

WEBVTT

NOTE duration:"01:10:49"

NOTE recognizability:0.839

NOTE language:en-us

NOTE Confidence: 0.6393677

00:00:00.000 --> 00:00:00.410 Yes.

NOTE Confidence: 0.83098558

00:00:03.480 --> 00:00:05.958 So targeting her 2IN breast cancer

NOTE Confidence: 0.83098558

00:00:05.958 --> 00:00:08.170 has resulted in markedly improved

NOTE Confidence: 0.83098558

00:00:08.170 --> 00:00:10.620 results in treating this disease.

NOTE Confidence: 0.83098558

00:00:10.620 --> 00:00:12.260 And as this slide shows,

NOTE Confidence: 0.83098558

00:00:12.260 --> 00:00:14.619 there are now eight her two targeting

NOTE Confidence: 0.83098558

00:00:14.619 --> 00:00:17.546 drugs that are FDA approved not including

NOTE Confidence: 0.83098558

00:00:17.546 --> 00:00:19.390 biosimilars or subcube preparations

NOTE Confidence: 0.83098558

00:00:19.390 --> 00:00:21.858 and most with indications in multiple

NOTE Confidence: 0.83098558

00:00:21.858 --> 00:00:24.760 settings and six new drug or disease

NOTE Confidence: 0.83098558

00:00:24.760 --> 00:00:28.160 setting approvals just since 2019.

NOTE Confidence: 0.83098558

00:00:28.160 --> 00:00:31.120 In this talk, I'd like to focus on

NOTE Confidence: 0.83098558

00:00:31.120 --> 00:00:34.092 recent results with the antibody drug

NOTE Confidence: 0.83098558

00:00:34.092 --> 00:00:36.244 conjugate trastuzumab Durex tecan.
NOTE Confidence: 0.83098558

00:00:36.250 --> 00:00:39.682 Include with my personal thoughts about
NOTE Confidence: 0.83098558

00:00:39.682 --> 00:00:42.943 application of this particular drug in
NOTE Confidence: 0.83098558

00:00:42.943 --> 00:00:45.758 phase one studies trastuzumab dierickx
NOTE Confidence: 0.83098558

00:00:45.758 --> 00:00:48.942 tecan had remarkable activity not only
NOTE Confidence: 0.83098558

00:00:48.942 --> 00:00:51.498 in her two positive breast cancer.
NOTE Confidence: 0.83098558

00:00:51.500 --> 00:00:54.034 But as shown here also another her
NOTE Confidence: 0.83098558

00:00:54.034 --> 00:00:56.224 two positive tumor types and in
NOTE Confidence: 0.83098558

00:00:56.224 --> 00:00:58.276 breast cancer that was assayed as
NOTE Confidence: 0.83098558

00:00:58.276 --> 00:01:00.895 her two IHC one plus and two plus
NOTE Confidence: 0.83098558

00:01:00.895 --> 00:01:02.962 that were called her two low.
NOTE Confidence: 0.83098558

00:01:02.962 --> 00:01:04.832 I'll return to this group
NOTE Confidence: 0.83098558

00:01:04.832 --> 00:01:06.799 in just a few moments.
NOTE Confidence: 0.83098558

00:01:06.800 --> 00:01:08.500 Getting back to her two
NOTE Confidence: 0.83098558

00:01:08.500 --> 00:01:09.520 positive breast cancer,
NOTE Confidence: 0.83098558

00:01:09.520 --> 00:01:11.722 the destiny breast 01 trial was

NOTE Confidence: 0.83098558

00:01:11.722 --> 00:01:14.503 a single arm phase two trial of

NOTE Confidence: 0.83098558

00:01:14.503 --> 00:01:16.969 trastuzumab Durex tcan for her two

NOTE Confidence: 0.83098558

00:01:16.969 --> 00:01:19.298 positive metastatic breast cancer.

NOTE Confidence: 0.83098558

00:01:19.300 --> 00:01:21.330 All patients had prior treatment.

NOTE Confidence: 0.83098558

00:01:21.330 --> 00:01:23.078 With trastuzumab and TDM,

NOTE Confidence: 0.83098558

00:01:23.078 --> 00:01:25.700 one and 2/3 had prior treatment.

NOTE Confidence: 0.83098558

00:01:25.700 --> 00:01:26.468 With pertuzumab,

NOTE Confidence: 0.83098558

00:01:26.468 --> 00:01:29.156 the median number of prior lines of

NOTE Confidence: 0.83098558

00:01:29.156 --> 00:01:31.776 therapy in the metastatic setting was six,

NOTE Confidence: 0.83098558

00:01:31.780 --> 00:01:36.510 and 92% had visceral metastases.

NOTE Confidence: 0.83098558

00:01:36.510 --> 00:01:40.115 The results showed again remarkable

NOTE Confidence: 0.83098558

00:01:40.115 --> 00:01:43.882 activity in this or two positive

NOTE Confidence: 0.83098558

00:01:43.882 --> 00:01:46.018 population with a confirmed

NOTE Confidence: 0.83098558

00:01:46.018 --> 00:01:48.405 objective response rate of 60.9%,

NOTE Confidence: 0.83098558

00:01:48.405 --> 00:01:51.675 some complete responses and a Disease

NOTE Confidence: 0.83098558

00:01:51.675 --> 00:01:55.346 Control rate of an astounding 97.3%.
NOTE Confidence: 0.83098558

00:01:55.346 --> 00:01:59.126 In this heavily pretreated population,
NOTE Confidence: 0.83098558

00:01:59.130 --> 00:02:01.945 the median progression free survival
NOTE Confidence: 0.83098558

00:02:01.945 --> 00:02:04.275 was 16.4 months and the median
NOTE Confidence: 0.83098558

00:02:04.275 --> 00:02:06.610 overall survival has not been reached.
NOTE Confidence: 0.83098558

00:02:06.610 --> 00:02:09.025 At the time of the initial publication,
NOTE Confidence: 0.83098558

00:02:09.030 --> 00:02:11.245 the median duration of response
NOTE Confidence: 0.83098558

00:02:11.245 --> 00:02:14.726 was 14.8 months and again in a
NOTE Confidence: 0.83098558

00:02:14.726 --> 00:02:16.750 very heavily pretreated population.
NOTE Confidence: 0.83098558

00:02:16.750 --> 00:02:19.710 So the results of this trial led to
NOTE Confidence: 0.83098558

00:02:19.710 --> 00:02:22.124 FDA accelerated approval of this agent
NOTE Confidence: 0.83098558

00:02:22.124 --> 00:02:25.083 in December of 2019 for patients with
NOTE Confidence: 0.83098558

00:02:25.083 --> 00:02:28.005 her two positive metastatic breast cancer.
NOTE Confidence: 0.83098558

00:02:28.010 --> 00:02:30.670 Following two or more anti
NOTE Confidence: 0.83098558

00:02:30.670 --> 00:02:32.798 her two based regimens.
NOTE Confidence: 0.83098558

00:02:32.800 --> 00:02:35.302 The destiny breast 03 study was

NOTE Confidence: 0.83098558

00:02:35.302 --> 00:02:37.476 a randomized phase three trial

NOTE Confidence: 0.83098558

00:02:37.476 --> 00:02:39.601 of trastuzumab dierickx team can

NOTE Confidence: 0.83098558

00:02:39.601 --> 00:02:42.361 versus TDM one for patients with

NOTE Confidence: 0.83098558

00:02:42.361 --> 00:02:44.821 metastatic her two positive breast

NOTE Confidence: 0.83098558

00:02:44.821 --> 00:02:47.242 cancer with prior trastuzumab and

NOTE Confidence: 0.83098558

00:02:47.242 --> 00:02:50.068 and taxane treatment and this once

NOTE Confidence: 0.83098558

00:02:50.068 --> 00:02:52.191 again showed superior progression

NOTE Confidence: 0.83098558

00:02:52.191 --> 00:02:54.956 free survival and overall response

NOTE Confidence: 0.83098558

00:02:54.956 --> 00:02:57.440 benefit across all subgroups.

NOTE Confidence: 0.83098558

00:02:57.440 --> 00:02:59.840 The confirmed response rates were

NOTE Confidence: 0.83098558

00:02:59.840 --> 00:03:03.872 almost 80% for trastuzumab Drex Tcan.

NOTE Confidence: 0.83098558

00:03:03.872 --> 00:03:07.220 Versus 43.2% for TDM one and this

NOTE Confidence: 0.83098558

00:03:07.220 --> 00:03:10.414 trial led to full FDA approval of

NOTE Confidence: 0.83098558

00:03:10.414 --> 00:03:13.627 this agent in May of this year.

NOTE Confidence: 0.83098558

00:03:13.630 --> 00:03:17.918 Phase One expansion result.

NOTE Confidence: 0.83098558

00:03:17.920 --> 00:03:19.476 Showing here, Debbie one,
NOTE Confidence: 0.83098558

00:03:19.476 --> 00:03:21.421 that there was remarkably high
NOTE Confidence: 0.83098558

00:03:21.421 --> 00:03:23.257 response rates for patients with
NOTE Confidence: 0.83098558

00:03:23.257 --> 00:03:25.339 tumors that were her two negative,
NOTE Confidence: 0.83098558

00:03:25.340 --> 00:03:29.414 but IHC one plus or two plus.
NOTE Confidence: 0.83098558

00:03:29.420 --> 00:03:31.940 This led to a randomized phase three
NOTE Confidence: 0.83098558

00:03:31.940 --> 00:03:34.749 study in this 1 + 2 plus population
NOTE Confidence: 0.83098558

00:03:34.749 --> 00:03:37.919 destiny breast O four of trastuzumab DirectX,
NOTE Confidence: 0.83098558

00:03:37.920 --> 00:03:40.864 tecan versus chemotherapy treatment
NOTE Confidence: 0.83098558

00:03:40.864 --> 00:03:42.288 of physician's choice.
NOTE Confidence: 0.83098558

00:03:42.288 --> 00:03:44.696 Patients could have had one or two
NOTE Confidence: 0.83098558

00:03:44.696 --> 00:03:46.574 prior lines of chemotherapy for
NOTE Confidence: 0.83098558

00:03:46.574 --> 00:03:48.409 recurrence or or recurrence within
NOTE Confidence: 0.83098558

00:03:48.409 --> 00:03:50.677 six months of adjuvant chemotherapy.
NOTE Confidence: 0.83098558

00:03:50.680 --> 00:03:53.635 This study enrolled 557 patients
NOTE Confidence: 0.83098558

00:03:53.635 --> 00:03:56.696 of which 88% were hormone receptor

NOTE Confidence: 0.83098558

00:03:56.696 --> 00:03:58.572 positive but considered endocrine

NOTE Confidence: 0.83098558

00:03:58.572 --> 00:03:59.510 therapy refractory.

NOTE Confidence: 0.901779001818182

00:03:59.510 --> 00:04:02.302 And 70 to 80% of the patients also

NOTE Confidence: 0.901779001818182

00:04:02.302 --> 00:04:05.900 had a prior CDK 46 inhibitor.

NOTE Confidence: 0.901779001818182

00:04:05.900 --> 00:04:08.224 The results showed markedly

NOTE Confidence: 0.901779001818182

00:04:08.224 --> 00:04:10.548 improved progression free survival

NOTE Confidence: 0.901779001818182

00:04:10.548 --> 00:04:12.960 for trustees mapped DXT can,

NOTE Confidence: 0.901779001818182

00:04:12.960 --> 00:04:14.421 compared with chemotherapy,

NOTE Confidence: 0.901779001818182

00:04:14.421 --> 00:04:16.856 a physician's choice in the

NOTE Confidence: 0.901779001818182

00:04:16.856 --> 00:04:18.773 hormone receptor positive group

NOTE Confidence: 0.901779001818182

00:04:18.773 --> 00:04:20.948 and similarly in all patients.

NOTE Confidence: 0.901779001818182

00:04:20.950 --> 00:04:24.646 Overall survival as well was improved

NOTE Confidence: 0.901779001818182

00:04:24.646 --> 00:04:28.908 in both groups by over six months

NOTE Confidence: 0.901779001818182

00:04:28.910 --> 00:04:30.818 and confirmed objective response

NOTE Confidence: 0.901779001818182

00:04:30.818 --> 00:04:33.203 rates were remarkably higher for

NOTE Confidence: 0.901779001818182

00:04:33.203 --> 00:04:35.409 trastuzumab DirectX tcan in both
NOTE Confidence: 0.901779001818182

00:04:35.409 --> 00:04:37.484 hormone receptor positive and hormone
NOTE Confidence: 0.901779001818182

00:04:37.484 --> 00:04:39.456 receptor negative patients as shown
NOTE Confidence: 0.901779001818182

00:04:39.456 --> 00:04:41.688 here as were the clinical benefit
NOTE Confidence: 0.901779001818182

00:04:41.690 --> 00:04:45.410 rates and the duration of response.
NOTE Confidence: 0.901779001818182

00:04:45.410 --> 00:04:47.666 So this these remarkable results in
NOTE Confidence: 0.901779001818182

00:04:47.666 --> 00:04:49.677 what we're conventionally her two
NOTE Confidence: 0.901779001818182

00:04:49.677 --> 00:04:51.437 negative metastatic breast cancer.
NOTE Confidence: 0.901779001818182

00:04:51.440 --> 00:04:53.735 Patients suggests that it takes
NOTE Confidence: 0.901779001818182

00:04:53.735 --> 00:04:56.483 very little her to expression for
NOTE Confidence: 0.901779001818182

00:04:56.483 --> 00:04:59.066 on tumor cells for this drug to
NOTE Confidence: 0.901779001818182

00:04:59.066 --> 00:05:01.090 have activity against a tumor.
NOTE Confidence: 0.901779001818182

00:05:01.090 --> 00:05:03.330 And based on the results of this trial,
NOTE Confidence: 0.901779001818182

00:05:03.330 --> 00:05:05.787 in August of this year the FDA
NOTE Confidence: 0.901779001818182

00:05:05.787 --> 00:05:07.916 approved a new indication for
NOTE Confidence: 0.901779001818182

00:05:07.916 --> 00:05:10.411 trastuzumab direct can for patients

NOTE Confidence: 0.901779001818182

00:05:10.411 --> 00:05:13.828 with what has now been termed quote

NOTE Confidence: 0.901779001818182

00:05:13.828 --> 00:05:16.588 her too low metastatic breast cancer.

NOTE Confidence: 0.901779001818182

00:05:16.590 --> 00:05:18.838 So I would like to share my thoughts

NOTE Confidence: 0.901779001818182

00:05:18.838 --> 00:05:20.799 and concerns about the omission from

NOTE Confidence: 0.901779001818182

00:05:20.799 --> 00:05:22.797 these studies and an omission from

NOTE Confidence: 0.901779001818182

00:05:22.861 --> 00:05:24.685 the FDA approval of patients who

NOTE Confidence: 0.901779001818182

00:05:24.685 --> 00:05:29.450 have tumors that are hurt to IHC 0.

NOTE Confidence: 0.901779001818182

00:05:29.450 --> 00:05:33.048 So first, regarding the technique of IHC,

NOTE Confidence: 0.901779001818182

00:05:33.050 --> 00:05:35.630 this is not a quantitative assay,

NOTE Confidence: 0.901779001818182

00:05:35.630 --> 00:05:37.814 but rather a qualitative test best

NOTE Confidence: 0.901779001818182

00:05:37.814 --> 00:05:39.966 at detecting the presence or absence

NOTE Confidence: 0.901779001818182

00:05:39.966 --> 00:05:42.171 of an antigen under the conditions of

NOTE Confidence: 0.901779001818182

00:05:42.171 --> 00:05:44.560 the essay and the tissue preparation.

NOTE Confidence: 0.901779001818182

00:05:44.560 --> 00:05:47.068 It might be considered at best

NOTE Confidence: 0.901779001818182

00:05:47.068 --> 00:05:48.740 semi quantitative and conventional.

NOTE Confidence: 0.901779001818182

00:05:48.740 --> 00:05:51.506 IHC is subjective as it's interpreted
NOTE Confidence: 0.901779001818182

00:05:51.506 --> 00:05:53.350 by the reader's eye.
NOTE Confidence: 0.901779001818182

00:05:53.350 --> 00:05:55.775 There are technologies to adapt
NOTE Confidence: 0.901779001818182

00:05:55.775 --> 00:05:57.715 immunodetection of antigens and
NOTE Confidence: 0.901779001818182

00:05:57.715 --> 00:05:59.450 tissue for quantitation,
NOTE Confidence: 0.901779001818182

00:05:59.450 --> 00:06:02.054 including one termed Aqua developed by
NOTE Confidence: 0.901779001818182

00:06:02.054 --> 00:06:05.048 my Yale colleague David Rim and Bob Camp,
NOTE Confidence: 0.901779001818182

00:06:05.050 --> 00:06:07.306 but these are generally not used
NOTE Confidence: 0.901779001818182

00:06:07.306 --> 00:06:08.810 in routine clinical practice.
NOTE Confidence: 0.901779001818182

00:06:08.810 --> 00:06:11.366 It just so happens that with
NOTE Confidence: 0.901779001818182

00:06:11.366 --> 00:06:12.644 her two immunohistochemistry,
NOTE Confidence: 0.901779001818182

00:06:12.650 --> 00:06:15.374 strong staining in formal and fixed
NOTE Confidence: 0.901779001818182

00:06:15.374 --> 00:06:17.637 paraffin embedded tissue correlates very
NOTE Confidence: 0.901779001818182

00:06:17.637 --> 00:06:19.899 well with her two gene amplification
NOTE Confidence: 0.901779001818182

00:06:19.899 --> 00:06:21.907 and performs well at identifying
NOTE Confidence: 0.901779001818182

00:06:21.907 --> 00:06:23.917 a tumor that is biologically.

NOTE Confidence: 0.901779001818182
00:06:23.920 --> 00:06:24.706 Driven by her,
NOTE Confidence: 0.901779001818182
00:06:24.706 --> 00:06:24.968 too.
NOTE Confidence: 0.80763433
00:06:27.470 --> 00:06:29.170 These original results by
NOTE Confidence: 0.80763433
00:06:29.170 --> 00:06:30.870 Dennis Slayman and colleagues,
NOTE Confidence: 0.80763433
00:06:30.870 --> 00:06:33.880 reported in science in 1989,
NOTE Confidence: 0.80763433
00:06:33.880 --> 00:06:36.390 compare for five different tumors.
NOTE Confidence: 0.80763433
00:06:36.390 --> 00:06:39.407 Her two gene content by Southern blot,
NOTE Confidence: 0.80763433
00:06:39.410 --> 00:06:42.924 her 2M RNA expression by northern blot,
NOTE Confidence: 0.80763433
00:06:42.930 --> 00:06:45.366 and protein expression by Western blot,
NOTE Confidence: 0.80763433
00:06:45.370 --> 00:06:47.665 which is what I want you to focus on,
NOTE Confidence: 0.80763433
00:06:47.670 --> 00:06:48.918 and immunohistochemical staining.
NOTE Confidence: 0.80763433
00:06:48.918 --> 00:06:52.388 And you can see that even the tumor
NOTE Confidence: 0.80763433
00:06:52.388 --> 00:06:55.769 here with the weakest or almost absent
NOTE Confidence: 0.80763433
00:06:55.769 --> 00:06:57.857 immunohistochemical staining in the 4th lane.
NOTE Confidence: 0.80763433
00:06:57.860 --> 00:07:00.386 That lacks her two gene amplification
NOTE Confidence: 0.80763433

00:07:00.386 --> 00:07:03.199 and has low levels of her 2M RNA.

NOTE Confidence: 0.80763433

00:07:03.200 --> 00:07:05.400 Clearly has her two protein

NOTE Confidence: 0.80763433

00:07:05.400 --> 00:07:07.160 detectable by Western blot.

NOTE Confidence: 0.80763433

00:07:07.160 --> 00:07:10.121 And I want to make the point that her

NOTE Confidence: 0.80763433

00:07:10.121 --> 00:07:13.478 two IHC result of zero in formalin

NOTE Confidence: 0.80763433

00:07:13.478 --> 00:07:15.938 fixed paraffin embedded tissue is

NOTE Confidence: 0.80763433

00:07:15.938 --> 00:07:18.416 not necessarily her too low null.

NOTE Confidence: 0.80763433

00:07:18.420 --> 00:07:20.766 And I suspect that there are

NOTE Confidence: 0.80763433

00:07:20.766 --> 00:07:22.831 really likely no breast tumors

NOTE Confidence: 0.80763433

00:07:22.831 --> 00:07:25.345 that are completely her to null.

NOTE Confidence: 0.80763433

00:07:25.350 --> 00:07:27.884 So what we've learned is that her

NOTE Confidence: 0.80763433

00:07:27.884 --> 00:07:30.052 two positive breast cancer expresses

NOTE Confidence: 0.80763433

00:07:30.052 --> 00:07:32.587 about 2,000,000 molecules per cell,

NOTE Confidence: 0.80763433

00:07:32.590 --> 00:07:35.334 and that level is about 100 times the

NOTE Confidence: 0.80763433

00:07:35.334 --> 00:07:37.609 normal level of her two expression,

NOTE Confidence: 0.80763433

00:07:37.610 --> 00:07:39.465 which is in the range of about

NOTE Confidence: 0.80763433

00:07:39.470 --> 00:07:42.585 20,000 molecules of her two per cell.

NOTE Confidence: 0.80763433

00:07:42.590 --> 00:07:45.718 So rather than refer to breast cancer as

NOTE Confidence: 0.80763433

00:07:45.718 --> 00:07:49.267 her two positive versus her two negative,

NOTE Confidence: 0.80763433

00:07:49.270 --> 00:07:51.095 a more appropriate description in

NOTE Confidence: 0.80763433

00:07:51.095 --> 00:07:53.482 my opinion is her two overexpressing

NOTE Confidence: 0.80763433

00:07:53.482 --> 00:07:55.446 versus her two normal.

NOTE Confidence: 0.88478821

00:07:58.130 --> 00:08:00.570 Never intending to be quantitative,

NOTE Confidence: 0.88478821

00:08:00.570 --> 00:08:02.868 Mike Press suggested the well known

NOTE Confidence: 0.88478821

00:08:02.868 --> 00:08:05.770 scoring system for her two IHC which is

NOTE Confidence: 0.88478821

00:08:05.770 --> 00:08:08.198 shown here which was designed to allow

NOTE Confidence: 0.88478821

00:08:08.198 --> 00:08:10.694 routine testing in pathology labs giving

NOTE Confidence: 0.88478821

00:08:10.694 --> 00:08:12.934 their ability to swing distinguish.

NOTE Confidence: 0.88478821

00:08:12.934 --> 00:08:15.886 Her two driven her two overexpressing

NOTE Confidence: 0.88478821

00:08:15.886 --> 00:08:18.595 breast tumors from all the others and

NOTE Confidence: 0.88478821

00:08:18.595 --> 00:08:21.066 it turned out that high level protein

NOTE Confidence: 0.88478821

00:08:21.066 --> 00:08:24.042 over expression by IHC most of the time

NOTE Confidence: 0.88478821

00:08:24.050 --> 00:08:26.906 correlated with her two gene amplification.

NOTE Confidence: 0.88478821

00:08:26.910 --> 00:08:29.450 And pathologists could relatively easily

NOTE Confidence: 0.88478821

00:08:29.450 --> 00:08:31.482 identify tumors with overexpression.

NOTE Confidence: 0.880442007142857

00:08:33.880 --> 00:08:35.992 David Rimm has found in the

NOTE Confidence: 0.880442007142857

00:08:35.992 --> 00:08:37.892 publication shown here that even

NOTE Confidence: 0.880442007142857

00:08:37.892 --> 00:08:39.584 experienced pathologists don't have

NOTE Confidence: 0.880442007142857

00:08:39.584 --> 00:08:42.452 a high level of agreement on scoring

NOTE Confidence: 0.880442007142857

00:08:42.452 --> 00:08:44.516 for breast cancers that are not,

NOTE Confidence: 0.880442007142857

00:08:44.520 --> 00:08:46.548 frankly her, too positive.

NOTE Confidence: 0.880442007142857

00:08:46.548 --> 00:08:48.069 In this publication,

NOTE Confidence: 0.880442007142857

00:08:48.070 --> 00:08:50.618 he showed that data from the College

NOTE Confidence: 0.880442007142857

00:08:50.618 --> 00:08:52.055 of American Pathologists surveys

NOTE Confidence: 0.880442007142857

00:08:52.055 --> 00:08:54.550 on a series of about 1400 breast

NOTE Confidence: 0.880442007142857

00:08:54.550 --> 00:08:57.830 cancer cases showed that 19% of the

NOTE Confidence: 0.880442007142857

00:08:57.830 --> 00:08:59.630 cases generate results with less

NOTE Confidence: 0.880442007142857

00:08:59.630 --> 00:09:02.002 than or equal to 70% concordance

NOTE Confidence: 0.880442007142857

00:09:02.002 --> 00:09:06.050 for her two IHC 0 versus 1 plus.

NOTE Confidence: 0.880442007142857

00:09:06.050 --> 00:09:08.694 And in another series of 170 Yale

NOTE Confidence: 0.880442007142857

00:09:08.694 --> 00:09:10.854 Cancer Center cases that was

NOTE Confidence: 0.880442007142857

00:09:10.854 --> 00:09:13.250 distributed to 18 pathologists,

NOTE Confidence: 0.880442007142857

00:09:13.250 --> 00:09:15.770 there was only 26% concordance

NOTE Confidence: 0.880442007142857

00:09:15.770 --> 00:09:18.850 between IHC Zero and one plus.

NOTE Confidence: 0.8644511825

00:09:21.500 --> 00:09:23.490 In another study, David Rimm's

NOTE Confidence: 0.8644511825

00:09:23.490 --> 00:09:26.165 group used his Aqua method of

NOTE Confidence: 0.8644511825

00:09:26.165 --> 00:09:27.989 quantitative immunofluorescence to

NOTE Confidence: 0.8644511825

00:09:27.989 --> 00:09:31.029 develop conditions that could more

NOTE Confidence: 0.8644511825

00:09:31.029 --> 00:09:33.179 quantitatively measure levels of her

NOTE Confidence: 0.8644511825

00:09:33.180 --> 00:09:36.040 2IN non overexpressing breast tumors.

NOTE Confidence: 0.8644511825

00:09:36.040 --> 00:09:38.220 And this plot shows quantitation

NOTE Confidence: 0.8644511825

00:09:38.220 --> 00:09:41.235 of her two levels in cases that

NOTE Confidence: 0.8644511825

00:09:41.235 --> 00:09:43.860 are IHC 3 plus shown in Green,
NOTE Confidence: 0.8644511825

00:09:43.860 --> 00:09:46.220 2 plus shown in black,
NOTE Confidence: 0.8644511825

00:09:46.220 --> 00:09:48.560 one plus shown in red,
NOTE Confidence: 0.8644511825

00:09:48.560 --> 00:09:51.230 and zero is shown in blue.
NOTE Confidence: 0.8644511825

00:09:51.230 --> 00:09:54.166 And you can see that her two protein
NOTE Confidence: 0.8644511825

00:09:54.166 --> 00:09:56.630 was detected in all of these cases,
NOTE Confidence: 0.8644511825

00:09:56.630 --> 00:09:58.958 and within the limit of linearity
NOTE Confidence: 0.8644511825

00:09:58.958 --> 00:10:00.510 of this particular assay,
NOTE Confidence: 0.8644511825

00:10:00.510 --> 00:10:02.620 cases that were called by
NOTE Confidence: 0.8644511825

00:10:02.620 --> 00:10:05.969 pathologists 2 + 1 plus or zero
NOTE Confidence: 0.8644511825

00:10:05.969 --> 00:10:08.265 are fairly randomly distributed.
NOTE Confidence: 0.8644511825

00:10:08.270 --> 00:10:10.124 Doctor Rimm suspects that there may
NOTE Confidence: 0.8644511825

00:10:10.124 --> 00:10:11.909 be a small percentage of cases,
NOTE Confidence: 0.8644511825

00:10:11.910 --> 00:10:13.538 not more than 10%,
NOTE Confidence: 0.8644511825

00:10:13.538 --> 00:10:15.573 that may truly have undetectable
NOTE Confidence: 0.8644511825

00:10:15.573 --> 00:10:16.828 levels of her two.

NOTE Confidence: 0.8644511825

00:10:16.830 --> 00:10:19.135 But I actually remain unconvinced

NOTE Confidence: 0.8644511825

00:10:19.135 --> 00:10:22.539 so far that there are any truly

NOTE Confidence: 0.8644511825

00:10:22.539 --> 00:10:25.054 her two negative breast cancers.

NOTE Confidence: 0.8644511825

00:10:25.060 --> 00:10:27.526 Two studies looked at whether there

NOTE Confidence: 0.8644511825

00:10:27.526 --> 00:10:29.170 are actually clinical differences

NOTE Confidence: 0.8644511825

00:10:29.236 --> 00:10:30.906 in breast cancer behavior between

NOTE Confidence: 0.8644511825

00:10:30.906 --> 00:10:33.184 tumors that are her 20 or those

NOTE Confidence: 0.8644511825

00:10:33.184 --> 00:10:34.828 that are being called her too

NOTE Confidence: 0.8644511825

00:10:34.828 --> 00:10:36.976 low one plus or two plus.

NOTE Confidence: 0.8644511825

00:10:36.976 --> 00:10:39.370 The first study from Canada looked

NOTE Confidence: 0.8644511825

00:10:39.456 --> 00:10:41.675 at 319 cases and suggested that

NOTE Confidence: 0.8644511825

00:10:41.675 --> 00:10:44.639 her 20 cases compared to 1 pluses

NOTE Confidence: 0.8644511825

00:10:44.639 --> 00:10:46.669 and two pluses were actually

NOTE Confidence: 0.8644511825

00:10:46.669 --> 00:10:49.059 more likely to be high grade,

NOTE Confidence: 0.8644511825

00:10:49.060 --> 00:10:51.560 have lower ER histo score,

NOTE Confidence: 0.8644511825

00:10:51.560 --> 00:10:54.199 be less likely to be PCR positive.
NOTE Confidence: 0.8644511825

00:10:54.200 --> 00:10:56.594 Be more likely to be triple negative
NOTE Confidence: 0.8644511825

00:10:56.594 --> 00:10:58.829 and have worse overall survival,
NOTE Confidence: 0.8644511825

00:10:58.830 --> 00:11:00.470 which is actually counterintuitive
NOTE Confidence: 0.8644511825

00:11:00.470 --> 00:11:02.930 to the known association of her
NOTE Confidence: 0.8644511825

00:11:02.997 --> 00:11:05.047 two with more aggressive disease.
NOTE Confidence: 0.8644511825

00:11:05.050 --> 00:11:05.439 However,
NOTE Confidence: 0.8644511825

00:11:05.439 --> 00:11:07.773 a larger study from Dana Farber
NOTE Confidence: 0.8644511825

00:11:07.773 --> 00:11:10.203 with over 5000 cases showed that
NOTE Confidence: 0.8644511825

00:11:10.203 --> 00:11:12.183 although once again her two
NOTE Confidence: 0.8644511825

00:11:12.183 --> 00:11:15.015 zeros seem to be less likely to
NOTE Confidence: 0.8644511825

00:11:15.015 --> 00:11:16.587 be hormone receptor positive,
NOTE Confidence: 0.8644511825

00:11:16.590 --> 00:11:18.545 they actually showed no difference
NOTE Confidence: 0.8644511825

00:11:18.545 --> 00:11:20.109 in disease free survival,
NOTE Confidence: 0.8644511825

00:11:20.110 --> 00:11:22.122 distant disease free survival,
NOTE Confidence: 0.8644511825

00:11:22.122 --> 00:11:24.134 overall survival or pathologic

NOTE Confidence: 0.8644511825

00:11:24.134 --> 00:11:26.546 complete response rates for those

NOTE Confidence: 0.8644511825

00:11:26.546 --> 00:11:28.330 who got neoadjuvant chemotherapy.

NOTE Confidence: 0.8644511825

00:11:28.330 --> 00:11:30.050 And that suggested that her

NOTE Confidence: 0.8644511825

00:11:30.050 --> 00:11:32.739 two low breast cancer is not a

NOTE Confidence: 0.8644511825

00:11:32.739 --> 00:11:34.089 distinct biological subtype.

NOTE Confidence: 0.777617024909091

00:11:36.370 --> 00:11:38.895 Finally, the Daisy study actually

NOTE Confidence: 0.777617024909091

00:11:38.895 --> 00:11:41.420 examined the activity of trastuzumab

NOTE Confidence: 0.777617024909091

00:11:41.500 --> 00:11:44.056 direkt can in all breast cancer

NOTE Confidence: 0.777617024909091

00:11:44.056 --> 00:11:46.629 subtypes with three cohorts shown here.

NOTE Confidence: 0.777617024909091

00:11:46.630 --> 00:11:48.650 Cohort 1 being conventionally

NOTE Confidence: 0.777617024909091

00:11:48.650 --> 00:11:50.670 hurt you positive patients,

NOTE Confidence: 0.777617024909091

00:11:50.670 --> 00:11:53.148 Cohort 2 being IHC one plus

NOTE Confidence: 0.777617024909091

00:11:53.148 --> 00:11:55.750 or two plus fish negative,

NOTE Confidence: 0.777617024909091

00:11:55.750 --> 00:11:59.188 what we now call her too low and cohort

NOTE Confidence: 0.777617024909091

00:11:59.188 --> 00:12:02.682 3 being actually her 20 cases and

NOTE Confidence: 0.777617024909091

00:12:02.682 --> 00:12:06.322 responses were seen in 33% of the 72.
NOTE Confidence: 0.777617024909091

00:12:06.322 --> 00:12:11.118 Were too low cases, but also in 30.6% of
NOTE Confidence: 0.777617024909091

00:12:11.118 --> 00:12:15.780 the 30s of the 36 her two IHC 0 cases.
NOTE Confidence: 0.777617024909091

00:12:15.780 --> 00:12:19.506 So while the IH2 IHC 0 cases were slightly
NOTE Confidence: 0.777617024909091

00:12:19.506 --> 00:12:22.377 numerically less and the numbers are small,
NOTE Confidence: 0.777617024909091

00:12:22.380 --> 00:12:24.675 this study certainly supports activity
NOTE Confidence: 0.777617024909091

00:12:24.675 --> 00:12:27.750 of this agent in her 20 cases.
NOTE Confidence: 0.877171672857143

00:12:30.080 --> 00:12:33.174 So to summarize, I think I've discussed
NOTE Confidence: 0.877171672857143

00:12:33.174 --> 00:12:36.759 that IHC is not a quantitative assay,
NOTE Confidence: 0.877171672857143

00:12:36.760 --> 00:12:38.700 that pathologists have difficulty
NOTE Confidence: 0.877171672857143

00:12:38.700 --> 00:12:40.640 in distinguishing between her
NOTE Confidence: 0.877171672857143

00:12:40.640 --> 00:12:42.839 two one plus and 0 cases,
NOTE Confidence: 0.877171672857143

00:12:42.840 --> 00:12:44.770 that her two can certainly
NOTE Confidence: 0.877171672857143

00:12:44.770 --> 00:12:47.280 be measured in IHC 0 cases,
NOTE Confidence: 0.877171672857143

00:12:47.280 --> 00:12:50.388 that her two IHC breast cancers behave
NOTE Confidence: 0.877171672857143

00:12:50.388 --> 00:12:53.198 similarly to quote her two low cases,

NOTE Confidence: 0.877171672857143

00:12:53.200 --> 00:12:55.132 and that in the Daisy trial

NOTE Confidence: 0.877171672857143

00:12:55.132 --> 00:12:56.906 there was activity of trastuzumab

NOTE Confidence: 0.877171672857143

00:12:56.906 --> 00:12:58.986 dierickx tikan in her two.

NOTE Confidence: 0.877171672857143

00:12:58.990 --> 00:13:01.414 0 cases that is with the

NOTE Confidence: 0.877171672857143

00:13:01.414 --> 00:13:03.740 small number of cases tested,

NOTE Confidence: 0.877171672857143

00:13:03.740 --> 00:13:06.158 really not very different from the

NOTE Confidence: 0.877171672857143

00:13:06.158 --> 00:13:09.118 activity seen in quote her two low cases.

NOTE Confidence: 0.877171672857143

00:13:09.120 --> 00:13:11.832 So I reiterate that her two IHC 0

NOTE Confidence: 0.877171672857143

00:13:11.832 --> 00:13:14.805 is not necessarily her to null and

NOTE Confidence: 0.877171672857143

00:13:14.805 --> 00:13:17.565 I suspect that no breast cancer

NOTE Confidence: 0.877171672857143

00:13:17.565 --> 00:13:19.895 is completely her to know.

NOTE Confidence: 0.877171672857143

00:13:19.900 --> 00:13:22.756 And it's clear that what we would

NOTE Confidence: 0.877171672857143

00:13:22.756 --> 00:13:25.502 consider normal levels of her two

NOTE Confidence: 0.877171672857143

00:13:25.502 --> 00:13:27.426 expression can confer sensitivity

NOTE Confidence: 0.877171672857143

00:13:27.426 --> 00:13:29.240 to trastuzumab direkt CAD.

NOTE Confidence: 0.877171672857143

00:13:29.240 --> 00:13:31.850 So I want to state that I think we
NOTE Confidence: 0.877171672857143

00:13:31.850 --> 00:13:34.358 know that there is her two expressed
NOTE Confidence: 0.877171672857143

00:13:34.358 --> 00:13:36.680 and there is her two normal.
NOTE Confidence: 0.877171672857143

00:13:36.680 --> 00:13:38.792 But I don't feel that we know for
NOTE Confidence: 0.877171672857143

00:13:38.792 --> 00:13:40.791 certain that there is any other
NOTE Confidence: 0.877171672857143

00:13:40.791 --> 00:13:42.897 category but besides those two categories.
NOTE Confidence: 0.877171672857143

00:13:42.900 --> 00:13:45.245 And so I make somewhat of a
NOTE Confidence: 0.877171672857143

00:13:45.245 --> 00:13:45.915 provocative statement,
NOTE Confidence: 0.877171672857143

00:13:45.920 --> 00:13:48.664 but I think I prefer I would propose
NOTE Confidence: 0.877171672857143

00:13:48.664 --> 00:13:51.214 that perhaps we should not be excluding
NOTE Confidence: 0.877171672857143

00:13:51.214 --> 00:13:53.541 her 20 IHC patients from potentially
NOTE Confidence: 0.877171672857143

00:13:53.541 --> 00:13:55.856 benefiting from trastuzumab dierickx T
NOTE Confidence: 0.877171672857143

00:13:55.856 --> 00:13:59.380 can I note that this would be off label?
NOTE Confidence: 0.877171672857143

00:13:59.380 --> 00:13:59.734 Use,
NOTE Confidence: 0.877171672857143

00:13:59.734 --> 00:14:01.504 but I think scientifically and
NOTE Confidence: 0.877171672857143

00:14:01.504 --> 00:14:03.730 with support from the Daisy trial,

NOTE Confidence: 0.877171672857143
00:14:03.730 --> 00:14:05.435 we could consider this agent
NOTE Confidence: 0.877171672857143
00:14:05.435 --> 00:14:07.567 for patients with her two zeros
NOTE Confidence: 0.877171672857143
00:14:07.567 --> 00:14:09.382 that otherwise don't have any
NOTE Confidence: 0.877171672857143
00:14:09.382 --> 00:14:12.648 other good treatments for them.
NOTE Confidence: 0.877171672857143
00:14:12.650 --> 00:14:13.838 That's my last slide.
NOTE Confidence: 0.841771010526316
00:14:16.880 --> 00:14:18.868 Thank you, doctor Digiovanna.
NOTE Confidence: 0.841771010526316
00:14:18.868 --> 00:14:21.850 That was a fantastic real overview
NOTE Confidence: 0.841771010526316
00:14:21.937 --> 00:14:23.769 of the evolving definition
NOTE Confidence: 0.841771010526316
00:14:23.769 --> 00:14:26.059 of her too and positivity.
NOTE Confidence: 0.841771010526316
00:14:26.060 --> 00:14:28.742 I'm sure that'll create some provocative
NOTE Confidence: 0.841771010526316
00:14:28.742 --> 00:14:31.199 hopefully questions in the chat box.
NOTE Confidence: 0.841771010526316
00:14:31.200 --> 00:14:36.020 And also later in the panel session,
NOTE Confidence: 0.841771010526316
00:14:36.020 --> 00:14:37.628 we're going to move on to
NOTE Confidence: 0.841771010526316
00:14:37.628 --> 00:14:38.432 Doctor Rachel Greenup,
NOTE Confidence: 0.841771010526316
00:14:38.440 --> 00:14:40.660 who's our chief of breast surgery
NOTE Confidence: 0.841771010526316

00:14:40.660 --> 00:14:42.390 here at Yale Department of
NOTE Confidence: 0.841771010526316

00:14:42.390 --> 00:14:43.774 Surgery and Associate Professor
NOTE Confidence: 0.841771010526316

00:14:43.774 --> 00:14:45.659 of surgery I'm talking about.
NOTE Confidence: 0.841771010526316

00:14:45.660 --> 00:14:47.460 Dates and breast cancer surgery.
NOTE Confidence: 0.841771010526316

00:14:47.460 --> 00:14:48.460 Thank you, Doctor Greenup.
NOTE Confidence: 0.857416

00:14:53.500 --> 00:14:54.628 My name is Ray.
NOTE Confidence: 0.92116813

00:14:54.700 --> 00:14:55.988 Give me one second.
NOTE Confidence: 0.86900458

00:14:57.150 --> 00:14:58.118 I just have to.
NOTE Confidence: 0.7009086

00:15:00.870 --> 00:15:01.800 Re share.
NOTE Confidence: 0.88272972

00:15:10.460 --> 00:15:13.680 Can you see that? OK, great.
NOTE Confidence: 0.88272972

00:15:13.680 --> 00:15:15.580 Thank you for having me.
NOTE Confidence: 0.88272972

00:15:15.580 --> 00:15:17.060 So I'm Rachel greenup.
NOTE Confidence: 0.88272972

00:15:17.060 --> 00:15:19.860 I'm a associate professor of breast surgery.
NOTE Confidence: 0.88272972

00:15:19.860 --> 00:15:22.180 I've been at Yale about a year and a half,
NOTE Confidence: 0.88272972

00:15:22.180 --> 00:15:24.090 and I'm excited to be
NOTE Confidence: 0.88272972

00:15:24.090 --> 00:15:26.000 here with you all tonight.

NOTE Confidence: 0.88272972

00:15:26.000 --> 00:15:28.825 So I often start with this slide because

NOTE Confidence: 0.88272972

00:15:28.825 --> 00:15:31.609 one of our favorite things about breast

NOTE Confidence: 0.88272972

00:15:31.609 --> 00:15:34.219 cancer surgery is seeing the incredible

NOTE Confidence: 0.88272972

00:15:34.219 --> 00:15:36.408 strides we've made in practicing.

NOTE Confidence: 0.88272972

00:15:36.410 --> 00:15:39.140 And by reducing what we do unnecessarily

NOTE Confidence: 0.88272972

00:15:39.140 --> 00:15:42.449 and seeing how it improves patient outcomes.

NOTE Confidence: 0.88272972

00:15:42.450 --> 00:15:44.865 So we stopped doing radical

NOTE Confidence: 0.88272972

00:15:44.865 --> 00:15:46.916 mastectomies in the 1990s,

NOTE Confidence: 0.88272972

00:15:46.916 --> 00:15:47.960 early 2000s,

NOTE Confidence: 0.88272972

00:15:47.960 --> 00:15:50.462 when we learned that lumpectomy with

NOTE Confidence: 0.88272972

00:15:50.462 --> 00:15:52.130 radiation was equally effective.

NOTE Confidence: 0.88272972

00:15:52.130 --> 00:15:54.468 And you can see this picture here,

NOTE Confidence: 0.88272972

00:15:54.470 --> 00:15:56.066 this old black and white photo

NOTE Confidence: 0.88272972

00:15:56.066 --> 00:15:57.926 of this woman who's really had

NOTE Confidence: 0.88272972

00:15:57.926 --> 00:15:59.398 extensive surgery with resection

NOTE Confidence: 0.88272972

00:15:59.398 --> 00:16:00.870 of her pectoralis muscle.
NOTE Confidence: 0.88272972

00:16:00.870 --> 00:16:03.006 It's so rare for us to need to
NOTE Confidence: 0.88272972

00:16:03.006 --> 00:16:05.170 do such extensive treatment in
NOTE Confidence: 0.78604835625

00:16:05.970 --> 00:16:08.268 2022. I don't think the slides
NOTE Confidence: 0.78604835625

00:16:08.268 --> 00:16:10.780 are forwarding yet, seeing that.
NOTE Confidence: 0.78604835625

00:16:10.780 --> 00:16:13.380 We're still on the updates and breast cancer.
NOTE Confidence: 0.851759308

00:16:14.850 --> 00:16:19.720 And that's happening. Let me.
NOTE Confidence: 0.851759308

00:16:19.720 --> 00:16:22.557 Let's try this again. Can you see that?
NOTE Confidence: 0.716443724285714

00:16:23.600 --> 00:16:25.740 We're looking at the Milan one trial. Yeah.
NOTE Confidence: 0.919685013333333

00:16:25.830 --> 00:16:29.100 OK. Sorry about that. Thank you.
NOTE Confidence: 0.919685013333333

00:16:29.100 --> 00:16:31.508 More recently we've been able to reduce
NOTE Confidence: 0.919685013333333

00:16:31.508 --> 00:16:33.947 the number of axillary lymph node
NOTE Confidence: 0.919685013333333

00:16:33.947 --> 00:16:36.182 dissections and significantly reduce the
NOTE Confidence: 0.919685013333333

00:16:36.182 --> 00:16:39.065 rates of lymphedema in women who have
NOTE Confidence: 0.919685013333333

00:16:39.065 --> 00:16:41.449 small amounts of node positive disease.
NOTE Confidence: 0.919685013333333

00:16:41.449 --> 00:16:44.732 We have good 10 year data suggesting

NOTE Confidence: 0.919685013333333

00:16:44.732 --> 00:16:47.545 that older women with favorable

NOTE Confidence: 0.919685013333333

00:16:47.545 --> 00:16:49.925 hormone receptor positive breast

NOTE Confidence: 0.919685013333333

00:16:49.925 --> 00:16:53.140 tumors can safely forgo radiation.

NOTE Confidence: 0.919685013333333

00:16:53.140 --> 00:16:55.292 We have good data to suggest that many

NOTE Confidence: 0.919685013333333

00:16:55.292 --> 00:16:57.126 women with hormone receptor positive

NOTE Confidence: 0.919685013333333

00:16:57.126 --> 00:16:59.186 breast cancer have little benefit.

NOTE Confidence: 0.919685013333333

00:16:59.190 --> 00:17:01.286 From chemotherapy above and

NOTE Confidence: 0.919685013333333

00:17:01.286 --> 00:17:02.858 beyond endocrine therapy.

NOTE Confidence: 0.919685013333333

00:17:02.860 --> 00:17:05.326 And we have ongoing national and

NOTE Confidence: 0.919685013333333

00:17:05.326 --> 00:17:07.454 international trials of of which

NOTE Confidence: 0.919685013333333

00:17:07.454 --> 00:17:09.920 doctor Golshan is very much involved

NOTE Confidence: 0.919685013333333

00:17:09.920 --> 00:17:12.758 looking at women with low grade or

NOTE Confidence: 0.919685013333333

00:17:12.758 --> 00:17:14.673 low risk ductal carcinoma insight

NOTE Confidence: 0.919685013333333

00:17:14.673 --> 00:17:17.190 two who can forego usual care

NOTE Confidence: 0.919685013333333

00:17:17.190 --> 00:17:19.320 for active surveillance and this

NOTE Confidence: 0.919685013333333

00:17:19.393 --> 00:17:22.165 is a comment trial which we are
NOTE Confidence: 0.9196850133333333

00:17:22.165 --> 00:17:24.020 currently enrolling at at Yale.
NOTE Confidence: 0.9196850133333333

00:17:24.020 --> 00:17:25.868 So many of our patients come to us
NOTE Confidence: 0.9196850133333333

00:17:25.868 --> 00:17:28.102 with a breast cancer that was diagnosed
NOTE Confidence: 0.9196850133333333

00:17:28.102 --> 00:17:30.252 on screening imaging and you can
NOTE Confidence: 0.9196850133333333

00:17:30.252 --> 00:17:32.107 see here a traditional diagnostic
NOTE Confidence: 0.9196850133333333

00:17:32.107 --> 00:17:34.102 mammogram with a correlating ultrasound
NOTE Confidence: 0.9196850133333333

00:17:34.102 --> 00:17:37.114 showing a biopsy proven breast cancer.
NOTE Confidence: 0.9196850133333333

00:17:37.120 --> 00:17:38.660 And I'm going to start with breast cancer
NOTE Confidence: 0.9196850133333333

00:17:38.660 --> 00:17:40.520 screening even though Doctor Lewis here,
NOTE Confidence: 0.9196850133333333

00:17:40.520 --> 00:17:41.675 I'll be brief.
NOTE Confidence: 0.9196850133333333

00:17:41.675 --> 00:17:44.370 There's been a lot of opinions over
NOTE Confidence: 0.9196850133333333

00:17:44.448 --> 00:17:48.016 several years and as a group we are
NOTE Confidence: 0.9196850133333333

00:17:48.016 --> 00:17:49.414 generally recommending screening
NOTE Confidence: 0.9196850133333333

00:17:49.414 --> 00:17:52.375 starting at 40 on an annual basis,
NOTE Confidence: 0.9196850133333333

00:17:52.380 --> 00:17:53.790 we more recently.

NOTE Confidence: 0.9196850133333333
00:17:53.790 --> 00:17:56.610 In our American Society of Breast
NOTE Confidence: 0.9196850133333333
00:17:56.610 --> 00:17:57.950 surgeons community,
NOTE Confidence: 0.9196850133333333
00:17:57.950 --> 00:18:00.200 there has been formal guidelines that
NOTE Confidence: 0.9196850133333333
00:18:00.200 --> 00:18:02.608 came forward in 2019 suggesting that
NOTE Confidence: 0.9196850133333333
00:18:02.608 --> 00:18:05.098 women over 25 should undergo formal
NOTE Confidence: 0.9196850133333333
00:18:05.098 --> 00:18:07.158 risk assessment for breast cancer
NOTE Confidence: 0.9196850133333333
00:18:07.158 --> 00:18:09.382 based on personal and family history
NOTE Confidence: 0.9196850133333333
00:18:09.382 --> 00:18:11.706 and that they were also eligible
NOTE Confidence: 0.9196850133333333
00:18:11.706 --> 00:18:13.770 for consideration of screening.
NOTE Confidence: 0.9196850133333333
00:18:13.770 --> 00:18:14.690 In addition,
NOTE Confidence: 0.9196850133333333
00:18:14.690 --> 00:18:16.530 these guidelines were really
NOTE Confidence: 0.9196850133333333
00:18:16.530 --> 00:18:18.370 valuable for practicing surgeons
NOTE Confidence: 0.9196850133333333
00:18:18.441 --> 00:18:21.001 and that they included potential
NOTE Confidence: 0.9196850133333333
00:18:21.001 --> 00:18:23.049 recommendations for supplemental imaging,
NOTE Confidence: 0.9196850133333333
00:18:23.050 --> 00:18:24.973 including 3D mammography.
NOTE Confidence: 0.9196850133333333

00:18:24.973 --> 00:18:28.178 MRI and or screening ultrasound
NOTE Confidence: 0.9196850133333333

00:18:28.178 --> 00:18:31.659 for which yells very well known.
NOTE Confidence: 0.9196850133333333

00:18:31.660 --> 00:18:33.404 When we meet our patients with
NOTE Confidence: 0.9196850133333333

00:18:33.404 --> 00:18:34.756 a breast cancer diagnosis,
NOTE Confidence: 0.9196850133333333

00:18:34.760 --> 00:18:36.716 many of them have options for
NOTE Confidence: 0.9196850133333333

00:18:36.716 --> 00:18:39.773 surgery and this is a black and white
NOTE Confidence: 0.9196850133333333

00:18:39.773 --> 00:18:41.453 illustration demonstrating an A
NOTE Confidence: 0.9196850133333333

00:18:41.453 --> 00:18:43.986 simplest form of breast conservation
NOTE Confidence: 0.9196850133333333

00:18:43.986 --> 00:18:46.154 with lumpectomy versus mastectomy.
NOTE Confidence: 0.9196850133333333

00:18:46.160 --> 00:18:48.116 When we talk about breast conservation,
NOTE Confidence: 0.9196850133333333

00:18:48.120 --> 00:18:50.250 that typically includes language of
NOTE Confidence: 0.9196850133333333

00:18:50.250 --> 00:18:51.954 lumpectomy followed by radiation.
NOTE Confidence: 0.9196850133333333

00:18:51.960 --> 00:18:53.952 But more recently we have identified
NOTE Confidence: 0.9196850133333333

00:18:53.952 --> 00:18:56.478 a subset of lower risk patients for
NOTE Confidence: 0.9196850133333333

00:18:56.478 --> 00:18:58.734 which radiation may not be necessary.
NOTE Confidence: 0.9196850133333333

00:18:58.740 --> 00:19:01.506 We always defer that decision to

NOTE Confidence: 0.919685013333333

00:19:01.506 --> 00:19:02.889 our radiation colleagues.

NOTE Confidence: 0.919685013333333

00:19:02.890 --> 00:19:05.270 And we typically require support

NOTE Confidence: 0.919685013333333

00:19:05.270 --> 00:19:07.870 from our radiologist either through

NOTE Confidence: 0.919685013333333

00:19:07.870 --> 00:19:10.576 wire localized lumpectomy to mark the

NOTE Confidence: 0.919685013333333

00:19:10.576 --> 00:19:13.935 spot on mammogram or in modern day

NOTE Confidence: 0.919685013333333

00:19:13.935 --> 00:19:16.870 through localizing devices we have

NOTE Confidence: 0.919685013333333

00:19:16.870 --> 00:19:19.176 instrumented and operationalized tag

NOTE Confidence: 0.919685013333333

00:19:19.176 --> 00:19:21.856 localization across our smilo sites.

NOTE Confidence: 0.919685013333333

00:19:21.860 --> 00:19:23.564 And the data is suggesting that

NOTE Confidence: 0.919685013333333

00:19:23.564 --> 00:19:25.094 use of these smaller implantable

NOTE Confidence: 0.919685013333333

00:19:25.094 --> 00:19:27.122 devices that are removed at the

NOTE Confidence: 0.919685013333333

00:19:27.122 --> 00:19:28.931 time of lumpectomy improve comfort

NOTE Confidence: 0.919685013333333

00:19:28.931 --> 00:19:30.761 for patients and are associated

NOTE Confidence: 0.919685013333333

00:19:30.761 --> 00:19:32.466 with higher patient satisfaction

NOTE Confidence: 0.919685013333333

00:19:32.466 --> 00:19:36.102 scores with reduced rates of margin

NOTE Confidence: 0.919685013333333

00:19:36.102 --> 00:19:38.628 positivity and smaller resections
NOTE Confidence: 0.9196850133333333

00:19:38.628 --> 00:19:41.088 of removed breast volume.
NOTE Confidence: 0.9196850133333333

00:19:41.090 --> 00:19:43.018 I think it's worth discussing all
NOTE Confidence: 0.9196850133333333

00:19:43.018 --> 00:19:44.526 the controversy around margins.
NOTE Confidence: 0.9196850133333333

00:19:44.530 --> 00:19:49.740 This really hit the late press even in 2019,
NOTE Confidence: 0.9196850133333333

00:19:49.740 --> 00:19:50.030 2020.
NOTE Confidence: 0.9196850133333333

00:19:50.030 --> 00:19:52.350 And this was based on the fact that
NOTE Confidence: 0.9196850133333333

00:19:52.414 --> 00:19:53.970 re excision rates historically
NOTE Confidence: 0.9196850133333333

00:19:53.970 --> 00:19:56.304 were really high ranging from 15
NOTE Confidence: 0.9196850133333333

00:19:56.366 --> 00:19:58.359 to 25% and many of women who went
NOTE Confidence: 0.9196850133333333

00:19:58.359 --> 00:19:59.160 back for second
NOTE Confidence: 0.86888420375

00:19:59.223 --> 00:20:01.485 surgery had close but negative margins,
NOTE Confidence: 0.86888420375

00:20:01.490 --> 00:20:04.250 meaning the second surgery did not
NOTE Confidence: 0.86888420375

00:20:04.250 --> 00:20:06.090 identify identify residual disease.
NOTE Confidence: 0.86888420375

00:20:06.090 --> 00:20:07.986 So there was a clear lack of consensus
NOTE Confidence: 0.86888420375

00:20:07.986 --> 00:20:09.988 about what was enough and there was

NOTE Confidence: 0.86888420375

00:20:09.988 --> 00:20:11.463 wide variation in clinical practice.

NOTE Confidence: 0.86888420375

00:20:11.470 --> 00:20:14.470 Across the country. Doctor Moran,

NOTE Confidence: 0.86888420375

00:20:14.470 --> 00:20:16.708 who leads our breast radiation oncology

NOTE Confidence: 0.86888420375

00:20:16.708 --> 00:20:18.857 program was really critical in taking

NOTE Confidence: 0.86888420375

00:20:18.857 --> 00:20:20.657 the lead on bringing together experts

NOTE Confidence: 0.86888420375

00:20:20.657 --> 00:20:22.989 from a multidisciplinary perspective.

NOTE Confidence: 0.86888420375

00:20:22.990 --> 00:20:26.630 They reviewed 33 men and 33 studies in a

NOTE Confidence: 0.86888420375

00:20:26.630 --> 00:20:28.888 meta analysis including over 28,000 patients.

NOTE Confidence: 0.86888420375

00:20:28.888 --> 00:20:31.751 And what they found was that certainly

NOTE Confidence: 0.86888420375

00:20:31.751 --> 00:20:33.894 positive margins did definitely increase

NOTE Confidence: 0.86888420375

00:20:33.894 --> 00:20:36.390 the risk of in breast recurrence.

NOTE Confidence: 0.86888420375

00:20:36.390 --> 00:20:38.730 However, no tumor on ink for

NOTE Confidence: 0.86888420375

00:20:38.730 --> 00:20:40.859 invasive ductal cancer was considered

NOTE Confidence: 0.86888420375

00:20:40.859 --> 00:20:43.835 considered a negative margin and that.

NOTE Confidence: 0.86888420375

00:20:43.840 --> 00:20:46.822 Age Histology size did not impact these

NOTE Confidence: 0.86888420375

00:20:46.822 --> 00:20:50.902 findings and no amount of added radiation or
NOTE Confidence: 0.86888420375

00:20:50.902 --> 00:20:53.617 chemotherapy could overcome good surgery.
NOTE Confidence: 0.86888420375

00:20:53.620 --> 00:20:55.090 And Doctor Moran,
NOTE Confidence: 0.86888420375

00:20:55.090 --> 00:20:58.030 in a partnership with many colleagues
NOTE Confidence: 0.86888420375

00:20:58.030 --> 00:21:01.032 from across the country in both
NOTE Confidence: 0.86888420375

00:21:01.032 --> 00:21:03.412 surgery and radiation also replicated
NOTE Confidence: 0.86888420375

00:21:03.412 --> 00:21:05.310 this process for DCIS,
NOTE Confidence: 0.86888420375

00:21:05.310 --> 00:21:07.160 which was really practice changing.
NOTE Confidence: 0.86888420375

00:21:07.160 --> 00:21:09.449 And when we estimated the number of
NOTE Confidence: 0.86888420375

00:21:09.449 --> 00:21:11.418 surgeries that it saved per year,
NOTE Confidence: 0.86888420375

00:21:11.420 --> 00:21:15.120 it was about 25,000.
NOTE Confidence: 0.86888420375

00:21:15.120 --> 00:21:16.988 Additional research that came out
NOTE Confidence: 0.86888420375

00:21:16.988 --> 00:21:19.218 of Yale looking at margin was the
NOTE Confidence: 0.86888420375

00:21:19.218 --> 00:21:21.360 landmark trial by Doctor Ennis Chapparr.
NOTE Confidence: 0.86888420375

00:21:21.360 --> 00:21:23.436 This was a randomized clinical trial,
NOTE Confidence: 0.86888420375

00:21:23.440 --> 00:21:24.012 small numbers,

NOTE Confidence: 0.86888420375

00:21:24.012 --> 00:21:26.300 yet it was one of the few local

NOTE Confidence: 0.86888420375

00:21:26.367 --> 00:21:28.172 regional trials done in breast

NOTE Confidence: 0.86888420375

00:21:28.172 --> 00:21:29.977 cancer for quite some time.

NOTE Confidence: 0.86888420375

00:21:29.980 --> 00:21:32.692 And women were randomized to either

NOTE Confidence: 0.86888420375

00:21:32.692 --> 00:21:34.500 having margins resected according

NOTE Confidence: 0.86888420375

00:21:34.569 --> 00:21:37.138 to the discretion of the surgeon or

NOTE Confidence: 0.86888420375

00:21:37.138 --> 00:21:39.485 routine cavity shave margins and it

NOTE Confidence: 0.86888420375

00:21:39.485 --> 00:21:41.843 clearly reduced the rate of margin

NOTE Confidence: 0.86888420375

00:21:41.843 --> 00:21:43.860 positivity and the need for re excision

NOTE Confidence: 0.86888420375

00:21:43.860 --> 00:21:45.889 by about half and again practice.

NOTE Confidence: 0.86888420375

00:21:45.890 --> 00:21:48.800 Changing for our surgical community.

NOTE Confidence: 0.86888420375

00:21:48.800 --> 00:21:49.957 When we talk about mastectomy,

NOTE Confidence: 0.86888420375

00:21:49.957 --> 00:21:52.176 we talk about removing the breast tissue.

NOTE Confidence: 0.86888420375

00:21:52.180 --> 00:21:54.245 This can be done with or without

NOTE Confidence: 0.86888420375

00:21:54.245 --> 00:21:55.972 reconstruction and we have wonderful

NOTE Confidence: 0.86888420375

00:21:55.972 --> 00:21:57.917 plastic surgery colleagues that can
NOTE Confidence: 0.86888420375

00:21:57.917 --> 00:22:00.399 offer either implant based and or
NOTE Confidence: 0.86888420375

00:22:00.399 --> 00:22:01.659 autologous tissue reconstruction.
NOTE Confidence: 0.86888420375

00:22:01.660 --> 00:22:04.180 And you'll hear from Doctor Ayalla
NOTE Confidence: 0.86888420375

00:22:04.180 --> 00:22:05.860 later in our session,
NOTE Confidence: 0.86888420375

00:22:05.860 --> 00:22:08.471 we know that there's been an increasing
NOTE Confidence: 0.86888420375

00:22:08.471 --> 00:22:10.081 rates of contralateral prophylactic
NOTE Confidence: 0.86888420375

00:22:10.081 --> 00:22:11.769 mastectomy or double mastectomy
NOTE Confidence: 0.86888420375

00:22:11.769 --> 00:22:14.232 and that these rates have tripled
NOTE Confidence: 0.86888420375

00:22:14.232 --> 00:22:15.687 in the last 40 years.
NOTE Confidence: 0.86888420375

00:22:15.690 --> 00:22:17.895 I show this picture always of Angelina
NOTE Confidence: 0.86888420375

00:22:17.895 --> 00:22:20.302 Jolie because she has a known Braca 1
NOTE Confidence: 0.86888420375

00:22:20.302 --> 00:22:22.143 mutation and came out publicly talking
NOTE Confidence: 0.86888420375

00:22:22.143 --> 00:22:24.405 about her choice for double mastectomy.
NOTE Confidence: 0.86888420375

00:22:24.410 --> 00:22:26.630 Yet she's at incredibly high risk,
NOTE Confidence: 0.86888420375

00:22:26.630 --> 00:22:30.030 as are our other hereditary

NOTE Confidence: 0.86888420375

00:22:30.030 --> 00:22:31.390 cancer populations.

NOTE Confidence: 0.86888420375

00:22:31.390 --> 00:22:33.945 But this data is really reflecting average

NOTE Confidence: 0.86888420375

00:22:33.945 --> 00:22:36.712 risk women who don't have a high risk

NOTE Confidence: 0.86888420375

00:22:36.712 --> 00:22:39.090 of developing cancer on the other side.

NOTE Confidence: 0.86888420375

00:22:39.090 --> 00:22:41.673 We know that when women have their

NOTE Confidence: 0.86888420375

00:22:41.673 --> 00:22:43.648 unaffected breast removed and have

NOTE Confidence: 0.86888420375

00:22:43.648 --> 00:22:45.248 no hereditary Cancer syndrome,

NOTE Confidence: 0.86888420375

00:22:45.250 --> 00:22:47.242 removal of the healthy breast does

NOTE Confidence: 0.86888420375

00:22:47.242 --> 00:22:49.496 not add oncologic or survival benefit

NOTE Confidence: 0.86888420375

00:22:49.496 --> 00:22:51.212 and is unfortunately associated

NOTE Confidence: 0.86888420375

00:22:51.212 --> 00:22:53.932 with a small increased risk of

NOTE Confidence: 0.86888420375

00:22:53.932 --> 00:22:54.870 surgical complications.

NOTE Confidence: 0.86888420375

00:22:54.870 --> 00:22:57.094 But we do know many of our patients

NOTE Confidence: 0.86888420375

00:22:57.094 --> 00:22:58.954 choose double mastectomy for the

NOTE Confidence: 0.86888420375

00:22:58.954 --> 00:23:00.610 benefit of reduced surveillance,

NOTE Confidence: 0.86888420375

00:23:00.610 --> 00:23:03.466 improved symmetry and Peace of Mind.
NOTE Confidence: 0.86888420375

00:23:03.470 --> 00:23:04.628 And so again,
NOTE Confidence: 0.86888420375

00:23:04.628 --> 00:23:06.558 our association of Breast surgery
NOTE Confidence: 0.86888420375

00:23:06.558 --> 00:23:09.010 came forward in 2016 with a consensus.
NOTE Confidence: 0.86888420375

00:23:09.010 --> 00:23:12.484 Statement saying that we should consider
NOTE Confidence: 0.86888420375

00:23:12.484 --> 00:23:16.029 double mastectomy but not recommend it.
NOTE Confidence: 0.86888420375

00:23:16.030 --> 00:23:17.194 We are increasingly doing
NOTE Confidence: 0.86888420375

00:23:17.194 --> 00:23:18.649 a greater number of *****
NOTE Confidence: 0.877999839285714

00:23:18.650 --> 00:23:19.184 sparing mastectomies.
NOTE Confidence: 0.877999839285714

00:23:19.184 --> 00:23:20.786 We need to think about distance
NOTE Confidence: 0.877999839285714

00:23:20.786 --> 00:23:22.681 of the tumor from the ***** the
NOTE Confidence: 0.877999839285714

00:23:22.681 --> 00:23:24.586 skin quality, the tumor side.
NOTE Confidence: 0.877999839285714

00:23:24.590 --> 00:23:26.222 Increasingly we're realizing that
NOTE Confidence: 0.877999839285714

00:23:26.222 --> 00:23:28.262 even BRCA mutation carriers can
NOTE Confidence: 0.877999839285714

00:23:28.262 --> 00:23:30.464 safely have this operation done and
NOTE Confidence: 0.877999839285714

00:23:30.464 --> 00:23:32.194 the improved aesthetics for some

NOTE Confidence: 0.877999839285714

00:23:32.254 --> 00:23:34.192 women really helps them make it

NOTE Confidence: 0.877999839285714

00:23:34.192 --> 00:23:37.570 difficult choice for risk reduction.

NOTE Confidence: 0.877999839285714

00:23:37.570 --> 00:23:40.209 A little bit of a plug for our program,

NOTE Confidence: 0.877999839285714

00:23:40.210 --> 00:23:42.674 we're ready to launch a home recovery

NOTE Confidence: 0.877999839285714

00:23:42.674 --> 00:23:44.249 after mastectomy program at Yale.

NOTE Confidence: 0.877999839285714

00:23:44.250 --> 00:23:46.642 And this is really for a very select

NOTE Confidence: 0.877999839285714

00:23:46.642 --> 00:23:48.980 group of patients who live near the

NOTE Confidence: 0.877999839285714

00:23:48.980 --> 00:23:51.310 hospital who want to go home for

NOTE Confidence: 0.877999839285714

00:23:51.310 --> 00:23:53.403 recovery and who have a a safety

NOTE Confidence: 0.877999839285714

00:23:53.403 --> 00:23:56.350 net or support system with family,

NOTE Confidence: 0.877999839285714

00:23:56.350 --> 00:23:58.246 friends and a visiting home nurse.

NOTE Confidence: 0.877999839285714

00:23:58.250 --> 00:24:00.833 And we're excited to launch that program

NOTE Confidence: 0.877999839285714

00:24:00.833 --> 00:24:02.788 to again improve patient experience

NOTE Confidence: 0.877999839285714

00:24:02.788 --> 00:24:05.511 and choice of how they recover after

NOTE Confidence: 0.877999839285714

00:24:05.511 --> 00:24:07.648 such a life changing operation.

NOTE Confidence: 0.877999839285714

00:24:07.650 --> 00:24:08.858 When we think about managing
NOTE Confidence: 0.877999839285714

00:24:08.858 --> 00:24:10.428 lymph nodes in the axilla,
NOTE Confidence: 0.877999839285714

00:24:10.430 --> 00:24:12.923 we have good data from almost a decade ago,
NOTE Confidence: 0.877999839285714

00:24:12.930 --> 00:24:14.974 the Acas Oxy 11 trial that showed
NOTE Confidence: 0.877999839285714

00:24:14.974 --> 00:24:16.772 that women have a small amount
NOTE Confidence: 0.877999839285714

00:24:16.772 --> 00:24:18.488 of nodal positivity do not need
NOTE Confidence: 0.877999839285714

00:24:18.488 --> 00:24:20.447 a full lymph node dissection.
NOTE Confidence: 0.877999839285714

00:24:20.450 --> 00:24:23.215 We can rely on systemic therapy and
NOTE Confidence: 0.877999839285714

00:24:23.215 --> 00:24:25.570 radiation to sterilize remaining nodes.
NOTE Confidence: 0.877999839285714

00:24:25.570 --> 00:24:28.706 And we have a long-awaited data coming soon,
NOTE Confidence: 0.877999839285714

00:24:28.710 --> 00:24:31.040 hopefully from the Alliance 11202
NOTE Confidence: 0.877999839285714

00:24:31.040 --> 00:24:33.925 trials suggesting that women who have
NOTE Confidence: 0.877999839285714

00:24:33.925 --> 00:24:36.335 upfront biopsy proven nodal disease,
NOTE Confidence: 0.877999839285714

00:24:36.340 --> 00:24:38.716 who go on to have chemotherapy.
NOTE Confidence: 0.877999839285714

00:24:38.720 --> 00:24:40.898 And convert either to node negative
NOTE Confidence: 0.877999839285714

00:24:40.898 --> 00:24:43.923 or node positive may be able to rely

NOTE Confidence: 0.877999839285714

00:24:43.923 --> 00:24:45.803 on radiation further deescalating the

NOTE Confidence: 0.877999839285714

00:24:45.803 --> 00:24:48.258 need for completion lymphadenectomy.

NOTE Confidence: 0.91236078

00:24:50.480 --> 00:24:52.490 Lastly, I'd like to talk

NOTE Confidence: 0.91236078

00:24:52.490 --> 00:24:53.696 about genetic testing.

NOTE Confidence: 0.91236078

00:24:53.700 --> 00:24:56.622 We had clear NCCN guidelines around

NOTE Confidence: 0.91236078

00:24:56.622 --> 00:25:00.058 who was eligible for and covered for,

NOTE Confidence: 0.91236078

00:25:00.060 --> 00:25:02.480 from an insurance perspective,

NOTE Confidence: 0.91236078

00:25:02.480 --> 00:25:04.295 hereditary cancer screening.

NOTE Confidence: 0.91236078

00:25:04.300 --> 00:25:06.624 This study by Peter Beija was the

NOTE Confidence: 0.91236078

00:25:06.624 --> 00:25:09.079 first to suggest that we were probably

NOTE Confidence: 0.91236078

00:25:09.079 --> 00:25:11.594 missing a large group of women who

NOTE Confidence: 0.91236078

00:25:11.594 --> 00:25:13.814 did not meet our historic criteria,

NOTE Confidence: 0.91236078

00:25:13.820 --> 00:25:16.410 who then went on to have positive

NOTE Confidence: 0.91236078

00:25:16.410 --> 00:25:19.080 test results and again this prompted.

NOTE Confidence: 0.91236078

00:25:19.080 --> 00:25:21.195 Changes in our American Society

NOTE Confidence: 0.91236078

00:25:21.195 --> 00:25:23.310 of Breast surgeons guidelines for
NOTE Confidence: 0.91236078

00:25:23.375 --> 00:25:25.223 hereditary breast cancer testing
NOTE Confidence: 0.91236078

00:25:25.223 --> 00:25:27.533 really endorsing that any patient
NOTE Confidence: 0.91236078

00:25:27.533 --> 00:25:30.281 with a known breast cancer should be
NOTE Confidence: 0.91236078

00:25:30.281 --> 00:25:32.836 offered a genetic testing and that
NOTE Confidence: 0.91236078

00:25:32.836 --> 00:25:34.968 genetic counseling and potential
NOTE Confidence: 0.91236078

00:25:34.968 --> 00:25:38.020 testing should be made available.
NOTE Confidence: 0.91236078

00:25:38.020 --> 00:25:38.490 Finally,
NOTE Confidence: 0.91236078

00:25:38.490 --> 00:25:41.310 we have long-awaited data again from
NOTE Confidence: 0.91236078

00:25:41.310 --> 00:25:43.660 the ECOG 2108 trial suggesting that
NOTE Confidence: 0.91236078

00:25:43.660 --> 00:25:45.999 removal of the primary breast tumor
NOTE Confidence: 0.91236078

00:25:45.999 --> 00:25:47.944 in women with metastatic disease
NOTE Confidence: 0.91236078

00:25:47.944 --> 00:25:50.120 does not improve overall survival.
NOTE Confidence: 0.91236078

00:25:50.120 --> 00:25:52.493 This was a study by Seema Khan
NOTE Confidence: 0.91236078

00:25:52.493 --> 00:25:54.908 and Doctor Golshan was also very
NOTE Confidence: 0.91236078

00:25:54.908 --> 00:25:57.113 involved in this national discussion.

NOTE Confidence: 0.91236078

00:25:57.120 --> 00:25:59.016 They looked at a secondary outcomes

NOTE Confidence: 0.91236078

00:25:59.016 --> 00:26:00.966 of chest wall disease and patient

NOTE Confidence: 0.91236078

00:26:00.966 --> 00:26:01.899 quality of life.

NOTE Confidence: 0.91236078

00:26:01.900 --> 00:26:04.210 Women went on to have breast

NOTE Confidence: 0.91236078

00:26:04.210 --> 00:26:05.750 conservation or mastectomy with

NOTE Confidence: 0.91236078

00:26:05.821 --> 00:26:07.749 negative margins and systemic.

NOTE Confidence: 0.91236078

00:26:07.750 --> 00:26:09.290 Treatment at the discretion

NOTE Confidence: 0.91236078

00:26:09.290 --> 00:26:10.830 of their treating team.

NOTE Confidence: 0.91236078

00:26:10.830 --> 00:26:12.150 And essentially we found

NOTE Confidence: 0.91236078

00:26:12.150 --> 00:26:13.470 that local regional therapy,

NOTE Confidence: 0.91236078

00:26:13.470 --> 00:26:15.034 including surgery and radiation

NOTE Confidence: 0.91236078

00:26:15.034 --> 00:26:16.989 did not extend survival in

NOTE Confidence: 0.91236078

00:26:16.989 --> 00:26:19.126 women who were diagnosed with

NOTE Confidence: 0.91236078

00:26:19.126 --> 00:26:20.806 newly metastatic breast cancer,

NOTE Confidence: 0.91236078

00:26:20.810 --> 00:26:23.264 but it did have some improvements

NOTE Confidence: 0.91236078

00:26:23.264 --> 00:26:24.900 on controlling disease and
NOTE Confidence: 0.91236078

00:26:24.977 --> 00:26:26.888 disease progression locally.
NOTE Confidence: 0.91236078

00:26:26.890 --> 00:26:28.720 So that's a whirlwind tour on
NOTE Confidence: 0.91236078

00:26:28.720 --> 00:26:30.450 updates and breast cancer surgery.
NOTE Confidence: 0.91236078

00:26:30.450 --> 00:26:32.256 I'd be happy to take any questions
NOTE Confidence: 0.91236078

00:26:32.256 --> 00:26:33.669 and thanks for joining us.
NOTE Confidence: 0.844033587666666

00:26:35.070 --> 00:26:37.056 Thank you. Doctor Greenup having you
NOTE Confidence: 0.844033587666666

00:26:37.056 --> 00:26:39.165 here lead our breast surgical program
NOTE Confidence: 0.844033587666666

00:26:39.165 --> 00:26:41.325 is just absolutely fantastic and all
NOTE Confidence: 0.844033587666666

00:26:41.325 --> 00:26:43.710 the work that you've done whether it's
NOTE Confidence: 0.844033587666666

00:26:43.710 --> 00:26:46.008 in the home recovery from mastectomy
NOTE Confidence: 0.844033587666666

00:26:46.008 --> 00:26:50.196 and others is so welcome here.
NOTE Confidence: 0.844033587666666

00:26:50.200 --> 00:26:51.894 We're going to move on to doctor
NOTE Confidence: 0.844033587666666

00:26:51.894 --> 00:26:52.378 Kristen Knowlton.
NOTE Confidence: 0.844033587666666

00:26:52.380 --> 00:26:53.790 Doctor Kristen Olson is one
NOTE Confidence: 0.844033587666666

00:26:53.790 --> 00:26:54.918 of our radiation oncologist.

NOTE Confidence: 0.844033587666666
00:26:54.920 --> 00:26:58.010 She's also the director of our
NOTE Confidence: 0.844033587666666
00:26:58.010 --> 00:27:01.279 Smilo site and Hampden and also our
NOTE Confidence: 0.844033587666666
00:27:01.279 --> 00:27:05.360 NA PVC lead and director here at
NOTE Confidence: 0.844033587666666
00:27:05.360 --> 00:27:08.060 our Yale New Haven Hospital site.
NOTE Confidence: 0.844033587666666
00:27:08.060 --> 00:27:11.198 She'll be discussing a radiation oncology.
NOTE Confidence: 0.939084262
00:27:13.690 --> 00:27:14.764 Great. Thank you.
NOTE Confidence: 0.939084262
00:27:14.764 --> 00:27:17.270 Are you able to see my screen?
NOTE Confidence: 0.939084262
00:27:17.270 --> 00:27:19.530 Not yet. OK, all right.
NOTE Confidence: 0.86694515
00:27:21.590 --> 00:27:24.510 OK. Here we go. How about now?
NOTE Confidence: 0.86694515
00:27:24.510 --> 00:27:27.322 Yes. OK. All right.
NOTE Confidence: 0.86694515
00:27:27.322 --> 00:27:29.520 So hi, I'm Kristen knolton.
NOTE Confidence: 0.86694515
00:27:29.520 --> 00:27:31.170 Thank you for the introduction.
NOTE Confidence: 0.86694515
00:27:31.170 --> 00:27:34.572 And this is our updates in radiation
NOTE Confidence: 0.86694515
00:27:34.572 --> 00:27:38.010 oncology from the Smilow Breast Center.
NOTE Confidence: 0.86694515
00:27:38.010 --> 00:27:40.730 So the Smilo network, as we all know,
NOTE Confidence: 0.86694515

00:27:40.730 --> 00:27:42.790 the Smilow cancer hospital, Yale,
NOTE Confidence: 0.86694515

00:27:42.790 --> 00:27:45.670 New Haven Health Network spans quite
NOTE Confidence: 0.86694515

00:27:45.670 --> 00:27:48.760 a bit of Connecticut and radiation
NOTE Confidence: 0.86694515

00:27:48.760 --> 00:27:51.465 is offered at Rennich Trumbull.
NOTE Confidence: 0.86694515

00:27:51.470 --> 00:27:53.170 We have Derby where,
NOTE Confidence: 0.86694515

00:27:53.170 --> 00:27:55.720 well that is under Griffin Hospital.
NOTE Confidence: 0.86694515

00:27:55.720 --> 00:27:58.982 The physicians who treat patients in the
NOTE Confidence: 0.86694515

00:27:58.982 --> 00:28:01.341 radiation oncology Department are Yale
NOTE Confidence: 0.86694515

00:28:01.341 --> 00:28:03.810 physicians from our department, Hamden,
NOTE Confidence: 0.86694515

00:28:03.810 --> 00:28:07.260 New Haven, Guildford and Waterford.
NOTE Confidence: 0.86694515

00:28:07.260 --> 00:28:09.540 And each site has a representative
NOTE Confidence: 0.86694515

00:28:09.540 --> 00:28:12.448 from what we call the breast team
NOTE Confidence: 0.86694515

00:28:12.448 --> 00:28:15.076 and which means that that person
NOTE Confidence: 0.86694515

00:28:15.076 --> 00:28:17.200 specializes in Breast Cancer Care,
NOTE Confidence: 0.86694515

00:28:17.200 --> 00:28:18.631 attends tumor boards,
NOTE Confidence: 0.86694515

00:28:18.631 --> 00:28:21.016 attends our weekly Recology Center,

NOTE Confidence: 0.86694515

00:28:21.020 --> 00:28:21.752 radiation oncology.

NOTE Confidence: 0.86694515

00:28:21.752 --> 00:28:24.314 Eating and breast chart rounds as well.

NOTE Confidence: 0.86694515

00:28:24.320 --> 00:28:26.516 And all of the sites within

NOTE Confidence: 0.86694515

00:28:26.516 --> 00:28:27.980 the Smilow Cancer Hospital,

NOTE Confidence: 0.86694515

00:28:27.980 --> 00:28:30.446 Yale New Haven Health system have

NOTE Confidence: 0.86694515

00:28:30.446 --> 00:28:32.699 apex accreditation that stands for

NOTE Confidence: 0.86694515

00:28:32.699 --> 00:28:34.859 accreditation programs for excellence.

NOTE Confidence: 0.86694515

00:28:34.860 --> 00:28:37.737 And that's under the auspices of Astro,

NOTE Confidence: 0.86694515

00:28:37.740 --> 00:28:40.164 which is essentially the premier radiation

NOTE Confidence: 0.86694515

00:28:40.164 --> 00:28:42.699 oncology society in the United States.

NOTE Confidence: 0.86694515

00:28:42.700 --> 00:28:44.938 And one could also argue globally,

NOTE Confidence: 0.86694515

00:28:44.940 --> 00:28:46.320 except for Derby,

NOTE Confidence: 0.86694515

00:28:46.320 --> 00:28:49.540 but Derby does also have great accreditation

NOTE Confidence: 0.86694515

00:28:49.616 --> 00:28:52.508 from the American College of Radiology.

NOTE Confidence: 0.86694515

00:28:52.510 --> 00:28:54.855 So all sites that shows that we

NOTE Confidence: 0.86694515

00:28:54.855 --> 00:28:56.971 have no clear concrete evidence
NOTE Confidence: 0.86694515

00:28:56.971 --> 00:29:00.055 that we are providing high quality
NOTE Confidence: 0.86694515

00:29:00.055 --> 00:29:02.507 patient centered care at all sites.
NOTE Confidence: 0.86694515

00:29:02.510 --> 00:29:04.610 So the breast team is led
NOTE Confidence: 0.86694515

00:29:04.610 --> 00:29:06.540 by Doctor Marina Mina Moran,
NOTE Confidence: 0.86694515

00:29:06.540 --> 00:29:08.430 she's a professor in our department.
NOTE Confidence: 0.86694515

00:29:08.430 --> 00:29:10.660 She's obviously chief of our
NOTE Confidence: 0.86694515

00:29:10.660 --> 00:29:12.444 breast cancer radiation oncology
NOTE Confidence: 0.86694515

00:29:12.444 --> 00:29:14.663 group and she's also vice chair
NOTE Confidence: 0.86694515

00:29:14.663 --> 00:29:16.830 of the NCCN Breast Cancer panel.
NOTE Confidence: 0.86694515

00:29:16.830 --> 00:29:19.230 And under her leadership the
NOTE Confidence: 0.86694515

00:29:19.230 --> 00:29:21.630 Breast team practices high quality
NOTE Confidence: 0.86694515

00:29:21.715 --> 00:29:24.310 evidence based Breast Cancer Care.
NOTE Confidence: 0.86694515

00:29:24.310 --> 00:29:26.949 And what that really means is that
NOTE Confidence: 0.86694515

00:29:26.949 --> 00:29:29.040 we we strive to always provide
NOTE Confidence: 0.86694515

00:29:29.040 --> 00:29:31.254 care that is supported by high

NOTE Confidence: 0.86694515

00:29:31.254 --> 00:29:33.010 quality data with meaningful.

NOTE Confidence: 0.86694515

00:29:33.010 --> 00:29:33.826 Follow up.

NOTE Confidence: 0.86694515

00:29:33.826 --> 00:29:36.274 Also the rest team participates in

NOTE Confidence: 0.86694515

00:29:36.274 --> 00:29:38.527 clinical trials often in conjunction

NOTE Confidence: 0.86694515

00:29:38.527 --> 00:29:40.802 with our medical oncology and

NOTE Confidence: 0.86694515

00:29:40.802 --> 00:29:42.520 surgical oncology colleagues.

NOTE Confidence: 0.86694515

00:29:42.520 --> 00:29:44.770 We hold weekly disease site

NOTE Confidence: 0.86694515

00:29:44.770 --> 00:29:46.120 specific chart rounds.

NOTE Confidence: 0.86694515

00:29:46.120 --> 00:29:47.844 We've adopted systemwide planning

NOTE Confidence: 0.86694515

00:29:47.844 --> 00:29:50.430 goals and objectives and the point

NOTE Confidence: 0.86694515

00:29:50.503 --> 00:29:52.589 of this team approach is that to

NOTE Confidence: 0.86694515

00:29:52.589 --> 00:29:54.463 that to ensure that when patients

NOTE Confidence: 0.86694515

00:29:54.463 --> 00:29:56.591 go to any site where we offer

NOTE Confidence: 0.86694515

00:29:56.600 --> 00:29:58.695 radiation oncology within the smilow

NOTE Confidence: 0.86694515

00:29:58.695 --> 00:30:00.790 cancer hospital system that the

NOTE Confidence: 0.86694515

00:30:00.852 --> 00:30:02.697 patient will get similar care.
NOTE Confidence: 0.86694515

00:30:02.700 --> 00:30:04.662 I do want to go back to this disease.
NOTE Confidence: 0.86694515

00:30:04.670 --> 00:30:08.378 Site specific chart rounds specifically to.
NOTE Confidence: 0.86694515

00:30:08.380 --> 00:30:10.664 So in radiation oncology,
NOTE Confidence: 0.86694515

00:30:10.664 --> 00:30:13.519 it's mandated that all radiation
NOTE Confidence: 0.86694515

00:30:13.519 --> 00:30:16.128 plans get reviewed by your
NOTE Confidence: 0.86694515

00:30:16.128 --> 00:30:18.558 peers and it happens weekly.
NOTE Confidence: 0.86694515

00:30:18.560 --> 00:30:19.912 And in our department,
NOTE Confidence: 0.86694515

00:30:19.912 --> 00:30:22.680 we used to do all sites together.
NOTE Confidence: 0.86694515

00:30:22.680 --> 00:30:24.456 But under me and his leadership,
NOTE Confidence: 0.86694515

00:30:24.460 --> 00:30:26.770 we started to have breast cancer
NOTE Confidence: 0.86694515

00:30:26.770 --> 00:30:29.098 disease teams chart rounds on our own,
NOTE Confidence: 0.86694515

00:30:29.100 --> 00:30:30.438 separate from the rest of the
NOTE Confidence: 0.86694515

00:30:30.438 --> 00:30:31.962 group so that we could really
NOTE Confidence: 0.86694515

00:30:31.962 --> 00:30:33.417 concentrate and delve in deeply
NOTE Confidence: 0.86694515

00:30:33.417 --> 00:30:34.969 into the breast cancer cases.

NOTE Confidence: 0.86694515
00:30:34.970 --> 00:30:36.802 And she really was ahead of the curve
NOTE Confidence: 0.86694515
00:30:36.802 --> 00:30:38.590 when we started that seven years ago
NOTE Confidence: 0.86694515
00:30:38.590 --> 00:30:40.849 and we were the first disease team in
NOTE Confidence: 0.86694515
00:30:40.849 --> 00:30:42.715 our department to do that subsequently.
NOTE Confidence: 0.86694515
00:30:42.720 --> 00:30:44.766 Now the Gu team and the
NOTE Confidence: 0.86694515
00:30:44.766 --> 00:30:46.130 thoracic team are doing
NOTE Confidence: 0.799177013636364
00:30:46.207 --> 00:30:48.298 that. So I chose thinking
NOTE Confidence: 0.799177013636364
00:30:48.298 --> 00:30:50.026 about our talk today,
NOTE Confidence: 0.799177013636364
00:30:50.030 --> 00:30:52.316 I chose to concentrate on our
NOTE Confidence: 0.799177013636364
00:30:52.316 --> 00:30:54.450 commitment to de escalation of care,
NOTE Confidence: 0.799177013636364
00:30:54.450 --> 00:30:57.000 which is certainly an important emerging
NOTE Confidence: 0.799177013636364
00:30:57.000 --> 00:30:59.410 strategy in breast cancer treatment.
NOTE Confidence: 0.799177013636364
00:30:59.410 --> 00:31:02.158 And specifically I chose to concentrate
NOTE Confidence: 0.799177013636364
00:31:02.158 --> 00:31:05.050 on our clinical trial participation
NOTE Confidence: 0.799177013636364
00:31:05.050 --> 00:31:08.319 because I do believe that our departments
NOTE Confidence: 0.799177013636364

00:31:08.319 --> 00:31:10.225 clinical trial participation really
NOTE Confidence: 0.799177013636364

00:31:10.225 --> 00:31:12.395 shows our commitment to embracing
NOTE Confidence: 0.799177013636364

00:31:12.395 --> 00:31:14.518 and helping move forward escalation
NOTE Confidence: 0.799177013636364

00:31:14.518 --> 00:31:17.070 of care and what I mean by that.
NOTE Confidence: 0.799177013636364

00:31:17.070 --> 00:31:19.730 Is either decreasing the dose
NOTE Confidence: 0.799177013636364

00:31:19.730 --> 00:31:22.390 or the number of fractions,
NOTE Confidence: 0.799177013636364

00:31:22.390 --> 00:31:25.570 or maybe even omitting radiation completely,
NOTE Confidence: 0.799177013636364

00:31:25.570 --> 00:31:28.770 but aiming to decrease toxicity
NOTE Confidence: 0.799177013636364

00:31:28.770 --> 00:31:30.690 essentially while keeping
NOTE Confidence: 0.799177013636364

00:31:30.690 --> 00:31:33.897 outcomes the same or even better.
NOTE Confidence: 0.799177013636364

00:31:33.900 --> 00:31:36.570 So an important trial that
NOTE Confidence: 0.799177013636364

00:31:36.570 --> 00:31:38.534 recently closed at our institution,
NOTE Confidence: 0.799177013636364

00:31:38.534 --> 00:31:40.620 but we was open and we enrolled
NOTE Confidence: 0.799177013636364

00:31:40.688 --> 00:31:42.268 a large number of patients.
NOTE Confidence: 0.799177013636364

00:31:42.270 --> 00:31:44.748 It's called the idea study and it
NOTE Confidence: 0.799177013636364

00:31:44.748 --> 00:31:46.332 stands for individualized decisions

NOTE Confidence: 0.799177013636364

00:31:46.332 --> 00:31:48.156 for endocrine therapy alone.

NOTE Confidence: 0.799177013636364

00:31:48.160 --> 00:31:50.974 And the Pi locally was Doctor Moran

NOTE Confidence: 0.799177013636364

00:31:50.974 --> 00:31:54.326 and this will piggyback a little bit

NOTE Confidence: 0.799177013636364

00:31:54.326 --> 00:31:56.906 on Doctor Greenup's discussion where

NOTE Confidence: 0.799177013636364

00:31:56.906 --> 00:31:59.705 she mentioned the CLG B9343 study.

NOTE Confidence: 0.799177013636364

00:31:59.705 --> 00:32:03.400 So that study was a well done phase three.

NOTE Confidence: 0.799177013636364

00:32:03.400 --> 00:32:06.270 This trial with over 12 years of

NOTE Confidence: 0.799177013636364

00:32:06.270 --> 00:32:08.655 median follow-up that has shown us

NOTE Confidence: 0.799177013636364

00:32:08.655 --> 00:32:11.767 that patients over 70 with a tumor 2

NOTE Confidence: 0.799177013636364

00:32:11.767 --> 00:32:14.427 centimeters or less estrogen receptor

NOTE Confidence: 0.799177013636364

00:32:14.427 --> 00:32:16.555 positive excised with negative

NOTE Confidence: 0.799177013636364

00:32:16.560 --> 00:32:19.545 margins and negative nodes either

NOTE Confidence: 0.799177013636364

00:32:19.545 --> 00:32:21.933 clinically or surgically tested.

NOTE Confidence: 0.799177013636364

00:32:21.940 --> 00:32:24.226 Those patients if they take endocrine

NOTE Confidence: 0.799177013636364

00:32:24.226 --> 00:32:26.584 therapy they can do very well

NOTE Confidence: 0.799177013636364

00:32:26.584 --> 00:32:28.489 and radiation therapy can safely
NOTE Confidence: 0.799177013636364

00:32:28.489 --> 00:32:30.440 be withheld in that group.
NOTE Confidence: 0.799177013636364

00:32:30.440 --> 00:32:31.964 So the idea trial,
NOTE Confidence: 0.799177013636364

00:32:31.964 --> 00:32:34.790 the goal is to expand on that.
NOTE Confidence: 0.799177013636364

00:32:34.790 --> 00:32:36.488 We start looking at younger ages,
NOTE Confidence: 0.799177013636364

00:32:36.490 --> 00:32:37.597 50 to 69,
NOTE Confidence: 0.799177013636364

00:32:37.597 --> 00:32:40.810 but this is a single ARM cohort study.
NOTE Confidence: 0.799177013636364

00:32:40.810 --> 00:32:42.430 So it's not a randomized trial,
NOTE Confidence: 0.799177013636364

00:32:42.430 --> 00:32:44.458 it's a single ARM cohort study
NOTE Confidence: 0.799177013636364

00:32:44.458 --> 00:32:45.810 to start exploring this.
NOTE Confidence: 0.799177013636364

00:32:45.810 --> 00:32:48.474 So it's similar at you know
NOTE Confidence: 0.799177013636364

00:32:48.474 --> 00:32:49.806 hormonal receptor positive,
NOTE Confidence: 0.799177013636364

00:32:49.810 --> 00:32:50.680 margins negative,
NOTE Confidence: 0.799177013636364

00:32:50.680 --> 00:32:51.550 no negative.
NOTE Confidence: 0.799177013636364

00:32:51.550 --> 00:32:54.160 These patients because they're younger do
NOTE Confidence: 0.799177013636364

00:32:54.228 --> 00:32:56.828 need to have some sort of axillary staging,

NOTE Confidence: 0.799177013636364
00:32:56.830 --> 00:32:59.190 Sentinel node biopsy or axillary
NOTE Confidence: 0.799177013636364
00:32:59.190 --> 00:33:02.105 dissection and in order to ensure
NOTE Confidence: 0.799177013636364
00:33:02.105 --> 00:33:04.919 that it's a favorable cancer that.
NOTE Confidence: 0.799177013636364
00:33:04.920 --> 00:33:06.264 Ideally we'll behave well.
NOTE Confidence: 0.799177013636364
00:33:06.264 --> 00:33:07.608 The Oncotype recurrence score
NOTE Confidence: 0.799177013636364
00:33:07.608 --> 00:33:09.650 must be less than or equal to 18.
NOTE Confidence: 0.799177013636364
00:33:09.650 --> 00:33:11.480 So these patients were enrolled on
NOTE Confidence: 0.799177013636364
00:33:11.480 --> 00:33:13.760 the single ARM cohort study and they
NOTE Confidence: 0.799177013636364
00:33:13.760 --> 00:33:15.430 did not receive radiation therapy.
NOTE Confidence: 0.799177013636364
00:33:15.430 --> 00:33:17.806 They had their lumpectomy with their
NOTE Confidence: 0.799177013636364
00:33:17.806 --> 00:33:20.393 axillary staging and five years of
NOTE Confidence: 0.799177013636364
00:33:20.393 --> 00:33:22.265 endocrine therapy and surveillance.
NOTE Confidence: 0.799177013636364
00:33:22.270 --> 00:33:24.214 And the primary objective is looking
NOTE Confidence: 0.799177013636364
00:33:24.214 --> 00:33:25.510 at local regional recurrence.
NOTE Confidence: 0.799177013636364
00:33:25.510 --> 00:33:27.550 And here we have our secondary
NOTE Confidence: 0.799177013636364

00:33:27.550 --> 00:33:29.602 objectives looking at the rates of
NOTE Confidence: 0.799177013636364

00:33:29.602 --> 00:33:31.807 salvage mastectomy and also to see as
NOTE Confidence: 0.799177013636364

00:33:31.807 --> 00:33:33.884 local regional recurrence associated
NOTE Confidence: 0.799177013636364

00:33:33.884 --> 00:33:36.140 with endocrine therapy compliance.
NOTE Confidence: 0.799177013636364

00:33:36.140 --> 00:33:38.630 So this trial is maturing now.
NOTE Confidence: 0.799177013636364

00:33:38.630 --> 00:33:41.138 It's closed as we said and
NOTE Confidence: 0.799177013636364

00:33:41.138 --> 00:33:43.910 now the data is gathering.
NOTE Confidence: 0.799177013636364

00:33:43.910 --> 00:33:45.430 Also at our at Yale,
NOTE Confidence: 0.799177013636364

00:33:45.430 --> 00:33:47.434 we we're offering the fabric trial
NOTE Confidence: 0.799177013636364

00:33:47.434 --> 00:33:49.421 that closed even more recently and
NOTE Confidence: 0.799177013636364

00:33:49.421 --> 00:33:51.757 as we could see a pair fabric stands
NOTE Confidence: 0.799177013636364

00:33:51.826 --> 00:33:53.886 for study of radiation fractionation
NOTE Confidence: 0.799177013636364

00:33:53.886 --> 00:33:55.946 on patient outcomes after breast
NOTE Confidence: 0.799177013636364

00:33:55.950 --> 00:33:58.840 reconstruction for invasive breast cancer.
NOTE Confidence: 0.799177013636364

00:33:58.840 --> 00:34:00.276 Although ironically the people,
NOTE Confidence: 0.799177013636364

00:34:00.276 --> 00:34:02.430 the physicians could have stage zero

NOTE Confidence: 0.799177013636364
00:34:02.490 --> 00:34:04.866 but they do put invasive cancer in the trial.
NOTE Confidence: 0.799177013636364
00:34:04.870 --> 00:34:07.005 So the question that this is trying
NOTE Confidence: 0.799177013636364
00:34:07.005 --> 00:34:09.282 to answer is can we decrease the
NOTE Confidence: 0.799177013636364
00:34:09.282 --> 00:34:11.226 treatment time IE the number of
NOTE Confidence: 0.885786871071429
00:34:11.293 --> 00:34:13.041 fractions for these patients
NOTE Confidence: 0.885786871071429
00:34:13.041 --> 00:34:14.789 and possibly the toxicity.
NOTE Confidence: 0.885786871071429
00:34:14.790 --> 00:34:16.940 For patients who require postmastectomy
NOTE Confidence: 0.885786871071429
00:34:16.940 --> 00:34:19.515 radiation therapy in the setting of
NOTE Confidence: 0.885786871071429
00:34:19.515 --> 00:34:21.335 implant based reconstruction and I
NOTE Confidence: 0.885786871071429
00:34:21.335 --> 00:34:23.857 highlighted this to let us know that
NOTE Confidence: 0.885786871071429
00:34:23.857 --> 00:34:25.861 what that patients had to undergo
NOTE Confidence: 0.885786871071429
00:34:25.861 --> 00:34:27.084 immediate reconstruction meaning
NOTE Confidence: 0.885786871071429
00:34:27.084 --> 00:34:29.736 the placement of a tissue expander
NOTE Confidence: 0.885786871071429
00:34:29.736 --> 00:34:32.556 or an implant either at the time
NOTE Confidence: 0.885786871071429
00:34:32.556 --> 00:34:34.840 of mastectomy or within 30 days.
NOTE Confidence: 0.885786871071429

00:34:34.840 --> 00:34:37.810 So and we see they could have stage zero
NOTE Confidence: 0.885786871071429

00:34:37.810 --> 00:34:40.339 through stage 3 invasive breast cancer.
NOTE Confidence: 0.885786871071429

00:34:40.340 --> 00:34:43.274 Yeah, it was could be ER positive or not,
NOTE Confidence: 0.885786871071429

00:34:43.280 --> 00:34:44.402 chemo or not.
NOTE Confidence: 0.885786871071429

00:34:44.402 --> 00:34:48.017 It was very open but the two arms are
NOTE Confidence: 0.885786871071429

00:34:48.017 --> 00:34:50.741 arm two is our standard treatment
NOTE Confidence: 0.885786871071429

00:34:50.741 --> 00:34:53.202 which is 25 fractions for these
NOTE Confidence: 0.885786871071429

00:34:53.202 --> 00:34:55.142 patients to great per fraction.
NOTE Confidence: 0.885786871071429

00:34:55.150 --> 00:34:57.856 And the experimental arm is looking
NOTE Confidence: 0.885786871071429

00:34:57.856 --> 00:34:59.209 at hypofractionation cutting
NOTE Confidence: 0.885786871071429

00:34:59.209 --> 00:35:01.369 down the number of treatments.
NOTE Confidence: 0.885786871071429

00:35:01.370 --> 00:35:03.356 And in intact breast cancer cases
NOTE Confidence: 0.885786871071429

00:35:03.356 --> 00:35:05.653 we've seen that this can be very
NOTE Confidence: 0.885786871071429

00:35:05.653 --> 00:35:07.158 successful in actually with as
NOTE Confidence: 0.885786871071429

00:35:07.158 --> 00:35:09.030 far as controlling the disease
NOTE Confidence: 0.885786871071429

00:35:09.030 --> 00:35:11.442 locally and also has less toxicity.

NOTE Confidence: 0.885786871071429

00:35:11.450 --> 00:35:13.178 So the goal in this trial is to

NOTE Confidence: 0.885786871071429

00:35:13.178 --> 00:35:14.936 say hey well this also hold up.

NOTE Confidence: 0.885786871071429

00:35:14.940 --> 00:35:17.496 In the setting of an implant or a tissue

NOTE Confidence: 0.885786871071429

00:35:17.496 --> 00:35:19.586 expander to be exchanged to an implant.

NOTE Confidence: 0.885786871071429

00:35:19.590 --> 00:35:21.540 So the objectives for this trial

NOTE Confidence: 0.885786871071429

00:35:21.540 --> 00:35:23.276 were looking at physical well-being

NOTE Confidence: 0.885786871071429

00:35:23.276 --> 00:35:25.532 of the patients and patient recorded

NOTE Confidence: 0.885786871071429

00:35:25.532 --> 00:35:27.852 outcomes using the fact be instrument

NOTE Confidence: 0.885786871071429

00:35:27.852 --> 00:35:30.108 and here's some other patient recorded

NOTE Confidence: 0.885786871071429

00:35:30.108 --> 00:35:31.306 outcomes that will be looked.

NOTE Confidence: 0.885786871071429

00:35:31.306 --> 00:35:32.326 They were looking at pain,

NOTE Confidence: 0.885786871071429

00:35:32.330 --> 00:35:32.944 our mobility,

NOTE Confidence: 0.885786871071429

00:35:32.944 --> 00:35:35.093 lymphedema and of course we want to

NOTE Confidence: 0.885786871071429

00:35:35.093 --> 00:35:37.110 look at the clinical outcomes too,

NOTE Confidence: 0.885786871071429

00:35:37.110 --> 00:35:37.564 recurrence,

NOTE Confidence: 0.885786871071429

00:35:37.564 --> 00:35:39.380 breast cancer specific survival
NOTE Confidence: 0.885786871071429

00:35:39.380 --> 00:35:41.650 and interestingly this also wanted
NOTE Confidence: 0.885786871071429

00:35:41.715 --> 00:35:43.997 to see was there a difference in
NOTE Confidence: 0.885786871071429

00:35:43.997 --> 00:35:44.975 the two fractionations.
NOTE Confidence: 0.885786871071429

00:35:44.980 --> 00:35:47.596 As far as rare radiation oncology,
NOTE Confidence: 0.885786871071429

00:35:47.600 --> 00:35:50.342 radiation therapy side effects such as
NOTE Confidence: 0.885786871071429

00:35:50.342 --> 00:35:52.950 brachial plexopathy or secondary malignancy.
NOTE Confidence: 0.8300930633333333

00:35:55.070 --> 00:35:56.162 Now we're getting to
NOTE Confidence: 0.8300930633333333

00:35:56.162 --> 00:35:57.527 trials that that are open.
NOTE Confidence: 0.8300930633333333

00:35:57.530 --> 00:36:00.626 So we have open now at Yale at
NOTE Confidence: 0.8300930633333333

00:36:00.626 --> 00:36:03.586 essentially all I think of all the sites,
NOTE Confidence: 0.8300930633333333

00:36:03.590 --> 00:36:06.794 the MA 39 trial also called the Taylor RT,
NOTE Confidence: 0.8300930633333333

00:36:06.800 --> 00:36:09.311 I'm the local PI for this trial and here
NOTE Confidence: 0.8300930633333333

00:36:09.311 --> 00:36:12.392 we see the name a randomized trial of
NOTE Confidence: 0.8300930633333333

00:36:12.392 --> 00:36:14.539 regional radiotherapy and biomarker low.
NOTE Confidence: 0.8300930633333333

00:36:14.540 --> 00:36:17.093 Low risk node positive and T3N0

NOTE Confidence: 0.8300930633333333

00:36:17.093 --> 00:36:18.758 breast cancer. That's a mouthful,

NOTE Confidence: 0.8300930633333333

00:36:18.760 --> 00:36:21.147 but that's the official title and the

NOTE Confidence: 0.8300930633333333

00:36:21.147 --> 00:36:23.696 question that this is looking to answer is.

NOTE Confidence: 0.8300930633333333

00:36:23.700 --> 00:36:26.095 Can we withhold regional nodal

NOTE Confidence: 0.8300930633333333

00:36:26.095 --> 00:36:28.490 radiation therapy in patients with

NOTE Confidence: 0.8300930633333333

00:36:28.567 --> 00:36:31.612 low volume nodal disease who have a

NOTE Confidence: 0.8300930633333333

00:36:31.612 --> 00:36:33.890 favorable breast cancer IE hormonal

NOTE Confidence: 0.8300930633333333

00:36:33.890 --> 00:36:35.686 receptor positive and Oncotype

NOTE Confidence: 0.8300930633333333

00:36:35.686 --> 00:36:38.890 score of less than or equal to 25.

NOTE Confidence: 0.8300930633333333

00:36:38.890 --> 00:36:39.940 And so yes,

NOTE Confidence: 0.8300930633333333

00:36:39.940 --> 00:36:42.343 here we see down here PCP one or two

NOTE Confidence: 0.8300930633333333

00:36:42.343 --> 00:36:44.467 with low volume nodal disease and

NOTE Confidence: 0.8300930633333333

00:36:44.467 --> 00:36:46.796 the definition of what low volume

NOTE Confidence: 0.8300930633333333

00:36:46.796 --> 00:36:49.141 nodal disease is changes depending

NOTE Confidence: 0.8300930633333333

00:36:49.141 --> 00:36:51.418 on whether axillary dissection was

NOTE Confidence: 0.8300930633333333

00:36:51.418 --> 00:36:53.806 performed or Sentinel lymph node biopsy.

NOTE Confidence: 0.8300930633333333

00:36:53.810 --> 00:36:54.896 Only was performed.

NOTE Confidence: 0.8300930633333333

00:36:54.896 --> 00:36:57.068 We see here the Oncotype score.

NOTE Confidence: 0.8300930633333333

00:36:57.070 --> 00:36:58.990 The patients could not have

NOTE Confidence: 0.8300930633333333

00:36:58.990 --> 00:37:00.526 chemotherapy before the surgery,

NOTE Confidence: 0.8300930633333333

00:37:00.530 --> 00:37:03.085 but it is allowed after the surgery.

NOTE Confidence: 0.8300930633333333

00:37:03.090 --> 00:37:06.246 And however, when COVID came around,

NOTE Confidence: 0.8300930633333333

00:37:06.250 --> 00:37:08.287 they changed it to allow some limited,

NOTE Confidence: 0.8300930633333333

00:37:08.290 --> 00:37:10.290 they should say neoadjuvant endocrine

NOTE Confidence: 0.8300930633333333

00:37:10.290 --> 00:37:12.734 therapy allowed because as we know

NOTE Confidence: 0.8300930633333333

00:37:12.734 --> 00:37:15.026 during COVID some patients were placed

NOTE Confidence: 0.8300930633333333

00:37:15.026 --> 00:37:17.249 on endocrine therapy as a placeholder.

NOTE Confidence: 0.8300930633333333

00:37:17.250 --> 00:37:19.374 So here we see our primary

NOTE Confidence: 0.8300930633333333

00:37:19.374 --> 00:37:21.100 objectives in in May 39,

NOTE Confidence: 0.8300930633333333

00:37:21.100 --> 00:37:23.266 it's to compare breast cancer recurrence

NOTE Confidence: 0.8300930633333333

00:37:23.266 --> 00:37:25.178 free interval and our secondary

NOTE Confidence: 0.8300930633333333
00:37:25.178 --> 00:37:27.578 objectives are all our usual suspects,
NOTE Confidence: 0.8300930633333333
00:37:27.580 --> 00:37:29.011 disease free survival,
NOTE Confidence: 0.8300930633333333
00:37:29.011 --> 00:37:30.919 breast cancer specific survival,
NOTE Confidence: 0.8300930633333333
00:37:30.920 --> 00:37:33.616 overall survival, local recurrence,
NOTE Confidence: 0.8300930633333333
00:37:33.616 --> 00:37:35.638 local regional recurrence,
NOTE Confidence: 0.8300930633333333
00:37:35.640 --> 00:37:36.808 free interval.
NOTE Confidence: 0.8300930633333333
00:37:36.808 --> 00:37:39.728 They're also looking at ARM
NOTE Confidence: 0.8300930633333333
00:37:39.728 --> 00:37:41.480 volume and motility,
NOTE Confidence: 0.8300930633333333
00:37:41.480 --> 00:37:42.935 still looking at really at
NOTE Confidence: 0.8300930633333333
00:37:42.935 --> 00:37:44.390 lymphedema and there are some
NOTE Confidence: 0.8300930633333333
00:37:44.451 --> 00:37:46.141 quality of life questionnaires and
NOTE Confidence: 0.8300930633333333
00:37:46.141 --> 00:37:47.831 here we see the randomization.
NOTE Confidence: 0.8300930633333333
00:37:47.840 --> 00:37:52.214 So arm one, arm two is our standard arm.
NOTE Confidence: 0.8300930633333333
00:37:52.220 --> 00:37:54.458 So if someone had lumpectomy standardly
NOTE Confidence: 0.8300930633333333
00:37:54.458 --> 00:37:57.308 they were and they have regional notes,
NOTE Confidence: 0.8300930633333333

00:37:57.310 --> 00:37:58.942 they have nodal involvement.
NOTE Confidence: 0.8300930633333333

00:37:58.942 --> 00:38:01.390 Standard arm is whole breast to
NOTE Confidence: 0.8300930633333333

00:38:01.460 --> 00:38:03.670 radiation therapy plus regional nodal
NOTE Confidence: 0.8300930633333333

00:38:03.670 --> 00:38:06.349 RT or in the postmastectomy setting
NOTE Confidence: 0.8300930633333333

00:38:06.349 --> 00:38:08.737 chest wall and regional nodal RT.
NOTE Confidence: 0.8300930633333333

00:38:08.740 --> 00:38:11.610 So the experimental arm that the patients
NOTE Confidence: 0.8300930633333333

00:38:11.610 --> 00:38:14.741 can be randomized to would be following
NOTE Confidence: 0.8300930633333333

00:38:14.741 --> 00:38:17.031 lumpectomy just the whole breast
NOTE Confidence: 0.8300930633333333

00:38:17.031 --> 00:38:19.650 irradiation therapy and not including the.
NOTE Confidence: 0.8300930633333333

00:38:19.650 --> 00:38:22.666 Total fields of the patient had a step,
NOTE Confidence: 0.8300930633333333

00:38:22.670 --> 00:38:24.100 they'd be randomized to no
NOTE Confidence: 0.8300930633333333

00:38:24.100 --> 00:38:25.530 radiation therapy and of course
NOTE Confidence: 0.8300930633333333

00:38:25.580 --> 00:38:27.010 then we'll be following them.
NOTE Confidence: 0.8300930633333333

00:38:27.010 --> 00:38:27.973 But as mentioned,
NOTE Confidence: 0.8300930633333333

00:38:27.973 --> 00:38:29.899 this trial remains open and patients
NOTE Confidence: 0.8300930633333333

00:38:29.899 --> 00:38:33.220 can enroll through our department.

NOTE Confidence: 0.8300930633333333
00:38:33.220 --> 00:38:36.020 And now we are opening this trial soon,
NOTE Confidence: 0.8300930633333333
00:38:36.020 --> 00:38:39.220 Deborah de escalation of breast
NOTE Confidence: 0.8300930633333333
00:38:39.220 --> 00:38:41.948 radiation and RGB R007 and this
NOTE Confidence: 0.8300930633333333
00:38:41.948 --> 00:38:44.120 piggybacks off of the first trial
NOTE Confidence: 0.8300930633333333
00:38:44.191 --> 00:38:46.315 I talked about the idea trial,
NOTE Confidence: 0.8300930633333333
00:38:46.320 --> 00:38:48.791 I remember that's the one where that
NOTE Confidence: 0.8300930633333333
00:38:48.791 --> 00:38:52.084 was that was going to be looking at
NOTE Confidence: 0.8300930633333333
00:38:52.084 --> 00:38:53.812 the withholding radiation therapy
NOTE Confidence: 0.8300930633333333
00:38:53.812 --> 00:38:56.807 for stage one cancers ages 50 to 69,
NOTE Confidence: 0.8300930633333333
00:38:56.807 --> 00:38:58.208 no nodal involvement,
NOTE Confidence: 0.8300930633333333
00:38:58.208 --> 00:39:00.543 ER positive Oncotype less than
NOTE Confidence: 0.8300930633333333
00:39:00.543 --> 00:39:02.997 18 that was a cohort study.
NOTE Confidence: 0.8300930633333333
00:39:03.000 --> 00:39:04.500 And the patients of course had
NOTE Confidence: 0.8300930633333333
00:39:04.500 --> 00:39:05.970 to go on endocrine therapy.
NOTE Confidence: 0.8300930633333333
00:39:05.970 --> 00:39:08.329 So now this is pushing that forward
NOTE Confidence: 0.8300930633333333

00:39:08.329 --> 00:39:10.445 even further to get even more
NOTE Confidence: 0.8300930633333333

00:39:10.445 --> 00:39:12.515 high quality evidence to say hey,
NOTE Confidence: 0.8798504033333333

00:39:12.520 --> 00:39:14.872 can we withhold radiation therapy in this
NOTE Confidence: 0.8798504033333333

00:39:14.872 --> 00:39:17.280 setting and this is a phase three trial.
NOTE Confidence: 0.8798504033333333

00:39:17.280 --> 00:39:19.014 So here we see that see
NOTE Confidence: 0.8798504033333333

00:39:19.014 --> 00:39:20.440 its patients with a T1.
NOTE Confidence: 0.8798504033333333

00:39:20.440 --> 00:39:22.816 So we know that means 2 centimeters or
NOTE Confidence: 0.8798504033333333

00:39:22.816 --> 00:39:25.318 less and 0 hormonal receptor positive.
NOTE Confidence: 0.8798504033333333

00:39:25.320 --> 00:39:27.225 Her two negative Oncotype recurrence
NOTE Confidence: 0.8798504033333333

00:39:27.225 --> 00:39:30.118 score less than 18 just like the idea
NOTE Confidence: 0.8798504033333333

00:39:30.118 --> 00:39:32.376 trial the ages, well here you're allowed.
NOTE Confidence: 0.8798504033333333

00:39:32.376 --> 00:39:35.009 It's a little bit more with the ages,
NOTE Confidence: 0.8798504033333333

00:39:35.010 --> 00:39:39.708 but the whole point is to expand the ages.
NOTE Confidence: 0.8798504033333333

00:39:39.710 --> 00:39:42.888 And so we're randomizing to arm one,
NOTE Confidence: 0.8798504033333333

00:39:42.890 --> 00:39:45.360 which is the standard arm,
NOTE Confidence: 0.8798504033333333

00:39:45.360 --> 00:39:47.370 which would be radiation therapy

NOTE Confidence: 0.8798504033333333
00:39:47.370 --> 00:39:49.380 to the breast plus endocrine
NOTE Confidence: 0.8798504033333333
00:39:49.449 --> 00:39:51.559 therapy or our experimental arm,
NOTE Confidence: 0.8798504033333333
00:39:51.560 --> 00:39:54.686 no radiation therapy plus endocrine therapy.
NOTE Confidence: 0.8798504033333333
00:39:54.690 --> 00:39:56.640 So while patients of all ages
NOTE Confidence: 0.8798504033333333
00:39:56.640 --> 00:39:58.460 are really allowed to enroll,
NOTE Confidence: 0.8798504033333333
00:39:58.460 --> 00:40:00.242 the point of this is really
NOTE Confidence: 0.8798504033333333
00:40:00.242 --> 00:40:02.136 to start expanding this out to
NOTE Confidence: 0.8798504033333333
00:40:02.136 --> 00:40:03.882 patients that are younger. Umm.
NOTE Confidence: 0.8798504033333333
00:40:03.882 --> 00:40:05.268 OK. All right.
NOTE Confidence: 0.8798504033333333
00:40:05.268 --> 00:40:06.654 So thank you.
NOTE Confidence: 0.8175881756666667
00:40:09.800 --> 00:40:11.260 Thank you, Doctor Knowlton.
NOTE Confidence: 0.8175881756666667
00:40:11.260 --> 00:40:14.166 A lot of great trials that have been
NOTE Confidence: 0.8175881756666667
00:40:14.166 --> 00:40:16.758 run at Yale and are currently open and
NOTE Confidence: 0.8175881756666667
00:40:16.830 --> 00:40:19.385 accruing your work and your team with
NOTE Confidence: 0.8175881756666667
00:40:19.385 --> 00:40:21.704 Doctor Moran has been really fantastic.
NOTE Confidence: 0.8175881756666667

00:40:21.704 --> 00:40:24.560 We're moving on to Doctor John Lewin,
NOTE Confidence: 0.817588175666667

00:40:24.560 --> 00:40:28.226 who's our chief of breast imaging.
NOTE Confidence: 0.817588175666667

00:40:28.230 --> 00:40:30.540 And the Espi president coming to talk
NOTE Confidence: 0.817588175666667

00:40:30.540 --> 00:40:32.886 about some of the latest in in in,
NOTE Confidence: 0.817588175666667

00:40:32.890 --> 00:40:34.645 in breast imaging available not
NOTE Confidence: 0.817588175666667

00:40:34.645 --> 00:40:36.400 only at Yale but potentially
NOTE Confidence: 0.817588175666667

00:40:36.467 --> 00:40:38.047 around the country as well.
NOTE Confidence: 0.817588175666667

00:40:38.050 --> 00:40:40.878 So, Doctor Lewin, the floor is yours.
NOTE Confidence: 0.912830138571429

00:40:41.710 --> 00:40:45.730 Thank you. Can you see my
NOTE Confidence: 0.912830138571429

00:40:45.730 --> 00:40:47.210 screen? Yeah, of course.
NOTE Confidence: 0.870675994285714

00:40:49.730 --> 00:40:53.874 So let me go to presentation mode.
NOTE Confidence: 0.870675994285714

00:40:53.880 --> 00:40:57.390 Alright, so thank you. So yeah,
NOTE Confidence: 0.870675994285714

00:40:57.390 --> 00:41:01.539 I want to talk about what's new in breast
NOTE Confidence: 0.870675994285714

00:41:01.539 --> 00:41:03.620 imaging and as Doctor Goldstein said,
NOTE Confidence: 0.870675994285714

00:41:03.620 --> 00:41:05.840 not just the Yale but everywhere because
NOTE Confidence: 0.870675994285714

00:41:05.840 --> 00:41:07.940 it's kind of interesting to know what's

NOTE Confidence: 0.870675994285714
00:41:07.940 --> 00:41:10.440 going on that's imaging effects everybody
NOTE Confidence: 0.870675994285714
00:41:10.440 --> 00:41:13.980 whether in primary care or in surgery.
NOTE Confidence: 0.870675994285714
00:41:13.980 --> 00:41:16.098 So here having just run a
NOTE Confidence: 0.870675994285714
00:41:16.098 --> 00:41:17.510 meeting on breast imaging,
NOTE Confidence: 0.870675994285714
00:41:17.510 --> 00:41:19.485 the Society of Breast Imaging
NOTE Confidence: 0.870675994285714
00:41:19.485 --> 00:41:20.960 meeting here are the hot topics,
NOTE Confidence: 0.870675994285714
00:41:20.960 --> 00:41:23.256 so as with the rest of the world.
NOTE Confidence: 0.870675994285714
00:41:23.260 --> 00:41:25.972 AI is a hot topic and the
NOTE Confidence: 0.870675994285714
00:41:25.972 --> 00:41:27.677 question is will mammograms be
NOTE Confidence: 0.870675994285714
00:41:27.677 --> 00:41:30.410 read by a computer in five years?
NOTE Confidence: 0.870675994285714
00:41:30.410 --> 00:41:33.080 And the answer is maybe.
NOTE Confidence: 0.870675994285714
00:41:33.080 --> 00:41:34.697 That's what we said five years ago,
NOTE Confidence: 0.870675994285714
00:41:34.700 --> 00:41:37.418 so it's not at all clear.
NOTE Confidence: 0.870675994285714
00:41:37.420 --> 00:41:40.060 The it's very easy to make a nice
NOTE Confidence: 0.870675994285714
00:41:40.060 --> 00:41:42.418 paper using AI to read mammograms,
NOTE Confidence: 0.870675994285714

00:41:42.420 --> 00:41:44.240 but now that they're starting
NOTE Confidence: 0.870675994285714

00:41:44.240 --> 00:41:46.060 to be implemented in clinics,
NOTE Confidence: 0.870675994285714

00:41:46.060 --> 00:41:48.154 we're finding railroad real world results
NOTE Confidence: 0.870675994285714

00:41:48.154 --> 00:41:50.700 aren't quite what we'd hoped they would be.
NOTE Confidence: 0.870675994285714

00:41:50.700 --> 00:41:53.040 So it's going to be a while before we let
NOTE Confidence: 0.870675994285714

00:41:53.098 --> 00:41:55.378 the computers read screening mammograms
NOTE Confidence: 0.870675994285714

00:41:55.378 --> 00:41:57.202 even without human intervention.
NOTE Confidence: 0.870675994285714

00:41:57.210 --> 00:41:59.070 But almost certainly in five years,
NOTE Confidence: 0.870675994285714

00:41:59.070 --> 00:42:02.214 AI will be used as a second read
NOTE Confidence: 0.870675994285714

00:42:02.214 --> 00:42:03.690 in most cases.
NOTE Confidence: 0.870675994285714

00:42:03.690 --> 00:42:04.920 Now the sad thing is,
NOTE Confidence: 0.870675994285714

00:42:04.920 --> 00:42:06.560 we know from history it will mostly depend
NOTE Confidence: 0.870675994285714

00:42:06.560 --> 00:42:08.300 on if there's a payment for the act.
NOTE Confidence: 0.870675994285714

00:42:08.300 --> 00:42:09.440 That's what happened with the
NOTE Confidence: 0.870675994285714

00:42:09.440 --> 00:42:10.124 predecessor of AI,
NOTE Confidence: 0.870675994285714

00:42:10.130 --> 00:42:12.968 which was called Computer aided diagnosis.

NOTE Confidence: 0.870675994285714
00:42:12.970 --> 00:42:14.978 It took off only because it was paid
NOTE Confidence: 0.870675994285714
00:42:14.978 --> 00:42:17.365 for and it really didn't work that well.
NOTE Confidence: 0.870675994285714
00:42:17.370 --> 00:42:18.790 And eventually Medicare said, well,
NOTE Confidence: 0.870675994285714
00:42:18.790 --> 00:42:19.926 we're not going to pay for this anymore.
NOTE Confidence: 0.870675994285714
00:42:19.930 --> 00:42:21.090 It doesn't actually work.
NOTE Confidence: 0.870675994285714
00:42:21.090 --> 00:42:23.299 But the same thing will happen with AI.
NOTE Confidence: 0.870675994285714
00:42:23.300 --> 00:42:25.668 If we can prove that it has merit
NOTE Confidence: 0.870675994285714
00:42:25.668 --> 00:42:27.478 enough and it gets paid for,
NOTE Confidence: 0.870675994285714
00:42:27.480 --> 00:42:29.488 it will take off.
NOTE Confidence: 0.870675994285714
00:42:29.490 --> 00:42:31.485 But that there's no question AI is
NOTE Confidence: 0.870675994285714
00:42:31.485 --> 00:42:33.779 going to have everything to do with
NOTE Confidence: 0.870675994285714
00:42:33.779 --> 00:42:35.843 every part of medicine and certainly
NOTE Confidence: 0.870675994285714
00:42:35.911 --> 00:42:38.226 radiology and certainly breast imaging.
NOTE Confidence: 0.870675994285714
00:42:38.230 --> 00:42:40.330 Contrast enhanced mammography is
NOTE Confidence: 0.870675994285714
00:42:40.330 --> 00:42:43.366 a big deal in meetings and it's
NOTE Confidence: 0.870675994285714

00:42:43.366 --> 00:42:45.186 a large area of research.
NOTE Confidence: 0.870675994285714

00:42:45.190 --> 00:42:47.224 But clinical adoption has been slow
NOTE Confidence: 0.870675994285714

00:42:47.224 --> 00:42:49.449 because there is no billing code.
NOTE Confidence: 0.870675994285714

00:42:49.450 --> 00:42:51.070 So it's just like with AI,
NOTE Confidence: 0.870675994285714

00:42:51.070 --> 00:42:52.288 if we can't get paid for it,
NOTE Confidence: 0.870675994285714

00:42:52.290 --> 00:42:55.226 it's very hard to get places to buy
NOTE Confidence: 0.870675994285714

00:42:55.226 --> 00:42:58.619 it when it was conceived and invented.
NOTE Confidence: 0.870675994285714

00:42:58.620 --> 00:43:00.438 It was about 20 years ago.
NOTE Confidence: 0.870675994285714

00:43:00.440 --> 00:43:02.448 The idea was that it would save money
NOTE Confidence: 0.870675994285714

00:43:02.448 --> 00:43:04.897 and we would all be capitated back then.
NOTE Confidence: 0.870675994285714

00:43:04.900 --> 00:43:05.992 For those of you who are old
NOTE Confidence: 0.870675994285714

00:43:05.992 --> 00:43:06.460 enough to remember,
NOTE Confidence: 0.870675994285714

00:43:06.460 --> 00:43:08.335 we were all told that
NOTE Confidence: 0.870675994285714

00:43:08.335 --> 00:43:09.835 capitation was the future.
NOTE Confidence: 0.870675994285714

00:43:09.840 --> 00:43:10.184 Well,
NOTE Confidence: 0.870675994285714

00:43:10.184 --> 00:43:11.560 that really never happened.

NOTE Confidence: 0.870675994285714
00:43:11.560 --> 00:43:13.849 And so the fact that it's low-cost
NOTE Confidence: 0.870675994285714
00:43:13.849 --> 00:43:16.238 now was actually slowing its adoption,
NOTE Confidence: 0.870675994285714
00:43:16.240 --> 00:43:18.838 but you'll see that it's a
NOTE Confidence: 0.870675994285714
00:43:18.838 --> 00:43:20.137 pretty good modality.
NOTE Confidence: 0.870675994285714
00:43:20.140 --> 00:43:23.110 And the thing that's a big source of top of
NOTE Confidence: 0.870675994285714
00:43:23.179 --> 00:43:26.077 discussion in our world is labor shortage.
NOTE Confidence: 0.870675994285714
00:43:26.080 --> 00:43:28.720 So there's a shortage of technologists
NOTE Confidence: 0.870675994285714
00:43:28.720 --> 00:43:31.980 all over the country and certainly Yale.
NOTE Confidence: 0.870675994285714
00:43:31.980 --> 00:43:34.458 And so if you have trouble getting
NOTE Confidence: 0.870675994285714
00:43:34.458 --> 00:43:35.520 them mammogram scheduled,
NOTE Confidence: 0.870675994285714
00:43:35.520 --> 00:43:37.150 that is why this happened,
NOTE Confidence: 0.870675994285714
00:43:37.150 --> 00:43:39.685 because of the pandemic and
NOTE Confidence: 0.870675994285714
00:43:39.685 --> 00:43:41.713 just overall great resignation.
NOTE Confidence: 0.870675994285714
00:43:41.720 --> 00:43:43.705 Certain number of texts decided
NOTE Confidence: 0.870675994285714
00:43:43.705 --> 00:43:45.690 they had enough and now
NOTE Confidence: 0.746707799473684

00:43:45.762 --> 00:43:47.927 we're training new tax breast
NOTE Confidence: 0.746707799473684

00:43:47.927 --> 00:43:50.220 radiologists are also in great.
NOTE Confidence: 0.746707799473684

00:43:50.220 --> 00:43:53.580 Short supply all over the country.
NOTE Confidence: 0.746707799473684

00:43:53.580 --> 00:43:57.618 And the last thing that is.
NOTE Confidence: 0.746707799473684

00:43:57.620 --> 00:43:59.588 A hot topic in breast imaging is how
NOTE Confidence: 0.746707799473684

00:43:59.588 --> 00:44:01.205 we screen and especially screening
NOTE Confidence: 0.746707799473684

00:44:01.205 --> 00:44:03.329 high risk women and then something
NOTE Confidence: 0.746707799473684

00:44:03.329 --> 00:44:04.753 called personalized screening and
NOTE Confidence: 0.746707799473684

00:44:04.753 --> 00:44:07.119 that's what I'm going to talk about.
NOTE Confidence: 0.746707799473684

00:44:07.120 --> 00:44:08.632 So screening, just review,
NOTE Confidence: 0.746707799473684

00:44:08.632 --> 00:44:10.900 mammography has been proven to reduce
NOTE Confidence: 0.746707799473684

00:44:10.962 --> 00:44:13.404 breast cancer mortality by seven of
NOTE Confidence: 0.746707799473684

00:44:13.404 --> 00:44:15.032 eight randomized clinical trials.
NOTE Confidence: 0.746707799473684

00:44:15.040 --> 00:44:16.430 So that's the highest level
NOTE Confidence: 0.746707799473684

00:44:16.430 --> 00:44:17.820 of proof you can have.
NOTE Confidence: 0.746707799473684

00:44:17.820 --> 00:44:19.598 The eighth trial was the Canadian trial,

NOTE Confidence: 0.746707799473684
00:44:19.600 --> 00:44:21.922 which was full of problems and
NOTE Confidence: 0.746707799473684
00:44:21.922 --> 00:44:24.136 actually one nice session and this
NOTE Confidence: 0.746707799473684
00:44:24.136 --> 00:44:26.742 year's meeting had to do with people
NOTE Confidence: 0.746707799473684
00:44:26.742 --> 00:44:29.402 coming forward who are in the Canadian
NOTE Confidence: 0.746707799473684
00:44:29.402 --> 00:44:32.171 trial in the 1980s and admitting that
NOTE Confidence: 0.746707799473684
00:44:32.171 --> 00:44:34.397 they did not randomize the patients.
NOTE Confidence: 0.746707799473684
00:44:34.397 --> 00:44:36.693 Did that have a much impact on anything?
NOTE Confidence: 0.746707799473684
00:44:36.700 --> 00:44:37.001 No.
NOTE Confidence: 0.746707799473684
00:44:37.001 --> 00:44:38.506 But it's interesting because it
NOTE Confidence: 0.746707799473684
00:44:38.506 --> 00:44:40.788 was clear from the data that they
NOTE Confidence: 0.746707799473684
00:44:40.788 --> 00:44:42.488 could not have actually randomized
NOTE Confidence: 0.746707799473684
00:44:42.488 --> 00:44:43.840 patients in that trial.
NOTE Confidence: 0.746707799473684
00:44:43.840 --> 00:44:46.488 The next big thing that is now absolutely
NOTE Confidence: 0.746707799473684
00:44:46.488 --> 00:44:48.599 standard of care is tomosynthesis.
NOTE Confidence: 0.746707799473684
00:44:48.600 --> 00:44:51.440 This evolved from the development
NOTE Confidence: 0.746707799473684

00:44:51.440 --> 00:44:53.144 of digital mammography.
NOTE Confidence: 0.746707799473684

00:44:53.150 --> 00:44:55.286 About 20 years ago and then
NOTE Confidence: 0.746707799473684

00:44:55.286 --> 00:44:57.257 Thomason says got approved shortly
NOTE Confidence: 0.746707799473684

00:44:57.257 --> 00:44:59.157 thereafter and now Thompson.
NOTE Confidence: 0.746707799473684

00:44:59.160 --> 00:45:01.070 This is basically the standard
NOTE Confidence: 0.746707799473684

00:45:01.070 --> 00:45:02.980 anywhere in a large city.
NOTE Confidence: 0.746707799473684

00:45:02.980 --> 00:45:05.302 There's still places that only do
NOTE Confidence: 0.746707799473684

00:45:05.302 --> 00:45:07.713 2D mammography but Tommy was really
NOTE Confidence: 0.746707799473684

00:45:07.713 --> 00:45:10.471 become the basis so Thomas since this
NOTE Confidence: 0.746707799473684

00:45:10.471 --> 00:45:12.432 definitely find some cancers that
NOTE Confidence: 0.746707799473684

00:45:12.432 --> 00:45:14.676 are not visible on 2D mammography
NOTE Confidence: 0.746707799473684

00:45:14.680 --> 00:45:17.718 and all mammal Yale is done with
NOTE Confidence: 0.746707799473684

00:45:17.718 --> 00:45:20.958 tomosynthesis even if it's on the mobile van.
NOTE Confidence: 0.746707799473684

00:45:20.960 --> 00:45:22.913 And the other thing which I'm sure
NOTE Confidence: 0.746707799473684

00:45:22.913 --> 00:45:25.605 which I'm sure almost all of you are
NOTE Confidence: 0.746707799473684

00:45:25.605 --> 00:45:27.400 familiar with is supplemental ultrasound,

NOTE Confidence: 0.746707799473684
00:45:27.400 --> 00:45:29.704 also called screening ultrasound and this
NOTE Confidence: 0.746707799473684
00:45:29.704 --> 00:45:32.939 is used for women with dense breast tissue.
NOTE Confidence: 0.746707799473684
00:45:32.940 --> 00:45:35.100 So dense breast tissue hides
NOTE Confidence: 0.746707799473684
00:45:35.100 --> 00:45:36.396 cancers on mammography,
NOTE Confidence: 0.746707799473684
00:45:36.400 --> 00:45:38.044 and it also increases the risk
NOTE Confidence: 0.746707799473684
00:45:38.044 --> 00:45:39.140 of breast cancer somewhat.
NOTE Confidence: 0.746707799473684
00:45:39.140 --> 00:45:41.282 But it's really the fact that the
NOTE Confidence: 0.746707799473684
00:45:41.282 --> 00:45:43.118 dense tissue can hide a cancer.
NOTE Confidence: 0.746707799473684
00:45:43.120 --> 00:45:45.184 That has been the push for
NOTE Confidence: 0.746707799473684
00:45:45.184 --> 00:45:46.560 supplemental ultrasound and the
NOTE Confidence: 0.746707799473684
00:45:46.621 --> 00:45:48.517 movement started in Connecticut.
NOTE Confidence: 0.746707799473684
00:45:48.520 --> 00:45:50.884 Screening ultrasound had been done in
NOTE Confidence: 0.746707799473684
00:45:50.884 --> 00:45:53.862 New York at boutique practices around the
NOTE Confidence: 0.746707799473684
00:45:53.862 --> 00:45:56.956 country and most probably in some Manhattan.
NOTE Confidence: 0.746707799473684
00:45:56.960 --> 00:45:59.054 But the movement to screen all
NOTE Confidence: 0.746707799473684

00:45:59.054 --> 00:46:01.506 women with dense breast tissue with
NOTE Confidence: 0.746707799473684

00:46:01.506 --> 00:46:03.486 ultrasound started in Connecticut.
NOTE Confidence: 0.746707799473684

00:46:03.490 --> 00:46:05.770 And it's really taken off.
NOTE Confidence: 0.746707799473684

00:46:05.770 --> 00:46:06.374 And again,
NOTE Confidence: 0.746707799473684

00:46:06.374 --> 00:46:08.186 a lot of it is economics.
NOTE Confidence: 0.746707799473684

00:46:08.190 --> 00:46:10.080 In much of the country you would have to pay
NOTE Confidence: 0.746707799473684

00:46:10.124 --> 00:46:11.924 for your own chain out of your deductible.
NOTE Confidence: 0.746707799473684

00:46:11.930 --> 00:46:16.218 But in Connecticut it is covered and the
NOTE Confidence: 0.746707799473684

00:46:16.218 --> 00:46:19.918 most patient can pay under law is \$20.
NOTE Confidence: 0.746707799473684

00:46:19.920 --> 00:46:22.008 So what again is,
NOTE Confidence: 0.746707799473684

00:46:22.008 --> 00:46:24.096 is dense breast tissue,
NOTE Confidence: 0.746707799473684

00:46:24.100 --> 00:46:26.254 well here is a classic slide
NOTE Confidence: 0.746707799473684

00:46:26.254 --> 00:46:28.605 that I guarantee you many of
NOTE Confidence: 0.746707799473684

00:46:28.605 --> 00:46:30.700 your patients are familiar with.
NOTE Confidence: 0.746707799473684

00:46:30.700 --> 00:46:32.950 So on the left is the rest that is
NOTE Confidence: 0.746707799473684

00:46:32.950 --> 00:46:35.013 mostly made of fat and in on the

NOTE Confidence: 0.746707799473684

00:46:35.013 --> 00:46:37.094 Mammo report we would say that the

NOTE Confidence: 0.746707799473684

00:46:37.094 --> 00:46:39.368 breast tissue is almost half that is.

NOTE Confidence: 0.746707799473684

00:46:39.368 --> 00:46:40.104 Really worded,

NOTE Confidence: 0.746707799473684

00:46:40.104 --> 00:46:43.609 I would say the best issue is best issue.

NOTE Confidence: 0.746707799473684

00:46:43.610 --> 00:46:45.528 Even if there's even no lines like

NOTE Confidence: 0.746707799473684

00:46:45.528 --> 00:46:47.354 you see here, it still makes milk,

NOTE Confidence: 0.746707799473684

00:46:47.354 --> 00:46:48.609 it still has breast elements,

NOTE Confidence: 0.746707799473684

00:46:48.610 --> 00:46:51.298 and it can still get breast cancer.

NOTE Confidence: 0.762834215

00:46:51.300 --> 00:46:53.356 But that's the wording they chose to use.

NOTE Confidence: 0.762834215

00:46:53.360 --> 00:46:55.832 And then the next one up is called

NOTE Confidence: 0.762834215

00:46:55.832 --> 00:46:57.240 scattered fibroglandular tissue tissue,

NOTE Confidence: 0.762834215

00:46:57.240 --> 00:46:58.938 and it looks something like that,

NOTE Confidence: 0.762834215

00:46:58.940 --> 00:47:01.856 where there's more black than white.

NOTE Confidence: 0.762834215

00:47:01.860 --> 00:47:03.840 This may not be nowadays.

NOTE Confidence: 0.762834215

00:47:03.840 --> 00:47:05.955 It's a little less dense when you see it

NOTE Confidence: 0.762834215

00:47:05.955 --> 00:47:08.217 on digital mammography with processing.

NOTE Confidence: 0.762834215

00:47:08.220 --> 00:47:09.660 But then the next heterogeneous,

NOTE Confidence: 0.762834215

00:47:09.660 --> 00:47:12.474 where it's denser but there's still at

NOTE Confidence: 0.762834215

00:47:12.474 --> 00:47:16.304 least 25% of the tissue is not dense

NOTE Confidence: 0.762834215

00:47:16.304 --> 00:47:18.418 and then extremely dense and you can

NOTE Confidence: 0.762834215

00:47:18.418 --> 00:47:20.776 see it would be hard to see a cancer.

NOTE Confidence: 0.762834215

00:47:20.780 --> 00:47:22.260 And because cancers are white,

NOTE Confidence: 0.762834215

00:47:22.260 --> 00:47:25.292 in the middle of all that white tissue

NOTE Confidence: 0.762834215

00:47:25.292 --> 00:47:28.719 and your patients can go online and go to

NOTE Confidence: 0.762834215

00:47:28.720 --> 00:47:32.580 densebreast-info.org formally are you dense?

NOTE Confidence: 0.762834215

00:47:32.580 --> 00:47:34.020 What's the name of that website?

NOTE Confidence: 0.762834215

00:47:34.020 --> 00:47:36.572 And certainly in Connecticut,

NOTE Confidence: 0.762834215

00:47:36.572 --> 00:47:39.124 everybody knows about presidents.

NOTE Confidence: 0.762834215

00:47:39.130 --> 00:47:41.104 So here's an old example of

NOTE Confidence: 0.762834215

00:47:41.104 --> 00:47:42.690 just what the problem is.

NOTE Confidence: 0.762834215

00:47:42.690 --> 00:47:45.270 So here is a digital mammogram

NOTE Confidence: 0.762834215

00:47:45.270 --> 00:47:47.202 where there is a cancer and when

NOTE Confidence: 0.762834215

00:47:47.202 --> 00:47:49.000 you when I should listen.

NOTE Confidence: 0.598212682

00:47:52.230 --> 00:47:53.928 Eatings the audience is like, well,

NOTE Confidence: 0.598212682

00:47:53.928 --> 00:47:56.380 it must be right here, but in fact it

NOTE Confidence: 0.598212682

00:47:56.380 --> 00:47:58.570 was found because it was palpable.

NOTE Confidence: 0.598212682

00:47:58.570 --> 00:48:01.144 But it was also visible in Old Town and

NOTE Confidence: 0.598212682

00:48:01.144 --> 00:48:03.557 was enrolled into my first digital.

NOTE Confidence: 0.598212682

00:48:03.560 --> 00:48:06.530 Contrast tomography trial and it's

NOTE Confidence: 0.598212682

00:48:06.530 --> 00:48:08.880 right there shows not only how

NOTE Confidence: 0.598212682

00:48:08.880 --> 00:48:11.046 tricky it is to find breast cancers

NOTE Confidence: 0.598212682

00:48:11.046 --> 00:48:13.524 and dense tissue but also how well

NOTE Confidence: 0.598212682

00:48:13.524 --> 00:48:15.558 certain other modalities can work.

NOTE Confidence: 0.598212682

00:48:15.560 --> 00:48:19.148 So that's why our supplemental and.

NOTE Confidence: 0.598212682

00:48:19.150 --> 00:48:22.071 Incomes. So in retrospect,

NOTE Confidence: 0.598212682

00:48:22.071 --> 00:48:23.253 you can see the cancers here,

NOTE Confidence: 0.598212682

00:48:23.260 --> 00:48:24.695 but you would never be able to
NOTE Confidence: 0.598212682

00:48:24.695 --> 00:48:26.253 pick that out and on this slide
NOTE Confidence: 0.598212682

00:48:26.253 --> 00:48:27.670 to zillions of people, no one.
NOTE Confidence: 0.7573675

00:48:29.950 --> 00:48:32.688 So. I risk screening,
NOTE Confidence: 0.7573675

00:48:32.688 --> 00:48:34.318 which is different than supplemental
NOTE Confidence: 0.7573675

00:48:34.318 --> 00:48:36.289 screening is what I want to talk about.
NOTE Confidence: 0.7573675

00:48:36.290 --> 00:48:37.935 The additional screening for patients
NOTE Confidence: 0.7573675

00:48:37.935 --> 00:48:40.343 who are at high risk and typically
NOTE Confidence: 0.7573675

00:48:40.343 --> 00:48:42.088 that's due to family history.
NOTE Confidence: 0.7573675

00:48:42.090 --> 00:48:44.000 So the biggest risk factors
NOTE Confidence: 0.7573675

00:48:44.000 --> 00:48:45.910 for breast cancer are gender.
NOTE Confidence: 0.7573675

00:48:45.910 --> 00:48:47.062 If you're familiar with
NOTE Confidence: 0.7573675

00:48:47.062 --> 00:48:48.502 higher risk and then age,
NOTE Confidence: 0.7573675

00:48:48.510 --> 00:48:50.350 as you get older, your risk goes up.
NOTE Confidence: 0.7573675

00:48:50.350 --> 00:48:52.990 But aside from those,
NOTE Confidence: 0.7573675

00:48:52.990 --> 00:48:54.970 family history is.

NOTE Confidence: 0.7573675

00:48:54.970 --> 00:48:58.610 The risk factor that is most you utilized

NOTE Confidence: 0.7573675

00:48:58.610 --> 00:49:01.192 to determine your risk gene mutations

NOTE Confidence: 0.7573675

00:49:01.192 --> 00:49:04.069 is another source of high risk force.

NOTE Confidence: 0.7573675

00:49:04.070 --> 00:49:06.450 The bracket one and bracket 2 carriers

NOTE Confidence: 0.7573675

00:49:06.450 --> 00:49:09.366 are at very high risk as you all know,

NOTE Confidence: 0.7573675

00:49:09.370 --> 00:49:11.064 but now there are many other mutations,

NOTE Confidence: 0.7573675

00:49:11.070 --> 00:49:14.265 there's check too is a common one that we

NOTE Confidence: 0.7573675

00:49:14.265 --> 00:49:19.878 screen typically high risk patients for so.

NOTE Confidence: 0.7573675

00:49:19.880 --> 00:49:20.984 The other thing that can cause

NOTE Confidence: 0.7573675

00:49:20.984 --> 00:49:22.706 you to be high risk is if you had

NOTE Confidence: 0.7573675

00:49:22.706 --> 00:49:23.909 a previous biopsy with what we

NOTE Confidence: 0.7573675

00:49:23.909 --> 00:49:25.205 would consider a high risk lesion,

NOTE Confidence: 0.7573675

00:49:25.210 --> 00:49:26.563 atypical ductal hyperplasia,

NOTE Confidence: 0.7573675

00:49:26.563 --> 00:49:28.367 fibular carcinoma insight two

NOTE Confidence: 0.7573675

00:49:28.367 --> 00:49:30.270 these are benign lesions.

NOTE Confidence: 0.7573675

00:49:30.270 --> 00:49:32.678 But they confer an increased risk for the
NOTE Confidence: 0.7573675

00:49:32.678 --> 00:49:35.365 rest of your life of three to four times.
NOTE Confidence: 0.7573675

00:49:35.370 --> 00:49:36.648 So if you have any risk at all and
NOTE Confidence: 0.7573675

00:49:36.648 --> 00:49:38.037 you multiply by three to four times,
NOTE Confidence: 0.7573675

00:49:38.040 --> 00:49:39.660 you end up high risk.
NOTE Confidence: 0.7573675

00:49:39.660 --> 00:49:42.556 And the other thing is a history of
NOTE Confidence: 0.7573675

00:49:42.556 --> 00:49:45.237 mental radiation between puberty and age 30.
NOTE Confidence: 0.7573675

00:49:45.240 --> 00:49:46.788 It's interesting that you can radiate
NOTE Confidence: 0.7573675

00:49:46.788 --> 00:49:48.651 women after age 30 and not really
NOTE Confidence: 0.7573675

00:49:48.651 --> 00:49:50.217 increase the risk for breast cancer,
NOTE Confidence: 0.7573675

00:49:50.220 --> 00:49:52.760 but between puberty and 30.
NOTE Confidence: 0.7573675

00:49:52.760 --> 00:49:56.939 A dose of radiation used to treat
NOTE Confidence: 0.7573675

00:49:56.939 --> 00:49:59.316 cancer is a high risk factor.
NOTE Confidence: 0.7573675

00:49:59.316 --> 00:50:01.080 Personal history of breast cancer makes
NOTE Confidence: 0.7573675

00:50:01.134 --> 00:50:03.374 you more likely to get another breast cancer,
NOTE Confidence: 0.7573675

00:50:03.380 --> 00:50:05.627 and that one's a little controversial whether

NOTE Confidence: 0.7573675

00:50:05.627 --> 00:50:08.320 we should do high risk screening for those.

NOTE Confidence: 0.7573675

00:50:08.320 --> 00:50:11.666 So the guidelines for high risk screening?

NOTE Confidence: 0.7573675

00:50:11.670 --> 00:50:14.036 Are as follows the most followed guidelines

NOTE Confidence: 0.7573675

00:50:14.036 --> 00:50:15.940 from the American Cancer Society.

NOTE Confidence: 0.7573675

00:50:15.940 --> 00:50:17.935 And this is where that 20 to

NOTE Confidence: 0.7573675

00:50:17.940 --> 00:50:19.648 25% lifetime risk comes.

NOTE Confidence: 0.7573675

00:50:19.648 --> 00:50:21.783 So you calculate the risk

NOTE Confidence: 0.7573675

00:50:21.783 --> 00:50:23.667 using one of the models,

NOTE Confidence: 0.7573675

00:50:23.670 --> 00:50:25.930 and if it's above 20%,

NOTE Confidence: 0.7573675

00:50:25.930 --> 00:50:28.372 then the Marion County Society would

NOTE Confidence: 0.7573675

00:50:28.372 --> 00:50:30.788 recommend that you consider screening with

NOTE Confidence: 0.7573675

00:50:30.788 --> 00:50:33.684 MRI as well as mammography starting at 30.

NOTE Confidence: 0.7573675

00:50:33.690 --> 00:50:35.022 News from for as long as

NOTE Confidence: 0.7573675

00:50:35.022 --> 00:50:35.910 they're in good health.

NOTE Confidence: 0.7573675

00:50:35.910 --> 00:50:37.248 Now, this is a lifetime risk.

NOTE Confidence: 0.7573675

00:50:37.250 --> 00:50:39.637 So you you really interpret this that

NOTE Confidence: 0.7573675

00:50:39.637 --> 00:50:41.425 you continue until their lifetime

NOTE Confidence: 0.7573675

00:50:41.425 --> 00:50:43.666 risk falls below that 20% range.

NOTE Confidence: 0.7573675

00:50:43.666 --> 00:50:46.146 But it's not for everybody.

NOTE Confidence: 0.7573675

00:50:46.150 --> 00:50:47.818 There's downsides to high

NOTE Confidence: 0.7573675

00:50:47.818 --> 00:50:49.486 risk screening with MRI,

NOTE Confidence: 0.7573675

00:50:49.490 --> 00:50:51.170 and I'll show you some of those,

NOTE Confidence: 0.7573675

00:50:51.170 --> 00:50:53.660 but keep in mind that 2025% lifetime

NOTE Confidence: 0.7573675

00:50:53.660 --> 00:50:55.760 risk based on family history and

NOTE Confidence: 0.7573675

00:50:55.760 --> 00:50:57.186 genetics or mental radiation

NOTE Confidence: 0.7573675

00:50:57.186 --> 00:50:59.184 or if you have leaf framing,

NOTE Confidence: 0.7573675

00:50:59.190 --> 00:51:01.366 which puts you at a very high risk.

NOTE Confidence: 0.7573675

00:51:01.370 --> 00:51:03.060 Now we've talked about the

NOTE Confidence: 0.7573675

00:51:03.060 --> 00:51:03.736 American collector.

NOTE Confidence: 0.7573675

00:51:03.740 --> 00:51:04.925 We talked about the American

NOTE Confidence: 0.7573675

00:51:04.925 --> 00:51:06.110 College radiology and the American

NOTE Confidence: 0.7573675

00:51:06.155 --> 00:51:07.058 Society breast surgeons.

NOTE Confidence: 0.7573675

00:51:07.060 --> 00:51:08.340 They have similar recommendations

NOTE Confidence: 0.7573675

00:51:08.340 --> 00:51:09.300 to American Society,

NOTE Confidence: 0.7573675

00:51:09.300 --> 00:51:10.950 but they also include high risk

NOTE Confidence: 0.7573675

00:51:10.950 --> 00:51:12.692 screening for women who have a

NOTE Confidence: 0.7573675

00:51:12.692 --> 00:51:14.157 personal history of breast cancer,

NOTE Confidence: 0.7573675

00:51:14.160 --> 00:51:15.805 especially if they're young and

NOTE Confidence: 0.7573675

00:51:15.805 --> 00:51:17.450 they have dense breast tissue.

NOTE Confidence: 0.844037048571429

00:51:19.620 --> 00:51:20.880 What do we use for risk models?

NOTE Confidence: 0.844037048571429

00:51:20.880 --> 00:51:23.088 If you see risk models in

NOTE Confidence: 0.844037048571429

00:51:23.088 --> 00:51:24.192 your radiology report,

NOTE Confidence: 0.844037048571429

00:51:24.200 --> 00:51:25.568 you want to know where they come from.

NOTE Confidence: 0.844037048571429

00:51:25.570 --> 00:51:27.316 Well, the oldest model is the

NOTE Confidence: 0.844037048571429

00:51:27.316 --> 00:51:29.474 Gale model and that was what was

NOTE Confidence: 0.844037048571429

00:51:29.474 --> 00:51:31.334 used for all the tamoxifen trials.

NOTE Confidence: 0.844037048571429

00:51:31.340 --> 00:51:34.665 It is primarily focused on
NOTE Confidence: 0.844037048571429

00:51:34.665 --> 00:51:37.034 environmental and hormonal. Actors.
NOTE Confidence: 0.844037048571429

00:51:37.034 --> 00:51:39.278 It has a family history factor,
NOTE Confidence: 0.844037048571429

00:51:39.280 --> 00:51:40.548 but it's very coarse.
NOTE Confidence: 0.844037048571429

00:51:40.548 --> 00:51:41.916 It's it's oh, basically.
NOTE Confidence: 0.844037048571429

00:51:41.916 --> 00:51:45.244 The backup pro and Klaus and Myriad models
NOTE Confidence: 0.844037048571429

00:51:45.244 --> 00:51:48.047 predict the risk of having a PRC mutation,
NOTE Confidence: 0.844037048571429

00:51:48.050 --> 00:51:49.730 but they do not predict predict
NOTE Confidence: 0.844037048571429

00:51:49.730 --> 00:51:50.850 your overall cancer risk.
NOTE Confidence: 0.844037048571429

00:51:50.850 --> 00:51:52.818 The one we use for determining high risk
NOTE Confidence: 0.844037048571429

00:51:52.818 --> 00:51:54.389 screening is the tire cusick model,
NOTE Confidence: 0.844037048571429

00:51:54.390 --> 00:51:56.470 which is also called Ibis.
NOTE Confidence: 0.844037048571429

00:51:56.470 --> 00:51:58.470 And it uses multiple factors,
NOTE Confidence: 0.844037048571429

00:51:58.470 --> 00:51:59.330 and the latest version,
NOTE Confidence: 0.844037048571429

00:51:59.330 --> 00:52:00.190 which is version 8,
NOTE Confidence: 0.844037048571429

00:52:00.190 --> 00:52:01.375 includes breast density.

NOTE Confidence: 0.844037048571429

00:52:01.375 --> 00:52:04.140 It has a much more complete family

NOTE Confidence: 0.844037048571429

00:52:04.213 --> 00:52:06.088 history than the GAIL model.

NOTE Confidence: 0.844037048571429

00:52:06.090 --> 00:52:08.491 It comes with outputs that are five

NOTE Confidence: 0.844037048571429

00:52:08.491 --> 00:52:11.015 year lifetime and we use lifetime to

NOTE Confidence: 0.844037048571429

00:52:11.015 --> 00:52:13.480 decide whether people should have an MRI.

NOTE Confidence: 0.844037048571429

00:52:13.480 --> 00:52:14.396 Excuse me?

NOTE Confidence: 0.844037048571429

00:52:14.396 --> 00:52:17.144 And the reason is because we're

NOTE Confidence: 0.844037048571429

00:52:17.144 --> 00:52:19.296 trying to gear these toward young

NOTE Confidence: 0.844037048571429

00:52:19.296 --> 00:52:21.150 women where we have the greatest

NOTE Confidence: 0.844037048571429

00:52:21.207 --> 00:52:23.139 chance of having a positive impact,

NOTE Confidence: 0.844037048571429

00:52:23.140 --> 00:52:26.660 saving as many years of life as possible.

NOTE Confidence: 0.844037048571429

00:52:26.660 --> 00:52:28.124 The only genes in the model

NOTE Confidence: 0.844037048571429

00:52:28.124 --> 00:52:29.380 of BRACA one and two.

NOTE Confidence: 0.844037048571429

00:52:29.380 --> 00:52:31.244 So it doesn't include all the other genes,

NOTE Confidence: 0.844037048571429

00:52:31.250 --> 00:52:33.062 which is a little problematic because

NOTE Confidence: 0.844037048571429

00:52:33.062 --> 00:52:35.371 now many of our patients have genetic
NOTE Confidence: 0.844037048571429

00:52:35.371 --> 00:52:37.453 panels that show they have mutations
NOTE Confidence: 0.844037048571429

00:52:37.453 --> 00:52:39.516 in other genes that confer risk.
NOTE Confidence: 0.844037048571429

00:52:39.520 --> 00:52:41.081 And you cannot have had a personal
NOTE Confidence: 0.844037048571429

00:52:41.081 --> 00:52:42.100 history of breast cancer.
NOTE Confidence: 0.844037048571429

00:52:42.100 --> 00:52:43.724 It does not take that into account.
NOTE Confidence: 0.916705914

00:52:45.890 --> 00:52:50.198 So what do you do if you are at high risk?
NOTE Confidence: 0.916705914

00:52:50.200 --> 00:52:52.550 Well, as I said, we do annual MRI and that
NOTE Confidence: 0.916705914

00:52:52.615 --> 00:52:54.750 has to be performed with Ivy contrast.
NOTE Confidence: 0.916705914

00:52:54.750 --> 00:52:55.858 There's no utility to
NOTE Confidence: 0.916705914

00:52:55.858 --> 00:52:57.243 ordering a non contrast MRI.
NOTE Confidence: 0.916705914

00:52:57.250 --> 00:52:59.160 The patient is months MRI
NOTE Confidence: 0.916705914

00:52:59.160 --> 00:53:01.070 but they don't want contrast.
NOTE Confidence: 0.916705914

00:53:01.070 --> 00:53:04.410 Then it's useless. First demography.
NOTE Confidence: 0.916705914

00:53:04.410 --> 00:53:05.946 We do non contrast them right
NOTE Confidence: 0.916705914

00:53:05.946 --> 00:53:06.970 only to evaluate implants.

NOTE Confidence: 0.916705914

00:53:06.970 --> 00:53:09.084 We do that very rarely these days.

NOTE Confidence: 0.916705914

00:53:09.090 --> 00:53:11.328 Elenium contrast is now very safe.

NOTE Confidence: 0.916705914

00:53:11.330 --> 00:53:15.479 It does this thing called NSF where it was.

NOTE Confidence: 0.916705914

00:53:15.480 --> 00:53:16.158 Horrible disease,

NOTE Confidence: 0.916705914

00:53:16.158 --> 00:53:18.531 but the contrast agent that caused that

NOTE Confidence: 0.916705914

00:53:18.531 --> 00:53:20.828 is off the market and the point where

NOTE Confidence: 0.916705914

00:53:20.828 --> 00:53:23.058 we don't even do routine crap testing.

NOTE Confidence: 0.916705914

00:53:23.060 --> 00:53:25.620 So.

NOTE Confidence: 0.916705914

00:53:25.620 --> 00:53:27.868 The other so you know for that FF.

NOTE Confidence: 0.916705914

00:53:27.870 --> 00:53:28.990 So that really saves a lot of work.

NOTE Confidence: 0.916705914

00:53:28.990 --> 00:53:31.713 You don't have to worry about getting

NOTE Confidence: 0.916705914

00:53:31.713 --> 00:53:33.560 pre MRI creatinine deposition of

NOTE Confidence: 0.916705914

00:53:33.560 --> 00:53:35.260 gallium you've probably heard about.

NOTE Confidence: 0.916705914

00:53:35.260 --> 00:53:37.178 They could see it in people's brains

NOTE Confidence: 0.916705914

00:53:37.178 --> 00:53:39.533 who have had multiple MRI with contrast

NOTE Confidence: 0.916705914

00:53:39.533 --> 00:53:41.747 that has been essentially eliminated by
NOTE Confidence: 0.916705914

00:53:41.805 --> 00:53:44.205 changing to macrocyclic from linear agents.
NOTE Confidence: 0.916705914

00:53:44.210 --> 00:53:45.476 So with MI,
NOTE Confidence: 0.916705914

00:53:45.476 --> 00:53:48.008 you also should have annual mammography
NOTE Confidence: 0.916705914

00:53:48.008 --> 00:53:50.786 because in studies you find about 9% more
NOTE Confidence: 0.916705914

00:53:50.786 --> 00:53:53.270 cancers if you add the mammogram for the MRI.
NOTE Confidence: 0.916705914

00:53:53.270 --> 00:53:54.728 So by far if somebody says
NOTE Confidence: 0.916705914

00:53:54.728 --> 00:53:56.279 I only want one of these,
NOTE Confidence: 0.916705914

00:53:56.280 --> 00:53:57.930 then they should have the MRI.
NOTE Confidence: 0.916705914

00:53:57.930 --> 00:53:59.910 It's quite far the better test.
NOTE Confidence: 0.916705914

00:53:59.910 --> 00:54:01.305 But if you want to have the best screening,
NOTE Confidence: 0.916705914

00:54:01.310 --> 00:54:02.890 it's MRI plus mammography.
NOTE Confidence: 0.916705914

00:54:02.890 --> 00:54:04.865 And typically the mammography is
NOTE Confidence: 0.916705914

00:54:04.865 --> 00:54:06.849 there just like calcifications,
NOTE Confidence: 0.916705914

00:54:06.850 --> 00:54:09.027 which can be a sign of TCS.
NOTE Confidence: 0.916705914

00:54:09.030 --> 00:54:10.570 And if you're going to have MRI,

NOTE Confidence: 0.916705914

00:54:10.570 --> 00:54:12.664 there's no benefit to adding screening

NOTE Confidence: 0.916705914

00:54:12.664 --> 00:54:14.440 ultrasound every study has shown.

NOTE Confidence: 0.816547505

00:54:17.250 --> 00:54:18.454 So what does it look like if

NOTE Confidence: 0.816547505

00:54:18.454 --> 00:54:19.770 you have a screening cancer?

NOTE Confidence: 0.816547505

00:54:19.770 --> 00:54:23.060 Well, here's one that's about 8 millimeters

NOTE Confidence: 0.816547505

00:54:23.060 --> 00:54:25.770 and they certainly can come smaller

NOTE Confidence: 0.816547505

00:54:25.770 --> 00:54:27.966 at three and four millimeter cancers,

NOTE Confidence: 0.816547505

00:54:27.970 --> 00:54:31.606 but this is the perfect example.

NOTE Confidence: 0.816547505

00:54:31.610 --> 00:54:33.185 It's a patient with very

NOTE Confidence: 0.816547505

00:54:33.185 --> 00:54:34.130 low background enhancement,

NOTE Confidence: 0.816547505

00:54:34.130 --> 00:54:36.286 a single lesion that's obvious to everybody,

NOTE Confidence: 0.816547505

00:54:36.290 --> 00:54:38.190 even without the green circle.

NOTE Confidence: 0.816547505

00:54:38.190 --> 00:54:40.486 In fact, she'd had a screening mammogram

NOTE Confidence: 0.816547505

00:54:40.486 --> 00:54:43.146 the year before and it wasn't there, so.

NOTE Confidence: 0.816547505

00:54:43.146 --> 00:54:46.198 If you knew a little bit spiculated,

NOTE Confidence: 0.816547505

00:54:46.200 --> 00:54:47.252 it's a little subtle,
NOTE Confidence: 0.816547505

00:54:47.252 --> 00:54:48.830 but to us that little tiny
NOTE Confidence: 0.816547505

00:54:48.889 --> 00:54:50.477 bump there means speculation.
NOTE Confidence: 0.75510810375

00:54:52.870 --> 00:54:54.091 This one's trickier.
NOTE Confidence: 0.75510810375

00:54:54.091 --> 00:54:56.126 This one's Oval and smooth.
NOTE Confidence: 0.75510810375

00:54:56.130 --> 00:54:57.462 And in fact, this one turned
NOTE Confidence: 0.75510810375

00:54:57.462 --> 00:54:59.190 out to be a fibroadenomas.
NOTE Confidence: 0.75510810375

00:54:59.190 --> 00:55:00.665 So it's not that everything
NOTE Confidence: 0.75510810375

00:55:00.665 --> 00:55:02.650 that lights up is a cancer.
NOTE Confidence: 0.75510810375

00:55:02.650 --> 00:55:04.190 So the case I showed, of course.
NOTE Confidence: 0.75510810375

00:55:04.190 --> 00:55:06.170 Great if everything looked like that,
NOTE Confidence: 0.75510810375

00:55:06.170 --> 00:55:07.994 but it doesn't always.
NOTE Confidence: 0.75510810375

00:55:07.994 --> 00:55:10.730 So you will have probably benign.
NOTE Confidence: 0.75510810375

00:55:10.730 --> 00:55:11.447 Comes from these,
NOTE Confidence: 0.75510810375

00:55:11.447 --> 00:55:13.440 so we give you an assessment of probably
NOTE Confidence: 0.75510810375

00:55:13.440 --> 00:55:15.568 benign and we recommend a follow up MRI.

NOTE Confidence: 0.75510810375

00:55:15.570 --> 00:55:17.490 We recommend the targeted ultrasound.

NOTE Confidence: 0.75510810375

00:55:17.490 --> 00:55:19.090 We cannot always tell a

NOTE Confidence: 0.75510810375

00:55:19.090 --> 00:55:20.370 benign from malignant lesion.

NOTE Confidence: 0.75510810375

00:55:20.370 --> 00:55:22.405 We have the capability to

NOTE Confidence: 0.75510810375

00:55:22.405 --> 00:55:24.033 biopsy under Mr Guidance.

NOTE Confidence: 0.838742302105263

00:55:26.260 --> 00:55:28.372 The other thing that is sort of the

NOTE Confidence: 0.838742302105263

00:55:28.372 --> 00:55:30.342 equivalent of dense breast tissue but

NOTE Confidence: 0.838742302105263

00:55:30.342 --> 00:55:32.077 for MRI is background enhancement.

NOTE Confidence: 0.838742302105263

00:55:32.080 --> 00:55:34.240 So if the normal tissue lights up like this,

NOTE Confidence: 0.838742302105263

00:55:34.240 --> 00:55:35.842 and especially if it lights up with a bunch

NOTE Confidence: 0.838742302105263

00:55:35.842 --> 00:55:37.645 of blobs that are a little bigger than this,

NOTE Confidence: 0.838742302105263

00:55:37.650 --> 00:55:39.394 which is not uncommon,

NOTE Confidence: 0.838742302105263

00:55:39.394 --> 00:55:42.010 it could potentially provide a cancer.

NOTE Confidence: 0.838742302105263

00:55:42.010 --> 00:55:43.030 Even on this pattern,

NOTE Confidence: 0.838742302105263

00:55:43.030 --> 00:55:45.129 we would be able to see a cancer,

NOTE Confidence: 0.838742302105263

00:55:45.130 --> 00:55:47.326 but we're not going to see
NOTE Confidence: 0.838742302105263

00:55:47.326 --> 00:55:49.980 as many as we see if that.
NOTE Confidence: 0.838742302105263

00:55:49.980 --> 00:55:53.140 Especially DCIS is what we would lose.
NOTE Confidence: 0.838742302105263

00:55:53.140 --> 00:55:56.956 So how does DCIS typically present?
NOTE Confidence: 0.838742302105263

00:55:56.960 --> 00:55:58.360 So it can present as a thing
NOTE Confidence: 0.838742302105263

00:55:58.360 --> 00:55:59.560 called non mass enhancement.
NOTE Confidence: 0.838742302105263

00:55:59.560 --> 00:56:01.261 So you see a report and it
NOTE Confidence: 0.838742302105263

00:56:01.261 --> 00:56:02.720 says there's mass enhancement.
NOTE Confidence: 0.838742302105263

00:56:02.720 --> 00:56:03.364 We're saying,
NOTE Confidence: 0.838742302105263

00:56:03.364 --> 00:56:04.974 well it could be DCIS,
NOTE Confidence: 0.838742302105263

00:56:04.980 --> 00:56:07.129 but it's more likely normal and we
NOTE Confidence: 0.838742302105263

00:56:07.129 --> 00:56:09.499 have to decide we biopsy this or not.
NOTE Confidence: 0.838742302105263

00:56:09.500 --> 00:56:11.428 We know that neither one of these is
NOTE Confidence: 0.838742302105263

00:56:11.428 --> 00:56:13.171 likely to be an invasive cancer and
NOTE Confidence: 0.838742302105263

00:56:13.171 --> 00:56:15.520 in fact we know that both of them are
NOTE Confidence: 0.838742302105263

00:56:15.520 --> 00:56:17.152 more likely normal tissue than DCS.

NOTE Confidence: 0.838742302105263

00:56:17.160 --> 00:56:19.820 But if we want to make sure we catch dsas,

NOTE Confidence: 0.838742302105263

00:56:19.820 --> 00:56:22.808 we. We have to have a threshold.

NOTE Confidence: 0.838742302105263

00:56:22.810 --> 00:56:26.666 When do we biopsy, when do we not?

NOTE Confidence: 0.838742302105263

00:56:26.670 --> 00:56:28.934 So those are kind of the things that

NOTE Confidence: 0.838742302105263

00:56:28.934 --> 00:56:31.608 might help you interpret the reports you get.

NOTE Confidence: 0.838742302105263

00:56:31.610 --> 00:56:33.770 So how good are each of these tests?

NOTE Confidence: 0.838742302105263

00:56:33.770 --> 00:56:37.550 Well, when you add tomography.

NOTE Confidence: 0.838742302105263

00:56:37.550 --> 00:56:40.182 For the first thousand patients in the

NOTE Confidence: 0.838742302105263

00:56:40.182 --> 00:56:42.230 first screening round, I know that well.

NOTE Confidence: 0.838742302105263

00:56:42.230 --> 00:56:43.610 First of all know that typical

NOTE Confidence: 0.838742302105263

00:56:43.662 --> 00:56:45.150 screening mammography practice,

NOTE Confidence: 0.838742302105263

00:56:45.150 --> 00:56:47.625 we will find 2 to 4 cancers per thousand.

NOTE Confidence: 0.838742302105263

00:56:47.630 --> 00:56:49.933 The yearly incidence of cancer is around

NOTE Confidence: 0.838742302105263

00:56:49.933 --> 00:56:52.607 two to three in screening age patients.

NOTE Confidence: 0.838742302105263

00:56:52.610 --> 00:56:53.778 But not everybody shows

NOTE Confidence: 0.838742302105263

00:56:53.778 --> 00:56:54.946 up absolutely every year.
NOTE Confidence: 0.838742302105263

00:56:54.950 --> 00:56:57.810 So it tends to be a yield of about four.
NOTE Confidence: 0.838742302105263

00:56:57.810 --> 00:57:00.150 Adding tomosynthesis in the early studies
NOTE Confidence: 0.838742302105263

00:57:00.150 --> 00:57:03.248 showed about one to two additional cancers.
NOTE Confidence: 0.838742302105263

00:57:03.250 --> 00:57:04.906 Often these were low grade cancers
NOTE Confidence: 0.838742302105263

00:57:04.906 --> 00:57:07.010 which was a little bit disappointing.
NOTE Confidence: 0.838742302105263

00:57:07.010 --> 00:57:07.486 Ultrasound.
NOTE Confidence: 0.838742302105263

00:57:07.486 --> 00:57:08.438 Was better.
NOTE Confidence: 0.838742302105263

00:57:08.438 --> 00:57:10.818 So adding supplemental ultrasound is
NOTE Confidence: 0.838742302105263

00:57:10.818 --> 00:57:13.490 better than just doing tomosynthesis.
NOTE Confidence: 0.838742302105263

00:57:13.490 --> 00:57:15.530 Three to four additional cancers,
NOTE Confidence: 0.838742302105263

00:57:15.530 --> 00:57:18.050 almost all invasive and not all low grade.
NOTE Confidence: 0.838742302105263

00:57:18.050 --> 00:57:20.450 There were some high grade cancers for sure.
NOTE Confidence: 0.838742302105263

00:57:20.450 --> 00:57:21.786 Contrasts that enhanced mammography
NOTE Confidence: 0.838742302105263

00:57:21.786 --> 00:57:24.210 and screening studies is a big jump
NOTE Confidence: 0.838742302105263

00:57:24.210 --> 00:57:25.666 because you're giving contrast.

NOTE Confidence: 0.838742302105263
00:57:25.670 --> 00:57:28.010 So the studies that were done
NOTE Confidence: 0.838742302105263
00:57:28.010 --> 00:57:29.570 showed eleven additional cancers,
NOTE Confidence: 0.838742302105263
00:57:29.570 --> 00:57:31.466 but the one that really drives
NOTE Confidence: 0.838742302105263
00:57:31.466 --> 00:57:33.469 everything is that if you do MRI,
NOTE Confidence: 0.838742302105263
00:57:33.470 --> 00:57:35.870 you find 14 additional cancers.
NOTE Confidence: 0.838742302105263
00:57:35.870 --> 00:57:37.028 So what does that really mean?
NOTE Confidence: 0.838742302105263
00:57:37.030 --> 00:57:37.938 But first of all,
NOTE Confidence: 0.838742302105263
00:57:37.938 --> 00:57:39.300 where does that really come from?
NOTE Confidence: 0.838742302105263
00:57:39.300 --> 00:57:42.340 So that 14 number comes from a study
NOTE Confidence: 0.838742302105263
00:57:42.340 --> 00:57:44.350 called the acronym 6666 trial.
NOTE Confidence: 0.838742302105263
00:57:44.350 --> 00:57:46.170 And for that trial you did not
NOTE Confidence: 0.838742302105263
00:57:46.170 --> 00:57:47.499 have to be high risk,
NOTE Confidence: 0.838742302105263
00:57:47.500 --> 00:57:49.438 you only had to have dense
NOTE Confidence: 0.838742302105263
00:57:49.438 --> 00:57:51.152 breast tissue 2800 subjects,
NOTE Confidence: 0.838742302105263
00:57:51.152 --> 00:57:53.276 they had mammography with
NOTE Confidence: 0.838742302105263

00:57:53.276 --> 00:57:54.869 or without tomosynthesis.
NOTE Confidence: 0.838742302105263

00:57:54.870 --> 00:57:56.886 And then for three years in a row they
NOTE Confidence: 0.838742302105263

00:57:56.886 --> 00:57:58.620 also had supplemental ultrasound.
NOTE Confidence: 0.838742302105263

00:57:58.620 --> 00:58:00.942 That's where they found about four
NOTE Confidence: 0.838742302105263

00:58:00.942 --> 00:58:02.956 cancers per thousand extra just
NOTE Confidence: 0.838742302105263

00:58:02.956 --> 00:58:03.760 on ultrasound.
NOTE Confidence: 0.838742302105263

00:58:03.760 --> 00:58:04.633 Pretty good yield,
NOTE Confidence: 0.838742302105263

00:58:04.633 --> 00:58:06.379 do you think you found everything?
NOTE Confidence: 0.838742302105263

00:58:06.380 --> 00:58:08.500 But then after three rounds of that day,
NOTE Confidence: 0.838742302105263

00:58:08.500 --> 00:58:09.808 they decided to do one round
NOTE Confidence: 0.838742302105263

00:58:09.808 --> 00:58:11.310 of MRI and lo and behold,
NOTE Confidence: 0.783299121578947

00:58:11.310 --> 00:58:13.428 there were 14 cancers per thousand
NOTE Confidence: 0.783299121578947

00:58:13.428 --> 00:58:16.019 that had been lurking there that were
NOTE Confidence: 0.783299121578947

00:58:16.019 --> 00:58:18.245 not found by mammography and Epstein.
NOTE Confidence: 0.783299121578947

00:58:18.250 --> 00:58:19.050 So what does that mean?
NOTE Confidence: 0.783299121578947

00:58:19.050 --> 00:58:20.255 Are we finding additional cancers

NOTE Confidence: 0.783299121578947
00:58:20.255 --> 00:58:21.750 that never would have been found?
NOTE Confidence: 0.783299121578947
00:58:21.750 --> 00:58:24.190 No. We're finding cancers earlier.
NOTE Confidence: 0.783299121578947
00:58:24.190 --> 00:58:28.327 So it's moving the detection point earlier.
NOTE Confidence: 0.783299121578947
00:58:28.330 --> 00:58:29.745 So that you're finding hopefully
NOTE Confidence: 0.783299121578947
00:58:29.745 --> 00:58:30.877 the same cancers earlier.
NOTE Confidence: 0.783299121578947
00:58:30.880 --> 00:58:32.616 We do not want to find 14
NOTE Confidence: 0.783299121578947
00:58:32.616 --> 00:58:34.010 cancers per thousand every year.
NOTE Confidence: 0.783299121578947
00:58:34.010 --> 00:58:35.510 That means we're over diagnosing,
NOTE Confidence: 0.783299121578947
00:58:35.510 --> 00:58:36.650 we're finding too many cancers,
NOTE Confidence: 0.783299121578947
00:58:36.650 --> 00:58:38.110 but that's not what happens.
NOTE Confidence: 0.783299121578947
00:58:38.110 --> 00:58:39.680 You find the 14 cancer.
NOTE Confidence: 0.846039831111111
00:58:42.480 --> 00:58:43.740 Number and the point is
NOTE Confidence: 0.846039831111111
00:58:43.740 --> 00:58:44.748 we're finding them earlier.
NOTE Confidence: 0.846039831111111
00:58:44.750 --> 00:58:45.758 So if you screen with MRI,
NOTE Confidence: 0.846039831111111
00:58:45.760 --> 00:58:47.596 you'll find smaller cancers
NOTE Confidence: 0.846039831111111

00:58:47.596 --> 00:58:50.350 and the cancers will all be.
NOTE Confidence: 0.8460398311111111

00:58:50.350 --> 00:58:52.846 Of all different types as far as aggression.
NOTE Confidence: 0.8460398311111111

00:58:52.850 --> 00:58:54.908 So they have to be aggressive enough
NOTE Confidence: 0.8460398311111111

00:58:54.908 --> 00:58:56.650 that they make their own blood
NOTE Confidence: 0.8460398311111111

00:58:56.650 --> 00:58:58.890 vessels in order to show up on MRI.
NOTE Confidence: 0.8460398311111111

00:58:58.890 --> 00:59:00.912 So it's not prone to over
NOTE Confidence: 0.8460398311111111

00:59:00.912 --> 00:59:02.882 diagnosis the way, for example,
NOTE Confidence: 0.8460398311111111

00:59:02.882 --> 00:59:06.214 tomosynthesis seemed to be a little bit.
NOTE Confidence: 0.8460398311111111

00:59:06.220 --> 00:59:07.236 So that's the feature.
NOTE Confidence: 0.8460398311111111

00:59:07.236 --> 00:59:08.506 The feature is called personalized
NOTE Confidence: 0.8460398311111111

00:59:08.506 --> 00:59:09.937 screening and in personalized screening,
NOTE Confidence: 0.8460398311111111

00:59:09.940 --> 00:59:11.396 which we are not doing at this point,
NOTE Confidence: 0.8460398311111111

00:59:11.400 --> 00:59:13.600 but we will be.
NOTE Confidence: 0.8460398311111111

00:59:13.600 --> 00:59:14.628 As things progressed over
NOTE Confidence: 0.8460398311111111

00:59:14.628 --> 00:59:15.656 the next five years,
NOTE Confidence: 0.8460398311111111

00:59:15.660 --> 00:59:17.280 each patient will get screened

NOTE Confidence: 0.8460398311111111
00:59:17.280 --> 00:59:19.440 based on their own risk factors.
NOTE Confidence: 0.8460398311111111
00:59:19.440 --> 00:59:21.536 That has to mean that some get more
NOTE Confidence: 0.8460398311111111
00:59:21.536 --> 00:59:22.980 screening and others get less.
NOTE Confidence: 0.8460398311111111
00:59:22.980 --> 00:59:24.396 Doesn't do any good if we
NOTE Confidence: 0.8460398311111111
00:59:24.396 --> 00:59:25.340 just screen everybody more.
NOTE Confidence: 0.8460398311111111
00:59:25.340 --> 00:59:26.738 So it'll affect how often we
NOTE Confidence: 0.8460398311111111
00:59:26.738 --> 00:59:28.027 say they should be screened
NOTE Confidence: 0.8460398311111111
00:59:28.027 --> 00:59:29.517 and what modalities we use.
NOTE Confidence: 0.8460398311111111
00:59:29.520 --> 00:59:30.972 We will use the standard risk
NOTE Confidence: 0.8460398311111111
00:59:30.972 --> 00:59:31.940 factors that I mentioned,
NOTE Confidence: 0.8460398311111111
00:59:31.940 --> 00:59:33.125 family history, etcetera.
NOTE Confidence: 0.8460398311111111
00:59:33.125 --> 00:59:36.478 But also we can use AI to analyze
NOTE Confidence: 0.8460398311111111
00:59:36.478 --> 00:59:38.998 the pattern on their mammogram.
NOTE Confidence: 0.8460398311111111
00:59:39.000 --> 00:59:42.726 And it's been shown that with AI you can
NOTE Confidence: 0.8460398311111111
00:59:42.726 --> 00:59:45.995 predict their short term risk very well.
NOTE Confidence: 0.8460398311111111

00:59:46.000 --> 00:59:47.240 I'm more than just looking
NOTE Confidence: 0.8460398311111111

00:59:47.240 --> 00:59:48.680 at density as we looked at,
NOTE Confidence: 0.8460398311111111

00:59:48.680 --> 00:59:50.040 but if you look at the actual pattern,
NOTE Confidence: 0.8460398311111111

00:59:50.040 --> 00:59:52.920 somehow the computer can tell
NOTE Confidence: 0.8460398311111111

00:59:52.920 --> 00:59:54.138 what their short term risk is.
NOTE Confidence: 0.8460398311111111

00:59:54.140 --> 00:59:56.484 So you might ask well how and they
NOTE Confidence: 0.8460398311111111

00:59:56.484 --> 00:59:58.280 realized we really don't know.
NOTE Confidence: 0.8460398311111111

00:59:58.280 --> 01:00:00.800 But if you're looking at short term risk,
NOTE Confidence: 0.8460398311111111

01:00:00.800 --> 01:00:02.459 but you're really looking at not so
NOTE Confidence: 0.8460398311111111

01:00:02.459 --> 01:00:04.219 much as risk but early detection.
NOTE Confidence: 0.8460398311111111

01:00:04.220 --> 01:00:06.416 So in my opinion they're seeing
NOTE Confidence: 0.8460398311111111

01:00:06.416 --> 01:00:07.880 early signs of cancer,
NOTE Confidence: 0.8460398311111111

01:00:07.880 --> 01:00:09.017 not super specifically,
NOTE Confidence: 0.8460398311111111

01:00:09.017 --> 01:00:11.670 but enough that if you take those
NOTE Confidence: 0.8460398311111111

01:00:11.738 --> 01:00:13.598 patients where they say hey,
NOTE Confidence: 0.8460398311111111

01:00:13.600 --> 01:00:15.456 this looks like there's going to be a

NOTE Confidence: 0.8460398311111111
01:00:15.456 --> 01:00:17.056 cancer here and you do MRI on them.
NOTE Confidence: 0.8460398311111111
01:00:17.060 --> 01:00:19.286 Find that it's the best predictor
NOTE Confidence: 0.8460398311111111
01:00:19.286 --> 01:00:20.399 of short-term risk,
NOTE Confidence: 0.8460398311111111
01:00:20.400 --> 01:00:24.408 so it's better than the entire music model.
NOTE Confidence: 0.8460398311111111
01:00:24.410 --> 01:00:26.390 And that is what's going.
NOTE Confidence: 0.8460398311111111
01:00:26.390 --> 01:00:28.082 So that's what we have to look forward to.
NOTE Confidence: 0.8460398311111111
01:00:28.090 --> 01:00:30.148 But here's where we are today.
NOTE Confidence: 0.8460398311111111
01:00:30.150 --> 01:00:31.650 Screening Murphy is still the
NOTE Confidence: 0.8460398311111111
01:00:31.650 --> 01:00:33.150 only tool that was validated
NOTE Confidence: 0.8460398311111111
01:00:33.209 --> 01:00:34.789 using trials with mortalities and
NOTE Confidence: 0.8460398311111111
01:00:34.789 --> 01:00:36.797 endpoint and it's still the mainstay
NOTE Confidence: 0.8460398311111111
01:00:36.797 --> 01:00:38.289 of breast cancer screening.
NOTE Confidence: 0.8460398311111111
01:00:38.290 --> 01:00:40.404 But we know it's far from perfect.
NOTE Confidence: 0.8460398311111111
01:00:40.410 --> 01:00:41.640 Ultrasound definitely finds
NOTE Confidence: 0.8460398311111111
01:00:41.640 --> 01:00:43.690 additional cancers and dense breasts.
NOTE Confidence: 0.8460398311111111

01:00:43.690 --> 01:00:45.671 And while we don't have a mortality
NOTE Confidence: 0.8460398311111111

01:00:45.671 --> 01:00:48.048 based trial to prove that it saves lives,
NOTE Confidence: 0.8460398311111111

01:00:48.050 --> 01:00:49.346 clearly we're finding cancers
NOTE Confidence: 0.8460398311111111

01:00:49.346 --> 01:00:50.966 that would have kept growing,
NOTE Confidence: 0.8460398311111111

01:00:50.970 --> 01:00:53.052 would have been found later with
NOTE Confidence: 0.8460398311111111

01:00:53.052 --> 01:00:54.194 only mammography, understand.
NOTE Confidence: 0.8460398311111111

01:00:54.194 --> 01:00:56.858 MRI is our most sensitive test,
NOTE Confidence: 0.8460398311111111

01:00:56.860 --> 01:00:58.612 but it's also our most expensive
NOTE Confidence: 0.8460398311111111

01:00:58.612 --> 01:01:01.121 and it also has this reputation of
NOTE Confidence: 0.8460398311111111

01:01:01.121 --> 01:01:03.222 having false positives, which it does.
NOTE Confidence: 0.8460398311111111

01:01:03.222 --> 01:01:05.999 But we've come to where we can manage those.
NOTE Confidence: 0.8460398311111111

01:01:06.000 --> 01:01:07.415 We know where our threshold
NOTE Confidence: 0.8460398311111111

01:01:07.415 --> 01:01:09.600 should be and we can do biopsies.
NOTE Confidence: 0.8460398311111111

01:01:09.600 --> 01:01:11.370 And the key to optimizing screening
NOTE Confidence: 0.8460398311111111

01:01:11.370 --> 01:01:13.179 in the future will be matching
NOTE Confidence: 0.8460398311111111

01:01:13.179 --> 01:01:14.889 every patient to the best tests

NOTE Confidence: 0.8460398311111111
01:01:14.889 --> 01:01:16.779 and interval for her.
NOTE Confidence: 0.8460398311111111
01:01:16.780 --> 01:01:19.316 And AI will very likely play a role,
NOTE Confidence: 0.8460398311111111
01:01:19.320 --> 01:01:20.880 which means mammography will very
NOTE Confidence: 0.8460398311111111
01:01:20.880 --> 01:01:22.968 likely play a role because it's from
NOTE Confidence: 0.8460398311111111
01:01:22.968 --> 01:01:24.840 the mammogram that we use the AI to
NOTE Confidence: 0.795321680454545
01:01:24.898 --> 01:01:26.460 determine risk. So again,
NOTE Confidence: 0.795321680454545
01:01:26.460 --> 01:01:28.800 a whirlwind tour of what's going
NOTE Confidence: 0.795321680454545
01:01:28.800 --> 01:01:31.780 on in breast imaging. So thank you.
NOTE Confidence: 0.89375819
01:01:33.430 --> 01:01:34.734 Thank you, doctor Lewin.
NOTE Confidence: 0.89375819
01:01:34.734 --> 01:01:36.038 That was really comprehensive
NOTE Confidence: 0.89375819
01:01:36.038 --> 01:01:38.079 and so much going on in the
NOTE Confidence: 0.89375819
01:01:38.079 --> 01:01:39.147 world of breast imaging.
NOTE Confidence: 0.89375819
01:01:39.150 --> 01:01:40.170 Last but not least,
NOTE Confidence: 0.89375819
01:01:40.170 --> 01:01:41.556 we have a doctor, Ayela,
NOTE Confidence: 0.89375819
01:01:41.556 --> 01:01:43.386 who's our newest faculty member,
NOTE Confidence: 0.89375819

01:01:43.390 --> 01:01:45.310 joining us from Memorial Sloan Kettering.

NOTE Confidence: 0.89375819

01:01:45.310 --> 01:01:48.650 Umm talking about advances in

NOTE Confidence: 0.89375819

01:01:48.650 --> 01:01:49.986 breast reconstruction.

NOTE Confidence: 0.89375819

01:01:49.990 --> 01:01:52.085 We're really excited to have

NOTE Confidence: 0.89375819

01:01:52.085 --> 01:01:53.342 a talented microvascular

NOTE Confidence: 0.89375819

01:01:53.342 --> 01:01:55.329 surgeon like you here at Yale.

NOTE Confidence: 0.89375819

01:01:55.330 --> 01:01:56.150 Thank you.

NOTE Confidence: 0.918385908

01:01:58.720 --> 01:02:00.200 Thank you for the introduction.

NOTE Confidence: 0.918385908

01:02:00.200 --> 01:02:01.910 Can you see my screen?

NOTE Confidence: 0.7522228

01:02:03.020 --> 01:02:04.770 Yes, awesome.

NOTE Confidence: 0.838278036

01:02:07.370 --> 01:02:08.622 All right. Well, good evening, everyone.

NOTE Confidence: 0.838278036

01:02:08.622 --> 01:02:09.950 This is a homestretch.

NOTE Confidence: 0.838278036

01:02:09.950 --> 01:02:11.750 Thank you for the introduction

NOTE Confidence: 0.838278036

01:02:11.750 --> 01:02:13.190 and for the invitation.

NOTE Confidence: 0.838278036

01:02:13.190 --> 01:02:14.470 So for the next 10 minutes or so,

NOTE Confidence: 0.838278036

01:02:14.470 --> 01:02:17.932 I'll be talking about strategies and

NOTE Confidence: 0.838278036

01:02:17.932 --> 01:02:19.663 comprehensive breast reconstruction.

NOTE Confidence: 0.838278036

01:02:19.670 --> 01:02:21.998 So we'll briefly discuss the background,

NOTE Confidence: 0.838278036

01:02:21.998 --> 01:02:24.408 why do we choose reconstruction,

NOTE Confidence: 0.838278036

01:02:24.410 --> 01:02:27.110 some options after both breast conservation

NOTE Confidence: 0.838278036

01:02:27.110 --> 01:02:29.556 and mastectomy surgery and a couple

NOTE Confidence: 0.838278036

01:02:29.556 --> 01:02:31.868 of new directions that we hope to be

NOTE Confidence: 0.838278036

01:02:31.938 --> 01:02:34.188 exploring at Yale for our patients.

NOTE Confidence: 0.838278036

01:02:34.190 --> 01:02:36.534 That it's been almost 25 years since the

NOTE Confidence: 0.838278036

01:02:36.534 --> 01:02:38.479 government has mandated healthcare payer

NOTE Confidence: 0.838278036

01:02:38.479 --> 01:02:40.644 coverage for all breast reconstruction,

NOTE Confidence: 0.838278036

01:02:40.650 --> 01:02:42.478 including contralateral procedures to

NOTE Confidence: 0.838278036

01:02:42.478 --> 01:02:44.763 achieve symmetry and any treatment

NOTE Confidence: 0.838278036

01:02:44.763 --> 01:02:46.629 after sequella of mastectomy.

NOTE Confidence: 0.838278036

01:02:46.630 --> 01:02:48.330 However, they're really still continues

NOTE Confidence: 0.838278036

01:02:48.330 --> 01:02:51.326 to be less than a 50% rate of women

NOTE Confidence: 0.838278036

01:02:51.326 --> 01:02:53.086 who are seeking breast reconstruction.

NOTE Confidence: 0.838278036

01:02:53.090 --> 01:02:54.298 And upon additional surveys

NOTE Confidence: 0.838278036

01:02:54.298 --> 01:02:55.204 of these patients,

NOTE Confidence: 0.838278036

01:02:55.210 --> 01:02:57.220 we have found that common reasons

NOTE Confidence: 0.838278036

01:02:57.220 --> 01:02:59.358 not to choose reconstruction are to

NOTE Confidence: 0.838278036

01:02:59.358 --> 01:03:01.198 avoid additional surgery belief that

NOTE Confidence: 0.838278036

01:03:01.198 --> 01:03:03.069 reconstruction is either not important

NOTE Confidence: 0.838278036

01:03:03.069 --> 01:03:04.844 or not available or potentially.

NOTE Confidence: 0.838278036

01:03:04.850 --> 01:03:06.270 A fear of breast implants,

NOTE Confidence: 0.838278036

01:03:06.270 --> 01:03:08.244 especially surrounding the

NOTE Confidence: 0.838278036

01:03:08.244 --> 01:03:10.218 current media state.

NOTE Confidence: 0.838278036

01:03:10.220 --> 01:03:11.552 We have found over and over

NOTE Confidence: 0.838278036

01:03:11.552 --> 01:03:12.823 that patients who do undergo

NOTE Confidence: 0.838278036

01:03:12.823 --> 01:03:14.171 reconstructive procedures have very

NOTE Confidence: 0.838278036

01:03:14.171 --> 01:03:16.140 high rate of satisfaction and very,

NOTE Confidence: 0.838278036

01:03:16.140 --> 01:03:18.708 very good and improved quality of life.

NOTE Confidence: 0.838278036

01:03:18.708 --> 01:03:20.728 And reconstruction is we can

NOTE Confidence: 0.838278036

01:03:20.728 --> 01:03:22.434 be performed concurrently with

NOTE Confidence: 0.838278036

01:03:22.434 --> 01:03:24.126 both breast conservation methods

NOTE Confidence: 0.838278036

01:03:24.126 --> 01:03:26.241 as well as after mastectomy.

NOTE Confidence: 0.838278036

01:03:26.250 --> 01:03:28.693 And it's important to note for our

NOTE Confidence: 0.838278036

01:03:28.693 --> 01:03:30.031 patients that reconstruction is

NOTE Confidence: 0.838278036

01:03:30.031 --> 01:03:31.655 safe and it does not affect the

NOTE Confidence: 0.838278036

01:03:31.655 --> 01:03:33.570 risk of local disease recurrence.

NOTE Confidence: 0.838278036

01:03:33.570 --> 01:03:35.215 And we think about uncle plastic surgery.

NOTE Confidence: 0.838278036

01:03:35.220 --> 01:03:37.488 This is very advantageous in many respects,

NOTE Confidence: 0.838278036

01:03:37.490 --> 01:03:39.446 and there's tons of literature and

NOTE Confidence: 0.838278036

01:03:39.446 --> 01:03:41.535 numerous algorithms to help us decide

NOTE Confidence: 0.838278036

01:03:41.535 --> 01:03:43.707 the optimal incisions and resection patterns.

NOTE Confidence: 0.838278036

01:03:43.710 --> 01:03:45.726 But I think it's simplest to tell

NOTE Confidence: 0.838278036

01:03:45.726 --> 01:03:47.700 patients that large breasts generally

NOTE Confidence: 0.838278036

01:03:47.700 --> 01:03:49.269 undergo therapeutic reduction.
NOTE Confidence: 0.838278036

01:03:49.270 --> 01:03:52.084 Small breasts with small masses undergo
NOTE Confidence: 0.838278036

01:03:52.084 --> 01:03:54.390 tissue rearrangement with a lift,
NOTE Confidence: 0.838278036

01:03:54.390 --> 01:03:56.838 and small breasts with a large
NOTE Confidence: 0.838278036

01:03:56.838 --> 01:03:58.973 mass may need volume replacement
NOTE Confidence: 0.838278036

01:03:58.973 --> 01:04:02.317 in the form of a local tissue flap.
NOTE Confidence: 0.838278036

01:04:02.320 --> 01:04:04.252 So here's a schematic of an oncoplastic
NOTE Confidence: 0.838278036

01:04:04.252 --> 01:04:05.840 reduction for a larger breast.
NOTE Confidence: 0.838278036

01:04:05.840 --> 01:04:07.538 We usually use this incision pattern,
NOTE Confidence: 0.838278036

01:04:07.540 --> 01:04:10.630 the the wise pattern and this is a
NOTE Confidence: 0.838278036

01:04:10.630 --> 01:04:12.730 patient who had a upper outer tumor
NOTE Confidence: 0.838278036

01:04:12.730 --> 01:04:14.620 for resection and we approached
NOTE Confidence: 0.838278036

01:04:14.620 --> 01:04:16.745 this using again that traditional
NOTE Confidence: 0.838278036

01:04:16.745 --> 01:04:18.380 wise pattern incision.
NOTE Confidence: 0.838278036

01:04:18.380 --> 01:04:20.242 We were able to reduce and lift
NOTE Confidence: 0.838278036

01:04:20.242 --> 01:04:22.080 the breast after the tumor was

NOTE Confidence: 0.838278036

01:04:22.080 --> 01:04:24.360 removed and she here she is postop,

NOTE Confidence: 0.838278036

01:04:24.360 --> 01:04:27.100 good contour, good symmetry.

NOTE Confidence: 0.838278036

01:04:27.100 --> 01:04:29.356 Small breasted patients who are losing

NOTE Confidence: 0.838278036

01:04:29.356 --> 01:04:31.716 a significant amount of their volume

NOTE Confidence: 0.838278036

01:04:31.716 --> 01:04:33.706 may need replacement with tissue.

NOTE Confidence: 0.838278036

01:04:33.710 --> 01:04:35.957 Often we take this from the back.

NOTE Confidence: 0.838278036

01:04:35.960 --> 01:04:37.031 So for example,

NOTE Confidence: 0.838278036

01:04:37.031 --> 01:04:39.173 this woman had a upper intermedial

NOTE Confidence: 0.838278036

01:04:39.173 --> 01:04:41.628 quadrant tumor and would have definitely

NOTE Confidence: 0.838278036

01:04:41.628 --> 01:04:43.658 had an aesthetic contour deformity.

NOTE Confidence: 0.838278036

01:04:43.660 --> 01:04:45.442 It doesn't have quite enough tissue

NOTE Confidence: 0.838278036

01:04:45.442 --> 01:04:46.965 to rearrange and she definitely

NOTE Confidence: 0.838278036

01:04:46.965 --> 01:04:48.375 does not lean a lift,

NOTE Confidence: 0.838278036

01:04:48.380 --> 01:04:49.717 nor does she want to be smaller.

NOTE Confidence: 0.838278036

01:04:49.720 --> 01:04:52.240 So the plan is to replace this volume with

NOTE Confidence: 0.838278036

01:04:52.240 --> 01:04:54.937 a thoracodorsal artery perforator flap,
NOTE Confidence: 0.838278036

01:04:54.940 --> 01:04:57.124 taking just the skin and the fat.
NOTE Confidence: 0.838278036

01:04:57.130 --> 01:04:59.990 Of the back and sparing the muscle.
NOTE Confidence: 0.838278036

01:04:59.990 --> 01:05:02.270 And this is her post-op healed good contour,
NOTE Confidence: 0.838278036

01:05:02.270 --> 01:05:03.150 no volume loss.
NOTE Confidence: 0.767471916666667

01:05:05.630 --> 01:05:06.686 So options after mastectomy,
NOTE Confidence: 0.767471916666667

01:05:06.686 --> 01:05:08.790 there are two traditional arms we know about.
NOTE Confidence: 0.767471916666667

01:05:08.790 --> 01:05:11.328 Of course for total breast volume
NOTE Confidence: 0.767471916666667

01:05:11.328 --> 01:05:13.470 replacement implant or autologous based.
NOTE Confidence: 0.767471916666667

01:05:13.470 --> 01:05:15.982 We decide on the best arm together with
NOTE Confidence: 0.767471916666667

01:05:15.982 --> 01:05:18.282 the patient after discussing her unique
NOTE Confidence: 0.767471916666667

01:05:18.282 --> 01:05:20.688 goals and values and certain specific
NOTE Confidence: 0.767471916666667

01:05:20.749 --> 01:05:22.969 factors such as plans for radiation.
NOTE Confidence: 0.767471916666667

01:05:22.970 --> 01:05:25.728 Implants are still the most popular choice.
NOTE Confidence: 0.767471916666667

01:05:25.730 --> 01:05:27.510 A certain subset of patients,
NOTE Confidence: 0.767471916666667

01:05:27.510 --> 01:05:28.934 small breasted minimal tosis,

NOTE Confidence: 0.767471916666667
01:05:28.934 --> 01:05:30.714 can have an implant placed
NOTE Confidence: 0.767471916666667
01:05:30.714 --> 01:05:32.546 directly at the time of mastectomy,
NOTE Confidence: 0.767471916666667
01:05:32.550 --> 01:05:34.195 but it is still definitely more common
NOTE Confidence: 0.767471916666667
01:05:34.195 --> 01:05:35.988 for this to be done in two stages.
NOTE Confidence: 0.767471916666667
01:05:35.990 --> 01:05:37.500 This allows the mastectomy skin
NOTE Confidence: 0.767471916666667
01:05:37.500 --> 01:05:39.649 to heal and in cases of limited
NOTE Confidence: 0.767471916666667
01:05:39.649 --> 01:05:41.679 skin will allow us to expand the
NOTE Confidence: 0.767471916666667
01:05:41.679 --> 01:05:43.308 pocket to the desired volume.
NOTE Confidence: 0.767471916666667
01:05:43.310 --> 01:05:44.774 The prosthetics have traditionally
NOTE Confidence: 0.767471916666667
01:05:44.774 --> 01:05:46.604 been placed underneath them also,
NOTE Confidence: 0.767471916666667
01:05:46.610 --> 01:05:48.339 but now there's a large movement to
NOTE Confidence: 0.767471916666667
01:05:48.339 --> 01:05:50.259 place them above the muscle and these
NOTE Confidence: 0.767471916666667
01:05:50.259 --> 01:05:51.664 implants of course include silicone
NOTE Confidence: 0.767471916666667
01:05:51.664 --> 01:05:53.279 or saline still in the market.
NOTE Confidence: 0.771689783
01:05:55.980 --> 01:05:57.870 The pros of course is you
NOTE Confidence: 0.771689783

01:05:57.870 --> 01:05:59.130 have one operative site,
NOTE Confidence: 0.771689783

01:05:59.130 --> 01:06:00.960 you're only operating on the chest.
NOTE Confidence: 0.771689783

01:06:00.960 --> 01:06:02.830 Compared to the autologous group,
NOTE Confidence: 0.771689783

01:06:02.830 --> 01:06:04.923 it is a reduced operative time and
NOTE Confidence: 0.771689783

01:06:04.923 --> 01:06:07.320 there is more rapid post-op recovery.
NOTE Confidence: 0.771689783

01:06:07.320 --> 01:06:09.665 But the cons is we're doing unilateral
NOTE Confidence: 0.771689783

01:06:09.665 --> 01:06:11.900 reconstruction is very difficult to obtain
NOTE Confidence: 0.771689783

01:06:11.900 --> 01:06:13.855 symmetry to the contralateral breast.
NOTE Confidence: 0.771689783

01:06:13.860 --> 01:06:15.135 The patient does have to
NOTE Confidence: 0.771689783

01:06:15.135 --> 01:06:16.155 come back very frequently,
NOTE Confidence: 0.771689783

01:06:16.160 --> 01:06:18.128 sometimes over the course of several
NOTE Confidence: 0.771689783

01:06:18.128 --> 01:06:19.860 months for tissue expansion visits,
NOTE Confidence: 0.771689783

01:06:19.860 --> 01:06:22.692 and they do require at least two operations
NOTE Confidence: 0.771689783

01:06:22.692 --> 01:06:25.170 to achieve reconstructive completion.
NOTE Confidence: 0.771689783

01:06:25.170 --> 01:06:27.330 With radiation there is potential
NOTE Confidence: 0.771689783

01:06:27.330 --> 01:06:29.058 for increasing complications and

NOTE Confidence: 0.771689783

01:06:29.058 --> 01:06:30.831 sometimes in very thin patients who

NOTE Confidence: 0.771689783

01:06:30.831 --> 01:06:32.833 have low BMI and we are putting

NOTE Confidence: 0.771689783

01:06:32.833 --> 01:06:34.498 the implant above the muscle,

NOTE Confidence: 0.771689783

01:06:34.500 --> 01:06:35.910 the implants can be visible,

NOTE Confidence: 0.771689783

01:06:35.910 --> 01:06:39.640 palpable or you can see rippling.

NOTE Confidence: 0.771689783

01:06:39.640 --> 01:06:40.621 Natalie, this option,

NOTE Confidence: 0.771689783

01:06:40.621 --> 01:06:42.583 great options for patients who want

NOTE Confidence: 0.771689783

01:06:42.583 --> 01:06:44.171 their own tissue natural appearance

NOTE Confidence: 0.771689783

01:06:44.171 --> 01:06:46.362 and feel often are very good options

NOTE Confidence: 0.771689783

01:06:46.362 --> 01:06:47.997 in unilaterally constructions to match

NOTE Confidence: 0.771689783

01:06:47.997 --> 01:06:49.928 the tosis of the contralateral breast.

NOTE Confidence: 0.771689783

01:06:49.928 --> 01:06:52.091 And I think this is usually the

NOTE Confidence: 0.771689783

01:06:52.091 --> 01:06:53.818 better option in the setting of

NOTE Confidence: 0.771689783

01:06:53.818 --> 01:06:55.700 radiation or very large skin deficits.

NOTE Confidence: 0.771689783

01:06:55.700 --> 01:06:56.058 However,

NOTE Confidence: 0.771689783

01:06:56.058 --> 01:06:58.206 it does require an experienced microsurgeon

NOTE Confidence: 0.771689783

01:06:58.206 --> 01:07:00.329 and we're operating on two sets of body.

NOTE Confidence: 0.771689783

01:07:00.330 --> 01:07:03.613 So this does necessitate a longer operative

NOTE Confidence: 0.771689783

01:07:03.613 --> 01:07:07.198 time and a longer recovery upfront.

NOTE Confidence: 0.771689783

01:07:07.200 --> 01:07:09.083 So there's a lot of discussion about

NOTE Confidence: 0.771689783

01:07:09.083 --> 01:07:10.819 the optimal timing of reconstruction.

NOTE Confidence: 0.771689783

01:07:10.820 --> 01:07:12.050 Immediate reconstruction is

NOTE Confidence: 0.771689783

01:07:12.050 --> 01:07:13.280 definitely always preferred,

NOTE Confidence: 0.771689783

01:07:13.280 --> 01:07:15.332 so patients do not have to wake up flat.

NOTE Confidence: 0.771689783

01:07:15.340 --> 01:07:17.076 But a lot of plastic surgeons are

NOTE Confidence: 0.771689783

01:07:17.076 --> 01:07:19.088 wary of the effects of radiation

NOTE Confidence: 0.771689783

01:07:19.088 --> 01:07:20.696 on their final reconstruction,

NOTE Confidence: 0.771689783

01:07:20.700 --> 01:07:22.500 whether that is an implant or

NOTE Confidence: 0.771689783

01:07:22.500 --> 01:07:24.160 if it is a flap.

NOTE Confidence: 0.771689783

01:07:24.160 --> 01:07:25.732 And we've also found that patients

NOTE Confidence: 0.771689783

01:07:25.732 --> 01:07:27.344 can be very overwhelmed with their

NOTE Confidence: 0.771689783

01:07:27.344 --> 01:07:28.886 recent cancer diagnosis and they want

NOTE Confidence: 0.771689783

01:07:28.886 --> 01:07:30.610 to defer thinking about their choice

NOTE Confidence: 0.771689783

01:07:30.610 --> 01:07:32.344 of final reconstruction until all of

NOTE Confidence: 0.771689783

01:07:32.350 --> 01:07:35.776 their adjuvant therapy can be completed.

NOTE Confidence: 0.771689783

01:07:35.780 --> 01:07:37.524 So we find that we can mitigate all

NOTE Confidence: 0.771689783

01:07:37.524 --> 01:07:39.304 of these concerns by placing a tissue

NOTE Confidence: 0.771689783

01:07:39.304 --> 01:07:40.984 expander at the time of mastectomy

NOTE Confidence: 0.771689783

01:07:40.984 --> 01:07:42.679 to maintain the breast pocket,

NOTE Confidence: 0.771689783

01:07:42.680 --> 01:07:44.318 make sure that the patient does wake

NOTE Confidence: 0.771689783

01:07:44.318 --> 01:07:46.078 up with some sort of breast mound.

NOTE Confidence: 0.771689783

01:07:46.080 --> 01:07:47.640 And then we have the patient

NOTE Confidence: 0.771689783

01:07:47.640 --> 01:07:48.680 complete their cancer treatment

NOTE Confidence: 0.771689783

01:07:48.723 --> 01:07:49.980 including adjuvant radiation,

NOTE Confidence: 0.771689783

01:07:49.980 --> 01:07:50.277 chemo,

NOTE Confidence: 0.771689783

01:07:50.277 --> 01:07:52.059 whatever is needed with the expander

NOTE Confidence: 0.771689783

01:07:52.059 --> 01:07:53.639 in place the entire time.
NOTE Confidence: 0.771689783

01:07:53.640 --> 01:07:55.593 And then in these cases it's preferred
NOTE Confidence: 0.771689783

01:07:55.593 --> 01:07:57.668 that the tissue expander should be placed
NOTE Confidence: 0.771689783

01:07:57.668 --> 01:08:00.060 in the pre pectoral plane above the muscle,
NOTE Confidence: 0.771689783

01:08:00.060 --> 01:08:01.560 avoid the morbidity of
NOTE Confidence: 0.771689783

01:08:01.560 --> 01:08:03.060 elevating the pectoralis muscle.
NOTE Confidence: 0.771689783

01:08:03.060 --> 01:08:05.356 It allows much faster, much more comfortable.
NOTE Confidence: 0.771689783

01:08:05.360 --> 01:08:06.715 Extension for the patient so
NOTE Confidence: 0.771689783

01:08:06.715 --> 01:08:08.070 they can be fully expanded,
NOTE Confidence: 0.771689783

01:08:08.070 --> 01:08:08.488 healed,
NOTE Confidence: 0.771689783

01:08:08.488 --> 01:08:11.414 go on to adjuvant therapy more quickly.
NOTE Confidence: 0.771689783

01:08:11.420 --> 01:08:13.275 And then on the patient's own timeline,
NOTE Confidence: 0.771689783

01:08:13.280 --> 01:08:15.260 the expander can be exchanged electively,
NOTE Confidence: 0.771689783

01:08:15.260 --> 01:08:17.374 so patients have time to discuss again,
NOTE Confidence: 0.771689783

01:08:17.380 --> 01:08:20.276 choose if they want to continue and replace
NOTE Confidence: 0.771689783

01:08:20.276 --> 01:08:22.658 this expander with a permanent implant,

NOTE Confidence: 0.771689783

01:08:22.660 --> 01:08:24.932 or at this point they can remove the

NOTE Confidence: 0.771689783

01:08:24.932 --> 01:08:26.896 prosthesis and put in their own tissue.

NOTE Confidence: 0.771689783

01:08:26.900 --> 01:08:28.248 This patient shown here,

NOTE Confidence: 0.771689783

01:08:28.248 --> 01:08:29.596 she underwent expander placement,

NOTE Confidence: 0.771689783

01:08:29.600 --> 01:08:31.178 fully expanded in a few weeks,

NOTE Confidence: 0.771689783

01:08:31.180 --> 01:08:32.645 completed all of her radiation

NOTE Confidence: 0.771689783

01:08:32.645 --> 01:08:33.817 and then came back,

NOTE Confidence: 0.771689783

01:08:33.820 --> 01:08:36.660 I believe six months later

NOTE Confidence: 0.771689783

01:08:36.660 --> 01:08:38.364 for autologous reconstruction.

NOTE Confidence: 0.771689783

01:08:38.370 --> 01:08:40.600 So we figured out a really good way to use

NOTE Confidence: 0.870645268888889

01:08:40.660 --> 01:08:42.190 our own tissue to create

NOTE Confidence: 0.870645268888889

01:08:42.190 --> 01:08:43.108 healthy warm breasts,

NOTE Confidence: 0.870645268888889

01:08:43.110 --> 01:08:44.325 restoring blood flow in and

NOTE Confidence: 0.870645268888889

01:08:44.325 --> 01:08:45.890 out of this new breast mound.

NOTE Confidence: 0.870645268888889

01:08:45.890 --> 01:08:47.420 And we tell patients that they're

NOTE Confidence: 0.870645268888889

01:08:47.420 --> 01:08:48.939 going to feel like a breast,
NOTE Confidence: 0.870645268888889

01:08:48.940 --> 01:08:49.910 which is true to others,
NOTE Confidence: 0.870645268888889

01:08:49.910 --> 01:08:51.470 but not necessarily the patient.
NOTE Confidence: 0.870645268888889

01:08:51.470 --> 01:08:53.020 Often patients are very disconcerted
NOTE Confidence: 0.870645268888889

01:08:53.020 --> 01:08:55.239 with the numb feeling in their chest.
NOTE Confidence: 0.870645268888889

01:08:55.240 --> 01:08:57.184 So now we're working on strategies
NOTE Confidence: 0.870645268888889

01:08:57.184 --> 01:08:59.047 to improve sensory recovery after
NOTE Confidence: 0.870645268888889

01:08:59.047 --> 01:09:00.571 mastectomy concurrently with
NOTE Confidence: 0.870645268888889

01:09:00.571 --> 01:09:02.095 autologous tissue reconstruction.
NOTE Confidence: 0.870645268888889

01:09:02.100 --> 01:09:03.264 I really like the way one
NOTE Confidence: 0.870645268888889

01:09:03.264 --> 01:09:04.220 of my partners put it.
NOTE Confidence: 0.870645268888889

01:09:04.220 --> 01:09:06.684 We have to hook up the plumbing
NOTE Confidence: 0.870645268888889

01:09:06.684 --> 01:09:08.815 and the electricity to make
NOTE Confidence: 0.870645268888889

01:09:08.815 --> 01:09:10.309 the reconstruction complete.
NOTE Confidence: 0.870645268888889

01:09:10.310 --> 01:09:12.435 So to offer truly comprehensive
NOTE Confidence: 0.870645268888889

01:09:12.435 --> 01:09:13.285 breast reconstruction,

NOTE Confidence: 0.870645268888889
01:09:13.290 --> 01:09:15.618 we must be able to also offer options
NOTE Confidence: 0.870645268888889
01:09:15.618 --> 01:09:18.058 to prevent and treat sequella of
NOTE Confidence: 0.870645268888889
01:09:18.058 --> 01:09:19.850 axillary dissections under radiation.
NOTE Confidence: 0.870645268888889
01:09:19.850 --> 01:09:20.765 As we know,
NOTE Confidence: 0.870645268888889
01:09:20.765 --> 01:09:22.290 lymphedema is very devastating to
NOTE Confidence: 0.870645268888889
01:09:22.290 --> 01:09:24.042 patients quality of life and we have
NOTE Confidence: 0.870645268888889
01:09:24.042 --> 01:09:25.670 not yet found a curative treatment.
NOTE Confidence: 0.870645268888889
01:09:25.670 --> 01:09:27.770 We do offer hope to offer preventative
NOTE Confidence: 0.870645268888889
01:09:27.770 --> 01:09:29.452 options such as immediate lymphatic
NOTE Confidence: 0.870645268888889
01:09:29.452 --> 01:09:31.257 reconstruction or also known as
NOTE Confidence: 0.870645268888889
01:09:31.257 --> 01:09:33.691 lymphatic at the time of the axillary
NOTE Confidence: 0.870645268888889
01:09:33.691 --> 01:09:35.623 dissection and we can utilize reverse
NOTE Confidence: 0.870645268888889
01:09:35.630 --> 01:09:37.645 lymphatic mapping to identify which
NOTE Confidence: 0.870645268888889
01:09:37.645 --> 01:09:40.290 nodes are important for armed drainage.
NOTE Confidence: 0.870645268888889
01:09:40.290 --> 01:09:41.970 For patients who already develop
NOTE Confidence: 0.870645268888889

01:09:41.970 --> 01:09:43.650 develop any sort of lymphedema,
NOTE Confidence: 0.870645268888889

01:09:43.650 --> 01:09:45.225 they do have patent lymphatic
NOTE Confidence: 0.870645268888889

01:09:45.225 --> 01:09:46.485 channels in their arm.
NOTE Confidence: 0.870645268888889

01:09:46.490 --> 01:09:48.824 We can bypass these scarred lymphatics
NOTE Confidence: 0.870645268888889

01:09:48.824 --> 01:09:51.140 with serial lymphatic ovular anastomosis.
NOTE Confidence: 0.870645268888889

01:09:51.140 --> 01:09:54.164 This is a really easy outpatient procedure.
NOTE Confidence: 0.870645268888889

01:09:54.170 --> 01:09:55.395 And for those who are a little
NOTE Confidence: 0.870645268888889

01:09:55.395 --> 01:09:55.920 bit more advanced,
NOTE Confidence: 0.870645268888889

01:09:55.920 --> 01:09:57.480 I have no channels left in their arm.
NOTE Confidence: 0.870645268888889

01:09:57.480 --> 01:10:00.098 Lymph node transplant can often be performed.
NOTE Confidence: 0.870645268888889

01:10:00.100 --> 01:10:02.692 So we use the omentum as a good donor
NOTE Confidence: 0.870645268888889

01:10:02.692 --> 01:10:05.318 side to prevent donor site lymphedema.
NOTE Confidence: 0.870645268888889

01:10:05.320 --> 01:10:07.630 But with the use of referral synthetic
NOTE Confidence: 0.870645268888889

01:10:07.630 --> 01:10:09.871 mapping we can also take select
NOTE Confidence: 0.870645268888889

01:10:09.871 --> 01:10:11.836 groin lymphatics along with the
NOTE Confidence: 0.870645268888889

01:10:11.836 --> 01:10:14.131 abdominal flap for whole holistic

NOTE Confidence: 0.870645268888889

01:10:14.131 --> 01:10:16.055 breast and axillary reconstruction.

NOTE Confidence: 0.870645268888889

01:10:16.060 --> 01:10:17.830 So very grateful to join Yale,

NOTE Confidence: 0.870645268888889

01:10:17.830 --> 01:10:19.468 be a part of this multidisciplinary

NOTE Confidence: 0.870645268888889

01:10:19.468 --> 01:10:20.899 team focused on cancer eradication

NOTE Confidence: 0.870645268888889

01:10:20.899 --> 01:10:22.334 and really improvement of quality

NOTE Confidence: 0.870645268888889

01:10:22.334 --> 01:10:23.960 of life for our patients.

NOTE Confidence: 0.870645268888889

01:10:23.960 --> 01:10:25.370 So thanks for the opportunity to

NOTE Confidence: 0.870645268888889

01:10:25.370 --> 01:10:26.814 discuss our approach to comprehensive

NOTE Confidence: 0.870645268888889

01:10:26.814 --> 01:10:28.197 breast reconstruction tonight.

NOTE Confidence: 0.8691891

01:10:29.300 --> 01:10:31.440 Thank you, Doctor Ayala. Wow.

NOTE Confidence: 0.8691891

01:10:31.440 --> 01:10:33.600 Thank you, everyone for, you know,

NOTE Confidence: 0.8691891

01:10:33.600 --> 01:10:36.231 5 phenomenal presentations

NOTE Confidence: 0.8691891

01:10:36.231 --> 01:10:40.136 and the audience for sticking

NOTE Confidence: 0.8691891

01:10:40.136 --> 01:10:42.116 with us through this evening.

NOTE Confidence: 0.8691891

01:10:42.120 --> 01:10:43.562 There are a couple of questions that

NOTE Confidence: 0.8691891

01:10:43.562 --> 01:10:44.879 actually came in through the chat,

NOTE Confidence: 0.8691891

01:10:44.880 --> 01:10:45.940 not sure they can actually

NOTE Confidence: 0.8691891

01:10:45.940 --> 01:10:47.335 be seen by the audience.

NOTE Confidence: 0.8691891

01:10:47.335 --> 01:10:49.000 I'm going to ask our panel.