

WEBVTT

NOTE duration: "00:10:35.946"

NOTE Confidence: 0.98879516

00:00:01.199 --> 00:00:03.199 Alright. So our next speaker

NOTE Confidence: 0.98879516

00:00:03.199 --> 00:00:03.939 on the,

NOTE Confidence: 0.9420019

00:00:04.559 --> 00:00:06.480 imaging translation is doctor Pam

NOTE Confidence: 0.9420019

00:00:06.480 --> 00:00:08.500 Koons, who did her undergrad

NOTE Confidence: 0.9420019

00:00:08.639 --> 00:00:09.619 and her medical,

NOTE Confidence: 0.9865176

00:00:10.080 --> 00:00:11.219 studies at Dartmouth.

NOTE Confidence: 0.9453595

00:00:11.840 --> 00:00:13.360 Then she completed medical residency

NOTE Confidence: 0.9453595

00:00:13.360 --> 00:00:15.120 and chief residency oncology fellowship

NOTE Confidence: 0.9453595

00:00:15.120 --> 00:00:16.664 at Stanford. She joined Yale

NOTE Confidence: 0.9453595

00:00:16.664 --> 00:00:17.945 in twenty twenty. She's the

NOTE Confidence: 0.9453595

00:00:17.945 --> 00:00:19.864 division chief of, GI medical

NOTE Confidence: 0.9453595

00:00:19.864 --> 00:00:21.625 oncology there here, and the

NOTE Confidence: 0.9453595

00:00:21.625 --> 00:00:22.744 director of the center for

NOTE Confidence: 0.9453595

00:00:22.744 --> 00:00:24.105 GI cancers at Yale Center,

NOTE Confidence: 0.9453595

00:00:24.265 --> 00:00:25.724 in the Smilow Cancer Hospital.

NOTE Confidence: 0.97373813

00:00:26.105 --> 00:00:27.224 She has focused her career

NOTE Confidence: 0.97373813

00:00:27.224 --> 00:00:28.505 on patient care and clinical

NOTE Confidence: 0.97373813

00:00:28.505 --> 00:00:29.384 research in the field of

NOTE Confidence: 0.97373813

00:00:29.384 --> 00:00:31.580 neuroendocrine tumors, and she is

NOTE Confidence: 0.97373813

00:00:31.640 --> 00:00:32.600 one of the two gurus

NOTE Confidence: 0.97373813

00:00:32.600 --> 00:00:33.720 of the NETHER three trial,

NOTE Confidence: 0.97373813

00:00:33.720 --> 00:00:34.520 which I'm sure we'll hear

NOTE Confidence: 0.97373813

00:00:34.520 --> 00:00:35.020 about.

NOTE Confidence: 0.9913883

00:00:40.440 --> 00:00:41.479 Great. Thank you so much.

NOTE Confidence: 0.9913883

00:00:41.479 --> 00:00:42.520 It's a pleasure to be

NOTE Confidence: 0.9913883

00:00:42.520 --> 00:00:43.020 here.

NOTE Confidence: 0.95087844

00:00:43.745 --> 00:00:45.425 So I will be talking

NOTE Confidence: 0.95087844

00:00:45.425 --> 00:00:46.784 about theranostics. So I'm going

NOTE Confidence: 0.95087844

00:00:46.784 --> 00:00:47.745 to first start with some

NOTE Confidence: 0.95087844

00:00:47.745 --> 00:00:49.585 definitions and then give three

NOTE Confidence: 0.95087844

00:00:49.585 --> 00:00:50.085 examples.

NOTE Confidence: 0.99579275

00:00:51.104 --> 00:00:53.205 So theranostics is an approach

NOTE Confidence: 0.971364

00:00:53.665 --> 00:00:55.525 using a combination of molecularly

NOTE Confidence: 0.971364

00:00:55.825 --> 00:00:58.200 targeted therapy and diagnostic imaging

NOTE Confidence: 0.971364

00:00:58.200 --> 00:00:59.500 using the same target.

NOTE Confidence: 0.9868807

00:00:59.800 --> 00:01:00.920 So imagine you have a

NOTE Confidence: 0.9868807

00:01:00.920 --> 00:01:02.360 population of patients for whom

NOTE Confidence: 0.9868807

00:01:02.360 --> 00:01:03.480 you would like to select

NOTE Confidence: 0.9868807

00:01:03.480 --> 00:01:04.140 a target.

NOTE Confidence: 0.9952322

00:01:04.600 --> 00:01:06.040 You have an imaging tool

NOTE Confidence: 0.9952322

00:01:06.040 --> 00:01:07.819 that can identify that target,

NOTE Confidence: 0.99917877

00:01:08.200 --> 00:01:09.000 and then you have a

NOTE Confidence: 0.99917877

00:01:09.000 --> 00:01:10.360 therapy that can go to

NOTE Confidence: 0.99917877

00:01:10.360 --> 00:01:11.740 that exact same target.

NOTE Confidence: 0.9908802

00:01:13.084 --> 00:01:14.045 I like to use the

NOTE Confidence: 0.9908802

00:01:14.045 --> 00:01:15.405 lock and key principle as
NOTE Confidence: 0.9908802

00:01:15.405 --> 00:01:17.345 we think about describing theranostics.
NOTE Confidence: 0.9591093

00:01:17.805 --> 00:01:18.925 So the lock is the
NOTE Confidence: 0.9591093

00:01:18.925 --> 00:01:20.205 target in the case of
NOTE Confidence: 0.9591093

00:01:20.205 --> 00:01:22.225 neuroendocrine tumors. That's the somatostatin
NOTE Confidence: 0.99196297

00:01:22.525 --> 00:01:24.925 receptor or prostate cancer. That's
NOTE Confidence: 0.99196297

00:01:24.925 --> 00:01:26.865 prostate specific membrane antigen.
NOTE Confidence: 0.98870325

00:01:27.240 --> 00:01:28.439 There's then a,
NOTE Confidence: 0.97223794

00:01:28.840 --> 00:01:30.920 compound of a ligand, linker,
NOTE Confidence: 0.97223794

00:01:30.920 --> 00:01:31.659 and radionuclide.
NOTE Confidence: 0.97016054

00:01:32.280 --> 00:01:34.040 The chelate chelator grabs on
NOTE Confidence: 0.97016054

00:01:34.040 --> 00:01:35.319 to the radionuclide, and that
NOTE Confidence: 0.97016054

00:01:35.319 --> 00:01:36.600 can either be an imaging
NOTE Confidence: 0.97016054

00:01:36.600 --> 00:01:37.100 radionuclide
NOTE Confidence: 0.8861208

00:01:37.560 --> 00:01:38.600 or in the case of
NOTE Confidence: 0.8861208

00:01:38.600 --> 00:01:39.100 therapy,

NOTE Confidence: 0.66999424
00:01:39.834 --> 00:01:40.494 a therapy
NOTE Confidence: 0.9359632
00:01:41.274 --> 00:01:43.115 radionuclide such as lutetium one
NOTE Confidence: 0.9359632
00:01:43.115 --> 00:01:44.715 seventy seven, which emits beta
NOTE Confidence: 0.9359632
00:01:44.715 --> 00:01:45.215 particles,
NOTE Confidence: 0.96898186
00:01:45.515 --> 00:01:46.954 or actinium two twenty five
NOTE Confidence: 0.96898186
00:01:46.954 --> 00:01:47.994 and lead two twelve, which
NOTE Confidence: 0.96898186
00:01:47.994 --> 00:01:49.134 emit alpha particles.
NOTE Confidence: 0.96486765
00:01:50.875 --> 00:01:52.575 So in nineteen forty one,
NOTE Confidence: 0.96486765
00:01:52.795 --> 00:01:54.270 Saul Hertz was the first
NOTE Confidence: 0.96486765
00:01:54.270 --> 00:01:55.710 to use I one thirty
NOTE Confidence: 0.96486765
00:01:55.710 --> 00:01:56.609 one therapeutically
NOTE Confidence: 0.9980084
00:01:57.070 --> 00:01:58.689 for treatment of hyperthyroidism
NOTE Confidence: 0.95493954
00:01:59.229 --> 00:02:01.390 and later thyroid cancer. And
NOTE Confidence: 0.95493954
00:02:01.390 --> 00:02:02.750 I third one thirty one
NOTE Confidence: 0.95493954
00:02:02.750 --> 00:02:04.429 in nineteen fifty one became
NOTE Confidence: 0.95493954

00:02:04.429 --> 00:02:05.729 the first radiopharmaceutical
NOTE Confidence: 0.9995965

00:02:06.270 --> 00:02:07.630 that was FDA approved for
NOTE Confidence: 0.9995965

00:02:07.630 --> 00:02:08.610 thyroid disease.
NOTE Confidence: 0.99418473

00:02:10.485 --> 00:02:12.245 So theranostics is really a
NOTE Confidence: 0.99418473

00:02:12.245 --> 00:02:13.444 package deal. We think of
NOTE Confidence: 0.99418473

00:02:13.444 --> 00:02:14.345 them as theranostic
NOTE Confidence: 0.87096083

00:02:14.724 --> 00:02:15.224 pairs.
NOTE Confidence: 0.9917232

00:02:15.685 --> 00:02:17.685 So there's a diagnostic imaging
NOTE Confidence: 0.9917232

00:02:17.685 --> 00:02:19.465 component and a therapy component.
NOTE Confidence: 0.9955918

00:02:20.165 --> 00:02:21.204 So in the field of
NOTE Confidence: 0.9955918

00:02:21.204 --> 00:02:22.885 neuroendocrine tumors, we have two
NOTE Confidence: 0.9955918

00:02:22.885 --> 00:02:24.345 options for imaging,
NOTE Confidence: 0.98997617

00:02:24.730 --> 00:02:26.250 gallium sixty eight or copper
NOTE Confidence: 0.98997617

00:02:26.250 --> 00:02:28.090 sixty four DOTATATE PET, and
NOTE Confidence: 0.98997617

00:02:28.090 --> 00:02:29.870 the therapy pair is lutetium
NOTE Confidence: 0.98997617

00:02:29.930 --> 00:02:31.390 one seventy seven DOTATATE.

NOTE Confidence: 0.9876155
00:02:32.090 --> 00:02:33.770 And in prostate cancer, that
NOTE Confidence: 0.9876155
00:02:33.770 --> 00:02:35.530 pairing is an imaging tool
NOTE Confidence: 0.9876155
00:02:35.530 --> 00:02:37.290 of gallium sixty eight PSMA
NOTE Confidence: 0.9876155
00:02:37.290 --> 00:02:39.245 eleven PET, and the therapy
NOTE Confidence: 0.9876155
00:02:39.305 --> 00:02:41.485 is Lutetian PSMA six seventeen.
NOTE Confidence: 0.932363
00:02:43.145 --> 00:02:44.665 So I think theranostics is
NOTE Confidence: 0.932363
00:02:44.665 --> 00:02:46.185 more hope than hype, although
NOTE Confidence: 0.932363
00:02:46.185 --> 00:02:47.145 it's been a lot it's
NOTE Confidence: 0.932363
00:02:47.145 --> 00:02:48.264 been hard to convince the
NOTE Confidence: 0.932363
00:02:48.264 --> 00:02:49.405 oncology community.
NOTE Confidence: 0.9788569
00:02:49.705 --> 00:02:50.905 It's here to stay and,
NOTE Confidence: 0.9788569
00:02:50.905 --> 00:02:51.944 in my opinion, is one
NOTE Confidence: 0.9788569
00:02:51.944 --> 00:02:53.225 of the most exciting new
NOTE Confidence: 0.9788569
00:02:53.225 --> 00:02:54.125 cancer therapies.
NOTE Confidence: 0.9647061
00:02:54.480 --> 00:02:56.020 We've really seen an explosion
NOTE Confidence: 0.9647061

00:02:56.080 --> 00:02:57.600 of both clinical trials and
NOTE Confidence: 0.9647061

00:02:57.600 --> 00:02:59.040 publications as you can see
NOTE Confidence: 0.9647061

00:02:59.040 --> 00:03:00.160 really just in the last
NOTE Confidence: 0.9647061

00:03:00.160 --> 00:03:00.660 decade.
NOTE Confidence: 0.99222744

00:03:01.840 --> 00:03:03.120 So the three examples I'd
NOTE Confidence: 0.99222744

00:03:03.120 --> 00:03:04.000 like to give are in
NOTE Confidence: 0.99222744

00:03:04.000 --> 00:03:06.500 neuroendocrine tumors, prostate cancer,
NOTE Confidence: 0.9846735

00:03:06.800 --> 00:03:07.540 and meningioma,
NOTE Confidence: 0.9990267

00:03:07.840 --> 00:03:08.820 and this includes
NOTE Confidence: 0.99859434

00:03:09.375 --> 00:03:11.215 key clinical trials with Yale
NOTE Confidence: 0.99859434

00:03:11.215 --> 00:03:12.495 investigators in all three of
NOTE Confidence: 0.99859434

00:03:12.495 --> 00:03:13.235 these areas.
NOTE Confidence: 0.98753965

00:03:14.735 --> 00:03:16.014 My own area of clinical
NOTE Confidence: 0.98753965

00:03:16.014 --> 00:03:17.694 research and patient care is
NOTE Confidence: 0.98753965

00:03:17.694 --> 00:03:18.834 in the field of neuroendocrine
NOTE Confidence: 0.98753965

00:03:18.894 --> 00:03:19.775 tumors, and I'd like to

NOTE Confidence: 0.98753965

00:03:19.775 --> 00:03:20.995 use this as a model

NOTE Confidence: 0.98753965

00:03:21.055 --> 00:03:22.014 to help us think about

NOTE Confidence: 0.98753965

00:03:22.014 --> 00:03:22.514 theranostics.

NOTE Confidence: 0.9906371

00:03:23.310 --> 00:03:25.250 So NETs are epithelial neoplasms

NOTE Confidence: 0.9415348

00:03:25.630 --> 00:03:27.470 derived from Nurnichen cells throughout

NOTE Confidence: 0.9415348

00:03:27.470 --> 00:03:29.070 the body most commonly found

NOTE Confidence: 0.9415348

00:03:29.070 --> 00:03:30.210 in the GI tract.

NOTE Confidence: 0.9827045

00:03:30.510 --> 00:03:32.110 NET incidence and prevalence are

NOTE Confidence: 0.9827045

00:03:32.110 --> 00:03:33.230 on the rise, making this

NOTE Confidence: 0.9827045

00:03:33.230 --> 00:03:34.670 a more important public health

NOTE Confidence: 0.9827045

00:03:34.670 --> 00:03:35.170 problem.

NOTE Confidence: 0.97850484

00:03:35.665 --> 00:03:37.585 Chromosome alterations are common, yet

NOTE Confidence: 0.97850484

00:03:37.585 --> 00:03:39.505 somatic mutations are rarely actionable.

NOTE Confidence: 0.97850484

00:03:39.505 --> 00:03:40.625 Therefore, we've not been able

NOTE Confidence: 0.97850484

00:03:40.625 --> 00:03:41.825 to take advantage of some

NOTE Confidence: 0.97850484

00:03:41.825 --> 00:03:43.265 of the standard other targeted
NOTE Confidence: 0.97850484

00:03:43.265 --> 00:03:44.485 therapies in the field.
NOTE Confidence: 0.9959055

00:03:45.025 --> 00:03:47.125 The World Health Organization classification
NOTE Confidence: 0.9945424

00:03:47.425 --> 00:03:49.105 system has really evolved over
NOTE Confidence: 0.9945424

00:03:49.105 --> 00:03:50.465 the last thirty years and
NOTE Confidence: 0.9945424

00:03:50.465 --> 00:03:51.205 now includes
NOTE Confidence: 0.99436814

00:03:51.740 --> 00:03:52.800 degree of differentiation
NOTE Confidence: 0.9685845

00:03:53.660 --> 00:03:55.180 and grade that includes k
NOTE Confidence: 0.9685845

00:03:55.180 --> 00:03:57.200 I sixty seven. And lastly,
NOTE Confidence: 0.9685845

00:03:57.340 --> 00:03:57.840 pathognomonic
NOTE Confidence: 0.9558792

00:03:58.220 --> 00:03:59.920 for NETs is somatostatin
NOTE Confidence: 0.6576223

00:04:00.220 --> 00:04:00.720 receptor
NOTE Confidence: 0.987417

00:04:01.099 --> 00:04:02.700 expression, which occurs in over
NOTE Confidence: 0.987417

00:04:02.700 --> 00:04:03.900 eighty to ninety percent of
NOTE Confidence: 0.987417

00:04:03.900 --> 00:04:04.400 patients.
NOTE Confidence: 0.9181905

00:04:05.034 --> 00:04:06.415 There are several therapeutic

NOTE Confidence: 0.94424343
00:04:06.795 --> 00:04:08.495 categories, including SSAs,
NOTE Confidence: 0.9998037
00:04:09.114 --> 00:04:10.894 targeted therapies, cytotoxic
NOTE Confidence: 0.95440334
00:04:11.275 --> 00:04:12.334 chemo, immunotherapy,
NOTE Confidence: 0.9836626
00:04:13.114 --> 00:04:15.114 and lastly, the newest component
NOTE Confidence: 0.9836626
00:04:15.114 --> 00:04:16.495 is radioligand therapy.
NOTE Confidence: 0.97447145
00:04:17.810 --> 00:04:19.330 The two clinical trials that
NOTE Confidence: 0.97447145
00:04:19.330 --> 00:04:20.930 put radioligand therapy on the
NOTE Confidence: 0.97447145
00:04:20.930 --> 00:04:22.450 map for NETs are NETTER
NOTE Confidence: 0.97447145
00:04:22.450 --> 00:04:24.150 one, which looked at lutetium
NOTE Confidence: 0.97447145
00:04:24.210 --> 00:04:25.750 dotatate versus octreotide
NOTE Confidence: 0.9987055
00:04:26.050 --> 00:04:26.790 in progressive
NOTE Confidence: 0.96660256
00:04:27.410 --> 00:04:28.930 midgut NETs with a low
NOTE Confidence: 0.96660256
00:04:28.930 --> 00:04:30.230 k I sixty seven.
NOTE Confidence: 0.9406438
00:04:30.685 --> 00:04:32.445 This trial met its primary
NOTE Confidence: 0.9406438
00:04:32.445 --> 00:04:34.285 endpoint of progression free survival
NOTE Confidence: 0.9406438

00:04:34.285 --> 00:04:35.725 and ultimately led to the
NOTE Confidence: 0.9406438

00:04:35.725 --> 00:04:37.824 first FDA approval of lutetium
NOTE Confidence: 0.9406438

00:04:37.884 --> 00:04:39.264 dotatate and GAP NETs.
NOTE Confidence: 0.919013

00:04:39.964 --> 00:04:41.725 NETTER two was a follow-up
NOTE Confidence: 0.919013

00:04:41.725 --> 00:04:44.040 study, looked at lutetium dotatate
NOTE Confidence: 0.919013

00:04:44.040 --> 00:04:45.880 versus octreotide in the first
NOTE Confidence: 0.919013

00:04:45.880 --> 00:04:48.199 line setting in slightly higher
NOTE Confidence: 0.919013

00:04:48.199 --> 00:04:50.360 Ki sixty seven, also met
NOTE Confidence: 0.919013

00:04:50.360 --> 00:04:52.139 its primary endpoint of progression
NOTE Confidence: 0.919013

00:04:52.199 --> 00:04:54.300 free survival, and actually represents
NOTE Confidence: 0.98562557

00:04:54.600 --> 00:04:56.805 the first randomized trial to
NOTE Confidence: 0.98562557

00:04:56.805 --> 00:04:58.245 look at first line therapy
NOTE Confidence: 0.98562557

00:04:58.245 --> 00:04:59.525 in any solid tumor and
NOTE Confidence: 0.98562557

00:04:59.525 --> 00:05:00.825 is included in the NCCM
NOTE Confidence: 0.98562557

00:05:00.885 --> 00:05:01.385 guidelines.
NOTE Confidence: 0.9510029

00:05:03.205 --> 00:05:04.485 NEDR three is a trial

NOTE Confidence: 0.9510029
00:05:04.485 --> 00:05:05.765 that just launched about a
NOTE Confidence: 0.9510029
00:05:05.765 --> 00:05:06.425 week ago.
NOTE Confidence: 0.96890193
00:05:06.964 --> 00:05:08.904 We are a lead site,
NOTE Confidence: 0.96890193
00:05:09.100 --> 00:05:10.480 and I'm serving as international
NOTE Confidence: 0.96890193
00:05:10.540 --> 00:05:11.900 cochair for this study. So
NOTE Confidence: 0.96890193
00:05:11.900 --> 00:05:13.580 this is a randomized study
NOTE Confidence: 0.96890193
00:05:13.580 --> 00:05:14.800 of lutetium dotatate
NOTE Confidence: 0.94962466
00:05:15.260 --> 00:05:16.160 versus octreotide,
NOTE Confidence: 0.9373945
00:05:16.779 --> 00:05:17.980 also in the first line
NOTE Confidence: 0.9373945
00:05:17.980 --> 00:05:19.339 setting for lower k I
NOTE Confidence: 0.9373945
00:05:19.339 --> 00:05:20.940 sixty seven, but high tumor
NOTE Confidence: 0.9373945
00:05:20.940 --> 00:05:21.760 burden patients,
NOTE Confidence: 0.9938674
00:05:22.145 --> 00:05:23.585 those who have larger tumors
NOTE Confidence: 0.9938674
00:05:23.585 --> 00:05:25.105 or symptoms from tumor bulk
NOTE Confidence: 0.9938674
00:05:25.105 --> 00:05:25.765 or hormones.
NOTE Confidence: 0.9991951

00:05:26.385 --> 00:05:27.585 In red, you can see
NOTE Confidence: 0.9991951

00:05:27.585 --> 00:05:28.705 that Yale will be serving
NOTE Confidence: 0.9991951

00:05:28.705 --> 00:05:30.225 as a key site for
NOTE Confidence: 0.9991951

00:05:30.225 --> 00:05:30.725 pharmacokinetic
NOTE Confidence: 0.99831134

00:05:31.185 --> 00:05:31.845 and dosimetry
NOTE Confidence: 0.6445143

00:05:32.305 --> 00:05:33.045 sub studies.
NOTE Confidence: 0.9724433

00:05:33.585 --> 00:05:34.385 We are one of two
NOTE Confidence: 0.9724433

00:05:34.385 --> 00:05:35.425 sites in the US doing
NOTE Confidence: 0.9724433

00:05:35.425 --> 00:05:36.145 this, and this is in
NOTE Confidence: 0.9724433

00:05:36.145 --> 00:05:37.685 partnership with the Pet Center.
NOTE Confidence: 0.9992301

00:05:39.160 --> 00:05:40.600 So many of the challenges
NOTE Confidence: 0.9992301

00:05:40.600 --> 00:05:41.339 and opportunities
NOTE Confidence: 0.99865025

00:05:41.800 --> 00:05:43.480 stem from the patients that
NOTE Confidence: 0.99865025

00:05:43.480 --> 00:05:44.540 we see in clinic.
NOTE Confidence: 0.9961674

00:05:44.920 --> 00:05:46.440 Number of patients have kidney
NOTE Confidence: 0.9961674

00:05:46.440 --> 00:05:48.140 disease and are not currently

NOTE Confidence: 0.9961674

00:05:48.200 --> 00:05:50.520 eligible for giving radioligand therapy,

NOTE Confidence: 0.9961674

00:05:50.520 --> 00:05:51.240 and I think this is

NOTE Confidence: 0.9961674

00:05:51.240 --> 00:05:52.440 an opportunity for us to

NOTE Confidence: 0.9961674

00:05:52.440 --> 00:05:53.180 think about.

NOTE Confidence: 0.991869

00:05:53.765 --> 00:05:55.685 Extensive bone metastases have a

NOTE Confidence: 0.991869

00:05:55.685 --> 00:05:57.945 theoretical risk of increased myelosuppression,

NOTE Confidence: 0.99933356

00:05:58.325 --> 00:05:59.705 and this is poorly studied.

NOTE Confidence: 0.9317695

00:06:00.325 --> 00:06:02.165 The new WHO cry or

NOTE Confidence: 0.9317695

00:06:02.165 --> 00:06:04.485 classification of well differentiated grade

NOTE Confidence: 0.9317695

00:06:04.485 --> 00:06:05.785 three tumors were historically

NOTE Confidence: 0.97780913

00:06:06.085 --> 00:06:07.385 excluded from trials,

NOTE Confidence: 0.9811165

00:06:07.729 --> 00:06:09.009 but now in two recent

NOTE Confidence: 0.9811165

00:06:09.009 --> 00:06:10.550 studies have just been included.

NOTE Confidence: 0.9910049

00:06:11.089 --> 00:06:12.529 The area of retreatment is

NOTE Confidence: 0.9910049

00:06:12.529 --> 00:06:14.050 an active area of research

NOTE Confidence: 0.9910049

00:06:14.050 --> 00:06:16.310 included in three ongoing trials.
NOTE Confidence: 0.98887146

00:06:16.690 --> 00:06:18.210 And then development of MDS
NOTE Confidence: 0.98887146

00:06:18.210 --> 00:06:19.490 and AML, which occurs in
NOTE Confidence: 0.98887146

00:06:19.490 --> 00:06:20.770 about two to three percent
NOTE Confidence: 0.98887146

00:06:20.770 --> 00:06:23.110 of patients receiving radioligand therapy,
NOTE Confidence: 0.97186047

00:06:23.635 --> 00:06:24.435 I think is something that
NOTE Confidence: 0.97186047

00:06:24.435 --> 00:06:25.635 we need to examine further
NOTE Confidence: 0.97186047

00:06:25.635 --> 00:06:27.075 and identify which of these
NOTE Confidence: 0.97186047

00:06:27.075 --> 00:06:28.375 patients are at risk.
NOTE Confidence: 0.9969284

00:06:30.355 --> 00:06:31.635 Just as an example, there
NOTE Confidence: 0.9969284

00:06:31.635 --> 00:06:32.835 are also a number of
NOTE Confidence: 0.9969284

00:06:32.835 --> 00:06:34.355 early phase trials looking at
NOTE Confidence: 0.9969284

00:06:34.355 --> 00:06:36.855 combination therapies with radioligand therapy,
NOTE Confidence: 0.9997329

00:06:37.349 --> 00:06:38.250 including cytotoxic
NOTE Confidence: 0.99788016

00:06:38.789 --> 00:06:39.289 chemotherapy,
NOTE Confidence: 0.99880546

00:06:39.990 --> 00:06:40.490 immunotherapy,

NOTE Confidence: 0.9722711

00:06:41.349 --> 00:06:43.430 DNA damage response inhibitors, which

NOTE Confidence: 0.9722711

00:06:43.430 --> 00:06:44.889 I think is a fantastic

NOTE Confidence: 0.9722711

00:06:45.029 --> 00:06:46.469 opportunity for Yale to lean

NOTE Confidence: 0.9722711

00:06:46.469 --> 00:06:48.009 into given our deep expertise

NOTE Confidence: 0.9722711

00:06:48.069 --> 00:06:49.669 in that area and other

NOTE Confidence: 0.9722711

00:06:49.669 --> 00:06:51.349 agents such as tyrosine kinase

NOTE Confidence: 0.9722711

00:06:51.349 --> 00:06:51.849 inhibitors.

NOTE Confidence: 0.9510355

00:06:54.125 --> 00:06:55.745 Moving on to prostate cancer.

NOTE Confidence: 0.96851784

00:06:56.444 --> 00:06:58.604 PSMA expression in prostate cancer

NOTE Confidence: 0.96851784

00:06:58.604 --> 00:07:00.125 occurs in about eighty to

NOTE Confidence: 0.96851784

00:07:00.125 --> 00:07:01.505 ninety percent of cases.

NOTE Confidence: 0.9651602

00:07:02.205 --> 00:07:03.805 The vision trial, which was

NOTE Confidence: 0.9651602

00:07:03.805 --> 00:07:05.485 a phase three trial in

NOTE Confidence: 0.9651602

00:07:05.485 --> 00:07:05.985 metastatic

NOTE Confidence: 0.98186994

00:07:06.285 --> 00:07:08.525 castrate resistant prostate cancer, looked

NOTE Confidence: 0.98186994

00:07:08.525 --> 00:07:11.560 at PSMA six seventeen lutetium
NOTE Confidence: 0.98186994

00:07:11.620 --> 00:07:12.760 PSMA six seventeen
NOTE Confidence: 0.9548283

00:07:13.220 --> 00:07:15.220 versus standard of care. It
NOTE Confidence: 0.9548283

00:07:15.220 --> 00:07:17.460 met both the, primary endpoints
NOTE Confidence: 0.9548283

00:07:17.460 --> 00:07:19.000 of progression free survival
NOTE Confidence: 0.97002465

00:07:19.380 --> 00:07:20.980 and overall survival and led
NOTE Confidence: 0.97002465

00:07:20.980 --> 00:07:22.694 to the FDA approval of
NOTE Confidence: 0.97002465

00:07:22.694 --> 00:07:23.974 this agent in just twenty
NOTE Confidence: 0.97002465

00:07:23.974 --> 00:07:25.574 twenty two for patients who
NOTE Confidence: 0.97002465

00:07:25.574 --> 00:07:27.974 progressed on both androgen receptor
NOTE Confidence: 0.97002465

00:07:27.974 --> 00:07:30.375 pathway inhibitors and taxane based
NOTE Confidence: 0.97002465

00:07:30.375 --> 00:07:30.875 chemotherapy.
NOTE Confidence: 0.9954395

00:07:31.974 --> 00:07:33.254 The follow-up study to this
NOTE Confidence: 0.9954395

00:07:33.254 --> 00:07:35.414 was the PSMA four phase
NOTE Confidence: 0.9954395

00:07:35.414 --> 00:07:36.155 three trial,
NOTE Confidence: 0.99228275

00:07:36.520 --> 00:07:37.960 which brought this a step

NOTE Confidence: 0.99228275

00:07:37.960 --> 00:07:39.500 earlier in the disease course,

NOTE Confidence: 0.99228275

00:07:39.800 --> 00:07:41.639 looked at lutetium PSMA six

NOTE Confidence: 0.99228275

00:07:41.639 --> 00:07:42.139 seventeen

NOTE Confidence: 0.99230886

00:07:42.759 --> 00:07:43.979 versus an ARPI

NOTE Confidence: 0.95849955

00:07:44.360 --> 00:07:46.939 change, so really eliminating taxanes,

NOTE Confidence: 0.95875233

00:07:47.560 --> 00:07:49.340 and and bringing the lutetium

NOTE Confidence: 0.95875233

00:07:49.560 --> 00:07:51.755 PSMA earlier. This also met

NOTE Confidence: 0.95875233

00:07:51.755 --> 00:07:53.455 its primer endpoint of PFS,

NOTE Confidence: 0.9996547

00:07:54.074 --> 00:07:55.375 and the FDA

NOTE Confidence: 0.9996785

00:07:55.755 --> 00:07:57.595 expanded its indication in twenty

NOTE Confidence: 0.9996785

00:07:57.595 --> 00:07:58.415 twenty five.

NOTE Confidence: 0.96851605

00:08:00.235 --> 00:08:01.915 What's exciting is that doctor

NOTE Confidence: 0.96851605

00:08:01.915 --> 00:08:03.435 Dan Petrillac is leading a

NOTE Confidence: 0.96851605

00:08:03.435 --> 00:08:05.615 new randomized phase two trial

NOTE Confidence: 0.8944975

00:08:05.980 --> 00:08:06.720 of luxigalutamide

NOTE Confidence: 0.9061702

00:08:07.500 --> 00:08:09.120 plus lutetium PSMA
NOTE Confidence: 0.9967306

00:08:09.420 --> 00:08:10.160 six seventeen
NOTE Confidence: 0.98003507

00:08:10.700 --> 00:08:12.560 in patients, with metastatic
NOTE Confidence: 0.993479

00:08:13.100 --> 00:08:14.800 castrate resistant prostate cancer.
NOTE Confidence: 0.99161357

00:08:15.500 --> 00:08:16.000 Luxigalutamide
NOTE Confidence: 0.967984

00:08:16.620 --> 00:08:18.380 is an oral PROTAC or
NOTE Confidence: 0.967984

00:08:18.380 --> 00:08:18.880 proteolysis
NOTE Confidence: 0.9459975

00:08:19.260 --> 00:08:20.240 targeting chimera
NOTE Confidence: 0.9703761

00:08:20.685 --> 00:08:21.965 developed here in the lab
NOTE Confidence: 0.9703761

00:08:21.965 --> 00:08:23.565 of doctor Craig Cruz, who
NOTE Confidence: 0.9703761

00:08:23.565 --> 00:08:25.005 has appointments in the departments
NOTE Confidence: 0.9703761

00:08:25.005 --> 00:08:26.385 of chemistry and pharmacology.
NOTE Confidence: 0.97513324

00:08:28.285 --> 00:08:29.565 And then moving on to
NOTE Confidence: 0.97513324

00:08:29.565 --> 00:08:30.065 meningioma,
NOTE Confidence: 0.9749681

00:08:30.845 --> 00:08:32.365 over seventy to a hundred
NOTE Confidence: 0.9749681

00:08:32.365 --> 00:08:33.665 percent of meningiomas

NOTE Confidence: 0.9207399

00:08:34.329 --> 00:08:35.149 express somatostatin

NOTE Confidence: 0.9664797

00:08:35.529 --> 00:08:36.970 receptor type two, so that

NOTE Confidence: 0.9664797

00:08:36.970 --> 00:08:38.410 same receptor we talked about

NOTE Confidence: 0.9664797

00:08:38.410 --> 00:08:39.070 for NETs,

NOTE Confidence: 0.9931987

00:08:39.610 --> 00:08:41.050 and this is regardless of

NOTE Confidence: 0.9931987

00:08:41.050 --> 00:08:41.550 grade.

NOTE Confidence: 0.9673063

00:08:41.929 --> 00:08:43.769 Doctor Sylvia Kurz in neuro

NOTE Confidence: 0.9673063

00:08:43.769 --> 00:08:44.970 oncology is one of the

NOTE Confidence: 0.9673063

00:08:44.970 --> 00:08:46.750 study chairs for a new

NOTE Confidence: 0.9673063

00:08:46.809 --> 00:08:48.885 national clinical trial network trial

NOTE Confidence: 0.9673063

00:08:48.885 --> 00:08:50.025 through, RTOG.

NOTE Confidence: 0.9387579

00:08:50.725 --> 00:08:51.845 That's a phase two study

NOTE Confidence: 0.9387579

00:08:51.845 --> 00:08:54.005 of lutetium dootatate versus standard

NOTE Confidence: 0.9387579

00:08:54.005 --> 00:08:55.705 of care in progressive intracranial

NOTE Confidence: 0.99936754

00:08:56.165 --> 00:08:56.665 meningioma.

NOTE Confidence: 0.9991912

00:08:57.045 --> 00:08:58.085 This is also soon to
NOTE Confidence: 0.9991912

00:08:58.085 --> 00:08:58.585 open.
NOTE Confidence: 0.92799366

00:09:00.245 --> 00:09:01.365 Lastly, though this is not
NOTE Confidence: 0.92799366

00:09:01.365 --> 00:09:03.225 formally a radioligand therapy,
NOTE Confidence: 0.9967765

00:09:03.779 --> 00:09:05.399 biology guided radiotherapy
NOTE Confidence: 0.9538704

00:09:05.860 --> 00:09:06.980 is truly part of the
NOTE Confidence: 0.9538704

00:09:06.980 --> 00:09:09.880 theranostics family. So Syntyxt BGRT
NOTE Confidence: 0.9210869

00:09:10.579 --> 00:09:12.199 on this on a reflection
NOTE Confidence: 0.9210869

00:09:12.339 --> 00:09:13.320 x one unit
NOTE Confidence: 0.8104593

00:09:13.699 --> 00:09:15.380 tracks f eighteen FTG PET
NOTE Confidence: 0.8104593

00:09:15.380 --> 00:09:16.360 tracer emissions
NOTE Confidence: 0.9817875

00:09:16.665 --> 00:09:19.324 to really guide RT depending
NOTE Confidence: 0.9817875

00:09:19.384 --> 00:09:21.324 on how the tumors move.
NOTE Confidence: 0.99569076

00:09:21.865 --> 00:09:22.365 So
NOTE Confidence: 0.9985696

00:09:22.824 --> 00:09:25.384 biology guided radiotherapy is approved
NOTE Confidence: 0.9985696

00:09:25.384 --> 00:09:27.245 for both primary and metastatic

NOTE Confidence: 0.9948009
00:09:27.865 --> 00:09:29.245 lung and bone cancers.
NOTE Confidence: 0.9888138
00:09:29.730 --> 00:09:30.929 Yale was the first in
NOTE Confidence: 0.9888138
00:09:30.929 --> 00:09:32.130 the northeast to install a
NOTE Confidence: 0.9888138
00:09:32.130 --> 00:09:33.809 unit and the first to
NOTE Confidence: 0.9888138
00:09:33.809 --> 00:09:35.350 treat a patient with BGRT
NOTE Confidence: 0.9888138
00:09:35.490 --> 00:09:36.550 in a single plan.
NOTE Confidence: 0.9856506
00:09:38.209 --> 00:09:39.330 So I think picking on
NOTE Confidence: 0.9856506
00:09:39.330 --> 00:09:40.610 a theme that was mentioned
NOTE Confidence: 0.9856506
00:09:40.610 --> 00:09:41.110 earlier,
NOTE Confidence: 0.8448766
00:09:41.649 --> 00:09:42.149 theranostics
NOTE Confidence: 0.9080801
00:09:42.450 --> 00:09:44.149 in particular is multidisciplinary
NOTE Confidence: 0.9111718
00:09:44.610 --> 00:09:45.345 and interdisciplinary,
NOTE Confidence: 0.98805076
00:09:46.225 --> 00:09:47.904 and this partnership will really
NOTE Confidence: 0.98805076
00:09:47.904 --> 00:09:49.184 lead to excellence in both
NOTE Confidence: 0.98805076
00:09:49.184 --> 00:09:51.365 patient care and research innovation.
NOTE Confidence: 0.98805076

00:09:51.425 --> 00:09:52.944 This slide is not all
NOTE Confidence: 0.98805076

00:09:52.944 --> 00:09:54.304 inclusive, but really is an
NOTE Confidence: 0.98805076

00:09:54.304 --> 00:09:55.904 indication that this is cross
NOTE Confidence: 0.98805076

00:09:55.904 --> 00:09:56.404 departmental,
NOTE Confidence: 0.98892516

00:09:57.024 --> 00:09:59.125 cross centers, and cross groups.
NOTE Confidence: 0.98892516

00:09:59.410 --> 00:10:00.690 And I anticipate that this
NOTE Confidence: 0.98892516

00:10:00.690 --> 00:10:01.890 list will expand as we
NOTE Confidence: 0.98892516

00:10:01.890 --> 00:10:03.010 bring in more basic and
NOTE Confidence: 0.98892516

00:10:03.010 --> 00:10:04.230 translational science.
NOTE Confidence: 0.9865172

00:10:05.730 --> 00:10:06.550 So theranostics
NOTE Confidence: 0.9971985

00:10:07.010 --> 00:10:08.290 is really a game changer
NOTE Confidence: 0.9971985

00:10:08.290 --> 00:10:09.170 and has been for the
NOTE Confidence: 0.9971985

00:10:09.170 --> 00:10:10.850 field of neuroendocrine tumors so
NOTE Confidence: 0.9971985

00:10:10.850 --> 00:10:12.434 far. We hope to optimize
NOTE Confidence: 0.9971985

00:10:12.495 --> 00:10:13.855 its use through better patient
NOTE Confidence: 0.9971985

00:10:13.855 --> 00:10:14.355 selection,

NOTE Confidence: 0.99588376

00:10:14.975 --> 00:10:17.475 decreasing toxicities, and increasing efficacy.

NOTE Confidence: 0.94013023

00:10:18.014 --> 00:10:19.135 New trials have you seen

NOTE Confidence: 0.94013023

00:10:19.295 --> 00:10:20.595 as you've seen are examining

NOTE Confidence: 0.94013023

00:10:20.654 --> 00:10:22.274 novel ligands, radionuclides,

NOTE Confidence: 0.9074336

00:10:22.894 --> 00:10:23.635 and combinations,

NOTE Confidence: 0.9832392

00:10:24.220 --> 00:10:25.500 and starting to look at

NOTE Confidence: 0.9832392

00:10:25.500 --> 00:10:27.420 other new indications in solid

NOTE Confidence: 0.9832392

00:10:27.420 --> 00:10:29.840 tumors, such as colon, liver,

NOTE Confidence: 0.9832392

00:10:30.059 --> 00:10:31.980 pancreas, breast, and lung. And

NOTE Confidence: 0.9832392

00:10:31.980 --> 00:10:32.940 I think that Yale has

NOTE Confidence: 0.9832392

00:10:32.940 --> 00:10:34.140 an opportunity to be a

NOTE Confidence: 0.9832392

00:10:34.140 --> 00:10:35.340 leader in this space. So

NOTE Confidence: 0.9832392

00:10:35.340 --> 00:10:35.946 thank you.