

WEBVTT

NOTE duration: "00:29:22.962"

NOTE Confidence: 0.42773902

00:04:24.330 --> 00:04:25.130 Wait. That would be all

NOTE Confidence: 0.42773902

00:04:25.130 --> 00:04:25.630 just

NOTE Confidence: 0.98844975

00:04:26.810 --> 00:04:29.070 Okay. Good. Great. Thank you.

NOTE Confidence: 0.9539454

00:04:30.625 --> 00:04:31.904 So here's this is one

NOTE Confidence: 0.9539454

00:04:31.904 --> 00:04:32.945 of these slides that I

NOTE Confidence: 0.9539454

00:04:32.945 --> 00:04:34.385 think doctor Weiner was warning

NOTE Confidence: 0.9539454

00:04:34.385 --> 00:04:35.105 us about,

NOTE Confidence: 0.9517762

00:04:35.505 --> 00:04:37.425 early in his talk. Since

NOTE Confidence: 0.9517762

00:04:37.425 --> 00:04:38.785 the problem with triple negative

NOTE Confidence: 0.9517762

00:04:38.785 --> 00:04:39.745 breast cancer is it's a

NOTE Confidence: 0.9517762

00:04:39.745 --> 00:04:41.505 much more aggressive cancer on

NOTE Confidence: 0.9517762

00:04:41.505 --> 00:04:42.005 average.

NOTE Confidence: 0.9909031

00:04:42.385 --> 00:04:43.745 And people with triple negative

NOTE Confidence: 0.9909031

00:04:43.745 --> 00:04:44.865 breast cancer don't do as

NOTE Confidence: 0.9909031

00:04:44.865 --> 00:04:45.904 well as people who don't
NOTE Confidence: 0.9909031

00:04:45.904 --> 00:04:47.310 have triple negative breast cancer
NOTE Confidence: 0.9909031

00:04:47.310 --> 00:04:48.430 in the long run. It's
NOTE Confidence: 0.9909031

00:04:48.430 --> 00:04:49.490 largely because
NOTE Confidence: 0.9645519

00:04:49.870 --> 00:04:51.069 our treatments aren't as good.
NOTE Confidence: 0.9645519

00:04:51.069 --> 00:04:52.189 We don't have as many
NOTE Confidence: 0.9645519

00:04:52.189 --> 00:04:53.650 treatments, but also
NOTE Confidence: 0.971848

00:04:54.029 --> 00:04:55.469 the cancer itself is much
NOTE Confidence: 0.971848

00:04:55.469 --> 00:04:56.210 more aggressive.
NOTE Confidence: 0.9663973

00:04:58.205 --> 00:04:59.485 And now I can't advance
NOTE Confidence: 0.9663973

00:04:59.485 --> 00:05:00.225 my slides.
NOTE Confidence: 0.96376365

00:05:00.765 --> 00:05:01.265 Fantastic.
NOTE Confidence: 0.67814744

00:05:02.125 --> 00:05:03.185 I'm gonna get them.
NOTE Confidence: 0.8332755

00:05:04.765 --> 00:05:05.845 Stop. Moral of the story
NOTE Confidence: 0.8332755

00:05:05.964 --> 00:05:06.945 like, there's stagnation.
NOTE Confidence: 0.98932993

00:05:08.045 --> 00:05:09.645 Moral of the story is

NOTE Confidence: 0.98932993
00:05:09.645 --> 00:05:11.165 that we really need better
NOTE Confidence: 0.98932993
00:05:11.165 --> 00:05:11.665 therapies,
NOTE Confidence: 0.9890454
00:05:12.029 --> 00:05:13.630 especially for this more aggressive
NOTE Confidence: 0.9890454
00:05:13.630 --> 00:05:14.690 subtype of cancer.
NOTE Confidence: 0.980659
00:05:16.670 --> 00:05:18.510 So we talked about hormone
NOTE Confidence: 0.980659
00:05:18.510 --> 00:05:20.110 based therapies. There are HER2
NOTE Confidence: 0.980659
00:05:20.110 --> 00:05:21.390 based therapies, but in triple
NOTE Confidence: 0.980659
00:05:21.390 --> 00:05:22.750 negative breast cancer, we can't
NOTE Confidence: 0.980659
00:05:22.750 --> 00:05:24.029 use them. And what we've
NOTE Confidence: 0.980659
00:05:24.029 --> 00:05:25.089 got is chemotherapy.
NOTE Confidence: 0.9778655
00:05:25.875 --> 00:05:27.395 And so chemotherapy is the
NOTE Confidence: 0.9778655
00:05:27.395 --> 00:05:28.675 backbone of the treatment for
NOTE Confidence: 0.9778655
00:05:28.675 --> 00:05:30.355 triple negative breast cancer. And
NOTE Confidence: 0.9778655
00:05:30.355 --> 00:05:31.235 there are a lot of
NOTE Confidence: 0.9778655
00:05:31.235 --> 00:05:33.154 them. There's a huge arsenal
NOTE Confidence: 0.9778655

00:05:33.154 --> 00:05:33.815 of chemotherapy,
NOTE Confidence: 0.9959864

00:05:34.115 --> 00:05:35.714 but as you probably know,
NOTE Confidence: 0.9959864

00:05:35.714 --> 00:05:36.214 chemotherapy
NOTE Confidence: 0.9983735

00:05:36.515 --> 00:05:37.795 has a lot of potential
NOTE Confidence: 0.9983735

00:05:37.795 --> 00:05:38.915 side effects. It can be
NOTE Confidence: 0.9983735

00:05:38.915 --> 00:05:39.735 pretty toxic.
NOTE Confidence: 0.98450035

00:05:41.360 --> 00:05:43.279 It can affect almost any
NOTE Confidence: 0.98450035

00:05:43.279 --> 00:05:44.500 part of the body,
NOTE Confidence: 0.975149

00:05:45.440 --> 00:05:46.720 from the brain all the
NOTE Confidence: 0.975149

00:05:46.720 --> 00:05:47.920 way down to the bones
NOTE Confidence: 0.975149

00:05:47.920 --> 00:05:48.880 and the skin and the
NOTE Confidence: 0.975149

00:05:48.880 --> 00:05:49.380 muscles,
NOTE Confidence: 0.88573915

00:05:50.640 --> 00:05:52.180 and in anything in between.
NOTE Confidence: 0.86418676

00:05:53.845 --> 00:05:54.665 It's inconvenient.
NOTE Confidence: 0.95710915

00:05:55.365 --> 00:05:56.025 It requires,
NOTE Confidence: 0.96681523

00:05:56.404 --> 00:05:57.464 in most cases,

NOTE Confidence: 0.9490269
00:05:57.925 --> 00:05:59.605 IV treatments that people have
NOTE Confidence: 0.9490269
00:05:59.605 --> 00:06:01.445 to come in to clinic
NOTE Confidence: 0.9490269
00:06:01.445 --> 00:06:03.044 and infusion to get those
NOTE Confidence: 0.9490269
00:06:03.044 --> 00:06:04.485 treatments. That can be a
NOTE Confidence: 0.9490269
00:06:04.485 --> 00:06:05.685 problem for child care. It
NOTE Confidence: 0.9490269
00:06:05.685 --> 00:06:06.645 can be a problem for
NOTE Confidence: 0.9490269
00:06:06.645 --> 00:06:07.145 transportation.
NOTE Confidence: 0.9740392
00:06:10.380 --> 00:06:11.180 And if you have to
NOTE Confidence: 0.9740392
00:06:11.180 --> 00:06:13.180 get repeated IV therapies, that
NOTE Confidence: 0.9740392
00:06:13.180 --> 00:06:14.700 can affect your blood vessels,
NOTE Confidence: 0.9740392
00:06:14.700 --> 00:06:16.380 which makes it very difficult
NOTE Confidence: 0.9740392
00:06:16.380 --> 00:06:17.900 to even give blood or
NOTE Confidence: 0.9740392
00:06:17.900 --> 00:06:19.260 get blood for for blood
NOTE Confidence: 0.9740392
00:06:19.260 --> 00:06:19.760 tests.
NOTE Confidence: 0.9771473
00:06:21.115 --> 00:06:22.634 People can't work as much
NOTE Confidence: 0.9771473

00:06:22.634 --> 00:06:23.435 if you have to come
NOTE Confidence: 0.9771473

00:06:23.435 --> 00:06:24.314 in all the time for
NOTE Confidence: 0.9771473

00:06:24.314 --> 00:06:25.754 treatments, and that can lead
NOTE Confidence: 0.9771473

00:06:25.754 --> 00:06:27.595 to financial toxicity or or
NOTE Confidence: 0.9771473

00:06:27.595 --> 00:06:29.514 financial problems. And and all
NOTE Confidence: 0.9771473

00:06:29.514 --> 00:06:31.514 kinds of effects on mental
NOTE Confidence: 0.9771473

00:06:31.514 --> 00:06:32.794 health have been described over
NOTE Confidence: 0.9771473

00:06:32.794 --> 00:06:33.294 time.
NOTE Confidence: 0.97951096

00:06:34.240 --> 00:06:35.120 And this is work that
NOTE Confidence: 0.97951096

00:06:35.120 --> 00:06:35.940 I've done,
NOTE Confidence: 0.89509046

00:06:37.040 --> 00:06:38.400 now a while back twenty
NOTE Confidence: 0.89509046

00:06:38.400 --> 00:06:40.000 nineteen. It's pre COVID, like,
NOTE Confidence: 0.89509046

00:06:40.000 --> 00:06:41.060 a whole different lifetime.
NOTE Confidence: 0.99265873

00:06:42.000 --> 00:06:43.199 But what we know is
NOTE Confidence: 0.99265873

00:06:43.199 --> 00:06:44.160 that more than half of
NOTE Confidence: 0.99265873

00:06:44.160 --> 00:06:47.060 patients report difficulties with nonphysical

NOTE Confidence: 0.9820982

00:06:47.440 --> 00:06:48.884 concerns. So I think when

NOTE Confidence: 0.9820982

00:06:48.884 --> 00:06:50.245 you think about chemotherapy, you

NOTE Confidence: 0.9820982

00:06:50.245 --> 00:06:51.525 think about nausea, and you

NOTE Confidence: 0.9820982

00:06:51.525 --> 00:06:52.404 think about all of the

NOTE Confidence: 0.9820982

00:06:52.404 --> 00:06:54.085 physical side effects, but there

NOTE Confidence: 0.9820982

00:06:54.085 --> 00:06:55.125 are all kinds of other

NOTE Confidence: 0.9820982

00:06:55.125 --> 00:06:56.485 things that this sort of

NOTE Confidence: 0.9820982

00:06:56.485 --> 00:06:57.464 treatment impacts.

NOTE Confidence: 0.9887755

00:06:58.004 --> 00:06:58.964 I'm just trying to make

NOTE Confidence: 0.9887755

00:06:58.964 --> 00:06:59.925 the case that we need

NOTE Confidence: 0.9887755

00:06:59.925 --> 00:07:00.745 better therapies.

NOTE Confidence: 0.66715854

00:07:02.740 --> 00:07:03.240 So

NOTE Confidence: 0.99870133

00:07:04.419 --> 00:07:06.020 you have likely heard of

NOTE Confidence: 0.99870133

00:07:06.020 --> 00:07:07.639 this concept of immunotherapy,

NOTE Confidence: 0.99978864

00:07:08.180 --> 00:07:09.000 which is

NOTE Confidence: 0.9465678

00:07:09.539 --> 00:07:10.900 the latest and greatest in
NOTE Confidence: 0.9465678

00:07:10.900 --> 00:07:12.099 all kinds of cancers that's
NOTE Confidence: 0.9465678

00:07:12.099 --> 00:07:13.300 used in lung cancer and
NOTE Confidence: 0.9465678

00:07:13.300 --> 00:07:15.219 melanoma and bladder cancer and
NOTE Confidence: 0.9465678

00:07:15.219 --> 00:07:16.605 renal cell cancer. And it's
NOTE Confidence: 0.9465678

00:07:16.685 --> 00:07:17.965 kind of all over all
NOTE Confidence: 0.9465678

00:07:17.965 --> 00:07:18.705 the the
NOTE Confidence: 0.99154985

00:07:19.245 --> 00:07:20.445 lay press in terms of
NOTE Confidence: 0.99154985

00:07:20.445 --> 00:07:22.365 cancer treatments. Well, what is
NOTE Confidence: 0.99154985

00:07:22.365 --> 00:07:22.865 it?
NOTE Confidence: 0.9992702

00:07:23.405 --> 00:07:23.905 Immunotherapy
NOTE Confidence: 0.9708244

00:07:25.405 --> 00:07:26.685 takes the brakes off the
NOTE Confidence: 0.9708244

00:07:26.685 --> 00:07:27.505 immune system.
NOTE Confidence: 0.9922559

00:07:28.045 --> 00:07:29.105 So immunotherapy,
NOTE Confidence: 0.9804474

00:07:31.620 --> 00:07:32.980 when when there is an
NOTE Confidence: 0.9804474

00:07:32.980 --> 00:07:34.180 immune cell, and in this

NOTE Confidence: 0.9804474

00:07:34.180 --> 00:07:35.300 case, this is an immune

NOTE Confidence: 0.9804474

00:07:35.300 --> 00:07:35.960 t cell,

NOTE Confidence: 0.9991477

00:07:36.740 --> 00:07:37.880 the cancer cell

NOTE Confidence: 0.9577686

00:07:38.340 --> 00:07:40.100 comes along and kind of

NOTE Confidence: 0.9577686

00:07:40.100 --> 00:07:41.460 tells the t cells to

NOTE Confidence: 0.9577686

00:07:41.460 --> 00:07:42.280 stop working.

NOTE Confidence: 0.9460874

00:07:43.060 --> 00:07:44.520 It puts the brakes on

NOTE Confidence: 0.9460874

00:07:44.815 --> 00:07:45.855 the the immune system. So

NOTE Confidence: 0.9460874

00:07:45.855 --> 00:07:46.895 the immune system is not

NOTE Confidence: 0.9460874

00:07:46.895 --> 00:07:48.815 fighting the cancer. But these

NOTE Confidence: 0.9460874

00:07:48.815 --> 00:07:49.294 immunotherapies

NOTE Confidence: 0.9565397

00:07:49.775 --> 00:07:51.055 and here I've listed some

NOTE Confidence: 0.9565397

00:07:51.055 --> 00:07:52.255 here. We call them checkpoint

NOTE Confidence: 0.9565397

00:07:52.255 --> 00:07:54.415 inhibitors or immunotherapies or immuno

NOTE Confidence: 0.9565397

00:07:54.415 --> 00:07:54.915 oncologics.

NOTE Confidence: 0.99304247

00:07:56.735 --> 00:07:57.235 They
NOTE Confidence: 0.9842093

00:07:58.020 --> 00:07:59.380 put they they take the
NOTE Confidence: 0.9842093

00:07:59.380 --> 00:08:00.740 brakes off. So they allow
NOTE Confidence: 0.9842093

00:08:00.740 --> 00:08:02.340 the the immune system to
NOTE Confidence: 0.9842093

00:08:02.340 --> 00:08:03.700 kind of get back in
NOTE Confidence: 0.9842093

00:08:03.700 --> 00:08:05.400 gear and fight the cancer
NOTE Confidence: 0.97231513

00:08:05.700 --> 00:08:07.139 and start attacking the cancer
NOTE Confidence: 0.97231513

00:08:07.139 --> 00:08:08.820 cells. So it's harnessing the
NOTE Confidence: 0.97231513

00:08:08.820 --> 00:08:09.960 own power
NOTE Confidence: 0.99774104

00:08:10.354 --> 00:08:11.815 of your of a patient's
NOTE Confidence: 0.99774104

00:08:11.875 --> 00:08:13.475 own immune system to help
NOTE Confidence: 0.99774104

00:08:13.475 --> 00:08:14.615 combat the cancer.
NOTE Confidence: 0.99367154

00:08:15.555 --> 00:08:16.535 And we
NOTE Confidence: 0.99930394

00:08:17.715 --> 00:08:19.495 now are using immunotherapy
NOTE Confidence: 0.99416703

00:08:20.195 --> 00:08:21.315 as part of the standard
NOTE Confidence: 0.99416703

00:08:21.315 --> 00:08:23.010 of care for treatment of

NOTE Confidence: 0.8966529
00:08:23.810 --> 00:08:25.410 patients that have triple negative
NOTE Confidence: 0.8966529
00:08:25.410 --> 00:08:26.070 breast cancer.
NOTE Confidence: 0.9872618
00:08:26.930 --> 00:08:27.810 And this is,
NOTE Confidence: 0.88393325
00:08:28.610 --> 00:08:29.830 a slide from
NOTE Confidence: 0.9467567
00:08:30.210 --> 00:08:31.970 the initial presentation of a
NOTE Confidence: 0.9467567
00:08:31.970 --> 00:08:33.490 study called the keynote three
NOTE Confidence: 0.9467567
00:08:33.490 --> 00:08:34.550 fifty five study.
NOTE Confidence: 0.8851263
00:08:34.850 --> 00:08:35.350 Keynote,
NOTE Confidence: 0.969354
00:08:36.625 --> 00:08:38.065 is a a series of
NOTE Confidence: 0.969354
00:08:38.065 --> 00:08:40.385 studies that studied Keytruda, very
NOTE Confidence: 0.969354
00:08:40.385 --> 00:08:41.665 cleverly named, and they're like
NOTE Confidence: 0.969354
00:08:41.665 --> 00:08:42.865 a thousand of them. I
NOTE Confidence: 0.969354
00:08:42.865 --> 00:08:43.825 only have I only know
NOTE Confidence: 0.969354
00:08:43.825 --> 00:08:44.865 a couple. I only need
NOTE Confidence: 0.969354
00:08:44.865 --> 00:08:46.225 to know a couple, but
NOTE Confidence: 0.969354

00:08:46.225 --> 00:08:46.865 there are a whole bunch
NOTE Confidence: 0.969354
00:08:46.865 --> 00:08:47.584 of them. But this is
NOTE Confidence: 0.969354
00:08:47.584 --> 00:08:49.309 keynote three fifty five. And
NOTE Confidence: 0.969354
00:08:49.309 --> 00:08:50.670 what it showed was that
NOTE Confidence: 0.969354
00:08:50.670 --> 00:08:52.029 when we add the drug
NOTE Confidence: 0.969354
00:08:52.029 --> 00:08:52.529 Keytruda
NOTE Confidence: 0.99713075
00:08:52.910 --> 00:08:53.649 to chemotherapy,
NOTE Confidence: 0.99230576
00:08:55.230 --> 00:08:55.970 we actually
NOTE Confidence: 0.835361
00:08:56.670 --> 00:08:58.209 pro that that combination
NOTE Confidence: 0.9993197
00:08:58.670 --> 00:09:00.670 prolongs the time that patients
NOTE Confidence: 0.9993197
00:09:00.670 --> 00:09:02.130 can stay on those treatments
NOTE Confidence: 0.9729396
00:09:02.670 --> 00:09:04.835 and prolongs the time to
NOTE Confidence: 0.9729396
00:09:04.835 --> 00:09:06.835 the cancer growing and having
NOTE Confidence: 0.9729396
00:09:06.835 --> 00:09:07.895 to switch therapies
NOTE Confidence: 0.6136774
00:09:08.355 --> 00:09:08.595 from
NOTE Confidence: 0.8952429
00:09:09.235 --> 00:09:09.735 and

NOTE Confidence: 0.99246347

00:09:10.275 --> 00:09:12.915 furthermore, it actually prolongs how

NOTE Confidence: 0.99246347

00:09:12.915 --> 00:09:14.054 long people live.

NOTE Confidence: 0.9683365

00:09:15.155 --> 00:09:16.355 And in this case, it

NOTE Confidence: 0.9683365

00:09:16.355 --> 00:09:17.559 was in the the three

NOTE Confidence: 0.9683365

00:09:17.559 --> 00:09:18.679 fifty five study, it was

NOTE Confidence: 0.9683365

00:09:18.679 --> 00:09:20.220 a difference in overall survival

NOTE Confidence: 0.9683365

00:09:20.360 --> 00:09:21.559 of seven months.

NOTE Confidence: 0.9832507

00:09:23.639 --> 00:09:24.279 And what we

NOTE Confidence: 0.9638425

00:09:24.920 --> 00:09:26.600 when when the the people,

NOTE Confidence: 0.9638425

00:09:26.600 --> 00:09:27.879 the very smart people, not

NOTE Confidence: 0.9638425

00:09:27.879 --> 00:09:29.339 me, very smart people,

NOTE Confidence: 0.999405

00:09:30.440 --> 00:09:30.940 did

NOTE Confidence: 0.8988887

00:09:31.445 --> 00:09:32.105 these studies,

NOTE Confidence: 0.99465764

00:09:32.965 --> 00:09:34.345 they found that the particular

NOTE Confidence: 0.99465764

00:09:34.405 --> 00:09:35.385 people who benefit

NOTE Confidence: 0.9520775

00:09:35.845 --> 00:09:37.045 were people who have certain

NOTE Confidence: 0.9520775

00:09:37.045 --> 00:09:37.925 levels of a of a

NOTE Confidence: 0.9520775

00:09:37.925 --> 00:09:39.304 protein called PDL one.

NOTE Confidence: 0.98863244

00:09:41.845 --> 00:09:42.665 So immunotherapy

NOTE Confidence: 0.92543715

00:09:43.125 --> 00:09:44.140 is kind of the latest

NOTE Confidence: 0.92543715

00:09:44.140 --> 00:09:45.980 and greatest. Yes, please. Great

NOTE Confidence: 0.92543715

00:09:45.980 --> 00:09:46.480 question.

NOTE Confidence: 0.9876294

00:09:47.500 --> 00:09:48.000 So

NOTE Confidence: 0.9572029

00:09:48.700 --> 00:09:51.020 people with higher levels of

NOTE Confidence: 0.9572029

00:09:51.020 --> 00:09:53.820 PD L1 benefit More. More.

NOTE Confidence: 0.9572029

00:09:53.820 --> 00:09:55.820 Mhmm. People with lower levels

NOTE Confidence: 0.9572029

00:09:55.820 --> 00:09:57.260 of PD L1 benefit a

NOTE Confidence: 0.9572029

00:09:57.260 --> 00:09:57.735 little bit?

NOTE Confidence: 0.9204719

00:09:58.615 --> 00:10:00.454 They they the cutoff of

NOTE Confidence: 0.9204719

00:10:00.454 --> 00:10:00.934 this

NOTE Confidence: 0.9879325

00:10:01.255 --> 00:10:02.615 it's a special test called

NOTE Confidence: 0.9879325
00:10:02.615 --> 00:10:03.274 the CPS
NOTE Confidence: 0.9833958
00:10:03.575 --> 00:10:04.855 where the cutoff is ten.
NOTE Confidence: 0.9833958
00:10:04.855 --> 00:10:06.054 People who had a CPS
NOTE Confidence: 0.9833958
00:10:06.054 --> 00:10:07.015 of less than ten did
NOTE Confidence: 0.9833958
00:10:07.015 --> 00:10:07.995 not seem to benefit,
NOTE Confidence: 0.9638457
00:10:08.774 --> 00:10:10.235 which is unfortunate.
NOTE Confidence: 0.9960663
00:10:10.855 --> 00:10:11.355 But
NOTE Confidence: 0.9943064
00:10:11.760 --> 00:10:13.280 I'll I'll kind of direct
NOTE Confidence: 0.9943064
00:10:13.280 --> 00:10:14.020 you to
NOTE Confidence: 0.9778792
00:10:14.400 --> 00:10:15.840 our next talk after this,
NOTE Confidence: 0.9778792
00:10:15.840 --> 00:10:17.200 which is from doctor Khan,
NOTE Confidence: 0.9778792
00:10:17.200 --> 00:10:18.720 who's gonna be talking about,
NOTE Confidence: 0.9910493
00:10:19.920 --> 00:10:21.040 phase one and early phase
NOTE Confidence: 0.9910493
00:10:21.040 --> 00:10:22.559 clinical trials. That doesn't mean
NOTE Confidence: 0.9910493
00:10:22.559 --> 00:10:23.840 that they may not benefit
NOTE Confidence: 0.9910493

00:10:23.840 --> 00:10:25.460 from some other combination
NOTE Confidence: 0.9933101

00:10:26.265 --> 00:10:28.585 of immunotherapy plus another drug
NOTE Confidence: 0.9933101

00:10:28.585 --> 00:10:29.645 or some other
NOTE Confidence: 0.98611

00:10:30.265 --> 00:10:30.765 creative,
NOTE Confidence: 0.99990225

00:10:31.545 --> 00:10:32.045 approach
NOTE Confidence: 0.98553526

00:10:32.425 --> 00:10:33.545 to kind of using the
NOTE Confidence: 0.98553526

00:10:33.545 --> 00:10:35.225 immune system to target triple
NOTE Confidence: 0.98553526

00:10:35.225 --> 00:10:36.585 negative breast cancer. And we've
NOTE Confidence: 0.98553526

00:10:36.585 --> 00:10:38.265 got trials that are looking
NOTE Confidence: 0.98553526

00:10:38.265 --> 00:10:39.305 at that, and I bet
NOTE Confidence: 0.98553526

00:10:39.305 --> 00:10:40.345 you're gonna talk about it
NOTE Confidence: 0.98553526

00:10:40.345 --> 00:10:41.165 more. Yes.
NOTE Confidence: 0.92090756

00:10:41.720 --> 00:10:43.480 Is that CPS ten the
NOTE Confidence: 0.92090756

00:10:43.480 --> 00:10:45.179 same as the blood tumor
NOTE Confidence: 0.92090756

00:10:45.240 --> 00:10:45.740 burden?
NOTE Confidence: 0.9875748

00:10:46.280 --> 00:10:47.960 Oh, great question. Great question.

NOTE Confidence: 0.9875748
00:10:47.960 --> 00:10:49.660 It's not. So
NOTE Confidence: 0.99745876
00:10:50.040 --> 00:10:52.460 the CPS is looking specifically
NOTE Confidence: 0.93586594
00:10:52.840 --> 00:10:54.140 at PD L1,
NOTE Confidence: 0.9997709
00:10:54.705 --> 00:10:55.365 which is
NOTE Confidence: 0.8782973
00:10:56.065 --> 00:10:57.125 when we think about,
NOTE Confidence: 0.93685657
00:10:58.065 --> 00:11:00.225 the immune system interacting with
NOTE Confidence: 0.93685657
00:11:00.225 --> 00:11:01.985 cancer cells, there's an interaction
NOTE Confidence: 0.93685657
00:11:01.985 --> 00:11:03.665 between a protein called PDL
NOTE Confidence: 0.93685657
00:11:03.665 --> 00:11:06.145 one and PD one. That's
NOTE Confidence: 0.93685657
00:11:06.145 --> 00:11:06.545 Lynn.
NOTE Confidence: 0.9986102
00:11:07.184 --> 00:11:08.305 So they're looking for a
NOTE Confidence: 0.9986102
00:11:08.305 --> 00:11:09.365 specific marker
NOTE Confidence: 0.9791489
00:11:09.860 --> 00:11:10.760 on the cancer.
NOTE Confidence: 0.9860868
00:11:11.940 --> 00:11:13.400 Tumor burden or,
NOTE Confidence: 0.91352814
00:11:14.900 --> 00:11:16.940 circulating tumor DNA. Is that
NOTE Confidence: 0.91352814

00:11:17.060 --> 00:11:18.020 I think because there's The
NOTE Confidence: 0.91352814

00:11:18.020 --> 00:11:18.980 one in the blood. The
NOTE Confidence: 0.91352814

00:11:18.980 --> 00:11:19.700 one in the the one
NOTE Confidence: 0.91352814

00:11:19.700 --> 00:11:20.500 in the blood. There are
NOTE Confidence: 0.91352814

00:11:20.500 --> 00:11:21.620 a lot of different blood
NOTE Confidence: 0.91352814

00:11:21.620 --> 00:11:22.500 tests that we can do,
NOTE Confidence: 0.91352814

00:11:22.500 --> 00:11:23.960 but certain Foundation.
NOTE Confidence: 0.9089751

00:11:24.335 --> 00:11:25.934 But found so foundation is
NOTE Confidence: 0.9089751

00:11:25.934 --> 00:11:27.375 one thing. Signatera is another.
NOTE Confidence: 0.9089751

00:11:27.375 --> 00:11:28.515 Let's talk about both.
NOTE Confidence: 0.8171579

00:11:30.175 --> 00:11:31.875 Sign so foundation,
NOTE Confidence: 0.99950314

00:11:34.415 --> 00:11:36.655 is a blood test that
NOTE Confidence: 0.99950314

00:11:36.655 --> 00:11:38.515 looks at the DNA
NOTE Confidence: 0.99984974

00:11:39.399 --> 00:11:40.220 of the cancer
NOTE Confidence: 0.9327407

00:11:40.600 --> 00:11:42.300 and what are the mutations
NOTE Confidence: 0.9660541

00:11:42.839 --> 00:11:44.440 inside that DNA. What is

NOTE Confidence: 0.9660541
00:11:44.440 --> 00:11:45.820 making cancer cancer?
NOTE Confidence: 0.9983911
00:11:46.440 --> 00:11:46.940 So
NOTE Confidence: 0.9794466
00:11:47.559 --> 00:11:49.240 cells are normally controlled by
NOTE Confidence: 0.9794466
00:11:49.240 --> 00:11:49.899 your DNA.
NOTE Confidence: 0.9851598
00:11:50.440 --> 00:11:51.500 And and
NOTE Confidence: 0.99447536
00:11:51.880 --> 00:11:53.100 under normal circumstances,
NOTE Confidence: 0.995331
00:11:53.480 --> 00:11:55.695 normal DNA, it makes proteins
NOTE Confidence: 0.995331
00:11:55.695 --> 00:11:56.835 and cells grow
NOTE Confidence: 0.9960605
00:11:57.215 --> 00:11:58.735 and stop growing in a
NOTE Confidence: 0.9960605
00:11:58.735 --> 00:11:59.715 regulated fashion.
NOTE Confidence: 0.97502995
00:12:00.575 --> 00:12:02.915 But when you've got abnormal
NOTE Confidence: 0.97502995
00:12:02.975 --> 00:12:04.355 DNA, there's a mutation.
NOTE Confidence: 0.9890716
00:12:04.815 --> 00:12:05.855 That's one of the things
NOTE Confidence: 0.9890716
00:12:05.855 --> 00:12:07.455 that can make cancer cancer.
NOTE Confidence: 0.9890716
00:12:07.455 --> 00:12:08.835 So you're looking for specific
NOTE Confidence: 0.9890716

00:12:08.975 --> 00:12:10.515 mutations in genes
NOTE Confidence: 0.9946876

00:12:11.630 --> 00:12:12.670 of the of the cancer
NOTE Confidence: 0.9946876

00:12:12.670 --> 00:12:13.410 cell itself.
NOTE Confidence: 0.998119

00:12:13.790 --> 00:12:14.670 And why do we do
NOTE Confidence: 0.998119

00:12:14.670 --> 00:12:15.570 that? Well,
NOTE Confidence: 0.97674435

00:12:16.030 --> 00:12:17.730 we actually have some drugs,
NOTE Confidence: 0.9729897

00:12:18.350 --> 00:12:20.110 not necessarily in too much
NOTE Confidence: 0.9729897

00:12:20.110 --> 00:12:21.230 in my talk today, but
NOTE Confidence: 0.9729897

00:12:21.230 --> 00:12:22.670 in other other talks and
NOTE Confidence: 0.9729897

00:12:22.670 --> 00:12:24.610 certainly in doctor Khan's world,
NOTE Confidence: 0.9729897

00:12:24.845 --> 00:12:26.045 where when we see certain
NOTE Confidence: 0.9729897

00:12:26.045 --> 00:12:26.545 mutations,
NOTE Confidence: 0.9990637

00:12:27.645 --> 00:12:28.705 it may suggest
NOTE Confidence: 0.9943074

00:12:29.405 --> 00:12:30.365 that we have a drug
NOTE Confidence: 0.9943074

00:12:30.365 --> 00:12:31.965 that can target that mutation,
NOTE Confidence: 0.9943074

00:12:31.965 --> 00:12:32.605 which is one of the

NOTE Confidence: 0.9943074

00:12:32.605 --> 00:12:34.304 reasons why we check foundation.

NOTE Confidence: 0.99104816

00:12:34.684 --> 00:12:36.625 There's another test called Signatera,

NOTE Confidence: 0.99842095

00:12:37.280 --> 00:12:38.980 which is looking just at

NOTE Confidence: 0.99842095

00:12:39.200 --> 00:12:41.540 circulating tumor DNA to

NOTE Confidence: 0.9813254

00:12:42.000 --> 00:12:43.120 to kind of give us

NOTE Confidence: 0.9813254

00:12:43.120 --> 00:12:44.420 a sense of how much

NOTE Confidence: 0.9813254

00:12:44.480 --> 00:12:45.940 cancer is around.

NOTE Confidence: 0.97385466

00:12:46.640 --> 00:12:48.500 Not usually used too much

NOTE Confidence: 0.97385466

00:12:48.559 --> 00:12:50.740 in this in this, scenario.

NOTE Confidence: 0.74369544

00:12:53.584 --> 00:12:55.925 Other questions? Oh, yeah. Great.

NOTE Confidence: 0.74369544

00:12:56.065 --> 00:12:57.184 On a prior slide, you

NOTE Confidence: 0.74369544

00:12:57.184 --> 00:12:58.404 had no other immunotherapies

NOTE Confidence: 0.99153316

00:12:58.785 --> 00:13:00.325 listed. Are those all

NOTE Confidence: 0.8641214

00:13:00.865 --> 00:13:02.545 cheap, using standard of care,

NOTE Confidence: 0.8641214

00:13:02.545 --> 00:13:03.425 or is it just the

NOTE Confidence: 0.8641214

00:13:03.425 --> 00:13:03.925 intruder?
NOTE Confidence: 0.9830197

00:13:05.429 --> 00:13:06.550 In terms of standard of
NOTE Confidence: 0.9830197

00:13:06.550 --> 00:13:08.309 care for breast cancer Triple
NOTE Confidence: 0.9830197

00:13:08.309 --> 00:13:10.070 negative. For triple negative breast
NOTE Confidence: 0.9830197

00:13:10.070 --> 00:13:11.990 cancer and breast cancer in
NOTE Confidence: 0.9830197

00:13:11.990 --> 00:13:13.429 general, but triple negative breast
NOTE Confidence: 0.9830197

00:13:13.429 --> 00:13:14.710 cancer, Keytruda is the only
NOTE Confidence: 0.9830197

00:13:14.710 --> 00:13:16.170 one that's approved right now.
NOTE Confidence: 0.96960604

00:13:17.270 --> 00:13:19.050 The drug Tecentriq or atezolizumab
NOTE Confidence: 0.97204673

00:13:19.429 --> 00:13:20.890 was approved a while back,
NOTE Confidence: 0.98626214

00:13:21.355 --> 00:13:22.415 but that FDA,
NOTE Confidence: 0.75270385

00:13:23.275 --> 00:13:24.575 indication got pulled.
NOTE Confidence: 0.9968416

00:13:25.115 --> 00:13:27.195 The others are all FDA
NOTE Confidence: 0.9968416

00:13:27.195 --> 00:13:29.035 approved and are being studied.
NOTE Confidence: 0.9968416

00:13:29.035 --> 00:13:30.075 There have been studies that
NOTE Confidence: 0.9968416

00:13:30.075 --> 00:13:31.135 have been looking at,

NOTE Confidence: 0.9189998

00:13:31.995 --> 00:13:34.495 nivolumab and evolimumab, Mopdevo, Nirvoy.

NOTE Confidence: 0.9189998

00:13:34.790 --> 00:13:36.150 There are an, we have

NOTE Confidence: 0.9189998

00:13:36.150 --> 00:13:37.210 a number of studies

NOTE Confidence: 0.9663145

00:13:37.750 --> 00:13:38.890 that look at durvalumab,

NOTE Confidence: 0.6164252

00:13:40.390 --> 00:13:40.950 or in

NOTE Confidence: 0.7817438

00:13:42.710 --> 00:13:43.910 school names these things. I

NOTE Confidence: 0.7817438

00:13:43.910 --> 00:13:44.809 know. Infinzi.

NOTE Confidence: 0.7543116

00:13:47.270 --> 00:13:49.050 Sometimes it's harder than the

NOTE Confidence: 0.7921717

00:13:49.554 --> 00:13:50.615 brand name's harder

NOTE Confidence: 0.91331214

00:13:51.155 --> 00:13:52.355 than the generic. There's a

NOTE Confidence: 0.91331214

00:13:52.355 --> 00:13:53.715 funny formula about how they

NOTE Confidence: 0.91331214

00:13:53.715 --> 00:13:54.835 come up with these. It's

NOTE Confidence: 0.91331214

00:13:54.835 --> 00:13:56.275 three zero four syllables, and

NOTE Confidence: 0.91331214

00:13:56.275 --> 00:13:57.635 it can't sound like another

NOTE Confidence: 0.91331214

00:13:57.635 --> 00:13:58.595 drum. That's right. And I

NOTE Confidence: 0.91331214

00:13:58.595 --> 00:13:59.715 think they get bonus points

NOTE Confidence: 0.91331214

00:13:59.715 --> 00:14:00.915 if they have q's and

NOTE Confidence: 0.91331214

00:14:00.915 --> 00:14:01.415 z's.

NOTE Confidence: 0.67920834

00:14:04.410 --> 00:14:04.910 So,

NOTE Confidence: 0.8741832

00:14:06.170 --> 00:14:08.089 anyway, the, so it's just

NOTE Confidence: 0.8741832

00:14:08.089 --> 00:14:09.769 heat treated as z's. So

NOTE Confidence: 0.8741832

00:14:09.769 --> 00:14:11.529 what is the to determine

NOTE Confidence: 0.8741832

00:14:11.529 --> 00:14:12.350 the PDL?

NOTE Confidence: 0.9663476

00:14:13.129 --> 00:14:14.170 Because I thought that was

NOTE Confidence: 0.9663476

00:14:14.170 --> 00:14:15.069 tumor burden.

NOTE Confidence: 0.9985148

00:14:15.610 --> 00:14:16.110 Yeah.

NOTE Confidence: 0.80867255

00:14:17.235 --> 00:14:17.735 PDL

NOTE Confidence: 0.9676927

00:14:18.755 --> 00:14:20.435 is not tumor burden. Tumor

NOTE Confidence: 0.9676927

00:14:20.435 --> 00:14:22.055 burden kind of speaks to

NOTE Confidence: 0.99953014

00:14:22.755 --> 00:14:24.135 the volume of

NOTE Confidence: 0.88397855

00:14:24.515 --> 00:14:26.195 of cancer. Feel free. If

NOTE Confidence: 0.88397855

00:14:26.195 --> 00:14:27.235 you if you have a

NOTE Confidence: 0.88397855

00:14:27.235 --> 00:14:28.275 a better way of explaining

NOTE Confidence: 0.88397855

00:14:28.275 --> 00:14:29.875 what it is, please chime

NOTE Confidence: 0.88397855

00:14:29.875 --> 00:14:30.375 in.

NOTE Confidence: 0.946706

00:14:32.630 --> 00:14:34.730 PDL is a it's measuring

NOTE Confidence: 0.946706

00:14:34.870 --> 00:14:36.490 whether a protein is present

NOTE Confidence: 0.946706

00:14:36.709 --> 00:14:38.070 on the tumor cells, so

NOTE Confidence: 0.946706

00:14:38.070 --> 00:14:39.510 not how much cancer there

NOTE Confidence: 0.946706

00:14:39.510 --> 00:14:40.630 is. What'd you say the

NOTE Confidence: 0.946706

00:14:40.630 --> 00:14:41.930 test was for that CSP?

NOTE Confidence: 0.946706

00:14:42.070 --> 00:14:44.170 It's CBS. It's the

NOTE Confidence: 0.6208446

00:14:45.595 --> 00:14:47.255 CBS tamper. Combine

NOTE Confidence: 0.3235101

00:14:47.955 --> 00:14:49.135 Combined. Prob

NOTE Confidence: 0.47843885

00:14:49.755 --> 00:14:51.275 prob prognostic store, prob prob

NOTE Confidence: 0.9833191

00:14:52.235 --> 00:14:53.995 something like that. Okay. It's

NOTE Confidence: 0.9833191

00:14:53.995 --> 00:14:55.355 a special it it's a
NOTE Confidence: 0.9833191

00:14:55.355 --> 00:14:55.835 test,
NOTE Confidence: 0.95130247

00:14:56.475 --> 00:14:58.555 that looks at how much
NOTE Confidence: 0.95130247

00:14:58.555 --> 00:14:59.515 is there and then what
NOTE Confidence: 0.95130247

00:14:59.515 --> 00:15:00.015 strength,
NOTE Confidence: 0.7634411

00:15:00.790 --> 00:15:01.750 is a particular,
NOTE Confidence: 0.97855645

00:15:05.110 --> 00:15:07.050 branded test that's associated
NOTE Confidence: 0.853317

00:15:07.430 --> 00:15:08.390 with the key truth, and
NOTE Confidence: 0.853317

00:15:08.390 --> 00:15:09.270 they were kind of approved
NOTE Confidence: 0.853317

00:15:09.270 --> 00:15:10.550 together. I can try to
NOTE Confidence: 0.853317

00:15:10.550 --> 00:15:11.190 do it maybe in a
NOTE Confidence: 0.853317

00:15:11.190 --> 00:15:12.060 different language just to see
NOTE Confidence: 0.853317

00:15:12.060 --> 00:15:13.675 if Yeah. So the the
NOTE Confidence: 0.853317

00:15:13.835 --> 00:15:14.895 Portuguese. The
NOTE Confidence: 0.8279299

00:15:16.315 --> 00:15:18.154 cps or PDL one testing
NOTE Confidence: 0.8279299

00:15:18.154 --> 00:15:19.915 or or PD one test.

NOTE Confidence: 0.8279299

00:15:19.915 --> 00:15:22.395 So those the pathologist, which

NOTE Confidence: 0.8279299

00:15:22.395 --> 00:15:23.274 is the doctor that has

NOTE Confidence: 0.8279299

00:15:23.274 --> 00:15:23.935 a microscope,

NOTE Confidence: 0.92782736

00:15:24.315 --> 00:15:25.195 they get a piece of

NOTE Confidence: 0.92782736

00:15:25.195 --> 00:15:26.670 the tumor, they slice it,

NOTE Confidence: 0.92782736

00:15:26.750 --> 00:15:27.870 They get it into his

NOTE Confidence: 0.92782736

00:15:27.870 --> 00:15:29.570 face. He puts this dye,

NOTE Confidence: 0.92782736

00:15:29.630 --> 00:15:31.470 like, PDL dye, and then

NOTE Confidence: 0.92782736

00:15:31.470 --> 00:15:33.389 he throw throws it. And

NOTE Confidence: 0.92782736

00:15:33.389 --> 00:15:34.350 then if he does have

NOTE Confidence: 0.92782736

00:15:34.350 --> 00:15:35.630 those receptors get in the

NOTE Confidence: 0.92782736

00:15:35.630 --> 00:15:36.750 dye, he catches it. And

NOTE Confidence: 0.92782736

00:15:36.750 --> 00:15:37.709 then when he looks into

NOTE Confidence: 0.92782736

00:15:37.709 --> 00:15:39.310 the microscope, he says, oh,

NOTE Confidence: 0.92782736

00:15:39.310 --> 00:15:40.430 I see everything is kind

NOTE Confidence: 0.92782736

00:15:40.430 --> 00:15:41.389 of lining up from this
NOTE Confidence: 0.92782736

00:15:41.389 --> 00:15:42.995 PDL one receptor.
NOTE Confidence: 0.8840267

00:15:43.375 --> 00:15:44.495 That's a test that is
NOTE Confidence: 0.8840267

00:15:44.495 --> 00:15:46.255 easier or easy easily done
NOTE Confidence: 0.8840267

00:15:46.255 --> 00:15:47.635 in the hospital. Okay? Pathologists
NOTE Confidence: 0.8840267

00:15:47.775 --> 00:15:48.495 can put it in the
NOTE Confidence: 0.8840267

00:15:48.495 --> 00:15:49.935 microscope, throw the dye, and
NOTE Confidence: 0.8840267

00:15:49.935 --> 00:15:51.155 see if it catches it.
NOTE Confidence: 0.8840267

00:15:51.295 --> 00:15:52.255 And then it looks to
NOTE Confidence: 0.8840267

00:15:52.255 --> 00:15:53.455 see, do you have those
NOTE Confidence: 0.8840267

00:15:53.455 --> 00:15:54.735 markers that are gonna show
NOTE Confidence: 0.8840267

00:15:54.735 --> 00:15:55.775 that the immune cells are
NOTE Confidence: 0.8840267

00:15:55.775 --> 00:15:57.000 gonna engage with the cancer
NOTE Confidence: 0.8840267

00:15:57.000 --> 00:15:58.280 cells and and that some
NOTE Confidence: 0.8840267

00:15:58.280 --> 00:15:59.720 Higgs and Mel was more
NOTE Confidence: 0.8840267

00:15:59.720 --> 00:16:00.620 shown to work.

NOTE Confidence: 0.89562297
00:16:01.080 --> 00:16:02.760 That is the CPS combined
NOTE Confidence: 0.89562297
00:16:02.760 --> 00:16:04.360 positive score or the PDL
NOTE Confidence: 0.89562297
00:16:04.360 --> 00:16:04.920 one hundred and ten, and
NOTE Confidence: 0.89562297
00:16:04.920 --> 00:16:05.960 that's all under just a
NOTE Confidence: 0.89562297
00:16:05.960 --> 00:16:06.460 microscope.
NOTE Confidence: 0.92101485
00:16:07.240 --> 00:16:08.360 Then we have the tumor
NOTE Confidence: 0.92101485
00:16:08.360 --> 00:16:09.720 mutation BERT. Remember she was
NOTE Confidence: 0.92101485
00:16:09.720 --> 00:16:11.000 talking about the how the
NOTE Confidence: 0.92101485
00:16:11.000 --> 00:16:11.985 tumor is made and this
NOTE Confidence: 0.92101485
00:16:11.985 --> 00:16:13.425 DNA code. So I think
NOTE Confidence: 0.92101485
00:16:13.425 --> 00:16:14.065 of that as like a
NOTE Confidence: 0.92101485
00:16:14.065 --> 00:16:15.505 barcode. You have a barcode
NOTE Confidence: 0.92101485
00:16:15.505 --> 00:16:16.465 at the grocery store. You
NOTE Confidence: 0.92101485
00:16:16.465 --> 00:16:17.345 read it. It tells you
NOTE Confidence: 0.92101485
00:16:17.345 --> 00:16:19.025 something. That's how we know
NOTE Confidence: 0.92101485

00:16:19.025 --> 00:16:20.385 the cancer cells has it's,
NOTE Confidence: 0.92101485

00:16:20.385 --> 00:16:21.665 like, all of the bunch
NOTE Confidence: 0.92101485

00:16:21.665 --> 00:16:23.425 of random letters and codes
NOTE Confidence: 0.92101485

00:16:23.425 --> 00:16:24.625 that that turns into some
NOTE Confidence: 0.92101485

00:16:24.625 --> 00:16:25.445 sort of message
NOTE Confidence: 0.9662482

00:16:25.880 --> 00:16:27.320 that can be read. If
NOTE Confidence: 0.9662482

00:16:27.320 --> 00:16:28.279 you have a lot of
NOTE Confidence: 0.9662482

00:16:28.279 --> 00:16:29.480 changes in the barcode, like
NOTE Confidence: 0.9662482

00:16:29.480 --> 00:16:30.519 the barcode is all, like,
NOTE Confidence: 0.9662482

00:16:30.519 --> 00:16:31.420 full of mistakes,
NOTE Confidence: 0.88502944

00:16:31.880 --> 00:16:33.320 that's what they call mutation
NOTE Confidence: 0.88502944

00:16:33.320 --> 00:16:34.839 burden. How many mutations do
NOTE Confidence: 0.88502944

00:16:34.839 --> 00:16:36.120 you have? Just one mutation
NOTE Confidence: 0.88502944

00:16:36.120 --> 00:16:37.580 or have thirty mutations?
NOTE Confidence: 0.91386753

00:16:37.995 --> 00:16:39.275 And then that is something
NOTE Confidence: 0.91386753

00:16:39.275 --> 00:16:40.395 that they see when they

NOTE Confidence: 0.91386753

00:16:40.395 --> 00:16:42.235 read a whole DNA barcode

NOTE Confidence: 0.91386753

00:16:42.235 --> 00:16:43.275 of this cancer, which is

NOTE Confidence: 0.91386753

00:16:43.275 --> 00:16:44.955 the foundation test. That's a

NOTE Confidence: 0.91386753

00:16:44.955 --> 00:16:46.395 more expensive fancier test. They

NOTE Confidence: 0.91386753

00:16:46.395 --> 00:16:47.435 need to look at the

NOTE Confidence: 0.91386753

00:16:47.435 --> 00:16:48.975 coding on both the cancer.

NOTE Confidence: 0.91386753

00:16:49.115 --> 00:16:49.835 And then they say, I

NOTE Confidence: 0.91386753

00:16:49.835 --> 00:16:50.875 have a few mutations. Your

NOTE Confidence: 0.91386753

00:16:50.875 --> 00:16:52.475 tumor mutation burden is gonna

NOTE Confidence: 0.91386753

00:16:52.475 --> 00:16:53.519 be low. If you have

NOTE Confidence: 0.91386753

00:16:53.519 --> 00:16:54.880 a ton of different mutations

NOTE Confidence: 0.91386753

00:16:54.880 --> 00:16:55.920 in the barcode is full

NOTE Confidence: 0.91386753

00:16:55.920 --> 00:16:57.120 of mistakes, then the tumor

NOTE Confidence: 0.91386753

00:16:57.120 --> 00:16:58.500 mutation burden is high.

NOTE Confidence: 0.9674545

00:16:58.959 --> 00:17:00.480 And that's another marker for

NOTE Confidence: 0.9674545

00:17:00.480 --> 00:17:01.940 immunotherapists to work. Immunotherapists

NOTE Confidence: 0.8727926

00:17:02.320 --> 00:17:03.920 like tumors that have a

NOTE Confidence: 0.8727926

00:17:03.920 --> 00:17:05.200 ton of mutations that look

NOTE Confidence: 0.8727926

00:17:05.200 --> 00:17:06.640 gangrier and then immune cells

NOTE Confidence: 0.8727926

00:17:06.640 --> 00:17:08.080 can recognize that better and

NOTE Confidence: 0.8727926

00:17:08.080 --> 00:17:09.924 cure. And the cutoff is

NOTE Confidence: 0.8727926

00:17:09.924 --> 00:17:11.924 interestingly and confusingly the same.

NOTE Confidence: 0.8727926

00:17:11.924 --> 00:17:14.004 So cps of ten and

NOTE Confidence: 0.8727926

00:17:14.004 --> 00:17:15.945 tumor mutation burden of ten,

NOTE Confidence: 0.9431032

00:17:16.244 --> 00:17:18.325 both have two totally different

NOTE Confidence: 0.9431032

00:17:18.325 --> 00:17:19.684 tens, but the number is

NOTE Confidence: 0.9431032

00:17:19.684 --> 00:17:21.044 the same. But if you

NOTE Confidence: 0.9431032

00:17:21.044 --> 00:17:22.244 have a TMD, your tumor

NOTE Confidence: 0.9431032

00:17:22.244 --> 00:17:24.105 mutation burden higher than ten,

NOTE Confidence: 0.9664462

00:17:24.420 --> 00:17:26.340 mutations per megabase of the

NOTE Confidence: 0.9664462

00:17:26.340 --> 00:17:28.020 DNA reading, then you can

NOTE Confidence: 0.9664462
00:17:28.020 --> 00:17:29.700 get Keytruda regardless of your
NOTE Confidence: 0.9664462
00:17:29.700 --> 00:17:31.619 tumor type. If you have,
NOTE Confidence: 0.9025543
00:17:32.100 --> 00:17:34.340 CVS or PDL one ink
NOTE Confidence: 0.9025543
00:17:34.340 --> 00:17:36.420 test that is super inky,
NOTE Confidence: 0.9025543
00:17:36.420 --> 00:17:38.040 like, super positive and colorful,
NOTE Confidence: 0.99416226
00:17:38.715 --> 00:17:39.695 more than ten,
NOTE Confidence: 0.9127839
00:17:39.994 --> 00:17:41.115 then you see they also
NOTE Confidence: 0.9127839
00:17:41.115 --> 00:17:42.315 can benefit from the case
NOTE Confidence: 0.9127839
00:17:42.315 --> 00:17:43.755 scenario. So it's just different
NOTE Confidence: 0.9127839
00:17:43.755 --> 00:17:44.715 tests, but that ten to
NOTE Confidence: 0.9127839
00:17:44.715 --> 00:17:46.015 ten makes things confusing.
NOTE Confidence: 0.8838475
00:17:46.554 --> 00:17:47.674 Thank you for that clarify.
NOTE Confidence: 0.8838475
00:17:47.674 --> 00:17:48.554 I'm sorry. I'm gonna cut
NOTE Confidence: 0.8838475
00:17:48.554 --> 00:17:49.355 you off because we got
NOTE Confidence: 0.8838475
00:17:49.355 --> 00:17:50.315 nothing here. But, no, thank
NOTE Confidence: 0.8838475

00:17:50.315 --> 00:17:50.975 you for
NOTE Confidence: 0.98199594

00:17:51.380 --> 00:17:52.280 thank you for the clarification.
NOTE Confidence: 0.98199594

00:17:52.420 --> 00:17:53.220 I was there was a
NOTE Confidence: 0.98199594

00:17:53.220 --> 00:17:54.820 disconnect there. So you totally,
NOTE Confidence: 0.98199594

00:17:54.820 --> 00:17:56.119 I think, answered the question
NOTE Confidence: 0.91780764

00:17:56.420 --> 00:17:57.460 much better than I did.
NOTE Confidence: 0.91780764

00:17:57.460 --> 00:17:58.420 So thank you for being
NOTE Confidence: 0.91780764

00:17:58.420 --> 00:17:58.920 here.
NOTE Confidence: 0.9453108

00:18:01.140 --> 00:18:03.300 The, the really quickly because
NOTE Confidence: 0.9453108

00:18:03.300 --> 00:18:04.244 we're down to eight minutes.
NOTE Confidence: 0.9453108

00:18:04.645 --> 00:18:06.325 I I suspect that Renee
NOTE Confidence: 0.9453108

00:18:06.325 --> 00:18:07.285 is gonna come in and
NOTE Confidence: 0.9453108

00:18:07.285 --> 00:18:08.165 tell us that we have
NOTE Confidence: 0.9453108

00:18:08.165 --> 00:18:08.984 to stop. But,
NOTE Confidence: 0.96922

00:18:10.005 --> 00:18:11.065 lots of people,
NOTE Confidence: 0.9646445

00:18:11.845 --> 00:18:13.684 with triple negative breast cancer,

NOTE Confidence: 0.9646445
00:18:13.684 --> 00:18:15.605 higher percentage than people without
NOTE Confidence: 0.9646445
00:18:15.605 --> 00:18:17.785 triple negative breast cancer, have,
NOTE Confidence: 0.9482816
00:18:18.950 --> 00:18:20.150 a a mutation in the
NOTE Confidence: 0.9482816
00:18:20.150 --> 00:18:21.510 genes BRCA one or b
NOTE Confidence: 0.9482816
00:18:21.510 --> 00:18:22.330 r BRCA
NOTE Confidence: 0.8662586
00:18:22.630 --> 00:18:23.130 two.
NOTE Confidence: 0.976533
00:18:23.590 --> 00:18:25.530 And those folks can develop,
NOTE Confidence: 0.976533
00:18:25.830 --> 00:18:26.950 have a very high chance
NOTE Confidence: 0.976533
00:18:26.950 --> 00:18:28.150 of developing breast cancer in
NOTE Confidence: 0.976533
00:18:28.150 --> 00:18:29.770 the lifetime in their lifetime.
NOTE Confidence: 0.976533
00:18:29.830 --> 00:18:31.510 And in triple negative breast
NOTE Confidence: 0.976533
00:18:31.510 --> 00:18:32.869 cancer, it makes up about
NOTE Confidence: 0.976533
00:18:32.869 --> 00:18:33.850 almost a quarter.
NOTE Confidence: 0.99706507
00:18:37.244 --> 00:18:37.744 BRCA
NOTE Confidence: 0.97209924
00:18:38.045 --> 00:18:40.304 leads to lots of errors
NOTE Confidence: 0.97209924

00:18:40.365 --> 00:18:42.125 in DNA replication. That's kind

NOTE Confidence: 0.97209924

00:18:42.125 --> 00:18:43.665 of how cancer is formed,

NOTE Confidence: 0.97209924

00:18:43.804 --> 00:18:45.005 and I'm not gonna get

NOTE Confidence: 0.97209924

00:18:45.005 --> 00:18:46.365 too much into why

NOTE Confidence: 0.98583186

00:18:47.070 --> 00:18:48.289 like, how this happens.

NOTE Confidence: 0.987769

00:18:50.109 --> 00:18:52.210 But people who have BRCA

NOTE Confidence: 0.987769

00:18:52.429 --> 00:18:54.289 one and BRCA two mutations,

NOTE Confidence: 0.9862138

00:18:55.070 --> 00:18:55.570 cancers,

NOTE Confidence: 0.9908757

00:18:56.109 --> 00:18:57.789 associated with those mutations are

NOTE Confidence: 0.9908757

00:18:57.789 --> 00:18:59.734 very sensitive to drugs called

NOTE Confidence: 0.9908757

00:18:59.734 --> 00:19:01.255 PARP inhibitors. So we use

NOTE Confidence: 0.9908757

00:19:01.255 --> 00:19:02.875 PARP inhibitors a lot

NOTE Confidence: 0.9740467

00:19:03.335 --> 00:19:05.015 in people, with these types

NOTE Confidence: 0.9740467

00:19:05.015 --> 00:19:06.315 of mutations and particularly,

NOTE Confidence: 0.97684544

00:19:07.255 --> 00:19:08.695 in people with breast cancer,

NOTE Confidence: 0.97684544

00:19:08.855 --> 00:19:10.234 triple negative breast cancer.

NOTE Confidence: 0.87426394

00:19:11.175 --> 00:19:13.330 The pill, generally well tolerated,

NOTE Confidence: 0.87426394

00:19:13.330 --> 00:19:15.169 and and it's an yet

NOTE Confidence: 0.87426394

00:19:15.169 --> 00:19:15.669 another

NOTE Confidence: 0.9973454

00:19:16.130 --> 00:19:17.250 drug that we can put

NOTE Confidence: 0.9973454

00:19:17.250 --> 00:19:18.770 in the arsenal against this

NOTE Confidence: 0.9973454

00:19:18.770 --> 00:19:19.270 cancer.

NOTE Confidence: 0.9578422

00:19:19.809 --> 00:19:20.390 And, again,

NOTE Confidence: 0.98763883

00:19:21.090 --> 00:19:22.130 these are these are called

NOTE Confidence: 0.98763883

00:19:22.130 --> 00:19:23.570 Kaplan Meier curves. If you've

NOTE Confidence: 0.98763883

00:19:23.570 --> 00:19:25.090 not seen these, basically, it

NOTE Confidence: 0.98763883

00:19:25.090 --> 00:19:25.830 tells us

NOTE Confidence: 0.9915167

00:19:26.494 --> 00:19:28.415 what what's happening with patients

NOTE Confidence: 0.9915167

00:19:28.415 --> 00:19:29.695 on the y axis and

NOTE Confidence: 0.9915167

00:19:29.695 --> 00:19:30.835 how long out,

NOTE Confidence: 0.97682273

00:19:32.175 --> 00:19:33.555 we go. And the longer

NOTE Confidence: 0.9614743

00:19:34.175 --> 00:19:35.295 this tells us how many
NOTE Confidence: 0.9614743

00:19:35.295 --> 00:19:36.975 patients are alive in a
NOTE Confidence: 0.9614743

00:19:36.975 --> 00:19:38.994 big clinical trial and duration
NOTE Confidence: 0.9614743

00:19:39.055 --> 00:19:41.040 so that you want the
NOTE Confidence: 0.9614743

00:19:41.040 --> 00:19:42.320 curves to be as flat
NOTE Confidence: 0.9614743

00:19:42.320 --> 00:19:43.680 as possible. So a curve
NOTE Confidence: 0.9614743

00:19:43.680 --> 00:19:44.640 that comes in that's a
NOTE Confidence: 0.9614743

00:19:44.640 --> 00:19:46.480 little much shallower is better
NOTE Confidence: 0.9614743

00:19:46.480 --> 00:19:47.600 than a curve that drops
NOTE Confidence: 0.9614743

00:19:47.600 --> 00:19:48.100 off.
NOTE Confidence: 0.9782705

00:19:49.040 --> 00:19:50.640 But this tells us these
NOTE Confidence: 0.9782705

00:19:50.640 --> 00:19:52.320 these curves, these graphs are
NOTE Confidence: 0.9782705

00:19:52.320 --> 00:19:53.760 telling us that the drug
NOTE Confidence: 0.9782705

00:19:53.760 --> 00:19:55.534 olaparib in the top and
NOTE Confidence: 0.9782705

00:19:55.534 --> 00:19:56.595 the drug talozaparib
NOTE Confidence: 0.9711504

00:19:56.975 --> 00:19:57.715 in the bottom,

NOTE Confidence: 0.9938607

00:19:58.015 --> 00:19:59.695 both are very effective or

NOTE Confidence: 0.9938607

00:19:59.695 --> 00:20:00.434 more effective

NOTE Confidence: 0.99812573

00:20:00.734 --> 00:20:02.674 in people with BRCA mutations

NOTE Confidence: 0.98528826

00:20:03.375 --> 00:20:05.315 than not using these drugs.

NOTE Confidence: 0.8554802

00:20:06.895 --> 00:20:08.534 There's another really cool class

NOTE Confidence: 0.8554802

00:20:08.534 --> 00:20:09.300 of medications called antibody drug

NOTE Confidence: 0.8554802

00:20:09.380 --> 00:20:10.224 seeking missiles because they're antibodies,

NOTE Confidence: 0.8554802

00:20:10.224 --> 00:20:11.140 which are looking for a

NOTE Confidence: 0.8554802

00:20:11.140 --> 00:20:11.960 particular protein.

NOTE Confidence: 0.9791069

00:20:21.715 --> 00:20:23.095 They attach to a particular

NOTE Confidence: 0.9791069

00:20:23.155 --> 00:20:24.915 protein, but riding along with

NOTE Confidence: 0.9791069

00:20:24.915 --> 00:20:26.295 the with the antibody

NOTE Confidence: 0.9945698

00:20:26.915 --> 00:20:27.815 is a drug.

NOTE Confidence: 0.9964307

00:20:28.755 --> 00:20:29.255 And

NOTE Confidence: 0.9861657

00:20:29.715 --> 00:20:31.715 so when the antibody finds

NOTE Confidence: 0.9861657

00:20:31.715 --> 00:20:33.075 the tumor antigen that it's
NOTE Confidence: 0.9861657

00:20:33.075 --> 00:20:34.675 looking for, it delivers the
NOTE Confidence: 0.9861657

00:20:34.675 --> 00:20:36.595 chemotherapy drug right to that
NOTE Confidence: 0.9861657

00:20:36.595 --> 00:20:37.095 area.
NOTE Confidence: 0.9977055

00:20:37.559 --> 00:20:38.859 So it's it's,
NOTE Confidence: 0.9988402

00:20:39.799 --> 00:20:40.539 a very
NOTE Confidence: 0.93935204

00:20:41.320 --> 00:20:41.820 exciting,
NOTE Confidence: 0.9983759

00:20:43.880 --> 00:20:45.240 group of drugs. We've got
NOTE Confidence: 0.9983759

00:20:45.240 --> 00:20:46.200 a couple of them in
NOTE Confidence: 0.9983759

00:20:46.200 --> 00:20:47.019 breast cancer,
NOTE Confidence: 0.997815

00:20:47.720 --> 00:20:49.340 that we use very routinely.
NOTE Confidence: 0.9909664

00:20:52.215 --> 00:20:53.575 In fact, the first antibody
NOTE Confidence: 0.9909664

00:20:53.575 --> 00:20:54.395 drug conjugate,
NOTE Confidence: 0.99909127

00:20:55.415 --> 00:20:55.915 was
NOTE Confidence: 0.95220745

00:20:56.455 --> 00:20:57.895 in breast cancer was approved
NOTE Confidence: 0.95220745

00:20:57.895 --> 00:20:59.415 for people with triple negative

NOTE Confidence: 0.95220745
00:20:59.415 --> 00:21:00.375 breast cancer. This is a
NOTE Confidence: 0.95220745
00:21:00.375 --> 00:21:01.355 drug called sacituzumab,
NOTE Confidence: 0.9030424
00:21:01.895 --> 00:21:03.415 or Trodelvie is the other
NOTE Confidence: 0.9030424
00:21:03.415 --> 00:21:03.900 name.
NOTE Confidence: 0.9463384
00:21:05.100 --> 00:21:06.300 And it was based on
NOTE Confidence: 0.9463384
00:21:06.300 --> 00:21:07.600 a a phase three
NOTE Confidence: 0.9828148
00:21:07.980 --> 00:21:10.140 large clinical trial of five
NOTE Confidence: 0.9828148
00:21:10.140 --> 00:21:11.420 hundred and thirty patients and
NOTE Confidence: 0.9828148
00:21:11.420 --> 00:21:12.859 found that people who received
NOTE Confidence: 0.9828148
00:21:12.859 --> 00:21:13.359 sacituzumab,
NOTE Confidence: 0.999651
00:21:14.700 --> 00:21:15.520 or TRODELV
NOTE Confidence: 0.9024214
00:21:16.060 --> 00:21:16.880 did better
NOTE Confidence: 0.99295723
00:21:17.375 --> 00:21:19.135 than people who had just
NOTE Confidence: 0.99295723
00:21:19.135 --> 00:21:20.994 single agent regular chemotherapy
NOTE Confidence: 0.9204928
00:21:21.615 --> 00:21:22.835 that's really nonspecific.
NOTE Confidence: 0.93887603

00:21:24.335 --> 00:21:26.015 So where are we moving?
NOTE Confidence: 0.93887603

00:21:26.015 --> 00:21:27.135 You've got a we've got
NOTE Confidence: 0.93887603

00:21:27.135 --> 00:21:29.234 to fine tune our treatments
NOTE Confidence: 0.93887603

00:21:29.455 --> 00:21:31.135 for metastatic triple negative breast
NOTE Confidence: 0.93887603

00:21:31.135 --> 00:21:31.635 cancer.
NOTE Confidence: 0.99231356

00:21:31.950 --> 00:21:33.710 So everybody with metastatic triple
NOTE Confidence: 0.99231356

00:21:33.710 --> 00:21:35.490 negative breast cancer gets genetic
NOTE Confidence: 0.99231356

00:21:35.549 --> 00:21:36.049 testing.
NOTE Confidence: 0.9978471

00:21:36.590 --> 00:21:38.190 What's the DNA that they
NOTE Confidence: 0.9978471

00:21:38.190 --> 00:21:39.330 are born with?
NOTE Confidence: 0.9501874

00:21:40.109 --> 00:21:42.350 We're looking for BRCA one,
NOTE Confidence: 0.9501874

00:21:42.350 --> 00:21:44.109 BRCA two mutations as well
NOTE Confidence: 0.9501874

00:21:44.109 --> 00:21:45.169 as some other mutations
NOTE Confidence: 0.9990506

00:21:45.470 --> 00:21:46.690 that might suggest
NOTE Confidence: 0.9915077

00:21:47.265 --> 00:21:48.705 that people would respond to
NOTE Confidence: 0.9915077

00:21:48.705 --> 00:21:49.685 a PARP inhibitor.

NOTE Confidence: 0.97471446
00:21:50.625 --> 00:21:52.065 We're looking at PD L1
NOTE Confidence: 0.97471446
00:21:52.065 --> 00:21:53.665 status, which we've we've talked
NOTE Confidence: 0.97471446
00:21:53.665 --> 00:21:55.445 about. We look at HER2
NOTE Confidence: 0.97471446
00:21:55.585 --> 00:21:56.085 status.
NOTE Confidence: 0.9608898
00:21:56.465 --> 00:21:58.465 So even though triple negative
NOTE Confidence: 0.9608898
00:21:58.465 --> 00:21:59.925 breast cancers by definition
NOTE Confidence: 0.99316853
00:22:00.305 --> 00:22:01.845 are HER2 negative,
NOTE Confidence: 0.99858457
00:22:02.710 --> 00:22:04.630 There is a class of
NOTE Confidence: 0.99858457
00:22:04.630 --> 00:22:05.130 HER2
NOTE Confidence: 0.91533417
00:22:05.750 --> 00:22:07.350 low, which I'm not gonna
NOTE Confidence: 0.91533417
00:22:07.350 --> 00:22:08.490 get into, but
NOTE Confidence: 0.9479972
00:22:08.950 --> 00:22:11.270 depending on if patients have
NOTE Confidence: 0.9479972
00:22:11.270 --> 00:22:12.710 a little bit of HER2
NOTE Confidence: 0.9479972
00:22:12.710 --> 00:22:14.550 expression, they could benefit from
NOTE Confidence: 0.9479972
00:22:14.550 --> 00:22:16.470 this drug called nHER2, which
NOTE Confidence: 0.9479972

00:22:16.470 --> 00:22:17.690 you may have heard about.
NOTE Confidence: 0.9877499

00:22:18.225 --> 00:22:19.924 We also look at mutational
NOTE Confidence: 0.9877499

00:22:19.984 --> 00:22:21.845 burden. We look at deficient
NOTE Confidence: 0.9877499

00:22:21.905 --> 00:22:24.385 mismatch repair, microsatellite instability. These
NOTE Confidence: 0.9877499

00:22:24.385 --> 00:22:25.845 are all markers of
NOTE Confidence: 0.99708533

00:22:26.304 --> 00:22:27.365 lots of mutations,
NOTE Confidence: 0.94091135

00:22:28.145 --> 00:22:30.005 that suggest that those patients
NOTE Confidence: 0.94091135

00:22:30.304 --> 00:22:31.665 may benefit from drugs like
NOTE Confidence: 0.94091135

00:22:31.665 --> 00:22:32.165 Keytruda.
NOTE Confidence: 0.90315455

00:22:32.850 --> 00:22:34.530 And then more genomic and
NOTE Confidence: 0.90315455

00:22:34.530 --> 00:22:36.710 molecular pro profiling like foundation
NOTE Confidence: 0.9429346

00:22:37.330 --> 00:22:38.690 to see if the if
NOTE Confidence: 0.9429346

00:22:38.690 --> 00:22:40.470 patients are eligible for,
NOTE Confidence: 0.96013135

00:22:41.250 --> 00:22:43.170 importantly, clinical trials, but there
NOTE Confidence: 0.96013135

00:22:43.170 --> 00:22:44.710 are other couple of other
NOTE Confidence: 0.96013135

00:22:44.770 --> 00:22:46.049 mutations that we look for

NOTE Confidence: 0.96013135
00:22:46.049 --> 00:22:47.670 that we have specific drugs.
NOTE Confidence: 0.9694744
00:22:49.725 --> 00:22:50.945 This is a really complicated
NOTE Confidence: 0.9694744
00:22:51.085 --> 00:22:52.445 slide that I probably can't
NOTE Confidence: 0.9694744
00:22:52.445 --> 00:22:52.945 explain,
NOTE Confidence: 0.9942419
00:22:53.405 --> 00:22:54.705 give it and give it,
NOTE Confidence: 0.9837355
00:22:55.405 --> 00:22:56.845 the the explanation that it
NOTE Confidence: 0.9837355
00:22:56.845 --> 00:22:57.345 deserves.
NOTE Confidence: 0.9990419
00:22:57.885 --> 00:22:59.185 But this is a map
NOTE Confidence: 0.99953413
00:22:59.565 --> 00:23:01.005 of all of the different
NOTE Confidence: 0.99953413
00:23:01.005 --> 00:23:03.025 pathways that are that are
NOTE Confidence: 0.96379584
00:23:03.570 --> 00:23:05.570 used in some cancers, and
NOTE Confidence: 0.96379584
00:23:05.570 --> 00:23:06.450 it's not even all of
NOTE Confidence: 0.96379584
00:23:06.450 --> 00:23:07.809 them, it's just some of
NOTE Confidence: 0.96379584
00:23:07.809 --> 00:23:08.470 the pathways.
NOTE Confidence: 0.965166
00:23:08.929 --> 00:23:10.609 And these red lines with
NOTE Confidence: 0.965166

00:23:10.609 --> 00:23:12.149 the kind of stop sign,
NOTE Confidence: 0.9875521

00:23:12.450 --> 00:23:13.570 these are the drugs that
NOTE Confidence: 0.9875521

00:23:13.570 --> 00:23:15.330 we have that are either
NOTE Confidence: 0.9875521

00:23:15.330 --> 00:23:17.350 in development or approved already
NOTE Confidence: 0.9875521

00:23:17.570 --> 00:23:18.070 that
NOTE Confidence: 0.9993718

00:23:18.529 --> 00:23:19.029 may
NOTE Confidence: 0.99357605

00:23:19.545 --> 00:23:21.965 work against those particular proteins
NOTE Confidence: 0.99357605

00:23:22.025 --> 00:23:23.405 and and pathways.
NOTE Confidence: 0.98350686

00:23:23.865 --> 00:23:25.005 These are all it's
NOTE Confidence: 0.95035756

00:23:25.465 --> 00:23:26.825 cell growth is a series
NOTE Confidence: 0.95035756

00:23:26.825 --> 00:23:28.585 of light switches, and it's
NOTE Confidence: 0.95035756

00:23:28.585 --> 00:23:29.705 like a circuit, and you
NOTE Confidence: 0.95035756

00:23:29.705 --> 00:23:31.145 gotta block the circuit in
NOTE Confidence: 0.95035756

00:23:31.145 --> 00:23:32.985 order to tell certain in
NOTE Confidence: 0.95035756

00:23:32.985 --> 00:23:34.265 order to tell cancer cells,
NOTE Confidence: 0.99684066

00:23:36.240 --> 00:23:37.540 to to stop growing.

NOTE Confidence: 0.99564785
00:23:37.840 --> 00:23:39.280 So I know I told
NOTE Confidence: 0.99564785
00:23:39.280 --> 00:23:40.320 you that I didn't change
NOTE Confidence: 0.99564785
00:23:40.320 --> 00:23:42.000 any any of the the
NOTE Confidence: 0.99564785
00:23:42.000 --> 00:23:43.460 slides. This is Eleanor.
NOTE Confidence: 0.988676
00:23:44.160 --> 00:23:45.600 She had her biopsy. It
NOTE Confidence: 0.988676
00:23:45.600 --> 00:23:47.460 confirmed that she had metastatic
NOTE Confidence: 0.988676
00:23:47.600 --> 00:23:48.340 breast cancer.
NOTE Confidence: 0.97358006
00:23:48.994 --> 00:23:50.355 She did we did check
NOTE Confidence: 0.97358006
00:23:50.355 --> 00:23:51.955 her PDL one, and it
NOTE Confidence: 0.97358006
00:23:51.955 --> 00:23:53.335 did come back positive,
NOTE Confidence: 0.9978277
00:23:54.435 --> 00:23:55.494 greater than ten.
NOTE Confidence: 0.99871165
00:23:55.955 --> 00:23:57.555 And so she started on
NOTE Confidence: 0.99871165
00:23:57.555 --> 00:23:58.055 chemotherapy
NOTE Confidence: 0.9457351
00:23:58.515 --> 00:23:59.415 with Keytruda.
NOTE Confidence: 0.99929315
00:24:00.915 --> 00:24:02.455 And you can see that
NOTE Confidence: 0.98029554

00:24:02.880 --> 00:24:04.320 spot in the liver, that
NOTE Confidence: 0.98029554

00:24:04.320 --> 00:24:05.780 dark area of the liver,
NOTE Confidence: 0.98029554

00:24:06.080 --> 00:24:07.359 just the the whole thing
NOTE Confidence: 0.98029554

00:24:07.359 --> 00:24:08.240 on the on the left
NOTE Confidence: 0.98029554

00:24:08.240 --> 00:24:08.900 side there.
NOTE Confidence: 0.9851343

00:24:09.280 --> 00:24:11.220 And her most recent scans
NOTE Confidence: 0.99667054

00:24:11.680 --> 00:24:12.180 show
NOTE Confidence: 0.986153

00:24:12.560 --> 00:24:14.480 almost a complete resolution of
NOTE Confidence: 0.986153

00:24:14.480 --> 00:24:16.660 metastatic lesions. So she's basically
NOTE Confidence: 0.99818516

00:24:17.484 --> 00:24:19.024 got no evidence of cancer
NOTE Confidence: 0.9222248

00:24:19.484 --> 00:24:20.544 on her scans,
NOTE Confidence: 0.98784286

00:24:20.924 --> 00:24:22.044 and then we dropped the
NOTE Confidence: 0.98784286

00:24:22.044 --> 00:24:24.065 chemotherapy. She's been hanging out
NOTE Confidence: 0.98784286

00:24:24.205 --> 00:24:25.565 on Keytruda. This is her
NOTE Confidence: 0.98784286

00:24:25.565 --> 00:24:27.085 most recent liver scan. Well,
NOTE Confidence: 0.98784286

00:24:27.085 --> 00:24:27.965 no. This was her most

NOTE Confidence: 0.98784286

00:24:27.965 --> 00:24:29.164 recent liver scan last year.

NOTE Confidence: 0.98784286

00:24:29.164 --> 00:24:30.284 So her her scan this

NOTE Confidence: 0.98784286

00:24:30.284 --> 00:24:31.644 year looks exactly the same.

NOTE Confidence: 0.9911902

00:24:32.605 --> 00:24:33.105 But

NOTE Confidence: 0.9996144

00:24:33.860 --> 00:24:36.280 that that cancer has completely

NOTE Confidence: 0.9868708

00:24:36.660 --> 00:24:38.340 resolved on the CAT scan.

NOTE Confidence: 0.9868708

00:24:38.340 --> 00:24:39.860 She's doing great. She has

NOTE Confidence: 0.9868708

00:24:39.860 --> 00:24:40.980 a man friend. She won't

NOTE Confidence: 0.9868708

00:24:40.980 --> 00:24:41.880 call him a boyfriend,

NOTE Confidence: 0.9769843

00:24:42.900 --> 00:24:44.040 because he's a man.

NOTE Confidence: 0.99483085

00:24:45.140 --> 00:24:46.500 And she retired from her

NOTE Confidence: 0.99483085

00:24:46.500 --> 00:24:47.960 job. She sees her friends.

NOTE Confidence: 0.99483085

00:24:47.984 --> 00:24:48.945 She goes to visit her

NOTE Confidence: 0.99483085

00:24:48.945 --> 00:24:49.845 family in Portland,

NOTE Confidence: 0.9739175

00:24:51.105 --> 00:24:52.545 multiple times a year, and

NOTE Confidence: 0.9739175

00:24:52.545 --> 00:24:53.765 they're going to the Caribbean.
NOTE Confidence: 0.9739175

00:24:53.905 --> 00:24:55.984 They go someplace fantastic every
NOTE Confidence: 0.9739175

00:24:55.984 --> 00:24:57.184 year with her man friends.
NOTE Confidence: 0.9739175

00:24:57.184 --> 00:24:58.545 So she's, like, living her
NOTE Confidence: 0.9739175

00:24:58.545 --> 00:24:59.285 best life.
NOTE Confidence: 0.9129619

00:25:01.359 --> 00:25:03.200 And it's it's it's just
NOTE Confidence: 0.9129619

00:25:03.200 --> 00:25:04.720 one of the success stories
NOTE Confidence: 0.9129619

00:25:04.720 --> 00:25:05.460 that I
NOTE Confidence: 0.8987613

00:25:05.760 --> 00:25:07.139 think, you know, she is
NOTE Confidence: 0.9895246

00:25:07.679 --> 00:25:09.460 really enjoying every day.
NOTE Confidence: 0.9917851

00:25:09.760 --> 00:25:11.299 She's been living with metastatic
NOTE Confidence: 0.9917851

00:25:11.440 --> 00:25:13.039 triple negative breast cancer now
NOTE Confidence: 0.9917851

00:25:13.039 --> 00:25:14.674 for over three years
NOTE Confidence: 0.92225057

00:25:14.975 --> 00:25:16.494 doing fantastic, and I don't
NOTE Confidence: 0.92225057

00:25:16.494 --> 00:25:17.774 see that changing anytime in
NOTE Confidence: 0.92225057

00:25:17.774 --> 00:25:18.914 the near future. And,

NOTE Confidence: 0.99641114
00:25:19.615 --> 00:25:21.294 hopefully, by if if her
NOTE Confidence: 0.99641114
00:25:21.294 --> 00:25:22.595 cancer ever does
NOTE Confidence: 0.9837278
00:25:23.294 --> 00:25:24.894 make an appearance again, we'll
NOTE Confidence: 0.9837278
00:25:24.894 --> 00:25:26.734 have even more exciting options
NOTE Confidence: 0.9837278
00:25:26.734 --> 00:25:27.234 for.
NOTE Confidence: 0.99543023
00:25:28.640 --> 00:25:29.460 That is
NOTE Confidence: 0.7390663
00:25:30.480 --> 00:25:31.919 it is time to see
NOTE Confidence: 0.7390663
00:25:31.919 --> 00:25:33.600 on the dot. I wanna
NOTE Confidence: 0.7390663
00:25:33.600 --> 00:25:34.500 exercise it.
NOTE Confidence: 0.9320579
00:25:36.400 --> 00:25:36.640 What
NOTE Confidence: 0.9970158
00:25:37.359 --> 00:25:39.140 can I answer other questions?
NOTE Confidence: 0.9765592
00:25:41.054 --> 00:25:42.174 Anything else kind of come
NOTE Confidence: 0.9765592
00:25:42.174 --> 00:25:42.674 up
NOTE Confidence: 0.6619875
00:25:43.375 --> 00:25:44.975 in this yes, please. Asking
NOTE Confidence: 0.6619875
00:25:44.975 --> 00:25:46.174 for in folks who have
NOTE Confidence: 0.6619875

00:25:46.174 --> 00:25:47.715 the aesthetic look at
NOTE Confidence: 0.8460684

00:25:48.815 --> 00:25:50.494 does the KEYTRIA work better
NOTE Confidence: 0.8460684

00:25:50.494 --> 00:25:51.534 if it's in different parts
NOTE Confidence: 0.8460684

00:25:51.534 --> 00:25:52.975 of the body? You know,
NOTE Confidence: 0.8460684

00:25:52.975 --> 00:25:54.914 liver versus lung versus brain?
NOTE Confidence: 0.84361094

00:25:55.890 --> 00:25:56.869 Bones, you know.
NOTE Confidence: 0.9804103

00:25:57.890 --> 00:25:58.850 I I don't I am
NOTE Confidence: 0.9804103

00:25:58.850 --> 00:26:00.210 not aware of any data
NOTE Confidence: 0.9804103

00:26:00.210 --> 00:26:01.730 that suggests that it does
NOTE Confidence: 0.9804103

00:26:01.730 --> 00:26:03.590 work better in any particular
NOTE Confidence: 0.9804103

00:26:03.890 --> 00:26:04.790 part of the body,
NOTE Confidence: 0.95025337

00:26:07.215 --> 00:26:08.414 with the exception of it
NOTE Confidence: 0.95025337

00:26:08.414 --> 00:26:09.535 doesn't get to the brain
NOTE Confidence: 0.95025337

00:26:09.535 --> 00:26:10.355 all that well.
NOTE Confidence: 0.9889334

00:26:11.775 --> 00:26:13.135 And some of these drugs
NOTE Confidence: 0.9889334

00:26:13.135 --> 00:26:14.355 do penetrate

NOTE Confidence: 0.9901013

00:26:14.975 --> 00:26:16.095 what we call the the

NOTE Confidence: 0.9901013

00:26:16.095 --> 00:26:17.155 blood brain barrier

NOTE Confidence: 0.96079206

00:26:17.615 --> 00:26:18.975 better than others. And and

NOTE Confidence: 0.96079206

00:26:18.975 --> 00:26:20.515 Keytruda is a big drug,

NOTE Confidence: 0.96079206

00:26:20.630 --> 00:26:21.990 It's a big antibody, so

NOTE Confidence: 0.96079206

00:26:21.990 --> 00:26:23.610 it doesn't penetrate as well.

NOTE Confidence: 0.99436885

00:26:25.910 --> 00:26:27.610 In my experience, people

NOTE Confidence: 0.92406684

00:26:28.710 --> 00:26:30.490 people with bone only disease,

NOTE Confidence: 0.9843546

00:26:31.030 --> 00:26:32.710 and triple negative breast cancer

NOTE Confidence: 0.9843546

00:26:32.710 --> 00:26:33.830 don't tend to respond as

NOTE Confidence: 0.9843546

00:26:33.830 --> 00:26:34.630 well, but they also don't

NOTE Confidence: 0.9843546

00:26:34.630 --> 00:26:36.090 tend to be CVS positive.

NOTE Confidence: 0.9757749

00:26:37.165 --> 00:26:39.085 So it's again, even triple

NOTE Confidence: 0.9757749

00:26:39.085 --> 00:26:40.705 negative breast cancer is

NOTE Confidence: 0.9953301

00:26:41.325 --> 00:26:42.065 a spectrum

NOTE Confidence: 0.9778864

00:26:42.685 --> 00:26:44.865 of diseases with not everybody's
NOTE Confidence: 0.9778864

00:26:45.085 --> 00:26:46.685 cancer behaving exactly the same
NOTE Confidence: 0.9778864

00:26:46.685 --> 00:26:47.185 way.
NOTE Confidence: 0.94152427

00:26:50.600 --> 00:26:52.600 So if it's bone and
NOTE Confidence: 0.94152427

00:26:52.600 --> 00:26:53.880 then it's hard to do
NOTE Confidence: 0.94152427

00:26:53.880 --> 00:26:54.860 the test on
NOTE Confidence: 0.9185295

00:26:55.320 --> 00:26:56.140 bone biopsies
NOTE Confidence: 0.95462716

00:26:56.440 --> 00:26:57.800 Yes. So you kinda have
NOTE Confidence: 0.95462716

00:26:57.800 --> 00:26:59.240 to keep repeating, you know,
NOTE Confidence: 0.95462716

00:26:59.240 --> 00:27:00.360 if it's just only your
NOTE Confidence: 0.95462716

00:27:00.360 --> 00:27:01.980 bone and it spreads around.
NOTE Confidence: 0.95462716

00:27:02.215 --> 00:27:04.475 Yes. And so bone only
NOTE Confidence: 0.95462716

00:27:04.535 --> 00:27:06.055 cancer is challenging for a
NOTE Confidence: 0.95462716

00:27:06.055 --> 00:27:07.335 number of reasons. It's a
NOTE Confidence: 0.95462716

00:27:07.335 --> 00:27:08.715 little bit harder to follow
NOTE Confidence: 0.93253976

00:27:09.175 --> 00:27:10.395 on scans, and

NOTE Confidence: 0.8787669

00:27:11.095 --> 00:27:12.295 you you may be there

NOTE Confidence: 0.8787669

00:27:12.295 --> 00:27:13.494 are PET scans and bone

NOTE Confidence: 0.8787669

00:27:13.494 --> 00:27:15.095 scans and CAT scans, and

NOTE Confidence: 0.8787669

00:27:15.095 --> 00:27:16.375 then they don't always,

NOTE Confidence: 0.9586462

00:27:18.210 --> 00:27:19.810 follow the disease activity for

NOTE Confidence: 0.9586462

00:27:19.810 --> 00:27:21.730 one. Second is biopsies are

NOTE Confidence: 0.9586462

00:27:21.730 --> 00:27:23.730 challenging because you've gotta get

NOTE Confidence: 0.9586462

00:27:23.730 --> 00:27:24.690 to the bone, and then

NOTE Confidence: 0.9586462

00:27:24.690 --> 00:27:25.750 it has to be decalcified.

NOTE Confidence: 0.9679887

00:27:26.050 --> 00:27:27.570 And and sometimes you can

NOTE Confidence: 0.9679887

00:27:27.570 --> 00:27:29.670 lose some diagnostic material

NOTE Confidence: 0.99844813

00:27:30.130 --> 00:27:31.109 in that process.

NOTE Confidence: 0.7678788

00:27:32.695 --> 00:27:33.435 But oftentimes,

NOTE Confidence: 0.9996016

00:27:33.895 --> 00:27:35.755 because people with breast cancer

NOTE Confidence: 0.9996016

00:27:35.895 --> 00:27:37.415 do well for a long

NOTE Confidence: 0.9996016

00:27:37.415 --> 00:27:37.915 time
NOTE Confidence: 0.8904183

00:27:38.295 --> 00:27:39.355 and the mutation
NOTE Confidence: 0.97510767

00:27:39.815 --> 00:27:41.655 the mutational profile can change
NOTE Confidence: 0.97510767

00:27:41.655 --> 00:27:42.395 over time,
NOTE Confidence: 0.9673009

00:27:42.775 --> 00:27:44.295 people can develop new things,
NOTE Confidence: 0.9673009

00:27:44.295 --> 00:27:45.355 we do biopsy
NOTE Confidence: 0.75973874

00:27:45.655 --> 00:27:46.715 sometimes people
NOTE Confidence: 0.99853474

00:27:47.260 --> 00:27:48.859 multiple times throughout the course
NOTE Confidence: 0.99853474

00:27:48.859 --> 00:27:50.299 of their their treatment to
NOTE Confidence: 0.99853474

00:27:50.299 --> 00:27:51.119 see if
NOTE Confidence: 0.9996211

00:27:51.580 --> 00:27:53.840 there's something new that's developed
NOTE Confidence: 0.9644537

00:27:54.380 --> 00:27:56.140 over time because cancers can
NOTE Confidence: 0.9644537

00:27:56.140 --> 00:27:58.400 develop resistance to things and
NOTE Confidence: 0.9491235

00:27:58.780 --> 00:28:00.780 create new mutations and and
NOTE Confidence: 0.9491235

00:28:00.780 --> 00:28:01.660 that all of a sudden
NOTE Confidence: 0.9491235

00:28:01.660 --> 00:28:02.380 we may have a new

NOTE Confidence: 0.9491235

00:28:02.380 --> 00:28:02.775 drug

NOTE Confidence: 0.8260047

00:28:06.535 --> 00:28:07.655 for. Yeah. Is there a

NOTE Confidence: 0.8260047

00:28:07.655 --> 00:28:08.635 concern of,

NOTE Confidence: 0.84536076

00:28:10.615 --> 00:28:11.975 of number of scams that

NOTE Confidence: 0.84536076

00:28:11.975 --> 00:28:13.575 a person a patient should

NOTE Confidence: 0.84536076

00:28:13.575 --> 00:28:15.195 be subject to?

NOTE Confidence: 0.9602565

00:28:15.730 --> 00:28:17.169 There's always kind of that

NOTE Confidence: 0.9602565

00:28:17.169 --> 00:28:19.490 concern about radiation exposure and,

NOTE Confidence: 0.9602565

00:28:19.490 --> 00:28:20.850 you know, are we scanning

NOTE Confidence: 0.9602565

00:28:20.850 --> 00:28:22.450 somebody too often or not

NOTE Confidence: 0.9602565

00:28:22.450 --> 00:28:23.429 often enough?

NOTE Confidence: 0.9983808

00:28:25.090 --> 00:28:26.549 And I think there's no

NOTE Confidence: 0.99984103

00:28:27.009 --> 00:28:28.789 standard answer to that question

NOTE Confidence: 0.94777435

00:28:29.355 --> 00:28:31.135 because every patient's different.

NOTE Confidence: 0.8942351

00:28:31.515 --> 00:28:32.335 And sometimes

NOTE Confidence: 0.97469074

00:28:33.915 --> 00:28:34.955 we do need to scan
NOTE Confidence: 0.97469074

00:28:34.955 --> 00:28:37.035 someone every six weeks or
NOTE Confidence: 0.97469074

00:28:37.035 --> 00:28:39.195 two months because we're really
NOTE Confidence: 0.97469074

00:28:39.195 --> 00:28:40.795 looking for a particular we're
NOTE Confidence: 0.97469074

00:28:40.795 --> 00:28:42.395 we're watching them very closely.
NOTE Confidence: 0.97469074

00:28:42.395 --> 00:28:43.355 Other times, we might do
NOTE Confidence: 0.97469074

00:28:43.355 --> 00:28:44.255 it less frequently.
NOTE Confidence: 0.96280426

00:28:45.330 --> 00:28:47.250 There's certainly financial considerations as
NOTE Confidence: 0.96280426

00:28:47.250 --> 00:28:47.990 well and
NOTE Confidence: 0.974727

00:28:48.690 --> 00:28:49.910 and convenience considerations.
NOTE Confidence: 0.99927694

00:28:50.370 --> 00:28:51.270 So there's no
NOTE Confidence: 0.97862726

00:28:52.130 --> 00:28:53.910 set answer to that. Typically,
NOTE Confidence: 0.97862726

00:28:54.130 --> 00:28:55.809 we do something every three
NOTE Confidence: 0.97862726

00:28:55.809 --> 00:28:56.309 months,
NOTE Confidence: 0.9613769

00:28:58.715 --> 00:29:00.315 subject to change depending on
NOTE Confidence: 0.9613769

00:29:00.315 --> 00:29:01.855 a patient's particular situation.

NOTE Confidence: 0.9925298

00:29:05.355 --> 00:29:06.715 Thank you all so much

NOTE Confidence: 0.9925298

00:29:06.715 --> 00:29:07.615 for being here.

NOTE Confidence: 0.94667286

00:29:08.955 --> 00:29:10.395 I really I appreciate the

NOTE Confidence: 0.94667286

00:29:10.395 --> 00:29:11.835 questions. I'm sorry for the

NOTE Confidence: 0.94667286

00:29:11.835 --> 00:29:12.155 miss

NOTE Confidence: 0.94911593

00:29:12.929 --> 00:29:14.710 my my lack of understanding

NOTE Confidence: 0.94911593

00:29:14.769 --> 00:29:16.210 earlier questions, but,

NOTE Confidence: 0.9968791

00:29:18.129 --> 00:29:19.649 please don't hesitate to reach

NOTE Confidence: 0.9968791

00:29:19.649 --> 00:29:20.850 out if other things come

NOTE Confidence: 0.9968791

00:29:20.850 --> 00:29:21.750 up. My

NOTE Confidence: 0.9347073

00:29:22.289 --> 00:29:22.962 ask your