WEBVTT

NOTE duration:"01:28:27.6910000"

NOTE language:en-us

NOTE Confidence: 0.7525454

00:00:00.000 --> 00:00:01.260 Good evening everyone.

NOTE Confidence: 0.7525454

00:00:01.260 --> 00:00:03.760 My name is Mara, Gulshan Anama,

NOTE Confidence: 0.7525454

00:00:03.760 --> 00:00:07.609 breast cancer surgeon, here at Yale.

NOTE Confidence: 0.7525454

00:00:07.610 --> 00:00:10.487 The clinical director of the breast program,

NOTE Confidence: 0.7525454

00:00:10.490 --> 00:00:12.776 Ann, really excited to be here

NOTE Confidence: 0.7525454

00:00:12.776 --> 00:00:15.475 this evening for the Smilow shares

NOTE Confidence: 0.7525454

00:00:15.475 --> 00:00:17.667 breast Cancer Awareness Month.

NOTE Confidence: 0.7525454

00:00:17.670 --> 00:00:20.424 Where we have a three preeminent

NOTE Confidence: 0.7525454

00:00:20.424 --> 00:00:22.260 authorities and breast cancer,

NOTE Confidence: 0.7525454

00:00:22.260 --> 00:00:23.610 this evening doctor,

NOTE Confidence: 0.7525454

00:00:23.610 --> 00:00:26.760 Uncle Garo we're going to have Doctor

NOTE Confidence: 0.7525454

00:00:26.847 --> 00:00:29.409 Bob Legare and Doctor Mina Moran

NOTE Confidence: 0.7525454

00:00:29.409 --> 00:00:31.900 talk about advances in oncology,

NOTE Confidence: 0.7525454

00:00:31.900 --> 00:00:32.704 radiation therapy,

NOTE Confidence: 0.7525454

00:00:32.704 --> 00:00:36.418 and really just a state of the art and

NOTE Confidence: 0.7525454

00:00:36.418 --> 00:00:38.920 treatment in breast cancer were going

NOTE Confidence: 0.7525454

00:00:38.920 --> 00:00:41.999 to have three separate presentations.

NOTE Confidence: 0.7525454

00:00:42.000 --> 00:00:45.924 And then at the end there will be a

NOTE Confidence: 0.7525454

00:00:45.924 --> 00:00:48.837 question and answer period where.

NOTE Confidence: 0.7525454

00:00:48.840 --> 00:00:51.115 And even in advance of the end,

NOTE Confidence: 0.7525454

00:00:51.120 --> 00:00:52.206 if you want,

NOTE Confidence: 0.7525454

00:00:52.206 --> 00:00:54.740 please put in any questions into the

NOTE Confidence: 0.7525454

00:00:54.817 --> 00:00:57.397 chat box or on the Q and a box that

NOTE Confidence: 0.7525454

00:00:57.480 --> 00:00:59.916 sat at the bottom of your screen.

NOTE Confidence: 0.7525454

00:00:59.920 --> 00:01:01.756 We've held two of these forums

NOTE Confidence: 0.7525454

00:01:01.756 --> 00:01:04.089 for Yale for the New Haven and

NOTE Confidence: 0.7525454

00:01:04.089 --> 00:01:05.469 also for the Fairfield,

NOTE Confidence: 0.7525454

00:01:05.470 --> 00:01:05.800 Bridgeport,

NOTE Confidence: 0.7525454

00:01:05.800 --> 00:01:08.110 but it's been a really well received

NOTE Confidence: 0.7525454

00:01:08.110 --> 00:01:10.140 and this is going to be the

NOTE Confidence: 0.7525454

00:01:10.140 --> 00:01:11.909 highlight of the month for breast

NOTE Confidence: 0.7525454

00:01:11.909 --> 00:01:13.939 cancer awareness and Smilow shares.

NOTE Confidence: 0.7525454

00:01:13.940 --> 00:01:15.570 So with no further ado,

NOTE Confidence: 0.7525454

00:01:15.570 --> 00:01:17.658 we're going to start with Doctor

NOTE Confidence: 0.7525454

00:01:17.658 --> 00:01:19.620 Bob Legare who's going to talk.

NOTE Confidence: 0.7525454

00:01:19.620 --> 00:01:21.520 About some advances in breast

NOTE Confidence: 0.7525454

00:01:21.520 --> 00:01:22.280 medical oncology.

NOTE Confidence: 0.7525454

00:01:22.280 --> 00:01:24.385 Then Doctor Mina Maranan radiation

NOTE Confidence: 0.7525454

00:01:24.385 --> 00:01:26.916 and certainly not last and not

NOTE Confidence: 0.7525454

00:01:26.916 --> 00:01:29.028 least but will have Doctor Bogart

NOTE Confidence: 0.7525454

00:01:29.028 --> 00:01:31.564 talk a little bit more about some

NOTE Confidence: 0.7525454

00:01:31.564 --> 00:01:33.676 of the advances in oncology and

NOTE Confidence: 0.7525454

00:01:33.680 --> 00:01:35.810 then look forward to some really

NOTE Confidence: 0.7525454

00:01:35.810 --> 00:01:37.860 great questions from the audience.

NOTE Confidence: 0.7525454

00:01:37.860 --> 00:01:39.760 Thank you Doctor Laghari at

NOTE Confidence: 0.7525454

00:01:39.760 --> 00:01:41.280 the floor is yours.

NOTE Confidence: 0.90315026

00:01:42.330 --> 00:01:44.990 Thank you, I appreciate that and I'm

NOTE Confidence: 0.90315026

00:01:44.990 --> 00:01:48.109 very happy to be with everyone tonight.

NOTE Confidence: 0.90315026

00:01:48.110 --> 00:01:50.504 And I'm going to try to share my screen.

NOTE Confidence: 0.90315026

00:01:50.510 --> 00:01:52.913 Just let me know if you can see things.

NOTE Confidence: 0.8953797

00:01:54.980 --> 00:01:56.606 Properly, can you see my screen?

NOTE Confidence: 0.89177865

00:01:58.850 --> 00:02:02.014 OK, so good evening and very excited

NOTE Confidence: 0.89177865

00:02:02.014 --> 00:02:05.088 to share some thoughts with you.

NOTE Confidence: 0.89177865

00:02:05.090 --> 00:02:06.986 Um, you know regarding breast cancer,

NOTE Confidence: 0.89177865

00:02:06.990 --> 00:02:08.880 maybe where we're heading where we

NOTE Confidence: 0.89177865

00:02:08.880 --> 00:02:11.395 hope to head, and some of the advances

NOTE Confidence: 0.89177865

00:02:11.395 --> 00:02:13.620 that we've seen come forward this year.

NOTE Confidence: 0.89177865

00:02:13.620 --> 00:02:16.158 We know that breast cancer remains.

NOTE Confidence: 0.89177865

00:02:16.160 --> 00:02:18.470 Significant, it's the most common

NOTE Confidence: 0.89177865

00:02:18.470 --> 00:02:20.780 malignancy that's not a non

NOTE Confidence: 0.89177865

00:02:20.864 --> 00:02:23.139 Melanoma skin cancer in women,

NOTE Confidence: 0.89177865

00:02:23.140 --> 00:02:25.465 estimated to be about 276

NOTE Confidence: 0.89177865

00:02:25.465 --> 00:02:27.790 thousand new cases this year.

NOTE Confidence: 0.89177865

00:02:27.790 --> 00:02:33.469 So we know that this is a very significant.

NOTE Confidence: 0.89177865

00:02:33.470 --> 00:02:35.390 Issue for our women across the

NOTE Confidence: 0.89177865

00:02:35.390 --> 00:02:37.132 world and certainly United States

NOTE Confidence: 0.89177865

00:02:37.132 --> 00:02:38.748 and something where research,

NOTE Confidence: 0.89177865

00:02:38.750 --> 00:02:41.018 really, I think is moving forward

NOTE Confidence: 0.89177865

00:02:41.018 --> 00:02:43.849 in a very hopeful way you can see

NOTE Confidence: 0.89177865

00:02:43.849 --> 00:02:46.145 on that top sort of purple pink

NOTE Confidence: 0.89177865

00:02:46.145 --> 00:02:48.609 part of this graph that you know,

NOTE Confidence: 0.89177865

00:02:48.610 --> 00:02:50.280 breast cancer probably had a

NOTE Confidence: 0.89177865

00:02:50.280 --> 00:02:53.109 little bit of a dip in the early

NOTE Confidence: 0.89177865

00:02:53.109 --> 00:02:55.287 2000s in terms of incidence rates,

NOTE Confidence: 0.89177865

00:02:55.290 --> 00:02:57.186 and that was perhaps based on

NOTE Confidence: 0.89177865

00:02:57.186 --> 00:02:59.317 folks moving a little bit away

NOTE Confidence: 0.89177865

00:02:59.317 --> 00:03:00.925 from home replacement therapy.

NOTE Confidence: 0.89177865

00:03:00.930 --> 00:03:02.970 And then after that we can

NOTE Confidence: 0.89177865

00:03:02.970 --> 00:03:05.280 see maybe a slow rise maybe.

NOTE Confidence: 0.89177865

00:03:05.280 --> 00:03:08.136 .3% per year increase in risk of

NOTE Confidence: 0.89177865

00:03:08.136 --> 00:03:10.330 breast cancer that we've seen.

NOTE Confidence: 0.89177865

00:03:10.330 --> 00:03:11.845 Subsequent to that,

NOTE Confidence: 0.89177865

00:03:11.845 --> 00:03:14.370 perhaps over the last decade.

NOTE Confidence: 0.89177865

00:03:14.370 --> 00:03:16.472 And I would say it, you know,

NOTE Confidence: 0.89177865

00:03:16.472 --> 00:03:17.996 as a combination of.

NOTE Confidence: 0.89177865

00:03:18.000 --> 00:03:20.345 Early detection with mammogram having

NOTE Confidence: 0.89177865

00:03:20.345 --> 00:03:22.690 shown to decrease mortality from

NOTE Confidence: 0.89177865

00:03:22.763 --> 00:03:24.907 breast cancer through screening.

NOTE Confidence: 0.89177865

00:03:24.910 --> 00:03:27.170 And also with advances in

NOTE Confidence: 0.89177865

00:03:27.170 --> 00:03:28.526 treatment we've seen.

NOTE Confidence: 0.89177865

00:03:28.530 --> 00:03:28.981 Thankfully,

NOTE Confidence: 0.89177865

00:03:28.981 --> 00:03:31.236 especially over the last decade,

NOTE Confidence: 0.89177865

00:03:31.240 --> 00:03:33.044 you know significant decrease

NOTE Confidence: 0.89177865

00:03:33.044 --> 00:03:34.848 in breast cancer mortality,

NOTE Confidence: 0.89177865

00:03:34.850 --> 00:03:38.021 so we've seen perhaps a 40% decrease

NOTE Confidence: 0.89177865

00:03:38.021 --> 00:03:40.727 in breast cancer mortality since 1989,

NOTE Confidence: 0.89177865

00:03:40.730 --> 00:03:42.086 after seeing essentially

NOTE Confidence: 0.89177865

00:03:42.086 --> 00:03:44.346 fairly flat lines before then,

NOTE Confidence: 0.89177865

00:03:44.350 --> 00:03:47.472 you can see that again in that

NOTE Confidence: 0.89177865

00:03:47.472 --> 00:03:50.668 purple pink curve there on the graph.

NOTE Confidence: 0.89177865

00:03:50.670 --> 00:03:52.930 So we are making progress.

NOTE Confidence: 0.89177865

00:03:52.930 --> 00:03:55.520 We can never be complacent.

NOTE Confidence: 0.89177865

00:03:55.520 --> 00:03:57.536 Now we have a long way to go,

NOTE Confidence: 0.89177865

00:03:57.540 --> 00:04:00.690 but there's this room for hope.

NOTE Confidence: 0.89177865

00:04:00.690 --> 00:04:04.154 When we look at 5 year survival rates,

NOTE Confidence: 0.89177865

00:04:04.160 --> 00:04:06.656 this can also be reflected going

NOTE Confidence: 0.89177865

00:04:06.656 --> 00:04:09.973 from the 70s to the 80s to you

NOTE Confidence: 0.89177865

00:04:09.973 --> 00:04:12.313 know the last decade and we're

NOTE Confidence: 0.89177865

00:04:12.406 --> 00:04:14.791 seeing five year survival rates

NOTE Confidence: 0.89177865

00:04:14.791 --> 00:04:19.620 increased from 75 to 84 to 91%.

NOTE Confidence: 0.89177865

00:04:19.620 --> 00:04:22.113 I was going to focus a bit on ER

NOTE Confidence: 0.89177865

00:04:22.113 --> 00:04:24.089 positive her two negative breast

NOTE Confidence: 0.89177865

00:04:24.089 --> 00:04:26.525 cancer and later tonight you'll hear

NOTE Confidence: 0.89177865

00:04:26.596 --> 00:04:29.032 some advances and her two positive

NOTE Confidence: 0.89177865

00:04:29.032 --> 00:04:31.091 breast cancer from Doctor Ogarro.

NOTE Confidence: 0.89177865

00:04:31.091 --> 00:04:32.384 We know that.

NOTE Confidence: 0.89177865

00:04:32.384 --> 00:04:34.539 Early breast cancer accounts for

NOTE Confidence: 0.89177865

00:04:34.539 --> 00:04:36.333 perhaps 90% of breast cancers

NOTE Confidence: 0.89177865

00:04:36.333 --> 00:04:38.860 diagnosed in women and 70% of those

NOTE Confidence: 0.89177865

00:04:38.860 --> 00:04:40.660 are hormone hormone receptor positive.

NOTE Confidence: 0.89177865

00:04:40.660 --> 00:04:41.952 In her two negative,

NOTE Confidence: 0.89177865

00:04:41.952 --> 00:04:43.890 we know that thankfully most women

NOTE Confidence: 0.89177865

00:04:43.955 --> 00:04:45.719 won't experience a recurrence,

NOTE Confidence: 0.89177865

00:04:45.720 --> 00:04:47.911 but some women will be at higher

NOTE Confidence: 0.89177865

00:04:47.911 --> 00:04:50.250 risk and those would be folks who

NOTE Confidence: 0.89177865

00:04:50.250 --> 00:04:52.248 have had high risk features and

NOTE Confidence: 0.89177865

00:04:52.315 --> 00:04:54.379 they can experience recurrence.

NOTE Confidence: 0.89177865

00:04:54.380 --> 00:04:56.468 Sometimes within the first few years

NOTE Confidence: 0.89177865

00:04:56.468 --> 00:04:59.429 and one of the questions that we ask,

NOTE Confidence: 0.89177865

00:04:59.430 --> 00:05:01.586 is you know why is this happening

NOTE Confidence: 0.89177865

00:05:01.586 --> 00:05:03.410 on our current therapeutics,

NOTE Confidence: 0.89177865

00:05:03.410 --> 00:05:06.245 and one question that we look at.

NOTE Confidence: 0.89177865

00:05:06.250 --> 00:05:08.760 Is is the question of.

NOTE Confidence: 0.89177865

00:05:08.760 --> 00:05:09.861 Endocrine refractory nessuno.

NOTE Confidence: 0.89177865

00:05:09.861 --> 00:05:12.068 When one is getting treated, say,

NOTE Confidence: 0.89177865

00:05:12.068 --> 00:05:14.276 with endocrine therapy of some type,

NOTE Confidence: 0.89177865

00:05:14.280 --> 00:05:16.476 what's permissive for that cell if

NOTE Confidence: 0.89177865

00:05:16.476 --> 00:05:18.993 it exists within the body to then

NOTE Confidence: 0.89177865

00:05:18.993 --> 00:05:21.275 grow back and manifest as stage four

NOTE Confidence: 0.808948000000001

00:05:21.349 --> 00:05:23.749 cancer after one is presented with

NOTE Confidence: 0.808948000000001

00:05:23.749 --> 00:05:26.422 early stage cancer, and there is some

NOTE Confidence: 0.808948000000001

00:05:26.422 --> 00:05:28.262 interesting trials that that we're

NOTE Confidence: 0.808948000000001

00:05:28.262 --> 00:05:30.792 looking at this question a bit at our

NOTE Confidence: 0.808948000000001

00:05:30.792 --> 00:05:32.679 American Society of clinical oncology

NOTE Confidence: 0.808948000000001

00:05:32.679 --> 00:05:35.350 meetings earlier this year, so it's

NOTE Confidence: 0.808948000000001

00:05:35.350 --> 00:05:38.670 hoping to highlight just a few of those.

NOTE Confidence: 0.808948000000001

00:05:38.670 --> 00:05:41.660 Trials and then to just take a look at some

NOTE Confidence: 0.808948000000001

00:05:41.732 --> 00:05:44.192 of the clinical research that's happening

NOTE Confidence: 0.808948000000001

00:05:44.192 --> 00:05:47.159 at Yale right now to share with you.

NOTE Confidence: 0.808948000000001

00:05:47.160 --> 00:05:51.444 This was a cartoon of sort of cell cycle

NOTE Confidence: 0.808948000000001

00:05:51.444 --> 00:05:55.530 kinetics if you will and how a protein calls.

NOTE Confidence: 0.808948000000001

00:05:55.530 --> 00:05:59.256 You know cyclin D works and how it affects

NOTE Confidence: 0.808948000000001

00:05:59.256 --> 00:06:02.188 cell cycle kinetics and just looking

NOTE Confidence: 0.808948000000001

00:06:02.188 --> 00:06:05.760 at that that that green circle RBRB,

NOTE Confidence: 0.808948000000001

00:06:05.760 --> 00:06:08.090 which is the retinoblastoma gene,

NOTE Confidence: 0.808948000000001

00:06:08.090 --> 00:06:10.410 is very important in controlling

NOTE Confidence: 0.808948000000001

00:06:10.410 --> 00:06:12.266 whether a cell replicates,

NOTE Confidence: 0.808948000000001

00:06:12.270 --> 00:06:15.525 you know, makes a copy of itself.

NOTE Confidence: 0.808948000000001

00:06:15.530 --> 00:06:17.598 Cell Grove cell replication.

NOTE Confidence: 0.808948000000001

00:06:17.598 --> 00:06:21.249 We know that dysregulated cell growth and

NOTE Confidence: 0.808948000000001

00:06:21.249 --> 00:06:24.069 replication is the hallmark of cancer.

NOTE Confidence: 0.808948000000001

00:06:24.070 --> 00:06:27.171 Now we know that mutations within cancer

NOTE Confidence: 0.808948000000001

00:06:27.171 --> 00:06:29.916 cells are what ultimately causes that

NOTE Confidence: 0.808948000000001

00:06:29.916 --> 00:06:33.653 this data in the stage 4 setting that

NOTE Confidence: 0.808948000000001

00:06:33.653 --> 00:06:36.941 adding a cyclin dependent kinase inhibitor

NOTE Confidence: 0.808948000000001

00:06:36.941 --> 00:06:39.860 to endocrine therapy hormone therapy,

NOTE Confidence: 0.808948000000001

00:06:39.860 --> 00:06:43.035 like anastrozole or an aromat

NOTE Confidence: 0.808948000000001

00:06:43.035 --> 00:06:46.258 ACE inhibitor or a surd like.

NOTE Confidence: 0.808948000000001

00:06:46.260 --> 00:06:48.983 A full best friend can almost double

NOTE Confidence: 0.808948000000001

00:06:48.983 --> 00:06:51.386 the progression free survival in the

NOTE Confidence: 0.808948000000001

00:06:51.386 --> 00:06:53.729 stage for setting, and like many,

NOTE Confidence: 0.808948000000001

00:06:53.729 --> 00:06:56.480 many aspects of how we study cancer.

NOTE Confidence: 0.808948000000001

00:06:56.480 --> 00:06:58.445 If something looks very hopeful

NOTE Confidence: 0.808948000000001

00:06:58.445 --> 00:07:00.410 in the stage for setting,

NOTE Confidence: 0.808948000000001

00:07:00.410 --> 00:07:04.900 we try to move it back to the early brand.

NOTE Confidence: 0.808948000000001

00:07:04.900 --> 00:07:06.680 Cancer setting and say hey,

NOTE Confidence: 0.808948000000001

00:07:06.680 --> 00:07:09.476 can we do better so documenting

NOTE Confidence: 0.808948000000001

00:07:09.476 --> 00:07:12.110 benefit in the advanced setting?

NOTE Confidence: 0.808948000000001

00:07:12.110 --> 00:07:14.980 In trying to block that.

NOTE Confidence: 0.808948000000001

00:07:14.980 --> 00:07:18.450 Movement from the G1 phase

NOTE Confidence: 0.808948000000001

00:07:18.450 --> 00:07:22.660 of the cell cycle to the.

NOTE Confidence: 0.808948000000001

00:07:22.660 --> 00:07:26.458 DNA replication phase.

NOTE Confidence: 0.808948000000001

00:07:26.460 --> 00:07:29.001 We've tried to look at these agents

NOTE Confidence: 0.808948000000001

00:07:29.001 --> 00:07:31.909 in the early stage of breast cancer,

NOTE Confidence: 0.808948000000001

00:07:31.910 --> 00:07:34.838 so this is a trial called Monarch that

NOTE Confidence: 0.808948000000001

00:07:34.838 --> 00:07:37.933 looked at a women who had early stage

NOTE Confidence: 0.808948000000001

00:07:37.933 --> 00:07:40.749 breast cancer that had some high risk

NOTE Confidence: 0.808948000000001

00:07:40.749 --> 00:07:43.577 features such as four or more involved

NOTE Confidence: 0.808948000000001

00:07:43.580 --> 00:07:46.282 lymph nodes or one to three involve

NOTE Confidence: 0.808948000000001

00:07:46.282 --> 00:07:48.629 lymph nodes with other high risk

NOTE Confidence: 0.808948000000001

00:07:48.629 --> 00:07:51.750 features like grade or size of the tumor,

NOTE Confidence: 0.808948000000001

00:07:51.750 --> 00:07:52.524 large tumors,

NOTE Confidence: 0.808948000000001

00:07:52.524 --> 00:07:56.630 and it was a big trial with over 5000 women.

NOTE Confidence: 0.808948000000001

00:07:56.630 --> 00:07:58.290 And essentially randomize those

NOTE Confidence: 0.808948000000001

00:07:58.290 --> 00:07:59.950 women to endocrine therapy.

NOTE Confidence: 0.808948000000001

00:07:59.950 --> 00:08:02.632 On the left you can see ET with a

NOTE Confidence: 0.808948000000001

00:08:02.632 --> 00:08:04.793 particular cyclin dependent kinase

NOTE Confidence: 0.808948000000001

00:08:04.793 --> 00:08:06.587 inhibitor called abemaciclib,

NOTE Confidence: 0.808948000000001

00:08:06.590 --> 00:08:08.174 or endocrine therapy alone.

NOTE Confidence: 0.808948000000001

00:08:08.174 --> 00:08:11.160 So half the group got integrant therapy,

NOTE Confidence: 0.808948000000001

00:08:11.160 --> 00:08:13.230 half the group got ended.

NOTE Confidence: 0.808948000000001

00:08:13.230 --> 00:08:14.890 Contrary with this cyclin

NOTE Confidence: 0.808948000000001

00:08:14.890 --> 00:08:16.135 dependent kinase inhibitor,

NOTE Confidence: 0.808948000000001

00:08:16.140 --> 00:08:19.185 and this was a phase three randomized

NOTE Confidence: 0.808948000000001

00:08:19.185 --> 00:08:22.113 trial in what you can see where

NOTE Confidence: 0.808948000000001

00:08:22.113 --> 00:08:24.886 I put those numbers of 88.7 and

NOTE Confidence: 0.808948000000001

00:08:24.886 --> 00:08:27.814 92.2% is we're seeing with a median

NOTE Confidence: 0.808948000000001

00:08:27.814 --> 00:08:30.190 follow up about 15.5 months.

NOTE Confidence: 0.808948000000001

00:08:30.190 --> 00:08:31.900 But the curves there are

NOTE Confidence: 0.808948000000001

00:08:31.900 --> 00:08:32.926 starting to separate,

NOTE Confidence: 0.808948000000001

00:08:32.930 --> 00:08:35.282 and we're seeing that the folks who received

NOTE Confidence: 0.808948000000001

00:08:35.282 --> 00:08:37.369 the cyclin dependent kinase inhibitor,

NOTE Confidence: 0.808948000000001

00:08:37.370 --> 00:08:38.396 some of them,

NOTE Confidence: 0.808948000000001

00:08:38.396 --> 00:08:40.106 seem to be doing better.

NOTE Confidence: 0.808948000000001

00:08:40.110 --> 00:08:42.838 The absolute benefit was perhaps 3.3 or 3.4%,

NOTE Confidence: 0.808948000000001

00:08:42.840 --> 00:08:44.898 but it's early in this trial,

NOTE Confidence: 0.808948000000001

00:08:44.900 --> 00:08:47.447 and this is a signal to us that we

NOTE Confidence: 0.808948000000001

00:08:47.447 --> 00:08:49.748 might be seeing an important benefit

NOTE Confidence: 0.808948000000001

00:08:49.748 --> 00:08:52.759 for some women by adding this agent in.

NOTE Confidence: 0.808948000000001

00:08:52.760 --> 00:08:54.790 So I think that right now this

NOTE Confidence: 0.808948000000001

00:08:54.790 --> 00:08:55.660 could be an

NOTE Confidence: 0.87199104

00:08:55.733 --> 00:08:57.688 option for some women with

NOTE Confidence: 0.87199104

00:08:57.688 --> 00:08:59.252 very high risk features.

NOTE Confidence: 0.87199104

00:08:59.260 --> 00:09:01.045 I'd like to see confirmatory

NOTE Confidence: 0.87199104

00:09:01.045 --> 00:09:02.116 trial saying that.

NOTE Confidence: 0.87199104

00:09:02.120 --> 00:09:03.452 This another cyclin dependent

NOTE Confidence: 0.87199104

00:09:03.452 --> 00:09:04.118 kinase inhibitors.

NOTE Confidence: 0.87199104

00:09:04.120 --> 00:09:06.458 There are three that are FDA approved,

NOTE Confidence: 0.87199104

00:09:06.460 --> 00:09:08.798 but the other two shows similar benefit,

NOTE Confidence: 0.87199104

00:09:08.800 --> 00:09:11.144 but I was really happy to see this

NOTE Confidence: 0.87199104

00:09:11.144 --> 00:09:13.268 presented and this was actually a

NOTE Confidence: 0.87199104

00:09:13.268 --> 00:09:15.103 different meeting called an ECMO

NOTE Confidence: 0.87199104

00:09:15.103 --> 00:09:16.818 meeting in earlier this year,

NOTE Confidence: 0.87199104

00:09:16.820 --> 00:09:19.865 which is a sort of a parallel

NOTE Confidence: 0.87199104

00:09:19.865 --> 00:09:22.040 to our American meeting.

NOTE Confidence: 0.87199104

00:09:22.040 --> 00:09:24.880 I want to focus just a minute on

NOTE Confidence: 0.87199104

00:09:24.880 --> 00:09:26.386 another targeted therapy that's

NOTE Confidence: 0.87199104

00:09:26.386 --> 00:09:28.920 had FDA approval for a few years

NOTE Confidence: 0.87199104

00:09:28.920 --> 00:09:31.237 in the setting of stage four.

NOTE Confidence: 0.87199104

00:09:31.240 --> 00:09:33.075 Again, ER positive her two

NOTE Confidence: 0.87199104

00:09:33.075 --> 00:09:34.176 negative breast cancer.

NOTE Confidence: 0.87199104

00:09:34.180 --> 00:09:37.852 When this is an agent called El Pela

NOTE Confidence: 0.87199104

00:09:37.852 --> 00:09:41.378 Sib and this we can see here is.

NOTE Confidence: 0.87199104

00:09:41.380 --> 00:09:43.630 Did this agent specifically blocks

NOTE Confidence: 0.87199104

00:09:43.630 --> 00:09:46.590 the Alpha isoform of a protein.

NOTE Confidence: 0.87199104

00:09:46.590 --> 00:09:50.328 There you can see in pink called

NOTE Confidence: 0.87199104

00:09:50.328 --> 00:09:51.930 three kinase.

NOTE Confidence: 0.87199104

00:09:51.930 --> 00:09:53.818 And if you look at this cartoon on

NOTE Confidence: 0.87199104

00:09:53.818 --> 00:09:55.947 the out in the outside world where

NOTE Confidence: 0.87199104

00:09:55.947 --> 00:09:58.000 that orange Circle says growth factor,

NOTE Confidence: 0.87199104

00:09:58.000 --> 00:10:00.107 these are the proteins that are still.

NOTE Confidence: 0.87199104

00:10:00.110 --> 00:10:02.234 Emulating cells to grow to divide

NOTE Confidence: 0.87199104

00:10:02.234 --> 00:10:04.520 to make more of themselves.

NOTE Confidence: 0.87199104

00:10:04.520 --> 00:10:07.728 And can we get at that particular cells?

NOTE Confidence: 0.87199104

00:10:07.730 --> 00:10:08.380 Cell mechanics?

NOTE Confidence: 0.87199104

00:10:08.380 --> 00:10:11.501 Can we get that in block it to try

NOTE Confidence: 0.87199104

00:10:11.501 --> 00:10:14.171 to prevent these cells from either

NOTE Confidence: 0.87199104

00:10:14.171 --> 00:10:16.150 moving through endocrine therapy?

NOTE Confidence: 0.87199104

00:10:16.150 --> 00:10:18.556 Or can we make integrant therapy,

NOTE Confidence: 0.87199104

00:10:18.560 --> 00:10:19.318 you know,

NOTE Confidence: 0.87199104

00:10:19.318 --> 00:10:21.592 work better and so that's kind

NOTE Confidence: 0.87199104

00:10:21.592 --> 00:10:24.168 of what we're looking at here.

NOTE Confidence: 0.87199104

00:10:24.170 --> 00:10:27.599 What we've seen is that in the Stage 4

NOTE Confidence: 0.87199104

00:10:27.599 --> 00:10:30.877 setting for a particular subtype of women.

NOTE Confidence: 0.87199104

00:10:30.880 --> 00:10:33.309 These agents can be very effective and

NOTE Confidence: 0.87199104

00:10:33.309 --> 00:10:36.060 that was a trial called Solar One,

NOTE Confidence: 0.87199104

00:10:36.060 --> 00:10:38.503 and in that trial again almost a

NOTE Confidence: 0.87199104

00:10:38.503 --> 00:10:41.237 doubling of disease free survival for women,

NOTE Confidence: 0.87199104

00:10:41.240 --> 00:10:44.752 you know with the you know with this

NOTE Confidence: 0.87199104

00:10:44.752 --> 00:10:48.030 agent and what we've seen is that.

NOTE Confidence: 0.87199104

00:10:48.030 --> 00:10:50.606 You know about 40% of women with

NOTE Confidence: 0.87199104

00:10:50.606 --> 00:10:52.721 PR positive her two negative

NOTE Confidence: 0.87199104

00:10:52.721 --> 00:10:54.589 advanced breast cancer Harbor

NOTE Confidence: 0.87199104

00:10:54.589 --> 00:10:57.000 this mutation so L pelis.

NOTE Confidence: 0.87199104

00:10:57.000 --> 00:11:01.312 It really is in a way a

NOTE Confidence: 0.87199104

00:11:01.312 --> 00:11:03.939 targeted therapy getting at a.

NOTE Confidence: 0.87199104

00:11:03.940 --> 00:11:05.545 A regulation problem where the

NOTE Confidence: 0.87199104

00:11:05.545 --> 00:11:07.870 cells are sort of hyper stimulated.

NOTE Confidence: 0.87199104

00:11:07.870 --> 00:11:10.369 They have a mutation in this gene.

NOTE Confidence: 0.87199104

00:11:10.370 --> 00:11:12.330 This mutation is permissive for

NOTE Confidence: 0.87199104

00:11:12.330 --> 00:11:14.290 cell growth and cell division

NOTE Confidence: 0.87199104

00:11:14.359 --> 00:11:16.200 and so adding it you know and

NOTE Confidence: 0.87199104

00:11:16.200 --> 00:11:18.220 it's not an uncommon mutation,

NOTE Confidence: 0.87199104

00:11:18.220 --> 00:11:20.523 it's in 40% of folks with PR

NOTE Confidence: 0.87199104

00:11:20.523 --> 00:11:22.500 positive her negative breast cancer.

NOTE Confidence: 0.87199104

00:11:22.500 --> 00:11:24.596 So hope rugo at UCSF had said well

NOTE Confidence: 0.87199104

00:11:24.596 --> 00:11:26.654 and we look specifically at this

NOTE Confidence: 0.87199104

00:11:26.654 --> 00:11:28.844 subgroup that has you know this

NOTE Confidence: 0.87199104

00:11:28.913 --> 00:11:31.487 mutation in already has seen that

NOTE Confidence: 0.87199104

00:11:31.487 --> 00:11:33.598 cyclin dependent kinase inhibitor that

NOTE Confidence: 0.87199104

00:11:33.598 --> 00:11:36.314 we talked about a while ago because.

NOTE Confidence: 0.87199104

00:11:36.320 --> 00:11:38.777 As our newer therapies coming to play,

NOTE Confidence: 0.87199104

00:11:38.780 --> 00:11:40.480 we're trying to understand the

NOTE Confidence: 0.87199104

00:11:40.480 --> 00:11:42.180 influence of a prior treatment

NOTE Confidence: 0.87199104

00:11:42.239 --> 00:11:43.687 on a subsequent treatment.

NOTE Confidence: 0.87199104

00:11:43.690 --> 00:11:45.445 So the question the Doctor

NOTE Confidence: 0.87199104

00:11:45.445 --> 00:11:47.200 Rugo is asking was well,

NOTE Confidence: 0.87199104

00:11:47.200 --> 00:11:48.816 since cyclin dependent kinase

NOTE Confidence: 0.87199104

00:11:48.816 --> 00:11:51.240 inhibitors that we looked at earlier

NOTE Confidence: 0.87199104

00:11:51.307 --> 00:11:53.293 since that standard of care for

NOTE Confidence: 0.87199104

00:11:53.293 --> 00:11:55.086 women with advanced ER positive

NOTE Confidence: 0.87199104

00:11:55.086 --> 00:11:57.126 her two negative breast cancer.

NOTE Confidence: 0.87199104

00:11:57.130 --> 00:11:58.850 What about women who have

NOTE Confidence: 0.87199104

00:11:58.850 --> 00:12:00.226 been exposed to that?

NOTE Confidence: 0.87199104

00:12:00.230 --> 00:12:02.974 Will they still respond to this new agent?

NOTE Confidence: 0.87199104

00:12:02.980 --> 00:12:03.578 Help Ellis,

NOTE Confidence: 0.87199104

00:12:03.578 --> 00:12:05.372 if in the context of this

NOTE Confidence: 0.87199104

00:12:05.372 --> 00:12:07.110 three kinase mutation,

NOTE Confidence: 0.87199104

00:12:07.110 --> 00:12:09.234 if they had been exposed to

NOTE Confidence: 0.87199104

00:12:09.234 --> 00:12:10.650 the cyclin dependent kinase

NOTE Confidence: 0.86085296

00:12:10.719 --> 00:12:13.383 inhibitor and I was very happy to see that

NOTE Confidence: 0.86085296

00:12:13.383 --> 00:12:16.387 the grass here look very similar between her,

NOTE Confidence: 0.86085296

00:12:16.390 --> 00:12:18.442 the original solar one trial that

NOTE Confidence: 0.86085296

00:12:18.442 --> 00:12:20.519 was published a few years ago,

NOTE Confidence: 0.86085296

00:12:20.520 --> 00:12:22.590 and this trial called by Leave,

NOTE Confidence: 0.86085296

00:12:22.590 --> 00:12:25.596 where if you can look at the graph with

NOTE Confidence: 0.86085296

00:12:25.596 --> 00:12:28.660 the sort of vertical lines going down?

NOTE Confidence: 0.86085296

00:12:28.660 --> 00:12:30.850 That would suggest a response in

NOTE Confidence: 0.86085296

00:12:30.850 --> 00:12:33.361 terms of decreasing size of tumor in

NOTE Confidence: 0.86085296

00:12:33.361 --> 00:12:35.323 the grass almost mimic each other,

NOTE Confidence: 0.86085296

00:12:35.330 --> 00:12:37.744 so they're sort of saying that, well,

NOTE Confidence: 0.86085296

00:12:37.744 --> 00:12:40.176 we do believe that this agent is going

NOTE Confidence: 0.86085296

00:12:40.176 --> 00:12:42.955 to be effective in women who have had

NOTE Confidence: 0.86085296

00:12:42.955 --> 00:12:45.159 a cyclin dependent kinase inhibitor,

NOTE Confidence: 0.86085296

00:12:45.160 --> 00:12:47.266 and so you know someone coming

NOTE Confidence: 0.86085296

00:12:47.266 --> 00:12:48.670 through with standard therapy,

NOTE Confidence: 0.86085296

00:12:48.670 --> 00:12:49.720 ER positive disease,

NOTE Confidence: 0.86085296

00:12:49.720 --> 00:12:50.770 stage four disease,

NOTE Confidence: 0.86085296

00:12:50.770 --> 00:12:51.823 getting endocrine therapy,

NOTE Confidence: 0.86085296

00:12:51.823 --> 00:12:53.929 and a cyclin dependent kinase inhibitor.

NOTE Confidence: 0.86085296

00:12:53.930 --> 00:12:56.738 If they have this three kinase mutation,

NOTE Confidence: 0.86085296

00:12:56.740 --> 00:12:58.720 this is a very viable.

NOTE Confidence: 0.86085296

00:12:58.720 --> 00:13:01.079 Option for them to go forward and

NOTE Confidence: 0.86085296

00:13:01.079 --> 00:13:03.170 again a doubling of the disease.

NOTE Confidence: 0.86085296

00:13:03.170 --> 00:13:04.928 Free survival rate so you know

NOTE Confidence: 0.86085296

00:13:04.928 --> 00:13:07.016 moving forward trying to get beyond

NOTE Confidence: 0.86085296

00:13:07.016 --> 00:13:08.297 endocrine refractory disease.

NOTE Confidence: 0.86085296

00:13:08.300 --> 00:13:11.534 So to me that was very hopeful.

NOTE Confidence: 0.86085296

00:13:11.540 --> 00:13:13.852 So I wanted to transition for a minute

NOTE Confidence: 0.86085296

00:13:13.852 --> 00:13:16.159 and just spend a few minutes looking

NOTE Confidence: 0.86085296

00:13:16.159 --> 00:13:18.419 at some clinical trials we have up

NOTE Confidence: 0.86085296

00:13:18.419 --> 00:13:20.539 and running at Yale and some of the

NOTE Confidence: 0.86085296

00:13:20.540 --> 00:13:22.640 focus that were that we're looking at.

NOTE Confidence: 0.86085296

00:13:22.640 --> 00:13:24.104 And you know,

NOTE Confidence: 0.86085296

00:13:24.104 --> 00:13:27.900 part of what we understand with cancer is.

NOTE Confidence: 0.86085296

00:13:27.900 --> 00:13:30.336 You know lifestyle exposures and one

NOTE Confidence: 0.86085296

00:13:30.336 --> 00:13:32.744 of the questions that were trying

NOTE Confidence: 0.86085296

00:13:32.744 --> 00:13:35.243 to look at is exemplified in this.

NOTE Confidence: 0.86085296

00:13:35.250 --> 00:13:36.273 Be well trial.

NOTE Confidence: 0.86085296

00:13:36.273 --> 00:13:38.660 The PR here is Doctor Sands and

NOTE Confidence: 0.86085296

00:13:38.740 --> 00:13:41.078 this is a trial looking at saying

NOTE Confidence: 0.86085296

00:13:41.078 --> 00:13:43.628 you know is weight loss after

NOTE Confidence: 0.86085296

00:13:43.628 --> 00:13:46.083 being diagnosed with breast cancer.

NOTE Confidence: 0.86085296

00:13:46.090 --> 00:13:48.406 You know can that affect outcome?

NOTE Confidence: 0.86085296

00:13:48.410 --> 00:13:51.380 So this is a very large trial across the

NOTE Confidence: 0.86085296

00:13:51.380 --> 00:13:53.540 country in women are being randomized

NOTE Confidence: 0.86085296

00:13:53.540 --> 00:13:56.382 to either you know no intervention or

NOTE Confidence: 0.86085296

00:13:56.382 --> 00:13:59.430 an intervention with counseling about diet.

NOTE Confidence: 0.86085296

00:13:59.430 --> 00:14:01.710 And weight loss and seeing if that translates

NOTE Confidence: 0.86085296

00:14:01.710 --> 00:14:04.226 into an outcome of benefit for these women.

NOTE Confidence: 0.86085296

00:14:04.230 --> 00:14:06.330 So this is an important important study.

NOTE Confidence: 0.86085296

00:14:06.330 --> 00:14:07.830 We know that women coming

NOTE Confidence: 0.86085296

00:14:07.830 --> 00:14:09.030 in with breast cancer,

NOTE Confidence: 0.86085296

00:14:09.030 --> 00:14:10.230 if they are considered,

NOTE Confidence: 0.86085296

00:14:10.230 --> 00:14:11.430 you know clinically overweight.

NOTE Confidence: 0.86085296

00:14:11.430 --> 00:14:12.146 You know,

NOTE Confidence: 0.86085296

00:14:12.146 --> 00:14:13.936 sometimes their outcome that some

NOTE Confidence: 0.86085296

00:14:13.936 --> 00:14:15.842 data supporting the fact of their

NOTE Confidence: 0.86085296

00:14:15.842 --> 00:14:17.378 outcome might not be as good

NOTE Confidence: 0.86085296

00:14:17.378 --> 00:14:19.229 as women who are a bit leaner,

NOTE Confidence: 0.86085296

00:14:19.230 --> 00:14:21.995 so we're trying to understand that better.

NOTE Confidence: 0.86085296

00:14:22.000 --> 00:14:25.080 This is a trial called the ABC trial,

NOTE Confidence: 0.86085296

00:14:25.080 --> 00:14:27.985 and looking at aspirin in early stage

NOTE Confidence: 0.86085296

00:14:27.985 --> 00:14:30.552 breast cancer and the question being

NOTE Confidence: 0.86085296

00:14:30.552 --> 00:14:33.457 asked here in Doctor Fishback as the

NOTE Confidence: 0.86085296

00:14:33.535 --> 00:14:36.316 Pi of this trial we we really have a

NOTE Confidence: 0.86085296

00:14:36.316 --> 00:14:38.170 deep resource of multiple oncologists.

NOTE Confidence: 0.86085296

00:14:38.170 --> 00:14:40.095 We're focusing on breast cancer.

NOTE Confidence: 0.86085296

00:14:40.100 --> 00:14:44.265 Yale and I think that really delivers.

NOTE Confidence: 0.86085296

00:14:44.270 --> 00:14:47.077 Innovation and quality care to our patients.

NOTE Confidence: 0.86085296

00:14:47.080 --> 00:14:49.252 Know aspirin and other agents like

NOTE Confidence: 0.86085296

00:14:49.252 --> 00:14:52.143 aspirin had been looked at in multiple

NOTE Confidence: 0.86085296

00:14:52.143 --> 00:14:54.322 malignancies for potentially, you know,

NOTE Confidence: 0.86085296

00:14:54.322 --> 00:14:55.926 preventing or decreasing risk,

NOTE Confidence: 0.86085296

00:14:55.930 --> 00:14:59.138 and this is a trial asking the question.

NOTE Confidence: 0.86085296

00:14:59.140 --> 00:14:59.515 Well,

NOTE Confidence: 0.86085296

00:14:59.515 --> 00:15:02.515 there's a lot of basis to consider this

NOTE Confidence: 0.86085296

00:15:02.515 --> 00:15:04.767 question as very relevant question.

NOTE Confidence: 0.86085296

00:15:04.770 --> 00:15:07.584 Could the addition of aspirin affect outcome?

NOTE Confidence: 0.86085296

00:15:07.590 --> 00:15:09.600 Would women potentially do better?

NOTE Confidence: 0.86085296

00:15:09.600 --> 00:15:12.890 So this is a very real relevant

NOTE Confidence: 0.86085296

00:15:12.890 --> 00:15:14.300 trial for us

NOTE Confidence: 0.8475373

00:15:14.414 --> 00:15:17.979 as well. I just left a few other trials.

NOTE Confidence: 0.8475373

00:15:17.980 --> 00:15:21.076 Alot of these happen to be national trials,

NOTE Confidence: 0.8475373

00:15:21.080 --> 00:15:24.168 but just to look at the top three,

NOTE Confidence: 0.8475373

00:15:24.170 --> 00:15:26.372 one looking at different molecular changes

NOTE Confidence: 0.8475373

00:15:26.372 --> 00:15:29.509 in a womans breast tumor and then randomize

NOTE Confidence: 0.8475373

00:15:29.509 --> 00:15:31.514 a different therapy before surgery.

NOTE Confidence: 0.8475373

00:15:31.520 --> 00:15:33.455 Based on what those with

NOTE Confidence: 0.8475373

00:15:33.455 --> 00:15:34.616 the molecular profile,

NOTE Confidence: 0.8475373

00:15:34.620 --> 00:15:37.329 the molecular landscape might look at again,

NOTE Confidence: 0.8475373

00:15:37.330 --> 00:15:40.676 doctors, Santas, the Pi for that trial.

NOTE Confidence: 0.8475373

00:15:40.680 --> 00:15:42.200 Another trial you know,

NOTE Confidence: 0.8475373

00:15:42.200 --> 00:15:44.100 perhaps like that Monarch trial?

NOTE Confidence: 0.8475373

00:15:44.100 --> 00:15:45.875 Looking at cyclin dependent kinase

NOTE Confidence: 0.8475373

00:15:45.875 --> 00:15:48.096 inhibitors in early breast cancer trial

NOTE Confidence: 0.8475373

00:15:48.096 --> 00:15:50.442 called Natalie using an alternative cyclin

NOTE Confidence: 0.8475373

00:15:50.442 --> 00:15:52.460 dependent kinase inhibitor riverstick Lib,

NOTE Confidence: 0.8475373

00:15:52.460 --> 00:15:54.360 and asking the similar question

NOTE Confidence: 0.8475373

00:15:54.360 --> 00:15:56.260 folks with high risk disease,

NOTE Confidence: 0.8475373

00:15:56.260 --> 00:15:58.829 would they do better with the addition

NOTE Confidence: 0.8475373

00:15:58.829 --> 00:16:01.200 of this agent in another trial?

NOTE Confidence: 0.8475373

00:16:01.200 --> 00:16:03.860 Looking at more advanced disease and Doctor,

NOTE Confidence: 0.8475373

00:16:03.860 --> 00:16:06.140 Mongolian is the P for that

NOTE Confidence: 0.8475373

00:16:06.140 --> 00:16:07.660 trial and that trial.

NOTE Confidence: 0.8475373

00:16:07.660 --> 00:16:08.749 Asking the question,

NOTE Confidence: 0.8475373

00:16:08.749 --> 00:16:11.290 you know we follow folks with advanced

NOTE Confidence: 0.8475373

00:16:11.351 --> 00:16:14.116 disease stage four disease with serial scans.

NOTE Confidence: 0.8475373

00:16:14.120 --> 00:16:15.744 How are we doing?

NOTE Confidence: 0.8475373

00:16:15.744 --> 00:16:17.774 Is the patient responding to

NOTE Confidence: 0.8475373

00:16:17.774 --> 00:16:19.920 treatment tumor markers guide us?

NOTE Confidence: 0.8475373

00:16:19.920 --> 00:16:23.040 Can they influence when we order CAT scans?

NOTE Confidence: 0.8475373

00:16:23.040 --> 00:16:25.965 Can we do less image Ng exposed women to

NOTE Confidence: 0.8475373

00:16:25.965 --> 00:16:28.887 less radiation and get similar outcomes?

NOTE Confidence: 0.8475373

00:16:28.890 --> 00:16:31.306 So a lot of a lot of interesting

NOTE Confidence: 0.8475373

00:16:31.306 --> 00:16:33.569 trials from different perspectives.

NOTE Confidence: 0.8475373

00:16:33.570 --> 00:16:35.845 And just to mention that more and

NOTE Confidence: 0.8475373

00:16:35.845 --> 00:16:38.639 more in the advanced cancer setting,

NOTE Confidence: 0.8475373

00:16:38.640 --> 00:16:40.590 we're looking to understand the

NOTE Confidence: 0.8475373

00:16:40.590 --> 00:16:42.850 molecular landscape, so we want to.

NOTE Confidence: 0.8475373

00:16:42.850 --> 00:16:45.559 Study the the genetics of the tumor

NOTE Confidence: 0.8475373

00:16:45.559 --> 00:16:47.935 by a biopsy and then sometimes

NOTE Confidence: 0.8475373

00:16:47.935 --> 00:16:50.978 by what we call a liquid biopsy.

NOTE Confidence: 0.8475373

00:16:50.980 --> 00:16:53.188 Getting a blood sample and looking

NOTE Confidence: 0.8475373

00:16:53.188 --> 00:16:54.660 for circulating tumor DNA.

NOTE Confidence: 0.8475373

00:16:54.660 --> 00:16:57.026 And we're doing that more and more

NOTE Confidence: 0.8475373

00:16:57.026 --> 00:16:59.645 to try to tailor our treatment

NOTE Confidence: 0.8475373

00:16:59.645 --> 00:17:02.190 to the most effective therapies.

NOTE Confidence: 0.8475373

00:17:02.190 --> 00:17:04.850 And this is becoming commonplace for us.

NOTE Confidence: 0.8475373

00:17:04.850 --> 00:17:07.562 And this is a trial that one of

NOTE Confidence: 0.8475373

00:17:07.562 --> 00:17:09.576 our lead researchers Doctor Push

NOTE Confidence: 0.8475373

00:17:09.576 --> 00:17:12.830 Die is going to be the Pi of.

NOTE Confidence: 0.8475373

00:17:12.830 --> 00:17:15.542 And this is a trial in early stage

NOTE Confidence: 0.8475373

00:17:15.542 --> 00:17:17.768 disease and asking the question.

NOTE Confidence: 0.8475373

00:17:17.770 --> 00:17:20.381 Well if we follow women on endocrine

NOTE Confidence: 0.8475373

00:17:20.381 --> 00:17:22.258 therapy after they've had their

NOTE Confidence: 0.8475373

00:17:22.258 --> 00:17:23.993 surgery and we've had other

NOTE Confidence: 0.8475373

00:17:23.993 --> 00:17:26.129 treatment in the agement setting.

NOTE Confidence: 0.8475373

00:17:26.130 --> 00:17:27.291 So after surgery,

NOTE Confidence: 0.8475373

00:17:27.291 --> 00:17:30.310 as you know when when someone say on,

NOTE Confidence: 0.8475373

00:17:30.310 --> 00:17:32.590 you know in Aromat ACE inhibitor.

NOTE Confidence: 0.81577164

00:17:35.230 --> 00:17:38.254 If we check their blood intermittently

NOTE Confidence: 0.81577164

00:17:38.254 --> 00:17:40.650 looking for circulating tumor DNA,

NOTE Confidence: 0.81577164

00:17:40.650 --> 00:17:43.890 if we see a certain signal as defined

NOTE Confidence: 0.81577164

00:17:43.890 --> 00:17:47.081 by the investigators and we acted

NOTE Confidence: 0.81577164

00:17:47.081 --> 00:17:50.507 on that signal to change treatment,

NOTE Confidence: 0.81577164

00:17:50.510 --> 00:17:52.482 say from typical adjeman

NOTE Confidence: 0.81577164

00:17:52.482 --> 00:17:54.953 endocrine therapy to adding, say,

NOTE Confidence: 0.81577164

00:17:54.953 --> 00:17:57.418 an agent like fulvestrant into

NOTE Confidence: 0.81577164

00:17:57.418 --> 00:17:59.390 cyclin dependent kinase inhibitor.

NOTE Confidence: 0.81577164

00:17:59.390 --> 00:18:03.226 For instance, do these folks do better?

NOTE Confidence: 0.81577164

00:18:03.230 --> 00:18:05.786 So again, trying to get it back question of

NOTE Confidence: 0.81577164

00:18:05.786 --> 00:18:08.737 if we come in early with different treatment,

NOTE Confidence: 0.81577164

00:18:08.740 --> 00:18:11.305 adding a second agent you know will our folks

NOTE Confidence: 0.81577164

00:18:11.305 --> 00:18:13.919 do better in terms of disease recurrence.

NOTE Confidence: 0.81577164

00:18:13.920 --> 00:18:16.090 I'm very eager to see this trial

NOTE Confidence: 0.81577164

00:18:16.090 --> 00:18:18.643 begin as well and I wanted to briefly

NOTE Confidence: 0.81577164

00:18:18.643 --> 00:18:21.613 touch on you know what might be new in

NOTE Confidence: 0.81577164

00:18:21.613 --> 00:18:24.009 genetics and how this could affect you.

NOTE Confidence: 0.81577164

00:18:24.009 --> 00:18:26.592 Know some of our patients in the

NOTE Confidence: 0.81577164

00:18:26.592 --> 00:18:29.482 clinic and some folks who have certain

NOTE Confidence: 0.81577164

00:18:29.482 --> 00:18:32.020 hereditary risk so we know that.

NOTE Confidence: 0.81577164

00:18:32.020 --> 00:18:35.953 Our folks have inherited ABRC A1 or BRC A2.

NOTE Confidence: 0.81577164

00:18:35.960 --> 00:18:38.216 Mutation has some special issues with

NOTE Confidence: 0.81577164

00:18:38.216 --> 00:18:41.380 tumor DNA repair and we call that

NOTE Confidence: 0.81577164

00:18:41.380 --> 00:18:42.970 homologous recombination deficiency.

NOTE Confidence: 0.81577164

00:18:42.970 --> 00:18:46.354 We know that some of these cancers are

NOTE Confidence: 0.81577164

00:18:46.354 --> 00:18:48.940 more challenging in terms of double

NOTE Confidence: 0.81577164

00:18:48.940 --> 00:18:51.430 stranded DNA repair because we know

NOTE Confidence: 0.81577164

00:18:51.512 --> 00:18:54.356 that cells are always having trouble,

NOTE Confidence: 0.81577164

00:18:54.360 --> 00:18:55.900 and if they can't,

NOTE Confidence: 0.81577164

00:18:55.900 --> 00:18:59.180 you know if they can't repair themselves,

NOTE Confidence: 0.81577164

00:18:59.180 --> 00:19:01.898 they would have a signal too.

NOTE Confidence: 0.81577164

00:19:01.900 --> 00:19:02.221 Parrish,

NOTE Confidence: 0.81577164

00:19:02.221 --> 00:19:04.789 and so we want to try to take

NOTE Confidence: 0.81577164

00:19:04.789 --> 00:19:06.606 advantage of maybe an inherent

NOTE Confidence: 0.81577164

00:19:06.606 --> 00:19:08.736 weakness within the BRC A1 cell.

NOTE Confidence: 0.81577164

00:19:08.740 --> 00:19:10.450 In this class of drugs

NOTE Confidence: 0.81577164

00:19:10.450 --> 00:19:11.476 called PARP inhibitors,

NOTE Confidence: 0.81577164

00:19:11.480 --> 00:19:13.502 I put two in here elaborate

NOTE Confidence: 0.81577164

00:19:13.502 --> 00:19:15.240 and tell is Zopa rib,

NOTE Confidence: 0.81577164

00:19:15.240 --> 00:19:17.544 which are FDA approved for advanced

NOTE Confidence: 0.81577164

00:19:17.544 --> 00:19:20.451 cancer that have been looked at in trials

NOTE Confidence: 0.81577164

00:19:20.451 --> 00:19:22.766 in the stage for setting for women

NOTE Confidence: 0.81577164

00:19:22.766 --> 00:19:25.190 with BRC A1 and B RCA two mutations

NOTE Confidence: 0.81577164

00:19:25.190 --> 00:19:27.210 and their effective and their helpful.

NOTE Confidence: 0.81577164

00:19:27.210 --> 00:19:29.814 And they're part of our standard treatment

NOTE Confidence: 0.81577164

00:19:29.814 --> 00:19:31.909 regiment for folks who have burst.

NOTE Confidence: 0.81577164

00:19:31.910 --> 00:19:34.926 My 2 mutations and one of the questions

NOTE Confidence: 0.81577164

00:19:34.926 --> 00:19:38.194 that Nadine Tung asked at ASCO this year was,

NOTE Confidence: 0.81577164

00:19:38.200 --> 00:19:38.568 well,

NOTE Confidence: 0.81577164

00:19:38.568 --> 00:19:39.304 you know,

NOTE Confidence: 0.81577164

00:19:39.304 --> 00:19:41.512 what about folks who might have

NOTE Confidence: 0.81577164

00:19:41.512 --> 00:19:43.048 other hereditary mutations beyond

NOTE Confidence: 0.81577164

00:19:43.048 --> 00:19:45.226 BRC A1 and B RCA 2?

NOTE Confidence: 0.81577164

00:19:45.230 --> 00:19:47.290 Because we're finding there are

NOTE Confidence: 0.81577164

00:19:47.290 --> 00:19:49.784 other high penetrance genes that can

NOTE Confidence: 0.81577164

00:19:49.784 --> 00:19:51.986 increase the risk for breast cancer

NOTE Confidence: 0.81577164

00:19:51.986 --> 00:19:53.989 with these people benefit from.

NOTE Confidence: 0.81577164

00:19:53.990 --> 00:19:56.606 The addition of a PARP inhibitor.

NOTE Confidence: 0.81577164

00:19:56.610 --> 00:19:59.316 And what about folks who have

NOTE Confidence: 0.81577164

00:19:59.316 --> 00:20:00.218 acquired mutate?

NOTE Confidence: 0.81577164

00:20:00.220 --> 00:20:01.940 Susan BRC A1 and BRC,

NOTE Confidence: 0.81577164

00:20:01.940 --> 00:20:04.243 two so these are folks who don't

NOTE Confidence: 0.81577164

00:20:04.243 --> 00:20:05.710 have hereditary breast cancer,

NOTE Confidence: 0.81577164

00:20:05.710 --> 00:20:08.090 but there are tumor cells have acquired

NOTE Confidence: 0.81577164

00:20:08.090 --> 00:20:09.820 mutations in those same genes.

NOTE Confidence: 0.81577164

00:20:09.820 --> 00:20:10.137 OK,

NOTE Confidence: 0.81577164

00:20:10.137 --> 00:20:12.039 and so the question is almost

NOTE Confidence: 0.81577164

00:20:12.039 --> 00:20:13.600 like Achilles heel question.

NOTE Confidence: 0.81577164

00:20:13.600 --> 00:20:17.299 Well, if the cell has a problem with repair.

NOTE Confidence: 0.81577164

00:20:17.300 --> 00:20:18.302 With one mechanism,

NOTE Confidence: 0.81577164

00:20:18.302 --> 00:20:20.640 because we know our cells are smart,

NOTE Confidence: 0.81577164

00:20:20.640 --> 00:20:21.972 so they've created multiple.

NOTE Confidence: 0.81577164

00:20:21.972 --> 00:20:22.638 You know,

NOTE Confidence: 0.81577164

00:20:22.640 --> 00:20:24.610 evolution is created multiple ways

NOTE Confidence: 0.81577164

00:20:24.610 --> 00:20:26.580 for cells to repair themselves.

NOTE Confidence: 0.81577164

00:20:26.580 --> 00:20:29.220 If we take out the single strand DNA

NOTE Confidence: 0.81577164

00:20:29.220 --> 00:20:31.258 repair mechanism with PARP inhibitors,

NOTE Confidence: 0.81577164

00:20:31.260 --> 00:20:33.780 could that lead to cancer cells perishing?

NOTE Confidence: 0.81577164

00:20:33.780 --> 00:20:35.590 We call that concept synthetic

NOTE Confidence: 0.81577164

00:20:35.590 --> 00:20:38.124 lethality and so this was a trial

NOTE Confidence: 0.81577164

00:20:38.124 --> 00:20:39.769 where folks with other mutations

NOTE Confidence: 0.81577164

00:20:39.769 --> 00:20:42.329 and I just want to highlight what

NOTE Confidence: 0.81577164

00:20:42.329 --> 00:20:44.579 we thought were the seminal aspects

NOTE Confidence: 0.81577164

00:20:44.580 --> 00:20:45.660 of this trial.

NOTE Confidence: 0.81577164

00:20:45.660 --> 00:20:47.820 There's a gene called Pal B2,

NOTE Confidence: 0.81578463

00:20:47.820 --> 00:20:50.340 partner and localized, or V RCA two,

NOTE Confidence: 0.81578463

00:20:50.340 --> 00:20:53.220 and it's a gene that also, when inherited,

NOTE Confidence: 0.81578463

00:20:53.220 --> 00:20:55.740 can increase the risk for breast cancer,

NOTE Confidence: 0.81578463

00:20:55.740 --> 00:20:58.308 and so in the hereditary setting.

NOTE Confidence: 0.81578463

00:20:58.310 --> 00:21:00.220 It was significant response with

NOTE Confidence: 0.81578463

00:21:00.220 --> 00:21:02.130 PARP inhibitors to the folks

NOTE Confidence: 0.81578463

00:21:02.202 --> 00:21:03.960 who had the PAL V2 mutation.

NOTE Confidence: 0.81578463

00:21:03.960 --> 00:21:06.030 So to me that that's getting

NOTE Confidence: 0.81578463

00:21:06.030 --> 00:21:07.840 very close to saying well,

NOTE Confidence: 0.81578463

00:21:07.840 --> 00:21:10.220 folks who have breast cancer in the

NOTE Confidence: 0.81578463

00:21:10.220 --> 00:21:12.779 context of this mutation like BRC A1B,

NOTE Confidence: 0.81578463

00:21:12.780 --> 00:21:15.404 RCA two are candidates for a PARP inhibitor

NOTE Confidence: 0.81578463

00:21:15.404 --> 00:21:18.079 was also very interesting in the middle.

NOTE Confidence: 0.81578463

00:21:18.080 --> 00:21:20.616 Here is it folks would acquire what we

NOTE Confidence: 0.81578463

00:21:20.616 --> 00:21:23.729 call a semantic BRC A1-AB or C2 mutation.

NOTE Confidence: 0.81578463

00:21:23.730 --> 00:21:26.082 They too seem to have an excellent

NOTE Confidence: 0.81578463

00:21:26.082 --> 00:21:27.987 response rate to these agents

NOTE Confidence: 0.81578463

00:21:27.987 --> 00:21:30.057 in the advanced cancer setting.

NOTE Confidence: 0.81578463

00:21:30.060 --> 00:21:32.335 So this was interesting and I think

NOTE Confidence: 0.81578463

00:21:32.335 --> 00:21:34.970 it's going to be relevant for us and

NOTE Confidence: 0.81578463

00:21:34.970 --> 00:21:36.972 just to mention that's in contrast

NOTE Confidence: 0.81578463

00:21:36.972 --> 00:21:39.676 to folks with an ATM or check two

NOTE Confidence: 0.81578463

00:21:39.676 --> 00:21:41.952 mutation to other genes that can be

NOTE Confidence: 0.81578463

00:21:41.952 --> 00:21:43.670 associated with hereditary breast cancer.

NOTE Confidence: 0.81578463

00:21:43.670 --> 00:21:46.013 Those folks didn't seem to benefit, OK?

NOTE Confidence: 0.81578463

00:21:46.013 --> 00:21:48.131 So I found that very interesting

NOTE Confidence: 0.81578463

00:21:48.131 --> 00:21:50.629 and one of our investigators,

NOTE Confidence: 0.81578463

00:21:50.630 --> 00:21:51.906 Doctor Larosa at Yale,

NOTE Confidence: 0.81578463

00:21:51.906 --> 00:21:54.651 has a trial at trying to mention this

NOTE Confidence: 0.81578463

00:21:54.651 --> 00:21:57.311 trucks and it's very relevant for our

NOTE Confidence: 0.81578463

00:21:57.311 --> 00:22:00.139 folks with germline mutations in V RC1BR,

NOTE Confidence: 0.81578463

00:22:00.140 --> 00:22:02.590 C two and you'll hear more about

NOTE Confidence: 0.81578463

00:22:02.590 --> 00:22:04.529 checkpoint inhibitors from doctoral Garo.

NOTE Confidence: 0.81578463

00:22:04.530 --> 00:22:07.670 But this is a trial saying well if we have

NOTE Confidence: 0.81578463

00:22:07.750 --> 00:22:11.118 folks who have benefit from a PARP inhibitor.

NOTE Confidence: 0.81578463

00:22:11.120 --> 00:22:13.423 If we add a checkpoint inhibitor might

NOTE Confidence: 0.81578463

00:22:13.423 --> 00:22:15.798 they do better 'cause there's some

NOTE Confidence: 0.81578463

00:22:15.798 --> 00:22:18.008 very interesting science behind that.

NOTE Confidence: 0.81578463

00:22:18.010 --> 00:22:19.995 Suggesting that those medicines could

NOTE Confidence: 0.81578463

00:22:19.995 --> 00:22:22.849 work very well together in our patients.

NOTE Confidence: 0.81578463

00:22:22.850 --> 00:22:25.664 So for me it was a Goodyear,

NOTE Confidence: 0.81578463

00:22:25.670 --> 00:22:28.088 a hopeful year looking at ways

NOTE Confidence: 0.81578463

00:22:28.088 --> 00:22:29.700 to overcome enterkin resistance.

NOTE Confidence: 0.81578463

00:22:29.700 --> 00:22:32.136 Some improvements as relates to how

NOTE Confidence: 0.81578463

00:22:32.136 --> 00:22:33.760 we understand hereditary cancer

NOTE Confidence: 0.81578463

00:22:33.824 --> 00:22:35.340 in the treatment thereof.

NOTE Confidence: 0.81578463

00:22:35.340 --> 00:22:38.372 And this is just a slide from the

NOTE Confidence: 0.81578463

00:22:38.372 --> 00:22:41.338 summer of some women that I know

NOTE Confidence: 0.81578463

00:22:41.338 --> 00:22:44.323 in Westerly who are doing yoga at

NOTE Confidence: 0.81578463

00:22:44.323 --> 00:22:47.039 sunrise on the beach and for me

NOTE Confidence: 0.81578463

00:22:47.039 --> 00:22:48.754 it's sort of symbolized hope.

NOTE Confidence: 0.81578463

00:22:48.754 --> 00:22:51.150 I do have great hope for this.

NOTE Confidence: 0.81578463

00:22:51.150 --> 00:22:53.110 I wanted to share that with you.

NOTE Confidence: 0.81578463

00:22:53.110 --> 00:22:53.680 Thank you.

NOTE Confidence: 0.8243819

00:22:55.140 --> 00:22:56.352 That was fantastic.

NOTE Confidence: 0.8243819

00:22:56.352 --> 00:22:58.372 Loved love that last slide

NOTE Confidence: 0.8243819

00:22:58.372 --> 00:23:00.632 and obviously all the data and

NOTE Confidence: 0.8243819

00:23:00.632 --> 00:23:02.352 the trials that are underway,

NOTE Confidence: 0.8243819

00:23:02.360 --> 00:23:04.640 especially here at Yale and Smilow.

NOTE Confidence: 0.8243819

00:23:04.640 --> 00:23:06.644 Next, we're going to move to

NOTE Confidence: 0.8243819

00:23:06.644 --> 00:23:08.815 Doctor Mina Moran and discuss the

NOTE Confidence: 0.8243819

00:23:08.815 --> 00:23:10.339 advances in radiation therapy

NOTE Confidence: 0.8243819

00:23:10.339 --> 00:23:12.770 and some of the really exciting

NOTE Confidence: 0.8243819

00:23:12.770 --> 00:23:15.278 techniques that are out there now.

NOTE Confidence: 0.8673003

00:23:27.870 --> 00:23:28.758 You're on mute.

NOTE Confidence: 0.80373096

00:23:34.170 --> 00:23:38.800 Is still on on mute.

NOTE Confidence: 0.80373096

00:23:38.800 --> 00:23:41.026 But while those slides are coming,

NOTE Confidence: 0.80373096

00:23:41.030 --> 00:23:43.250 there was a question about 100.

NOTE Confidence: 0.80373096

00:23:43.250 --> 00:23:45.476 It was from Pam regarding 100%

NOTE Confidence: 0.80373096

00:23:45.480 --> 00:23:47.360 breast tissue density and how

NOTE Confidence: 0.80373096

00:23:47.360 --> 00:23:49.930 confident you could be an image Ng.

NOTE Confidence: 0.80373096

00:23:49.930 --> 00:23:52.156 I think that's a fantastic question.

NOTE Confidence: 0.80373096

00:23:52.160 --> 00:23:54.218 We're going to absolutely get that

NOTE Confidence: 0.80373096

00:23:54.218 --> 00:23:56.610 in our question and answer session.

NOTE Confidence: 0.80373096

00:23:56.610 --> 00:23:58.722 And also, what are the signs

NOTE Confidence: 0.80373096

00:23:58.722 --> 00:24:00.690 and symptoms of breast cancer?

NOTE Confidence: 0.80373096

00:24:00.690 --> 00:24:03.287 And I think really super relevant questions.

NOTE Confidence: 0.80373096

00:24:03.290 --> 00:24:05.140 So with no further ado,

NOTE Confidence: 0.80373096

00:24:05.140 --> 00:24:07.000 Doctor Moran, professor and director,

NOTE Confidence: 0.80373096

00:24:07.000 --> 00:24:08.480 radiation Oncology at Yale.

NOTE Confidence: 0.8712355

00:24:09.460 --> 00:24:11.470 Thank you, I apologize for that.

NOTE Confidence: 0.8712355

00:24:11.470 --> 00:24:13.480 I'm having some technical difficulties today,

NOTE Confidence: 0.8712355

00:24:13.480 --> 00:24:16.657 so I'm going to be talking to you about

NOTE Confidence: 0.8712355

00:24:16.657 --> 00:24:19.174 radiation and just to give you an idea,

NOTE Confidence: 0.8712355

00:24:19.180 --> 00:24:22.105 you know one of the things I want to

NOTE Confidence: 0.8712355

00:24:22.105 --> 00:24:24.536 talk about is just the general principles

NOTE Confidence: 0.8712355

00:24:24.536 --> 00:24:26.098 of practices for breast radiation,

NOTE Confidence: 0.8712355

00:24:26.098 --> 00:24:27.940 such as the role of radiation

NOTE Confidence: 0.8712355

00:24:27.997 --> 00:24:29.557 in breast conservation therapy,

NOTE Confidence: 0.8712355

00:24:29.560 --> 00:24:31.570 the role of radiation after mastectomy,

NOTE Confidence: 0.8712355

00:24:31.570 --> 00:24:33.245 and the use of radiation

NOTE Confidence: 0.8712355

00:24:33.245 --> 00:24:34.585 in the palliative setting.

NOTE Confidence: 0.8712355

00:24:34.590 --> 00:24:36.600 I want to talk about radiation,

NOTE Confidence: 0.8712355

00:24:36.600 --> 00:24:39.201 what it is makes a lot of patients that

NOTE Confidence: 0.8712355

00:24:39.201 --> 00:24:42.056 come for consultation don't really have an.

NOTE Confidence: 0.8712355

00:24:42.060 --> 00:24:45.170 Idea of what it is or what it does.

NOTE Confidence: 0.8712355

00:24:45.170 --> 00:24:45.732 And Lastly,

NOTE Confidence: 0.8712355

00:24:45.732 --> 00:24:47.980 I want to talk about some of the

NOTE Confidence: 0.8712355

00:24:48.052 --> 00:24:50.392 technological advances that we now are

NOTE Confidence: 0.8712355

00:24:50.392 --> 00:24:52.790 using routinely in our practices to

NOTE Confidence: 0.86841786

00:24:52.790 --> 00:24:53.819 decrease normal tissue.

NOTE Confidence: 0.85281974

00:24:56.240 --> 00:24:59.202 So when a patient is newly diagnosed

NOTE Confidence: 0.85281974

00:24:59.202 --> 00:25:01.317 with early stage breast cancer,

NOTE Confidence: 0.85281974

00:25:01.320 --> 00:25:04.632 one of the major decisions that they face is

NOTE Confidence: 0.85281974

00:25:04.632 --> 00:25:08.078 the choice between Ms Ectomy or lumpectomy.

NOTE Confidence: 0.85281974

00:25:08.080 --> 00:25:11.464 If they are a candidate for a lumpectomy.

NOTE Confidence: 0.85281974

00:25:11.470 --> 00:25:13.586 And this shows long-term survival,

NOTE Confidence: 0.85281974

00:25:13.586 --> 00:25:15.278 following a lumpectomy with

NOTE Confidence: 0.85281974

00:25:15.278 --> 00:25:16.970 radiation versus the mastectomy.

NOTE Confidence: 0.85281974

00:25:16.970 --> 00:25:19.506 And as you can see here,

NOTE Confidence: 0.85281974

00:25:19.506 --> 00:25:22.040 that the outcomes in terms of

NOTE Confidence: 0.85281974

00:25:22.040 --> 00:25:23.732 long-term survival are equivalent.

NOTE Confidence: 0.85281974

00:25:23.732 --> 00:25:26.774 And this is nevertheless a persistent myth.

NOTE Confidence: 0.85281974

00:25:26.774 --> 00:25:29.346 But Patience feels that once the

NOTE Confidence: 0.85281974

00:25:29.346 --> 00:25:31.830 breast is a fully removed that

NOTE Confidence: 0.85281974

00:25:31.830 --> 00:25:33.890 their outcomes may be better,

NOTE Confidence: 0.85281974

00:25:33.890 --> 00:25:35.959 but unfortunately that isn't it.

NOTE Confidence: 0.85281974

00:25:35.959 --> 00:25:37.198 Fortunately, or unfortunately,

NOTE Confidence: 0.85281974

00:25:37.200 --> 00:25:38.024 they're not.

NOTE Confidence: 0.85281974

00:25:38.024 --> 00:25:40.084 It is not the case,

NOTE Confidence: 0.85281974

00:25:40.090 --> 00:25:43.390 and what we see is that more and

NOTE Confidence: 0.85281974

00:25:43.390 --> 00:25:46.145 more women over the last decade or

NOTE Confidence: 0.85281974

00:25:46.145 --> 00:25:48.070 so have been choosing mastectomy

NOTE Confidence: 0.85281974

00:25:48.142 --> 00:25:49.998 over a breast conservation.

NOTE Confidence: 0.85281974

00:25:50.000 --> 00:25:52.884 Ultimately that the outcomes are the same,

NOTE Confidence: 0.85281974

00:25:52.890 --> 00:25:55.314 and So what are the indications

NOTE Confidence: 0.85281974

00:25:55.314 --> 00:25:57.980 for when a patient may require?

NOTE Confidence: 0.85281974

00:25:57.980 --> 00:25:58.405 Radiation,

NOTE Confidence: 0.85281974

00:25:58.405 --> 00:26:01.372 the most common indication is in the

NOTE Confidence: 0.85281974

00:26:01.372 --> 00:26:03.487 use of breast conservation therapy,

NOTE Confidence: 0.85281974

00:26:03.490 --> 00:26:06.206 which is defined as limited surgery to

NOTE Confidence: 0.85281974

00:26:06.206 --> 00:26:09.000 remove the tumor with negative margins,

NOTE Confidence: 0.85281974

00:26:09.000 --> 00:26:11.526 and that's followed by whole breast

NOTE Confidence: 0.85281974

00:26:11.526 --> 00:26:14.119 radiation with an assessment of the

NOTE Confidence: 0.85281974

00:26:14.119 --> 00:26:16.633 lymph nodes and breast conservation therapy.

NOTE Confidence: 0.85281974

00:26:16.640 --> 00:26:17.909 As I said,

NOTE Confidence: 0.85281974

00:26:17.910 --> 00:26:20.452 is a standard alternative to mastectomy

NOTE Confidence: 0.85281974

00:26:20.452 --> 00:26:22.994 for early stage breast cancer and

NOTE Confidence: 0.85281974

00:26:22.994 --> 00:26:24.688 provides equivalent long-term outcomes

NOTE Confidence: 0.85281974

00:26:24.688 --> 00:26:27.656 up to 25 years for eligible patients.

NOTE Confidence: 0.85281974

00:26:27.660 --> 00:26:28.575 So after.

NOTE Confidence: 0.85281974

00:26:28.575 --> 00:26:30.060 Lumpectomy the alternatives

NOTE Confidence: 0.85281974

00:26:30.060 --> 00:26:31.772 to whole breast radiation,

NOTE Confidence: 0.85281974

00:26:31.772 --> 00:26:34.340 can also be a partial breast

NOTE Confidence: 0.85281974

00:26:34.419 --> 00:26:36.040 radiation therapy plan,

NOTE Confidence: 0.85281974

00:26:36.040 --> 00:26:38.800 where the lumpectomy cavity is outlined.

NOTE Confidence: 0.85281974

00:26:38.800 --> 00:26:41.100 And we're treating just that

NOTE Confidence: 0.85281974

00:26:41.100 --> 00:26:43.400 small portion of the breast.

NOTE Confidence: 0.85281974

00:26:43.400 --> 00:26:47.490 This approach is actually quite promising.

NOTE Confidence: 0.85281974

00:26:47.490 --> 00:26:49.384 Appears to have good cosmesis,

NOTE Confidence: 0.85281974

00:26:49.384 --> 00:26:52.026 but the studies are newer than the

NOTE Confidence: 0.85281974

00:26:52.026 --> 00:26:53.538 traditional whole breast radiation

NOTE Confidence: 0.85281974

00:26:53.538 --> 00:26:55.426 and they have significantly shorter

NOTE Confidence: 0.85281974

00:26:55.426 --> 00:26:57.692 follow-up and so currently it's only

NOTE Confidence: 0.85281974

00:26:57.692 --> 00:27:00.379 being offered for selected low risk patients.

NOTE Confidence: 0.85281974

00:27:00.379 --> 00:27:01.636 And then Lastly,

NOTE Confidence: 0.85281974

00:27:01.636 --> 00:27:04.150 there's one group of patients where

NOTE Confidence: 0.85281974

00:27:04.227 --> 00:27:06.527 we routinely offer them radiation,

NOTE Confidence: 0.85281974

00:27:06.530 --> 00:27:06.915 omission,

NOTE Confidence: 0.85281974

00:27:06.915 --> 00:27:09.200 or just having the lumpectomy with

NOTE Confidence: 0.85281974

00:27:09.200 --> 00:27:11.109 a no additional aggregate radiation.

NOTE Confidence: 0.85281974

00:27:11.110 --> 00:27:14.022 And this is for patients over the

NOTE Confidence: 0.85281974

00:27:14.022 --> 00:27:16.526 age of approximately 65 to 70 who

NOTE Confidence: 0.85281974

00:27:16.526 --> 00:27:18.341 haviar positive tumors that measure

NOTE Confidence: 0.85281974

00:27:18.341 --> 00:27:20.627 less than two to three centimeters,

NOTE Confidence: 0.85281974

00:27:20.630 --> 00:27:22.540 and who have negative nodes,

NOTE Confidence: 0.85281974

00:27:22.540 --> 00:27:24.748 and who are willing to commit

NOTE Confidence: 0.85281974

00:27:24.748 --> 00:27:26.730 to tamoxifen for five years.

NOTE Confidence: 0.85281974

00:27:26.730 --> 00:27:27.870 And what we

NOTE Confidence: 0.83263856

00:27:27.870 --> 00:27:30.156 tell these patients is that they

NOTE Confidence: 0.85561679

00:27:30.160 --> 00:27:32.152 their risk of. The cancer coming

NOTE Confidence: 0.85561679

00:27:32.152 --> 00:27:34.149 back within the breast is higher,

NOTE Confidence: 0.85561679

00:27:34.150 --> 00:27:36.302 but if it does come back they can

NOTE Confidence: 0.85561679

00:27:36.302 --> 00:27:38.264 ultimately have a mastectomy and so

NOTE Confidence: 0.85561679

00:27:38.264 --> 00:27:40.310 therefore there is no survival difference.

NOTE Confidence: 0.8434824

00:27:43.020 --> 00:27:46.058 What are the indications for a after

NOTE Confidence: 0.8434824

00:27:46.058 --> 00:27:48.950 a mastectomy to do radiation well,

NOTE Confidence: 0.8434824

00:27:48.950 --> 00:27:52.138 radiation is typically offered in the post

NOTE Confidence: 0.8434824

00:27:52.138 --> 00:27:54.874 mastectomy setting for high risk patients,

NOTE Confidence: 0.8434824

00:27:54.880 --> 00:27:57.604 and it's used to sterilize microscopic

NOTE Confidence: 0.8434824

00:27:57.604 --> 00:27:59.890 disease on the chest wall.

NOTE Confidence: 0.8434824

00:27:59.890 --> 00:28:03.350 In regional lymph nodes.

NOTE Confidence: 0.8434824

00:28:03.350 --> 00:28:06.353 Typically the radiation is a delivered entire

NOTE Confidence: 0.8434824

00:28:06.353 --> 00:28:09.428 chest wall and any lymph nodes at risk.

NOTE Confidence: 0.8434824

00:28:09.430 --> 00:28:11.460 The patients that we consider

NOTE Confidence: 0.8434824

00:28:11.460 --> 00:28:13.490 for most mastectomy radiation are

NOTE Confidence: 0.8434824

00:28:13.563 --> 00:28:15.498 those who have positive nodes.

NOTE Confidence: 0.8434824

00:28:15.500 --> 00:28:17.846 Those who have positive margins if

NOTE Confidence: 0.8434824

00:28:17.846 --> 00:28:20.769 they have tumor that involves the skin,

NOTE Confidence: 0.8434824

00:28:20.770 --> 00:28:23.185 or if they have a tumor that

NOTE Confidence: 0.8434824

00:28:23.185 --> 00:28:25.220 measures of five centimeters.

NOTE Confidence: 0.8328143

00:28:27.590 --> 00:28:30.920 So whether it's.

NOTE Confidence: 0.8328143

00:28:30.920 --> 00:28:33.566 Text me or post mastectomy radiation.

NOTE Confidence: 0.8328143

00:28:33.570 --> 00:28:35.785 It's important to recognize that

NOTE Confidence: 0.8328143

00:28:35.785 --> 00:28:38.497 radiation is very safe and effective

NOTE Confidence: 0.8328143

00:28:38.497 --> 00:28:41.504 and is much better tolerated than it

NOTE Confidence: 0.8328143

00:28:41.504 --> 00:28:45.056 was years ago due to the advances that

NOTE Confidence: 0.8328143

00:28:45.056 --> 00:28:47.240 we've made and radiation generally

NOTE Confidence: 0.8328143

00:28:47.240 --> 00:28:49.445 reduces local and regional recurrences

NOTE Confidence: 0.8328143

00:28:49.445 --> 00:28:53.285 by approximately 60 to 70%, which is a

NOTE Confidence: 0.8328143

00:28:53.285 --> 00:28:56.555 relative risk reduction of about 2/3.

NOTE Confidence: 0.8328143

00:28:56.560 --> 00:28:58.190 In certain subsets of patients,

NOTE Confidence: 0.8328143

00:28:58.190 --> 00:29:00.465 radiation is also associated with an increase

NOTE Confidence: 0.8328143

00:29:00.465 --> 00:29:03.390 in survival and could be as high as 10%,

NOTE Confidence: 0.8328143

00:29:03.390 --> 00:29:05.012 and this is particularly true

NOTE Confidence: 0.8328143

00:29:05.012 --> 00:29:06.960 of the younger patients who have

NOTE Confidence: 0.8328143

00:29:06.960 --> 00:29:09.750 a very long life expectancy.

NOTE Confidence: 0.8328143

00:29:09.750 --> 00:29:12.152 The treatment is almost always given

NOTE Confidence: 0.8328143

00:29:12.152 --> 00:29:14.507 after chemotherapy and the treatment

NOTE Confidence: 0.8328143

00:29:14.507 --> 00:29:16.843 duration of radiation is specific to

NOTE Confidence: 0.8328143

00:29:16.843 --> 00:29:19.883 the patient and it can be as good as six

NOTE Confidence: 0.8328143

00:29:19.883 --> 00:29:22.158 weeks out from from beginning to end.

NOTE Confidence: 0.844464

00:29:24.490 --> 00:29:27.402 So the last major an indication for radiation

NOTE Confidence: 0.844464

00:29:27.402 --> 00:29:30.132 is for patients in the metastatic setting

NOTE Confidence: 0.844464

00:29:30.132 --> 00:29:32.598 or in the recurrent disease setting.

NOTE Confidence: 0.844464

00:29:32.600 --> 00:29:34.525 Or a patient has disease

NOTE Confidence: 0.844464

00:29:34.525 --> 00:29:35.680 that's causing symptoms.

NOTE Confidence: 0.844464

00:29:35.680 --> 00:29:38.382 In these situations the radiation is that

NOTE Confidence: 0.844464

00:29:38.382 --> 00:29:41.474 delivered is given in a pallet of way,

NOTE Confidence: 0.844464

00:29:41.474 --> 00:29:43.682 meaning that it's used to alleviate

NOTE Confidence: 0.844464

00:29:43.682 --> 00:29:45.472 the symptoms that the patient

NOTE Confidence: 0.844464

00:29:45.472 --> 00:29:46.880 might be experiencing,

NOTE Confidence: 0.844464

00:29:46.880 --> 00:29:48.425 and it's highly effective.

NOTE Confidence: 0.844464

00:29:48.425 --> 00:29:51.896 It can be up to 70 to 90% of

NOTE Confidence: 0.844464

00:29:51.896 --> 00:29:53.826 patients do resport report that

NOTE Confidence: 0.844464

00:29:53.830 --> 00:29:56.740 they have a very good pain control.

NOTE Confidence: 0.844464

00:29:56.740 --> 00:29:58.288 But the fractionation in

NOTE Confidence: 0.844464

00:29:58.288 --> 00:29:59.076 differs significantly.

NOTE Confidence: 0.844464

00:29:59.076 --> 00:30:00.258 Can be anyway?

NOTE Confidence: 0.844464

00:30:00.260 --> 00:30:02.542 From 10 to 15 treatments or as

NOTE Confidence: 0.844464

00:30:02.542 --> 00:30:04.928 little as one to two treatments,

NOTE Confidence: 0.844464

00:30:04.930 --> 00:30:06.934 depending on the site and the

NOTE Confidence: 0.844464

00:30:06.934 --> 00:30:08.880 performance status of the patients,

NOTE Confidence: 0.844464

00:30:08.880 --> 00:30:11.028 and typically it's used for things

NOTE Confidence: 0.844464

00:30:11.028 --> 00:30:13.106 like bone lesions, brain metastasis,

NOTE Confidence: 0.844464

00:30:13.106 --> 00:30:16.094 soft tissue masses or even chest

NOTE Confidence: 0.844464

00:30:16.094 --> 00:30:17.090 wall recurrences.

NOTE Confidence: 0.844464

00:30:17.090 --> 00:30:18.760 So just an important point.

NOTE Confidence: 0.844464

00:30:18.760 --> 00:30:19.094 Lastly,

NOTE Confidence: 0.844464

00:30:19.094 --> 00:30:21.098 for all treatment of breast cancer,

NOTE Confidence: 0.844464

00:30:21.100 --> 00:30:23.098 I think it's important to remember

NOTE Confidence: 0.844464

00:30:23.100 --> 00:30:25.105 that every breast cancer is different,

NOTE Confidence: 0.844464

00:30:25.105 --> 00:30:27.712 and so the biology is different in every

NOTE Confidence: 0.844464

00:30:27.712 --> 00:30:30.030 case as well as patient related factors

NOTE Confidence: 0.844464

00:30:30.030 --> 00:30:32.445 that that a physician has to consider.

NOTE Confidence: 0.844464

00:30:32.450 --> 00:30:33.118 In addition,

NOTE Confidence: 0.844464

00:30:33.118 --> 00:30:35.789 we have to look at the efficacy of

NOTE Confidence: 0.844464

00:30:35.790 --> 00:30:38.016 the treatment as well as the toxicity

NOTE Confidence: 0.844464

00:30:38.016 --> 00:30:40.595 and then look at the risks versus the

NOTE Confidence: 0.844464

00:30:40.595 --> 00:30:42.949 benefits to make sure that it's it's

NOTE Confidence: 0.844464

00:30:42.949 --> 00:30:45.145 worth the treatments for the patient.

NOTE Confidence: 0.844464

00:30:45.150 --> 00:30:47.220 So in addition to the doctors.

NOTE Confidence: 0.844464

00:30:47.220 --> 00:30:48.876 Recommendation for their whether

NOTE Confidence: 0.844464

00:30:48.876 --> 00:30:51.359 or not to deliver radiation and

NOTE Confidence: 0.844464

00:30:51.360 --> 00:30:53.448 other important components that

NOTE Confidence: 0.844464

00:30:53.448 --> 00:30:56.058 sometimes gets neglected but should

NOTE Confidence: 0.844464

00:30:56.058 --> 00:30:59.008 be discussed is the patients of

NOTE Confidence: 0.844464

00:30:59.008 --> 00:31:01.358 personal preferences and what they

NOTE Confidence: 0.844464

00:31:01.434 --> 00:31:04.266 want to do and how they would receive.

NOTE Confidence: 0.844464

00:31:04.270 --> 00:31:06.357 So now what is radiation?

NOTE Confidence: 0.844464

00:31:06.357 --> 00:31:09.693 Radiation is a high energy X Ray beam,

NOTE Confidence: 0.844464

00:31:09.700 --> 00:31:12.210 not very different than a chest

NOTE Confidence: 0.844464

00:31:12.210 --> 00:31:14.304 X Ray or cat scan.

NOTE Confidence: 0.844464

00:31:14.304 --> 00:31:16.389 They all use ionizing radiation,

NOTE Confidence: 0.844464

00:31:16.390 --> 00:31:18.892 but the magnitude of the energy

NOTE Confidence: 0.844464

00:31:18.892 --> 00:31:20.143 is significantly greater,

NOTE Confidence: 0.844464

00:31:20.150 --> 00:31:22.410 up for therapeutic radiation and

NOTE Confidence: 0.844464

00:31:22.410 --> 00:31:25.436 ultimately what it does is it causes

NOTE Confidence: 0.844464

00:31:25.436 --> 00:31:28.188 damage to any of the cells that are

NOTE Confidence: 0.844464

00:31:28.274 --> 00:31:31.022 in the radiations pathway and so

NOTE Confidence: 0.844464

00:31:31.022 --> 00:31:33.530 within our field of radiation oncology.

NOTE Confidence: 0.844464

00:31:33.530 --> 00:31:37.100 Our goal is to try to use.

NOTE Confidence: 0.844464

00:31:37.100 --> 00:31:38.820 The radiation to minimize the

NOTE Confidence: 0.844464

00:31:38.820 --> 00:31:41.015 chance of the cancer coming back

NOTE Confidence: 0.844464

00:31:41.015 --> 00:31:42.239 locally or regionally.

NOTE Confidence: 0.844464

00:31:42.240 --> 00:31:45.008 And we do this by trying to individualize

NOTE Confidence: 0.844464

00:31:45.008 --> 00:31:47.186 the beams to the patients anatomy

NOTE Confidence: 0.844464

00:31:47.186 --> 00:31:49.763 and target the areas at risk for

NOTE Confidence: 0.844464

00:31:49.763 --> 00:31:52.085 recurrence and minimize the dose to

NOTE Confidence: 0.844464

00:31:52.085 --> 00:31:55.840 the normal tissue wherever possible.

NOTE Confidence: 0.844464

00:31:55.840 --> 00:31:58.832 So how does radiation work while the

NOTE Confidence: 0.844464

00:31:58.832 --> 00:32:01.424 individual X Ray beams target the

NOTE Confidence: 0.844464

00:32:01.424 --> 00:32:04.427 DNA and normal cells as well through

NOTE Confidence: 0.844464

00:32:04.427 --> 00:32:06.490 a direct and indirect mechanism?

NOTE Confidence: 0.844464

00:32:06.490 --> 00:32:09.040 That's a little bit too difficult

NOTE Confidence: 0.844464

00:32:09.040 --> 00:32:11.603 to explain in this short session,

NOTE Confidence: 0.844464

00:32:11.603 --> 00:32:14.160 but ultimately what happens is that

NOTE Confidence: 0.844464

00:32:14.160 --> 00:32:16.285 the the radiation causes damage

NOTE Confidence: 0.844464

00:32:16.285 --> 00:32:18.842 to the DNA of any cell,

NOTE Confidence: 0.844464

00:32:18.842 --> 00:32:21.659 and by doing this it ultimately

NOTE Confidence: 0.844464

00:32:21.659 --> 00:32:24.224 prevents the cells from replicating

NOTE Confidence: 0.844464

00:32:24.224 --> 00:32:27.039 unless they can repair themselves.

NOTE Confidence: 0.844464

00:32:27.040 --> 00:32:29.847 And So what are the what are

NOTE Confidence: 0.844464

00:32:29.847 --> 00:32:32.150 the exact types of damages?

NOTE Confidence: 0.844464

00:32:32.150 --> 00:32:35.132 All different kinds but but the the

NOTE Confidence: 0.844464

00:32:35.132 --> 00:32:37.706 damages are typically such that the

NOTE Confidence: 0.844464

00:32:37.706 --> 00:32:41.520 cancer cells are not able to recover from it,

NOTE Confidence: 0.844464

00:32:41.520 --> 00:32:43.656 whereas normal cells such as

NOTE Confidence: 0.844464

00:32:43.656 --> 00:32:45.360 our skin lung tissue,

NOTE Confidence: 0.844464

00:32:45.360 --> 00:32:47.420 our breast tissue is able

NOTE Confidence: 0.844464

00:32:47.420 --> 00:32:49.480 to recover and for this

NOTE Confidence: 0.8680765

00:32:49.569 --> 00:32:52.167 reason it leads to cancer cell

NOTE Confidence: 0.8680765

00:32:52.167 --> 00:32:54.732 death when the cells try to

NOTE Confidence: 0.8680765

00:32:54.732 --> 00:32:56.533 reproduce or replicate, whereas.

NOTE Confidence: 0.8680765

00:32:56.533 --> 00:32:59.671 The normal tissue has the ability

NOTE Confidence: 0.8680765

00:32:59.671 --> 00:33:02.946 to repair and seal off and then

NOTE Confidence: 0.8680765

00:33:02.946 --> 00:33:05.860 continue with its normal life cycle.

NOTE Confidence: 0.88084704

00:33:07.270 --> 00:33:09.766 So when a patient comes in for radiation,

NOTE Confidence: 0.88084704

00:33:09.770 --> 00:33:11.014 sometimes they think that

NOTE Confidence: 0.88084704

00:33:11.014 --> 00:33:12.569 they're going to start radiation.

NOTE Confidence: 0.88084704

00:33:12.570 --> 00:33:14.754 The date if they have the consultation,

NOTE Confidence: 0.88084704

00:33:14.760 --> 00:33:17.523 and this is just to show you that there's

NOTE Confidence: 0.88084704

00:33:17.523 --> 00:33:19.436 actually a process that we follow.

NOTE Confidence: 0.88084704

00:33:19.440 --> 00:33:22.064 The patient first needs to undergo a see

NOTE Confidence: 0.88084704

00:33:22.064 --> 00:33:24.451 T simulation an it's a multi step process

NOTE Confidence: 0.88084704

00:33:24.451 --> 00:33:26.930 where we put the patient on the table.

NOTE Confidence: 0.88084704

00:33:26.930 --> 00:33:29.734 We immobilize them to make sure that we can

NOTE Confidence: 0.88084704

00:33:29.734 --> 00:33:31.918 reproduce their positioning on a daily basis.

NOTE Confidence: 0.88084704

00:33:31.920 --> 00:33:34.056 For the treatments we add some

NOTE Confidence: 0.88084704

00:33:34.056 --> 00:33:36.149 markers to their skin on their

NOTE Confidence: 0.88084704

00:33:36.149 --> 00:33:38.228 skin and then we get the scan.

NOTE Confidence: 0.88084704

00:33:38.230 --> 00:33:40.408 This is what one of the

NOTE Confidence: 0.88084704

00:33:40.408 --> 00:33:41.497 immobilization looks like.

NOTE Confidence: 0.88084704

00:33:41.500 --> 00:33:44.758 It is a vac lock with a breast board.

NOTE Confidence: 0.88084704

00:33:44.760 --> 00:33:46.590 Patients are required to put their

NOTE Confidence: 0.88084704

00:33:46.590 --> 00:33:49.418 arms up and so for this reason another

NOTE Confidence: 0.88084704

00:33:49.418 --> 00:33:51.348 important important point is that

NOTE Confidence: 0.88084704

00:33:51.348 --> 00:33:53.478 when patients come to radiation,

NOTE Confidence: 0.88084704

00:33:53.480 --> 00:33:56.273 they should be able to raise their

NOTE Confidence: 0.88084704

00:33:56.273 --> 00:33:58.458 arms comfortably and keep them up

NOTE Confidence: 0.88084704

00:33:58.458 --> 00:34:01.037 for at least 20 to 30 minutes in

NOTE Confidence: 0.88084704

00:34:01.037 --> 00:34:03.627 order for the CAT scan and the

NOTE Confidence: 0.88084704

00:34:03.627 --> 00:34:06.968 entire simulation process to occur.

NOTE Confidence: 0.88084704

00:34:06.970 --> 00:34:09.413 And so this is what the radiation

NOTE Confidence: 0.88084704

00:34:09.413 --> 00:34:10.460 feels look like.

NOTE Confidence: 0.88084704

00:34:10.460 --> 00:34:12.548 And this is just a schematic.

NOTE Confidence: 0.88084704

00:34:12.550 --> 00:34:14.878 But basically what happens is the

NOTE Confidence: 0.88084704

00:34:14.878 --> 00:34:17.704 head of the machine moves to the to

NOTE Confidence: 0.88084704

00:34:17.704 --> 00:34:20.267 one side of the breast or the chest

NOTE Confidence: 0.88084704

00:34:20.267 --> 00:34:22.675 wall tissue and it treats it and

NOTE Confidence: 0.88084704

00:34:22.675 --> 00:34:25.102 then moves to the other side and

NOTE Confidence: 0.88084704

00:34:25.102 --> 00:34:27.560 treats the other side of the breast.

NOTE Confidence: 0.88084704

00:34:27.560 --> 00:34:29.666 And by doing this we're really

NOTE Confidence: 0.88084704

00:34:29.666 --> 00:34:31.773 skimming the chest wall and not

NOTE Confidence: 0.88084704

00:34:31.773 --> 00:34:33.681 penetrating from the front to the

NOTE Confidence: 0.88084704

00:34:33.681 --> 00:34:36.572 back an in this way we're really just

NOTE Confidence: 0.88084704

00:34:36.572 --> 00:34:38.630 treating the superficial a tissue.

NOTE Confidence: 0.88084704

00:34:38.630 --> 00:34:41.630 Which includes the breast tissue.

NOTE Confidence: 0.88084704

00:34:41.630 --> 00:34:45.050 Here are the wires that we put on to

NOTE Confidence: 0.88084704

00:34:45.050 --> 00:34:47.294 clinically delineate what we want

NOTE Confidence: 0.88084704

00:34:47.294 --> 00:34:49.964 to make sure that we're covering

NOTE Confidence: 0.88084704

00:34:50.046 --> 00:34:52.762 an right underneath you see the two

NOTE Confidence: 0.88084704

00:34:52.762 --> 00:34:55.980 CT scans and in the pink you have

NOTE Confidence: 0.88084704

00:34:55.980 --> 00:34:57.210 the breast volume.

NOTE Confidence: 0.88084704

00:34:57.210 --> 00:35:00.304 The yellow that you see there is

NOTE Confidence: 0.88084704

00:35:00.304 --> 00:35:02.677 the lumpectomy volume and on the

NOTE Confidence: 0.88084704

00:35:02.677 --> 00:35:05.451 scan to the left side of the screen

NOTE Confidence: 0.88084704

00:35:05.451 --> 00:35:08.608 you see the three little areas that

NOTE Confidence: 0.88084704

00:35:08.608 --> 00:35:10.994 are outlined are your lymph nodes.

NOTE Confidence: 0.88084704

00:35:10.994 --> 00:35:14.650 In the axilla and the red line that I drew,

NOTE Confidence: 0.88084704

00:35:14.650 --> 00:35:16.110 is that tangential beam?

NOTE Confidence: 0.88084704

00:35:16.110 --> 00:35:19.018 So just to show you that we were

NOTE Confidence: 0.88084704

00:35:19.018 --> 00:35:21.578 able to cover a good portion of the

NOTE Confidence: 0.88084704

00:35:21.659 --> 00:35:23.955 breast and the level one Level 2

NOTE Confidence: 0.88084704

00:35:23.955 --> 00:35:26.872 and Level 3 lymph nodes with just

NOTE Confidence: 0.88084704

00:35:26.872 --> 00:35:28.804 a tangential beam alone?

NOTE Confidence: 0.88084704

00:35:28.810 --> 00:35:30.880 So ultimately this 3 dimensional

NOTE Confidence: 0.88084704

00:35:30.880 --> 00:35:33.770 technology with the use of CAT scans

NOTE Confidence: 0.88084704

00:35:33.770 --> 00:35:36.746 and looking at it at every different level,

NOTE Confidence: 0.88084704

00:35:36.750 --> 00:35:39.137 it allows us to contour the beam

NOTE Confidence: 0.88084704

00:35:39.137 --> 00:35:41.015 to an individual patients anatomy

NOTE Confidence: 0.88084704

00:35:41.015 --> 00:35:43.745 and it allows us to deliver precise

NOTE Confidence: 0.88084704

00:35:43.745 --> 00:35:45.878 and focused radiation beams.

NOTE Confidence: 0.88084704

00:35:45.880 --> 00:35:47.820 So what does radiation target

NOTE Confidence: 0.88084704

00:35:47.820 --> 00:35:50.650 and what do we try to target?

NOTE Confidence: 0.88084704

00:35:50.650 --> 00:35:52.750 Most patients who undergo breast

NOTE Confidence: 0.88084704

00:35:52.750 --> 00:35:54.430 conservation have their whole

NOTE Confidence: 0.88084704

00:35:54.430 --> 00:35:56.199 breast treated at this time.

NOTE Confidence: 0.88084704

00:35:56.200 --> 00:35:59.098 We may or may not include nodes

NOTE Confidence: 0.88084704

00:35:59.098 --> 00:36:00.340 if the patient.

NOTE Confidence: 0.88084704

00:36:00.340 --> 00:36:02.416 If it's indicated for the patient,

NOTE Confidence: 0.88084704

00:36:02.420 --> 00:36:04.835 for example, if they have positive nodes,

NOTE Confidence: 0.88084704

00:36:04.840 --> 00:36:07.255 we often will include the regional nodes.

NOTE Confidence: 0.88084704

00:36:07.260 --> 00:36:08.286 After the mastectomy,

NOTE Confidence: 0.88084704

00:36:08.286 --> 00:36:10.338 we treat the chest wall and

NOTE Confidence: 0.88084704

00:36:10.338 --> 00:36:12.100 a more often than not,

NOTE Confidence: 0.86867094

00:36:12.100 --> 00:36:14.176 because these are higher risk patients,

NOTE Confidence: 0.86867094

00:36:14.180 --> 00:36:17.316 they will have their regional nodes treated.

NOTE Confidence: 0.86867094

00:36:17.320 --> 00:36:19.342 And this is what the fields

NOTE Confidence: 0.86867094

00:36:19.342 --> 00:36:21.150 look like on the skin.

NOTE Confidence: 0.86867094

00:36:21.150 --> 00:36:24.610 So this is just a schematic to show you what

NOTE Confidence: 0.86867094

00:36:24.692 --> 00:36:27.919 the delivery of the tangential beams are.

NOTE Confidence: 0.86867094

00:36:27.920 --> 00:36:30.140 First, there's the medial beam or

NOTE Confidence: 0.86867094

00:36:30.140 --> 00:36:32.689 the medial part of the treatment,

NOTE Confidence: 0.86867094

00:36:32.690 --> 00:36:36.670 so you have the beam and sub beams within it,

NOTE Confidence: 0.86867094

00:36:36.670 --> 00:36:38.655 which are tailored to the

NOTE Confidence: 0.86867094

00:36:38.655 --> 00:36:40.243 individual patient and delete.

NOTE Confidence: 0.86867094

00:36:40.250 --> 00:36:41.842 Deliver the radiation medially.

NOTE Confidence: 0.86867094

00:36:41.842 --> 00:36:43.832 Then the beam moves into

NOTE Confidence: 0.86867094

00:36:43.832 --> 00:36:45.056 the lateral position,

NOTE Confidence: 0.86867094

00:36:45.056 --> 00:36:47.534 so the height of the machine

NOTE Confidence: 0.86867094

00:36:47.534 --> 00:36:50.503 moves to the lateral side of the

NOTE Confidence: 0.86867094

00:36:50.503 --> 00:36:52.568 patient and again similar beam.

NOTE Confidence: 0.86867094

00:36:52.570 --> 00:36:54.532 Delivers the tangential field and sub

NOTE Confidence: 0.86867094

00:36:54.532 --> 00:36:57.089 beams as well and ultimately together.

NOTE Confidence: 0.86867094

00:36:57.090 --> 00:36:59.994 What that gives you is a dose distribution

NOTE Confidence: 0.86867094

00:36:59.994 --> 00:37:02.323 that looks like what that purple

NOTE Confidence: 0.86867094

00:37:02.323 --> 00:37:04.621 and the yellow there are covering.

NOTE Confidence: 0.86867094

00:37:04.630 --> 00:37:07.790 So you're covering a good part of almost

NOTE Confidence: 0.86867094

00:37:07.790 --> 00:37:11.291 all of that breast tissue with a very

NOTE Confidence: 0.86867094

00:37:11.291 --> 00:37:14.979 little amount of lung or heart in the field.

NOTE Confidence: 0.86867094

00:37:14.980 --> 00:37:16.600 And so the goal is,

NOTE Confidence: 0.86867094

00:37:16.600 --> 00:37:18.210 as we're doing this treatment,

NOTE Confidence: 0.86867094

00:37:18.210 --> 00:37:21.280 planning is to design the beams in such a way

NOTE Confidence: 0.86867094

00:37:21.348 --> 00:37:24.345 that we treat the breast and the chest wall,

NOTE Confidence: 0.86867094

00:37:24.350 --> 00:37:26.288 with or without the lymph nodes,

NOTE Confidence: 0.86867094

00:37:26.290 --> 00:37:27.900 and we minimize the radiation

NOTE Confidence: 0.86867094

00:37:27.900 --> 00:37:29.188 to the normal tissue.

NOTE Confidence: 0.86867094

00:37:29.190 --> 00:37:31.662 And so we have a lot of tools

NOTE Confidence: 0.86867094

00:37:31.662 --> 00:37:33.707 that we are able to use,

NOTE Confidence: 0.86867094

00:37:33.710 --> 00:37:34.356 such as.

NOTE Confidence: 0.86867094

00:37:34.356 --> 00:37:36.294 Once we get the CAT scan,

NOTE Confidence: 0.86867094

00:37:36.300 --> 00:37:37.955 we can three dimensionally recreate

NOTE Confidence: 0.86867094

00:37:37.955 --> 00:37:40.288 the skin surface as well as the

NOTE Confidence: 0.86867094

00:37:40.288 --> 00:37:41.524 three dimensional internal surface

NOTE Confidence: 0.86867094

00:37:41.524 --> 00:37:44.142 so that we are able to see exactly

NOTE Confidence: 0.86867094

00:37:44.142 --> 00:37:45.466 where these beams intersect.

NOTE Confidence: 0.86867094

00:37:45.470 --> 00:37:48.030 And also then be able to change the

NOTE Confidence: 0.86867094

00:37:48.030 --> 00:37:51.532 beam a little bit in order to make sure

NOTE Confidence: 0.86867094

00:37:51.532 --> 00:37:54.480 that we're covering what we need to cover.

NOTE Confidence: 0.86867094

00:37:54.480 --> 00:37:56.478 The things that we worry about,

NOTE Confidence: 0.86867094

00:37:56.480 --> 00:37:59.096 the most critical things that we worry about

NOTE Confidence: 0.86867094

00:37:59.096 --> 00:38:01.826 are the the heart in the lung obviously,

NOTE Confidence: 0.86867094

00:38:01.830 --> 00:38:03.174 and sometimes the liver.

NOTE Confidence: 0.86867094

00:38:03.174 --> 00:38:05.593 And so we have two important tools

NOTE Confidence: 0.86867094

00:38:05.593 --> 00:38:07.573 that we use regularly to minimize

NOTE Confidence: 0.86867094

00:38:07.573 --> 00:38:09.840 that dose to the heart and lung.

NOTE Confidence: 0.86867094

00:38:09.840 --> 00:38:12.178 The first one is the deep inspiration,

NOTE Confidence: 0.86867094

00:38:12.180 --> 00:38:13.770 breath hold technique and the

NOTE Confidence: 0.86867094

00:38:13.770 --> 00:38:16.121 other one is the prone breast board

NOTE Confidence: 0.86867094

00:38:16.121 --> 00:38:18.209 technique and I'm just going to

NOTE Confidence: 0.86867094

00:38:18.209 --> 00:38:20.200 briefly talk about both of those.

NOTE Confidence: 0.86867094

00:38:20.200 --> 00:38:21.672 The deep inspiration breath

NOTE Confidence: 0.86867094

00:38:21.672 --> 00:38:23.512 hold technique allows a patient

NOTE Confidence: 0.86867094

00:38:23.512 --> 00:38:25.319 when they take a deep breath.

NOTE Confidence: 0.86867094

00:38:25.320 --> 00:38:27.522 Their chest wall moves away from

NOTE Confidence: 0.86867094

00:38:27.522 --> 00:38:30.569 the heart and and in doing so and

NOTE Confidence: 0.86867094

00:38:30.569 --> 00:38:32.444 with the diaphragm going down,

NOTE Confidence: 0.86867094

00:38:32.450 --> 00:38:35.506 what you have is more room for that

NOTE Confidence: 0.86867094

00:38:35.506 --> 00:38:37.518 tangential beam to get in there

NOTE Confidence: 0.86867094

00:38:37.518 --> 00:38:39.785 and to be able to treat without

NOTE Confidence: 0.86867094

00:38:39.785 --> 00:38:42.395 exposing the hearts and also it

NOTE Confidence: 0.86867094

00:38:42.395 --> 00:38:45.208 reduces the amount of a lung volume.

NOTE Confidence: 0.86867094

00:38:45.208 --> 00:38:47.914 So this is just an example to

NOTE Confidence: 0.86867094

00:38:47.914 --> 00:38:49.699 show you in a patient.

NOTE Confidence: 0.86867094

00:38:49.700 --> 00:38:52.700 On the left is the free breathing scan.

NOTE Confidence: 0.86867094

00:38:52.700 --> 00:38:55.850 On the right is the breath hold.

NOTE Confidence: 0.86867094

00:38:55.850 --> 00:38:58.794 In in red you see the heart contour,

NOTE Confidence: 0.86867094

00:38:58.800 --> 00:39:01.649 how much the heart shape changes in

NOTE Confidence: 0.86867094

00:39:01.649 --> 00:39:03.648 this particular patient when she

NOTE Confidence: 0.86867094

00:39:03.648 --> 00:39:05.760 holds her breath and that really

NOTE Confidence: 0.86867094

00:39:05.760 --> 00:39:08.395 allows us to get into the chest wall,

NOTE Confidence: 0.86867094

00:39:08.400 --> 00:39:10.240 the breast tissue and nodes,

NOTE Confidence: 0.86867094

00:39:10.240 --> 00:39:13.168 and miss the heart.

NOTE Confidence: 0.86867094

00:39:13.170 --> 00:39:15.550 This is just a cross section of

NOTE Confidence: 0.86867094

00:39:15.550 --> 00:39:16.570 that showing you

NOTE Confidence: 0.88418823

00:39:16.642 --> 00:39:19.169 again the decreased heart dose on the

NOTE Confidence: 0.88418823

00:39:19.169 --> 00:39:22.131 left you have the free breathing on the

NOTE Confidence: 0.88418823

00:39:22.131 --> 00:39:25.014 right you have the breath hold and how

NOTE Confidence: 0.88418823

00:39:25.014 --> 00:39:27.162 significant that change in anatomy is.

NOTE Confidence: 0.88418823

00:39:27.170 --> 00:39:28.970 Using this breath whole technique.

NOTE Confidence: 0.88418823

00:39:28.970 --> 00:39:31.441 So then the question is well, OK,

NOTE Confidence: 0.88418823

00:39:31.441 --> 00:39:34.009 fine, you do that on the CAT scan

NOTE Confidence: 0.88418823

00:39:34.009 --> 00:39:36.508 at the time of CT simulation.

NOTE Confidence: 0.88418823

00:39:36.510 --> 00:39:38.774 But what do you do day today for

NOTE Confidence: 0.88418823

00:39:38.774 --> 00:39:41.247 the six weeks of treatment that

NOTE Confidence: 0.88418823

00:39:41.247 --> 00:39:43.083 you're bringing the patient?

NOTE Confidence: 0.88418823

00:39:43.090 --> 00:39:44.894 In every day, well,

NOTE Confidence: 0.88418823

00:39:44.894 --> 00:39:47.149 we have very sophisticated lasers

NOTE Confidence: 0.88418823

00:39:47.149 --> 00:39:49.419 within the treatment room that

NOTE Confidence: 0.88418823

00:39:49.419 --> 00:39:52.035 project onto the patients skin and

NOTE Confidence: 0.88418823

00:39:52.110 --> 00:39:54.365 determine the exact position that

NOTE Confidence: 0.88418823

00:39:54.365 --> 00:39:57.622 the body contour should be in when

NOTE Confidence: 0.88418823

00:39:57.622 --> 00:40:00.628 the patient takes that deep breath.

NOTE Confidence: 0.88418823

00:40:00.630 --> 00:40:02.700 And these reference points are locked

NOTE Confidence: 0.88418823

00:40:02.700 --> 00:40:05.600 into our record and verify treatment system,

NOTE Confidence: 0.88418823

00:40:05.600 --> 00:40:08.352 and so the machine only turns on and

NOTE Confidence: 0.88418823

00:40:08.352 --> 00:40:10.750 delivers the radiation when the patient

NOTE Confidence: 0.88418823

00:40:10.750 --> 00:40:13.620 is in that exact precise breath hold,

NOTE Confidence: 0.88418823

00:40:13.620 --> 00:40:15.906 and this is within 3 millimeters,

NOTE Confidence: 0.88418823

00:40:15.910 --> 00:40:18.196 so anything more than 3 millimeters,

NOTE Confidence: 0.88418823

00:40:18.200 --> 00:40:21.674 the machine will not turn on and the patient

NOTE Confidence: 0.88418823

00:40:21.674 --> 00:40:24.694 holds their breath as long as they can,

NOTE Confidence: 0.88418823

00:40:24.700 --> 00:40:25.873 the machine delivers.

NOTE Confidence: 0.88418823

00:40:25.873 --> 00:40:29.502 It does what it's supposed to do as soon

NOTE Confidence: 0.88418823

00:40:29.502 --> 00:40:31.944 as the patient releases their breath.

NOTE Confidence: 0.88418823

00:40:31.950 --> 00:40:34.134 The machine turns off and then the

NOTE Confidence: 0.88418823

00:40:34.134 --> 00:40:36.023 patient catches up on their breath

NOTE Confidence: 0.88418823

00:40:36.023 --> 00:40:37.793 and you repeat the cycle until

NOTE Confidence: 0.88418823

00:40:37.793 --> 00:40:39.917 the entire treatment is delivered.

NOTE Confidence: 0.88418823

00:40:39.920 --> 00:40:42.752 So this is just a data showing you

NOTE Confidence: 0.88418823

00:40:42.752 --> 00:40:46.312 just one study looking at the IBH in in

NOTE Confidence: 0.88418823

00:40:46.312 --> 00:40:49.398 patients who have who do free breathing.

NOTE Confidence: 0.88418823

00:40:49.400 --> 00:40:51.770 These are just some cardiac parameters.

NOTE Confidence: 0.88418823

00:40:51.770 --> 00:40:55.288 You see that only about 50 to 60% with

NOTE Confidence: 0.88418823

00:40:55.288 --> 00:40:57.436 free breathing can avoid the cardiac

NOTE Confidence: 0.88418823

00:40:57.436 --> 00:41:00.070 structures to what is considered acceptable.

NOTE Confidence: 0.88418823

00:41:00.070 --> 00:41:02.085 With deep inspiration breath hold

NOTE Confidence: 0.88418823

00:41:02.085 --> 00:41:04.410 technique that increases to about 97%.

NOTE Confidence: 0.88418823

00:41:04.410 --> 00:41:08.106 So that's it's it's remarkable that it works

NOTE Confidence: 0.88418823

00:41:08.106 --> 00:41:11.936 very well in the vast majority of patients.

NOTE Confidence: 0.88418823

00:41:11.940 --> 00:41:14.754 But what about that last 3% of patients

NOTE Confidence: 0.88418823

00:41:14.754 --> 00:41:17.218 where the DB H doesn't work well?

NOTE Confidence: 0.88418823

00:41:17.220 --> 00:41:18.628 We have another technique.

NOTE Confidence: 0.88418823

00:41:18.628 --> 00:41:20.036 It's not as precise,

NOTE Confidence: 0.88418823

00:41:20.040 --> 00:41:22.146 but it does work very well.

NOTE Confidence: 0.88418823

00:41:22.150 --> 00:41:23.908 It's the prone board and what

NOTE Confidence: 0.88418823

00:41:23.908 --> 00:41:26.664 we do is we instead of having a

NOTE Confidence: 0.88418823

00:41:26.664 --> 00:41:28.932 patient patient on the left there

NOTE Confidence: 0.88418823

00:41:29.013 --> 00:41:31.299 with their laying on their back,

NOTE Confidence: 0.88418823

00:41:31.300 --> 00:41:33.310 you can see that their heart

NOTE Confidence: 0.88418823

00:41:33.310 --> 00:41:35.170 is clearly in the field,

NOTE Confidence: 0.88418823

00:41:35.170 --> 00:41:37.987 will put them in the prone position and we

NOTE Confidence: 0.88418823

00:41:37.987 --> 00:41:41.155 use gravity to have that breast fall forward,

NOTE Confidence: 0.88418823

00:41:41.160 --> 00:41:42.516 and it allows us.

NOTE Confidence: 0.88418823

00:41:42.516 --> 00:41:45.004 To treat the vast majority of the

NOTE Confidence: 0.88418823

00:41:45.004 --> 00:41:47.296 breast tissue in the chest wall

NOTE Confidence: 0.88418823

00:41:47.296 --> 00:41:49.668 without having to treat the heart,

NOTE Confidence: 0.88418823

00:41:49.670 --> 00:41:51.872 and so this is our alternative

NOTE Confidence: 0.88418823

00:41:51.872 --> 00:41:53.720 method for decreasing heart dose,

NOTE Confidence: 0.88418823

00:41:53.720 --> 00:41:56.296 and it works quite well as well.

NOTE Confidence: 0.88418823

00:41:56.300 --> 00:41:59.236 This is what the breast board looks like.

NOTE Confidence: 0.88418823

00:41:59.240 --> 00:41:59.684 Again,

NOTE Confidence: 0.88418823

00:41:59.684 --> 00:42:02.348 the ipsilateral breast or the side

NOTE Confidence: 0.88418823

00:42:02.348 --> 00:42:04.849 that we're treating hangs down the.

NOTE Confidence: 0.88418823

00:42:04.850 --> 00:42:08.350 Your side is pushed up and out of the way.

NOTE Confidence: 0.88418823

00:42:08.350 --> 00:42:10.974 We do similarly outline the volume of the

NOTE Confidence: 0.88418823

00:42:10.974 --> 00:42:13.248 breast tissue and the lumpectomy cavity.

NOTE Confidence: 0.88418823

00:42:13.250 --> 00:42:15.882 And an important point is that if a

NOTE Confidence: 0.88418823

00:42:15.882 --> 00:42:18.395 patient has a tumor that was originally

NOTE Confidence: 0.88418823

00:42:18.395 --> 00:42:20.600 very close to the chest wall,

NOTE Confidence: 0.88418823

00:42:20.600 --> 00:42:22.350 that would be a patient.

NOTE Confidence: 0.88418823

00:42:22.350 --> 00:42:23.022 For example,

NOTE Confidence: 0.88418823

00:42:23.022 --> 00:42:26.200 that we would not want to do breath holds.

NOTE Confidence: 0.87772

00:42:26.200 --> 00:42:28.816 I mean not do prone breast board on

NOTE Confidence: 0.87772

00:42:28.816 --> 00:42:30.997 because you are skimping a little

NOTE Confidence: 0.87772

00:42:30.997 --> 00:42:33.169 bit on the very very posterior

NOTE Confidence: 0.87772

00:42:33.247 --> 00:42:35.407 aspect of the chest wall there.

NOTE Confidence: 0.87772

00:42:35.410 --> 00:42:37.792 But in the vast majority of

NOTE Confidence: 0.87772

00:42:37.792 --> 00:42:40.228 patients that we do it in it,

NOTE Confidence: 0.87772

00:42:40.230 --> 00:42:42.456 as long as their appropriately selected,

NOTE Confidence: 0.87772

00:42:42.460 --> 00:42:45.057 it's a very effective technique as well.

NOTE Confidence: 0.87772

00:42:45.060 --> 00:42:47.028 So in summary, radiation is an

NOTE Confidence: 0.87772

00:42:47.028 --> 00:42:48.830 essential component to the multi

NOTE Confidence: 0.87772

00:42:48.830 --> 00:42:50.985 disciplinary approach of breast cancer,

NOTE Confidence: 0.87772

00:42:50.990 --> 00:42:53.433 and as I mentioned to you for

NOTE Confidence: 0.87772

00:42:53.433 --> 00:42:55.070 early stage breast cancer,

NOTE Confidence: 0.87772

00:42:55.070 --> 00:42:56.183 breast conservation therapy

NOTE Confidence: 0.87772

00:42:56.183 --> 00:42:57.667 is equal to mastectomy,

NOTE Confidence: 0.87772

00:42:57.670 --> 00:42:59.872 meaning that there is no difference

NOTE Confidence: 0.87772

00:42:59.872 --> 00:43:02.535 in survival rates and for this reason

NOTE Confidence: 0.87772

00:43:02.535 --> 00:43:04.779 I like to stress that mastectomy

NOTE Confidence: 0.87772

00:43:04.779 --> 00:43:06.640 shouldn't be chosen by patients.

NOTE Confidence: 0.87772

00:43:06.640 --> 00:43:08.440 Under the false pretense that

NOTE Confidence: 0.87772

00:43:08.440 --> 00:43:10.701 they're going to have better outcomes

NOTE Confidence: 0.87772

00:43:10.701 --> 00:43:12.666 by removing the whole breast,

NOTE Confidence: 0.87772

00:43:12.670 --> 00:43:14.560 because this isn't the case.

NOTE Confidence: 0.87772

00:43:14.560 --> 00:43:16.645 Also, don't choose mastectomy just

NOTE Confidence: 0.87772

00:43:16.645 --> 00:43:19.109 to avoid radiation because you don't

NOTE Confidence: 0.87772

00:43:19.109 --> 00:43:21.265 want to go through five weeks or

NOTE Confidence: 0.87772

00:43:21.265 --> 00:43:23.518 six weeks of radiation because even

NOTE Confidence: 0.87772

00:43:23.518 --> 00:43:25.478 after mastectomy there are going

NOTE Confidence: 0.87772

00:43:25.478 --> 00:43:28.126 to be patients who are going to

NOTE Confidence: 0.87772

00:43:28.126 --> 00:43:29.254 require postmastectomy radiation.

NOTE Confidence: 0.87772

00:43:29.260 --> 00:43:31.642 And Lastly that with the current

NOTE Confidence: 0.87772

00:43:31.642 --> 00:43:34.160 technology and the advances that we have,

NOTE Confidence: 0.87772

00:43:34.160 --> 00:43:36.045 radiation has really become quite

NOTE Confidence: 0.87772

00:43:36.045 --> 00:43:37.928 safe and effective, it does.

NOTE Confidence: 0.87772

00:43:37.928 --> 00:43:39.424 Decrease local and regional

NOTE Confidence: 0.87772

00:43:39.424 --> 00:43:40.920 recurrences by about 2/3.

NOTE Confidence: 0.87772

00:43:40.920 --> 00:43:42.700 There's also a survival benefit

NOTE Confidence: 0.87772

00:43:42.700 --> 00:43:43.768 in some patients,

NOTE Confidence: 0.87772

00:43:43.770 --> 00:43:45.550 and it's much better tolerated

NOTE Confidence: 0.87772

00:43:45.550 --> 00:43:47.330 than it was years ago,

NOTE Confidence: 0.87772

00:43:47.330 --> 00:43:49.454 so I often will have patients

NOTE Confidence: 0.87772

00:43:49.454 --> 00:43:51.599 who come to me and say,

NOTE Confidence: 0.87772

00:43:51.600 --> 00:43:54.448 Oh my mother had radiation 20 years ago,

NOTE Confidence: 0.87772

00:43:54.450 --> 00:43:55.802 but it was awful.

NOTE Confidence: 0.87772

00:43:55.802 --> 00:43:59.070 It's not the same as it was years ago.

NOTE Confidence: 0.87772

00:43:59.070 --> 00:44:00.770 Our technology has advanced so

NOTE Confidence: 0.87772

00:44:00.770 --> 00:44:02.907 much that the vast majority of

NOTE Confidence: 0.87772

00:44:02.907 --> 00:44:04.407 patients tolerated very well,

NOTE Confidence: 0.87772

00:44:04.410 --> 00:44:06.190 and if you need it,

NOTE Confidence: 0.87772

00:44:06.190 --> 00:44:09.318 it is not necessarily something to fear so.

NOTE Confidence: 0.87772

00:44:09.320 --> 00:44:11.712 Thank you for your time and thank you

NOTE Confidence: 0.87772

00:44:11.712 --> 00:44:14.075 for calling in this late in the evening.

NOTE Confidence: 0.87772

00:44:14.080 --> 00:44:14.350 Thank

NOTE Confidence: 0.8497173

00:44:14.350 --> 00:44:16.000 you doctor Mario that was fantastic.

NOTE Confidence: 0.8497173

00:44:16.000 --> 00:44:17.771 Loved it. I actually learned a lot

NOTE Confidence: 0.8497173

00:44:17.771 --> 00:44:19.474 and was almost holding my breath

NOTE Confidence: 0.8497173

00:44:19.474 --> 00:44:22.720 while you were talking about.

NOTE Confidence: 0.8497173

00:44:22.720 --> 00:44:24.570 And now last but certainly

NOTE Confidence: 0.8497173

00:44:24.570 --> 00:44:26.420 not least Doctor on couple

NOTE Confidence: 0.8497173

00:44:26.494 --> 00:44:28.589 Garo talking about again more.

NOTE Confidence: 0.8497173

00:44:28.590 --> 00:44:30.774 You know the amazing changes that

NOTE Confidence: 0.8497173

00:44:30.774 --> 00:44:32.890 are ongoing in medical oncology.

NOTE Confidence: 0.8497173

00:44:32.890 --> 00:44:35.620 We've gotten a whole slew of questions,

NOTE Confidence: 0.8497173

00:44:35.620 --> 00:44:37.036 so once you're done,

NOTE Confidence: 0.8497173

00:44:37.036 --> 00:44:39.160 I'll be asking our panelists for

NOTE Confidence: 0.8497173

00:44:39.229 --> 00:44:41.097 their thoughts and opinions.

NOTE Confidence: 0.83460325

00:44:45.060 --> 00:44:46.644 Good evening, it's a privilege for

NOTE Confidence: 0.83460325

00:44:46.644 --> 00:44:48.918 me to be part of the smilow shares,

NOTE Confidence: 0.83460325

00:44:48.920 --> 00:44:52.943 and Moreover to be part of the same 323.

NOTE Confidence: 0.83460325

00:44:52.950 --> 00:44:55.626 Teammates smile, water for the doctor.

NOTE Confidence: 0.83460325

00:44:55.630 --> 00:44:57.174 Legare and Doctor Moran.

NOTE Confidence: 0.83460325

00:44:57.174 --> 00:45:00.412 I would like to share the screen so

NOTE Confidence: 0.83460325

00:45:00.412 --> 00:45:03.352 Doctor Moran would you mind to Unshare?

NOTE Confidence: 0.8178703325

00:45:04.010 --> 00:45:09.278 Yeah. I have unshared.

NOTE Confidence: 0.8178703325

00:45:09.280 --> 00:45:11.360 Stop sharing. Yup, there you go.

NOTE Confidence: 0.73218155

00:45:14.580 --> 00:45:15.440 OK.

NOTE Confidence: 0.814005

00:45:30.190 --> 00:45:33.410 OK, sorry. I am.

NOTE Confidence: 0.8173576

00:45:41.480 --> 00:45:43.920 So in my talk I'm going to focus

NOTE Confidence: 0.8173576

00:45:43.920 --> 00:45:46.037 on some novel treatment options

NOTE Confidence: 0.8173576

00:45:46.037 --> 00:45:48.881 in her to positive and triple

NOTE Confidence: 0.8173576

00:45:48.881 --> 00:45:51.189 negative advanced breast cancer.

NOTE Confidence: 0.8173576

00:45:51.190 --> 00:45:54.590 We do know that not every case of

NOTE Confidence: 0.8173576

00:45:54.590 --> 00:45:57.516 breast cancer is the same as doctor.

NOTE Confidence: 0.8173576

00:45:57.520 --> 00:45:58.354 Legare mentioned.

NOTE Confidence: 0.8173576

00:45:58.354 --> 00:46:00.439 Approximately 70% of the breast

NOTE Confidence: 0.8173576

00:46:00.439 --> 00:46:02.160 cancers are hormonally driven.

NOTE Confidence: 0.8173576

00:46:02.160 --> 00:46:05.860 However, there are other cancers.

NOTE Confidence: 0.8173576

00:46:05.860 --> 00:46:08.968 That may have a different driving

NOTE Confidence: 0.8173576

00:46:08.968 --> 00:46:12.814 pathway that our is called her two

NOTE Confidence: 0.8173576

00:46:12.814 --> 00:46:15.042 and they represent approximately

NOTE Confidence: 0.8173576

00:46:15.042 --> 00:46:18.892 20 to 25% of all breast cancers,

NOTE Confidence: 0.8173576

00:46:18.892 --> 00:46:22.122 while 1015% of breast cancers.

NOTE Confidence: 0.8173576

00:46:22.122 --> 00:46:23.550 I'm sorry.

NOTE Confidence: 0.8173576

00:46:23.550 --> 00:46:25.430 Are considered the triple negative.

NOTE Confidence: 0.8173576

00:46:25.430 --> 00:46:28.055 They do not have expression for estrogen,

NOTE Confidence: 0.8173576

00:46:28.060 --> 00:46:29.668 progesterone, or hard to,

NOTE Confidence: 0.8173576

00:46:29.668 --> 00:46:32.080 and it is important to know

NOTE Confidence: 0.8173576

00:46:32.155 --> 00:46:34.640 which subtype of breast cancer

NOTE Confidence: 0.8173576

00:46:34.640 --> 00:46:36.628 you're dealing with because.

NOTE Confidence: 0.8173576

00:46:36.630 --> 00:46:38.920 Survival and prognosis is different.

NOTE Confidence: 0.8173576

00:46:38.920 --> 00:46:41.662 The best prognosis is for the

NOTE Confidence: 0.8173576

00:46:41.662 --> 00:46:43.033 hormonally driven cancers,

NOTE Confidence: 0.8173576

00:46:43.040 --> 00:46:45.330 but the her two positive,

NOTE Confidence: 0.8173576

00:46:45.330 --> 00:46:48.126 either with your positive ITI or

NOTE Confidence: 0.8173576

00:46:48.126 --> 00:46:49.990 concurrently are negativity as

NOTE Confidence: 0.8173576

00:46:50.069 --> 00:46:52.655 well as the triple negative breast.

NOTE Confidence: 0.8173576

00:46:52.660 --> 00:46:55.402 Cancer may not have the same

NOTE Confidence: 0.8173576

00:46:55.402 --> 00:46:56.316 excellent prognosis.

NOTE Confidence: 0.8847944

00:46:59.970 --> 00:47:02.854 In the last several years we've had

NOTE Confidence: 0.8847944

00:47:02.854 --> 00:47:04.975 tremendous advancements in the treatment

NOTE Confidence: 0.8847944

00:47:04.975 --> 00:47:07.417 of a triple negative breast cancer,

NOTE Confidence: 0.8847944

00:47:07.420 --> 00:47:09.910 and her two positive breast cancer,

NOTE Confidence: 0.8847944

00:47:09.910 --> 00:47:12.550 and I'm going to mention two

NOTE Confidence: 0.8847944

00:47:12.550 --> 00:47:15.090 such advances for each subtype.

NOTE Confidence: 0.8847944

00:47:15.090 --> 00:47:18.890 What is her two positive iti we do know that.

NOTE Confidence: 0.8847944

00:47:18.890 --> 00:47:20.960 Breast normal breast cells and

NOTE Confidence: 0.8847944

00:47:20.960 --> 00:47:23.464 most of the breast cancer cells

NOTE Confidence: 0.8847944

00:47:23.464 --> 00:47:25.618 do have a certain number of.

NOTE Confidence: 0.8847944

00:47:25.620 --> 00:47:27.033 Her two receptors,

NOTE Confidence: 0.8847944

00:47:27.033 --> 00:47:29.388 her stands for human epithelial

NOTE Confidence: 0.8847944

00:47:29.388 --> 00:47:33.003 receptor and in that class we have four

NOTE Confidence: 0.8847944

00:47:33.003 --> 00:47:35.340 different categories for breast cancer.

NOTE Confidence: 0.8847944

00:47:35.340 --> 00:47:39.309 The her two are the most important.

NOTE Confidence: 0.8847944

00:47:39.310 --> 00:47:41.570 So this had two receptors,

NOTE Confidence: 0.8847944

00:47:41.570 --> 00:47:42.920 are transmembrane proteins

NOTE Confidence: 0.8847944

00:47:42.920 --> 00:47:44.720 and when are lagging,

NOTE Confidence: 0.8847944

00:47:44.720 --> 00:47:47.877 the growth factor attaches to the receptor.

NOTE Confidence: 0.8847944

00:47:47.880 --> 00:47:49.668 It induces the dimerization.

NOTE Confidence: 0.8847944

00:47:49.668 --> 00:47:51.456 The pairing of that

NOTE Confidence: 0.8847944

00:47:51.456 --> 00:47:53.290 receptor with another one,

NOTE Confidence: 0.8847944

00:47:53.290 --> 00:47:56.258 and that in turn will activate the

NOTE Confidence: 0.8847944

00:47:56.258 --> 00:47:58.700 internal part of the receptor.

NOTE Confidence: 0.8847944

00:47:58.700 --> 00:48:01.626 This code of tyrosine kinase and it

NOTE Confidence: 0.8847944

00:48:01.626 --> 00:48:04.502 will trigger a sequence of events

NOTE Confidence: 0.8847944

00:48:04.502 --> 00:48:07.052 that would lead to activations

NOTE Confidence: 0.8847944

00:48:07.052 --> 00:48:10.097 of pathways and genes inside the

NOTE Confidence: 0.8847944

00:48:10.097 --> 00:48:12.512 nucleus and ultimately lead to.

NOTE Confidence: 0.8847944

00:48:12.520 --> 00:48:14.945 Pro growth to proliferation in

NOTE Confidence: 0.8847944

00:48:14.945 --> 00:48:17.872 approximately 25% of the breast cancer.

NOTE Confidence: 0.8847944

00:48:17.872 --> 00:48:21.405 We have an over expression of her

NOTE Confidence: 0.8847944

00:48:21.405 --> 00:48:24.447 two receptors and or over expression

NOTE Confidence: 0.8847944

00:48:24.447 --> 00:48:27.827 of the genes the her two genes

NOTE Confidence: 0.8847944

00:48:27.827 --> 00:48:30.952 in the nuclei and that leads to

NOTE Confidence: 0.8847944

00:48:30.952 --> 00:48:32.398 an exuberant activation.

NOTE Confidence: 0.8847944

00:48:32.398 --> 00:48:35.800 If you may say so of the.

NOTE Confidence: 0.8608486

00:48:37.810 --> 00:48:39.550 Proliferative pathways inside the

NOTE Confidence: 0.8608486

00:48:39.550 --> 00:48:43.052 cancer cells that could lead to a more

NOTE Confidence: 0.8608486

00:48:43.052 --> 00:48:45.107 aggressive growth and cancer spread.

NOTE Confidence: 0.8608486

00:48:45.110 --> 00:48:48.380 And the important of this pathway

NOTE Confidence: 0.8608486

00:48:48.380 --> 00:48:51.260 was recognized in the 1980s.

NOTE Confidence: 0.8608486

00:48:51.260 --> 00:48:54.608 And while this pathway confers the

NOTE Confidence: 0.8608486

00:48:54.608 --> 00:48:56.282 cancer monographic aggressiveness,

NOTE Confidence: 0.8608486

00:48:56.290 --> 00:49:00.574 it also gives us the opportunity

NOTE Confidence: 0.8608486

00:49:00.574 --> 00:49:03.430 to interact with it.

NOTE Confidence: 0.8608486

00:49:03.430 --> 00:49:07.838 Two to treat and a big component of

NOTE Confidence: 0.8608486

00:49:07.838 --> 00:49:11.722 that improvement in the breast cancer

NOTE Confidence: 0.8608486

00:49:11.722 --> 00:49:15.730 mortality that Doctor Legare mentioned is.

NOTE Confidence: 0.8608486

00:49:15.730 --> 00:49:18.565 Basicaly due to the advancement in the

NOTE Confidence: 0.8608486

00:49:18.565 --> 00:49:21.630 her two positive breast cancer treatment.

NOTE Confidence: 0.8608486

00:49:21.630 --> 00:49:24.070 So in the late 1990s,

NOTE Confidence: 0.8608486

00:49:24.070 --> 00:49:27.058 the first drug that was approved

NOTE Confidence: 0.8608486

00:49:27.058 --> 00:49:29.420 by FDA was transducer MA.

NOTE Confidence: 0.8608486

00:49:29.420 --> 00:49:32.605 This is a monoclonal antibody that attaches

NOTE Confidence: 0.8608486

00:49:32.605 --> 00:49:36.422 to the her two receptor and basically

NOTE Confidence: 0.8608486

00:49:36.422 --> 00:49:39.962 blocks the proliferative pathway there are.

NOTE Confidence: 0.8608486

00:49:39.970 --> 00:49:41.898 Several mechanisms it could

NOTE Confidence: 0.8608486

00:49:41.898 --> 00:49:44.308 also induce the degradation of

NOTE Confidence: 0.8608486

00:49:44.308 --> 00:49:46.890 the receptor prevents sharing,

NOTE Confidence: 0.8608486

00:49:46.890 --> 00:49:49.030 but nevertheless.

NOTE Confidence: 0.8608486

00:49:49.030 --> 00:49:51.991 The plastic so mad made a tremendous

NOTE Confidence: 0.8608486

00:49:51.991 --> 00:49:54.872 difference in the overall survival of

NOTE Confidence: 0.8608486

00:49:54.872 --> 00:49:57.417 patients with metastatic disease and

NOTE Confidence: 0.8608486

00:49:57.417 --> 00:50:00.637 later it was brought to the earlier.

NOTE Confidence: 0.8608486

00:50:00.640 --> 00:50:03.316 Stages of the breast cancer and

NOTE Confidence: 0.8608486

00:50:03.316 --> 00:50:05.100 significantly improved the chance

NOTE Confidence: 0.8608486

00:50:05.175 --> 00:50:07.563 for cure and decrease risk of

NOTE Confidence: 0.8608486

00:50:07.563 --> 00:50:09.155 recurrence for early stages.

NOTE Confidence: 0.8608486

00:50:09.160 --> 00:50:12.592 Breast cancer in 2012 we had the advent

NOTE Confidence: 0.8608486

00:50:12.592 --> 00:50:15.639 of pertuzumab that blocks the pairing of

NOTE Confidence: 0.8608486

00:50:15.639 --> 00:50:18.960 the her two receptor with the her three.

NOTE Confidence: 0.8608486

00:50:18.960 --> 00:50:20.660 This is the strongest.

NOTE Confidence: 0.78094727

00:50:23.800 --> 00:50:27.826 Excuse me still way of stimulating

NOTE Confidence: 0.78094727

00:50:27.826 --> 00:50:30.790 the her two pathway and together

NOTE Confidence: 0.78094727

00:50:30.881 --> 00:50:34.001 with transducer mom again broad

NOTE Confidence: 0.78094727

00:50:34.001 --> 00:50:36.497 additional benefit for metastatic

NOTE Confidence: 0.78094727

00:50:36.497 --> 00:50:39.897 breast cancer cases patients and now

NOTE Confidence: 0.78094727

00:50:39.897 --> 00:50:43.282 it's also approved for treatment of

NOTE Confidence: 0.78094727

00:50:43.282 --> 00:50:46.742 patients with early stages breast

NOTE Confidence: 0.78094727

00:50:46.742 --> 00:50:49.510 cancer before their surgeries.

NOTE Confidence: 0.78094727

00:50:49.510 --> 00:50:51.646 A newer concept is the antibody

NOTE Confidence: 0.78094727

00:50:51.646 --> 00:50:52.358 drug conjugate,

NOTE Confidence: 0.78094727

00:50:52.360 --> 00:50:55.208 and I'm going to talk in more detail.

NOTE Confidence: 0.9071445

00:50:57.540 --> 00:51:00.410 In the next few minutes.

NOTE Confidence: 0.9071445

00:51:00.410 --> 00:51:02.422 So, this monoclonal antibodies

NOTE Confidence: 0.9071445

00:51:02.422 --> 00:51:04.937 are large molecules that act

NOTE Confidence: 0.9071445

00:51:04.937 --> 00:51:06.868 outside the cell membrane,

NOTE Confidence: 0.9071445

00:51:06.870 --> 00:51:09.630 but we also have a class of drugs

NOTE Confidence: 0.9071445

00:51:09.630 --> 00:51:12.262 that are called targeted tyrosine

NOTE Confidence: 0.9071445

00:51:12.262 --> 00:51:15.347 kinase inhibitors that are smaller

NOTE Confidence: 0.9071445

00:51:15.347 --> 00:51:18.717 molecules taken by mouth that could

NOTE Confidence: 0.9071445

00:51:18.717 --> 00:51:21.277 basically block the thyrogen kinase.

NOTE Confidence: 0.9071445

00:51:21.280 --> 00:51:24.759 The internal part of the heart receptor,

NOTE Confidence: 0.9071445

00:51:24.760 --> 00:51:28.239 and by doing that it basically stopped.

NOTE Confidence: 0.9071445

00:51:28.240 --> 00:51:31.450 They stopped this activation of the.

NOTE Confidence: 0.9071445

00:51:31.450 --> 00:51:35.110 Metabolic pathways and.

NOTE Confidence: 0.9071445

00:51:35.110 --> 00:51:36.790 They do have slight differences,

NOTE Confidence: 0.9071445

00:51:36.790 --> 00:51:39.244 but there are some slight differences

NOTE Confidence: 0.9071445

00:51:39.244 --> 00:51:41.190 between the three compounds and

NOTE Confidence: 0.9071445

00:51:41.190 --> 00:51:43.142 the newest one is to cut in it,

NOTE Confidence: 0.9071445

00:51:43.150 --> 00:51:45.136 and again, I'm going to talk

NOTE Confidence: 0.9071445

00:51:45.136 --> 00:51:47.169 a little bit later about it.

NOTE Confidence: 0.803734588571429

00:51:49.610 --> 00:51:53.018 So the. Antibody drug

NOTE Confidence: 0.803734588571429

00:51:53.018 --> 00:51:55.574 conjugate's represent them.

NOTE Confidence: 0.803734588571429

00:51:55.580 --> 00:52:00.656 Significance advancement in the treatment of.

NOTE Confidence: 0.803734588571429

00:52:00.660 --> 00:52:04.390 Breast cancer and basically the

NOTE Confidence: 0.803734588571429

00:52:04.390 --> 00:52:08.120 antibody molecule that is transducer

NOTE Confidence: 0.803734588571429

00:52:08.232 --> 00:52:11.784 map is loaded with several small

NOTE Confidence: 0.803734588571429

00:52:11.784 --> 00:52:15.003 molecules of a potent cytostatic

NOTE Confidence: 0.803734588571429

00:52:15.003 --> 00:52:18.678 or potent chemotherapy that is

NOTE Confidence: 0.803734588571429

00:52:18.678 --> 00:52:22.960 delivered directly to the cancer cell

NOTE Confidence: 0.803734588571429

00:52:22.960 --> 00:52:25.640 overexpressing her two receptors.

NOTE Confidence: 0.803734588571429

00:52:25.640 --> 00:52:29.430 So it's a targeted chemotherapy

NOTE Confidence: 0.803734588571429

00:52:29.430 --> 00:52:30.946 delivery system.

NOTE Confidence: 0.803734588571429

00:52:30.950 --> 00:52:33.446 So when it after it attaches

NOTE Confidence: 0.803734588571429

00:52:33.446 --> 00:52:34.694 to the receptors,

NOTE Confidence: 0.803734588571429

00:52:34.700 --> 00:52:36.884 it gets internalized in what we

NOTE Confidence: 0.803734588571429

00:52:36.884 --> 00:52:39.999 call an endo zone the and after an

NOTE Confidence: 0.803734588571429

00:52:39.999 --> 00:52:41.969 activation of certain enzymes in

NOTE Confidence: 0.803734588571429

00:52:41.969 --> 00:52:45.300 the what it becomes now the lysosome

NOTE Confidence: 0.803734588571429

00:52:45.300 --> 00:52:47.204 the chemotherapy medication is.

NOTE Confidence: 0.8327423

00:52:49.820 --> 00:52:51.604 Released inside the cells

NOTE Confidence: 0.8327423

00:52:51.604 --> 00:52:53.388 and kills the cells.

NOTE Confidence: 0.8327423

00:52:53.390 --> 00:52:55.322 So different antibodies have

NOTE Confidence: 0.8327423

00:52:55.322 --> 00:52:57.254 different abilities to release,

NOTE Confidence: 0.8327423

00:52:57.260 --> 00:53:00.648 less or more of this chemotherapy molecules,

NOTE Confidence: 0.8327423

00:53:00.650 --> 00:53:03.978 and we do know that the sum of

NOTE Confidence: 0.8327423

00:53:03.978 --> 00:53:06.104 the chemotherapy can diffuse

NOTE Confidence: 0.8327423

00:53:06.104 --> 00:53:07.910 into the neighborhood.

NOTE Confidence: 0.8327423

00:53:07.910 --> 00:53:11.305 It can diffuse outside the cell and

NOTE Confidence: 0.8327423

00:53:11.305 --> 00:53:13.719 actually killed some other cells

NOTE Confidence: 0.8327423

00:53:13.719 --> 00:53:16.317 in the neighborhood that may not

NOTE Confidence: 0.8327423

00:53:16.317 --> 00:53:19.527 be so strongly her two positive.

NOTE Confidence: 0.8327423

00:53:19.530 --> 00:53:23.548 So this is what we call a

NOTE Confidence: 0.8327423

00:53:23.548 --> 00:53:25.270 bystander killing effect.

NOTE Confidence: 0.8327423

00:53:25.270 --> 00:53:28.365 So the first antibody drug, conjugate,

NOTE Confidence: 0.8327423

00:53:28.365 --> 00:53:31.970 that was approved by FDA in 2012,

NOTE Confidence: 0.8327423

00:53:31.970 --> 00:53:34.540 was trastuzumab, khamsin, or PDM,

NOTE Confidence: 0.8327423

00:53:34.540 --> 00:53:37.354 one and basically it's a molecule

NOTE Confidence: 0.8327423

00:53:37.354 --> 00:53:39.926 of transducer mob with 3.5

NOTE Confidence: 0.8327423

00:53:39.926 --> 00:53:41.747 molecules of maintenance,

NOTE Confidence: 0.8327423

00:53:41.750 --> 00:53:46.356 and that is a very strong cytostatic

NOTE Confidence: 0.8327423

00:53:46.356 --> 00:53:50.568 that would be too toxic to be.

NOTE Confidence: 0.8327423

00:53:50.570 --> 00:53:53.720 I mean to be used as a treatment on its own.

NOTE Confidence: 0.8327423

00:53:53.720 --> 00:53:56.870 So this medication made significant

NOTE Confidence: 0.8327423

00:53:56.870 --> 00:54:00.679 improvement in the outcome of metastatic

NOTE Confidence: 0.8327423

00:54:00.679 --> 00:54:03.997 breast cancer when used in second

NOTE Confidence: 0.8327423

00:54:03.997 --> 00:54:07.600 line after a patient's progress.

NOTE Confidence: 0.8327423

00:54:07.600 --> 00:54:10.885 Usually transducer marban pertuzumab plus

NOTE Confidence: 0.8327423

00:54:10.885 --> 00:54:14.170 attacks in bone backbone chemotherapy.

NOTE Confidence: 0.8327423

00:54:14.170 --> 00:54:16.538 But as of 2019,

NOTE Confidence: 0.8327423

00:54:16.538 --> 00:54:21.570 it got FDA approval also for treatment.

NOTE Confidence: 0.8327423

00:54:21.570 --> 00:54:24.786 Agile and setting up if patients

NOTE Confidence: 0.8327423

00:54:24.786 --> 00:54:26.930 are treated with trastuzumab

NOTE Confidence: 0.8327423

00:54:27.025 --> 00:54:29.837 and pertuzumab and chemotherapy,

NOTE Confidence: 0.8327423

00:54:29.840 --> 00:54:32.084 and they have residual.

NOTE Confidence: 0.8327423

00:54:32.084 --> 00:54:36.470 Disease at the time of the surgery,

NOTE Confidence: 0.8327423

00:54:36.470 --> 00:54:39.206 those die hard cells could be

NOTE Confidence: 0.8327423

00:54:39.206 --> 00:54:41.807 better killed by this targeted

NOTE Confidence: 0.8327423

00:54:41.807 --> 00:54:44.527 delivery of the chemotherapy.

NOTE Confidence: 0.8327423

00:54:44.530 --> 00:54:46.081 In December 2019,

NOTE Confidence: 0.8327423

00:54:46.081 --> 00:54:49.183 FDA gave accelerated approval for a

NOTE Confidence: 0.8327423

00:54:49.183 --> 00:54:52.293 new antibody drug conjugate called

NOTE Confidence: 0.8327423

00:54:52.293 --> 00:54:55.418 transducer Map Direct City Cam.

NOTE Confidence: 0.8327423

00:54:55.420 --> 00:54:57.716 The commercial name is in her too,

NOTE Confidence: 0.8327423

00:54:57.720 --> 00:54:59.360 and while we're not supposed

NOTE Confidence: 0.8327423

00:54:59.360 --> 00:55:00.672 to use commercial names,

NOTE Confidence: 0.8327423

00:55:00.680 --> 00:55:03.430 it's much easier to pronounce.

NOTE Confidence: 0.8327423

00:55:03.430 --> 00:55:06.300 So compared to TDM one,

NOTE Confidence: 0.8327423

00:55:06.300 --> 00:55:09.170 this antibody delivers a much

NOTE Confidence: 0.8327423

00:55:09.170 --> 00:55:11.466 higher payload of chemotherapy.

NOTE Confidence: 0.8327423

00:55:11.470 --> 00:55:16.054 It has eight such molecules attached to it,

NOTE Confidence: 0.8327423

00:55:16.060 --> 00:55:20.035 and what happens the linker

NOTE Confidence: 0.8327423

00:55:20.035 --> 00:55:22.420 that attaches the.

NOTE Confidence: 0.8327423

00:55:22.420 --> 00:55:25.390 The chemotherapy that is a typo.

NOTE Confidence: 0.8327423

00:55:25.390 --> 00:55:28.214 I summarize one inhibitor

NOTE Confidence: 0.8327423

00:55:28.214 --> 00:55:31.038 to the transducer map.

NOTE Confidence: 0.8327423

00:55:31.040 --> 00:55:32.264 It's cleavable.

NOTE Confidence: 0.8327423

00:55:32.264 --> 00:55:35.936 Meaning like it then gets cleaved

NOTE Confidence: 0.8327423

00:55:35.936 --> 00:55:39.784 easier inside the cancer cells and that

NOTE Confidence: 0.8327423

00:55:39.784 --> 00:55:44.060 accounts for a much higher bystander effect.

NOTE Confidence: 0.8327423

00:55:44.060 --> 00:55:45.046 In addition,

NOTE Confidence: 0.8327423

00:55:45.046 --> 00:55:48.004 this molecule has a much higher

NOTE Confidence: 0.8327423

00:55:48.004 --> 00:55:51.159 affinity for the her two receptors

NOTE Confidence: 0.8327423

00:55:51.159 --> 00:55:53.235 compared to the Herceptin,

NOTE Confidence: 0.8327423

00:55:53.240 --> 00:55:56.930 and also to the TDM one.

NOTE Confidence: 0.8327423

00:55:56.930 --> 00:55:58.790 So.

NOTE Confidence: 0.8327423

00:55:58.790 --> 00:56:01.892 They approve all his based on

NOTE Confidence: 0.8327423

00:56:01.892 --> 00:56:04.660 this Destiny Breast 01 trial,

NOTE Confidence: 0.8327423

00:56:04.660 --> 00:56:07.906 which basically was a single arm

NOTE Confidence: 0.8327423

00:56:07.906 --> 00:56:10.834 phase two trial that enrolled

NOTE Confidence: 0.8327423

00:56:10.834 --> 00:56:14.104 112 twelve patients who were

NOTE Confidence: 0.8327423

00:56:14.104 --> 00:56:17.403 heavily pretreated so that means

NOTE Confidence: 0.8327423

00:56:17.403 --> 00:56:20.298 they had received number of.

NOTE Confidence: 0.8327423

00:56:20.300 --> 00:56:22.544 My therapies before the median number

NOTE Confidence: 0.8327423

00:56:22.544 --> 00:56:25.072 was six where there were patients who

NOTE Confidence: 0.8327423

00:56:25.072 --> 00:56:27.736 received as few as two and some other

NOTE Confidence: 0.8327423

00:56:27.736 --> 00:56:30.144 patients who received as many as 29.

NOTE Confidence: 0.8327423

00:56:30.150 --> 00:56:31.605 And in such,

NOTE Confidence: 0.8327423

00:56:31.605 --> 00:56:33.545 a heavily pretreated population,

NOTE Confidence: 0.8327423

00:56:33.550 --> 00:56:36.945 usually the response rate is very low,

NOTE Confidence: 0.8327423

00:56:36.950 --> 00:56:40.310 but in this is the waterfall plot

NOTE Confidence: 0.8327423

00:56:40.310 --> 00:56:42.867 analysis and basically each line

NOTE Confidence: 0.8327423

00:56:42.867 --> 00:56:45.951 represents an individual patient and the

NOTE Confidence: 0.8327423

00:56:45.951 --> 00:56:49.300 length of this bar or line basically

NOTE Confidence: 0.8327423

00:56:49.300 --> 00:56:52.016 reflects the depth of the response,

NOTE Confidence: 0.8327423

00:56:52.016 --> 00:56:55.418 and a picture is worth 1000 words.

NOTE Confidence: 0.8327423

00:56:55.420 --> 00:56:59.156 You can see that the vast majority of

NOTE Confidence: 0.8327423

00:56:59.156 --> 00:57:02.707 patients had a shrinkage in their tumor,

NOTE Confidence: 0.8327423

00:57:02.710 --> 00:57:03.998 so by.

NOTE Confidence: 0.8327423

00:57:03.998 --> 00:57:08.506 We call it stable disease if it's

NOTE Confidence: 0.8327423

00:57:08.506 --> 00:57:14.060 shrinkage less than 30% and significant.

NOTE Confidence: 0.8327423

00:57:14.060 --> 00:57:17.240 Or a partial response if it's

NOTE Confidence: 0.8327423

00:57:17.240 --> 00:57:19.890 more than 30% and progression

NOTE Confidence: 0.8327423

00:57:19.890 --> 00:57:23.070 of when it's more than 15%,

NOTE Confidence: 0.81430334

00:57:23.070 --> 00:57:25.720 so 60.9% of the patients

NOTE Confidence: 0.81430334

00:57:25.720 --> 00:57:27.310 treated with trastuzumab.

NOTE Confidence: 0.81430334

00:57:27.310 --> 00:57:32.470 Dirac stickan achieved response rate for.

NOTE Confidence: 0.81430334

00:57:32.470 --> 00:57:35.766 And 76% of the patients had the control

NOTE Confidence: 0.81430334

00:57:35.766 --> 00:57:38.568 of their disease at six months.

NOTE Confidence: 0.81430334

00:57:38.570 --> 00:57:41.377 This response lasted for at least 14

NOTE Confidence: 0.81430334

00:57:41.377 --> 00:57:44.232 months and not only that, it worked,

NOTE Confidence: 0.81430334

00:57:44.232 --> 00:57:47.360 but it worked fast with a median time

NOTE Confidence: 0.81430334

00:57:47.442 --> 00:57:50.598 to response of 1.6 months, which means,

NOTE Confidence: 0.81430334

00:57:50.598 --> 00:57:54.750 like a little bit more than six weeks.

NOTE Confidence: 0.81430334

00:57:54.750 --> 00:57:56.610 The overall survival in this

NOTE Confidence: 0.81430334

00:57:56.610 --> 00:57:58.470 study has not been reached.

NOTE Confidence: 0.81430334

00:57:58.470 --> 00:58:00.660 The medication is well tolerated mainly

NOTE Confidence: 0.81430334

00:58:00.660 --> 00:58:02.929 with the neutropenia and some fatigue,

NOTE Confidence: 0.81430334

00:58:02.930 --> 00:58:05.264 but there is a particular side

NOTE Confidence: 0.81430334

00:58:05.264 --> 00:58:06.820 effect that requires attention

NOTE Confidence: 0.81430334

00:58:06.887 --> 00:58:09.087 and it's called interstitial lung

NOTE Confidence: 0.81430334

00:58:09.087 --> 00:58:11.287 disease that usually presents with.

NOTE Confidence: 0.81430334

00:58:11.290 --> 00:58:15.886 Shortness of breath and cough and.

NOTE Confidence: 0.81430334

00:58:15.890 --> 00:58:17.876 On the imaging studies it would

NOTE Confidence: 0.81430334

00:58:17.876 --> 00:58:19.880 show some ground glass opacity's,

NOTE Confidence: 0.81430334

00:58:19.880 --> 00:58:22.792 so the doctors do know to monitor

NOTE Confidence: 0.81430334

00:58:22.792 --> 00:58:26.078 for such side effect very carefully.

NOTE Confidence: 0.81430334

00:58:26.080 --> 00:58:26.918 Of note,

NOTE Confidence: 0.81430334

00:58:26.918 --> 00:58:29.013 patients with her two positive

NOTE Confidence: 0.81430334

00:58:29.013 --> 00:58:31.452 disease have a higher propensity

NOTE Confidence: 0.81430334

00:58:31.452 --> 00:58:33.656 for developing brain metastases

NOTE Confidence: 0.81430334

00:58:33.656 --> 00:58:36.482 and such patients are usually

NOTE Confidence: 0.81430334

00:58:36.482 --> 00:58:39.197 excluded from the clinical trials.

NOTE Confidence: 0.81430334

00:58:39.200 --> 00:58:42.406 In this best in in 01 trial,

NOTE Confidence: 0.81430334

00:58:42.410 --> 00:58:44.845 24 patients with stable brain

NOTE Confidence: 0.81430334

00:58:44.845 --> 00:58:47.280 metastases were included and that

NOTE Confidence: 0.81430334

00:58:47.363 --> 00:58:50.237 progression free survival was 18 months

NOTE Confidence: 0.81430334

00:58:50.237 --> 00:58:53.090 and that is absolutely remarkable.

NOTE Confidence: 0.81430334

00:58:53.090 --> 00:58:56.018 But I am glad to say that there

NOTE Confidence: 0.81430334

00:58:56.018 --> 00:58:58.792 is another drug that also got

NOTE Confidence: 0.81430334

00:58:58.792 --> 00:59:01.232 recently approved and that could

NOTE Confidence: 0.81430334

00:59:01.232 --> 00:59:04.862 give us even a better hope for such

NOTE Confidence: 0.81430334

00:59:04.862 --> 00:59:06.584 patients with brain metastasis.

NOTE Confidence: 0.81430334

00:59:06.584 --> 00:59:09.068 And this is the selective tyrosine

NOTE Confidence: 0.81430334

00:59:09.068 --> 00:59:10.970 kinase inhibitor called Tucatinib.

NOTE Confidence: 0.81430334

00:59:10.970 --> 00:59:13.150 And as I said before,

NOTE Confidence: 0.81430334

00:59:13.150 --> 00:59:15.775 it works at the intracellular

NOTE Confidence: 0.81430334

00:59:15.775 --> 00:59:17.875 portion of the pathway.

NOTE Confidence: 0.81430334

00:59:17.880 --> 00:59:20.820 So the her two climb patient,

NOTE Confidence: 0.81430334

00:59:20.820 --> 00:59:23.837 so you had to climb trial randomized

NOTE Confidence: 0.81430334

00:59:23.837 --> 00:59:26.209 612 patients to chemotherapy with

NOTE Confidence: 0.81430334

00:59:26.209 --> 00:59:28.694 trastuzumab and keep site had

NOTE Confidence: 0.81430334

00:59:28.694 --> 00:59:31.599 been with or without Academy.

NOTE Confidence: 0.81430334

00:59:31.600 --> 00:59:34.540 So some patients receive the catnip.

NOTE Confidence: 0.81430334

00:59:34.540 --> 00:59:39.430 Some patients receive the possible and.

NOTE Confidence: 0.81430334

00:59:39.430 --> 00:59:43.441 48 percent of the patients of almost

NOTE Confidence: 0.81430334

00:59:43.441 --> 00:59:47.739 half of them had brain metastases.

NOTE Confidence: 0.81430334

00:59:47.740 --> 00:59:50.172 Somewhere stable and somewhere

NOTE Confidence: 0.81430334

00:59:50.172 --> 00:59:53.212 newly diagnosed but not requiring

NOTE Confidence: 0.81430334

00:59:53.212 --> 00:59:56.254 immediate treatment and some had

NOTE Confidence: 0.81430334

00:59:56.254 --> 00:59:58.598 progression after prior treatment.

NOTE Confidence: 0.81430334

00:59:58.600 --> 00:59:59.800 So the.

NOTE Confidence: 0.81430334

00:59:59.800 --> 01:00:02.200 In the overall population,

NOTE Confidence: 0.81430334

01:00:02.200 --> 01:00:04.360 there was a significant improvement

NOTE Confidence: 0.81430334

01:00:04.360 --> 01:00:06.520 in the pro Disease Control.

NOTE Confidence: 0.81430334

01:00:06.520 --> 01:00:08.675 What we call progression free

NOTE Confidence: 0.81430334

01:00:08.675 --> 01:00:11.026 survival with 46% reduction in

NOTE Confidence: 0.81430334

01:00:11.026 --> 01:00:13.138 the risk of progression.

NOTE Confidence: 0.81430334

01:00:13.140 --> 01:00:15.564 And that translated into an improvement

NOTE Confidence: 0.81430334

01:00:15.564 --> 01:00:17.759 in the overall survival with 34%

NOTE Confidence: 0.81430334

01:00:17.760 --> 01:00:20.070 reduction in the risk of death.

NOTE Confidence: 0.88297325

01:00:23.570 --> 01:00:26.594 When we look at the patients

NOTE Confidence: 0.88297325

01:00:26.594 --> 01:00:28.106 with brain metastases,

NOTE Confidence: 0.88297325

01:00:28.110 --> 01:00:31.128 the overall response rate was 47%.

NOTE Confidence: 0.88297325

01:00:31.130 --> 01:00:33.150 For patients who had.

NOTE Confidence: 0.85006946

01:00:35.470 --> 01:00:37.682 The Tucatinib treatment versus

NOTE Confidence: 0.85006946

01:00:37.682 --> 01:00:40.447 placebo and that translated into

NOTE Confidence: 0.85006946

01:00:40.447 --> 01:00:43.472 an unprecedented improvement in the

NOTE Confidence: 0.85006946

01:00:43.472 --> 01:00:47.042 progression free survival at one year.

NOTE Confidence: 0.85006946

01:00:47.050 --> 01:00:50.991 Like 75% of the patients were alive

NOTE Confidence: 0.85006946

01:00:50.991 --> 01:00:54.604 and with control of their disease

NOTE Confidence: 0.85006946

01:00:54.604 --> 01:00:58.216 and also in the overall survival.

NOTE Confidence: 0.85006946

01:00:58.220 --> 01:01:00.530 So these two medications transferred

NOTE Confidence: 0.85006946

01:01:00.530 --> 01:01:03.250 him up the Rack City can,

NOTE Confidence: 0.85006946

01:01:03.250 --> 01:01:05.600 and the Ducati need represent

NOTE Confidence: 0.85006946

01:01:05.600 --> 01:01:07.480 major improvements in the

NOTE Confidence: 0.85006946

01:01:07.480 --> 01:01:09.189 treatment of the advanced.

NOTE Confidence: 0.85006946

01:01:09.190 --> 01:01:11.470 Her two positive breast cancer.

NOTE Confidence: 0.85006946

01:01:11.470 --> 01:01:14.494 They are now being studied in more

NOTE Confidence: 0.85006946

01:01:14.494 --> 01:01:17.310 and earlier lines of therapy in

NOTE Confidence: 0.85006946

01:01:17.310 --> 01:01:19.700 opposing ajibon therapy for the.

NOTE Confidence: 0.7120492

01:01:21.900 --> 01:01:25.106 The transducer map the taxi can to

NOTE Confidence: 0.7120492

01:01:25.106 --> 01:01:28.561 replace the TDM one or second line

NOTE Confidence: 0.7120492

01:01:28.561 --> 01:01:31.531 and also looking at their effecting

NOTE Confidence: 0.7120492

01:01:31.628 --> 01:01:34.288 the patullo positive disease.

NOTE Confidence: 0.7120492

01:01:34.290 --> 01:01:36.605 So shifting gears to triple

NOTE Confidence: 0.7120492

01:01:36.605 --> 01:01:37.994 negative breast cancer,

NOTE Confidence: 0.7120492

01:01:38.000 --> 01:01:41.303 we define it by what is what doesn't have

NOTE Confidence: 0.7120492

01:01:41.303 --> 01:01:44.517 by the lack of estrogen progesterone

NOTE Confidence: 0.7120492

01:01:44.517 --> 01:01:47.272 receptors and her two receptors,

NOTE Confidence: 0.7120492

01:01:47.280 --> 01:01:50.938 and it represents 10 to 15% of all

NOTE Confidence: 0.7120492

01:01:50.938 --> 01:01:53.108 breast cancer cases more common

NOTE Confidence: 0.7120492

01:01:53.108 --> 01:01:54.991 in African American patients

NOTE Confidence: 0.7120492

01:01:54.991 --> 01:01:57.486 and those of Hispanic heritage.

NOTE Confidence: 0.7120492

01:01:57.490 --> 01:01:58.418 Younger women.

NOTE Confidence: 0.7120492

01:01:58.418 --> 01:02:01.666 Those who are BRC A1 mutation carriers.

NOTE Confidence: 0.7120492

01:02:01.670 --> 01:02:05.475 We do note that 85% of bracamonte associated

NOTE Confidence: 0.7120492

01:02:05.475 --> 01:02:07.950 breast cancers are triple negative.

NOTE Confidence: 0.7120492

01:02:07.950 --> 01:02:08.866 And Conversely,

NOTE Confidence: 0.7120492

01:02:08.866 --> 01:02:12.036 10 to 15% of the triple negative

NOTE Confidence: 0.7120492

01:02:12.036 --> 01:02:14.281 breast cancer patients have BRC

NOTE Confidence: 0.7120492

01:02:14.281 --> 01:02:17.092 one mutation and they do have

NOTE Confidence: 0.7120492

01:02:17.092 --> 01:02:18.916 a more aggressive behavior,

NOTE Confidence: 0.7120492

01:02:18.920 --> 01:02:21.075 but even triple negative breast

NOTE Confidence: 0.7120492

01:02:21.075 --> 01:02:23.950 cancer is not the same disease.

NOTE Confidence: 0.7120492

01:02:23.950 --> 01:02:27.410 There are different subtypes.

NOTE Confidence: 0.7120492

01:02:27.410 --> 01:02:31.490 Researchers from Vanderbilt University.

NOTE Confidence: 0.7120492

01:02:31.490 --> 01:02:33.282 It's remarkable research and

NOTE Confidence: 0.7120492

01:02:33.282 --> 01:02:34.626 identified several subtypes.

NOTE Confidence: 0.7120492

01:02:34.630 --> 01:02:36.418 There were seven initially,

NOTE Confidence: 0.7120492

01:02:36.418 --> 01:02:39.570 and they were narrowed down to four,

NOTE Confidence: 0.7120492

01:02:39.570 --> 01:02:42.738 and I'm not going to go into details

NOTE Confidence: 0.7120492

01:02:42.738 --> 01:02:45.860 about the specifics of each subtype.

NOTE Confidence: 0.7120492

01:02:45.860 --> 01:02:49.080 But just to mention that there are

NOTE Confidence: 0.7120492

01:02:49.080 --> 01:02:51.123 different genetics and molecular

NOTE Confidence: 0.7120492

01:02:51.123 --> 01:02:53.993 differences and there is extensive

NOTE Confidence: 0.7120492

01:02:53.993 --> 01:02:56.289 research trying to target.

NOTE Confidence: 0.7120492

01:02:56.290 --> 01:03:00.178 Them and find particular.

NOTE Confidence: 0.7120492

01:03:00.180 --> 01:03:02.668 Solutions and treatments for

NOTE Confidence: 0.7120492

01:03:02.668 --> 01:03:05.156 each breast cancer subtype.

NOTE Confidence: 0.7120492

01:03:05.160 --> 01:03:07.260 So we do have breakthrough

NOTE Confidence: 0.7120492

01:03:07.260 --> 01:03:09.360 development in the treatment of

NOTE Confidence: 0.7120492

01:03:09.436 --> 01:03:11.608 triple negative breast cancer,

NOTE Confidence: 0.7120492

01:03:11.610 --> 01:03:15.354 and this is a drug called Sacituzumab movie

NOTE Confidence: 0.7120492

01:03:15.354 --> 01:03:18.989 taken that was approved in April of 2024.

NOTE Confidence: 0.7120492

01:03:18.990 --> 01:03:22.217 Three front of triple negative breast cancer.

NOTE Confidence: 0.7120492

01:03:22.220 --> 01:03:24.800 So this is a targeted antibody

NOTE Confidence: 0.7120492

01:03:24.800 --> 01:03:27.102 drug conjugate similar to transfer

NOTE Confidence: 0.7120492

01:03:27.102 --> 01:03:29.126 some of their practican.

NOTE Confidence: 0.7120492

01:03:29.130 --> 01:03:32.674 But in this case it targets a drop

NOTE Confidence: 0.7120492

01:03:32.674 --> 01:03:36.455 two antigen that was found to be

NOTE Confidence: 0.7120492

01:03:36.455 --> 01:03:39.250 expressed on many epithelial cancers.

NOTE Confidence: 0.7120492

01:03:39.250 --> 01:03:41.102 Such as bladder cancer,

NOTE Confidence: 0.7120492

01:03:41.102 --> 01:03:43.880 breast cancer initially thought to be

NOTE Confidence: 0.7120492

01:03:43.956 --> 01:03:47.220 specific for triple negative breast cancer,

NOTE Confidence: 0.7120492

01:03:47.220 --> 01:03:49.850 but recent research showed that

NOTE Confidence: 0.7120492

01:03:49.850 --> 01:03:53.011 actually it's equally expressed on the

NOTE Confidence: 0.7120492

01:03:53.011 --> 01:03:55.675 ER positive breast cancers as well,

NOTE Confidence: 0.7120492

01:03:55.680 --> 01:03:58.837 so the antibody targets this antigen and

NOTE Confidence: 0.7120492

01:03:58.837 --> 01:04:02.659 antibody has a high payload of chemotherapy,

NOTE Confidence: 0.7120492

01:04:02.660 --> 01:04:05.216 called SN 38.

NOTE Confidence: 0.7120492

01:04:05.216 --> 01:04:06.920 This is.

NOTE Confidence: 0.7120492

01:04:06.920 --> 01:04:09.026 Metabolic product over

NOTE Confidence: 0.7120492

01:04:09.026 --> 01:04:13.238 chemotherapy that we know we can.

NOTE Confidence: 0.7120492

01:04:13.240 --> 01:04:18.226 That is basically used to treat.

NOTE Confidence: 0.7120492

01:04:18.230 --> 01:04:19.966 GI malignancy is mainly,

NOTE Confidence: 0.7120492

01:04:19.966 --> 01:04:22.570 and it's not necessarily part of

NOTE Confidence: 0.7120492

01:04:22.651 --> 01:04:25.435 the armamentarium that we have for

NOTE Confidence: 0.7120492

01:04:25.435 --> 01:04:27.910 the triple negative breast cancer.

NOTE Confidence: 0.7120492

01:04:27.910 --> 01:04:30.983 So it delivers a novel chemotherapy to

NOTE Confidence: 0.7120492

01:04:30.983 --> 01:04:33.899 the triple negative breast cancer cells,

NOTE Confidence: 0.7120492

01:04:33.900 --> 01:04:37.080 and what is also particular about

NOTE Confidence: 0.7120492

01:04:37.080 --> 01:04:40.292 this compound is that the linker

NOTE Confidence: 0.7120492

01:04:40.292 --> 01:04:43.256 is very pH sensitive and that.

NOTE Confidence: 0.7120492

01:04:43.260 --> 01:04:44.568 A has a very.

NOTE Confidence: 0.67893416

01:04:48.930 --> 01:04:52.344 It is released very easily into

NOTE Confidence: 0.67893416

01:04:52.344 --> 01:04:56.161 the cancer cells and also has

NOTE Confidence: 0.67893416

01:04:56.161 --> 01:04:59.009 an important bystander effect.

NOTE Confidence: 0.67893416

01:04:59.010 --> 01:05:01.420 So this medication was approved

NOTE Confidence: 0.67893416

01:05:01.420 --> 01:05:05.333 based on the results of a phase two

NOTE Confidence: 0.67893416

01:05:05.333 --> 01:05:07.688 trial where women were treated.

NOTE Confidence: 0.67893416

01:05:07.690 --> 01:05:10.490 In third line or above and there

NOTE Confidence: 0.67893416

01:05:10.490 --> 01:05:14.180 was a response rate of 35% with.

NOTE Confidence: 0.67893416

01:05:14.180 --> 01:05:17.060 Progression free survival or 5.6 months

NOTE Confidence: 0.67893416

01:05:17.060 --> 01:05:19.820 and overall survival of 13 months.

NOTE Confidence: 0.67893416

01:05:19.820 --> 01:05:22.655 So European Society of Medical

NOTE Confidence: 0.67893416

01:05:22.655 --> 01:05:26.087 Oncology in September 2024 S mom

NOTE Confidence: 0.67893416

01:05:26.087 --> 01:05:29.580 we the results of the central were

NOTE Confidence: 0.67893416

01:05:29.580 --> 01:05:32.786 presented and basically this trial

NOTE Confidence: 0.67893416

01:05:32.786 --> 01:05:36.291 compared Gov Itacon versus single

NOTE Confidence: 0.67893416

01:05:36.291 --> 01:05:38.916 agent chemotherapy in metastatic

NOTE Confidence: 0.67893416

01:05:38.916 --> 01:05:41.956 triple negative breast cancer in

NOTE Confidence: 0.67893416

01:05:41.956 --> 01:05:46.155 women who already had at least two

NOTE Confidence: 0.67893416

01:05:46.155 --> 01:05:48.435 prior chemotherapy regiments and

NOTE Confidence: 0.67893416

01:05:48.435 --> 01:05:51.950 this novel medication was compared.

NOTE Confidence: 0.67893416

01:05:51.950 --> 01:05:54.830 To what ever the physician thought

NOTE Confidence: 0.67893416

01:05:54.830 --> 01:05:58.200 would be the best possible choice

NOTE Confidence: 0.67893416

01:05:58.200 --> 01:06:00.908 for that particular patient.

NOTE Confidence: 0.67893416

01:06:00.910 --> 01:06:04.072 And there was a significant improvement

NOTE Confidence: 0.67893416

01:06:04.072 --> 01:06:06.732 in the progression free survival

NOTE Confidence: 0.67893416

01:06:06.732 --> 01:06:09.528 from 1.7 months to 5.6 months.

NOTE Confidence: 0.67893416

01:06:09.530 --> 01:06:12.806 The and there was also an improvement

NOTE Confidence: 0.67893416

01:06:12.806 --> 01:06:15.110 in the overall survival,

NOTE Confidence: 0.67893416

01:06:15.110 --> 01:06:18.218 so this is the first study that

NOTE Confidence: 0.67893416

01:06:18.218 --> 01:06:20.766 showed an improved survival over

NOTE Confidence: 0.67893416

01:06:20.766 --> 01:06:24.126 standard of care in triple negative

NOTE Confidence: 0.67893416

01:06:24.126 --> 01:06:26.833 breast cancer and the results

NOTE Confidence: 0.67893416

01:06:26.833 --> 01:06:29.323 again are unprecedented and this

NOTE Confidence: 0.67893416

01:06:29.323 --> 01:06:33.452 drug is going to move to.

NOTE Confidence: 0.67893416

01:06:33.452 --> 01:06:36.584 Earlier stages of treatment.

NOTE Confidence: 0.67893416

01:06:36.590 --> 01:06:39.152 It is well tolerated with main

NOTE Confidence: 0.67893416

01:06:39.152 --> 01:06:40.860 side effects being anemia,

NOTE Confidence: 0.67893416

01:06:40.860 --> 01:06:42.303 neutropenia, and diarrhea.

NOTE Confidence: 0.67893416

01:06:42.303 --> 01:06:44.708 That is usually very well

NOTE Confidence: 0.67893416

01:06:44.708 --> 01:06:46.310 controlled with Imodium.

NOTE Confidence: 0.67893416

01:06:46.310 --> 01:06:48.580 So.

NOTE Confidence: 0.67893416

01:06:48.580 --> 01:06:52.020 Using the same concept.

NOTE Confidence: 0.67893416

01:06:52.020 --> 01:06:54.168 That's targeting different.

NOTE Confidence: 0.7459677

01:06:56.320 --> 01:06:59.020 An antigen called leave 1A.

NOTE Confidence: 0.7459677

01:06:59.020 --> 01:07:03.046 There is a drug called the.

NOTE Confidence: 0.7459677

01:07:03.050 --> 01:07:05.570 Look, that is a map that is in

NOTE Confidence: 0.7459677

01:07:05.570 --> 01:07:07.338 clinical trials at and we are

NOTE Confidence: 0.7459677

01:07:07.338 --> 01:07:09.399 happy to say that is open at

NOTE Confidence: 0.7459677

01:07:09.399 --> 01:07:11.339 Yale through Phase one program.

NOTE Confidence: 0.7459677

01:07:11.340 --> 01:07:14.348 And the. We do know that some of

NOTE Confidence: 0.7459677

01:07:14.348 --> 01:07:17.198 the triple negative breast cancer.

NOTE Confidence: 0.7459677

01:07:17.200 --> 01:07:19.902 Do have a low expression of the

NOTE Confidence: 0.7459677

01:07:19.902 --> 01:07:22.131 her two receptors and transducer

NOTE Confidence: 0.7459677

01:07:22.131 --> 01:07:24.611 Moderat stickan is being studied

NOTE Confidence: 0.7459677

01:07:24.611 --> 01:07:26.810 in this setting as well.

NOTE Confidence: 0.7459677

01:07:26.810 --> 01:07:28.615 And the sacituzumab govit econ

NOTE Confidence: 0.7459677

01:07:28.615 --> 01:07:31.120 is also studied in ER positive.

NOTE Confidence: 0.83742774

01:07:33.880 --> 01:07:35.720 Metastatic breast cancer and again,

NOTE Confidence: 0.83742774

01:07:35.720 --> 01:07:39.842 I'm happy to say that we have a clinical

NOTE Confidence: 0.83742774

01:07:39.842 --> 01:07:43.498 trial called tropics to open at Yale.

NOTE Confidence: 0.83742774

01:07:43.500 --> 01:07:45.970 So over the last decade,

NOTE Confidence: 0.83742774

01:07:45.970 --> 01:07:49.288 the advent of immunotherapy has changed

NOTE Confidence: 0.83742774

01:07:49.288 --> 01:07:52.300 Natural History of many cancers.

NOTE Confidence: 0.83742774

01:07:52.300 --> 01:07:55.216 And obviously there was a question,

NOTE Confidence: 0.83742774

01:07:55.220 --> 01:07:58.070 would that make a difference in

NOTE Confidence: 0.83742774

01:07:58.070 --> 01:08:00.560 metastatic triple negative breast cancer?

NOTE Confidence: 0.83742774

01:08:00.560 --> 01:08:03.888 We do know that body has an innate

NOTE Confidence: 0.83742774

01:08:03.888 --> 01:08:06.851 immune system that is supposed to

NOTE Confidence: 0.83742774

01:08:06.851 --> 01:08:09.406 protect us against the invaders

NOTE Confidence: 0.83742774

01:08:09.406 --> 01:08:11.738 against breast cancer cells,

NOTE Confidence: 0.83742774

01:08:11.740 --> 01:08:15.135 and when the normal antigens are recognized,

NOTE Confidence: 0.83742774

01:08:15.140 --> 01:08:19.514 the P cells would come and destroy the cells,

NOTE Confidence: 0.83742774

01:08:19.520 --> 01:08:20.969 however the cancers.

NOTE Confidence: 0.813300000000001

01:08:23.410 --> 01:08:27.073 Dude, learn to fight back so we do have

NOTE Confidence: 0.813300000000001

01:08:27.073 --> 01:08:29.728 this checkpoint mechanism that basicaly

NOTE Confidence: 0.813300000000001

01:08:29.728 --> 01:08:34.589 also has a good role to prevent the P

NOTE Confidence: 0.813300000000001

01:08:34.589 --> 01:08:37.673 cells of attacking the normal cells.

NOTE Confidence: 0.813300000000001

01:08:37.680 --> 01:08:40.424 But the. Two more cells take advantage

NOTE Confidence: 0.813300000000001

01:08:40.424 --> 01:08:43.291 of that by overexpressing body called

NOTE Confidence: 0.813300000000001

01:08:43.291 --> 01:08:46.507 the program death Ligand and binding

NOTE Confidence: 0.813300000000001

01:08:46.507 --> 01:08:49.719 the OR pedial one receptor and binding

NOTE Confidence: 0.813300000000001

01:08:49.719 --> 01:08:52.812 the PD one receptor on the tumour

NOTE Confidence: 0.813300000000001

01:08:52.812 --> 01:08:55.536 cells and turning off the surveillance

NOTE Confidence: 0.813300000000001

01:08:55.536 --> 01:08:58.605 of the immune system and by doing

NOTE Confidence: 0.813300000000001

01:08:58.605 --> 01:09:01.699 that they managed to grow undetected.

NOTE Confidence: 0.813300000000001

01:09:01.700 --> 01:09:03.779 So Fortunately we do have a new

NOTE Confidence: 0.813300000000001

01:09:03.779 --> 01:09:06.491 class of drugs that are called immune

NOTE Confidence: 0.813300000000001

01:09:06.491 --> 01:09:08.686 checkpoint inhibitors that could block

NOTE Confidence: 0.813300000000001

01:09:08.686 --> 01:09:11.050 either the PDL one receptor or the

NOTE Confidence: 0.813300000000001

01:09:11.050 --> 01:09:13.625 PD one receptors and by doing that.

NOTE Confidence: 0.813300000000001

01:09:13.625 --> 01:09:17.421 The T cells are now allowed to detect

NOTE Confidence: 0.813300000000001

01:09:17.421 --> 01:09:20.895 the cancer cells and destroy them.

NOTE Confidence: 0.813300000000001

01:09:20.900 --> 01:09:23.852 So several such drugs are were

NOTE Confidence: 0.813300000000001

01:09:23.852 --> 01:09:25.822 investigated in, particularly in

NOTE Confidence: 0.813300000000001

01:09:25.822 --> 01:09:27.786 triple negative breast cancer,

NOTE Confidence: 0.813300000000001

01:09:27.790 --> 01:09:30.724 and this single therapy and first

NOTE Confidence: 0.813300000000001

01:09:30.724 --> 01:09:33.246 line setting the response rate

NOTE Confidence: 0.813300000000001

01:09:33.246 --> 01:09:35.170 was not that impressive,

NOTE Confidence: 0.813300000000001

01:09:35.170 --> 01:09:38.116 maybe only in the low 20%.

NOTE Confidence: 0.813300000000001

01:09:38.120 --> 01:09:41.210 But what is intriguing is that

NOTE Confidence: 0.813300000000001

01:09:41.210 --> 01:09:43.957 there are patients that are

NOTE Confidence: 0.813300000000001

01:09:43.957 --> 01:09:46.897 responders who have very durable.

NOTE Confidence: 0.813300000000001

01:09:46.900 --> 01:09:51.718 A response and potentially be cured.

NOTE Confidence: 0.813300000000001

01:09:51.720 --> 01:09:53.830 So.

NOTE Confidence: 0.813300000000001

01:09:53.830 --> 01:09:57.850 Impassion 130 was the first trial

NOTE Confidence: 0.813300000000001

01:09:57.850 --> 01:10:00.530 that basically combined pedia.

NOTE Confidence: 0.813300000000001

01:10:00.530 --> 01:10:03.480 One inhibitor atezolizumab with the

NOTE Confidence: 0.813300000000001

01:10:03.480 --> 01:10:06.430 chemotherapy backbone of NAB paclitaxel.

NOTE Confidence: 0.813300000000001

01:10:06.430 --> 01:10:08.430 4.

NOTE Confidence: 0.813300000000001

01:10:08.430 --> 01:10:11.825 Women with the triple negative breast cancer.

NOTE Confidence: 0.78657377

01:10:13.990 --> 01:10:17.590 And or locally advanced,

NOTE Confidence: 0.78657377

01:10:17.590 --> 01:10:20.290 unresectable breast cancer.

NOTE Confidence: 0.78657377

01:10:20.290 --> 01:10:25.118 And. They were treated.

NOTE Confidence: 0.78657377

01:10:25.120 --> 01:10:28.444 And the statistics have

NOTE Confidence: 0.78657377

01:10:28.444 --> 01:10:30.937 showed the significant.

NOTE Confidence: 0.78657377

01:10:30.940 --> 01:10:33.784 Improvement in the duration of the

NOTE Confidence: 0.78657377

01:10:33.784 --> 01:10:37.070 Disease Control of more than two months.

NOTE Confidence: 0.78657377

01:10:37.070 --> 01:10:40.082 But actually the benefit was seen

NOTE Confidence: 0.78657377

01:10:40.082 --> 01:10:44.080 only in the patients who had the PD

NOTE Confidence: 0.78657377

01:10:44.080 --> 01:10:46.924 L1 expression positive ITI using the

NOTE Confidence: 0.78657377

01:10:47.020 --> 01:10:50.458 specific essay called Ventana SP 142.

NOTE Confidence: 0.78657377

01:10:50.460 --> 01:10:51.555 In the clinic,

NOTE Confidence: 0.78657377

01:10:51.555 --> 01:10:53.380 in this particular clinical trial,

NOTE Confidence: 0.78657377

01:10:53.380 --> 01:10:55.205 40% of the patients had

NOTE Confidence: 0.78657377

01:10:55.205 --> 01:10:57.030 the PD L1 positive ITI,

NOTE Confidence: 0.78657377

01:10:57.030 --> 01:11:00.750 but we do know that in real life only 20

NOTE Confidence: 0.78657377

01:11:00.851 --> 01:11:04.100 to 30% of such patients are positive.

NOTE Confidence: 0.78657377

01:11:04.100 --> 01:11:07.454 So the Disease Control translated into

NOTE Confidence: 0.78657377

01:11:07.454 --> 01:11:10.736 an improvement in the overall survival

NOTE Confidence: 0.78657377

01:11:10.736 --> 01:11:14.536 of 10 months from 15 to 25 months.

NOTE Confidence: 0.78657377

01:11:14.540 --> 01:11:19.650 For this pedial one positive population and.

NOTE Confidence: 0.78657377

01:11:19.650 --> 01:11:21.725 FDA approved the use of

NOTE Confidence: 0.78657377

01:11:21.725 --> 01:11:23.385 alcoholism app and nap.

NOTE Confidence: 0.78657377

01:11:23.390 --> 01:11:23.807 Paclitaxel,

NOTE Confidence: 0.78657377

01:11:23.807 --> 01:11:26.309 irrespective of the line of therapy.

NOTE Confidence: 0.78657377

01:11:26.310 --> 01:11:28.800 But we do not have really.

NOTE Confidence: 0.78657377

01:11:28.800 --> 01:11:31.380 We really don't have data to

NOTE Confidence: 0.78657377

01:11:31.380 --> 01:11:34.343 know what would be the benefit

NOTE Confidence: 0.78657377

01:11:34.343 --> 01:11:37.218 beyond the first line treatment.

NOTE Confidence: 0.78657377

01:11:37.220 --> 01:11:40.010 So another study that was presented

NOTE Confidence: 0.78657377

01:11:40.010 --> 01:11:43.493 at ASCO 2020 used this time at

NOTE Confidence: 0.78657377

01:11:43.493 --> 01:11:46.038 PD one inhibitor called the

NOTE Confidence: 0.78657377

01:11:46.038 --> 01:11:48.957 pembrolizumab and combine it with

NOTE Confidence: 0.78657377

01:11:48.957 --> 01:11:51.365 different types of chemotherapy.

NOTE Confidence: 0.78657377

01:11:51.370 --> 01:11:53.990 There were three different regiments,

NOTE Confidence: 0.78657377

01:11:53.990 --> 01:11:57.110 not backlit axle.

NOTE Confidence: 0.78657377

01:11:57.110 --> 01:12:00.582 Paclitaxel and Jim Carbo and the patients

NOTE Confidence: 0.78657377

01:12:00.582 --> 01:12:03.699 were treated and field progression,

NOTE Confidence: 0.78657377

01:12:03.700 --> 01:12:06.180 toxicity or completion of

NOTE Confidence: 0.78657377

01:12:06.180 --> 01:12:08.660 35 cycles of treatment.

NOTE Confidence: 0.78657377

01:12:08.660 --> 01:12:11.712 And we did see Dan improvement in

NOTE Confidence: 0.78657377

01:12:11.712 --> 01:12:13.830 the progression free survival.

NOTE Confidence: 0.78657377

01:12:13.830 --> 01:12:16.782 That again was limited to those

NOTE Confidence: 0.78657377

01:12:16.782 --> 01:12:19.469 patients who overexpressed the PDL one.

NOTE Confidence: 0.78657377

01:12:19.470 --> 01:12:21.338 They used a different.

NOTE Confidence: 0.78657377

01:12:21.338 --> 01:12:23.673 Way of describing their positive

NOTE Confidence: 0.78657377

01:12:23.673 --> 01:12:24.989 iti's CPS score,

NOTE Confidence: 0.78657377

01:12:24.990 --> 01:12:27.072 which looks at the total percent

NOTE Confidence: 0.78657377

01:12:27.072 --> 01:12:29.160 of cells that are positive,

NOTE Confidence: 0.78657377

01:12:29.160 --> 01:12:31.032 including the tumour cells,

NOTE Confidence: 0.78657377

01:12:31.032 --> 01:12:33.840 lymphocytes and macrophages in the tumor.

NOTE Confidence: 0.78657377

01:12:33.840 --> 01:12:38.048 So this regimen is not FDA approved yet,

NOTE Confidence: 0.78657377

01:12:38.050 --> 01:12:41.200 but it is up for approval,

NOTE Confidence: 0.78657377

01:12:41.200 --> 01:12:44.672 and I think the message to take home

NOTE Confidence: 0.78657377

01:12:44.672 --> 01:12:49.342 from this study is that you can use

NOTE Confidence: 0.78657377

01:12:49.342 --> 01:12:51.196 different chemotherapy backbones,

NOTE Confidence: 0.78657377

01:12:51.200 --> 01:12:52.775 different chemotherapy regiments

NOTE Confidence: 0.78657377

01:12:52.775 --> 01:12:54.875 in combination with immunotherapy,

NOTE Confidence: 0.78657377

01:12:54.880 --> 01:12:57.520 and you can tailor the chemotherapy

NOTE Confidence: 0.78657377

01:12:57.520 --> 01:13:00.046 used based on the patients

NOTE Confidence: 0.78657377

01:13:00.046 --> 01:13:02.770 toxicities and prior treatments.

NOTE Confidence: 0.8573514

01:13:04.910 --> 01:13:08.406 So I'd like to say that there's the

NOTE Confidence: 0.8573514

01:13:08.406 --> 01:13:11.980 question why do certain patients stop

NOTE Confidence: 0.8573514

01:13:11.980 --> 01:13:14.580 responding to the immunotherapy?

NOTE Confidence: 0.8573514

01:13:14.580 --> 01:13:17.928 And there are mechanisms of resistance

NOTE Confidence: 0.8573514

01:13:17.928 --> 01:13:22.090 with activation of the Mac or AKT pathways,

NOTE Confidence: 0.8573514

01:13:22.090 --> 01:13:26.150 and Fortunately we do have.

NOTE Confidence: 0.8573514

01:13:26.150 --> 01:13:28.886 Hitters tyrosine kinases that could turn

NOTE Confidence: 0.8573514

01:13:28.886 --> 01:13:32.157 those pathways off and there are some

NOTE Confidence: 0.8573514

01:13:32.157 --> 01:13:34.905 early studies that basically combine them.

NOTE Confidence: 0.8573514

01:13:34.910 --> 01:13:37.150 Make inhibitor called cobimetinib.

NOTE Confidence: 0.8573514

01:13:37.150 --> 01:13:39.950 There is actually approved for

NOTE Confidence: 0.8573514

01:13:39.950 --> 01:13:42.678 treatment time of Melanoma with taxol.

NOTE Confidence: 0.8573514

01:13:42.680 --> 01:13:46.216 And that other look at is Alyssa Map.

NOTE Confidence: 0.8573514

01:13:46.220 --> 01:13:49.286 So basically the same regimen from the

NOTE Confidence: 0.8573514

01:13:49.286 --> 01:13:52.366 Impassion 130 trials and early results show

NOTE Confidence: 0.8573514

01:13:52.366 --> 01:13:55.500 an excellent control in the tumour burden,

NOTE Confidence: 0.8573514

01:13:55.500 --> 01:13:58.620 and very promising response rates.

NOTE Confidence: 0.8573514

01:13:58.620 --> 01:14:02.075 So the chemoimmunotherapy was brought

NOTE Confidence: 0.8573514

01:14:02.075 --> 01:14:06.216 to earlier phases of treatment in

NOTE Confidence: 0.8573514

01:14:06.216 --> 01:14:09.690 new agement setting for women who

NOTE Confidence: 0.8573514

01:14:09.690 --> 01:14:12.960 have triple negative breast cancer.

NOTE Confidence: 0.8573514

01:14:12.960 --> 01:14:15.060 And are treated with corrective

NOTE Confidence: 0.8573514

01:14:15.060 --> 01:14:17.665 intent before the surgery and there

NOTE Confidence: 0.8573514

01:14:17.665 --> 01:14:19.835 was a significant improvement in

NOTE Confidence: 0.8573514

01:14:19.835 --> 01:14:22.143 the rate of pathological complete

NOTE Confidence: 0.8573514

01:14:22.143 --> 01:14:24.653 response and event free survival

NOTE Confidence: 0.8573514

01:14:24.653 --> 01:14:28.550 without significant increase in the.

NOTE Confidence: 0.8573514

01:14:28.550 --> 01:14:32.500 Adverse events this regimen

NOTE Confidence: 0.8573514

01:14:32.500 --> 01:14:35.320 is not in the approved yet.

NOTE Confidence: 0.8573514

01:14:35.320 --> 01:14:37.042 Waiting additional data

NOTE Confidence: 0.8573514

01:14:37.042 --> 01:14:39.338 in the overall survival.

NOTE Confidence: 0.8573514

01:14:39.340 --> 01:14:43.404 So I tried to make the point that

NOTE Confidence: 0.8573514

01:14:43.404 --> 01:14:45.700 important breakthrough developments.

NOTE Confidence: 0.8573514

01:14:45.700 --> 01:14:48.202 And that we do have important

NOTE Confidence: 0.8573514

01:14:48.202 --> 01:14:49.870 breakthrough developments in the

NOTE Confidence: 0.8573514

01:14:49.946 --> 01:14:52.532 treatment of her two positive and

NOTE Confidence: 0.8573514

01:14:52.532 --> 01:14:54.256 triple negative breast cancer,

NOTE Confidence: 0.8573514

01:14:54.260 --> 01:14:56.871 the treatment has to be personalized based

NOTE Confidence: 0.8573514

01:14:56.871 --> 01:14:59.501 on the cancer subtypes and different

NOTE Confidence: 0.8573514

01:14:59.501 --> 01:15:02.387 molecular characteristics of the two more,

NOTE Confidence: 0.8573514

01:15:02.390 --> 01:15:04.530 but also looking at the

NOTE Confidence: 0.8573514

01:15:04.530 --> 01:15:05.386 patients comorbidities,

NOTE Confidence: 0.8573514

01:15:05.390 --> 01:15:08.888 prior treatments and patients preference and.

NOTE Confidence: 0.8573514

01:15:08.890 --> 01:15:11.452 Participation in clinical trials is very

NOTE Confidence: 0.8573514

01:15:11.452 --> 01:15:14.047 important to continue to improve the

NOTE Confidence: 0.8573514

01:15:14.047 --> 01:15:16.910 outcome of different types of breast cancer.

NOTE Confidence: 0.8573514

01:15:16.910 --> 01:15:19.934 I am very happy to say that we have

NOTE Confidence: 0.8573514

01:15:19.934 --> 01:15:23.018 an expanding large list of clinical

NOTE Confidence: 0.8573514

01:15:23.018 --> 01:15:26.218 trials for all subtypes and all

NOTE Confidence: 0.8573514

01:15:26.218 --> 01:15:28.948 stages of breast cancer at Yale.

NOTE Confidence: 0.8573514

01:15:28.950 --> 01:15:33.570 And we are all a team fighting for hope and

NOTE Confidence: 0.8573514

01:15:33.684 --> 01:15:37.878 also fighting for curing breast cancer.

NOTE Confidence: 0.8573514

01:15:37.880 --> 01:15:41.588 And these are some contact information

NOTE Confidence: 0.8573514

01:15:41.588 --> 01:15:45.861 if you choose to call us after

NOTE Confidence: 0.8573514

01:15:45.861 --> 01:15:48.109 this meeting is over.

NOTE Confidence: 0.8573514

01:15:48.110 --> 01:15:48.680 Thank you.

NOTE Confidence: 0.82724625

01:15:50.150 --> 01:15:52.590 Thank you so much Doctor Bulgar that was

NOTE Confidence: 0.82724625

01:15:52.590 --> 01:15:55.629 quite a Tour de force in the latest in

NOTE Confidence: 0.82724625

01:15:55.629 --> 01:15:57.788 uncut medical oncology and drug therapy.

NOTE Confidence: 0.82724625

01:15:57.790 --> 01:16:00.222 We actually don't have a ton of time

NOTE Confidence: 0.82724625

01:16:00.222 --> 01:16:02.429 but there were so many questions.

NOTE Confidence: 0.82724625

01:16:02.430 --> 01:16:05.027 I just love this panel and more

NOTE Confidence: 0.82724625

01:16:05.027 --> 01:16:06.842 importantly the attendees who really

NOTE Confidence: 0.82724625

01:16:06.842 --> 01:16:09.386 took so much time out of their evening

NOTE Confidence: 0.82724625

01:16:09.461 --> 01:16:11.797 to stay with us and listen to what

NOTE Confidence: 0.82724625

01:16:11.797 --> 01:16:14.050 smilow and our Cancer Center is doing.

NOTE Confidence: 0.82724625

01:16:14.050 --> 01:16:16.374 So this is almost like speed dating.

NOTE Confidence: 0.82724625

01:16:16.380 --> 01:16:19.700 I'm going to fire off some questions if.

NOTE Confidence: 0.82724625

01:16:19.700 --> 01:16:21.807 To our panelists and hopefully just keep

NOTE Confidence: 0.82724625

01:16:21.807 --> 01:16:23.719 those answers as quick as possible.

NOTE Confidence: 0.82724625

01:16:23.720 --> 01:16:27.234 But this is really all of our.

NOTE Confidence: 0.82724625

01:16:27.240 --> 01:16:29.124 Attendees really deserve answers

NOTE Confidence: 0.82724625

01:16:29.124 --> 01:16:30.537 to their questions,

NOTE Confidence: 0.82724625

01:16:30.540 --> 01:16:33.613 which I tried to do in the

NOTE Confidence: 0.82724625

01:16:33.613 --> 01:16:36.209 background couple for Doctor Moran.

NOTE Confidence: 0.82724625

01:16:36.210 --> 01:16:38.700 One is a question on angiosarcoma

NOTE Confidence: 0.82724625

01:16:38.700 --> 01:16:40.991 after treatment for a radiation

NOTE Confidence: 0.82724625

01:16:40.991 --> 01:16:43.756 therapy 10 years after mastectomy.

NOTE Confidence: 0.82724625

01:16:43.760 --> 01:16:47.270 This comes from an Peterson and from her mom

NOTE Confidence: 0.82724625

01:16:47.270 --> 01:16:50.838 who required a pretty extensive resection.

NOTE Confidence: 0.82724625

01:16:50.840 --> 01:16:52.724 What percentage of patients

NOTE Confidence: 0.82724625

01:16:52.724 --> 01:16:53.666 develop osteosarcomas,

NOTE Confidence: 0.82724625

01:16:53.670 --> 01:16:57.114 and is there a gene that can

NOTE Confidence: 0.82724625

01:16:57.114 --> 01:16:58.590 differentiate with that?

NOTE Confidence: 0.82724625

01:16:58.590 --> 01:17:01.290 And kind of moving along those

NOTE Confidence: 0.82724625

01:17:01.290 --> 01:17:03.735 lines is from those radiation

NOTE Confidence: 0.82724625

01:17:03.735 --> 01:17:06.510 damage the skin and tissue,

NOTE Confidence: 0.82724625

01:17:06.510 --> 01:17:08.490 thus making reconstruction different

NOTE Confidence: 0.84449834

01:17:08.490 --> 01:17:09.975 difficult after mastectomy.

NOTE Confidence: 0.84449834

01:17:09.975 --> 01:17:13.440 OK, so to answer the first question,

NOTE Confidence: 0.84449834

01:17:13.440 --> 01:17:15.915 yes, second malignancy in the

NOTE Confidence: 0.84449834

01:17:15.915 --> 01:17:17.895 radiation field can occur.

NOTE Confidence: 0.84449834

01:17:17.900 --> 01:17:21.860 It is pretty rare we quote the number

NOTE Confidence: 0.84449834

01:17:21.860 --> 01:17:25.820 of .01% at 10 years and I think

NOTE Confidence: 0.84449834

01:17:25.820 --> 01:17:28.175 you know that's probably accurate.

NOTE Confidence: 0.84449834

01:17:28.175 --> 01:17:30.800 At best I've seen maybe 2 in

NOTE Confidence: 0.84449834

01:17:30.800 --> 01:17:34.106 my 20 year career of a sarcoma

NOTE Confidence: 0.84449834

01:17:34.106 --> 01:17:36.078 that was radiation induced,

NOTE Confidence: 0.84449834

01:17:36.080 --> 01:17:37.870 so it's unfortunate there isn't

NOTE Confidence: 0.84449834

01:17:37.870 --> 01:17:41.050 any way for us to be able to

NOTE Confidence: 0.84449834

01:17:41.050 --> 01:17:43.240 identify those patients other than

NOTE Confidence: 0.84449834

01:17:43.240 --> 01:17:45.439 maybe possibly the ATM mutation,

NOTE Confidence: 0.84449834

01:17:45.440 --> 01:17:47.064 which isn't necessarily linked

NOTE Confidence: 0.84449834

01:17:47.064 --> 01:17:48.688 to sarcomas per se,

NOTE Confidence: 0.84449834

01:17:48.690 --> 01:17:50.725 but they do have significantly

NOTE Confidence: 0.84449834

01:17:50.725 --> 01:17:52.760 more toxicity from the radiation,

NOTE Confidence: 0.84449834

01:17:52.760 --> 01:17:55.736 and it could be that they have a

NOTE Confidence: 0.84449834

01:17:55.736 --> 01:17:58.032 higher incidence of 2nd malignancies

NOTE Confidence: 0.84449834

01:17:58.032 --> 01:17:59.988 related to the radiation.

NOTE Confidence: 0.84449834

01:17:59.990 --> 01:18:02.425 Other repair mechanisms are not

NOTE Confidence: 0.84449834

01:18:02.425 --> 01:18:04.860 as established as someone who

NOTE Confidence: 0.84449834

01:18:04.941 --> 01:18:07.000 doesn't carry that mutation.

NOTE Confidence: 0.84449834

01:18:07.000 --> 01:18:08.503 The second question,

NOTE Confidence: 0.84449834

01:18:08.503 --> 01:18:10.507 as far as reconstruction,

NOTE Confidence: 0.84449834

01:18:10.510 --> 01:18:12.554 that is a very,

NOTE Confidence: 0.84449834

01:18:12.554 --> 01:18:15.109 very excellent question and we

NOTE Confidence: 0.84449834

01:18:15.109 --> 01:18:18.029 deal with this all the time.

NOTE Confidence: 0.84449834

01:18:18.030 --> 01:18:21.030 Yes, radiation does cause the image,

NOTE Confidence: 0.84449834

01:18:21.030 --> 01:18:22.854 and for this reason,

NOTE Confidence: 0.84449834

01:18:22.854 --> 01:18:25.590 when you undergo a mastectomy and

NOTE Confidence: 0.84449834

01:18:25.679 --> 01:18:28.823 then get radiation and then have

NOTE Confidence: 0.84449834

01:18:28.823 --> 01:18:31.680 reconstruction in the delayed setting.

NOTE Confidence: 0.84449834

01:18:31.680 --> 01:18:33.708 Or what needs to happen is

NOTE Confidence: 0.84449834

01:18:33.708 --> 01:18:35.060 a couple of things.

NOTE Confidence: 0.84449834

01:18:35.060 --> 01:18:37.524 One is that you want to wait at

NOTE Confidence: 0.84449834

01:18:37.524 --> 01:18:40.423 least six months or so to allow the

NOTE Confidence: 0.84449834

01:18:40.423 --> 01:18:42.939 skin to completely heal 2 is that

NOTE Confidence: 0.84449834

01:18:42.939 --> 01:18:44.877 you want to have an experienced

NOTE Confidence: 0.84449834

01:18:44.877 --> 01:18:48.200 a plastic surgeon who knows.

NOTE Confidence: 0.84449834

01:18:48.200 --> 01:18:50.430 Has experienced with the radiation

NOTE Confidence: 0.84449834

01:18:50.430 --> 01:18:53.577 and how that tissue looks like Inter

NOTE Confidence: 0.84449834

01:18:53.577 --> 01:18:56.079 operatively and 3rd is that unless

NOTE Confidence: 0.84449834

01:18:56.079 --> 01:18:58.596 you've had an expander place you

NOTE Confidence: 0.84449834

01:18:58.596 --> 01:19:01.008 really can't do an implant based

NOTE Confidence: 0.84449834

01:19:01.010 --> 01:19:03.180 reconstruction and so for that

NOTE Confidence: 0.84449834

01:19:03.180 --> 01:19:05.902 reason most of those patients who

NOTE Confidence: 0.84449834

01:19:05.902 --> 01:19:07.810 have delayed reconstruction and

NOTE Confidence: 0.84449834

01:19:07.810 --> 01:19:10.628 haven't had an expander placed will

NOTE Confidence: 0.84449834

01:19:10.628 --> 01:19:13.106 have to have a autologous flap and

NOTE Confidence: 0.84449834

01:19:13.106 --> 01:19:15.524 what that means is just putting

NOTE Confidence: 0.84449834

01:19:15.524 --> 01:19:17.654 in tissue from somewhere else,

NOTE Confidence: 0.84449834

01:19:17.660 --> 01:19:21.188 whether it be their abdomen or

NOTE Confidence: 0.84449834

01:19:21.188 --> 01:19:24.599 their back or their butt so.

NOTE Confidence: 0.84449834

01:19:24.600 --> 01:19:24.970 Thank

NOTE Confidence: 0.8548819

01:19:24.970 --> 01:19:27.778 you, I'm kind of going back to an earlier

NOTE Confidence: 0.8548819

01:19:27.778 --> 01:19:30.516 and just more generalized question on.

NOTE Confidence: 0.8548819

01:19:30.520 --> 01:19:32.739 You know how confident can we be

NOTE Confidence: 0.8548819

01:19:32.739 --> 01:19:34.985 when you haven't really dense breast

NOTE Confidence: 0.8548819

01:19:34.985 --> 01:19:37.025 tissue on mammogram and ultrasound

NOTE Confidence: 0.8548819

01:19:37.025 --> 01:19:39.397 in terms of detection of cancer?

NOTE Confidence: 0.8548819

01:19:39.400 --> 01:19:42.178 And how can women self check

NOTE Confidence: 0.8548819

01:19:42.178 --> 01:19:45.010 outside of their annual mammogram?

NOTE Confidence: 0.8548819

01:19:45.010 --> 01:19:46.852 Especially when the some of the

NOTE Confidence: 0.8548819

01:19:46.852 --> 01:19:48.080 recommendations for self breast

NOTE Confidence: 0.8548819

01:19:48.136 --> 01:19:49.646 exam are no longer recommended.

NOTE Confidence: 0.8548819

01:19:49.650 --> 01:19:51.498 This is just open to any and

NOTE Confidence: 0.8548819

01:19:51.498 --> 01:19:53.040 all of our panelists.

NOTE Confidence: 0.44722733

01:19:57.940 --> 01:19:58.810 Bob, no.

NOTE Confidence: 0.85145134

01:20:00.170 --> 01:20:04.416 Sure. So in terms of the dense breast tissue,

NOTE Confidence: 0.85145134

01:20:04.420 --> 01:20:07.534 you know we know that you know that's common.

NOTE Confidence: 0.85145134

01:20:07.540 --> 01:20:11.446 Maybe half of women have breast density.

NOTE Confidence: 0.85145134

01:20:11.450 --> 01:20:13.634 It's categorized and defined, but we know

NOTE Confidence: 0.85145134

01:20:13.634 --> 01:20:16.008 that can decrease sensitivity for mammogram.

NOTE Confidence: 0.85145134

01:20:16.010 --> 01:20:18.863 We know younger women are more likely to have

NOTE Confidence: 0.85145134

01:20:18.863 --> 01:20:21.632 you know denser breast tissue, but older

NOTE Confidence: 0.85145134

01:20:21.632 --> 01:20:24.089 women have denser breast tissue as well,

NOTE Confidence: 0.85145134

01:20:24.090 --> 01:20:26.540 so we know there's some limited sensitivity.

NOTE Confidence: 0.85145134

01:20:26.540 --> 01:20:28.801 We still know that mammography is the

NOTE Confidence: 0.85145134

01:20:28.801 --> 01:20:31.696 one tool that's been shown to define and

NOTE Confidence: 0.85145134

01:20:31.696 --> 01:20:33.556 reduce mortality from breast cancer,

NOTE Confidence: 0.85145134

01:20:33.560 --> 01:20:35.666 so we still do use mammogram.

NOTE Confidence: 0.85145134

01:20:35.670 --> 01:20:38.222 I would say that these days and we're

NOTE Confidence: 0.85145134

01:20:38.222 --> 01:20:40.092 fortunate United States where pretty

NOTE Confidence: 0.85145134

01:20:40.092 --> 01:20:42.047 much all using digital mammogram.

NOTE Confidence: 0.85145134

01:20:42.050 --> 01:20:44.894 And most of us are also using Tomo synthesis,

NOTE Confidence: 0.85145134

01:20:44.900 --> 01:20:47.168 which gives us a little bit more

NOTE Confidence: 0.85145134

01:20:47.168 --> 01:20:49.014 sensitivity still in terms of getting

NOTE Confidence: 0.85145134

01:20:49.014 --> 01:20:51.667 more of a 3D picture of the breast and

NOTE Confidence: 0.85145134

01:20:51.667 --> 01:20:53.779 then just to comment on ultrasound,

NOTE Confidence: 0.85145134

01:20:53.780 --> 01:20:56.168 I usually tell my patients that

NOTE Confidence: 0.85145134

01:20:56.168 --> 01:20:57.760 ultrasound might pick up.

NOTE Confidence: 0.85145134

01:20:57.760 --> 01:21:00.410 Maybe 3 or 4, maybe 4% per thousand

NOTE Confidence: 0.85145134

01:21:00.410 --> 01:21:01.730 more more breast cancer,

NOTE Confidence: 0.85145134

01:21:01.730 --> 01:21:03.716 so it's something that you know.

NOTE Confidence: 0.85145134

01:21:03.720 --> 01:21:05.700 Some women choose is all this.

NOTE Confidence: 0.85145134

01:21:05.700 --> 01:21:07.360 No, that's in part political.

NOTE Confidence: 0.85145134

01:21:07.360 --> 01:21:09.677 But when you look at the medical

NOTE Confidence: 0.85145134

01:21:09.677 --> 01:21:10.670 aspect of it,

NOTE Confidence: 0.85145134

01:21:10.670 --> 01:21:12.987 it's an option for women with dense,

NOTE Confidence: 0.85145134

01:21:12.990 --> 01:21:13.788 dense breast tissue.

NOTE Confidence: 0.85145134

01:21:13.788 --> 01:21:16.037 And we know that MRI is out there

NOTE Confidence: 0.85145134

01:21:16.037 --> 01:21:17.999 and is used selectively in high

NOTE Confidence: 0.85145134

01:21:17.999 --> 01:21:19.484 risk populations like germline

NOTE Confidence: 0.85145134

01:21:19.484 --> 01:21:21.260 mutations or other populations.

NOTE Confidence: 0.85145134

01:21:21.260 --> 01:21:24.324 And we know that that could be considered

NOTE Confidence: 0.85145134

01:21:24.324 --> 01:21:27.706 the gold standard in terms of sensitivity.

NOTE Confidence: 0.85145134

01:21:27.710 --> 01:21:30.110 But we use it less for multiple reasons.

NOTE Confidence: 0.85145134

01:21:30.110 --> 01:21:32.510 That was the second part of that question,

NOTE Confidence: 0.85145134

01:21:32.510 --> 01:21:33.110 I'm sorry.

NOTE Confidence: 0.82461095

01:21:34.890 --> 01:21:37.476 In terms of self breast exams,

NOTE Confidence: 0.82461095

01:21:37.480 --> 01:21:39.640 thoughts on that? Yeah, you

NOTE Confidence: 0.830492657857143

01:21:39.640 --> 01:21:42.405 know the data. Hasn't shown us that

NOTE Confidence: 0.830492657857143

01:21:42.405 --> 01:21:45.347 that breast self exam you know improve,

NOTE Confidence: 0.830492657857143

01:21:45.350 --> 01:21:47.354 you know survival or as relates

NOTE Confidence: 0.830492657857143

01:21:47.354 --> 01:21:49.423 to breast cancer and and certainly

NOTE Confidence: 0.830492657857143

01:21:49.423 --> 01:21:51.761 some women still choose to do that

NOTE Confidence: 0.830492657857143

01:21:51.761 --> 01:21:53.955 and it's their right to do that.

NOTE Confidence: 0.830492657857143

01:21:53.960 --> 01:21:56.048 And I would say that if one is

NOTE Confidence: 0.830492657857143

01:21:56.048 --> 01:21:58.012 doing that maybe just being trained

NOTE Confidence: 0.830492657857143

01:21:58.012 --> 01:22:00.542 to do it most effectively but we

NOTE Confidence: 0.830492657857143

01:22:00.542 --> 01:22:02.557 don't have necessarily other tools,

NOTE Confidence: 0.830492657857143

01:22:02.560 --> 01:22:05.908 But that's not something that we.

NOTE Confidence: 0.830492657857143

01:22:05.910 --> 01:22:06.888 Generally recommend those.

NOTE Confidence: 0.830492657857143

01:22:06.888 --> 01:22:07.866 Certainly someone certainly

NOTE Confidence: 0.830492657857143

01:22:07.866 --> 01:22:09.170 choose to do that.

NOTE Confidence: 0.82779634

01:22:10.540 --> 01:22:13.892 That that we cannot really rely on the

NOTE Confidence: 0.82779634

01:22:13.892 --> 01:22:17.170 breast exam to detect the breast cancer,

NOTE Confidence: 0.82779634

01:22:17.170 --> 01:22:20.082 and that's the value of the screening

NOTE Confidence: 0.82779634

01:22:20.082 --> 01:22:22.801 mammogram to detect them way before

NOTE Confidence: 0.82779634

01:22:22.801 --> 01:22:25.126 the breast cancers become palpable.

NOTE Confidence: 0.82779634

01:22:25.130 --> 01:22:27.320 American Cancer Society discourages self

NOTE Confidence: 0.82779634

01:22:27.320 --> 01:22:29.990 breast exam as routine detection method,

NOTE Confidence: 0.82779634

01:22:29.990 --> 01:22:32.954 but enciende guidelines do include a

NOTE Confidence: 0.82779634

01:22:32.954 --> 01:22:35.956 recommendation for what we call breast

NOTE Confidence: 0.82779634

01:22:35.956 --> 01:22:39.253 awareness because it is very important for

NOTE Confidence: 0.82779634

01:22:39.253 --> 01:22:42.546 women to know how their breast feel like.

NOTE Confidence: 0.82779634

01:22:42.550 --> 01:22:44.944 It also for premenopausal women the best

NOTE Confidence: 0.82779634

01:22:44.944 --> 01:22:47.464 time to check would be under 10 days

NOTE Confidence: 0.82779634

01:22:47.464 --> 01:22:50.100 after the onset of the menstrual periods,

NOTE Confidence: 0.82779634

01:22:50.100 --> 01:22:52.458 when there are less hormonal changes

NOTE Confidence: 0.82779634

01:22:52.458 --> 01:22:55.668 in the breast and we do know that 10 to

NOTE Confidence: 0.82779634

01:22:55.668 --> 01:22:58.150 15% of the breast cancers are diagnosed

NOTE Confidence: 0.82779634

01:22:58.150 --> 01:23:01.069 because women do find a lump in the breast.

NOTE Confidence: 0.82779634

01:23:01.070 --> 01:23:03.798 So I think that while never say I'm

NOTE Confidence: 0.82779634

01:23:03.798 --> 01:23:06.555 just going to rely on the breast exam,

NOTE Confidence: 0.82779634

01:23:06.560 --> 01:23:08.280 go for the screening mammogram.

NOTE Confidence: 0.82779634

01:23:08.280 --> 01:23:10.905 I do encourage my patients to have

NOTE Confidence: 0.82779634

01:23:10.905 --> 01:23:13.238 a breast awareness and be aware of.

NOTE Confidence: 0.82779634

01:23:13.240 --> 01:23:14.830 How their breast tissue feels like.

NOTE Confidence: 0.87026006

01:23:15.400 --> 01:23:17.857 Yeah, I agree with that as well,

NOTE Confidence: 0.87026006

01:23:17.860 --> 01:23:20.184 and I also tell patients for anyone

NOTE Confidence: 0.87026006

01:23:20.184 --> 01:23:21.996 that's had radiation as they

NOTE Confidence: 0.87026006

01:23:21.996 --> 01:23:23.500 are finishing their radiation.

NOTE Confidence: 0.87026006

01:23:23.500 --> 01:23:25.719 I tell them that during the first

NOTE Confidence: 0.87026006

01:23:25.719 --> 01:23:27.886 six months post radiation that they

NOTE Confidence: 0.87026006

01:23:27.886 --> 01:23:30.172 should actually do a breast exam,

NOTE Confidence: 0.87026006

01:23:30.180 --> 01:23:31.372 not to be alarmed,

NOTE Confidence: 0.87026006

01:23:31.372 --> 01:23:33.160 but that all the changes that

NOTE Confidence: 0.87026006

01:23:33.226 --> 01:23:35.281 they're feeling is the scar

NOTE Confidence: 0.87026006

01:23:35.281 --> 01:23:36.514 tissue that's developing.

NOTE Confidence: 0.87026006

01:23:36.520 --> 01:23:38.300 Because with radiation you develop

NOTE Confidence: 0.87026006

01:23:38.300 --> 01:23:41.099 scar tissue just like you do with surgery,

NOTE Confidence: 0.87026006

01:23:41.100 --> 01:23:43.452 and it's just an opportunity for them

NOTE Confidence: 0.87026006

01:23:43.452 --> 01:23:46.377 to learn what their new breast feels like,

NOTE Confidence: 0.87026006

01:23:46.380 --> 01:23:48.190 so that down the road.

NOTE Confidence: 0.87026006

01:23:48.190 --> 01:23:50.020 They're not alarmed if they

NOTE Confidence: 0.87026006

01:23:50.020 --> 01:23:51.850 suddenly check their breasts at

NOTE Confidence: 0.87026006

01:23:51.912 --> 01:23:53.922 one year and and suddenly feel

NOTE Confidence: 0.87026006

01:23:53.922 --> 01:23:55.820 lumps and bumps because the vast

NOTE Confidence: 0.83816534

01:23:55.820 --> 01:23:58.740 majority of them are normal.

NOTE Confidence: 0.8531833

01:23:58.740 --> 01:24:02.244 And this is for two things from Caitlin.

NOTE Confidence: 0.8531833

01:24:02.250 --> 01:24:05.674 One is, she said, please do self checks

NOTE Confidence: 0.8531833

01:24:05.674 --> 01:24:09.280 and that's how she found her cancer again.

NOTE Confidence: 0.8531833

01:24:09.280 --> 01:24:11.974 Absolutely, if a woman feels comfortable

NOTE Confidence: 0.8531833

01:24:11.974 --> 01:24:14.678 with their own breast exams and

NOTE Confidence: 0.8531833

01:24:14.678 --> 01:24:17.174 seeing any changes of noticing them,

NOTE Confidence: 0.8531833

01:24:17.180 --> 01:24:20.684 I 100% supportive of doing self breast exams.

NOTE Confidence: 0.8531833

01:24:20.690 --> 01:24:23.775 She also had a really

NOTE Confidence: 0.8531833

01:24:23.775 --> 01:24:25.626 thoughtful question about.

NOTE Confidence: 0.8531833

01:24:25.630 --> 01:24:27.405 Stage 2A triple positive breast

NOTE Confidence: 0.8531833

01:24:27.405 --> 01:24:29.180 cancer with no lymph nodes.

NOTE Confidence: 0.8531833

01:24:29.180 --> 01:24:31.406 What are the thoughts on neural

NOTE Confidence: 0.8531833

01:24:31.406 --> 01:24:33.439 links and also thoughts on who?

NOTE Confidence: 0.8531833

01:24:33.440 --> 01:24:36.185 For ectomy on a 36 year old female on

NOTE Confidence: 0.8531833

01:24:36.185 --> 01:24:38.770 tamoxifen for the above mentioned diagnosis.

NOTE Confidence: 0.82676107

01:24:41.790 --> 01:24:44.610 Want me to comment on that?

NOTE Confidence: 0.6920089

01:24:44.610 --> 01:24:47.210 The you know neural links that you know,

NOTE Confidence: 0.6920089

01:24:47.210 --> 01:24:49.202 I believe you referring to Noor

NOTE Confidence: 0.6920089

01:24:49.202 --> 01:24:51.758 Atnip which is an oral sort of pan.

NOTE Confidence: 0.6920089

01:24:51.760 --> 01:24:54.300 Her two tyrosine kinase inhibitor.

NOTE Confidence: 0.6920089

01:24:54.300 --> 01:24:59.106 And that was studied, and it seemed to be.

NOTE Confidence: 0.6920089

01:24:59.110 --> 01:24:59.872 More effective,

NOTE Confidence: 0.6920089

01:24:59.872 --> 01:25:02.158 perhaps in the ER positive group,

NOTE Confidence: 0.6920089

01:25:02.160 --> 01:25:06.248 I believe that was the EXANET trial.

NOTE Confidence: 0.6920089

01:25:06.250 --> 01:25:09.930 It's oral, I think it was taken for a year.

NOTE Confidence: 0.6920089

01:25:09.930 --> 01:25:11.568 Has some pretty significant side effects

NOTE Confidence: 0.6920089

01:25:11.568 --> 01:25:13.100 in terms of especially diarrhea,

NOTE Confidence: 0.6920089

01:25:13.100 --> 01:25:15.860 but there's ways to sort of try to

NOTE Confidence: 0.6920089

01:25:15.860 --> 01:25:18.318 preempt that prophylaxis against it.

NOTE Confidence: 0.6920089

01:25:18.320 --> 01:25:23.444 I believe that trial also did include.

NOTE Confidence: 0.6920089

01:25:23.450 --> 01:25:26.106 Women who had new regiment therapy and there

NOTE Confidence: 0.6920089

01:25:26.106 --> 01:25:29.096 was a similar trend in terms of benefit.

NOTE Confidence: 0.6920089

01:25:29.100 --> 01:25:31.172 Interesting thing these to my not to

NOTE Confidence: 0.6920089

01:25:31.172 --> 01:25:34.439 my as I recall is that in that trial

NOTE Confidence: 0.6920089

01:25:34.439 --> 01:25:36.776 women hadn't seen Pertuzumab which is

NOTE Confidence: 0.6920089

01:25:36.776 --> 01:25:38.960 now sort of a standard complemented

NOTE Confidence: 0.6920089

01:25:38.960 --> 01:25:40.710 as Doctor Boger was showing.

NOTE Confidence: 0.6920089

01:25:40.710 --> 01:25:42.410 As earlier with Herceptin which

NOTE Confidence: 0.6920089

01:25:42.410 --> 01:25:43.920 is also called trust.

NOTE Confidence: 0.6920089

01:25:43.920 --> 01:25:46.400 Choose a map in these sort of neoadjuvant

NOTE Confidence: 0.6920089

01:25:46.400 --> 01:25:48.630 and then sometimes following into the

NOTE Confidence: 0.6920089

01:25:48.630 --> 01:25:51.690 advanced setting so there is some data there,

NOTE Confidence: 0.6920089

01:25:51.690 --> 01:25:53.460 but there's not really data.

NOTE Confidence: 0.6920089

01:25:53.460 --> 01:25:54.856 Looking at that agent.

NOTE Confidence: 0.6920089

01:25:54.856 --> 01:25:56.601 In the setting of prior

NOTE Confidence: 0.6920089

01:25:56.601 --> 01:25:58.348 exposure to produce in abduls.

NOTE Confidence: 0.6920089

01:25:58.350 --> 01:25:59.811 To my knowledge,

NOTE Confidence: 0.6920089

01:25:59.811 --> 01:26:02.733 in addition to trust him then.

NOTE Confidence: 0.6920089

01:26:02.740 --> 01:26:03.920 And then the second part,

NOTE Confidence: 0.6920089

01:26:03.920 --> 01:26:04.394 Doctor Bulgaro,

NOTE Confidence: 0.6920089

01:26:04.394 --> 01:26:06.520 did you want to comment on the second bar?

NOTE Confidence: 0.7632609

01:26:07.160 --> 01:26:10.023 Sure, so the IT is well established

NOTE Confidence: 0.7632609

01:26:10.023 --> 01:26:13.343 based on the large softex trial that

NOTE Confidence: 0.7632609

01:26:13.343 --> 01:26:16.355 young women do benefit from ovarian

NOTE Confidence: 0.7632609

01:26:16.448 --> 01:26:19.438 suppression. That is done with.

NOTE Confidence: 0.6811129

01:26:21.690 --> 01:26:24.791 With drugs like Zola decks or can

NOTE Confidence: 0.6811129

01:26:24.791 --> 01:26:28.596 settle in and in addition to oral

NOTE Confidence: 0.6811129

01:26:28.596 --> 01:26:33.040 anti hormonal treatment, now the.

NOTE Confidence: 0.6811129

01:26:33.040 --> 01:26:35.462 Removal of, I mean that basically puts

NOTE Confidence: 0.6811129

01:26:35.462 --> 01:26:37.858 the patients into a chemical menopause.

NOTE Confidence: 0.6811129

01:26:37.860 --> 01:26:40.828 There is the option of a surgical menopause,

NOTE Confidence: 0.6811129

01:26:40.830 --> 01:26:43.056 particularly if there is a genetic

NOTE Confidence: 0.6811129

01:26:43.056 --> 01:26:44.540 predisposition for ovarian cancer,

NOTE Confidence: 0.6811129

01:26:44.540 --> 01:26:47.310 but that is an irreversible option, you know.

NOTE Confidence: 0.6811129

01:26:47.310 --> 01:26:50.106 So I think that it has to be discussed

NOTE Confidence: 0.6811129

01:26:50.106 --> 01:26:52.330 with your treating physician,

NOTE Confidence: 0.6811129

01:26:52.330 --> 01:26:54.556 the pros and cons of prophylactic

NOTE Confidence: 0.6811129

01:26:54.556 --> 01:26:55.298 bulfer ectomy.

NOTE Confidence: 0.6811129

01:26:55.300 --> 01:26:57.526 If there is a cancer predisposition,

NOTE Confidence: 0.6811129

01:26:57.530 --> 01:26:59.942 genes that would increase the risk

NOTE Confidence: 0.6811129

01:26:59.942 --> 01:27:02.400 for ovarian cancer and someone is.

NOTE Confidence: 0.6811129

01:27:02.400 --> 01:27:07.080 Delete sure that is done conceiving.

NOTE Confidence: 0.6811129

01:27:07.080 --> 01:27:09.336 Then, prophylactically for Ectomy

NOTE Confidence: 0.6811129

01:27:09.336 --> 01:27:12.156 is an option but otherwise

NOTE Confidence: 0.6811129

01:27:12.156 --> 01:27:14.639 ovarian suppression with this.

NOTE Confidence: 0.6811129

01:27:14.640 --> 01:27:16.590 Every three months injections is the

NOTE Confidence: 0.6811129

01:27:16.590 --> 01:27:18.939 standard of care in addition to oral,

NOTE Confidence: 0.6811129

01:27:18.940 --> 01:27:20.420 anti estrogen therapy and then

NOTE Confidence: 0.6811129

01:27:20.420 --> 01:27:22.345 you have the tamoxifen or even

NOTE Confidence: 0.6811129

01:27:22.345 --> 01:27:23.909 better than automatic inhibitor.

NOTE Confidence: 0.7846092

01:27:26.550 --> 01:27:29.484 So much first of all to our

NOTE Confidence: 0.7846092

01:27:29.484 --> 01:27:31.160 panelists around of applause.

NOTE Confidence: 0.7846092

01:27:31.160 --> 01:27:33.652 Although we won't be able to hear

NOTE Confidence: 0.7846092

01:27:33.652 --> 01:27:35.793 it from her doctor Bulgarella

NOTE Confidence: 0.7846092

01:27:35.793 --> 01:27:38.698 Garian Moran for you know, really.

NOTE Confidence: 0.7846092

01:27:38.698 --> 01:27:41.624 3 state of the art fantastic talks.

NOTE Confidence: 0.7846092

01:27:41.630 --> 01:27:44.486 And here at Yale and the Smilow

NOTE Confidence: 0.7846092

01:27:44.486 --> 01:27:47.078 Cancer Center at Water for Dell,

NOTE Confidence: 0.7846092

01:27:47.080 --> 01:27:50.006 NM westerly, it was a great evening.

NOTE Confidence: 0.7846092

01:27:50.010 --> 01:27:52.105 And really more importantly to

NOTE Confidence: 0.7846092

01:27:52.105 --> 01:27:54.200 our attendees or cancer survivors,

NOTE Confidence: 0.7846092

01:27:54.200 --> 01:27:57.938 those are going through this right now.

NOTE Confidence: 0.7846092

01:27:57.940 --> 01:27:59.740 Your questions were super thoughtful.

NOTE Confidence: 0.7846092

01:27:59.740 --> 01:28:02.022 I tried to answer some of them

NOTE Confidence: 0.7846092

01:28:02.022 --> 01:28:03.871 while our panelists were giving

NOTE Confidence: 0.7846092

01:28:03.871 --> 01:28:05.479 their giving their talks.

NOTE Confidence: 0.7846092

01:28:05.480 --> 01:28:07.290 This has been recorded and

NOTE Confidence: 0.7846092

01:28:07.290 --> 01:28:09.430 you can go back to it.

NOTE Confidence: 0.7846092

01:28:09.430 --> 01:28:10.432 And of course,

NOTE Confidence: 0.7846092

01:28:10.432 --> 01:28:12.436 we're always here for you and

NOTE Confidence: 0.7846092

01:28:12.436 --> 01:28:14.448 happy to answer any questions.

NOTE Confidence: 0.88886136

01:28:16.700 --> 01:28:18.996 Thank you so much for a wonderful

NOTE Confidence: 0.88886136

01:28:18.996 --> 01:28:20.570 evening and stay healthy.

NOTE Confidence: 0.88886136

01:28:20.570 --> 01:28:22.330 Take care guys, thank you.

NOTE Confidence: 0.88886136

01:28:22.330 --> 01:28:23.740 Thank you, thank you.