

WEBVTT

NOTE duration: "00:57:39.906"

NOTE Confidence: 0.93740726

00:00:00.080 --> 00:00:01.360 Roy Herbst. Really excited to

NOTE Confidence: 0.93740726

00:00:01.360 --> 00:00:02.879 introduce our ground round speaker

NOTE Confidence: 0.93740726

00:00:02.879 --> 00:00:03.379 today.

NOTE Confidence: 0.9930981

00:00:04.000 --> 00:00:05.839 A special pleasure to introduce

NOTE Confidence: 0.9930981

00:00:05.839 --> 00:00:06.980 doctor William Oh,

NOTE Confidence: 0.9843478

00:00:07.359 --> 00:00:09.280 who's just joined us. I

NOTE Confidence: 0.9843478

00:00:09.280 --> 00:00:10.719 can tell you, Eric has

NOTE Confidence: 0.9843478

00:00:10.719 --> 00:00:12.015 just texted me and,

NOTE Confidence: 0.99541026

00:00:12.414 --> 00:00:13.615 wanted me to emphasize how

NOTE Confidence: 0.99541026

00:00:13.615 --> 00:00:14.975 excited, he and we all

NOTE Confidence: 0.99541026

00:00:14.975 --> 00:00:16.515 are to have William here.

NOTE Confidence: 0.97755396

00:00:16.975 --> 00:00:17.935 As you'll see as I

NOTE Confidence: 0.97755396

00:00:17.935 --> 00:00:19.454 introduce him, he certainly has

NOTE Confidence: 0.97755396

00:00:19.454 --> 00:00:20.815 a tremendous background, and he'll

NOTE Confidence: 0.97755396

00:00:20.815 --> 00:00:22.275 be a a great addition.
NOTE Confidence: 0.899384

00:00:23.375 --> 00:00:24.515 Doctor O, he's
NOTE Confidence: 0.99270076

00:00:25.010 --> 00:00:26.290 now the director of precision
NOTE Confidence: 0.99270076

00:00:26.290 --> 00:00:27.410 medicine for the Yale Cancer
NOTE Confidence: 0.99270076

00:00:27.410 --> 00:00:27.910 Center
NOTE Confidence: 0.9682759

00:00:28.290 --> 00:00:29.830 and Smile Cancer Hospital.
NOTE Confidence: 0.9520651

00:00:30.290 --> 00:00:31.490 He'll be very involved in
NOTE Confidence: 0.9520651

00:00:31.490 --> 00:00:32.450 in in some of that
NOTE Confidence: 0.9520651

00:00:32.450 --> 00:00:34.130 work and including our precision
NOTE Confidence: 0.9520651

00:00:34.130 --> 00:00:35.970 medicine tumor board, and he's
NOTE Confidence: 0.9520651

00:00:35.970 --> 00:00:37.570 importantly the service line medical
NOTE Confidence: 0.9520651

00:00:37.570 --> 00:00:39.330 director of Smile Cancer Hospital
NOTE Confidence: 0.9520651

00:00:39.330 --> 00:00:39.989 at Greenwich.
NOTE Confidence: 0.9816846

00:00:40.925 --> 00:00:42.125 He received his medical degree
NOTE Confidence: 0.9816846

00:00:42.125 --> 00:00:43.025 from NYU.
NOTE Confidence: 0.94238913

00:00:43.645 --> 00:00:44.525 He was actually a Yale

NOTE Confidence: 0.94238913
00:00:44.525 --> 00:00:45.745 undergraduate in,
NOTE Confidence: 0.92351294
00:00:46.284 --> 00:00:47.185 BS in
NOTE Confidence: 0.93222415
00:00:47.565 --> 00:00:49.325 molecular biophysics and biochemistry, and
NOTE Confidence: 0.93222415
00:00:49.325 --> 00:00:50.705 did his internship and residency,
NOTE Confidence: 0.9685677
00:00:51.245 --> 00:00:52.784 at the Brigham Women's Hospital
NOTE Confidence: 0.9685677
00:00:53.085 --> 00:00:54.390 and and his clinical fellowship
NOTE Confidence: 0.9685677
00:00:54.390 --> 00:00:56.149 at the, Dana Farber, which
NOTE Confidence: 0.9685677
00:00:56.149 --> 00:00:57.269 is where I first met
NOTE Confidence: 0.9685677
00:00:57.269 --> 00:00:57.769 him.
NOTE Confidence: 0.98405266
00:00:58.469 --> 00:00:59.589 Before being at Yale, he
NOTE Confidence: 0.98405266
00:00:59.589 --> 00:01:01.050 was the chief medical officer
NOTE Confidence: 0.98405266
00:01:01.190 --> 00:01:02.550 and executive vice president of
NOTE Confidence: 0.98405266
00:01:02.550 --> 00:01:04.090 the Prostate Cancer Foundation.
NOTE Confidence: 0.96792245
00:01:04.470 --> 00:01:05.830 We focused on barriers to
NOTE Confidence: 0.96792245
00:01:05.830 --> 00:01:07.590 delivery of care for prostate
NOTE Confidence: 0.96792245

00:01:07.590 --> 00:01:08.650 cancer nationally.
NOTE Confidence: 0.9829654

00:01:09.725 --> 00:01:11.025 William is a genitourinary
NOTE Confidence: 0.99945277

00:01:11.405 --> 00:01:11.905 oncologist
NOTE Confidence: 0.9562929

00:01:12.605 --> 00:01:13.965 truly with decades of experience
NOTE Confidence: 0.9562929

00:01:13.965 --> 00:01:15.405 caring for patients with prostate
NOTE Confidence: 0.9562929

00:01:15.405 --> 00:01:15.905 cancer.
NOTE Confidence: 0.98029274

00:01:16.365 --> 00:01:17.245 For over a decade, he
NOTE Confidence: 0.98029274

00:01:17.245 --> 00:01:18.605 was chief of hematology and
NOTE Confidence: 0.98029274

00:01:18.605 --> 00:01:19.505 medical oncology,
NOTE Confidence: 0.9502965

00:01:19.965 --> 00:01:22.125 deputy director of the, Tisch
NOTE Confidence: 0.9502965

00:01:22.125 --> 00:01:23.985 Cancer Institute and NCI designated
NOTE Confidence: 0.9502965

00:01:24.045 --> 00:01:25.709 center, and the Ezra Greenspan
NOTE Confidence: 0.9502965

00:01:25.930 --> 00:01:27.610 professor of clinical cancer,
NOTE Confidence: 0.998174

00:01:27.930 --> 00:01:28.430 therapeutics
NOTE Confidence: 0.9762732

00:01:29.050 --> 00:01:30.650 at the Icahn Medical School.
NOTE Confidence: 0.9762732

00:01:30.650 --> 00:01:31.790 That's Mount Sinai.

NOTE Confidence: 0.9993169
00:01:32.650 --> 00:01:33.530 He has a number of
NOTE Confidence: 0.9993169
00:01:33.530 --> 00:01:34.010 national,
NOTE Confidence: 0.77479494
00:01:35.370 --> 00:01:35.770 you know,
NOTE Confidence: 0.91878045
00:01:36.330 --> 00:01:37.690 roles that are quite relevant.
NOTE Confidence: 0.91878045
00:01:37.690 --> 00:01:38.775 He's chair of the American
NOTE Confidence: 0.91878045
00:01:38.775 --> 00:01:40.855 Cancer Society's National Prostate Cancer
NOTE Confidence: 0.91878045
00:01:40.855 --> 00:01:41.355 Roundtable,
NOTE Confidence: 0.9985487
00:01:41.735 --> 00:01:42.855 whose mission is to improve
NOTE Confidence: 0.9985487
00:01:42.855 --> 00:01:44.955 prostate cancer outcomes and survivorship
NOTE Confidence: 0.9793192
00:01:45.334 --> 00:01:47.015 through increasing awareness and equitable
NOTE Confidence: 0.9793192
00:01:47.015 --> 00:01:48.375 access to prevention, screening, and
NOTE Confidence: 0.9793192
00:01:48.375 --> 00:01:48.875 treatment.
NOTE Confidence: 0.9350889
00:01:49.175 --> 00:01:49.975 He's also chair of the
NOTE Confidence: 0.9350889
00:01:49.975 --> 00:01:51.575 medical advisory council for the
NOTE Confidence: 0.9350889
00:01:51.575 --> 00:01:52.875 Chemotherapy Foundation.
NOTE Confidence: 0.9353912

00:01:53.570 --> 00:01:55.409 So, what better way to
NOTE Confidence: 0.9353912

00:01:55.409 --> 00:01:57.329 welcome William to Yale to
NOTE Confidence: 0.9353912

00:01:57.329 --> 00:01:58.710 have him give grand rounds.
NOTE Confidence: 0.9353912

00:01:59.009 --> 00:02:00.049 He's also part of the
NOTE Confidence: 0.9353912

00:02:00.049 --> 00:02:01.890 QU division. I think Dan
NOTE Confidence: 0.9353912

00:02:01.890 --> 00:02:03.270 Petrak, I know, is online,
NOTE Confidence: 0.9888848

00:02:03.649 --> 00:02:04.850 from a meeting he's at,
NOTE Confidence: 0.9888848

00:02:04.850 --> 00:02:05.890 and he's gonna talk to
NOTE Confidence: 0.9888848

00:02:05.890 --> 00:02:07.090 us about new advances in
NOTE Confidence: 0.9888848

00:02:07.090 --> 00:02:08.610 prostate cancer in twenty twenty
NOTE Confidence: 0.9888848

00:02:08.610 --> 00:02:09.845 five. William, thank
NOTE Confidence: 0.9849772

00:02:13.105 --> 00:02:14.385 you. Well, thank you, Roy,
NOTE Confidence: 0.9849772

00:02:14.385 --> 00:02:15.264 and thank you all for
NOTE Confidence: 0.9849772

00:02:15.264 --> 00:02:15.925 the welcome.
NOTE Confidence: 0.95629245

00:02:19.745 --> 00:02:20.805 Let's see here.
NOTE Confidence: 0.99962527

00:02:23.190 --> 00:02:24.330 These are my disclosures.

NOTE Confidence: 0.99981445
00:02:27.830 --> 00:02:28.710 I wanted to talk a
NOTE Confidence: 0.99981445
00:02:28.710 --> 00:02:30.150 little bit about my journey
NOTE Confidence: 0.99981445
00:02:30.150 --> 00:02:30.650 here.
NOTE Confidence: 0.9623715
00:02:32.230 --> 00:02:33.830 I actually worked with Roy
NOTE Confidence: 0.9623715
00:02:33.830 --> 00:02:35.305 as a resident. He doesn't
NOTE Confidence: 0.9623715
00:02:35.305 --> 00:02:36.745 remember that, but we were
NOTE Confidence: 0.9623715
00:02:36.745 --> 00:02:37.705 residents together. He was a
NOTE Confidence: 0.9623715
00:02:37.705 --> 00:02:38.505 year ahead of me. And
NOTE Confidence: 0.9623715
00:02:38.505 --> 00:02:39.944 then subsequently with Eric at
NOTE Confidence: 0.9623715
00:02:39.944 --> 00:02:41.065 the Dana Farber and many
NOTE Confidence: 0.9623715
00:02:41.065 --> 00:02:42.745 friends. This was really key
NOTE Confidence: 0.9623715
00:02:42.745 --> 00:02:44.425 to part of my journey
NOTE Confidence: 0.9623715
00:02:44.425 --> 00:02:45.705 because as I moved on
NOTE Confidence: 0.9623715
00:02:45.705 --> 00:02:46.605 in my career,
NOTE Confidence: 0.964303
00:02:48.200 --> 00:02:49.000 as you heard, I went
NOTE Confidence: 0.964303

00:02:49.000 --> 00:02:50.519 to Mount Sinai about fifteen
NOTE Confidence: 0.964303

00:02:50.519 --> 00:02:51.180 years ago
NOTE Confidence: 0.9711385

00:02:51.480 --> 00:02:52.360 to build a new cancer
NOTE Confidence: 0.9711385

00:02:52.360 --> 00:02:53.819 center in New York City,
NOTE Confidence: 0.8951658

00:02:54.120 --> 00:02:54.860 and, ultimately,
NOTE Confidence: 0.99804944

00:02:55.560 --> 00:02:57.079 we did get NCI designation
NOTE Confidence: 0.99804944

00:02:57.079 --> 00:02:58.379 and and renewed it.
NOTE Confidence: 0.9762048

00:02:58.680 --> 00:03:00.040 A part of my goal
NOTE Confidence: 0.9762048

00:03:00.040 --> 00:03:01.745 in life was to figure
NOTE Confidence: 0.9762048

00:03:01.745 --> 00:03:02.945 out how we actually deliver
NOTE Confidence: 0.9762048

00:03:02.945 --> 00:03:04.145 this care better to our
NOTE Confidence: 0.9762048

00:03:04.145 --> 00:03:05.425 patients because so much was
NOTE Confidence: 0.9762048

00:03:05.425 --> 00:03:06.805 happening and is happening.
NOTE Confidence: 0.98057526

00:03:07.264 --> 00:03:07.825 So I left,
NOTE Confidence: 0.9638581

00:03:08.705 --> 00:03:10.705 my my administrative roles to
NOTE Confidence: 0.9638581

00:03:10.705 --> 00:03:11.985 join a company called Semaphore,

NOTE Confidence: 0.9638581

00:03:11.985 --> 00:03:12.865 which was a spin out

NOTE Confidence: 0.9638581

00:03:12.865 --> 00:03:14.225 of of Mount Sinai, which

NOTE Confidence: 0.9638581

00:03:14.225 --> 00:03:15.585 was really using genomics, but

NOTE Confidence: 0.9638581

00:03:15.585 --> 00:03:17.430 really more importantly, clinical data

NOTE Confidence: 0.9638581

00:03:17.430 --> 00:03:18.650 and AI to try

NOTE Confidence: 0.99872637

00:03:19.030 --> 00:03:19.690 to improve

NOTE Confidence: 0.98675025

00:03:20.150 --> 00:03:21.270 the way we deliver care

NOTE Confidence: 0.98675025

00:03:21.270 --> 00:03:22.870 to patients. And, this will

NOTE Confidence: 0.98675025

00:03:22.870 --> 00:03:23.990 come up a little bit

NOTE Confidence: 0.98675025

00:03:23.990 --> 00:03:25.510 in in my decision really

NOTE Confidence: 0.98675025

00:03:25.510 --> 00:03:26.970 to come back to academia,

NOTE Confidence: 0.99920684

00:03:28.150 --> 00:03:29.590 to use information and data

NOTE Confidence: 0.99920684

00:03:29.590 --> 00:03:30.550 to better take care of

NOTE Confidence: 0.99920684

00:03:30.550 --> 00:03:31.210 our patients.

NOTE Confidence: 0.95762205

00:03:32.514 --> 00:03:33.875 It's a long story, but,

NOTE Confidence: 0.9666934

00:03:34.194 --> 00:03:35.555 after two years at, a
NOTE Confidence: 0.9666934

00:03:35.555 --> 00:03:37.155 publicly traded company, I I
NOTE Confidence: 0.9666934

00:03:37.155 --> 00:03:38.995 joined, the Prostate Cancer Foundation
NOTE Confidence: 0.9666934

00:03:38.995 --> 00:03:40.455 as the chief medical officer,
NOTE Confidence: 0.99845725

00:03:41.075 --> 00:03:41.875 and I'll talk a little
NOTE Confidence: 0.99845725

00:03:41.875 --> 00:03:42.915 bit about the work that
NOTE Confidence: 0.99845725

00:03:42.915 --> 00:03:44.595 I did there, in today's
NOTE Confidence: 0.99845725

00:03:44.595 --> 00:03:46.275 talk. But it all leads
NOTE Confidence: 0.99845725

00:03:46.275 --> 00:03:47.730 to, I think, a real
NOTE Confidence: 0.99845725

00:03:47.730 --> 00:03:49.010 opportunity for me to have
NOTE Confidence: 0.99845725

00:03:49.010 --> 00:03:49.410 joined,
NOTE Confidence: 0.8876972

00:03:49.890 --> 00:03:51.170 the Yale Cancer Center and
NOTE Confidence: 0.8876972

00:03:51.170 --> 00:03:51.670 Smilow
NOTE Confidence: 0.9827914

00:03:52.210 --> 00:03:53.650 to talk about work that,
NOTE Confidence: 0.9827914

00:03:54.050 --> 00:03:55.490 really in two big domains.
NOTE Confidence: 0.9827914

00:03:55.490 --> 00:03:56.930 One is, of course, prostate

NOTE Confidence: 0.9827914

00:03:56.930 --> 00:03:57.890 cancer, which I'm gonna be

NOTE Confidence: 0.9827914

00:03:57.890 --> 00:03:59.090 focusing on today, and the

NOTE Confidence: 0.9827914

00:03:59.090 --> 00:04:00.614 second is how we deliver

NOTE Confidence: 0.9827914

00:04:00.675 --> 00:04:01.875 the care better, not just

NOTE Confidence: 0.9827914

00:04:01.875 --> 00:04:03.075 in prostate cancer, but to

NOTE Confidence: 0.9827914

00:04:03.075 --> 00:04:04.595 all cancer patients, and that's

NOTE Confidence: 0.9827914

00:04:04.595 --> 00:04:06.114 really that title around precision

NOTE Confidence: 0.9827914

00:04:06.114 --> 00:04:06.614 medicine.

NOTE Confidence: 0.9798788

00:04:07.955 --> 00:04:09.075 But today, I'm gonna focus

NOTE Confidence: 0.9798788

00:04:09.075 --> 00:04:10.215 on prostate cancer.

NOTE Confidence: 0.9700813

00:04:10.754 --> 00:04:11.795 These are the newest data

NOTE Confidence: 0.9700813

00:04:11.795 --> 00:04:13.334 from the American Cancer Society

NOTE Confidence: 0.9700813

00:04:13.394 --> 00:04:14.829 about the burden. It is

NOTE Confidence: 0.9700813

00:04:14.829 --> 00:04:16.029 the number one cancer in

NOTE Confidence: 0.9700813

00:04:16.029 --> 00:04:17.389 men. Really, by far, thirty

NOTE Confidence: 0.9700813

00:04:17.389 --> 00:04:18.589 percent of all pros all
NOTE Confidence: 0.9700813

00:04:18.589 --> 00:04:20.750 cancers are are prostate cancer.
NOTE Confidence: 0.9700813

00:04:20.750 --> 00:04:21.250 And,
NOTE Confidence: 0.9875966

00:04:21.710 --> 00:04:23.229 interestingly, even though we sometimes
NOTE Confidence: 0.9875966

00:04:23.229 --> 00:04:24.430 have a belief that prostate
NOTE Confidence: 0.9875966

00:04:24.430 --> 00:04:25.710 cancer is not lethal, it's
NOTE Confidence: 0.9875966

00:04:25.710 --> 00:04:27.070 still the second leading cause
NOTE Confidence: 0.9875966

00:04:27.070 --> 00:04:28.545 of cancer death. Not only
NOTE Confidence: 0.9875966

00:04:28.545 --> 00:04:29.665 that, the death rate is
NOTE Confidence: 0.9875966

00:04:29.665 --> 00:04:30.485 actually rising.
NOTE Confidence: 0.9988876

00:04:30.865 --> 00:04:31.904 This is as of twenty
NOTE Confidence: 0.9988876

00:04:31.904 --> 00:04:32.725 twenty five.
NOTE Confidence: 0.9711279

00:04:35.585 --> 00:04:37.105 Here's the incidence rates, and
NOTE Confidence: 0.9711279

00:04:37.105 --> 00:04:38.545 it this is, again, really
NOTE Confidence: 0.9711279

00:04:38.545 --> 00:04:39.745 hot off the press. And
NOTE Confidence: 0.9711279

00:04:39.745 --> 00:04:40.785 you can see this very

NOTE Confidence: 0.9711279

00:04:40.785 --> 00:04:43.479 sharp, increase in the, incidence

NOTE Confidence: 0.9711279

00:04:43.479 --> 00:04:45.080 of prostate cancer. This is

NOTE Confidence: 0.9711279

00:04:45.080 --> 00:04:46.120 in in and of itself

NOTE Confidence: 0.9711279

00:04:46.120 --> 00:04:47.960 quite an interesting conversation about

NOTE Confidence: 0.9711279

00:04:47.960 --> 00:04:48.460 why

NOTE Confidence: 0.9725354

00:04:48.839 --> 00:04:50.199 it's risen so sharply in

NOTE Confidence: 0.9725354

00:04:50.199 --> 00:04:51.080 the past decade.

NOTE Confidence: 0.9743373

00:04:51.720 --> 00:04:52.520 And we can talk a

NOTE Confidence: 0.9743373

00:04:52.520 --> 00:04:53.479 little bit more in the

NOTE Confidence: 0.9743373

00:04:53.479 --> 00:04:54.824 q and a about what

NOTE Confidence: 0.9743373

00:04:54.824 --> 00:04:56.185 the in implications there. And

NOTE Confidence: 0.9743373

00:04:56.185 --> 00:04:57.145 you can see the parallel

NOTE Confidence: 0.9743373

00:04:57.145 --> 00:04:58.264 in breast cancer, the breast

NOTE Confidence: 0.9743373

00:04:58.264 --> 00:04:59.805 cancer incidence rates rising.

NOTE Confidence: 0.96795595

00:05:02.904 --> 00:05:03.865 But the death rate from

NOTE Confidence: 0.96795595

00:05:03.865 --> 00:05:05.544 prostate cancer has, in fact,
NOTE Confidence: 0.96795595

00:05:05.544 --> 00:05:06.044 plateaued,
NOTE Confidence: 0.9688571

00:05:06.505 --> 00:05:07.224 and there's a lot of
NOTE Confidence: 0.9688571

00:05:07.224 --> 00:05:08.479 reasons to be concerned about
NOTE Confidence: 0.9688571

00:05:08.479 --> 00:05:09.919 this plateau. You know, early
NOTE Confidence: 0.9688571

00:05:09.919 --> 00:05:10.880 when I started in this
NOTE Confidence: 0.9688571

00:05:10.880 --> 00:05:12.560 field about, twenty five years
NOTE Confidence: 0.9688571

00:05:12.560 --> 00:05:14.160 ago, I thought the prostate
NOTE Confidence: 0.9688571

00:05:14.160 --> 00:05:15.520 cancer would actually if you
NOTE Confidence: 0.9688571

00:05:15.520 --> 00:05:16.800 see this drop that that
NOTE Confidence: 0.9688571

00:05:16.800 --> 00:05:17.680 you can see on this
NOTE Confidence: 0.9688571

00:05:17.680 --> 00:05:19.199 graph, I thought prostate cancer
NOTE Confidence: 0.9688571

00:05:19.199 --> 00:05:21.060 would fall below colo colorectal
NOTE Confidence: 0.9688571

00:05:21.199 --> 00:05:22.639 and other can cancer death
NOTE Confidence: 0.9688571

00:05:22.639 --> 00:05:24.055 rates, but in fact, it
NOTE Confidence: 0.9688571

00:05:24.055 --> 00:05:25.415 has plateaued and in as

NOTE Confidence: 0.9688571

00:05:25.415 --> 00:05:26.855 I mentioned, it's slowly rising.

NOTE Confidence: 0.9688571

00:05:26.855 --> 00:05:27.975 Of course, lung cancer death

NOTE Confidence: 0.9688571

00:05:27.975 --> 00:05:29.275 rates have gone down dramatically

NOTE Confidence: 0.9688571

00:05:29.335 --> 00:05:31.255 in men since, the surgeon

NOTE Confidence: 0.9688571

00:05:31.255 --> 00:05:33.575 general's report around, around cigarette

NOTE Confidence: 0.9688571

00:05:33.575 --> 00:05:34.075 smoking.

NOTE Confidence: 0.97778225

00:05:35.415 --> 00:05:36.294 And these are some of

NOTE Confidence: 0.97778225

00:05:36.294 --> 00:05:37.750 the data that have recently

NOTE Confidence: 0.97778225

00:05:37.750 --> 00:05:39.349 come out about why we're

NOTE Confidence: 0.97778225

00:05:39.349 --> 00:05:40.629 concerned about the death rate

NOTE Confidence: 0.97778225

00:05:40.629 --> 00:05:41.449 actually rising.

NOTE Confidence: 0.9841736

00:05:41.909 --> 00:05:42.810 If you look at,

NOTE Confidence: 0.96478033

00:05:43.669 --> 00:05:45.349 the rates of, cancer, you

NOTE Confidence: 0.96478033

00:05:45.349 --> 00:05:47.050 can see again that rise

NOTE Confidence: 0.96478033

00:05:47.270 --> 00:05:48.629 both both in all groups,

NOTE Confidence: 0.96478033

00:05:48.629 --> 00:05:50.069 but also specifically in black

NOTE Confidence: 0.96478033

00:05:50.069 --> 00:05:51.694 men who are denoted by

NOTE Confidence: 0.96478033

00:05:51.694 --> 00:05:53.615 the green dots here. But

NOTE Confidence: 0.96478033

00:05:53.615 --> 00:05:55.055 particularly, I wanna point out,

NOTE Confidence: 0.96478033

00:05:55.455 --> 00:05:57.294 this this graph, the the

NOTE Confidence: 0.96478033

00:05:57.294 --> 00:05:59.455 distant, metastatic disease, and you

NOTE Confidence: 0.96478033

00:05:59.455 --> 00:06:00.574 can see two things here.

NOTE Confidence: 0.96478033

00:06:00.574 --> 00:06:01.615 One is the rate of

NOTE Confidence: 0.96478033

00:06:01.615 --> 00:06:03.714 metastatic prostate cancer is growing

NOTE Confidence: 0.96478033

00:06:03.935 --> 00:06:05.375 quite dramatically over the past

NOTE Confidence: 0.96478033

00:06:05.375 --> 00:06:05.875 decade.

NOTE Confidence: 0.9475912

00:06:06.589 --> 00:06:07.790 And one question is why?

NOTE Confidence: 0.9475912

00:06:07.790 --> 00:06:08.670 This is in the US.

NOTE Confidence: 0.9475912

00:06:08.670 --> 00:06:09.870 This is not worldwide. This

NOTE Confidence: 0.9475912

00:06:09.870 --> 00:06:11.230 is in a country where

NOTE Confidence: 0.9475912

00:06:11.230 --> 00:06:12.430 you could see that, that

NOTE Confidence: 0.9475912
00:06:12.430 --> 00:06:13.630 rates of metastatic disease were
NOTE Confidence: 0.9475912
00:06:13.630 --> 00:06:14.130 dramatically
NOTE Confidence: 0.9974518
00:06:14.589 --> 00:06:15.570 dropping before,
NOTE Confidence: 0.9795769
00:06:17.390 --> 00:06:18.670 before this point. So what's
NOTE Confidence: 0.9795769
00:06:18.670 --> 00:06:19.950 happened over the past decade?
NOTE Confidence: 0.9795769
00:06:19.950 --> 00:06:21.225 And then you still see
NOTE Confidence: 0.9795769
00:06:21.225 --> 00:06:23.065 this huge disparity between black
NOTE Confidence: 0.9795769
00:06:23.065 --> 00:06:24.285 men and all other races.
NOTE Confidence: 0.9536743
00:06:24.745 --> 00:06:25.625 And this is gonna get
NOTE Confidence: 0.9536743
00:06:25.625 --> 00:06:26.505 at some of the work
NOTE Confidence: 0.9536743
00:06:26.505 --> 00:06:27.464 that I did, particularly at
NOTE Confidence: 0.9536743
00:06:27.464 --> 00:06:28.925 the prostate cancer foundation.
NOTE Confidence: 0.9977741
00:06:29.545 --> 00:06:30.904 But, I think a lot
NOTE Confidence: 0.9977741
00:06:30.904 --> 00:06:32.105 of us are concerned about
NOTE Confidence: 0.9977741
00:06:32.105 --> 00:06:33.464 these these trends about and
NOTE Confidence: 0.9977741

00:06:33.464 --> 00:06:35.005 about how we reverse them.
NOTE Confidence: 0.90485024

00:06:36.060 --> 00:06:37.500 Also last year, the Lancet
NOTE Confidence: 0.90485024

00:06:37.500 --> 00:06:39.199 Commission published a report
NOTE Confidence: 0.98965424

00:06:39.980 --> 00:06:41.660 about worldwide rates of of
NOTE Confidence: 0.98965424

00:06:41.660 --> 00:06:43.339 prostate cancer. And what we
NOTE Confidence: 0.98965424

00:06:43.339 --> 00:06:44.460 know is that over the
NOTE Confidence: 0.98965424

00:06:44.460 --> 00:06:46.060 next twenty years or so,
NOTE Confidence: 0.98965424

00:06:46.060 --> 00:06:47.339 from twenty twenty to twenty,
NOTE Confidence: 0.98965424

00:06:47.740 --> 00:06:49.020 forty, you can see in
NOTE Confidence: 0.98965424

00:06:49.020 --> 00:06:50.300 the in the corners here,
NOTE Confidence: 0.98965424

00:06:50.300 --> 00:06:51.199 the rates of
NOTE Confidence: 0.9930671

00:06:51.555 --> 00:06:53.555 prostate cancer will double. So
NOTE Confidence: 0.9930671

00:06:53.555 --> 00:06:54.515 the number of new cases
NOTE Confidence: 0.9930671

00:06:54.515 --> 00:06:55.714 will double, and the number
NOTE Confidence: 0.9930671

00:06:55.714 --> 00:06:57.154 of deaths will increase by
NOTE Confidence: 0.9930671

00:06:57.154 --> 00:06:58.595 eighty five percent. And you

NOTE Confidence: 0.9930671
00:06:58.595 --> 00:06:59.395 can see a lot of
NOTE Confidence: 0.9930671
00:06:59.395 --> 00:07:00.515 it is driven in the
NOTE Confidence: 0.9930671
00:07:00.515 --> 00:07:01.015 orange
NOTE Confidence: 0.9740294
00:07:01.475 --> 00:07:03.335 bars by by East Asia,
NOTE Confidence: 0.99744
00:07:03.635 --> 00:07:04.375 South America,
NOTE Confidence: 0.9522116
00:07:05.650 --> 00:07:07.089 and, and other parts of
NOTE Confidence: 0.9522116
00:07:07.089 --> 00:07:08.289 the world. So we're seeing
NOTE Confidence: 0.9522116
00:07:08.289 --> 00:07:09.750 both an increase in incidence,
NOTE Confidence: 0.9522116
00:07:09.810 --> 00:07:10.470 but also,
NOTE Confidence: 0.9656104
00:07:11.009 --> 00:07:12.449 a significant increase in death
NOTE Confidence: 0.9656104
00:07:12.449 --> 00:07:13.650 rates. And, again, we can
NOTE Confidence: 0.9656104
00:07:13.650 --> 00:07:15.250 debate and discuss some of
NOTE Confidence: 0.9656104
00:07:15.250 --> 00:07:16.930 the underlying causes of this.
NOTE Confidence: 0.9656104
00:07:17.169 --> 00:07:18.050 This is not just a
NOTE Confidence: 0.9656104
00:07:18.050 --> 00:07:19.830 detection issue. This is a
NOTE Confidence: 0.9656104

00:07:19.970 --> 00:07:21.110 a a a true concern,
NOTE Confidence: 0.9656104

00:07:21.305 --> 00:07:22.345 especially in an era where
NOTE Confidence: 0.9656104

00:07:22.345 --> 00:07:23.305 we have so many new
NOTE Confidence: 0.9656104

00:07:23.305 --> 00:07:24.345 therapies, which is what I'm
NOTE Confidence: 0.9656104

00:07:24.345 --> 00:07:26.125 gonna shift my talk to.
NOTE Confidence: 0.99902916

00:07:27.225 --> 00:07:28.605 So I'm gonna talk about
NOTE Confidence: 0.99902916

00:07:28.665 --> 00:07:30.125 five different areas today.
NOTE Confidence: 0.9823654

00:07:30.585 --> 00:07:31.465 I know that's a lot
NOTE Confidence: 0.9823654

00:07:31.465 --> 00:07:33.065 to cover in a forty
NOTE Confidence: 0.9823654

00:07:33.065 --> 00:07:34.345 five, fifty minute talk, but
NOTE Confidence: 0.9823654

00:07:34.345 --> 00:07:35.385 I wanna I'm gonna go
NOTE Confidence: 0.9823654

00:07:35.385 --> 00:07:36.200 through these because I wanted
NOTE Confidence: 0.9823654

00:07:36.200 --> 00:07:37.080 to just give you a
NOTE Confidence: 0.9823654

00:07:37.080 --> 00:07:38.860 sense of how much new
NOTE Confidence: 0.9823654

00:07:38.920 --> 00:07:40.200 information and new data and
NOTE Confidence: 0.9823654

00:07:40.200 --> 00:07:41.740 new treatments are really happening.

NOTE Confidence: 0.9823654
00:07:41.880 --> 00:07:42.760 But I'm gonna start with
NOTE Confidence: 0.9823654
00:07:42.760 --> 00:07:44.140 this idea that screening
NOTE Confidence: 0.8904114
00:07:44.840 --> 00:07:46.440 is bad for prostate cancer.
NOTE Confidence: 0.8904114
00:07:46.440 --> 00:07:47.340 And this is unfortunately
NOTE Confidence: 0.97565126
00:07:47.960 --> 00:07:49.660 something that has, taken
NOTE Confidence: 0.9671991
00:07:50.035 --> 00:07:51.715 hold and may be explaining
NOTE Confidence: 0.9671991
00:07:51.715 --> 00:07:53.315 some of the epidemiologic trends
NOTE Confidence: 0.9671991
00:07:53.315 --> 00:07:54.215 that you're seeing.
NOTE Confidence: 0.9835717
00:07:54.755 --> 00:07:56.355 What is risk adapted screening?
NOTE Confidence: 0.9835717
00:07:56.355 --> 00:07:57.715 Well, I think part of
NOTE Confidence: 0.9835717
00:07:57.715 --> 00:07:58.375 this is,
NOTE Confidence: 0.99911404
00:07:59.555 --> 00:08:01.335 conveyed by a very famous,
NOTE Confidence: 0.937886
00:08:02.035 --> 00:08:03.155 urologist who is a chair
NOTE Confidence: 0.937886
00:08:03.155 --> 00:08:04.675 of urology at, Memorial Sloan
NOTE Confidence: 0.937886
00:08:04.675 --> 00:08:06.090 Kettering for many years, and,
NOTE Confidence: 0.937886

00:08:06.090 --> 00:08:08.010 unfortunately, himself died of prostate

NOTE Confidence: 0.937886

00:08:08.010 --> 00:08:09.050 cancer. But he had a

NOTE Confidence: 0.937886

00:08:09.050 --> 00:08:11.130 lot of, wisdom that he

NOTE Confidence: 0.937886

00:08:11.130 --> 00:08:12.670 would talk about. One was,

NOTE Confidence: 0.937886

00:08:12.890 --> 00:08:14.090 he said, growing old is

NOTE Confidence: 0.937886

00:08:14.090 --> 00:08:15.930 invariably fatal. Prostate cancer is

NOTE Confidence: 0.937886

00:08:15.930 --> 00:08:17.770 less so. This gets to,

NOTE Confidence: 0.937886

00:08:17.770 --> 00:08:19.050 from the nineteen seventies and

NOTE Confidence: 0.937886

00:08:19.050 --> 00:08:20.090 eighties, the idea that not

NOTE Confidence: 0.937886

00:08:20.090 --> 00:08:21.710 all prostate cancers are lethal.

NOTE Confidence: 0.95003

00:08:22.865 --> 00:08:24.065 The other, thing that he

NOTE Confidence: 0.95003

00:08:24.065 --> 00:08:25.825 said is, is cure possible

NOTE Confidence: 0.95003

00:08:25.825 --> 00:08:27.025 for though in those for

NOTE Confidence: 0.95003

00:08:27.025 --> 00:08:28.465 whom it is necessary, and

NOTE Confidence: 0.95003

00:08:28.465 --> 00:08:29.445 is cure necessary

NOTE Confidence: 0.9902854

00:08:29.905 --> 00:08:30.785 for those in whom it

NOTE Confidence: 0.9902854

00:08:30.785 --> 00:08:31.905 is possible? What he's talking

NOTE Confidence: 0.9902854

00:08:31.905 --> 00:08:33.345 about is the heterogeneity of

NOTE Confidence: 0.9902854

00:08:33.345 --> 00:08:34.785 prostate cancer means that some

NOTE Confidence: 0.9902854

00:08:34.785 --> 00:08:36.245 men should be left alone

NOTE Confidence: 0.9935329

00:08:36.630 --> 00:08:37.990 to live their lives without

NOTE Confidence: 0.9935329

00:08:37.990 --> 00:08:39.670 intervention, and other men, no

NOTE Confidence: 0.9935329

00:08:39.670 --> 00:08:40.870 matter what we do, may

NOTE Confidence: 0.9935329

00:08:40.870 --> 00:08:41.990 progress and die of their

NOTE Confidence: 0.9935329

00:08:41.990 --> 00:08:43.190 disease. So when you think

NOTE Confidence: 0.9935329

00:08:43.190 --> 00:08:44.230 of a disease with such

NOTE Confidence: 0.9935329

00:08:44.230 --> 00:08:44.730 heterogeneity,

NOTE Confidence: 0.9990035

00:08:45.270 --> 00:08:46.309 how do we apply the

NOTE Confidence: 0.9990035

00:08:46.309 --> 00:08:47.670 right treatments and the right

NOTE Confidence: 0.9990035

00:08:47.670 --> 00:08:48.870 solutions to each of these

NOTE Confidence: 0.9990035

00:08:48.870 --> 00:08:49.370 patients?

NOTE Confidence: 0.92817897

00:08:50.925 --> 00:08:52.125 So we we wrote an
NOTE Confidence: 0.92817897

00:08:52.125 --> 00:08:53.965 editorial. This is Sigrid Carlson
NOTE Confidence: 0.92817897

00:08:53.965 --> 00:08:55.805 and I really talking about,
NOTE Confidence: 0.9769565

00:08:56.285 --> 00:08:58.045 screening guidelines, and and you
NOTE Confidence: 0.9769565

00:08:58.045 --> 00:08:59.005 don't you're not meant to
NOTE Confidence: 0.9769565

00:08:59.005 --> 00:09:00.365 read this. I can tell
NOTE Confidence: 0.9769565

00:09:00.365 --> 00:09:01.645 you just just that all
NOTE Confidence: 0.9769565

00:09:01.645 --> 00:09:03.485 of the major organizations that
NOTE Confidence: 0.9769565

00:09:03.485 --> 00:09:05.105 actually put out screening guidelines,
NOTE Confidence: 0.9256564

00:09:05.670 --> 00:09:07.510 put out slightly different ones.
NOTE Confidence: 0.9256564

00:09:07.510 --> 00:09:08.890 So this is very complicated
NOTE Confidence: 0.9256564

00:09:09.029 --> 00:09:10.490 and unfortunately on the line.
NOTE Confidence: 0.9256564

00:09:10.550 --> 00:09:12.070 Now most primary care doctors
NOTE Confidence: 0.9256564

00:09:12.070 --> 00:09:13.370 and most insurance companies,
NOTE Confidence: 0.96368635

00:09:13.990 --> 00:09:15.270 fund the recommendations of the
NOTE Confidence: 0.96368635

00:09:15.270 --> 00:09:16.950 US Preventative Services Task Force,

NOTE Confidence: 0.96368635

00:09:16.950 --> 00:09:17.770 but the AUA,

NOTE Confidence: 0.9855115

00:09:18.295 --> 00:09:19.895 the American Cancer Society, the

NOTE Confidence: 0.9855115

00:09:19.895 --> 00:09:21.575 American Society of Clinical Oncology,

NOTE Confidence: 0.9855115

00:09:21.575 --> 00:09:23.015 NCCN, they all put out

NOTE Confidence: 0.9855115

00:09:23.015 --> 00:09:24.455 different guidelines. And you can

NOTE Confidence: 0.9855115

00:09:24.455 --> 00:09:25.655 see if you dig into

NOTE Confidence: 0.9855115

00:09:25.655 --> 00:09:27.975 this editorial that, unfortunately, all

NOTE Confidence: 0.9855115

00:09:27.975 --> 00:09:30.235 of the guidelines differ slightly.

NOTE Confidence: 0.9840974

00:09:30.660 --> 00:09:32.179 And, you know, who's not

NOTE Confidence: 0.9840974

00:09:32.179 --> 00:09:33.220 gonna be confused when you

NOTE Confidence: 0.9840974

00:09:33.220 --> 00:09:34.600 see all of this, variation

NOTE Confidence: 0.9840974

00:09:34.660 --> 00:09:35.620 in terms of the the

NOTE Confidence: 0.9840974

00:09:35.620 --> 00:09:36.120 guidelines?

NOTE Confidence: 0.992596

00:09:37.940 --> 00:09:38.740 So when I joined the

NOTE Confidence: 0.992596

00:09:38.740 --> 00:09:40.260 Prostate Cancer Foundation a few

NOTE Confidence: 0.992596

00:09:40.260 --> 00:09:41.860 years ago, even though I'm
NOTE Confidence: 0.992596

00:09:41.860 --> 00:09:42.839 a medical oncologist
NOTE Confidence: 0.9764657

00:09:43.155 --> 00:09:44.675 and I don't necessarily screen
NOTE Confidence: 0.9764657

00:09:44.675 --> 00:09:45.875 patients, I I asked the
NOTE Confidence: 0.9764657

00:09:45.875 --> 00:09:47.075 question, where can I make
NOTE Confidence: 0.9764657

00:09:47.075 --> 00:09:48.675 the biggest difference in terms
NOTE Confidence: 0.9764657

00:09:48.675 --> 00:09:49.175 of,
NOTE Confidence: 0.9867091

00:09:49.635 --> 00:09:51.555 reducing mortality from from from
NOTE Confidence: 0.9867091

00:09:51.555 --> 00:09:53.155 prostate cancer? So one of
NOTE Confidence: 0.9867091

00:09:53.155 --> 00:09:54.355 the first areas was this
NOTE Confidence: 0.9867091

00:09:54.355 --> 00:09:56.055 concept of risk adapted screening.
NOTE Confidence: 0.9867091

00:09:56.339 --> 00:09:57.220 So we know, as I
NOTE Confidence: 0.9867091

00:09:57.220 --> 00:09:58.600 showed you in that earlier
NOTE Confidence: 0.9867091

00:09:58.740 --> 00:09:59.240 epidemiologic
NOTE Confidence: 0.9826584

00:09:59.620 --> 00:10:01.459 graph, black men are one
NOTE Confidence: 0.9826584

00:10:01.459 --> 00:10:02.579 of the groups that has

NOTE Confidence: 0.9826584

00:10:02.579 --> 00:10:04.019 the highest rate of both

NOTE Confidence: 0.9826584

00:10:04.019 --> 00:10:05.540 diagnosis and death from cancer,

NOTE Confidence: 0.9826584

00:10:05.540 --> 00:10:06.339 and you can see that

NOTE Confidence: 0.9826584

00:10:06.339 --> 00:10:07.699 here. They actually have about

NOTE Confidence: 0.9826584

00:10:07.699 --> 00:10:08.740 a two point two fold

NOTE Confidence: 0.9826584

00:10:08.740 --> 00:10:09.860 higher risk of dying of

NOTE Confidence: 0.9826584

00:10:09.860 --> 00:10:11.635 prostate cancer. They present at

NOTE Confidence: 0.9826584

00:10:11.635 --> 00:10:13.235 younger ages, they have more

NOTE Confidence: 0.9826584

00:10:13.235 --> 00:10:14.355 aggressive disease, and are more

NOTE Confidence: 0.9826584

00:10:14.355 --> 00:10:15.635 likely to be diagnosed with

NOTE Confidence: 0.9826584

00:10:15.635 --> 00:10:16.455 advanced disease.

NOTE Confidence: 0.98629683

00:10:16.835 --> 00:10:18.775 So these racial disparities clearly

NOTE Confidence: 0.98629683

00:10:18.835 --> 00:10:20.275 exist, and this is clearly

NOTE Confidence: 0.98629683

00:10:20.275 --> 00:10:21.735 a population at risk.

NOTE Confidence: 0.98041874

00:10:22.195 --> 00:10:24.115 Now, there's an interesting conversation

NOTE Confidence: 0.98041874

00:10:24.115 --> 00:10:25.654 about the biology and genetics

NOTE Confidence: 0.98041874

00:10:25.714 --> 00:10:27.040 behind this and whether this

NOTE Confidence: 0.98041874

00:10:27.040 --> 00:10:28.580 is truly an access issue,

NOTE Confidence: 0.98041874

00:10:28.800 --> 00:10:30.480 a socioeconomic issue, or if

NOTE Confidence: 0.98041874

00:10:30.480 --> 00:10:32.180 it's truly a biological issue.

NOTE Confidence: 0.98041874

00:10:32.320 --> 00:10:33.360 But the bottom line is

NOTE Confidence: 0.98041874

00:10:33.360 --> 00:10:34.800 the self reported black men

NOTE Confidence: 0.98041874

00:10:34.800 --> 00:10:35.760 have the highest rates of

NOTE Confidence: 0.98041874

00:10:35.760 --> 00:10:37.440 dying of prostate cancer, in

NOTE Confidence: 0.98041874

00:10:37.440 --> 00:10:38.834 the United States and and

NOTE Confidence: 0.98041874

00:10:38.834 --> 00:10:39.814 actually in the world.

NOTE Confidence: 0.9852213

00:10:40.115 --> 00:10:41.154 So what we did was

NOTE Confidence: 0.9852213

00:10:41.154 --> 00:10:42.915 we simply created a,

NOTE Confidence: 0.9730094

00:10:43.394 --> 00:10:44.834 an expert group, a panel

NOTE Confidence: 0.9730094

00:10:44.834 --> 00:10:45.334 here,

NOTE Confidence: 0.9998096

00:10:45.875 --> 00:10:47.254 to review the evidence.

NOTE Confidence: 0.9847621

00:10:47.554 --> 00:10:48.995 Now the issue is that

NOTE Confidence: 0.9847621

00:10:48.995 --> 00:10:50.214 if you try to only,

NOTE Confidence: 0.99674684

00:10:50.675 --> 00:10:52.535 limit that evidence to randomized

NOTE Confidence: 0.9792015

00:10:53.160 --> 00:10:54.860 phase three trials, you'll be,

NOTE Confidence: 0.97611576

00:10:55.399 --> 00:10:57.240 very disappointed because of the

NOTE Confidence: 0.97611576

00:10:57.240 --> 00:10:58.679 three randomized trials that have

NOTE Confidence: 0.97611576

00:10:58.679 --> 00:11:00.120 looked at screening, only five

NOTE Confidence: 0.97611576

00:11:00.120 --> 00:11:01.240 percent of one of the

NOTE Confidence: 0.97611576

00:11:01.240 --> 00:11:03.559 three trials actually had, black

NOTE Confidence: 0.97611576

00:11:03.559 --> 00:11:05.240 men enrolled. So here's a

NOTE Confidence: 0.97611576

00:11:05.240 --> 00:11:07.079 high risk population who have

NOTE Confidence: 0.97611576

00:11:07.079 --> 00:11:08.425 just not been studied. So

NOTE Confidence: 0.97611576

00:11:08.425 --> 00:11:09.625 is the absence of evidence,

NOTE Confidence: 0.97611576

00:11:09.625 --> 00:11:10.505 does that mean that we

NOTE Confidence: 0.97611576

00:11:10.505 --> 00:11:12.585 shouldn't actually make recommendations that

NOTE Confidence: 0.97611576

00:11:12.585 --> 00:11:14.665 directly impact this population? And
NOTE Confidence: 0.97611576

00:11:14.665 --> 00:11:15.945 we decided no. We said
NOTE Confidence: 0.97611576

00:11:15.945 --> 00:11:16.985 we were gonna look at
NOTE Confidence: 0.97611576

00:11:16.985 --> 00:11:18.184 all the evidence, but include
NOTE Confidence: 0.97611576

00:11:18.184 --> 00:11:19.245 evidence that included
NOTE Confidence: 0.998521

00:11:19.545 --> 00:11:21.645 modeling evidence and observational data.
NOTE Confidence: 0.91697073

00:11:22.660 --> 00:11:23.780 So this paper was published
NOTE Confidence: 0.91697073

00:11:23.780 --> 00:11:25.220 in the NEJM Evidence last
NOTE Confidence: 0.91697073

00:11:25.220 --> 00:11:26.740 year, and it asked six
NOTE Confidence: 0.91697073

00:11:26.740 --> 00:11:28.340 questions. You know, should black
NOTE Confidence: 0.91697073

00:11:28.340 --> 00:11:29.240 men be screened?
NOTE Confidence: 0.92855287

00:11:29.540 --> 00:11:30.660 What should they know about
NOTE Confidence: 0.92855287

00:11:30.660 --> 00:11:32.179 screening? At what age and
NOTE Confidence: 0.92855287

00:11:32.179 --> 00:11:33.300 so on? And I'm not
NOTE Confidence: 0.92855287

00:11:33.300 --> 00:11:34.740 gonna go into detail about
NOTE Confidence: 0.92855287

00:11:34.740 --> 00:11:35.720 all this, but, basically,

NOTE Confidence: 0.9980646
00:11:36.125 --> 00:11:37.245 most men are recommended to
NOTE Confidence: 0.9980646
00:11:37.245 --> 00:11:38.204 have screening at the age
NOTE Confidence: 0.9980646
00:11:38.204 --> 00:11:39.665 of fifty to fifty five.
NOTE Confidence: 0.9719545
00:11:40.365 --> 00:11:41.804 And even though the guidelines
NOTE Confidence: 0.9719545
00:11:41.804 --> 00:11:43.404 have always put a black
NOTE Confidence: 0.9719545
00:11:43.404 --> 00:11:45.024 man into an asterisk category,
NOTE Confidence: 0.9719545
00:11:45.084 --> 00:11:45.885 we took it out of
NOTE Confidence: 0.9719545
00:11:45.885 --> 00:11:46.925 the asterisk, and we just
NOTE Confidence: 0.9719545
00:11:46.925 --> 00:11:48.445 basically said black men should
NOTE Confidence: 0.9719545
00:11:48.445 --> 00:11:49.964 get a baseline PSA between
NOTE Confidence: 0.9719545
00:11:49.964 --> 00:11:50.925 the ages of forty and
NOTE Confidence: 0.9719545
00:11:50.925 --> 00:11:52.199 forty five, and they should
NOTE Confidence: 0.9719545
00:11:52.199 --> 00:11:53.800 also get annual screening. I
NOTE Confidence: 0.9719545
00:11:53.800 --> 00:11:55.100 think there's a real opportunity,
NOTE Confidence: 0.9273393
00:11:55.879 --> 00:11:56.779 certainly nationally,
NOTE Confidence: 0.9773639

00:11:57.160 --> 00:11:59.240 but also here, within the,
NOTE Confidence: 0.9773639

00:11:59.639 --> 00:12:00.920 the Yale network to really
NOTE Confidence: 0.9773639

00:12:00.920 --> 00:12:01.879 think about how we can
NOTE Confidence: 0.9773639

00:12:01.879 --> 00:12:03.399 have an impact on on
NOTE Confidence: 0.9773639

00:12:03.399 --> 00:12:04.279 patients who are at the
NOTE Confidence: 0.9773639

00:12:04.279 --> 00:12:06.055 highest risk of both getting
NOTE Confidence: 0.9773639

00:12:06.055 --> 00:12:07.495 prostate cancer but also dying
NOTE Confidence: 0.9773639

00:12:07.495 --> 00:12:08.235 of it.
NOTE Confidence: 0.94340134

00:12:09.735 --> 00:12:11.575 But as I mentioned earlier,
NOTE Confidence: 0.94340134

00:12:11.575 --> 00:12:12.855 some of the challenges here
NOTE Confidence: 0.94340134

00:12:12.855 --> 00:12:13.655 are how do we actually
NOTE Confidence: 0.94340134

00:12:13.655 --> 00:12:14.795 deliver this care.
NOTE Confidence: 0.9844502

00:12:15.495 --> 00:12:17.355 So, when I left PCF,
NOTE Confidence: 0.978293

00:12:18.135 --> 00:12:19.490 really, it was to, as
NOTE Confidence: 0.978293

00:12:19.490 --> 00:12:20.610 I thought about coming back
NOTE Confidence: 0.978293

00:12:20.610 --> 00:12:22.149 to an academic medical center,

NOTE Confidence: 0.978293

00:12:22.209 --> 00:12:23.649 it really requires this kind

NOTE Confidence: 0.978293

00:12:23.649 --> 00:12:25.490 of partnership, really community leaders

NOTE Confidence: 0.978293

00:12:25.490 --> 00:12:27.329 and academic centers. And I

NOTE Confidence: 0.978293

00:12:27.329 --> 00:12:28.529 think that, one of the

NOTE Confidence: 0.978293

00:12:28.529 --> 00:12:30.370 organizations that I've been fortunate

NOTE Confidence: 0.978293

00:12:30.370 --> 00:12:31.455 to be asked to to

NOTE Confidence: 0.978293

00:12:31.455 --> 00:12:32.835 join and lead is the

NOTE Confidence: 0.978293

00:12:32.895 --> 00:12:34.995 ACS National Prostate Cancer Roundtable.

NOTE Confidence: 0.9895652

00:12:35.775 --> 00:12:37.135 And the idea really is

NOTE Confidence: 0.9895652

00:12:37.135 --> 00:12:38.335 to think about projects that

NOTE Confidence: 0.9895652

00:12:38.335 --> 00:12:39.875 will actually impact,

NOTE Confidence: 0.9826347

00:12:40.415 --> 00:12:41.615 the disease in the exact

NOTE Confidence: 0.9826347

00:12:41.615 --> 00:12:42.655 way that I I first

NOTE Confidence: 0.9826347

00:12:42.655 --> 00:12:44.115 started when I joined PCF.

NOTE Confidence: 0.98943174

00:12:44.709 --> 00:12:45.990 And so this started in

NOTE Confidence: 0.98943174

00:12:45.990 --> 00:12:47.110 September. More to come on

NOTE Confidence: 0.98943174

00:12:47.110 --> 00:12:48.550 this, and I'd love to

NOTE Confidence: 0.98943174

00:12:48.550 --> 00:12:49.910 interact with the community here

NOTE Confidence: 0.98943174

00:12:49.910 --> 00:12:50.870 to think about ways in

NOTE Confidence: 0.98943174

00:12:50.870 --> 00:12:51.929 which we can actually,

NOTE Confidence: 0.9713755

00:12:52.550 --> 00:12:54.070 address this at risk population.

NOTE Confidence: 0.9713755

00:12:54.070 --> 00:12:55.190 There are other at risk

NOTE Confidence: 0.9713755

00:12:55.190 --> 00:12:56.630 populations. For example, those with

NOTE Confidence: 0.9713755

00:12:56.630 --> 00:12:57.830 a family history or genetic

NOTE Confidence: 0.9713755

00:12:57.830 --> 00:12:59.215 risk, Not gonna have a

NOTE Confidence: 0.9713755

00:12:59.215 --> 00:13:00.255 chance to talk about that

NOTE Confidence: 0.9713755

00:13:00.255 --> 00:13:01.695 today, but I think that

NOTE Confidence: 0.9713755

00:13:01.695 --> 00:13:03.695 implementation is key. You can

NOTE Confidence: 0.9713755

00:13:03.695 --> 00:13:04.655 get all the great drugs

NOTE Confidence: 0.9713755

00:13:04.655 --> 00:13:05.535 in the world. You can

NOTE Confidence: 0.9713755

00:13:05.535 --> 00:13:06.655 have all these fancy new

NOTE Confidence: 0.9713755
00:13:06.655 --> 00:13:08.335 bi diagnostic tests. But if
NOTE Confidence: 0.9713755
00:13:08.335 --> 00:13:09.235 patients who
NOTE Confidence: 0.8931736
00:13:09.615 --> 00:13:11.075 can have access to a
NOTE Confidence: 0.97807413
00:13:11.450 --> 00:13:12.890 basic basically, a fifty dollar
NOTE Confidence: 0.97807413
00:13:12.890 --> 00:13:14.730 test can actually learn if
NOTE Confidence: 0.97807413
00:13:14.730 --> 00:13:16.170 they might have, a lethal
NOTE Confidence: 0.97807413
00:13:16.170 --> 00:13:17.450 cancer, I think that the
NOTE Confidence: 0.97807413
00:13:17.450 --> 00:13:18.490 answer is to try to
NOTE Confidence: 0.97807413
00:13:18.490 --> 00:13:19.550 to find those patients.
NOTE Confidence: 0.9858877
00:13:20.890 --> 00:13:22.250 Okay. So we're gonna switch
NOTE Confidence: 0.9858877
00:13:22.250 --> 00:13:24.170 to, more advanced disease. And,
NOTE Confidence: 0.9858877
00:13:24.170 --> 00:13:25.130 of course, this is the
NOTE Confidence: 0.9858877
00:13:25.130 --> 00:13:26.750 other way in which patients
NOTE Confidence: 0.9746536
00:13:27.075 --> 00:13:28.515 progress and unfortunately die of
NOTE Confidence: 0.9746536
00:13:28.515 --> 00:13:29.395 the disease. And I'm gonna
NOTE Confidence: 0.9746536

00:13:29.395 --> 00:13:30.995 first talk about androgen receptor
NOTE Confidence: 0.9746536

00:13:30.995 --> 00:13:32.755 pathway inhibitors, what I call
NOTE Confidence: 0.9746536

00:13:32.755 --> 00:13:33.875 the first targeted therapy. You
NOTE Confidence: 0.9746536

00:13:33.875 --> 00:13:35.075 know, we talk about targeted
NOTE Confidence: 0.9746536

00:13:35.075 --> 00:13:36.275 therapy now. We have all
NOTE Confidence: 0.9746536

00:13:36.275 --> 00:13:37.015 these fancy,
NOTE Confidence: 0.96031207

00:13:37.635 --> 00:13:39.655 biomarkers. But in truth, androgen
NOTE Confidence: 0.96031207

00:13:39.715 --> 00:13:40.215 receptor
NOTE Confidence: 0.9875076

00:13:41.120 --> 00:13:42.079 is one of the key
NOTE Confidence: 0.9875076

00:13:42.079 --> 00:13:42.480 first,
NOTE Confidence: 0.96461713

00:13:42.959 --> 00:13:43.459 pathways.
NOTE Confidence: 0.9959812

00:13:43.839 --> 00:13:44.720 And you can see here
NOTE Confidence: 0.9959812

00:13:44.720 --> 00:13:45.220 that,
NOTE Confidence: 0.98349124

00:13:45.600 --> 00:13:47.059 in pink are four,
NOTE Confidence: 0.94820046

00:13:47.519 --> 00:13:48.559 what we call ARPs or
NOTE Confidence: 0.94820046

00:13:48.559 --> 00:13:50.399 androgen receptor pathway inhibitors that

NOTE Confidence: 0.94820046
00:13:50.399 --> 00:13:52.000 are proven to improve survival
NOTE Confidence: 0.94820046
00:13:52.000 --> 00:13:53.699 in multiple disease states within
NOTE Confidence: 0.94820046
00:13:53.759 --> 00:13:55.360 the treatment landscape of prostate
NOTE Confidence: 0.94820046
00:13:55.360 --> 00:13:55.860 cancer.
NOTE Confidence: 0.9763691
00:13:56.865 --> 00:13:58.304 But this history goes back
NOTE Confidence: 0.9763691
00:13:58.304 --> 00:13:59.105 many years. In fact, there
NOTE Confidence: 0.9763691
00:13:59.105 --> 00:13:59.825 have been at least two
NOTE Confidence: 0.9763691
00:13:59.825 --> 00:14:01.585 Nobel prizes awarded for the
NOTE Confidence: 0.9763691
00:14:01.585 --> 00:14:03.105 discovery that androgen was a
NOTE Confidence: 0.9763691
00:14:03.105 --> 00:14:04.785 driver of prostate cancer. Now
NOTE Confidence: 0.9763691
00:14:04.785 --> 00:14:06.145 in twenty twenty five, we
NOTE Confidence: 0.9763691
00:14:06.145 --> 00:14:07.605 think it's obvious that androgen
NOTE Confidence: 0.9763691
00:14:07.665 --> 00:14:09.425 drives prostate cancer. But back
NOTE Confidence: 0.9763691
00:14:09.425 --> 00:14:11.045 when, doctor Huggins
NOTE Confidence: 0.9961234
00:14:11.429 --> 00:14:12.570 first did orchiectomies,
NOTE Confidence: 0.98934466

00:14:13.190 --> 00:14:14.870 in patients with metastatic prostate

NOTE Confidence: 0.98934466

00:14:14.870 --> 00:14:16.090 cancer, it was not obvious

NOTE Confidence: 0.98934466

00:14:16.309 --> 00:14:17.670 that prostate cancer was driven

NOTE Confidence: 0.98934466

00:14:17.670 --> 00:14:19.770 by testosterone and and androgen

NOTE Confidence: 0.98934466

00:14:19.830 --> 00:14:20.330 receptor.

NOTE Confidence: 0.97857165

00:14:20.710 --> 00:14:21.830 And this is a long

NOTE Confidence: 0.97857165

00:14:21.830 --> 00:14:22.870 history. The second,

NOTE Confidence: 0.95166415

00:14:23.510 --> 00:14:24.550 Nobel Prize, by the way,

NOTE Confidence: 0.95166415

00:14:24.550 --> 00:14:26.505 was for the chemical synthesis

NOTE Confidence: 0.95166415

00:14:26.505 --> 00:14:27.325 of LHRH.

NOTE Confidence: 0.9847934

00:14:27.785 --> 00:14:28.904 And the idea here really

NOTE Confidence: 0.9847934

00:14:28.904 --> 00:14:30.185 is that this is a

NOTE Confidence: 0.9847934

00:14:30.185 --> 00:14:32.105 big disease for which this

NOTE Confidence: 0.9847934

00:14:32.105 --> 00:14:34.105 observation has not only led

NOTE Confidence: 0.9847934

00:14:34.105 --> 00:14:35.404 to a long standing

NOTE Confidence: 0.92212045

00:14:35.705 --> 00:14:37.065 treatment, which we still use,

NOTE Confidence: 0.92212045
00:14:37.065 --> 00:14:38.285 so we don't use orchiectomy
NOTE Confidence: 0.9649085
00:14:38.585 --> 00:14:39.840 here in the United States.
NOTE Confidence: 0.9649085
00:14:39.840 --> 00:14:41.360 It's still used worldwide as
NOTE Confidence: 0.9649085
00:14:41.360 --> 00:14:42.960 a very inexpensive way to
NOTE Confidence: 0.9649085
00:14:42.960 --> 00:14:44.320 deprive the cancer of its
NOTE Confidence: 0.9649085
00:14:44.320 --> 00:14:46.480 ligand. But LHRH agonists and
NOTE Confidence: 0.9649085
00:14:46.480 --> 00:14:48.000 antagonists remain a mainstay of
NOTE Confidence: 0.9649085
00:14:48.000 --> 00:14:49.860 treatment, basically, androgen deprivation.
NOTE Confidence: 0.9617703
00:14:51.120 --> 00:14:52.400 But what really have we
NOTE Confidence: 0.9617703
00:14:52.400 --> 00:14:53.840 learned, when I started in
NOTE Confidence: 0.9617703
00:14:53.840 --> 00:14:54.960 this field, we said, you
NOTE Confidence: 0.9617703
00:14:54.960 --> 00:14:56.204 know what? We we gave
NOTE Confidence: 0.9617703
00:14:56.204 --> 00:14:58.045 the patient luproliide. Their testosterone
NOTE Confidence: 0.9617703
00:14:58.045 --> 00:14:59.485 went down. We're done. We've
NOTE Confidence: 0.9617703
00:14:59.485 --> 00:15:01.404 maximized it. It turned out
NOTE Confidence: 0.9617703

00:15:01.404 --> 00:15:02.764 that we were completely wrong.
NOTE Confidence: 0.9617703

00:15:02.764 --> 00:15:03.805 And the reason we were
NOTE Confidence: 0.9617703

00:15:03.805 --> 00:15:05.584 completely wrong is that androgen
NOTE Confidence: 0.9617703

00:15:05.725 --> 00:15:07.084 continued to be an important
NOTE Confidence: 0.9617703

00:15:07.084 --> 00:15:08.384 driver of these cancers.
NOTE Confidence: 0.9958394

00:15:08.845 --> 00:15:10.410 And we now know that
NOTE Confidence: 0.9958394

00:15:10.410 --> 00:15:11.290 there are at least,
NOTE Confidence: 0.9993367

00:15:12.010 --> 00:15:13.790 four drugs in this category
NOTE Confidence: 0.9179207

00:15:14.250 --> 00:15:16.410 of ARPII that block the
NOTE Confidence: 0.9179207

00:15:16.410 --> 00:15:18.730 continued signaling of an androgen
NOTE Confidence: 0.9179207

00:15:18.730 --> 00:15:20.250 in these cancer cells. And
NOTE Confidence: 0.9179207

00:15:20.250 --> 00:15:21.870 they are listed here, abiraterone,
NOTE Confidence: 0.9755524

00:15:22.515 --> 00:15:24.455 apalutamide, darolutamide, and enzalutamide.
NOTE Confidence: 0.9771298

00:15:24.835 --> 00:15:26.055 We also know that chemotherapy
NOTE Confidence: 0.9771298

00:15:26.275 --> 00:15:27.635 has an impact when these
NOTE Confidence: 0.9771298

00:15:27.635 --> 00:15:29.155 cancers first present. We we've

NOTE Confidence: 0.9771298

00:15:29.155 --> 00:15:30.355 known that for a while,

NOTE Confidence: 0.9771298

00:15:30.355 --> 00:15:31.315 but in fact, when you

NOTE Confidence: 0.9771298

00:15:31.315 --> 00:15:32.695 move it early into the

NOTE Confidence: 0.9771298

00:15:32.835 --> 00:15:33.335 presentation

NOTE Confidence: 0.97844785

00:15:33.715 --> 00:15:35.769 of metastatic prostate cancer, you

NOTE Confidence: 0.97844785

00:15:35.769 --> 00:15:37.790 can target this heterogeneity. Heterogeneity

NOTE Confidence: 0.97844785

00:15:38.010 --> 00:15:39.690 implies that these cancer cells

NOTE Confidence: 0.97844785

00:15:39.690 --> 00:15:41.610 are not uniform monoclonal like

NOTE Confidence: 0.97844785

00:15:41.610 --> 00:15:43.209 some leukemias may be. There

NOTE Confidence: 0.97844785

00:15:43.209 --> 00:15:44.570 are these different colored cancer

NOTE Confidence: 0.97844785

00:15:44.570 --> 00:15:45.070 cells.

NOTE Confidence: 0.9861781

00:15:45.529 --> 00:15:46.490 They're not really colored in

NOTE Confidence: 0.9861781

00:15:46.490 --> 00:15:48.170 real life, but, but they

NOTE Confidence: 0.9861781

00:15:48.170 --> 00:15:50.110 are driven by different driver

NOTE Confidence: 0.9931138

00:15:50.415 --> 00:15:52.675 mutations or abnormalities or sensitivity

NOTE Confidence: 0.9931138

00:15:52.735 --> 00:15:53.875 to androgen signaling.
NOTE Confidence: 0.9775627

00:15:54.255 --> 00:15:55.295 And if you have a
NOTE Confidence: 0.9775627

00:15:55.295 --> 00:15:57.795 better androgen androgen signaling inhibitor,
NOTE Confidence: 0.95342714

00:15:58.334 --> 00:15:59.695 or chemotherapy that you can
NOTE Confidence: 0.95342714

00:15:59.695 --> 00:16:01.135 actually improve survival in these
NOTE Confidence: 0.95342714

00:16:01.135 --> 00:16:01.635 patients.
NOTE Confidence: 0.9730137

00:16:02.015 --> 00:16:02.894 And there have now been
NOTE Confidence: 0.9730137

00:16:02.894 --> 00:16:04.894 eleven prospective clinical trials. This
NOTE Confidence: 0.9730137

00:16:04.894 --> 00:16:05.670 is one of the most
NOTE Confidence: 0.9730137

00:16:05.750 --> 00:16:08.089 studied and most effective randomized,
NOTE Confidence: 0.9977755

00:16:09.350 --> 00:16:10.950 stories that exist in modern
NOTE Confidence: 0.9977755

00:16:10.950 --> 00:16:11.450 oncology.
NOTE Confidence: 0.9741112

00:16:11.829 --> 00:16:13.910 Okay? Eleven randomized clinical trials
NOTE Confidence: 0.9741112

00:16:13.910 --> 00:16:15.750 that show survival benefit for
NOTE Confidence: 0.9741112

00:16:15.750 --> 00:16:17.610 combination therapy in metastatic
NOTE Confidence: 0.9792979

00:16:18.055 --> 00:16:19.655 hormone sensitive prostate cancer. So

NOTE Confidence: 0.9792979

00:16:19.655 --> 00:16:21.175 we call this HSBC or

NOTE Confidence: 0.9792979

00:16:21.175 --> 00:16:23.415 hormone sensitive prostate cancer because

NOTE Confidence: 0.9792979

00:16:23.415 --> 00:16:24.295 we know that if we

NOTE Confidence: 0.9792979

00:16:24.295 --> 00:16:25.735 actually deprive these patients of

NOTE Confidence: 0.9792979

00:16:25.735 --> 00:16:27.095 androgen, as I showed you

NOTE Confidence: 0.9792979

00:16:27.095 --> 00:16:28.455 with doctor Huggins, we can

NOTE Confidence: 0.9792979

00:16:28.455 --> 00:16:29.995 put these cancers into remission.

NOTE Confidence: 0.9792979

00:16:30.135 --> 00:16:31.495 But those patients would recur

NOTE Confidence: 0.9792979

00:16:31.495 --> 00:16:32.795 within a year or two.

NOTE Confidence: 0.9792979

00:16:32.850 --> 00:16:33.970 But what we've shown with

NOTE Confidence: 0.9792979

00:16:33.970 --> 00:16:35.250 all of these clinical trials

NOTE Confidence: 0.9792979

00:16:35.250 --> 00:16:36.050 is that if you do

NOTE Confidence: 0.9792979

00:16:36.050 --> 00:16:37.649 doublets where you add an

NOTE Confidence: 0.9792979

00:16:37.649 --> 00:16:39.990 ARPI to androgen deprivation therapy

NOTE Confidence: 0.9792979

00:16:40.209 --> 00:16:41.410 or you do triplets where

NOTE Confidence: 0.9792979

00:16:41.410 --> 00:16:42.690 you add an ARPI plus
NOTE Confidence: 0.9792979

00:16:42.690 --> 00:16:43.190 chemotherapy,
NOTE Confidence: 0.9453917

00:16:43.649 --> 00:16:44.769 that you can actually improve
NOTE Confidence: 0.9453917

00:16:44.769 --> 00:16:45.730 survival, and you can see
NOTE Confidence: 0.9453917

00:16:45.730 --> 00:16:47.190 the hazard ratios there.
NOTE Confidence: 0.9853379

00:16:48.705 --> 00:16:49.825 You can improve survival by
NOTE Confidence: 0.9853379

00:16:49.825 --> 00:16:50.785 up to twenty to forty
NOTE Confidence: 0.9853379

00:16:50.785 --> 00:16:52.145 percent. And all of these
NOTE Confidence: 0.9853379

00:16:52.145 --> 00:16:53.125 studies were positive.
NOTE Confidence: 0.98577297

00:16:53.505 --> 00:16:55.025 So the the question is
NOTE Confidence: 0.98577297

00:16:55.025 --> 00:16:56.305 not if these drugs work.
NOTE Confidence: 0.98577297

00:16:56.305 --> 00:16:57.904 The question is, is there
NOTE Confidence: 0.98577297

00:16:57.904 --> 00:16:59.185 an optimal sequence? Is there
NOTE Confidence: 0.98577297

00:16:59.185 --> 00:17:00.145 one drug better than the
NOTE Confidence: 0.98577297

00:17:00.145 --> 00:17:00.865 other? But we're not gonna
NOTE Confidence: 0.98577297

00:17:00.865 --> 00:17:01.825 talk about that. We're gonna

NOTE Confidence: 0.98577297

00:17:01.825 --> 00:17:02.790 talk about the fact that

NOTE Confidence: 0.98577297

00:17:02.870 --> 00:17:04.309 all of these trials, including

NOTE Confidence: 0.98577297

00:17:04.309 --> 00:17:05.270 one that didn't even make

NOTE Confidence: 0.98577297

00:17:05.270 --> 00:17:06.570 it to this review article

NOTE Confidence: 0.98577297

00:17:06.710 --> 00:17:08.330 and was presented very recently,

NOTE Confidence: 0.99911785

00:17:08.790 --> 00:17:10.230 all show that these drugs

NOTE Confidence: 0.99911785

00:17:10.230 --> 00:17:11.910 should absolutely be used to

NOTE Confidence: 0.99911785

00:17:11.910 --> 00:17:12.809 improve survival.

NOTE Confidence: 0.9934365

00:17:13.590 --> 00:17:14.549 So, you know, when I

NOTE Confidence: 0.9934365

00:17:14.549 --> 00:17:15.690 give talks to patients,

NOTE Confidence: 0.9633452

00:17:16.070 --> 00:17:16.790 you know, I try to

NOTE Confidence: 0.9633452

00:17:16.790 --> 00:17:18.415 make the story simple. Right?

NOTE Confidence: 0.9633452

00:17:18.415 --> 00:17:20.494 So ADT alone, going back

NOTE Confidence: 0.9633452

00:17:20.494 --> 00:17:21.935 to the nineteen forties, androgen

NOTE Confidence: 0.9633452

00:17:21.935 --> 00:17:24.015 deprivation alone, therapy alone was

NOTE Confidence: 0.9633452

00:17:24.015 --> 00:17:25.155 the standard of care.
NOTE Confidence: 0.99552464

00:17:26.415 --> 00:17:27.615 Then in the past few
NOTE Confidence: 0.99552464

00:17:27.615 --> 00:17:28.494 years, if you look at
NOTE Confidence: 0.99552464

00:17:28.494 --> 00:17:30.494 that graphic, we showed that
NOTE Confidence: 0.99552464

00:17:30.494 --> 00:17:30.994 chemotherapy
NOTE Confidence: 0.8663807

00:17:31.375 --> 00:17:31.830 plus,
NOTE Confidence: 0.9309438

00:17:32.470 --> 00:17:34.149 ADT or an r one
NOTE Confidence: 0.9309438

00:17:34.149 --> 00:17:36.570 RP plus, ADT improved survival.
NOTE Confidence: 0.9309438

00:17:36.630 --> 00:17:37.990 So two drugs were better
NOTE Confidence: 0.9309438

00:17:37.990 --> 00:17:38.730 than one.
NOTE Confidence: 0.9944168

00:17:39.990 --> 00:17:41.590 Now the triplets showed that
NOTE Confidence: 0.9944168

00:17:41.590 --> 00:17:42.490 if you add,
NOTE Confidence: 0.99962527

00:17:43.109 --> 00:17:44.010 a third drug
NOTE Confidence: 0.94118536

00:17:44.355 --> 00:17:45.795 together, if you add ADT
NOTE Confidence: 0.94118536

00:17:45.795 --> 00:17:47.575 plus docetaxel on either abiraterone
NOTE Confidence: 0.968707

00:17:47.875 --> 00:17:49.655 or dutasteride, you improve survival.

NOTE Confidence: 0.968707
00:17:49.955 --> 00:17:51.315 So, actually, these two options
NOTE Confidence: 0.968707
00:17:51.315 --> 00:17:52.195 should really be off the
NOTE Confidence: 0.968707
00:17:52.195 --> 00:17:53.715 table now, and you'd be
NOTE Confidence: 0.968707
00:17:53.715 --> 00:17:54.215 surprised.
NOTE Confidence: 0.9846366
00:17:54.755 --> 00:17:55.875 A lot of patients, in
NOTE Confidence: 0.9846366
00:17:55.875 --> 00:17:56.130 fact,
NOTE Confidence: 0.99403197
00:17:56.690 --> 00:17:57.670 do not receive,
NOTE Confidence: 0.96035975
00:17:58.210 --> 00:17:59.810 these three options here. And
NOTE Confidence: 0.96035975
00:17:59.810 --> 00:18:01.590 these options are widely available,
NOTE Confidence: 0.98111635
00:18:01.890 --> 00:18:03.010 and we can talk again
NOTE Confidence: 0.98111635
00:18:03.010 --> 00:18:04.450 about why they're not always
NOTE Confidence: 0.98111635
00:18:04.450 --> 00:18:05.810 used. But sometimes it's the
NOTE Confidence: 0.98111635
00:18:05.810 --> 00:18:07.170 doctors themselves, maybe not in
NOTE Confidence: 0.98111635
00:18:07.170 --> 00:18:08.965 academic centers like ours, but
NOTE Confidence: 0.98111635
00:18:08.965 --> 00:18:10.005 in the community who may
NOTE Confidence: 0.98111635

00:18:10.005 --> 00:18:11.145 or may not appreciate,
NOTE Confidence: 0.99767536

00:18:12.165 --> 00:18:13.485 how important these drugs are
NOTE Confidence: 0.99767536

00:18:13.485 --> 00:18:14.725 in terms of overall survival.
NOTE Confidence: 0.99767536

00:18:14.725 --> 00:18:15.845 If you can live forty
NOTE Confidence: 0.99767536

00:18:15.845 --> 00:18:17.525 percent longer with these treatments,
NOTE Confidence: 0.99767536

00:18:17.525 --> 00:18:18.565 why wouldn't you give these
NOTE Confidence: 0.99767536

00:18:18.565 --> 00:18:19.065 treatments?
NOTE Confidence: 0.97537863

00:18:19.845 --> 00:18:21.465 So they've asked that question
NOTE Confidence: 0.97537863

00:18:21.525 --> 00:18:23.045 in real world studies, and,
NOTE Confidence: 0.98211247

00:18:23.659 --> 00:18:24.779 this includes mostly,
NOTE Confidence: 0.97124195

00:18:25.179 --> 00:18:26.700 US studies, but also studies
NOTE Confidence: 0.97124195

00:18:26.700 --> 00:18:27.820 from other countries. And you
NOTE Confidence: 0.97124195

00:18:27.820 --> 00:18:28.299 can see that,
NOTE Confidence: 0.9566826

00:18:30.140 --> 00:18:31.419 adding one of these drugs,
NOTE Confidence: 0.9566826

00:18:31.419 --> 00:18:32.779 either Dositax or one of
NOTE Confidence: 0.9566826

00:18:32.779 --> 00:18:33.100 these,

NOTE Confidence: 0.82711864

00:18:33.659 --> 00:18:34.619 it's called the RC here,

NOTE Confidence: 0.82711864

00:18:34.619 --> 00:18:35.679 but I mean ARP,

NOTE Confidence: 0.9752967

00:18:36.059 --> 00:18:37.340 the one of these extra

NOTE Confidence: 0.9752967

00:18:37.340 --> 00:18:38.445 drugs improve,

NOTE Confidence: 0.94382197

00:18:39.164 --> 00:18:40.365 were were more likely to

NOTE Confidence: 0.94382197

00:18:40.365 --> 00:18:41.645 be used in white patients,

NOTE Confidence: 0.94382197

00:18:41.645 --> 00:18:43.804 younger patients, in academic centers,

NOTE Confidence: 0.94382197

00:18:43.804 --> 00:18:45.244 and more likely by oncologists

NOTE Confidence: 0.94382197

00:18:45.244 --> 00:18:45.984 and neurologists.

NOTE Confidence: 0.9973159

00:18:46.445 --> 00:18:47.164 But if you look at

NOTE Confidence: 0.9973159

00:18:47.164 --> 00:18:48.605 this graph that was published,

NOTE Confidence: 0.9973159

00:18:48.605 --> 00:18:49.645 it looks like we're doing

NOTE Confidence: 0.9973159

00:18:49.645 --> 00:18:50.605 pretty well. But if in

NOTE Confidence: 0.9973159

00:18:50.605 --> 00:18:51.565 fact, if you actually put

NOTE Confidence: 0.9973159

00:18:51.565 --> 00:18:52.765 it on scale, this is

NOTE Confidence: 0.9973159

00:18:52.765 --> 00:18:53.940 what it really looks like.
NOTE Confidence: 0.9654516

00:18:54.419 --> 00:18:55.539 So we're we're lucky to
NOTE Confidence: 0.9654516

00:18:55.539 --> 00:18:57.059 get to fifty percent. At
NOTE Confidence: 0.9654516

00:18:57.059 --> 00:18:57.859 at at the time this
NOTE Confidence: 0.9654516

00:18:57.859 --> 00:18:58.980 was published, which was just
NOTE Confidence: 0.9654516

00:18:58.980 --> 00:19:00.600 last year, it was only,
NOTE Confidence: 0.9852666

00:19:01.059 --> 00:19:02.500 it was only about, thirty
NOTE Confidence: 0.9852666

00:19:02.500 --> 00:19:03.940 to forty percent were receiving
NOTE Confidence: 0.9852666

00:19:03.940 --> 00:19:05.000 a second drug.
NOTE Confidence: 0.96380764

00:19:05.460 --> 00:19:07.244 Okay. So this again gets
NOTE Confidence: 0.96380764

00:19:07.244 --> 00:19:08.205 to the same point I
NOTE Confidence: 0.96380764

00:19:08.205 --> 00:19:09.665 brought up earlier about implementation.
NOTE Confidence: 0.9961769

00:19:10.205 --> 00:19:11.005 We can get all these
NOTE Confidence: 0.9961769

00:19:11.005 --> 00:19:12.125 great drugs, but if patients
NOTE Confidence: 0.9961769

00:19:12.125 --> 00:19:13.165 aren't receiving it, they're not
NOTE Confidence: 0.9961769

00:19:13.165 --> 00:19:14.625 getting the survival benefit.

NOTE Confidence: 0.9868063
00:19:16.365 --> 00:19:17.565 And I wanna call out,
NOTE Confidence: 0.9868063
00:19:17.885 --> 00:19:19.005 that there are other drugs
NOTE Confidence: 0.9868063
00:19:19.005 --> 00:19:20.525 coming down this pike, including
NOTE Confidence: 0.9868063
00:19:20.525 --> 00:19:20.940 work
NOTE Confidence: 0.9605208
00:19:21.340 --> 00:19:22.619 developed here at Yale by
NOTE Confidence: 0.9605208
00:19:22.619 --> 00:19:23.980 Craig Cruz, the concept of
NOTE Confidence: 0.9605208
00:19:23.980 --> 00:19:24.480 PROTACs,
NOTE Confidence: 0.9457755
00:19:25.019 --> 00:19:26.460 AR degraders, and led by
NOTE Confidence: 0.9457755
00:19:26.460 --> 00:19:27.820 Dan Petrelac in the original
NOTE Confidence: 0.9457755
00:19:27.820 --> 00:19:29.340 clinical trials. And this was
NOTE Confidence: 0.9457755
00:19:29.340 --> 00:19:30.700 pub presented last year at
NOTE Confidence: 0.9457755
00:19:30.700 --> 00:19:31.659 ASCO, and you can see
NOTE Confidence: 0.9457755
00:19:31.659 --> 00:19:32.320 that this,
NOTE Confidence: 0.95240575
00:19:32.700 --> 00:19:34.639 PROTAC that degrades AR,
NOTE Confidence: 0.9815187
00:19:35.054 --> 00:19:36.335 specifically in patients who have,
NOTE Confidence: 0.9815187

00:19:36.734 --> 00:19:38.494 mutations in the ligand binding
NOTE Confidence: 0.9815187

00:19:38.494 --> 00:19:39.695 domain, it's beyond the scope
NOTE Confidence: 0.9815187

00:19:39.695 --> 00:19:41.054 of this discussion. But these
NOTE Confidence: 0.9815187

00:19:41.054 --> 00:19:42.095 are patients who do not
NOTE Confidence: 0.9815187

00:19:42.095 --> 00:19:43.234 respond to the current,
NOTE Confidence: 0.96441925

00:19:43.855 --> 00:19:45.615 AR, PIs that we have
NOTE Confidence: 0.96441925

00:19:45.615 --> 00:19:46.654 at this time. And you
NOTE Confidence: 0.96441925

00:19:46.654 --> 00:19:48.254 can see these waterfall plots,
NOTE Confidence: 0.96441925

00:19:48.254 --> 00:19:49.554 you see quite a dramatic
NOTE Confidence: 0.9731155

00:19:51.000 --> 00:19:52.280 benefit to the use of
NOTE Confidence: 0.9731155

00:19:52.280 --> 00:19:53.880 a degrader. So we're gonna
NOTE Confidence: 0.9731155

00:19:53.880 --> 00:19:55.740 continue to see androgen signaling
NOTE Confidence: 0.9628272

00:19:56.119 --> 00:19:57.720 as an important target for
NOTE Confidence: 0.9628272

00:19:57.720 --> 00:19:59.900 anticancer therapy and prostate cancer.
NOTE Confidence: 0.95382553

00:20:00.440 --> 00:20:01.960 So here's a a story
NOTE Confidence: 0.95382553

00:20:01.960 --> 00:20:03.800 that has evolved over not

NOTE Confidence: 0.95382553
00:20:03.800 --> 00:20:05.080 just a few decades, but
NOTE Confidence: 0.95382553
00:20:05.080 --> 00:20:05.580 over
NOTE Confidence: 0.9792357
00:20:05.905 --> 00:20:07.445 almost a century. We're coming,
NOTE Confidence: 0.9792357
00:20:07.585 --> 00:20:08.565 you know, in the next
NOTE Confidence: 0.9792357
00:20:08.705 --> 00:20:10.145 sixty, seventy, eighty years we've
NOTE Confidence: 0.9792357
00:20:10.145 --> 00:20:11.605 been using these treatments. But,
NOTE Confidence: 0.9792357
00:20:11.825 --> 00:20:12.945 we think we're done, but
NOTE Confidence: 0.9792357
00:20:12.945 --> 00:20:13.905 we keep getting better and
NOTE Confidence: 0.9792357
00:20:13.905 --> 00:20:14.785 better, and you're gonna see
NOTE Confidence: 0.9792357
00:20:14.785 --> 00:20:15.665 more of these drugs in
NOTE Confidence: 0.9792357
00:20:15.665 --> 00:20:16.405 that setting.
NOTE Confidence: 0.9993105
00:20:17.585 --> 00:20:18.625 Okay. So how else can
NOTE Confidence: 0.9993105
00:20:18.625 --> 00:20:19.445 we be better?
NOTE Confidence: 0.9974321
00:20:20.420 --> 00:20:21.859 You know, biomarkers are a
NOTE Confidence: 0.9974321
00:20:21.859 --> 00:20:23.220 hot topic. People talk about
NOTE Confidence: 0.9974321

00:20:23.220 --> 00:20:24.260 it all the time. That
NOTE Confidence: 0.9974321

00:20:24.260 --> 00:20:25.780 is the key to doing
NOTE Confidence: 0.9974321

00:20:25.780 --> 00:20:27.859 better precision medicine. Right? So
NOTE Confidence: 0.9974321

00:20:27.859 --> 00:20:28.660 I'm gonna talk a little
NOTE Confidence: 0.9974321

00:20:28.660 --> 00:20:29.780 bit about the story here
NOTE Confidence: 0.9974321

00:20:29.780 --> 00:20:31.059 in prostate cancer with regard
NOTE Confidence: 0.9974321

00:20:31.059 --> 00:20:33.059 to both molecular biomarkers and
NOTE Confidence: 0.9974321

00:20:33.059 --> 00:20:34.520 PARP inhibitors in particular.
NOTE Confidence: 0.94111985

00:20:36.255 --> 00:20:38.335 So, in this graphic, there's
NOTE Confidence: 0.94111985

00:20:38.335 --> 00:20:39.855 two areas that a biomarker
NOTE Confidence: 0.94111985

00:20:39.935 --> 00:20:41.615 that are biomarker driven, PARP
NOTE Confidence: 0.94111985

00:20:41.615 --> 00:20:42.994 inhibitors and pembrolizumab.
NOTE Confidence: 0.9239735

00:20:43.455 --> 00:20:44.575 And I'll just talk briefly
NOTE Confidence: 0.9239735

00:20:44.575 --> 00:20:45.315 about both.
NOTE Confidence: 0.99753714

00:20:45.695 --> 00:20:46.895 But this is an article
NOTE Confidence: 0.99753714

00:20:46.895 --> 00:20:48.355 from a few years ago

NOTE Confidence: 0.99825996
00:20:49.350 --> 00:20:51.190 that really shows the FDA
NOTE Confidence: 0.99825996
00:20:51.190 --> 00:20:51.690 approvals,
NOTE Confidence: 0.98301965
00:20:52.230 --> 00:20:54.070 over the last twenty years
NOTE Confidence: 0.98301965
00:20:54.070 --> 00:20:55.109 and how many of them
NOTE Confidence: 0.98301965
00:20:55.109 --> 00:20:56.630 are really biomarker driven. You
NOTE Confidence: 0.98301965
00:20:56.630 --> 00:20:57.910 can see that the blue
NOTE Confidence: 0.98301965
00:20:57.910 --> 00:20:59.530 are biomarker driven approvals.
NOTE Confidence: 0.9773381
00:20:59.910 --> 00:21:01.190 And I couldn't find a
NOTE Confidence: 0.9773381
00:21:01.190 --> 00:21:02.630 more recent updated version, but
NOTE Confidence: 0.9773381
00:21:02.630 --> 00:21:04.230 it's probably continued and even
NOTE Confidence: 0.9773381
00:21:04.230 --> 00:21:05.565 more so. And you can
NOTE Confidence: 0.9773381
00:21:05.565 --> 00:21:06.605 see that in in recent
NOTE Confidence: 0.9773381
00:21:06.605 --> 00:21:07.645 years, at least half of
NOTE Confidence: 0.9773381
00:21:07.645 --> 00:21:09.404 all drug approvals by the
NOTE Confidence: 0.9773381
00:21:09.404 --> 00:21:10.465 FDA are actually,
NOTE Confidence: 0.98408085

00:21:11.005 --> 00:21:12.524 have an associated biomarker. And

NOTE Confidence: 0.98408085

00:21:12.524 --> 00:21:13.484 what this really points out

NOTE Confidence: 0.98408085

00:21:13.484 --> 00:21:14.524 is prostate cancer is not

NOTE Confidence: 0.98408085

00:21:14.524 --> 00:21:16.205 prostate cancer. Lung cancer, we

NOTE Confidence: 0.98408085

00:21:16.205 --> 00:21:17.609 know that's the prototypical story.

NOTE Confidence: 0.98408085

00:21:17.609 --> 00:21:19.050 It's not lung cancer. It's

NOTE Confidence: 0.98408085

00:21:19.050 --> 00:21:20.890 EGFR mutated lung cancer or

NOTE Confidence: 0.98408085

00:21:20.890 --> 00:21:21.390 it's,

NOTE Confidence: 0.97886753

00:21:22.250 --> 00:21:22.730 it's,

NOTE Confidence: 0.96360564

00:21:23.210 --> 00:21:24.970 ROS fusion lung cancer. And

NOTE Confidence: 0.96360564

00:21:24.970 --> 00:21:25.850 the same thing is true

NOTE Confidence: 0.96360564

00:21:25.850 --> 00:21:27.690 in prostate cancer except that

NOTE Confidence: 0.96360564

00:21:27.690 --> 00:21:29.230 we have fewer clear biomarkers.

NOTE Confidence: 0.96360564

00:21:29.369 --> 00:21:30.330 But I just this is

NOTE Confidence: 0.96360564

00:21:30.330 --> 00:21:31.950 an interesting paper from,

NOTE Confidence: 0.94140303

00:21:32.515 --> 00:21:34.135 also, from last year from,

NOTE Confidence: 0.9653808

00:21:35.234 --> 00:21:36.595 from a a a prominent

NOTE Confidence: 0.9653808

00:21:36.595 --> 00:21:38.035 group that looked at the

NOTE Confidence: 0.9653808

00:21:38.035 --> 00:21:40.195 rates of molecularly driven treatment

NOTE Confidence: 0.9653808

00:21:40.195 --> 00:21:42.035 decisions. So this concept of

NOTE Confidence: 0.9653808

00:21:42.035 --> 00:21:43.575 targeted precision therapy.

NOTE Confidence: 0.96505964

00:21:43.875 --> 00:21:45.095 And we know that,

NOTE Confidence: 0.97359246

00:21:46.240 --> 00:21:46.740 precision

NOTE Confidence: 0.87440234

00:21:47.679 --> 00:21:48.720 tier one and tier two,

NOTE Confidence: 0.87440234

00:21:49.039 --> 00:21:49.539 mutations

NOTE Confidence: 0.9881627

00:21:50.240 --> 00:21:50.740 represent

NOTE Confidence: 0.93933284

00:21:51.200 --> 00:21:51.700 about,

NOTE Confidence: 0.9557955

00:21:52.080 --> 00:21:54.080 in twenty seventeen represented about

NOTE Confidence: 0.9557955

00:21:54.080 --> 00:21:55.840 nine percent of all patients

NOTE Confidence: 0.9557955

00:21:55.840 --> 00:21:56.340 presenting,

NOTE Confidence: 0.91581804

00:21:56.960 --> 00:21:58.580 across the board, all cancers.

NOTE Confidence: 0.99829733

00:21:58.905 --> 00:21:59.865 And that went up to
NOTE Confidence: 0.99829733

00:21:59.865 --> 00:22:01.625 thirty one point six percent,
NOTE Confidence: 0.99829733

00:22:01.865 --> 00:22:02.845 five years later.
NOTE Confidence: 0.9454348

00:22:03.225 --> 00:22:05.385 Okay? And similarly, the number
NOTE Confidence: 0.9454348

00:22:05.385 --> 00:22:05.625 of,
NOTE Confidence: 0.9924433

00:22:06.505 --> 00:22:07.005 undetermined,
NOTE Confidence: 0.97982013

00:22:08.025 --> 00:22:09.885 drivers or drivers without actionability
NOTE Confidence: 0.97982013

00:22:10.025 --> 00:22:11.405 went down by about half.
NOTE Confidence: 0.97982013

00:22:11.520 --> 00:22:13.119 So you might say, depending
NOTE Confidence: 0.97982013

00:22:13.119 --> 00:22:14.400 on your, you know, point
NOTE Confidence: 0.97982013

00:22:14.400 --> 00:22:15.280 of view in the world,
NOTE Confidence: 0.97982013

00:22:15.280 --> 00:22:16.320 are you a half full
NOTE Confidence: 0.97982013

00:22:16.320 --> 00:22:17.540 or half empty person?
NOTE Confidence: 0.9834286

00:22:18.800 --> 00:22:20.080 Going from nine percent to
NOTE Confidence: 0.9834286

00:22:20.080 --> 00:22:21.440 thirty one percent in just
NOTE Confidence: 0.9834286

00:22:21.440 --> 00:22:22.900 five years is pretty dramatic,

NOTE Confidence: 0.99902153

00:22:23.359 --> 00:22:24.640 but two thirds of patients

NOTE Confidence: 0.99902153

00:22:24.640 --> 00:22:26.420 still don't have actionable mutations

NOTE Confidence: 0.997191

00:22:26.775 --> 00:22:27.895 if you do sequencing of

NOTE Confidence: 0.997191

00:22:27.895 --> 00:22:28.635 their tumors.

NOTE Confidence: 0.9649981

00:22:29.015 --> 00:22:30.215 And this actually this paper

NOTE Confidence: 0.9649981

00:22:30.215 --> 00:22:31.175 came out of Memorial Sloan

NOTE Confidence: 0.9649981

00:22:31.175 --> 00:22:32.695 Kettering. So the question is,

NOTE Confidence: 0.9649981

00:22:32.695 --> 00:22:34.315 in the average community practice,

NOTE Confidence: 0.9649981

00:22:34.535 --> 00:22:35.335 you know, if they're not

NOTE Confidence: 0.9649981

00:22:35.335 --> 00:22:36.455 doing all of the sequencing,

NOTE Confidence: 0.9649981

00:22:36.455 --> 00:22:37.975 are they getting the benefit

NOTE Confidence: 0.9649981

00:22:37.975 --> 00:22:39.355 of these actionable mutations?

NOTE Confidence: 0.99633

00:22:40.550 --> 00:22:41.830 It turns out prostate cancer

NOTE Confidence: 0.99633

00:22:41.830 --> 00:22:42.970 is driven by,

NOTE Confidence: 0.95981437

00:22:43.590 --> 00:22:46.010 molecular alter alterations, most importantly,

NOTE Confidence: 0.95981437

00:22:46.070 --> 00:22:47.609 DNA damage repair mutations
NOTE Confidence: 0.9754063

00:22:47.990 --> 00:22:49.429 or DDR mutations. And you
NOTE Confidence: 0.9754063

00:22:49.429 --> 00:22:50.309 can see here, if you
NOTE Confidence: 0.9754063

00:22:50.309 --> 00:22:51.609 look at the mutations,
NOTE Confidence: 0.9455051

00:22:52.309 --> 00:22:53.670 BRCA two is the most
NOTE Confidence: 0.9455051

00:22:53.670 --> 00:22:55.555 common one. So this sometimes
NOTE Confidence: 0.9455051

00:22:55.555 --> 00:22:57.735 surprises patients because with BRCA,
NOTE Confidence: 0.9455051

00:22:57.875 --> 00:22:59.075 of course, BRCA was named
NOTE Confidence: 0.9455051

00:22:59.075 --> 00:23:00.675 after breast cancer, but this
NOTE Confidence: 0.9455051

00:23:00.675 --> 00:23:02.755 gene in prostate cancer patients
NOTE Confidence: 0.9455051

00:23:02.755 --> 00:23:04.135 is associated with,
NOTE Confidence: 0.979558

00:23:04.675 --> 00:23:06.675 both a worse prognosis, earlier
NOTE Confidence: 0.979558

00:23:06.675 --> 00:23:07.175 diagnosis,
NOTE Confidence: 0.984096

00:23:07.475 --> 00:23:08.695 but also significant,
NOTE Confidence: 0.8640049

00:23:11.390 --> 00:23:12.450 significantly worse outcomes.
NOTE Confidence: 0.9651392

00:23:13.070 --> 00:23:14.109 And and if you look

NOTE Confidence: 0.9651392
00:23:14.109 --> 00:23:15.550 at these, about a quarter
NOTE Confidence: 0.9651392
00:23:15.550 --> 00:23:17.070 of patients with advanced prostate
NOTE Confidence: 0.9651392
00:23:17.070 --> 00:23:19.230 cancer or CRPC, castration resistant
NOTE Confidence: 0.9651392
00:23:19.230 --> 00:23:20.130 prostate cancer,
NOTE Confidence: 0.9900743
00:23:20.430 --> 00:23:20.930 have,
NOTE Confidence: 0.99809974
00:23:21.390 --> 00:23:22.590 a mutation in in one
NOTE Confidence: 0.99809974
00:23:22.590 --> 00:23:23.950 of these DNA damage repair
NOTE Confidence: 0.99809974
00:23:23.950 --> 00:23:24.450 mutations.
NOTE Confidence: 0.98828673
00:23:25.585 --> 00:23:26.785 Fifty percent of those are
NOTE Confidence: 0.98828673
00:23:26.785 --> 00:23:28.225 germline, meaning they inherited it
NOTE Confidence: 0.98828673
00:23:28.225 --> 00:23:29.105 from their mother or father,
NOTE Confidence: 0.98828673
00:23:29.105 --> 00:23:31.265 and fifty percent are, somatic,
NOTE Confidence: 0.98828673
00:23:31.265 --> 00:23:32.945 meaning they developed it, during
NOTE Confidence: 0.98828673
00:23:32.945 --> 00:23:33.605 their lifetime.
NOTE Confidence: 0.96476775
00:23:34.305 --> 00:23:35.265 One of the things that
NOTE Confidence: 0.96476775

00:23:35.265 --> 00:23:36.885 we've learned certainly from preclinical
NOTE Confidence: 0.96476775

00:23:36.945 --> 00:23:38.545 work is that there probably
NOTE Confidence: 0.96476775

00:23:38.545 --> 00:23:40.545 is a synergy between androgen
NOTE Confidence: 0.96476775

00:23:40.545 --> 00:23:42.299 signaling and and blocking androgen
NOTE Confidence: 0.96476775

00:23:42.299 --> 00:23:42.799 signaling
NOTE Confidence: 0.95544046

00:23:43.100 --> 00:23:43.600 and,
NOTE Confidence: 0.9913334

00:23:43.980 --> 00:23:45.500 and these DNA damage repair
NOTE Confidence: 0.9913334

00:23:45.500 --> 00:23:46.000 mutations.
NOTE Confidence: 0.9845103

00:23:47.340 --> 00:23:48.859 And, and so the the
NOTE Confidence: 0.9845103

00:23:48.859 --> 00:23:50.640 the hypothesis based on preclinical
NOTE Confidence: 0.9845103

00:23:50.779 --> 00:23:52.240 work was that combining
NOTE Confidence: 0.9684274

00:23:52.700 --> 00:23:54.375 an ARP with a PARP
NOTE Confidence: 0.9684274

00:23:54.375 --> 00:23:56.615 inhibitor would actually improve outcomes
NOTE Confidence: 0.9684274

00:23:56.615 --> 00:23:58.155 in patients with prostate cancer.
NOTE Confidence: 0.9347372

00:23:58.695 --> 00:24:00.775 So two trials three trials
NOTE Confidence: 0.9347372

00:24:00.775 --> 00:24:02.535 recently about a year ago,

NOTE Confidence: 0.9347372

00:24:02.535 --> 00:24:03.815 actually, a few years ago,

NOTE Confidence: 0.9347372

00:24:03.815 --> 00:24:04.955 have shown that,

NOTE Confidence: 0.945134

00:24:05.415 --> 00:24:06.615 survival is improved if you

NOTE Confidence: 0.945134

00:24:06.615 --> 00:24:08.475 actually combine a PARP inhibitor

NOTE Confidence: 0.945134

00:24:08.535 --> 00:24:08.775 with,

NOTE Confidence: 0.97189033

00:24:09.359 --> 00:24:10.720 one of these androgen receptor

NOTE Confidence: 0.97189033

00:24:10.720 --> 00:24:11.840 pathway inhibitors. And this is

NOTE Confidence: 0.97189033

00:24:11.840 --> 00:24:13.220 one of the studies, PROPEL,

NOTE Confidence: 0.97189033

00:24:13.359 --> 00:24:15.140 which combined olaparib with abiraterone

NOTE Confidence: 0.9510712

00:24:15.600 --> 00:24:16.820 versus, placebo,

NOTE Confidence: 0.99748254

00:24:17.280 --> 00:24:18.100 plus abiraterone.

NOTE Confidence: 0.93297327

00:24:18.800 --> 00:24:20.160 And you can see that

NOTE Confidence: 0.93297327

00:24:20.160 --> 00:24:21.840 particularly in the BRCA sub

NOTE Confidence: 0.93297327

00:24:21.920 --> 00:24:23.859 mutated subset, a very significant

NOTE Confidence: 0.93297327

00:24:24.080 --> 00:24:25.315 improvement, in this case in

NOTE Confidence: 0.93297327

00:24:25.315 --> 00:24:26.135 overall survival.
NOTE Confidence: 0.9664426

00:24:26.515 --> 00:24:27.234 So we know that if
NOTE Confidence: 0.9664426

00:24:27.234 --> 00:24:28.115 you carry one of these
NOTE Confidence: 0.9664426

00:24:28.115 --> 00:24:29.635 mutations, you should be getting
NOTE Confidence: 0.9664426

00:24:29.635 --> 00:24:30.915 a PARP inhibitor. But more
NOTE Confidence: 0.9664426

00:24:30.915 --> 00:24:31.875 importantly, you should be getting
NOTE Confidence: 0.9664426

00:24:31.875 --> 00:24:32.835 it right up front. You
NOTE Confidence: 0.9664426

00:24:32.835 --> 00:24:34.515 shouldn't be getting it later.
NOTE Confidence: 0.9664426

00:24:34.515 --> 00:24:36.315 This this drug was approved,
NOTE Confidence: 0.959693

00:24:36.755 --> 00:24:37.635 quite a number of years
NOTE Confidence: 0.959693

00:24:37.635 --> 00:24:39.315 ago if you progressed after
NOTE Confidence: 0.959693

00:24:39.315 --> 00:24:40.375 a drug like abiraterone.
NOTE Confidence: 0.96205455

00:24:40.890 --> 00:24:42.170 But now this these studies
NOTE Confidence: 0.96205455

00:24:42.170 --> 00:24:43.130 seem to suggest that you
NOTE Confidence: 0.96205455

00:24:43.130 --> 00:24:44.010 should be getting them right
NOTE Confidence: 0.96205455

00:24:44.010 --> 00:24:44.890 up front, right at the

NOTE Confidence: 0.96205455

00:24:44.890 --> 00:24:46.350 time of metastatic disease.

NOTE Confidence: 0.9434669

00:24:47.130 --> 00:24:48.250 And the second study that

NOTE Confidence: 0.9434669

00:24:48.250 --> 00:24:49.290 is really in flight right

NOTE Confidence: 0.9434669

00:24:49.290 --> 00:24:51.070 at this moment is Talopro

NOTE Confidence: 0.9434669

00:24:51.210 --> 00:24:52.890 two. Again, a a different

NOTE Confidence: 0.9434669

00:24:52.890 --> 00:24:54.350 PARP inhibitor called talazoparib,

NOTE Confidence: 0.9745585

00:24:55.255 --> 00:24:57.255 combined with enzalutamide versus placebo

NOTE Confidence: 0.9745585

00:24:57.255 --> 00:24:58.695 plus enzalutamide. Again, a very

NOTE Confidence: 0.9745585

00:24:58.695 --> 00:25:00.554 similar endpoint, which is, radiographic

NOTE Confidence: 0.9745585

00:25:00.695 --> 00:25:02.294 progression free survival. And you

NOTE Confidence: 0.9745585

00:25:02.294 --> 00:25:03.335 can see that in all

NOTE Confidence: 0.9745585

00:25:03.335 --> 00:25:04.794 patients, there is a benefit

NOTE Confidence: 0.9854158

00:25:05.335 --> 00:25:05.835 to,

NOTE Confidence: 0.98443335

00:25:06.455 --> 00:25:07.275 to the combo,

NOTE Confidence: 0.9787059

00:25:08.190 --> 00:25:08.590 but,

NOTE Confidence: 0.9743526

00:25:09.230 --> 00:25:11.549 more significant in HRR or,
NOTE Confidence: 0.9743526

00:25:11.789 --> 00:25:13.250 DDR deficient tumors.
NOTE Confidence: 0.98884857

00:25:13.789 --> 00:25:14.590 They did put out a
NOTE Confidence: 0.98884857

00:25:14.590 --> 00:25:16.029 press release that suggests that
NOTE Confidence: 0.98884857

00:25:16.029 --> 00:25:18.029 maybe this, this combination works
NOTE Confidence: 0.98884857

00:25:18.029 --> 00:25:19.390 in all comers. I think
NOTE Confidence: 0.98884857

00:25:19.390 --> 00:25:20.190 we have to wait and
NOTE Confidence: 0.98884857

00:25:20.190 --> 00:25:21.549 see, when that data is
NOTE Confidence: 0.98884857

00:25:21.549 --> 00:25:22.049 presented.
NOTE Confidence: 0.94197685

00:25:22.705 --> 00:25:23.985 So the FDA has now
NOTE Confidence: 0.94197685

00:25:23.985 --> 00:25:24.485 approved,
NOTE Confidence: 0.9956955

00:25:25.025 --> 00:25:26.385 at least three combinations that
NOTE Confidence: 0.9956955

00:25:26.385 --> 00:25:27.345 are listed here. I didn't
NOTE Confidence: 0.9956955

00:25:27.345 --> 00:25:28.305 show you the third study
NOTE Confidence: 0.9956955

00:25:28.305 --> 00:25:28.965 of niraparib.
NOTE Confidence: 0.95428985

00:25:29.585 --> 00:25:30.865 But what does this mean?

NOTE Confidence: 0.95428985

00:25:30.865 --> 00:25:32.385 This means that in patients

NOTE Confidence: 0.95428985

00:25:32.385 --> 00:25:33.825 certainly with a DNA damage

NOTE Confidence: 0.95428985

00:25:33.825 --> 00:25:34.725 repair mutation,

NOTE Confidence: 0.9246987

00:25:35.185 --> 00:25:37.045 most important one being BRCA

NOTE Confidence: 0.9246987

00:25:37.185 --> 00:25:38.460 one or two, that that

NOTE Confidence: 0.9246987

00:25:38.460 --> 00:25:39.740 these patients should receive a

NOTE Confidence: 0.9246987

00:25:39.740 --> 00:25:41.740 combination of an ARP plus

NOTE Confidence: 0.9246987

00:25:41.740 --> 00:25:42.640 a PARP inhibitor.

NOTE Confidence: 0.99854547

00:25:43.820 --> 00:25:45.020 But similar to the story

NOTE Confidence: 0.99854547

00:25:45.020 --> 00:25:46.240 I've been telling you before,

NOTE Confidence: 0.9653735

00:25:46.700 --> 00:25:48.140 people don't get tested. It

NOTE Confidence: 0.9653735

00:25:48.140 --> 00:25:49.179 is, this is a real

NOTE Confidence: 0.9653735

00:25:49.179 --> 00:25:50.780 world evidence study actually from

NOTE Confidence: 0.9653735

00:25:50.780 --> 00:25:52.275 the Flatiron Group that shows

NOTE Confidence: 0.9653735

00:25:52.275 --> 00:25:53.555 that about sixty percent of

NOTE Confidence: 0.9653735

00:25:53.555 --> 00:25:55.255 patients never get tested
NOTE Confidence: 0.9993274

00:25:55.555 --> 00:25:56.455 for these mutations.
NOTE Confidence: 0.979575

00:25:56.994 --> 00:25:58.355 So as of now, in
NOTE Confidence: 0.979575

00:25:58.355 --> 00:25:59.395 order to be a candidate,
NOTE Confidence: 0.979575

00:25:59.395 --> 00:26:00.275 you have to be tested.
NOTE Confidence: 0.979575

00:26:00.275 --> 00:26:01.075 And you can see that
NOTE Confidence: 0.979575

00:26:01.075 --> 00:26:01.875 there was a little bit
NOTE Confidence: 0.979575

00:26:01.875 --> 00:26:03.395 of a blip down during
NOTE Confidence: 0.979575

00:26:03.395 --> 00:26:05.429 COVID. But in general, about
NOTE Confidence: 0.979575

00:26:05.429 --> 00:26:06.790 six only about forty percent
NOTE Confidence: 0.979575

00:26:06.790 --> 00:26:08.309 of patients nationally get tested
NOTE Confidence: 0.979575

00:26:08.309 --> 00:26:10.010 for DNA damage repair mutations.
NOTE Confidence: 0.979575

00:26:10.309 --> 00:26:11.030 So you if you don't
NOTE Confidence: 0.979575

00:26:11.030 --> 00:26:12.070 get tested, you'll never be
NOTE Confidence: 0.979575

00:26:12.070 --> 00:26:13.030 able to benefit from the
NOTE Confidence: 0.979575

00:26:13.030 --> 00:26:13.530 treatment.

NOTE Confidence: 0.99858284
00:26:15.270 --> 00:26:15.770 Okay.
NOTE Confidence: 0.98554295
00:26:16.635 --> 00:26:17.835 I think, if we haven't
NOTE Confidence: 0.98554295
00:26:17.835 --> 00:26:19.855 had a PSMA PET talk
NOTE Confidence: 0.98554295
00:26:19.915 --> 00:26:21.515 in for this group, I
NOTE Confidence: 0.98554295
00:26:21.515 --> 00:26:22.555 I hope we do have
NOTE Confidence: 0.98554295
00:26:22.555 --> 00:26:24.155 one soon because it's completely
NOTE Confidence: 0.98554295
00:26:24.155 --> 00:26:24.655 transformed
NOTE Confidence: 0.999187
00:26:25.275 --> 00:26:26.395 the way we treat these
NOTE Confidence: 0.999187
00:26:26.395 --> 00:26:27.515 patients. I've been taking care
NOTE Confidence: 0.999187
00:26:27.515 --> 00:26:28.795 of prostate cancer for twenty
NOTE Confidence: 0.999187
00:26:28.795 --> 00:26:30.715 five years. PSMA PET has
NOTE Confidence: 0.999187
00:26:30.715 --> 00:26:31.215 completely
NOTE Confidence: 0.9531023
00:26:31.690 --> 00:26:33.070 changed the way we visualize
NOTE Confidence: 0.9531023
00:26:33.130 --> 00:26:34.730 prostate cancer. Now this is
NOTE Confidence: 0.9531023
00:26:34.730 --> 00:26:36.010 a clinical states model that
NOTE Confidence: 0.9531023

00:26:36.010 --> 00:26:37.690 I've shown many years now.

NOTE Confidence: 0.9531023

00:26:37.690 --> 00:26:38.730 If you start present with

NOTE Confidence: 0.9531023

00:26:38.730 --> 00:26:41.050 clinically localized prostate cancer, you

NOTE Confidence: 0.9531023

00:26:41.050 --> 00:26:43.210 have, radical prostatectomy by doctor

NOTE Confidence: 0.9531023

00:26:43.210 --> 00:26:44.650 Kim and you you're cured

NOTE Confidence: 0.9531023

00:26:44.650 --> 00:26:45.850 or you get radiation and

NOTE Confidence: 0.9531023

00:26:45.850 --> 00:26:47.195 you're cured. But if you

NOTE Confidence: 0.9531023

00:26:47.195 --> 00:26:48.315 aren't and at least a

NOTE Confidence: 0.9531023

00:26:48.315 --> 00:26:49.355 third of patients are not

NOTE Confidence: 0.9531023

00:26:49.355 --> 00:26:49.855 cured,

NOTE Confidence: 0.9827884

00:26:50.155 --> 00:26:51.355 they go through these disease

NOTE Confidence: 0.9827884

00:26:51.355 --> 00:26:52.475 states going from left to

NOTE Confidence: 0.9827884

00:26:52.475 --> 00:26:53.295 right where,

NOTE Confidence: 0.97925055

00:26:53.675 --> 00:26:54.555 where you might have a

NOTE Confidence: 0.97925055

00:26:54.555 --> 00:26:55.994 rising PSA and then you

NOTE Confidence: 0.97925055

00:26:55.994 --> 00:26:57.515 develop metastatic disease like I

NOTE Confidence: 0.97925055
00:26:57.515 --> 00:26:58.635 talked about earlier, which is
NOTE Confidence: 0.97925055
00:26:58.635 --> 00:27:00.075 on the bottom there. At
NOTE Confidence: 0.97925055
00:27:00.075 --> 00:27:01.359 the top, though, there's this
NOTE Confidence: 0.97925055
00:27:01.359 --> 00:27:02.880 interesting state that we defined
NOTE Confidence: 0.97925055
00:27:02.880 --> 00:27:03.619 as nonmetastatic
NOTE Confidence: 0.9518594
00:27:04.240 --> 00:27:05.600 but hormone sensitive and then
NOTE Confidence: 0.9518594
00:27:05.600 --> 00:27:06.880 castration resistant. What does that
NOTE Confidence: 0.9518594
00:27:06.880 --> 00:27:07.619 mean nonmetastatic?
NOTE Confidence: 0.98352695
00:27:08.080 --> 00:27:08.880 Well, it doesn't mean that
NOTE Confidence: 0.98352695
00:27:08.880 --> 00:27:09.919 they don't have metastasis. It
NOTE Confidence: 0.98352695
00:27:09.919 --> 00:27:10.720 means that we can't see
NOTE Confidence: 0.98352695
00:27:10.720 --> 00:27:12.559 it with traditional scans like
NOTE Confidence: 0.98352695
00:27:12.559 --> 00:27:13.945 bone scan and CAT scan.
NOTE Confidence: 0.98352695
00:27:13.945 --> 00:27:15.065 That's really what it means.
NOTE Confidence: 0.98352695
00:27:15.065 --> 00:27:16.285 It means that our imaging
NOTE Confidence: 0.99979657

00:27:16.825 --> 00:27:18.285 was not able to detect
NOTE Confidence: 0.9933126

00:27:18.665 --> 00:27:19.945 what we knew that was,
NOTE Confidence: 0.9933126

00:27:20.185 --> 00:27:21.545 cancer progressing. How do we
NOTE Confidence: 0.9933126

00:27:21.545 --> 00:27:22.665 know that their cancers were
NOTE Confidence: 0.9933126

00:27:22.665 --> 00:27:23.865 progressing? Well, we have a
NOTE Confidence: 0.9933126

00:27:23.865 --> 00:27:25.305 biomarker that I started this
NOTE Confidence: 0.9933126

00:27:25.305 --> 00:27:26.765 whole conversation with PSA
NOTE Confidence: 0.9799366

00:27:27.145 --> 00:27:28.345 that even though it's very
NOTE Confidence: 0.9799366

00:27:28.345 --> 00:27:29.970 controversial as a as a
NOTE Confidence: 0.9799366

00:27:29.970 --> 00:27:30.470 biomarker
NOTE Confidence: 0.98942673

00:27:30.770 --> 00:27:31.270 for,
NOTE Confidence: 0.99891347

00:27:32.690 --> 00:27:34.130 for screening, it is not
NOTE Confidence: 0.99891347

00:27:34.130 --> 00:27:35.570 controversial at all as a
NOTE Confidence: 0.99891347

00:27:35.570 --> 00:27:36.710 biomarker for monitoring.
NOTE Confidence: 0.9888671

00:27:37.090 --> 00:27:38.290 We use it all the
NOTE Confidence: 0.9888671

00:27:38.290 --> 00:27:39.730 time to monitor whether patients

NOTE Confidence: 0.9888671
00:27:39.730 --> 00:27:41.330 are progressing or not. So
NOTE Confidence: 0.9888671
00:27:41.330 --> 00:27:42.554 as I said, we've actually
NOTE Confidence: 0.9888671
00:27:42.554 --> 00:27:43.674 gone through this state where
NOTE Confidence: 0.9888671
00:27:43.674 --> 00:27:44.955 we actually used to use
NOTE Confidence: 0.9888671
00:27:44.955 --> 00:27:46.394 bone scan and CT scan,
NOTE Confidence: 0.9888671
00:27:46.394 --> 00:27:47.835 but we've completely shifted to
NOTE Confidence: 0.9888671
00:27:47.835 --> 00:27:49.115 the use of PET scan
NOTE Confidence: 0.9888671
00:27:49.115 --> 00:27:49.934 with CT.
NOTE Confidence: 0.9522613
00:27:50.475 --> 00:27:51.674 Why? I at least I
NOTE Confidence: 0.9522613
00:27:51.674 --> 00:27:52.475 have. I was on a
NOTE Confidence: 0.9522613
00:27:52.475 --> 00:27:53.914 panel. I was sitting there,
NOTE Confidence: 0.9522613
00:27:53.914 --> 00:27:54.794 and I said, I don't
NOTE Confidence: 0.9522613
00:27:54.794 --> 00:27:56.575 do bone scans anymore. And,
NOTE Confidence: 0.98143893
00:27:57.190 --> 00:27:58.450 you know, prominent urologist,
NOTE Confidence: 0.97479737
00:27:58.990 --> 00:28:00.270 you know, kind of tried
NOTE Confidence: 0.97479737

00:28:00.270 --> 00:28:01.150 to berate me for it.
NOTE Confidence: 0.97479737

00:28:01.150 --> 00:28:02.510 But in truth, if I'm
NOTE Confidence: 0.97479737

00:28:02.510 --> 00:28:03.550 able to get a PSMA
NOTE Confidence: 0.97479737

00:28:03.550 --> 00:28:05.230 PET scan, it is far
NOTE Confidence: 0.97479737

00:28:05.230 --> 00:28:06.750 superior to what information I
NOTE Confidence: 0.97479737

00:28:06.750 --> 00:28:07.630 might get from a bone
NOTE Confidence: 0.97479737

00:28:07.630 --> 00:28:08.130 scan.
NOTE Confidence: 0.9759838

00:28:08.670 --> 00:28:10.770 Now PSMA is an interesting,
NOTE Confidence: 0.9901895

00:28:11.365 --> 00:28:13.365 transmembrane molecule because it's not
NOTE Confidence: 0.9901895

00:28:13.365 --> 00:28:14.645 just an imaging molecule, but
NOTE Confidence: 0.9901895

00:28:14.645 --> 00:28:15.765 it is a therapeutic one
NOTE Confidence: 0.9901895

00:28:15.765 --> 00:28:16.645 as I'll talk about in
NOTE Confidence: 0.9901895

00:28:16.645 --> 00:28:17.225 a second.
NOTE Confidence: 0.9775276

00:28:18.005 --> 00:28:20.164 It's, highly expressed in prostate
NOTE Confidence: 0.9775276

00:28:20.164 --> 00:28:20.664 cancer,
NOTE Confidence: 0.9619466

00:28:21.044 --> 00:28:21.865 but particularly,

NOTE Confidence: 0.9905092
00:28:22.325 --> 00:28:23.525 almost a thousand fold in
NOTE Confidence: 0.9905092
00:28:23.525 --> 00:28:24.585 metastatic disease.
NOTE Confidence: 0.9681257
00:28:24.900 --> 00:28:25.940 And one of the issues
NOTE Confidence: 0.9681257
00:28:25.940 --> 00:28:27.460 is that this this, new
NOTE Confidence: 0.9681257
00:28:27.460 --> 00:28:28.740 imaging agent became, you know,
NOTE Confidence: 0.9681257
00:28:28.740 --> 00:28:30.520 became available relatively recently.
NOTE Confidence: 0.98349375
00:28:30.900 --> 00:28:31.780 And you can see here,
NOTE Confidence: 0.98349375
00:28:31.780 --> 00:28:33.060 I I listed the timing
NOTE Confidence: 0.98349375
00:28:33.060 --> 00:28:34.420 when it became available, twenty
NOTE Confidence: 0.98349375
00:28:34.420 --> 00:28:35.700 twenty, twenty twenty one, twenty
NOTE Confidence: 0.98349375
00:28:35.700 --> 00:28:37.060 twenty three. These are three
NOTE Confidence: 0.98349375
00:28:37.060 --> 00:28:39.080 different types of PSMA reagents.
NOTE Confidence: 0.9873532
00:28:39.525 --> 00:28:40.485 And so in a very
NOTE Confidence: 0.9873532
00:28:40.485 --> 00:28:41.925 short time, we've put a
NOTE Confidence: 0.9873532
00:28:41.925 --> 00:28:42.965 lot of pressure on nuclear
NOTE Confidence: 0.9873532

00:28:42.965 --> 00:28:44.165 medicine to be able to
NOTE Confidence: 0.9873532

00:28:44.165 --> 00:28:45.205 get these scans for our
NOTE Confidence: 0.9873532

00:28:45.205 --> 00:28:46.025 patients because
NOTE Confidence: 0.9888157

00:28:46.325 --> 00:28:47.785 from the point of diagnosis
NOTE Confidence: 0.9888157

00:28:47.925 --> 00:28:48.565 all the way to the
NOTE Confidence: 0.9888157

00:28:48.565 --> 00:28:50.325 point of advanced disease, this
NOTE Confidence: 0.9888157

00:28:50.325 --> 00:28:51.925 is helping guide exactly where
NOTE Confidence: 0.9888157

00:28:51.925 --> 00:28:52.885 the cancer is in a
NOTE Confidence: 0.9888157

00:28:52.885 --> 00:28:54.485 much more sensitive and specific
NOTE Confidence: 0.9888157

00:28:54.485 --> 00:28:55.710 way than we were able
NOTE Confidence: 0.9888157

00:28:55.710 --> 00:28:57.630 to do with, with, imaging
NOTE Confidence: 0.9888157

00:28:57.630 --> 00:28:59.150 like bone scans or or
NOTE Confidence: 0.9888157

00:28:59.150 --> 00:29:00.370 CT scans alone.
NOTE Confidence: 0.99631375

00:29:00.990 --> 00:29:02.130 And, it is,
NOTE Confidence: 0.98797095

00:29:02.670 --> 00:29:04.190 not real it's it's expressed
NOTE Confidence: 0.98797095

00:29:04.190 --> 00:29:05.710 on other organs, particularly the

NOTE Confidence: 0.98797095

00:29:05.710 --> 00:29:07.390 salivary and lacrimal glands. You'll

NOTE Confidence: 0.98797095

00:29:07.390 --> 00:29:08.110 see on some of the

NOTE Confidence: 0.98797095

00:29:08.110 --> 00:29:09.565 images I show you, which

NOTE Confidence: 0.98797095

00:29:09.565 --> 00:29:10.765 is important because of the

NOTE Confidence: 0.98797095

00:29:10.765 --> 00:29:12.205 toxicity of drugs that target

NOTE Confidence: 0.98797095

00:29:12.205 --> 00:29:13.405 it. So they get dry

NOTE Confidence: 0.98797095

00:29:13.405 --> 00:29:14.305 mouth, for example,

NOTE Confidence: 0.99192274

00:29:15.085 --> 00:29:16.365 and the kidneys can also

NOTE Confidence: 0.99192274

00:29:16.365 --> 00:29:18.045 sometimes take up these, some

NOTE Confidence: 0.99192274

00:29:18.045 --> 00:29:19.245 of these drugs. But it

NOTE Confidence: 0.99192274

00:29:19.245 --> 00:29:20.525 is a really important and

NOTE Confidence: 0.99192274

00:29:20.525 --> 00:29:21.505 excellent target.

NOTE Confidence: 0.7525256

00:29:22.685 --> 00:29:23.185 So,

NOTE Confidence: 0.9946351

00:29:25.170 --> 00:29:26.450 so we we do know

NOTE Confidence: 0.9946351

00:29:26.450 --> 00:29:27.990 that that concept of nonmetastatic

NOTE Confidence: 0.9989401

00:29:28.370 --> 00:29:30.230 is a disappearing disease state.

NOTE Confidence: 0.9948809

00:29:30.690 --> 00:29:31.650 So there were drugs that

NOTE Confidence: 0.9948809

00:29:31.650 --> 00:29:32.950 were approved for nonmetastatic

NOTE Confidence: 0.97050184

00:29:33.810 --> 00:29:35.890 castration resistant prostate cancer. But

NOTE Confidence: 0.97050184

00:29:35.890 --> 00:29:36.930 in this study from the

NOTE Confidence: 0.97050184

00:29:36.930 --> 00:29:37.430 UCLA,

NOTE Confidence: 0.94174695

00:29:38.035 --> 00:29:39.395 when they looked at patients

NOTE Confidence: 0.94174695

00:29:39.395 --> 00:29:40.295 who are nonmetastatic,

NOTE Confidence: 0.95198685

00:29:40.915 --> 00:29:41.795 that is they didn't have

NOTE Confidence: 0.95198685

00:29:41.795 --> 00:29:42.755 cancer on a bone or

NOTE Confidence: 0.95198685

00:29:42.755 --> 00:29:44.035 CT scan and they did

NOTE Confidence: 0.95198685

00:29:44.035 --> 00:29:45.175 a PSMA PET,

NOTE Confidence: 0.98815817

00:29:45.635 --> 00:29:46.675 ninety six percent of them

NOTE Confidence: 0.98815817

00:29:46.675 --> 00:29:48.035 were ninety ninety eight percent

NOTE Confidence: 0.98815817

00:29:48.035 --> 00:29:48.915 of them actually had a

NOTE Confidence: 0.98815817

00:29:48.915 --> 00:29:50.435 positive PET scan. So how

NOTE Confidence: 0.98815817
00:29:50.515 --> 00:29:52.035 that's not nonmetastatic. It means
NOTE Confidence: 0.98815817
00:29:52.035 --> 00:29:53.075 that your old scan was
NOTE Confidence: 0.98815817
00:29:53.075 --> 00:29:53.735 no good.
NOTE Confidence: 0.99424726
00:29:54.090 --> 00:29:55.530 And so it is a
NOTE Confidence: 0.99424726
00:29:55.530 --> 00:29:57.049 disappearing disease state in in
NOTE Confidence: 0.99424726
00:29:57.049 --> 00:29:58.350 the advent of the PSMA
NOTE Confidence: 0.99424726
00:29:58.410 --> 00:29:58.910 era.
NOTE Confidence: 0.9996011
00:30:00.010 --> 00:30:01.070 There was a prior
NOTE Confidence: 0.9778338
00:30:01.610 --> 00:30:03.049 test that was available a
NOTE Confidence: 0.9778338
00:30:03.049 --> 00:30:04.510 few years before called fluciclovine.
NOTE Confidence: 0.9778338
00:30:04.730 --> 00:30:06.730 Fluciclovine is interesting because it
NOTE Confidence: 0.9778338
00:30:06.730 --> 00:30:08.265 is a metabolic scan. It's
NOTE Confidence: 0.9778338
00:30:08.345 --> 00:30:10.205 an amino acid, that,
NOTE Confidence: 0.990639
00:30:10.825 --> 00:30:11.785 that was used that we
NOTE Confidence: 0.990639
00:30:11.785 --> 00:30:13.145 were using before PSMA became
NOTE Confidence: 0.990639

00:30:13.145 --> 00:30:14.345 widely available in the United
NOTE Confidence: 0.990639

00:30:14.345 --> 00:30:15.465 States. And this was a
NOTE Confidence: 0.990639

00:30:15.465 --> 00:30:16.765 head to head study comparing
NOTE Confidence: 0.9582556

00:30:17.225 --> 00:30:18.925 PSMA to fluciclovine.
NOTE Confidence: 0.9992606

00:30:19.305 --> 00:30:20.520 And you can see that
NOTE Confidence: 0.9992606

00:30:20.680 --> 00:30:22.520 PSMA was four point eight
NOTE Confidence: 0.9992606

00:30:22.520 --> 00:30:24.280 times more accurate in terms
NOTE Confidence: 0.9992606

00:30:24.280 --> 00:30:25.100 of detecting,
NOTE Confidence: 0.97971153

00:30:26.200 --> 00:30:28.540 detecting prostate cancer. So, again,
NOTE Confidence: 0.9789014

00:30:29.160 --> 00:30:30.600 you can't treat what you
NOTE Confidence: 0.9789014

00:30:30.600 --> 00:30:32.280 can't measure. Right? We have
NOTE Confidence: 0.9789014

00:30:32.280 --> 00:30:33.640 PSA. We can measure that.
NOTE Confidence: 0.9789014

00:30:33.640 --> 00:30:34.905 That's a very simple quick
NOTE Confidence: 0.9789014

00:30:34.905 --> 00:30:35.785 test that we can order
NOTE Confidence: 0.9789014

00:30:35.785 --> 00:30:37.305 on these patients. It's not
NOTE Confidence: 0.9789014

00:30:37.305 --> 00:30:38.425 perfect. It doesn't give us

NOTE Confidence: 0.9789014

00:30:38.425 --> 00:30:39.625 all the information. Certainly doesn't

NOTE Confidence: 0.9789014

00:30:39.625 --> 00:30:41.385 tell us where the cancer

NOTE Confidence: 0.9789014

00:30:41.385 --> 00:30:42.845 is, and that's why PSMA

NOTE Confidence: 0.9613394

00:30:43.545 --> 00:30:44.985 PET in particular has really

NOTE Confidence: 0.9613394

00:30:44.985 --> 00:30:46.105 transformed the way we think

NOTE Confidence: 0.9613394

00:30:46.105 --> 00:30:47.005 about this disease.

NOTE Confidence: 0.9741432

00:30:48.380 --> 00:30:50.139 And, this is a prelude

NOTE Confidence: 0.9741432

00:30:50.139 --> 00:30:51.500 to the the next section

NOTE Confidence: 0.9741432

00:30:51.500 --> 00:30:52.539 of my talk, which is

NOTE Confidence: 0.9741432

00:30:52.539 --> 00:30:53.279 really therapeutics.

NOTE Confidence: 0.9953484

00:30:53.740 --> 00:30:54.620 Because as you see on

NOTE Confidence: 0.9953484

00:30:54.620 --> 00:30:55.419 the left, you can see

NOTE Confidence: 0.9953484

00:30:55.419 --> 00:30:57.120 a patient with metastatic disease

NOTE Confidence: 0.9953484

00:30:57.259 --> 00:30:58.940 who has a positive PSMA

NOTE Confidence: 0.9953484

00:30:58.940 --> 00:30:59.980 PET scan. You can see

NOTE Confidence: 0.9953484

00:30:59.980 --> 00:31:01.179 the the areas in his
NOTE Confidence: 0.9953484

00:31:01.179 --> 00:31:01.679 bone,
NOTE Confidence: 0.9963035

00:31:01.980 --> 00:31:03.015 that light up.
NOTE Confidence: 0.98315716

00:31:03.415 --> 00:31:04.475 You can see the salivary
NOTE Confidence: 0.98315716

00:31:04.535 --> 00:31:05.655 glands up in the upper
NOTE Confidence: 0.98315716

00:31:05.655 --> 00:31:07.015 part of his head, and,
NOTE Confidence: 0.98148185

00:31:07.655 --> 00:31:08.535 and you can also see
NOTE Confidence: 0.98148185

00:31:08.535 --> 00:31:09.655 that his kidneys light up
NOTE Confidence: 0.98148185

00:31:09.655 --> 00:31:10.935 because it's being excreted through
NOTE Confidence: 0.98148185

00:31:10.935 --> 00:31:12.375 the kidneys, and some is,
NOTE Confidence: 0.98148185

00:31:12.535 --> 00:31:13.755 collecting in the bladder.
NOTE Confidence: 0.98232204

00:31:14.135 --> 00:31:15.175 On the right side, you
NOTE Confidence: 0.98232204

00:31:15.175 --> 00:31:15.835 see that,
NOTE Confidence: 0.9838325

00:31:16.370 --> 00:31:17.570 FDG PET, which has been
NOTE Confidence: 0.9838325

00:31:17.570 --> 00:31:18.610 around for many years and
NOTE Confidence: 0.9838325

00:31:18.610 --> 00:31:19.570 and really lights up in

NOTE Confidence: 0.9838325
00:31:19.570 --> 00:31:20.690 the with the advent of
NOTE Confidence: 0.9838325
00:31:20.690 --> 00:31:21.190 glucose
NOTE Confidence: 0.96527976
00:31:21.570 --> 00:31:23.090 and is very useful in
NOTE Confidence: 0.96527976
00:31:23.090 --> 00:31:24.610 diseases like lymphoma and lung
NOTE Confidence: 0.96527976
00:31:24.610 --> 00:31:26.690 cancer because those cancers are
NOTE Confidence: 0.96527976
00:31:26.690 --> 00:31:28.130 very proliferative and use quite
NOTE Confidence: 0.96527976
00:31:28.130 --> 00:31:29.030 a lot of glucose.
NOTE Confidence: 0.9452557
00:31:29.410 --> 00:31:30.630 That that sometimes,
NOTE Confidence: 0.97225523
00:31:31.414 --> 00:31:33.015 in traditionally, FDG PET was
NOTE Confidence: 0.97225523
00:31:33.015 --> 00:31:34.375 not useful in prostate cancer.
NOTE Confidence: 0.97225523
00:31:34.375 --> 00:31:35.654 Traditionally, we haven't used a
NOTE Confidence: 0.97225523
00:31:35.654 --> 00:31:36.455 lot of it, but you
NOTE Confidence: 0.97225523
00:31:36.455 --> 00:31:37.654 can see that, in fact,
NOTE Confidence: 0.97225523
00:31:37.654 --> 00:31:39.095 there are some cancers in
NOTE Confidence: 0.97225523
00:31:39.174 --> 00:31:40.715 including in this patient here
NOTE Confidence: 0.97225523

00:31:40.855 --> 00:31:42.215 where some of the cancer

NOTE Confidence: 0.97225523

00:31:42.215 --> 00:31:44.054 cells do express PSMA, but

NOTE Confidence: 0.97225523

00:31:44.054 --> 00:31:45.640 some don't, and they only

NOTE Confidence: 0.97225523

00:31:45.640 --> 00:31:47.240 express FDG. And that's as

NOTE Confidence: 0.97225523

00:31:47.240 --> 00:31:48.200 you'll see in a minute,

NOTE Confidence: 0.97225523

00:31:48.200 --> 00:31:49.240 that's a real issue as

NOTE Confidence: 0.97225523

00:31:49.240 --> 00:31:50.380 we learn more about,

NOTE Confidence: 0.9678294

00:31:50.920 --> 00:31:52.200 the use of these imaging

NOTE Confidence: 0.9678294

00:31:52.200 --> 00:31:53.020 tech techniques.

NOTE Confidence: 0.9732318

00:31:53.880 --> 00:31:54.920 So the last section of

NOTE Confidence: 0.9732318

00:31:54.920 --> 00:31:56.040 my talk is really gonna,

NOTE Confidence: 0.9732318

00:31:56.360 --> 00:31:57.480 focus on this era of

NOTE Confidence: 0.9732318

00:31:57.480 --> 00:31:59.385 targeted therapy. I already started

NOTE Confidence: 0.9732318

00:31:59.385 --> 00:32:00.985 by saying androgen receptor pathway

NOTE Confidence: 0.9732318

00:32:00.985 --> 00:32:02.345 inhibitors are targeted therapy, and

NOTE Confidence: 0.9732318

00:32:02.345 --> 00:32:04.185 that's true. But in fact,

NOTE Confidence: 0.9732318
00:32:04.185 --> 00:32:05.865 we're moving to, an era
NOTE Confidence: 0.9732318
00:32:05.865 --> 00:32:06.525 of radioligands,
NOTE Confidence: 0.9897077
00:32:07.465 --> 00:32:09.325 bispecifics, and beyond. So,
NOTE Confidence: 0.98042876
00:32:10.025 --> 00:32:11.485 so this is, really
NOTE Confidence: 0.97749364
00:32:11.929 --> 00:32:13.210 in in this case, I'm
NOTE Confidence: 0.97749364
00:32:13.210 --> 00:32:14.330 gonna talk about LU one
NOTE Confidence: 0.97749364
00:32:14.330 --> 00:32:15.390 seven seven PSMA,
NOTE Confidence: 0.96229094
00:32:15.850 --> 00:32:17.210 but we're also gonna talk
NOTE Confidence: 0.96229094
00:32:17.210 --> 00:32:18.570 about all the treatments that
NOTE Confidence: 0.96229094
00:32:18.570 --> 00:32:19.530 I think are are on
NOTE Confidence: 0.96229094
00:32:19.530 --> 00:32:21.130 their way. So this was
NOTE Confidence: 0.96229094
00:32:21.130 --> 00:32:22.570 a, New England Journal paper
NOTE Confidence: 0.96229094
00:32:22.570 --> 00:32:23.929 just three years ago now
NOTE Confidence: 0.96229094
00:32:23.929 --> 00:32:25.150 called the VISION study.
NOTE Confidence: 0.9549279
00:32:25.615 --> 00:32:26.654 And it really shows you
NOTE Confidence: 0.9549279

00:32:26.654 --> 00:32:28.255 how PSMA, in particular a
NOTE Confidence: 0.9549279

00:32:28.255 --> 00:32:29.775 ligand called PSMA six one
NOTE Confidence: 0.9549279

00:32:29.775 --> 00:32:31.455 seven, binds to the cancer
NOTE Confidence: 0.9549279

00:32:31.455 --> 00:32:32.755 cell and delivers
NOTE Confidence: 0.99456245

00:32:33.294 --> 00:32:34.115 a radioactive,
NOTE Confidence: 0.9622645

00:32:34.735 --> 00:32:36.255 payload. In this case, LU
NOTE Confidence: 0.9622645

00:32:36.255 --> 00:32:37.740 one seven seven. That's a
NOTE Confidence: 0.9622645

00:32:37.900 --> 00:32:39.420 a beta particle that is
NOTE Confidence: 0.9622645

00:32:39.420 --> 00:32:41.020 lethal. So remember the imaging
NOTE Confidence: 0.9622645

00:32:41.020 --> 00:32:42.140 I showed you earlier was
NOTE Confidence: 0.9622645

00:32:42.140 --> 00:32:43.020 just to see the pic
NOTE Confidence: 0.9622645

00:32:43.340 --> 00:32:44.460 where the cancer is. But
NOTE Confidence: 0.9622645

00:32:44.460 --> 00:32:45.900 if you put a attach
NOTE Confidence: 0.9622645

00:32:45.900 --> 00:32:46.800 it to a radio,
NOTE Confidence: 0.98274094

00:32:47.260 --> 00:32:48.480 ligand that actually,
NOTE Confidence: 0.9767832

00:32:48.940 --> 00:32:50.460 is in endocytosed by the

NOTE Confidence: 0.9767832
00:32:50.460 --> 00:32:51.820 tumor cell, then it destroys
NOTE Confidence: 0.9767832
00:32:51.820 --> 00:32:52.965 that that cancer cell. That's
NOTE Confidence: 0.9767832
00:32:52.965 --> 00:32:53.924 the idea. So it's like
NOTE Confidence: 0.9767832
00:32:53.924 --> 00:32:55.065 a smart bomb technology
NOTE Confidence: 0.9942823
00:32:55.684 --> 00:32:57.765 to take PSMA and then
NOTE Confidence: 0.9942823
00:32:57.765 --> 00:32:58.265 deliver,
NOTE Confidence: 0.97936326
00:32:59.125 --> 00:33:00.424 a radioactive particle.
NOTE Confidence: 0.97542506
00:33:01.285 --> 00:33:02.405 And this is a trial
NOTE Confidence: 0.97542506
00:33:02.405 --> 00:33:03.605 design. You had to just
NOTE Confidence: 0.97542506
00:33:03.605 --> 00:33:05.625 have one positive PSMA,
NOTE Confidence: 0.97971755
00:33:06.000 --> 00:33:07.200 PET lesion. And we can
NOTE Confidence: 0.97971755
00:33:07.200 --> 00:33:08.000 talk a little bit about
NOTE Confidence: 0.97971755
00:33:08.000 --> 00:33:10.020 the nuances of this, but
NOTE Confidence: 0.97971755
00:33:10.080 --> 00:33:11.120 this makes it very simple.
NOTE Confidence: 0.97971755
00:33:11.120 --> 00:33:12.000 When you're doing a large
NOTE Confidence: 0.97971755

00:33:12.000 --> 00:33:13.920 randomized trials, keep it simple.
NOTE Confidence: 0.97971755

00:33:13.920 --> 00:33:14.800 If you don't keep it
NOTE Confidence: 0.97971755

00:33:14.800 --> 00:33:15.760 simple, it's very hard to
NOTE Confidence: 0.97971755

00:33:15.760 --> 00:33:16.580 accrue patients.
NOTE Confidence: 0.99160683

00:33:17.120 --> 00:33:18.480 And the the advantage of
NOTE Confidence: 0.99160683

00:33:18.480 --> 00:33:19.815 this treatment is that the
NOTE Confidence: 0.99160683

00:33:19.815 --> 00:33:20.695 patients could have had it
NOTE Confidence: 0.99160683

00:33:20.695 --> 00:33:22.054 anywhere. It works wherever the
NOTE Confidence: 0.99160683

00:33:22.054 --> 00:33:23.174 cancer is. It works if
NOTE Confidence: 0.99160683

00:33:23.174 --> 00:33:23.975 it's in the bone, in
NOTE Confidence: 0.99160683

00:33:23.975 --> 00:33:24.855 the lymph nodes, in the
NOTE Confidence: 0.99160683

00:33:24.855 --> 00:33:25.674 liver, anywhere.
NOTE Confidence: 0.99422485

00:33:26.774 --> 00:33:28.154 And the patients were randomized.
NOTE Confidence: 0.97135246

00:33:28.615 --> 00:33:29.575 These are patients who had
NOTE Confidence: 0.97135246

00:33:29.575 --> 00:33:30.934 already received the standard of
NOTE Confidence: 0.97135246

00:33:30.934 --> 00:33:31.815 care at the time, which

NOTE Confidence: 0.97135246

00:33:31.815 --> 00:33:33.755 included chemotherapy with a taxane

NOTE Confidence: 0.9002595

00:33:34.500 --> 00:33:35.880 or, an ARPY,

NOTE Confidence: 0.9858569

00:33:36.340 --> 00:33:37.000 or both.

NOTE Confidence: 0.95971745

00:33:37.300 --> 00:33:38.660 And they were randomized to

NOTE Confidence: 0.95971745

00:33:38.660 --> 00:33:40.180 receive standard of care therapy,

NOTE Confidence: 0.95971745

00:33:40.180 --> 00:33:41.720 which was not further chemotherapy

NOTE Confidence: 0.95971745

00:33:41.780 --> 00:33:44.020 but anything else, versus this,

NOTE Confidence: 0.9792815

00:33:44.580 --> 00:33:45.780 treatment, l u one seven

NOTE Confidence: 0.9792815

00:33:45.780 --> 00:33:46.840 seven six PSMA.

NOTE Confidence: 0.99059695

00:33:47.380 --> 00:33:48.520 And you can see here,

NOTE Confidence: 0.97828686

00:33:48.904 --> 00:33:50.825 on the left, radiographic progression

NOTE Confidence: 0.97828686

00:33:50.825 --> 00:33:51.565 free survival,

NOTE Confidence: 0.96825504

00:33:52.265 --> 00:33:53.705 hazard ratio of point four

NOTE Confidence: 0.96825504

00:33:53.705 --> 00:33:54.205 zero,

NOTE Confidence: 0.9322068

00:33:54.505 --> 00:33:56.105 sixty percent reduction in risk

NOTE Confidence: 0.9322068

00:33:56.105 --> 00:33:57.784 of project progression. But more
NOTE Confidence: 0.9322068

00:33:57.784 --> 00:33:59.784 importantly, overall survival, point six
NOTE Confidence: 0.9322068

00:33:59.784 --> 00:34:01.279 two has a ratio, Forty
NOTE Confidence: 0.9322068

00:34:01.279 --> 00:34:02.980 percent improvement in overall survival.
NOTE Confidence: 0.97346383

00:34:03.360 --> 00:34:04.240 And we have seen some
NOTE Confidence: 0.97346383

00:34:04.240 --> 00:34:06.000 dramatic responses to patients with
NOTE Confidence: 0.97346383

00:34:06.000 --> 00:34:07.679 this treatment. It is, given
NOTE Confidence: 0.97346383

00:34:07.679 --> 00:34:09.280 here, and it is, it
NOTE Confidence: 0.97346383

00:34:09.280 --> 00:34:10.480 has transformed a lot of
NOTE Confidence: 0.97346383

00:34:10.480 --> 00:34:11.140 my patients',
NOTE Confidence: 0.9981853

00:34:11.839 --> 00:34:12.339 lives.
NOTE Confidence: 0.9763749

00:34:13.040 --> 00:34:14.275 It is not curative, at
NOTE Confidence: 0.9763749

00:34:14.275 --> 00:34:15.395 least in the states we're
NOTE Confidence: 0.9763749

00:34:15.395 --> 00:34:16.515 giving. Remember, we're giving it
NOTE Confidence: 0.9763749

00:34:16.515 --> 00:34:17.795 at very late stages right
NOTE Confidence: 0.9763749

00:34:17.795 --> 00:34:18.295 now.

NOTE Confidence: 0.9985785
00:34:18.675 --> 00:34:19.635 So we'll talk a little
NOTE Confidence: 0.9985785
00:34:19.635 --> 00:34:21.235 bit about, what's being done
NOTE Confidence: 0.9985785
00:34:21.235 --> 00:34:22.215 to move it forward.
NOTE Confidence: 0.9886123
00:34:23.395 --> 00:34:24.435 So if you look at
NOTE Confidence: 0.9886123
00:34:24.435 --> 00:34:26.035 PSA response, that's a very
NOTE Confidence: 0.9886123
00:34:26.035 --> 00:34:27.494 common way that we measure
NOTE Confidence: 0.9886123
00:34:27.710 --> 00:34:29.309 how efficacious a treatment is.
NOTE Confidence: 0.9886123
00:34:29.309 --> 00:34:30.349 And you can see that
NOTE Confidence: 0.9886123
00:34:30.349 --> 00:34:31.170 if you use,
NOTE Confidence: 0.9780767
00:34:31.950 --> 00:34:33.309 standard of care alone, about
NOTE Confidence: 0.9780767
00:34:33.309 --> 00:34:34.269 seven percent will have a
NOTE Confidence: 0.9780767
00:34:34.269 --> 00:34:35.730 fifty percent drop in PSA.
NOTE Confidence: 0.9780767
00:34:35.869 --> 00:34:36.829 But if you use this
NOTE Confidence: 0.9780767
00:34:36.829 --> 00:34:38.289 LU one seven seven,
NOTE Confidence: 0.9876847
00:34:38.670 --> 00:34:40.065 it's about forty six percent.
NOTE Confidence: 0.9876847

00:34:40.224 --> 00:34:41.265 So, again, this is not
NOTE Confidence: 0.9876847

00:34:41.265 --> 00:34:42.224 a treatment that works in
NOTE Confidence: 0.9876847

00:34:42.224 --> 00:34:43.185 every patient. We can talk
NOTE Confidence: 0.9876847

00:34:43.185 --> 00:34:44.244 about some of the nuances
NOTE Confidence: 0.9876847

00:34:44.305 --> 00:34:45.425 there, but this is a
NOTE Confidence: 0.9876847

00:34:45.425 --> 00:34:46.464 group of patients who had
NOTE Confidence: 0.9876847

00:34:46.464 --> 00:34:47.665 no other therapy available to
NOTE Confidence: 0.9876847

00:34:47.665 --> 00:34:49.025 them and who were likely
NOTE Confidence: 0.9876847

00:34:49.025 --> 00:34:50.244 to progress and die.
NOTE Confidence: 0.9717007

00:34:51.344 --> 00:34:53.125 And we definitely see exceptional
NOTE Confidence: 0.9717007

00:34:53.185 --> 00:34:54.305 responders. And what you see
NOTE Confidence: 0.9717007

00:34:54.305 --> 00:34:55.410 here in this patient is
NOTE Confidence: 0.9717007

00:34:55.489 --> 00:34:56.450 on the left side, his
NOTE Confidence: 0.9717007

00:34:56.450 --> 00:34:57.089 PSA was,
NOTE Confidence: 0.9536574

00:34:57.650 --> 00:34:59.089 eight hundred and eighty, and
NOTE Confidence: 0.9536574

00:34:59.089 --> 00:35:00.950 he had diffuse bone metastases

NOTE Confidence: 0.9536574

00:35:01.010 --> 00:35:02.069 as you can see there.

NOTE Confidence: 0.9536574

00:35:02.289 --> 00:35:03.809 And within, one month and

NOTE Confidence: 0.9536574

00:35:03.809 --> 00:35:04.770 then three months, which you

NOTE Confidence: 0.9536574

00:35:04.770 --> 00:35:05.569 see on the second to

NOTE Confidence: 0.9536574

00:35:05.569 --> 00:35:07.329 last and last panel, his

NOTE Confidence: 0.9536574

00:35:07.329 --> 00:35:08.289 PSA has gone down to

NOTE Confidence: 0.9536574

00:35:08.289 --> 00:35:10.130 thirty and his bones, his,

NOTE Confidence: 0.9536574

00:35:10.450 --> 00:35:12.194 PET scan is pretty much,

NOTE Confidence: 0.772979

00:35:13.055 --> 00:35:13.555 clear,

NOTE Confidence: 0.988293

00:35:13.934 --> 00:35:15.375 almost completely clear. And we've

NOTE Confidence: 0.988293

00:35:15.375 --> 00:35:16.815 seen some complete responses with

NOTE Confidence: 0.988293

00:35:16.815 --> 00:35:17.555 these treatments.

NOTE Confidence: 0.999734

00:35:17.855 --> 00:35:18.355 So

NOTE Confidence: 0.99924564

00:35:18.734 --> 00:35:20.094 it is a smart way

NOTE Confidence: 0.99924564

00:35:20.094 --> 00:35:21.954 of delivering targeted radiopharmaceutical

NOTE Confidence: 0.9720528

00:35:22.415 --> 00:35:22.915 therapy.
NOTE Confidence: 0.9692561

00:35:23.295 --> 00:35:24.390 But as I mentioned in
NOTE Confidence: 0.9692561

00:35:24.390 --> 00:35:25.829 that earlier graphic where I
NOTE Confidence: 0.9692561

00:35:25.829 --> 00:35:26.950 showed it next to FTG
NOTE Confidence: 0.9692561

00:35:26.950 --> 00:35:28.790 PET, there are still patients,
NOTE Confidence: 0.9692561

00:35:28.790 --> 00:35:30.390 for example, who don't express
NOTE Confidence: 0.9692561

00:35:30.390 --> 00:35:31.750 PSMA. That's what you see
NOTE Confidence: 0.9692561

00:35:31.750 --> 00:35:33.270 in the left panel. Or
NOTE Confidence: 0.9692561

00:35:33.270 --> 00:35:34.950 patients who have discordance between
NOTE Confidence: 0.9692561

00:35:34.950 --> 00:35:36.089 PSMA and FDG,
NOTE Confidence: 0.9622322

00:35:36.545 --> 00:35:37.505 either in bone in the
NOTE Confidence: 0.9622322

00:35:37.505 --> 00:35:38.625 center panels or in the
NOTE Confidence: 0.9622322

00:35:38.625 --> 00:35:39.665 right. And you see I
NOTE Confidence: 0.9622322

00:35:39.665 --> 00:35:41.025 put PSMA at next to
NOTE Confidence: 0.9622322

00:35:41.025 --> 00:35:42.485 FDG in each of these,
NOTE Confidence: 0.9622322

00:35:42.545 --> 00:35:43.505 and you can see that

NOTE Confidence: 0.9622322
00:35:43.505 --> 00:35:45.025 in some patients, the FDG
NOTE Confidence: 0.9622322
00:35:45.025 --> 00:35:46.465 PET is showing tumors that
NOTE Confidence: 0.9622322
00:35:46.465 --> 00:35:47.445 don't make PSMA.
NOTE Confidence: 0.92797405
00:35:48.625 --> 00:35:49.905 This is also as probably
NOTE Confidence: 0.92797405
00:35:49.905 --> 00:35:50.945 a a a a way
NOTE Confidence: 0.92797405
00:35:50.945 --> 00:35:52.325 in which these cancer cells,
NOTE Confidence: 0.95125246
00:35:52.839 --> 00:35:53.640 you know, it's like the
NOTE Confidence: 0.95125246
00:35:53.640 --> 00:35:55.079 terminator. Sometimes you you you
NOTE Confidence: 0.95125246
00:35:55.079 --> 00:35:56.440 shrink them as many as
NOTE Confidence: 0.95125246
00:35:56.440 --> 00:35:57.319 you can, but the cancer
NOTE Confidence: 0.95125246
00:35:57.319 --> 00:35:58.380 cells that recur
NOTE Confidence: 0.9530772
00:35:58.680 --> 00:36:00.280 are don't express PSMA. And
NOTE Confidence: 0.9530772
00:36:00.280 --> 00:36:01.400 and this treatment will not
NOTE Confidence: 0.9530772
00:36:01.400 --> 00:36:02.440 work if your tumor cell
NOTE Confidence: 0.9530772
00:36:02.440 --> 00:36:03.579 does not make PSMA.
NOTE Confidence: 0.99219936

00:36:04.725 --> 00:36:05.925 The side effects are almost
NOTE Confidence: 0.99219936

00:36:05.925 --> 00:36:06.905 what you'd expect.
NOTE Confidence: 0.9973525

00:36:07.685 --> 00:36:08.745 Because it's a radiopharmaceutical,
NOTE Confidence: 0.97528225

00:36:09.605 --> 00:36:10.885 we see bone marrow suppression
NOTE Confidence: 0.97528225

00:36:10.885 --> 00:36:11.625 and fatigue.
NOTE Confidence: 0.96929777

00:36:12.405 --> 00:36:13.445 And the dry mouth is
NOTE Confidence: 0.96929777

00:36:13.445 --> 00:36:15.225 unique to this treatment because
NOTE Confidence: 0.96929777

00:36:15.285 --> 00:36:16.085 as I showed you in
NOTE Confidence: 0.96929777

00:36:16.085 --> 00:36:17.205 some of those graphics, you
NOTE Confidence: 0.96929777

00:36:17.205 --> 00:36:17.864 see this,
NOTE Confidence: 0.9192163

00:36:18.680 --> 00:36:19.980 this uptake in the salivary
NOTE Confidence: 0.9192163

00:36:20.120 --> 00:36:21.180 and, glands.
NOTE Confidence: 0.9828026

00:36:21.800 --> 00:36:22.840 So what about moving this
NOTE Confidence: 0.9828026

00:36:22.840 --> 00:36:24.040 treatment earlier? Like, why are
NOTE Confidence: 0.9828026

00:36:24.040 --> 00:36:25.160 we waiting until after the
NOTE Confidence: 0.9828026

00:36:25.160 --> 00:36:27.000 patient's progressed on chemotherapy and

NOTE Confidence: 0.9828026
00:36:27.000 --> 00:36:28.280 has the amount of disease
NOTE Confidence: 0.9828026
00:36:28.280 --> 00:36:29.720 I showed you? Well, that
NOTE Confidence: 0.9828026
00:36:29.720 --> 00:36:31.480 idea is obviously, moving forward.
NOTE Confidence: 0.9828026
00:36:31.480 --> 00:36:32.360 And this was a study
NOTE Confidence: 0.9828026
00:36:32.360 --> 00:36:34.205 called PSMA four. This is
NOTE Confidence: 0.9828026
00:36:34.205 --> 00:36:35.344 before chemotherapy.
NOTE Confidence: 0.9963772
00:36:35.885 --> 00:36:36.765 And you can see it's
NOTE Confidence: 0.9963772
00:36:36.765 --> 00:36:37.585 the same randomization.
NOTE Confidence: 0.9503776
00:36:37.885 --> 00:36:39.265 You could either get another
NOTE Confidence: 0.9503776
00:36:39.565 --> 00:36:40.605 ARPI or you could get,
NOTE Confidence: 0.9503776
00:36:40.844 --> 00:36:42.445 this LU one seven seven.
NOTE Confidence: 0.9503776
00:36:42.445 --> 00:36:43.165 And you see on the
NOTE Confidence: 0.9503776
00:36:43.165 --> 00:36:44.765 left side a very strong
NOTE Confidence: 0.9503776
00:36:44.765 --> 00:36:45.265 PSMA,
NOTE Confidence: 0.93413395
00:36:47.390 --> 00:36:49.630 PFS benefit. So really a
NOTE Confidence: 0.93413395

00:36:49.630 --> 00:36:50.750 doubling of the time it
NOTE Confidence: 0.93413395

00:36:50.750 --> 00:36:51.730 takes to progress.
NOTE Confidence: 0.9736641

00:36:52.030 --> 00:36:52.830 But on the right side,
NOTE Confidence: 0.9736641

00:36:52.830 --> 00:36:53.950 you don't really see an
NOTE Confidence: 0.9736641

00:36:53.950 --> 00:36:55.630 overall survival benefit. So this
NOTE Confidence: 0.9736641

00:36:55.630 --> 00:36:56.510 is one of the reasons
NOTE Confidence: 0.9736641

00:36:56.510 --> 00:36:57.550 that the FDA has not
NOTE Confidence: 0.9736641

00:36:57.550 --> 00:36:58.590 yet approved this. This study
NOTE Confidence: 0.9736641

00:36:58.590 --> 00:36:59.550 was presented, you can see
NOTE Confidence: 0.9736641

00:36:59.550 --> 00:37:00.930 here, in twenty twenty three.
NOTE Confidence: 0.9941798

00:37:01.235 --> 00:37:02.275 And we've seen this data
NOTE Confidence: 0.9941798

00:37:02.275 --> 00:37:03.395 for quite some time, but
NOTE Confidence: 0.9941798

00:37:03.395 --> 00:37:04.995 it's expected that the FDA
NOTE Confidence: 0.9941798

00:37:04.995 --> 00:37:05.735 will actually,
NOTE Confidence: 0.99714863

00:37:06.675 --> 00:37:08.195 probably approve this in patients
NOTE Confidence: 0.99714863

00:37:08.195 --> 00:37:09.315 who have not yet received

NOTE Confidence: 0.99714863
00:37:09.315 --> 00:37:10.995 chemotherapy. But it's, again, a
NOTE Confidence: 0.99714863
00:37:10.995 --> 00:37:12.614 subject we don't fully understand
NOTE Confidence: 0.90754014
00:37:12.995 --> 00:37:14.355 why are aren't these patients,
NOTE Confidence: 0.90754014
00:37:14.594 --> 00:37:15.875 benefiting in terms of overall
NOTE Confidence: 0.90754014
00:37:15.875 --> 00:37:16.375 survival.
NOTE Confidence: 0.99139816
00:37:17.289 --> 00:37:18.329 And then the other question
NOTE Confidence: 0.99139816
00:37:18.329 --> 00:37:19.450 is, you know, if if
NOTE Confidence: 0.99139816
00:37:19.450 --> 00:37:20.410 this is these are all
NOTE Confidence: 0.99139816
00:37:20.410 --> 00:37:21.869 patients with metastatic disease,
NOTE Confidence: 0.92318726
00:37:22.650 --> 00:37:23.849 why wait till they develop
NOTE Confidence: 0.92318726
00:37:23.849 --> 00:37:25.769 castration resistance? Why not just
NOTE Confidence: 0.92318726
00:37:25.769 --> 00:37:26.670 treat them upfront?
NOTE Confidence: 0.9432207
00:37:27.130 --> 00:37:28.170 And this was a study
NOTE Confidence: 0.9432207
00:37:28.170 --> 00:37:29.690 from your, Australia where they
NOTE Confidence: 0.9432207
00:37:29.690 --> 00:37:30.730 gave them two cycles of
NOTE Confidence: 0.9432207

00:37:30.730 --> 00:37:32.394 PSMA treatment in addition to
NOTE Confidence: 0.9432207

00:37:32.394 --> 00:37:33.994 hormones and chemotherapy. Remember I
NOTE Confidence: 0.9432207

00:37:33.994 --> 00:37:35.454 told you, in MHSPC
NOTE Confidence: 0.9567734

00:37:35.835 --> 00:37:37.594 combination therapy with two or
NOTE Confidence: 0.9567734

00:37:37.594 --> 00:37:38.714 three drugs is the standard
NOTE Confidence: 0.9567734

00:37:38.714 --> 00:37:40.075 of care. So why not
NOTE Confidence: 0.9567734

00:37:40.075 --> 00:37:41.755 just give them this, two
NOTE Confidence: 0.9567734

00:37:41.755 --> 00:37:43.614 treatments of PSMA in addition?
NOTE Confidence: 0.9567734

00:37:43.914 --> 00:37:44.954 And they looked at, this
NOTE Confidence: 0.9567734

00:37:44.954 --> 00:37:46.634 endpoint, which was after all
NOTE Confidence: 0.9567734

00:37:46.634 --> 00:37:47.810 the treatment's done a a
NOTE Confidence: 0.9567734

00:37:47.810 --> 00:37:49.410 year later, who's more likely
NOTE Confidence: 0.9567734

00:37:49.410 --> 00:37:50.450 to have a low PSA?
NOTE Confidence: 0.9567734

00:37:50.450 --> 00:37:51.650 And it was actually you
NOTE Confidence: 0.9567734

00:37:51.650 --> 00:37:52.850 were four times more likely
NOTE Confidence: 0.9567734

00:37:52.850 --> 00:37:53.989 to have a low PSA

NOTE Confidence: 0.9567734

00:37:54.210 --> 00:37:55.030 a year later.

NOTE Confidence: 0.9571547

00:37:55.410 --> 00:37:57.330 So it suggests actually that

NOTE Confidence: 0.9571547

00:37:57.330 --> 00:37:59.010 giving this treatment upfront will

NOTE Confidence: 0.9571547

00:37:59.010 --> 00:38:00.230 have a long term benefit.

NOTE Confidence: 0.9975024

00:38:00.695 --> 00:38:01.195 Now,

NOTE Confidence: 0.9992842

00:38:01.655 --> 00:38:03.094 there's another study giving six

NOTE Confidence: 0.9992842

00:38:03.094 --> 00:38:04.295 of these cycles six of

NOTE Confidence: 0.9992842

00:38:04.295 --> 00:38:04.955 these treatments.

NOTE Confidence: 0.97985345

00:38:05.494 --> 00:38:06.455 If if you give a

NOTE Confidence: 0.97985345

00:38:06.455 --> 00:38:08.295 treatment like hormonal therapy or

NOTE Confidence: 0.97985345

00:38:08.295 --> 00:38:08.795 chemotherapy,

NOTE Confidence: 0.99423397

00:38:09.175 --> 00:38:10.295 then the target starts to

NOTE Confidence: 0.99423397

00:38:10.295 --> 00:38:12.295 go away. Will giving four

NOTE Confidence: 0.99423397

00:38:12.295 --> 00:38:13.860 more of those cycles of

NOTE Confidence: 0.99423397

00:38:14.100 --> 00:38:15.540 of of LU one seven

NOTE Confidence: 0.99423397

00:38:15.540 --> 00:38:16.420 seven get rid of more
NOTE Confidence: 0.99423397

00:38:16.420 --> 00:38:18.100 cancer? It's not clear. In
NOTE Confidence: 0.99423397

00:38:18.100 --> 00:38:19.380 fact, when we give these
NOTE Confidence: 0.99423397

00:38:19.380 --> 00:38:20.420 treatments to patients who have
NOTE Confidence: 0.99423397

00:38:20.420 --> 00:38:21.380 a negative PET scan, it
NOTE Confidence: 0.99423397

00:38:21.380 --> 00:38:22.980 doesn't work. It only works
NOTE Confidence: 0.99423397

00:38:22.980 --> 00:38:24.360 if the target's there.
NOTE Confidence: 0.98839426

00:38:24.660 --> 00:38:26.745 So I think, what these
NOTE Confidence: 0.98839426

00:38:26.985 --> 00:38:28.505 studies suggest is earlier use
NOTE Confidence: 0.98839426

00:38:28.505 --> 00:38:29.885 of these drugs does matter,
NOTE Confidence: 0.98839426

00:38:30.025 --> 00:38:30.525 but
NOTE Confidence: 0.9983365

00:38:30.985 --> 00:38:32.045 giving it indiscriminately
NOTE Confidence: 0.99547255

00:38:32.345 --> 00:38:33.165 probably doesn't.
NOTE Confidence: 0.9498266

00:38:34.505 --> 00:38:35.625 So this is my summary
NOTE Confidence: 0.9498266

00:38:35.625 --> 00:38:37.145 of radioligand therapy. And by
NOTE Confidence: 0.9498266

00:38:37.145 --> 00:38:38.105 the way, this is a

NOTE Confidence: 0.9498266

00:38:38.105 --> 00:38:39.225 very odd area for drug

NOTE Confidence: 0.9498266

00:38:39.225 --> 00:38:41.065 development. People are very, very

NOTE Confidence: 0.9498266

00:38:41.065 --> 00:38:42.960 interested in replicating this. Because

NOTE Confidence: 0.9498266

00:38:42.960 --> 00:38:43.920 right now, it's just two

NOTE Confidence: 0.9498266

00:38:43.920 --> 00:38:45.219 diseases where RLTs

NOTE Confidence: 0.9625311

00:38:45.520 --> 00:38:47.119 are actually approved. One is

NOTE Confidence: 0.9625311

00:38:47.119 --> 00:38:48.400 prostate cancer like I showed

NOTE Confidence: 0.9625311

00:38:48.400 --> 00:38:49.359 you, and the other is

NOTE Confidence: 0.9625311

00:38:49.359 --> 00:38:49.859 neuroendocrine

NOTE Confidence: 0.97157437

00:38:50.160 --> 00:38:52.080 tumors, okay, which are even

NOTE Confidence: 0.97157437

00:38:52.080 --> 00:38:53.359 less common. But people are

NOTE Confidence: 0.97157437

00:38:53.359 --> 00:38:54.640 very interested in this type

NOTE Confidence: 0.97157437

00:38:54.640 --> 00:38:56.415 of approach in in bladder

NOTE Confidence: 0.97157437

00:38:56.415 --> 00:38:57.775 cancer, breast cancer, and lung

NOTE Confidence: 0.97157437

00:38:57.775 --> 00:38:59.215 cancer. And I think the

NOTE Confidence: 0.97157437

00:38:59.215 --> 00:39:00.575 the ability to deliver this
NOTE Confidence: 0.97157437

00:39:00.575 --> 00:39:01.395 type of radiopharmaceutical
NOTE Confidence: 0.994036

00:39:01.855 --> 00:39:03.375 treatment, I think, will hinge
NOTE Confidence: 0.994036

00:39:03.375 --> 00:39:04.575 on how good those targets
NOTE Confidence: 0.994036

00:39:04.575 --> 00:39:05.535 are. We happen to have
NOTE Confidence: 0.994036

00:39:05.535 --> 00:39:06.575 a really good target with
NOTE Confidence: 0.994036

00:39:06.575 --> 00:39:08.355 prostate cancer, which is PSMA.
NOTE Confidence: 0.9993288

00:39:08.895 --> 00:39:10.015 The other interesting thing that
NOTE Confidence: 0.9993288

00:39:10.015 --> 00:39:11.640 you'll hear about is alpha
NOTE Confidence: 0.9993288

00:39:11.640 --> 00:39:12.140 particles.
NOTE Confidence: 0.9954801

00:39:12.520 --> 00:39:13.559 So, you know, I'm not
NOTE Confidence: 0.9954801

00:39:13.559 --> 00:39:14.380 a physicist,
NOTE Confidence: 0.9781553

00:39:15.079 --> 00:39:16.760 but there are better ways
NOTE Confidence: 0.9781553

00:39:16.760 --> 00:39:18.539 of delivering a lethal dose
NOTE Confidence: 0.9781553

00:39:18.680 --> 00:39:19.160 of,
NOTE Confidence: 0.9754889

00:39:19.480 --> 00:39:20.460 of, radiopharmaceutical

NOTE Confidence: 0.9981989

00:39:21.160 --> 00:39:22.599 that are more able to

NOTE Confidence: 0.9981989

00:39:22.599 --> 00:39:24.280 kill these cancer cells with

NOTE Confidence: 0.9981989

00:39:24.280 --> 00:39:25.099 less toxicity.

NOTE Confidence: 0.9885278

00:39:26.445 --> 00:39:27.485 Okay. So the last part

NOTE Confidence: 0.9885278

00:39:27.485 --> 00:39:28.205 of my talk is really

NOTE Confidence: 0.9885278

00:39:28.205 --> 00:39:30.125 about immunotherapy. And, you know,

NOTE Confidence: 0.9885278

00:39:30.125 --> 00:39:31.165 this was it's hard to

NOTE Confidence: 0.9885278

00:39:31.165 --> 00:39:32.605 believe it's this was the

NOTE Confidence: 0.9885278

00:39:32.605 --> 00:39:33.565 breakthrough of the year in

NOTE Confidence: 0.9885278

00:39:33.565 --> 00:39:34.765 two thousand thirteen. So we've

NOTE Confidence: 0.9885278

00:39:34.765 --> 00:39:35.645 been living with this now

NOTE Confidence: 0.9885278

00:39:35.645 --> 00:39:37.745 for almost a dozen years.

NOTE Confidence: 0.9778967

00:39:38.125 --> 00:39:39.400 And, of course, you know,

NOTE Confidence: 0.9778967

00:39:39.400 --> 00:39:40.780 lung cancer is the prototypical,

NOTE Confidence: 0.994563

00:39:41.239 --> 00:39:41.739 disease,

NOTE Confidence: 0.97722435

00:39:42.840 --> 00:39:44.600 along with melanoma and and
NOTE Confidence: 0.97722435

00:39:44.600 --> 00:39:46.840 kidney cancer where immunotherapies made,
NOTE Confidence: 0.97722435

00:39:47.160 --> 00:39:48.060 important differences.
NOTE Confidence: 0.9821022

00:39:48.520 --> 00:39:50.440 But prostate cancer actually was
NOTE Confidence: 0.9821022

00:39:50.440 --> 00:39:51.400 one of the first diseases
NOTE Confidence: 0.9821022

00:39:51.400 --> 00:39:52.920 where a checkpoint inhibitor was
NOTE Confidence: 0.9821022

00:39:52.920 --> 00:39:54.620 tested. This was CTLA four.
NOTE Confidence: 0.9821022

00:39:54.840 --> 00:39:55.985 And you can actually see
NOTE Confidence: 0.9821022

00:39:55.985 --> 00:39:57.525 that there was a suggestion
NOTE Confidence: 0.9821022

00:39:57.665 --> 00:39:59.105 that some patients might benefit
NOTE Confidence: 0.9821022

00:39:59.105 --> 00:40:00.545 from a checkpoint inhibitor even
NOTE Confidence: 0.9821022

00:40:00.545 --> 00:40:01.665 in prostate cancer, but it
NOTE Confidence: 0.9821022

00:40:01.665 --> 00:40:02.864 was never developed further. This
NOTE Confidence: 0.9821022

00:40:02.864 --> 00:40:03.364 was,
NOTE Confidence: 0.99587077

00:40:03.905 --> 00:40:04.405 predating,
NOTE Confidence: 0.9302025

00:40:04.785 --> 00:40:05.825 the use of PD L

NOTE Confidence: 0.9302025

00:40:05.825 --> 00:40:07.125 one or PD one inhibitors.

NOTE Confidence: 0.98949695

00:40:07.630 --> 00:40:08.750 But there was a suggestion

NOTE Confidence: 0.98949695

00:40:08.750 --> 00:40:09.950 that maybe some patients with

NOTE Confidence: 0.98949695

00:40:09.950 --> 00:40:12.109 prostate cancer actually could benefit

NOTE Confidence: 0.98949695

00:40:12.109 --> 00:40:13.790 from checkpoint inhibitors. But in

NOTE Confidence: 0.98949695

00:40:13.790 --> 00:40:14.369 the end,

NOTE Confidence: 0.96710175

00:40:14.670 --> 00:40:16.109 the only approval for checkpoint

NOTE Confidence: 0.96710175

00:40:16.109 --> 00:40:17.710 inhibitors in prostate cancer right

NOTE Confidence: 0.96710175

00:40:17.710 --> 00:40:19.230 now are in TMB high

NOTE Confidence: 0.96710175

00:40:19.230 --> 00:40:20.530 or MSI high tumors,

NOTE Confidence: 0.9627871

00:40:21.005 --> 00:40:22.045 which, as you know, are

NOTE Confidence: 0.9627871

00:40:22.045 --> 00:40:23.965 highly mutated prostate cancer. Prostate

NOTE Confidence: 0.9627871

00:40:23.965 --> 00:40:25.085 cancers in general are not

NOTE Confidence: 0.9627871

00:40:25.085 --> 00:40:25.985 highly mutated.

NOTE Confidence: 0.9725934

00:40:27.725 --> 00:40:28.925 The prevalence is probably around

NOTE Confidence: 0.9725934

00:40:28.925 --> 00:40:29.985 three to five percent,
NOTE Confidence: 0.9785045

00:40:30.285 --> 00:40:31.245 and the rate of response
NOTE Confidence: 0.9785045

00:40:31.245 --> 00:40:32.925 is about fifty percent, but
NOTE Confidence: 0.9785045

00:40:32.925 --> 00:40:34.045 some of these are durable.
NOTE Confidence: 0.9785045

00:40:34.045 --> 00:40:35.219 You can't really see the
NOTE Confidence: 0.9785045

00:40:35.219 --> 00:40:36.260 the bottom there. But the
NOTE Confidence: 0.9785045

00:40:36.260 --> 00:40:36.760 progression
NOTE Confidence: 0.97978526

00:40:37.060 --> 00:40:38.500 free survival for those with
NOTE Confidence: 0.97978526

00:40:38.500 --> 00:40:40.180 very high TMBs, you can
NOTE Confidence: 0.97978526

00:40:40.180 --> 00:40:41.700 see from from upper to
NOTE Confidence: 0.97978526

00:40:41.700 --> 00:40:43.619 lower, the highest TMBs. You
NOTE Confidence: 0.97978526

00:40:43.619 --> 00:40:45.060 can see that they're, they
NOTE Confidence: 0.97978526

00:40:45.060 --> 00:40:46.820 they are not progressing after
NOTE Confidence: 0.97978526

00:40:46.820 --> 00:40:47.700 two or three years, some
NOTE Confidence: 0.97978526

00:40:47.700 --> 00:40:49.140 of these patients. So, again,
NOTE Confidence: 0.97978526

00:40:49.140 --> 00:40:50.680 it behooves us to check,

NOTE Confidence: 0.9655806
00:40:51.045 --> 00:40:52.724 for for evidence of a
NOTE Confidence: 0.9655806
00:40:52.724 --> 00:40:54.665 tumor mutational burden or MSI
NOTE Confidence: 0.9655806
00:40:54.805 --> 00:40:56.585 high or unstable disease.
NOTE Confidence: 0.98573303
00:40:58.005 --> 00:40:59.525 But I think the real
NOTE Confidence: 0.98573303
00:40:59.765 --> 00:41:00.645 you know, that's a very
NOTE Confidence: 0.98573303
00:41:00.645 --> 00:41:01.925 small percentage of patients. So,
NOTE Confidence: 0.98573303
00:41:01.925 --> 00:41:02.885 you know, I I probably
NOTE Confidence: 0.98573303
00:41:02.885 --> 00:41:03.844 have seen one or two,
NOTE Confidence: 0.98573303
00:41:03.844 --> 00:41:04.645 even though I have a
NOTE Confidence: 0.98573303
00:41:04.645 --> 00:41:05.625 very big practice,
NOTE Confidence: 0.98627365
00:41:06.759 --> 00:41:08.200 is is really taking a
NOTE Confidence: 0.98627365
00:41:08.200 --> 00:41:09.000 a page out of the
NOTE Confidence: 0.98627365
00:41:09.000 --> 00:41:11.000 PSMA handbook and to look
NOTE Confidence: 0.98627365
00:41:11.000 --> 00:41:11.239 at,
NOTE Confidence: 0.93054616
00:41:11.880 --> 00:41:13.420 bispecific t cell engagers,
NOTE Confidence: 0.97801447

00:41:13.719 --> 00:41:15.719 so called BiTE. So remember,
NOTE Confidence: 0.97801447

00:41:15.719 --> 00:41:16.599 if you have a target
NOTE Confidence: 0.97801447

00:41:16.599 --> 00:41:17.719 and now you can deliver
NOTE Confidence: 0.97801447

00:41:17.719 --> 00:41:18.299 a radiopharmaceutical,
NOTE Confidence: 0.95636624

00:41:18.759 --> 00:41:19.880 maybe you can deliver other
NOTE Confidence: 0.95636624

00:41:19.880 --> 00:41:21.864 things like T cells. We
NOTE Confidence: 0.95636624

00:41:21.864 --> 00:41:22.664 know that T cells are
NOTE Confidence: 0.95636624

00:41:22.664 --> 00:41:23.964 the things that kill cancer.
NOTE Confidence: 0.95636624

00:41:24.025 --> 00:41:25.625 Right? Why don't they work
NOTE Confidence: 0.95636624

00:41:25.625 --> 00:41:26.984 in can prostate cancer in
NOTE Confidence: 0.95636624

00:41:26.984 --> 00:41:28.025 general like in these,
NOTE Confidence: 0.99427146

00:41:28.585 --> 00:41:30.184 in this curve? Well, probably
NOTE Confidence: 0.99427146

00:41:30.184 --> 00:41:30.984 because they don't know where
NOTE Confidence: 0.99427146

00:41:30.984 --> 00:41:31.864 to go. So if you
NOTE Confidence: 0.99427146

00:41:31.864 --> 00:41:33.224 can be smart and deliver
NOTE Confidence: 0.99427146

00:41:33.224 --> 00:41:34.265 the T cell directly to

NOTE Confidence: 0.99427146
00:41:34.265 --> 00:41:35.545 the cancer cell, maybe you'll
NOTE Confidence: 0.99427146
00:41:35.545 --> 00:41:36.239 have a better,
NOTE Confidence: 0.9734508
00:41:36.960 --> 00:41:37.940 out outcome.
NOTE Confidence: 0.99114984
00:41:38.800 --> 00:41:39.760 So this was one of
NOTE Confidence: 0.99114984
00:41:39.760 --> 00:41:40.960 the first bites that certainly
NOTE Confidence: 0.99114984
00:41:40.960 --> 00:41:41.920 got a lot of attention.
NOTE Confidence: 0.9847371
00:41:42.239 --> 00:41:43.280 This was now five years
NOTE Confidence: 0.9847371
00:41:43.280 --> 00:41:43.780 ago.
NOTE Confidence: 0.93856615
00:41:44.160 --> 00:41:44.960 And you can see that
NOTE Confidence: 0.93856615
00:41:44.960 --> 00:41:45.619 a majority
NOTE Confidence: 0.98871017
00:41:46.080 --> 00:41:47.600 of patients receiving AMG one
NOTE Confidence: 0.98871017
00:41:47.600 --> 00:41:49.219 sixty, which was a PSMA
NOTE Confidence: 0.98871017
00:41:49.360 --> 00:41:49.860 directed,
NOTE Confidence: 0.9837439
00:41:50.320 --> 00:41:52.205 bispecific t t cell engager,
NOTE Confidence: 0.9837439
00:41:52.425 --> 00:41:53.785 actually had a PSA response
NOTE Confidence: 0.9837439

00:41:53.785 --> 00:41:55.465 in this waterfall plot. It
NOTE Confidence: 0.9837439

00:41:55.465 --> 00:41:56.985 had some toxicities that really
NOTE Confidence: 0.9837439

00:41:56.985 --> 00:41:57.965 killed this drug,
NOTE Confidence: 0.9842794

00:41:58.265 --> 00:41:59.465 but there was this, you
NOTE Confidence: 0.9842794

00:41:59.465 --> 00:42:00.265 know, there are a bunch
NOTE Confidence: 0.9842794

00:42:00.265 --> 00:42:01.225 of other ones that I
NOTE Confidence: 0.9842794

00:42:01.225 --> 00:42:02.105 showed you on that first
NOTE Confidence: 0.9842794

00:42:02.105 --> 00:42:03.625 slide. And this was, this
NOTE Confidence: 0.9842794

00:42:03.625 --> 00:42:04.905 is also something that is
NOTE Confidence: 0.9842794

00:42:04.905 --> 00:42:06.710 quite, I think, exciting and
NOTE Confidence: 0.9842794

00:42:06.710 --> 00:42:08.469 interesting, but I think it
NOTE Confidence: 0.9842794

00:42:08.469 --> 00:42:09.750 reminds us of the toxicity.
NOTE Confidence: 0.9842794

00:42:09.750 --> 00:42:10.789 You know, it's interesting. We'll
NOTE Confidence: 0.9842794

00:42:10.789 --> 00:42:12.170 see the same drug used
NOTE Confidence: 0.9842794

00:42:12.230 --> 00:42:13.510 in breast cancer and lung
NOTE Confidence: 0.9842794

00:42:13.510 --> 00:42:15.109 cancer and prostate cancer, and

NOTE Confidence: 0.9842794

00:42:15.109 --> 00:42:16.469 sometimes we'll see more toxicity

NOTE Confidence: 0.9842794

00:42:16.469 --> 00:42:18.069 in prostate cancer patients. I

NOTE Confidence: 0.9842794

00:42:18.069 --> 00:42:19.875 don't always understand why. I

NOTE Confidence: 0.9842794

00:42:19.875 --> 00:42:20.835 have a theory about it,

NOTE Confidence: 0.9842794

00:42:20.835 --> 00:42:22.535 which relates to androgen deprivation,

NOTE Confidence: 0.9842794

00:42:22.675 --> 00:42:24.114 but we do see more

NOTE Confidence: 0.9842794

00:42:24.114 --> 00:42:25.875 toxicity in prostate cancer patients

NOTE Confidence: 0.9842794

00:42:25.875 --> 00:42:27.315 than we might sometimes expect

NOTE Confidence: 0.9842794

00:42:27.315 --> 00:42:28.375 with the same drug.

NOTE Confidence: 0.95028466

00:42:28.675 --> 00:42:29.815 But this is a combination

NOTE Confidence: 0.95028466

00:42:29.875 --> 00:42:31.175 of a a a bispecific

NOTE Confidence: 0.95028466

00:42:31.395 --> 00:42:32.135 from Regeneron

NOTE Confidence: 0.9095829

00:42:32.835 --> 00:42:34.215 that, again, shows

NOTE Confidence: 0.99973446

00:42:34.560 --> 00:42:35.060 significant

NOTE Confidence: 0.97368515

00:42:35.680 --> 00:42:36.960 responses, especially when combined with

NOTE Confidence: 0.97368515

00:42:36.960 --> 00:42:38.480 the checkpoint inhibitor. But it
NOTE Confidence: 0.97368515

00:42:38.480 --> 00:42:39.600 was toxic, and there were
NOTE Confidence: 0.97368515

00:42:39.600 --> 00:42:40.800 several deaths. So what they've
NOTE Confidence: 0.97368515

00:42:40.800 --> 00:42:41.840 done is they've taken away
NOTE Confidence: 0.97368515

00:42:41.840 --> 00:42:43.040 the checkpoint inhibitor, and they're
NOTE Confidence: 0.97368515

00:42:43.040 --> 00:42:45.460 just using the bispecific alone.
NOTE Confidence: 0.98599774

00:42:46.400 --> 00:42:47.520 And this got a lot
NOTE Confidence: 0.98599774

00:42:47.520 --> 00:42:48.900 of attention last year,
NOTE Confidence: 0.83659667

00:42:49.395 --> 00:42:50.775 a couple years ago now,
NOTE Confidence: 0.84403133

00:42:51.155 --> 00:42:52.614 a STEEP one bispecific.
NOTE Confidence: 0.9930068

00:42:53.075 --> 00:42:54.535 STEEP one is another target,
NOTE Confidence: 0.86625594

00:42:55.315 --> 00:42:56.855 immune target that,
NOTE Confidence: 0.94426715

00:42:57.155 --> 00:42:58.675 showed almost a sixty percent
NOTE Confidence: 0.94426715

00:42:58.675 --> 00:43:00.114 response rate. Again, in highly
NOTE Confidence: 0.94426715

00:43:00.114 --> 00:43:01.315 pretreated patients, and you can
NOTE Confidence: 0.94426715

00:43:01.315 --> 00:43:02.594 see the majority of patients

NOTE Confidence: 0.94426715
00:43:02.594 --> 00:43:03.094 responded.
NOTE Confidence: 0.9992527
00:43:03.690 --> 00:43:05.150 So I think this concept
NOTE Confidence: 0.9977912
00:43:05.530 --> 00:43:06.030 has,
NOTE Confidence: 0.97449535
00:43:06.730 --> 00:43:08.329 has, legs. I think we
NOTE Confidence: 0.97449535
00:43:08.329 --> 00:43:09.609 really know that we can
NOTE Confidence: 0.97449535
00:43:09.609 --> 00:43:10.650 deliver a t cell to
NOTE Confidence: 0.97449535
00:43:10.650 --> 00:43:11.609 the site of cancer as
NOTE Confidence: 0.97449535
00:43:11.609 --> 00:43:12.650 long as we can control
NOTE Confidence: 0.97449535
00:43:12.650 --> 00:43:13.310 the toxicity.
NOTE Confidence: 0.991265
00:43:14.969 --> 00:43:16.010 And the last point I
NOTE Confidence: 0.991265
00:43:16.010 --> 00:43:17.369 would make is really around,
NOTE Confidence: 0.991265
00:43:17.609 --> 00:43:18.570 what we know to be
NOTE Confidence: 0.991265
00:43:18.570 --> 00:43:19.070 a
NOTE Confidence: 0.9689853
00:43:19.575 --> 00:43:20.855 a pathway of progression for
NOTE Confidence: 0.9689853
00:43:20.855 --> 00:43:22.395 prostate cancer, and that's neuroendocrine
NOTE Confidence: 0.9689853

00:43:22.535 --> 00:43:23.035 differentiation.
NOTE Confidence: 0.9893975

00:43:23.815 --> 00:43:24.715 This is a,
NOTE Confidence: 0.98089325

00:43:25.175 --> 00:43:26.855 a cartoon that talks about
NOTE Confidence: 0.98089325

00:43:26.855 --> 00:43:28.055 kind of the progression from
NOTE Confidence: 0.98089325

00:43:28.055 --> 00:43:28.855 the left to the right
NOTE Confidence: 0.98089325

00:43:28.855 --> 00:43:30.474 of a normal prostate gland
NOTE Confidence: 0.98089325

00:43:30.535 --> 00:43:31.594 to typical adenocarcinoma.
NOTE Confidence: 0.9995662

00:43:32.055 --> 00:43:33.594 Those are the PSA producing
NOTE Confidence: 0.9880521

00:43:34.210 --> 00:43:35.489 prostate cancer cells that might
NOTE Confidence: 0.9880521

00:43:35.489 --> 00:43:36.850 spread to the bone, and
NOTE Confidence: 0.9880521

00:43:36.850 --> 00:43:38.290 it moves into this so
NOTE Confidence: 0.9880521

00:43:38.290 --> 00:43:39.030 called neuroendocrine,
NOTE Confidence: 0.98236513

00:43:40.450 --> 00:43:43.010 phenotype. Neuroendocrine tumor cells are
NOTE Confidence: 0.98236513

00:43:43.090 --> 00:43:44.850 don't make PSA. They are
NOTE Confidence: 0.98236513

00:43:44.850 --> 00:43:46.290 not as responsive to androgen.
NOTE Confidence: 0.98236513

00:43:46.290 --> 00:43:47.090 And what you see by

NOTE Confidence: 0.98236513

00:43:47.090 --> 00:43:48.224 the time they develop pure

NOTE Confidence: 0.98236513

00:43:48.224 --> 00:43:49.825 neuroendocrine prostate cancer is that

NOTE Confidence: 0.98236513

00:43:49.825 --> 00:43:51.505 these cancers may have unusual

NOTE Confidence: 0.98236513

00:43:51.505 --> 00:43:52.625 patterns to spread. They may

NOTE Confidence: 0.98236513

00:43:52.625 --> 00:43:53.744 go to the brain, which

NOTE Confidence: 0.98236513

00:43:53.744 --> 00:43:55.344 almost never happens normally in

NOTE Confidence: 0.98236513

00:43:55.344 --> 00:43:57.184 prostate cancer, and they're highly

NOTE Confidence: 0.98236513

00:43:57.184 --> 00:43:58.144 aggressive. They may go to

NOTE Confidence: 0.98236513

00:43:58.144 --> 00:43:59.204 the liver, for example.

NOTE Confidence: 0.97958195

00:43:59.744 --> 00:44:01.619 And this has been, unfortunately,

NOTE Confidence: 0.97958195

00:44:01.680 --> 00:44:02.800 a way in which our

NOTE Confidence: 0.97958195

00:44:02.800 --> 00:44:04.400 ARPs and the other androgen

NOTE Confidence: 0.97958195

00:44:04.400 --> 00:44:05.860 pathway drugs that we have

NOTE Confidence: 0.91647375

00:44:06.239 --> 00:44:07.920 stop working, and these patients

NOTE Confidence: 0.91647375

00:44:07.920 --> 00:44:09.860 may progress and chemotherapy, unfortunately,

NOTE Confidence: 0.91647375

00:44:09.920 --> 00:44:11.619 has a very, modest effect.
NOTE Confidence: 0.9613439

00:44:12.000 --> 00:44:12.880 Now this is something that
NOTE Confidence: 0.9613439

00:44:12.880 --> 00:44:14.880 has broad implications across lots
NOTE Confidence: 0.9613439

00:44:14.880 --> 00:44:16.175 of diseases because we know
NOTE Confidence: 0.9613439

00:44:16.175 --> 00:44:18.495 actually that neuroendocrine carcinoma is,
NOTE Confidence: 0.9613439

00:44:18.815 --> 00:44:20.114 present all over the body.
NOTE Confidence: 0.9613439

00:44:20.175 --> 00:44:21.695 These neuroendocrine cells are present
NOTE Confidence: 0.9613439

00:44:21.695 --> 00:44:22.735 all over the body. And
NOTE Confidence: 0.9613439

00:44:22.735 --> 00:44:24.015 in fact, you know, probably
NOTE Confidence: 0.9613439

00:44:24.015 --> 00:44:25.535 the neuroendocrine type of cancer
NOTE Confidence: 0.9613439

00:44:25.535 --> 00:44:26.415 that we know the most
NOTE Confidence: 0.9613439

00:44:26.415 --> 00:44:27.510 about is in the lung.
NOTE Confidence: 0.9613439

00:44:27.670 --> 00:44:28.230 And so a lot of
NOTE Confidence: 0.9613439

00:44:28.230 --> 00:44:29.030 the things we've done for
NOTE Confidence: 0.9613439

00:44:29.030 --> 00:44:30.950 neuroendocrine pros can prostate cancer
NOTE Confidence: 0.9613439

00:44:30.950 --> 00:44:32.469 has come from our understanding

NOTE Confidence: 0.9613439

00:44:32.469 --> 00:44:33.670 of how lung cancer doctors

NOTE Confidence: 0.9613439

00:44:33.670 --> 00:44:34.410 treat neuroendocrine,

NOTE Confidence: 0.9957207

00:44:35.190 --> 00:44:36.650 cancer or small cell cancers.

NOTE Confidence: 0.98041064

00:44:37.510 --> 00:44:38.469 But there is a target

NOTE Confidence: 0.98041064

00:44:38.469 --> 00:44:39.750 here too called DLL three

NOTE Confidence: 0.98041064

00:44:39.750 --> 00:44:42.305 or delta like ligand, three.

NOTE Confidence: 0.98041064

00:44:42.364 --> 00:44:43.244 And you can see here

NOTE Confidence: 0.98041064

00:44:43.244 --> 00:44:44.205 that if you look at,

NOTE Confidence: 0.98041064

00:44:44.445 --> 00:44:45.984 staining for DLL three,

NOTE Confidence: 0.99812317

00:44:46.364 --> 00:44:47.244 which is in the last

NOTE Confidence: 0.99812317

00:44:47.244 --> 00:44:47.744 panel,

NOTE Confidence: 0.9428803

00:44:48.205 --> 00:44:49.484 you can see that, about

NOTE Confidence: 0.9428803

00:44:49.484 --> 00:44:51.244 seventy six percent of, advanced

NOTE Confidence: 0.9428803

00:44:51.244 --> 00:44:53.505 prostate cancers, neuroendocrine prostate cancers

NOTE Confidence: 0.9428803

00:44:53.565 --> 00:44:55.680 express d DLL three, and

NOTE Confidence: 0.9428803

00:44:55.680 --> 00:44:56.880 they don't express the AR.
NOTE Confidence: 0.9428803

00:44:56.880 --> 00:44:58.319 They lose AR expression. They
NOTE Confidence: 0.9428803

00:44:58.319 --> 00:45:00.319 express DLL three. So last
NOTE Confidence: 0.9428803

00:45:00.319 --> 00:45:01.440 year, there was a new
NOTE Confidence: 0.9428803

00:45:01.440 --> 00:45:03.200 BiTE that was approved for
NOTE Confidence: 0.9428803

00:45:03.200 --> 00:45:04.819 small cell lung cancer called
NOTE Confidence: 0.9428803

00:45:04.880 --> 00:45:05.380 tarlatanib
NOTE Confidence: 0.66512287

00:45:06.160 --> 00:45:06.819 or tarlatanib.
NOTE Confidence: 0.9978492

00:45:07.855 --> 00:45:08.355 And,
NOTE Confidence: 0.9199454

00:45:08.655 --> 00:45:09.614 this is a you can
NOTE Confidence: 0.9199454

00:45:09.614 --> 00:45:11.215 see they are targeted towards,
NOTE Confidence: 0.98017275

00:45:11.614 --> 00:45:13.155 delivering a t cell directly
NOTE Confidence: 0.98017275

00:45:13.215 --> 00:45:14.255 to a,
NOTE Confidence: 0.98175883

00:45:14.655 --> 00:45:16.175 small cell lung cancer that
NOTE Confidence: 0.98175883

00:45:16.175 --> 00:45:17.855 might express DLL three. So
NOTE Confidence: 0.98175883

00:45:17.855 --> 00:45:18.815 this has actually been looked

NOTE Confidence: 0.98175883

00:45:18.815 --> 00:45:20.255 at in prostate cancer. And,

NOTE Confidence: 0.98175883

00:45:20.255 --> 00:45:21.510 again, you can see that

NOTE Confidence: 0.98175883

00:45:21.510 --> 00:45:22.870 in patients who have DLL

NOTE Confidence: 0.98175883

00:45:22.870 --> 00:45:24.950 three positive neuroendocrine prostate cancer

NOTE Confidence: 0.98175883

00:45:24.950 --> 00:45:25.830 that there are some long

NOTE Confidence: 0.98175883

00:45:25.830 --> 00:45:26.650 term responders.

NOTE Confidence: 0.9813532

00:45:26.950 --> 00:45:28.070 Overall, the response rate was

NOTE Confidence: 0.9813532

00:45:28.070 --> 00:45:29.270 only ten percent, but I

NOTE Confidence: 0.9813532

00:45:29.270 --> 00:45:30.390 think this again gets to

NOTE Confidence: 0.9813532

00:45:30.390 --> 00:45:31.350 the idea that we have

NOTE Confidence: 0.9813532

00:45:31.350 --> 00:45:32.790 to find and target the

NOTE Confidence: 0.9813532

00:45:32.790 --> 00:45:33.450 right patients.

NOTE Confidence: 0.91616446

00:45:34.755 --> 00:45:35.954 So these are my last

NOTE Confidence: 0.91616446

00:45:35.954 --> 00:45:37.015 couple of slides.

NOTE Confidence: 0.9915829

00:45:37.795 --> 00:45:39.635 Targeted therapy for prostate cancer,

NOTE Confidence: 0.9915829

00:45:39.635 --> 00:45:40.755 I think we're seeing it.
NOTE Confidence: 0.9915829

00:45:40.755 --> 00:45:42.135 AR is the first target,
NOTE Confidence: 0.9915829

00:45:42.194 --> 00:45:43.734 but we have PARP inhibitors
NOTE Confidence: 0.9915829

00:45:43.795 --> 00:45:45.015 for DDR mutations.
NOTE Confidence: 0.95429343

00:45:45.395 --> 00:45:46.914 MSI high tumors should get,
NOTE Confidence: 0.95429343

00:45:47.154 --> 00:45:48.989 checkpoint inhibitors. But we're seeing
NOTE Confidence: 0.95429343

00:45:48.989 --> 00:45:51.170 these PSMA directed therapies, certainly
NOTE Confidence: 0.94136167

00:45:51.469 --> 00:45:51.969 radioligand
NOTE Confidence: 0.9439404

00:45:52.270 --> 00:45:53.330 therapies, but also,
NOTE Confidence: 0.93855596

00:45:53.790 --> 00:45:54.530 these BiTEs.
NOTE Confidence: 0.9882589

00:45:54.910 --> 00:45:56.190 And DLL three is a
NOTE Confidence: 0.9882589

00:45:56.190 --> 00:45:58.350 promising target for neuroendocrine prostate
NOTE Confidence: 0.9882589

00:45:58.350 --> 00:45:58.850 cancer.
NOTE Confidence: 0.99522907

00:45:59.390 --> 00:46:00.590 So I'm gonna end on
NOTE Confidence: 0.99522907

00:46:00.590 --> 00:46:01.875 the concept that I I
NOTE Confidence: 0.99522907

00:46:01.955 --> 00:46:02.855 came here for

NOTE Confidence: 0.943881

00:46:03.155 --> 00:46:04.675 to Yale, which is how

NOTE Confidence: 0.943881

00:46:04.675 --> 00:46:05.955 are we gonna use precision

NOTE Confidence: 0.943881

00:46:05.955 --> 00:46:07.475 medicine more accurately? Here's one

NOTE Confidence: 0.943881

00:46:07.475 --> 00:46:08.775 disease, a big disease,

NOTE Confidence: 0.964287

00:46:09.075 --> 00:46:10.315 that is still lethal for

NOTE Confidence: 0.964287

00:46:10.315 --> 00:46:11.795 a subset of patients. How

NOTE Confidence: 0.964287

00:46:11.795 --> 00:46:12.995 do we take what we

NOTE Confidence: 0.964287

00:46:12.995 --> 00:46:14.195 learn about the patient? And

NOTE Confidence: 0.964287

00:46:14.195 --> 00:46:15.475 you can see, this is

NOTE Confidence: 0.964287

00:46:15.475 --> 00:46:17.075 from an AACR report. But,

NOTE Confidence: 0.964287

00:46:17.075 --> 00:46:17.575 basically,

NOTE Confidence: 0.994311

00:46:17.930 --> 00:46:18.970 think about the world we

NOTE Confidence: 0.994311

00:46:18.970 --> 00:46:20.090 live in. We're not just

NOTE Confidence: 0.994311

00:46:20.410 --> 00:46:21.930 these are not men who

NOTE Confidence: 0.994311

00:46:21.930 --> 00:46:22.810 just come in with one

NOTE Confidence: 0.994311

00:46:22.810 --> 00:46:24.090 disease. They come in with
NOTE Confidence: 0.994311

00:46:24.090 --> 00:46:26.090 a background of genetics and
NOTE Confidence: 0.994311

00:46:26.090 --> 00:46:28.410 and lifestyle factors and and
NOTE Confidence: 0.994311

00:46:28.410 --> 00:46:29.930 the epigenome and how they
NOTE Confidence: 0.994311

00:46:29.930 --> 00:46:31.305 present. And there's so many
NOTE Confidence: 0.994311

00:46:31.305 --> 00:46:32.585 factors that we don't account
NOTE Confidence: 0.994311

00:46:32.585 --> 00:46:33.864 for when we try to
NOTE Confidence: 0.994311

00:46:33.864 --> 00:46:34.364 deliver
NOTE Confidence: 0.9890919

00:46:34.744 --> 00:46:35.785 the right treatment to each
NOTE Confidence: 0.9890919

00:46:35.785 --> 00:46:37.145 of these patients. And I'm
NOTE Confidence: 0.9890919

00:46:37.145 --> 00:46:38.364 not saying that we can
NOTE Confidence: 0.9890919

00:46:38.505 --> 00:46:39.545 account for all this, but,
NOTE Confidence: 0.9890919

00:46:39.545 --> 00:46:40.665 you know, we can definitely
NOTE Confidence: 0.9890919

00:46:40.665 --> 00:46:41.964 put people into categories
NOTE Confidence: 0.9804376

00:46:42.585 --> 00:46:43.864 that better account for some
NOTE Confidence: 0.9804376

00:46:43.864 --> 00:46:44.984 of these factors that right

NOTE Confidence: 0.9804376
00:46:44.984 --> 00:46:46.185 now we're not measuring at
NOTE Confidence: 0.9804376
00:46:46.185 --> 00:46:46.560 all.
NOTE Confidence: 0.98095703
00:46:47.600 --> 00:46:48.800 And I think that AI
NOTE Confidence: 0.98095703
00:46:48.800 --> 00:46:49.840 is an area where we're
NOTE Confidence: 0.98095703
00:46:49.840 --> 00:46:51.360 gonna learn more about how
NOTE Confidence: 0.98095703
00:46:51.360 --> 00:46:52.719 to bring this information together.
NOTE Confidence: 0.98095703
00:46:52.719 --> 00:46:53.360 This is what I was
NOTE Confidence: 0.98095703
00:46:53.360 --> 00:46:54.660 trying to do at Sema4
NOTE Confidence: 0.98095703
00:46:54.719 --> 00:46:55.760 when I was there and
NOTE Confidence: 0.98095703
00:46:55.760 --> 00:46:56.560 what I think we can
NOTE Confidence: 0.98095703
00:46:56.560 --> 00:46:58.080 do here with with, the
NOTE Confidence: 0.98095703
00:46:58.080 --> 00:46:58.580 multidisciplinary
NOTE Confidence: 0.9620035
00:46:59.040 --> 00:47:00.984 excellence we have in pathology,
NOTE Confidence: 0.9620035
00:47:00.984 --> 00:47:01.484 molecular,
NOTE Confidence: 0.99427783
00:47:02.185 --> 00:47:02.685 genetics,
NOTE Confidence: 0.9882543

00:47:03.145 --> 00:47:04.285 with, bioinformatics,
NOTE Confidence: 0.98868674

00:47:04.585 --> 00:47:05.565 etcetera. So,
NOTE Confidence: 0.98535377

00:47:06.425 --> 00:47:07.705 you know, this paper came
NOTE Confidence: 0.98535377

00:47:07.705 --> 00:47:08.665 out a few years ago
NOTE Confidence: 0.98535377

00:47:08.665 --> 00:47:10.984 where multimodal AI, which is
NOTE Confidence: 0.98535377

00:47:10.984 --> 00:47:12.744 really using a combination of
NOTE Confidence: 0.98535377

00:47:12.744 --> 00:47:13.244 histology
NOTE Confidence: 0.98725873

00:47:14.170 --> 00:47:15.930 plus clinical data from they
NOTE Confidence: 0.98725873

00:47:15.930 --> 00:47:18.110 used, multiple randomized clinical trials.
NOTE Confidence: 0.98725873

00:47:18.170 --> 00:47:19.710 They created an AI score
NOTE Confidence: 0.9655331

00:47:20.570 --> 00:47:22.730 and, basically predicted the outcomes
NOTE Confidence: 0.9655331

00:47:22.730 --> 00:47:23.930 of of patients. And they
NOTE Confidence: 0.9655331

00:47:23.930 --> 00:47:24.989 actually reclassified,
NOTE Confidence: 0.998721

00:47:26.170 --> 00:47:27.630 forty two percent of patients
NOTE Confidence: 0.87890077

00:47:28.194 --> 00:47:29.875 compared to clinical risk factors
NOTE Confidence: 0.87890077

00:47:29.875 --> 00:47:31.335 was was so called NCCN

NOTE Confidence: 0.87890077
00:47:31.395 --> 00:47:31.895 criteria.
NOTE Confidence: 0.9889486
00:47:33.155 --> 00:47:34.515 In other words, they were
NOTE Confidence: 0.9889486
00:47:34.515 --> 00:47:35.875 much more accurate for about
NOTE Confidence: 0.9889486
00:47:35.875 --> 00:47:36.994 forty percent of the patients.
NOTE Confidence: 0.9889486
00:47:36.994 --> 00:47:38.434 So we're making decisions based
NOTE Confidence: 0.9889486
00:47:38.434 --> 00:47:39.875 on clinical factors that I
NOTE Confidence: 0.9889486
00:47:39.875 --> 00:47:41.395 mentioned earlier, like PSA and
NOTE Confidence: 0.9889486
00:47:41.395 --> 00:47:41.895 staging.
NOTE Confidence: 0.9997591
00:47:42.594 --> 00:47:43.255 And this
NOTE Confidence: 0.99976254
00:47:43.710 --> 00:47:44.450 AI program
NOTE Confidence: 0.9898837
00:47:44.750 --> 00:47:46.190 was so potent in predicting
NOTE Confidence: 0.9898837
00:47:46.190 --> 00:47:47.550 this and is now commercially
NOTE Confidence: 0.9898837
00:47:47.550 --> 00:47:48.750 available that it made it
NOTE Confidence: 0.9898837
00:47:48.750 --> 00:47:50.349 into the NCCN guidelines this
NOTE Confidence: 0.9898837
00:47:50.349 --> 00:47:50.849 year,
NOTE Confidence: 0.9784646

00:47:51.550 --> 00:47:53.250 as a both a prognostic
NOTE Confidence: 0.97989833

00:47:53.710 --> 00:47:55.390 tool, which, you know, has
NOTE Confidence: 0.97989833

00:47:55.390 --> 00:47:56.805 limited value, but also as
NOTE Confidence: 0.97989833

00:47:56.805 --> 00:47:57.844 a predictor of who should
NOTE Confidence: 0.97989833

00:47:57.844 --> 00:47:59.464 get hormonal therapy with radiation.
NOTE Confidence: 0.9830035

00:48:00.085 --> 00:48:01.285 So I'm just using this
NOTE Confidence: 0.9830035

00:48:01.285 --> 00:48:02.565 as an example of where
NOTE Confidence: 0.9830035

00:48:02.565 --> 00:48:04.005 we're gonna go in the
NOTE Confidence: 0.9830035

00:48:04.005 --> 00:48:05.925 future as we as large
NOTE Confidence: 0.9830035

00:48:05.925 --> 00:48:07.785 language models and and information
NOTE Confidence: 0.9830035

00:48:08.005 --> 00:48:10.140 gets distilled into, bite sized
NOTE Confidence: 0.9830035

00:48:10.140 --> 00:48:11.500 pieces that we as clinicians
NOTE Confidence: 0.9830035

00:48:11.500 --> 00:48:12.859 can use, and I'm really
NOTE Confidence: 0.9830035

00:48:12.859 --> 00:48:14.059 excited to to be part
NOTE Confidence: 0.9830035

00:48:14.059 --> 00:48:15.260 of that. So I'll stop
NOTE Confidence: 0.9830035

00:48:15.260 --> 00:48:16.219 there. Thank you very much

NOTE Confidence: 0.9830035
00:48:16.219 --> 00:48:17.040 for your attention.
NOTE Confidence: 0.68643755
00:48:21.260 --> 00:48:22.059 Thank you. I have time
NOTE Confidence: 0.68643755
00:48:22.059 --> 00:48:22.719 for questions,
NOTE Confidence: 0.9416778
00:48:23.579 --> 00:48:24.079 comments.
NOTE Confidence: 0.93689275
00:48:25.625 --> 00:48:27.224 The floor is open. I'll
NOTE Confidence: 0.93689275
00:48:27.224 --> 00:48:28.984 walk the microphone. Doctor Joseph
NOTE Confidence: 0.93689275
00:48:28.984 --> 00:48:30.185 Kim, and then you can
NOTE Confidence: 0.93689275
00:48:30.185 --> 00:48:31.145 keep the microphone and help
NOTE Confidence: 0.93689275
00:48:31.145 --> 00:48:32.905 me. Okay. Thank you. Thank
NOTE Confidence: 0.93689275
00:48:32.905 --> 00:48:33.864 you, William. This is a
NOTE Confidence: 0.93689275
00:48:33.864 --> 00:48:36.265 fantastic talk. And, again, welcome
NOTE Confidence: 0.93689275
00:48:36.265 --> 00:48:38.010 back, to Yale. So my
NOTE Confidence: 0.93689275
00:48:38.010 --> 00:48:39.290 question I just wanna kinda
NOTE Confidence: 0.93689275
00:48:39.290 --> 00:48:40.330 probe on the your last
NOTE Confidence: 0.93689275
00:48:40.330 --> 00:48:41.690 point about the precision medicine
NOTE Confidence: 0.93689275

00:48:41.690 --> 00:48:43.450 in prostate cancer. Again, in
NOTE Confidence: 0.93689275

00:48:43.450 --> 00:48:44.410 prostate cancer, that may not
NOTE Confidence: 0.93689275

00:48:44.410 --> 00:48:45.530 be the most precise term
NOTE Confidence: 0.93689275

00:48:45.530 --> 00:48:46.570 either because we are still
NOTE Confidence: 0.93689275

00:48:46.570 --> 00:48:47.930 learning how we define precision
NOTE Confidence: 0.93689275

00:48:47.930 --> 00:48:49.695 oncology in prostate cancer. So,
NOTE Confidence: 0.93689275

00:48:49.775 --> 00:48:50.655 you know, now as you
NOTE Confidence: 0.93689275

00:48:50.655 --> 00:48:51.614 mentioned, we have a lot
NOTE Confidence: 0.93689275

00:48:51.614 --> 00:48:52.815 of good treatment options available
NOTE Confidence: 0.93689275

00:48:52.815 --> 00:48:54.255 for metastatic prostate cancer. You
NOTE Confidence: 0.93689275

00:48:54.255 --> 00:48:56.675 mentioned novel AR integrator, RIP,
NOTE Confidence: 0.9899231

00:48:56.975 --> 00:48:57.475 chemotherapy,
NOTE Confidence: 0.83671045

00:48:58.415 --> 00:49:00.094 PSM target therapies, and PARP
NOTE Confidence: 0.83671045

00:49:00.094 --> 00:49:00.594 inhibitors.
NOTE Confidence: 0.9053772

00:49:01.375 --> 00:49:02.495 And doctor Roy Herbst, you
NOTE Confidence: 0.9053772

00:49:02.495 --> 00:49:03.375 know, he when it was

NOTE Confidence: 0.9053772

00:49:03.375 --> 00:49:05.010 a SWA, he's a SWA,

NOTE Confidence: 0.9053772

00:49:05.010 --> 00:49:06.630 he designed this master protocol,

NOTE Confidence: 0.93202615

00:49:07.010 --> 00:49:08.550 the master protocol, big umbrella

NOTE Confidence: 0.93202615

00:49:08.610 --> 00:49:10.050 protocol. Are we as a

NOTE Confidence: 0.93202615

00:49:10.050 --> 00:49:11.489 field in prostate cancer, are

NOTE Confidence: 0.93202615

00:49:11.489 --> 00:49:12.770 we ready for things like

NOTE Confidence: 0.93202615

00:49:12.770 --> 00:49:13.969 that? Because if you really

NOTE Confidence: 0.93202615

00:49:13.969 --> 00:49:14.850 make an impact in in

NOTE Confidence: 0.93202615

00:49:15.010 --> 00:49:16.075 clinical practice, practice, we have

NOTE Confidence: 0.93202615

00:49:16.075 --> 00:49:16.795 to come up with a

NOTE Confidence: 0.93202615

00:49:16.795 --> 00:49:18.415 good novel trial design.

NOTE Confidence: 0.9902924

00:49:18.875 --> 00:49:19.675 I'd like to know what

NOTE Confidence: 0.9902924

00:49:19.675 --> 00:49:20.955 your views on, on these

NOTE Confidence: 0.9902924

00:49:20.955 --> 00:49:21.775 issues are.

NOTE Confidence: 0.99734306

00:49:22.475 --> 00:49:23.435 Yeah. I mean, I think,

NOTE Confidence: 0.99734306

00:49:23.675 --> 00:49:24.475 I would love to hear
NOTE Confidence: 0.99734306

00:49:24.475 --> 00:49:25.835 Roy's thoughts too.
NOTE Confidence: 0.9960669

00:49:26.795 --> 00:49:28.635 When we built this this
NOTE Confidence: 0.9960669

00:49:28.635 --> 00:49:29.855 graphic, right,
NOTE Confidence: 0.9959078

00:49:30.300 --> 00:49:31.360 that you can see,
NOTE Confidence: 0.9772482

00:49:31.900 --> 00:49:32.860 we did it piece by
NOTE Confidence: 0.9772482

00:49:32.860 --> 00:49:34.540 piece. It was certainly it
NOTE Confidence: 0.9772482

00:49:34.540 --> 00:49:35.580 was painful, and it was
NOTE Confidence: 0.9772482

00:49:35.580 --> 00:49:36.719 each clinical trial.
NOTE Confidence: 0.9790394

00:49:37.020 --> 00:49:38.700 And the biggest problem with
NOTE Confidence: 0.9790394

00:49:38.700 --> 00:49:40.380 this picture is we don't
NOTE Confidence: 0.9790394

00:49:40.380 --> 00:49:41.260 know what we should do
NOTE Confidence: 0.9790394

00:49:41.260 --> 00:49:42.620 when in which order. Right?
NOTE Confidence: 0.9790394

00:49:42.620 --> 00:49:43.755 This is we have all
NOTE Confidence: 0.9790394

00:49:43.755 --> 00:49:45.434 these debates about, sequencing of
NOTE Confidence: 0.9790394

00:49:45.434 --> 00:49:45.934 treatments.

NOTE Confidence: 0.9666212
00:49:46.635 --> 00:49:48.155 What you're suggesting is that
NOTE Confidence: 0.9666212
00:49:48.155 --> 00:49:49.275 we move into this kind
NOTE Confidence: 0.9666212
00:49:49.275 --> 00:49:51.114 of bigger thinking. Right? The
NOTE Confidence: 0.9666212
00:49:51.275 --> 00:49:52.474 this idea of a an,
NOTE Confidence: 0.9666212
00:49:52.875 --> 00:49:54.315 an umbrella protocol or a
NOTE Confidence: 0.9666212
00:49:54.315 --> 00:49:56.075 protocol that's a master protocol
NOTE Confidence: 0.9666212
00:49:56.075 --> 00:49:57.830 that that, accounts for all
NOTE Confidence: 0.9666212
00:49:57.830 --> 00:49:58.890 of the different heterogeneity.
NOTE Confidence: 0.988381
00:49:59.670 --> 00:50:00.950 The the the the real
NOTE Confidence: 0.988381
00:50:00.950 --> 00:50:01.910 reason we haven't done it,
NOTE Confidence: 0.988381
00:50:01.910 --> 00:50:03.110 as you know, Joseph, is
NOTE Confidence: 0.988381
00:50:03.110 --> 00:50:04.469 that we don't have the
NOTE Confidence: 0.988381
00:50:04.469 --> 00:50:06.489 categories for these patients. Right?
NOTE Confidence: 0.9942464
00:50:06.790 --> 00:50:08.010 Most patients express
NOTE Confidence: 0.99670446
00:50:08.310 --> 00:50:10.570 AR. Most patients express PSMA.
NOTE Confidence: 0.9784398

00:50:11.625 --> 00:50:12.745 We don't know who responds
NOTE Confidence: 0.9784398

00:50:12.745 --> 00:50:13.725 to, to,
NOTE Confidence: 0.9954745

00:50:15.065 --> 00:50:16.344 chemotherapy. We don't know who
NOTE Confidence: 0.9954745

00:50:16.344 --> 00:50:17.405 responds to,
NOTE Confidence: 0.9460237

00:50:18.105 --> 00:50:18.605 to,
NOTE Confidence: 0.99512607

00:50:19.385 --> 00:50:20.505 some of the treatments that
NOTE Confidence: 0.99512607

00:50:20.505 --> 00:50:21.864 we give. So that is
NOTE Confidence: 0.99512607

00:50:21.864 --> 00:50:22.825 the reason we don't have
NOTE Confidence: 0.99512607

00:50:22.825 --> 00:50:24.120 this. The other thing that
NOTE Confidence: 0.99512607

00:50:24.280 --> 00:50:25.960 maybe similar or different is
NOTE Confidence: 0.99512607

00:50:25.960 --> 00:50:27.720 that these tumors evolve over
NOTE Confidence: 0.99512607

00:50:27.720 --> 00:50:28.780 time. Right?
NOTE Confidence: 0.9791921

00:50:29.560 --> 00:50:31.160 So, this picture shows that,
NOTE Confidence: 0.9791921

00:50:31.160 --> 00:50:32.920 in fact, we induce some
NOTE Confidence: 0.9791921

00:50:32.920 --> 00:50:34.440 of these resistance patterns. That's
NOTE Confidence: 0.9791921

00:50:34.440 --> 00:50:35.720 not different from lung cancer.

NOTE Confidence: 0.9791921

00:50:35.720 --> 00:50:37.180 But maybe lung cancer

NOTE Confidence: 0.98086786

00:50:37.485 --> 00:50:39.485 presents with enough categories that

NOTE Confidence: 0.98086786

00:50:39.485 --> 00:50:40.365 you can do a master

NOTE Confidence: 0.98086786

00:50:40.365 --> 00:50:41.725 protocol where you give the

NOTE Confidence: 0.98086786

00:50:41.725 --> 00:50:42.525 right drug to the right

NOTE Confidence: 0.98086786

00:50:42.525 --> 00:50:44.205 person right up front. So

NOTE Confidence: 0.98086786

00:50:44.205 --> 00:50:45.245 I would love to hear

NOTE Confidence: 0.98086786

00:50:45.245 --> 00:50:46.685 if if that's what's made

NOTE Confidence: 0.98086786

00:50:46.685 --> 00:50:47.885 them kind of this broader

NOTE Confidence: 0.98086786

00:50:47.885 --> 00:50:49.405 approach successful in lung cancer,

NOTE Confidence: 0.98086786

00:50:49.405 --> 00:50:49.905 Roy.

NOTE Confidence: 0.9970127

00:50:50.319 --> 00:50:51.359 Well, of course,

NOTE Confidence: 0.9075657

00:50:52.480 --> 00:50:54.160 lung cancer's evolved now with

NOTE Confidence: 0.9075657

00:50:54.160 --> 00:50:55.940 nine different, you know, genetic,

NOTE Confidence: 0.9513161

00:50:57.440 --> 00:50:59.599 defects, you know, oncogenes that

NOTE Confidence: 0.9513161

00:50:59.599 --> 00:51:00.640 we can target that are
NOTE Confidence: 0.9513161

00:51:00.640 --> 00:51:01.140 addicted,
NOTE Confidence: 0.98221415

00:51:01.680 --> 00:51:03.119 that are addictive. So that
NOTE Confidence: 0.98221415

00:51:03.119 --> 00:51:04.400 that opens up the door
NOTE Confidence: 0.98221415

00:51:04.400 --> 00:51:05.415 there. I think the area
NOTE Confidence: 0.98221415

00:51:05.415 --> 00:51:06.775 where these master protocols could
NOTE Confidence: 0.98221415

00:51:06.775 --> 00:51:07.575 come in handy is in
NOTE Confidence: 0.98221415

00:51:07.575 --> 00:51:09.435 resistance, either primary or acquired.
NOTE Confidence: 0.99814403

00:51:09.735 --> 00:51:10.455 But you're right. You need
NOTE Confidence: 0.99814403

00:51:10.455 --> 00:51:11.415 to have a dichotomy. You
NOTE Confidence: 0.99814403

00:51:11.415 --> 00:51:12.614 can't solve the whole problem
NOTE Confidence: 0.99814403

00:51:12.614 --> 00:51:13.355 at once.
NOTE Confidence: 0.98870707

00:51:13.735 --> 00:51:14.535 You would need to find
NOTE Confidence: 0.98870707

00:51:14.535 --> 00:51:15.655 patients who are resistant to
NOTE Confidence: 0.98870707

00:51:15.655 --> 00:51:16.775 one therapy. And and then,
NOTE Confidence: 0.98870707

00:51:16.775 --> 00:51:17.655 of course, there probably are

NOTE Confidence: 0.98870707
00:51:17.655 --> 00:51:18.695 patients who are probably better
NOTE Confidence: 0.98870707
00:51:18.695 --> 00:51:19.575 off with one drug than
NOTE Confidence: 0.98870707
00:51:19.575 --> 00:51:20.559 the other, and that that
NOTE Confidence: 0.98870707
00:51:20.559 --> 00:51:22.400 is precision medicine. And, we
NOTE Confidence: 0.98870707
00:51:22.400 --> 00:51:23.440 certainly have the ability to
NOTE Confidence: 0.98870707
00:51:23.440 --> 00:51:24.719 do that here. Right? One
NOTE Confidence: 0.98870707
00:51:24.719 --> 00:51:25.440 of the things you'll work
NOTE Confidence: 0.98870707
00:51:25.440 --> 00:51:26.480 on, William, because we have
NOTE Confidence: 0.98870707
00:51:26.480 --> 00:51:28.400 the pathology is is amazing.
NOTE Confidence: 0.98870707
00:51:28.400 --> 00:51:29.380 We have the surgical
NOTE Confidence: 0.9635447
00:51:29.680 --> 00:51:30.799 colleagues who will co work
NOTE Confidence: 0.9635447
00:51:30.799 --> 00:51:32.319 with us, radiation oncology. And
NOTE Confidence: 0.9635447
00:51:32.319 --> 00:51:33.760 then in a multimodality way,
NOTE Confidence: 0.9635447
00:51:33.760 --> 00:51:34.559 sort of pull that all
NOTE Confidence: 0.9635447
00:51:34.559 --> 00:51:35.725 together. So I think that's
NOTE Confidence: 0.9635447

00:51:35.725 --> 00:51:36.925 a good point, Joe. I
NOTE Confidence: 0.9635447

00:51:36.925 --> 00:51:38.125 wanna ask you another question,
NOTE Confidence: 0.9635447

00:51:38.125 --> 00:51:38.625 William,
NOTE Confidence: 0.93822944

00:51:38.925 --> 00:51:40.605 and, other questions, Joe, who
NOTE Confidence: 0.93822944

00:51:40.605 --> 00:51:42.204 has the other microphone. You're
NOTE Confidence: 0.93822944

00:51:42.204 --> 00:51:43.484 at Greenwich, and you're setting
NOTE Confidence: 0.93822944

00:51:43.484 --> 00:51:44.785 up a service line there.
NOTE Confidence: 0.9373219

00:51:45.165 --> 00:51:45.984 The PMSA,
NOTE Confidence: 0.9518317

00:51:46.525 --> 00:51:47.645 therapy you mentioned, is that
NOTE Confidence: 0.9518317

00:51:47.645 --> 00:51:48.545 available there?
NOTE Confidence: 0.9746192

00:51:49.244 --> 00:51:50.445 Is it available throughout our
NOTE Confidence: 0.9746192

00:51:50.445 --> 00:51:52.180 network? And, then also the
NOTE Confidence: 0.9746192

00:51:52.180 --> 00:51:53.140 BiTE therapy. I just came
NOTE Confidence: 0.9746192

00:51:53.140 --> 00:51:54.100 off a couple weeks on
NOTE Confidence: 0.9746192

00:51:54.100 --> 00:51:55.300 service, and I can tell
NOTE Confidence: 0.9746192

00:51:55.300 --> 00:51:56.260 you that that's not the

NOTE Confidence: 0.9746192

00:51:56.260 --> 00:51:57.460 easiest thing. Are we administering

NOTE Confidence: 0.9746192

00:51:57.460 --> 00:51:58.340 that at all our centers

NOTE Confidence: 0.9746192

00:51:58.340 --> 00:51:59.860 as well? Yeah. Well, the

NOTE Confidence: 0.9746192

00:51:59.860 --> 00:52:01.460 imaging is available there in

NOTE Confidence: 0.9746192

00:52:01.460 --> 00:52:03.480 Greenwich, and I'm meeting with

NOTE Confidence: 0.9746192

00:52:03.620 --> 00:52:05.400 the nuclear medicine team tomorrow,

NOTE Confidence: 0.9858577

00:52:06.245 --> 00:52:07.605 I believe, to talk about

NOTE Confidence: 0.9858577

00:52:07.605 --> 00:52:08.405 how to make,

NOTE Confidence: 0.99747217

00:52:08.725 --> 00:52:10.025 some of these treatments available,

NOTE Confidence: 0.9879708

00:52:10.405 --> 00:52:12.005 in places like Greenwich. But

NOTE Confidence: 0.9879708

00:52:12.005 --> 00:52:13.125 it is complicated. I think

NOTE Confidence: 0.9879708

00:52:13.125 --> 00:52:14.505 you need the right expertise

NOTE Confidence: 0.9879708

00:52:14.725 --> 00:52:15.844 in each site to be

NOTE Confidence: 0.9879708

00:52:15.844 --> 00:52:17.145 able to deliver it safely

NOTE Confidence: 0.9879708

00:52:17.285 --> 00:52:18.025 and effectively.

NOTE Confidence: 0.9814072

00:52:18.480 --> 00:52:19.680 And I have no doubt
NOTE Confidence: 0.9814072

00:52:19.680 --> 00:52:20.960 that over time, we'll build
NOTE Confidence: 0.9814072

00:52:20.960 --> 00:52:22.080 that. I mean, one of
NOTE Confidence: 0.9814072

00:52:22.080 --> 00:52:22.880 the reasons, as you know,
NOTE Confidence: 0.9814072

00:52:22.880 --> 00:52:24.100 that I came to Greenwich
NOTE Confidence: 0.9814072

00:52:24.400 --> 00:52:25.680 is that I I saw
NOTE Confidence: 0.9814072

00:52:25.680 --> 00:52:27.300 its proximity to New York
NOTE Confidence: 0.9814072

00:52:27.520 --> 00:52:28.719 and our ability to kind
NOTE Confidence: 0.9814072

00:52:28.719 --> 00:52:30.400 of apply the great science
NOTE Confidence: 0.9814072

00:52:30.400 --> 00:52:31.600 and the great clinical care
NOTE Confidence: 0.9814072

00:52:31.600 --> 00:52:32.800 we deliver across the whole
NOTE Confidence: 0.9814072

00:52:32.800 --> 00:52:34.265 Milo network, but in a
NOTE Confidence: 0.9814072

00:52:34.265 --> 00:52:35.545 place where there's a high
NOTE Confidence: 0.9814072

00:52:35.545 --> 00:52:36.985 concentration of people, which is
NOTE Confidence: 0.9814072

00:52:36.985 --> 00:52:37.965 in the New York area.
NOTE Confidence: 0.9814072

00:52:38.185 --> 00:52:39.305 I was in Manhattan for

NOTE Confidence: 0.9814072

00:52:39.305 --> 00:52:40.265 a long time. People would

NOTE Confidence: 0.9814072

00:52:40.344 --> 00:52:41.225 when I moved to Manhattan,

NOTE Confidence: 0.9814072

00:52:41.225 --> 00:52:42.105 people were like, why does

NOTE Confidence: 0.9814072

00:52:42.105 --> 00:52:43.705 Manhattan need another cancer center?

NOTE Confidence: 0.9814072

00:52:43.705 --> 00:52:44.745 And it turned out Manhattan

NOTE Confidence: 0.9814072

00:52:44.745 --> 00:52:46.530 needed another cancer center quite

NOTE Confidence: 0.9814072

00:52:46.530 --> 00:52:47.810 significantly. There were patients who

NOTE Confidence: 0.9814072

00:52:47.810 --> 00:52:49.489 were really not cared for

NOTE Confidence: 0.9814072

00:52:49.489 --> 00:52:50.290 by some of the well

NOTE Confidence: 0.9814072

00:52:50.290 --> 00:52:51.810 known institutions in New York

NOTE Confidence: 0.9814072

00:52:51.810 --> 00:52:53.489 City because they didn't have

NOTE Confidence: 0.9814072

00:52:53.489 --> 00:52:55.570 access, because, there's, it was

NOTE Confidence: 0.9814072

00:52:55.570 --> 00:52:57.350 such a highly concentrated area.

NOTE Confidence: 0.9814072

00:52:57.570 --> 00:52:59.570 So I think Greenwich represents

NOTE Confidence: 0.9814072

00:52:59.570 --> 00:53:01.190 a real opportunity for us

NOTE Confidence: 0.9814072

00:53:01.325 --> 00:53:02.785 to to to do research,
NOTE Confidence: 0.9814072

00:53:02.845 --> 00:53:04.205 to do clinical care that's
NOTE Confidence: 0.9814072

00:53:04.205 --> 00:53:05.425 at the highest level,
NOTE Confidence: 0.9337543

00:53:05.805 --> 00:53:07.485 but we'll start with the
NOTE Confidence: 0.9337543

00:53:07.485 --> 00:53:08.605 areas of treatment that we
NOTE Confidence: 0.9337543

00:53:08.605 --> 00:53:10.065 know are safe and effective.
NOTE Confidence: 0.965962

00:53:10.445 --> 00:53:11.325 And and in the long
NOTE Confidence: 0.965962

00:53:11.325 --> 00:53:12.365 run, I think we want
NOTE Confidence: 0.965962

00:53:12.365 --> 00:53:14.045 patients in Greenwich or in
NOTE Confidence: 0.965962

00:53:14.045 --> 00:53:15.485 Westerly or anywhere within the
NOTE Confidence: 0.965962

00:53:15.485 --> 00:53:16.750 Smilo network to get the
NOTE Confidence: 0.965962

00:53:16.750 --> 00:53:18.590 best standards of care. Great.
NOTE Confidence: 0.965962

00:53:18.590 --> 00:53:19.570 Any other questions?
NOTE Confidence: 0.98905754

00:53:20.430 --> 00:53:21.070 Do we have any of
NOTE Confidence: 0.98905754

00:53:21.070 --> 00:53:22.050 our fellows here?
NOTE Confidence: 0.98311526

00:53:23.470 --> 00:53:24.750 I didn't think so. I'm

NOTE Confidence: 0.98311526
00:53:24.750 --> 00:53:26.030 gonna sign an executive order
NOTE Confidence: 0.98311526
00:53:26.030 --> 00:53:27.010 to get the fellows.
NOTE Confidence: 0.8700145
00:53:27.470 --> 00:53:28.830 And and and, seriously, we
NOTE Confidence: 0.8700145
00:53:28.830 --> 00:53:29.710 should have our fellows here.
NOTE Confidence: 0.8700145
00:53:29.710 --> 00:53:30.830 This was a wonderful talk,
NOTE Confidence: 0.8700145
00:53:30.830 --> 00:53:31.230 and,
NOTE Confidence: 0.998158
00:53:31.635 --> 00:53:33.015 if anyone's listening online,
NOTE Confidence: 0.9661856
00:53:33.395 --> 00:53:34.515 we're gonna we're gonna exchange
NOTE Confidence: 0.9661856
00:53:34.515 --> 00:53:35.475 that. But but, William, let
NOTE Confidence: 0.9661856
00:53:35.475 --> 00:53:36.355 me ask you. The precision
NOTE Confidence: 0.9661856
00:53:36.355 --> 00:53:38.035 medicine tumor board, which we
NOTE Confidence: 0.9661856
00:53:38.035 --> 00:53:39.155 started a while back and
NOTE Confidence: 0.9661856
00:53:39.155 --> 00:53:40.535 then COVID sort of derailed.
NOTE Confidence: 0.9661856
00:53:40.594 --> 00:53:41.555 But I would think that's
NOTE Confidence: 0.9661856
00:53:41.555 --> 00:53:42.915 critical for a cancer center
NOTE Confidence: 0.9661856

00:53:42.915 --> 00:53:44.375 that we get our scientists
NOTE Confidence: 0.9661856

00:53:44.630 --> 00:53:45.430 and we get the people
NOTE Confidence: 0.9661856

00:53:45.430 --> 00:53:46.550 that know how to analyze
NOTE Confidence: 0.9661856

00:53:46.550 --> 00:53:47.930 the DNA and the epigenetics
NOTE Confidence: 0.9666879

00:53:48.390 --> 00:53:49.270 and and pull that all
NOTE Confidence: 0.9666879

00:53:49.270 --> 00:53:49.770 together.
NOTE Confidence: 0.97468394

00:53:50.310 --> 00:53:51.590 You're gonna revitalize that, I
NOTE Confidence: 0.97468394

00:53:51.590 --> 00:53:52.230 know. Can you tell us
NOTE Confidence: 0.97468394

00:53:52.230 --> 00:53:53.830 your plans? Well, I think,
NOTE Confidence: 0.97468394

00:53:53.830 --> 00:53:55.110 first of all, Zenta and
NOTE Confidence: 0.97468394

00:53:55.110 --> 00:53:56.469 Rick Wilson Zenta Walter and
NOTE Confidence: 0.97468394

00:53:56.469 --> 00:53:57.510 Rick Wilson have done a
NOTE Confidence: 0.97468394

00:53:57.510 --> 00:53:58.710 really great job of taking
NOTE Confidence: 0.97468394

00:53:58.710 --> 00:54:00.174 this over from Qualator. But
NOTE Confidence: 0.97468394

00:54:00.174 --> 00:54:01.234 I do think that,
NOTE Confidence: 0.9446833

00:54:02.255 --> 00:54:03.295 the goal is to kind

NOTE Confidence: 0.9446833
00:54:03.295 --> 00:54:03.795 of
NOTE Confidence: 0.9812243
00:54:04.094 --> 00:54:05.795 not just teach, but really
NOTE Confidence: 0.9812243
00:54:05.855 --> 00:54:07.214 affect the care of all
NOTE Confidence: 0.9812243
00:54:07.214 --> 00:54:08.255 the patients who get this
NOTE Confidence: 0.9812243
00:54:08.255 --> 00:54:10.255 molecular testing across all the
NOTE Confidence: 0.9812243
00:54:10.255 --> 00:54:11.614 diseases that we see. We
NOTE Confidence: 0.9812243
00:54:11.614 --> 00:54:12.734 have an amazing phase one
NOTE Confidence: 0.9812243
00:54:12.734 --> 00:54:14.255 program. And in a way,
NOTE Confidence: 0.9812243
00:54:14.255 --> 00:54:15.870 a precision medicine tumor board
NOTE Confidence: 0.9812243
00:54:15.950 --> 00:54:16.850 is like matchmaking.
NOTE Confidence: 0.98855746
00:54:17.150 --> 00:54:18.670 It's like finding the genetic
NOTE Confidence: 0.98855746
00:54:18.670 --> 00:54:20.430 results that would lead patients
NOTE Confidence: 0.98855746
00:54:20.430 --> 00:54:21.870 to go on trials sooner
NOTE Confidence: 0.98855746
00:54:21.870 --> 00:54:23.150 and faster. We know the
NOTE Confidence: 0.98855746
00:54:23.150 --> 00:54:24.910 biggest barrier. I showed that
NOTE Confidence: 0.98855746

00:54:24.910 --> 00:54:26.530 biomarker slide from the FDA.
NOTE Confidence: 0.98855746

00:54:26.750 --> 00:54:28.350 The biggest barrier that that
NOTE Confidence: 0.98855746

00:54:28.350 --> 00:54:29.890 industry has with these drugs
NOTE Confidence: 0.98855746

00:54:29.950 --> 00:54:31.070 is finding patients to go
NOTE Confidence: 0.98855746

00:54:31.070 --> 00:54:32.525 on their trials. And cancer
NOTE Confidence: 0.98855746

00:54:32.525 --> 00:54:34.205 is no longer prostate cancer,
NOTE Confidence: 0.98855746

00:54:34.205 --> 00:54:35.725 lung cancer, breast cancer. It
NOTE Confidence: 0.98855746

00:54:35.725 --> 00:54:36.225 is,
NOTE Confidence: 0.9635251

00:54:37.325 --> 00:54:39.245 increasingly rare diseases because they're
NOTE Confidence: 0.9635251

00:54:39.245 --> 00:54:41.185 subsetted into these molecular subtypes.
NOTE Confidence: 0.9443885

00:54:41.485 --> 00:54:42.765 So I think a precision
NOTE Confidence: 0.9443885

00:54:42.765 --> 00:54:43.965 medicine tumor board is really
NOTE Confidence: 0.9443885

00:54:43.965 --> 00:54:45.405 critical, and, my goal is
NOTE Confidence: 0.9443885

00:54:45.405 --> 00:54:46.680 to think about ways that
NOTE Confidence: 0.9443885

00:54:46.680 --> 00:54:47.800 we can improve it, make
NOTE Confidence: 0.9443885

00:54:47.800 --> 00:54:48.460 it hybrid,

NOTE Confidence: 0.95223397

00:54:48.760 --> 00:54:50.280 and think about more frequent

NOTE Confidence: 0.95223397

00:54:50.280 --> 00:54:51.739 and and really tactical

NOTE Confidence: 0.9327213

00:54:52.200 --> 00:54:53.960 discussion so that both trainees

NOTE Confidence: 0.9327213

00:54:53.960 --> 00:54:55.319 and and the docs themselves

NOTE Confidence: 0.9327213

00:54:55.319 --> 00:54:56.520 really learn from the experience,

NOTE Confidence: 0.9327213

00:54:56.520 --> 00:54:58.200 including myself. Great. Speaking of

NOTE Confidence: 0.9327213

00:54:58.200 --> 00:54:59.000 multiple data, we have a

NOTE Confidence: 0.9327213

00:54:59.000 --> 00:55:00.619 chair of urology, doctor Kim.

NOTE Confidence: 0.9327213

00:55:00.815 --> 00:55:02.015 Well, again, thank you so

NOTE Confidence: 0.9327213

00:55:02.015 --> 00:55:03.295 much for the talk. I

NOTE Confidence: 0.9327213

00:55:03.295 --> 00:55:04.335 just wanna go back to

NOTE Confidence: 0.9327213

00:55:04.335 --> 00:55:05.855 the, the disparity issue with

NOTE Confidence: 0.9327213

00:55:05.855 --> 00:55:07.375 the black man. So, again,

NOTE Confidence: 0.9327213

00:55:07.375 --> 00:55:08.015 I think we as a

NOTE Confidence: 0.9327213

00:55:08.015 --> 00:55:09.055 field have been talking about

NOTE Confidence: 0.9327213

00:55:09.055 --> 00:55:10.255 this for a long, long
NOTE Confidence: 0.9327213

00:55:10.255 --> 00:55:10.755 time.
NOTE Confidence: 0.9037219

00:55:11.055 --> 00:55:12.255 So the suggestions in the
NOTE Confidence: 0.9037219

00:55:12.415 --> 00:55:13.329 I read the your papers.
NOTE Confidence: 0.9037219

00:55:13.329 --> 00:55:14.369 How do you implement something
NOTE Confidence: 0.9037219

00:55:14.369 --> 00:55:15.089 like that? What are your
NOTE Confidence: 0.9037219

00:55:15.089 --> 00:55:16.450 thoughts on getting it out
NOTE Confidence: 0.9037219

00:55:16.450 --> 00:55:17.489 into the community to make
NOTE Confidence: 0.9037219

00:55:17.489 --> 00:55:19.250 sure that such guidelines are
NOTE Confidence: 0.9037219

00:55:19.250 --> 00:55:20.290 followed? Because there's still some
NOTE Confidence: 0.9037219

00:55:20.290 --> 00:55:21.190 huge resistance,
NOTE Confidence: 0.95132655

00:55:21.809 --> 00:55:22.930 in terms of implementing. So
NOTE Confidence: 0.95132655

00:55:22.930 --> 00:55:23.809 what challenge do you see
NOTE Confidence: 0.95132655

00:55:23.809 --> 00:55:25.569 and, your thoughts? I I
NOTE Confidence: 0.95132655

00:55:25.650 --> 00:55:26.950 yeah. It's a great question,
NOTE Confidence: 0.95132655

00:55:27.010 --> 00:55:27.809 Isaac, because,

NOTE Confidence: 0.96317554

00:55:28.645 --> 00:55:29.605 sometimes the people who are

NOTE Confidence: 0.96317554

00:55:29.605 --> 00:55:31.285 the biggest evangelists for finding

NOTE Confidence: 0.96317554

00:55:31.285 --> 00:55:32.905 these cancers earlier, like urologists

NOTE Confidence: 0.96317554

00:55:32.965 --> 00:55:34.325 or oncologists, are not the

NOTE Confidence: 0.96317554

00:55:34.325 --> 00:55:35.625 ones talking to the patients

NOTE Confidence: 0.96317554

00:55:35.765 --> 00:55:37.525 in primary care. I think

NOTE Confidence: 0.96317554

00:55:37.525 --> 00:55:38.565 that there's a way to

NOTE Confidence: 0.96317554

00:55:38.565 --> 00:55:40.565 implement a smile wide, Yale

NOTE Confidence: 0.96317554

00:55:40.565 --> 00:55:41.065 wide,

NOTE Confidence: 0.9880726

00:55:41.559 --> 00:55:42.520 program. This is really not

NOTE Confidence: 0.9880726

00:55:42.520 --> 00:55:43.900 a cancer issue. It's precancerous.

NOTE Confidence: 0.9880726

00:55:43.960 --> 00:55:45.719 It's really internal medicine where

NOTE Confidence: 0.9880726

00:55:45.719 --> 00:55:46.219 we

NOTE Confidence: 0.95955765

00:55:46.839 --> 00:55:48.359 try to convey this idea

NOTE Confidence: 0.95955765

00:55:48.359 --> 00:55:49.960 and and to create, maybe

NOTE Confidence: 0.95955765

00:55:49.960 --> 00:55:51.180 a Yale wide program
NOTE Confidence: 0.9692069

00:55:51.559 --> 00:55:52.520 for looking at these high
NOTE Confidence: 0.9692069

00:55:52.520 --> 00:55:54.280 risk populations. That includes black
NOTE Confidence: 0.9692069

00:55:54.280 --> 00:55:55.099 men. It includes
NOTE Confidence: 0.98354423

00:55:55.400 --> 00:55:57.099 men with, genetic risk.
NOTE Confidence: 0.9607823

00:55:57.855 --> 00:55:58.735 And I think this publication
NOTE Confidence: 0.9607823

00:55:58.735 --> 00:55:59.695 of this guideline, the reason
NOTE Confidence: 0.9607823

00:55:59.695 --> 00:56:00.515 I think NEJM,
NOTE Confidence: 0.93592906

00:56:01.375 --> 00:56:03.135 evidence allowed us to publish
NOTE Confidence: 0.93592906

00:56:03.135 --> 00:56:04.435 it was they recognize
NOTE Confidence: 0.999643

00:56:04.735 --> 00:56:05.875 this gap between
NOTE Confidence: 0.9803539

00:56:06.175 --> 00:56:07.715 this idea that the USPSTF
NOTE Confidence: 0.9803539

00:56:07.935 --> 00:56:09.555 says there's not enough evidence,
NOTE Confidence: 0.9803539

00:56:09.614 --> 00:56:11.530 and now we have something
NOTE Confidence: 0.9803539

00:56:11.530 --> 00:56:13.049 that can justify a program
NOTE Confidence: 0.9803539

00:56:13.049 --> 00:56:14.170 where we're more aggressive about

NOTE Confidence: 0.9803539

00:56:14.170 --> 00:56:15.849 screening black men. So I

NOTE Confidence: 0.9803539

00:56:15.849 --> 00:56:17.049 wanna certainly sit down with

NOTE Confidence: 0.9803539

00:56:17.049 --> 00:56:19.049 you and your department, but

NOTE Confidence: 0.9803539

00:56:19.049 --> 00:56:21.309 also internal medicine, primary care,

NOTE Confidence: 0.9506348

00:56:21.609 --> 00:56:23.450 and, you know, AAFP and,

NOTE Confidence: 0.9506348

00:56:23.530 --> 00:56:24.974 you know, ACP,

NOTE Confidence: 0.9586474

00:56:25.275 --> 00:56:26.555 the American College of Physicians,

NOTE Confidence: 0.9586474

00:56:26.555 --> 00:56:27.594 they're kind of still against

NOTE Confidence: 0.9586474

00:56:27.594 --> 00:56:28.094 screening.

NOTE Confidence: 0.98543817

00:56:28.555 --> 00:56:29.855 And this is the problem.

NOTE Confidence: 0.98543817

00:56:29.994 --> 00:56:31.515 Risk adapted screening is the

NOTE Confidence: 0.98543817

00:56:31.515 --> 00:56:32.954 key. Don't screen everyone. Don't

NOTE Confidence: 0.98543817

00:56:32.954 --> 00:56:34.494 screen the ninety year old

NOTE Confidence: 0.98543817

00:56:34.555 --> 00:56:35.435 guy who comes in a

NOTE Confidence: 0.98543817

00:56:35.435 --> 00:56:37.194 wheelchair. But a fifty year

NOTE Confidence: 0.98543817

00:56:37.194 --> 00:56:38.234 old or forty five year
NOTE Confidence: 0.98543817

00:56:38.234 --> 00:56:39.670 old black man who has
NOTE Confidence: 0.98543817

00:56:39.670 --> 00:56:41.190 a family history, he's getting
NOTE Confidence: 0.98543817

00:56:41.190 --> 00:56:42.550 the wrong message. I know
NOTE Confidence: 0.98543817

00:56:42.550 --> 00:56:44.150 that because they're they're not
NOTE Confidence: 0.98543817

00:56:44.150 --> 00:56:45.510 being told that they should
NOTE Confidence: 0.98543817

00:56:45.510 --> 00:56:46.790 be detected trying to detect
NOTE Confidence: 0.98543817

00:56:46.790 --> 00:56:48.469 this cancer. So I think
NOTE Confidence: 0.98543817

00:56:48.469 --> 00:56:49.430 it is a huge challenge.
NOTE Confidence: 0.98543817

00:56:49.430 --> 00:56:50.710 I think ACS is very
NOTE Confidence: 0.98543817

00:56:50.710 --> 00:56:52.710 interested in creating the the
NOTE Confidence: 0.98543817

00:56:52.710 --> 00:56:53.670 the the toolkit to be
NOTE Confidence: 0.98543817

00:56:53.670 --> 00:56:55.094 able to help places do
NOTE Confidence: 0.98543817

00:56:55.094 --> 00:56:56.215 this, and that's, I think,
NOTE Confidence: 0.98543817

00:56:56.215 --> 00:56:56.955 another source
NOTE Confidence: 0.9994265

00:56:57.415 --> 00:56:57.995 of information.

NOTE Confidence: 0.9942248

00:56:59.255 --> 00:57:00.455 Any other questions? I think

NOTE Confidence: 0.9942248

00:57:00.455 --> 00:57:01.015 we are at the end

NOTE Confidence: 0.9942248

00:57:01.015 --> 00:57:01.815 of the hour. I'll just

NOTE Confidence: 0.9942248

00:57:01.815 --> 00:57:02.535 say that this is a

NOTE Confidence: 0.9942248

00:57:02.535 --> 00:57:04.055 wonderful example of what,

NOTE Confidence: 0.97141784

00:57:04.375 --> 00:57:05.975 comprehensive cancer center does. You

NOTE Confidence: 0.97141784

00:57:05.975 --> 00:57:07.170 know, we go from the

NOTE Confidence: 0.97141784

00:57:07.170 --> 00:57:07.670 patient,

NOTE Confidence: 0.97252446

00:57:08.210 --> 00:57:09.730 access, you know, bringing people

NOTE Confidence: 0.97252446

00:57:09.730 --> 00:57:11.170 in and getting them screened,

NOTE Confidence: 0.97252446

00:57:11.170 --> 00:57:12.050 taking them all the way

NOTE Confidence: 0.97252446

00:57:12.050 --> 00:57:13.109 through the new therapeutic

NOTE Confidence: 0.77021724

00:57:13.969 --> 00:57:14.469 options.

NOTE Confidence: 0.99259454

00:57:14.770 --> 00:57:16.869 We have wonderful surgery, radiation,

NOTE Confidence: 0.89890414

00:57:17.250 --> 00:57:18.050 a a large number of

NOTE Confidence: 0.89890414

00:57:18.050 --> 00:57:20.210 medical oncologists, Dan, yourself, Joe
NOTE Confidence: 0.89890414

00:57:20.210 --> 00:57:21.109 Kim is here,
NOTE Confidence: 0.92510617

00:57:21.675 --> 00:57:22.975 many others. We have Sameer
NOTE Confidence: 0.92510617

00:57:23.035 --> 00:57:24.175 Azadi coming from,
NOTE Confidence: 0.9619583

00:57:25.035 --> 00:57:26.075 New York who works on
NOTE Confidence: 0.9619583

00:57:26.075 --> 00:57:27.355 plasticity, right, who works on
NOTE Confidence: 0.9619583

00:57:27.355 --> 00:57:28.635 the developmental. So we have
NOTE Confidence: 0.9619583

00:57:28.635 --> 00:57:29.355 so much that we can
NOTE Confidence: 0.9619583

00:57:29.355 --> 00:57:30.801 do here. So, let you
NOTE Confidence: 0.9619583

00:57:30.801 --> 00:57:31.841 know, you should start thinking
NOTE Confidence: 0.9619583

00:57:31.841 --> 00:57:32.801 about, like, a spore in
NOTE Confidence: 0.9619583

00:57:32.801 --> 00:57:33.781 a few years. So,
NOTE Confidence: 0.9726896

00:57:34.081 --> 00:57:35.201 really great to see everyone
NOTE Confidence: 0.9726896

00:57:35.201 --> 00:57:36.561 here. William will stay up
NOTE Confidence: 0.9726896

00:57:36.561 --> 00:57:37.521 for a few more questions,
NOTE Confidence: 0.9726896

00:57:37.521 --> 00:57:37.841 and,

NOTE Confidence: 0.9982244

00:57:38.321 --> 00:57:39.121 enjoy the rest of your

NOTE Confidence: 0.9982244

00:57:39.121 --> 00:57:39.906 day. Thank you.