0.696586504

00:57:03.804 --> 00:57:05.890 risk for Merkel, but you know.

NOTE Confidence: 0.696586504

00:57:05.890 --> 00:57:07.540 Again, it's a rare tumor,

NOTE Confidence: 0.696586504

00:57:07.540 --> 00:57:11.892 so we don't see this as much as we

NOTE Confidence: 0.696586504

00:57:11.892 --> 00:57:13.768 see horrible, poorly differentiated

NOTE Confidence: 0.696586504

00:57:13.768 --> 00:57:15.220 cutaneous squamous cells.

NOTE Confidence: 0.696586504

00:57:15.220 --> 00:57:16.408 You know, that's usually what we.

NOTE Confidence: 0.696586504

00:57:16.410 --> 00:57:17.878 We're worrying and battling

NOTE Confidence: 0.696586504

00:57:17.878 --> 00:57:19.346 more with these patients,

NOTE Confidence: 0.696586504

00:57:19.350 --> 00:57:20.750 but we do see it more often

NOTE Confidence: 0.696586504

00:57:20.750 --> 00:57:21.800 in the transplant patients.

NOTE Confidence: 0.77060529

00:57:22.070 --> 00:57:24.500 Perfect. Are there other questions?

NOTE Confidence: 0.8653770025

00:57:28.280 --> 00:57:29.208 If not, I'll thank

NOTE Confidence: 0.726215027272727

00:57:29.220 --> 00:57:30.708 you very much. You're very interesting

NOTE Confidence: 0.726215027272727

00:57:30.708 --> 00:57:32.120 talk actually to both speakers,

NOTE Confidence: 0.726215027272727

00:57:32.120 --> 00:57:33.638 and we've learned a lot about

NOTE Confidence: 0.726215027272727

00:57:33.638 --> 00:57:34.790 neuroendocrine tumors today. Thank you.