WEBVTT

- NOTE duration:"01:05:10.3110000"
- NOTE language:en-us
- NOTE Confidence: 0.7527053
- 00:00:00.000 --> 00:00:02.325 Soon my name is Mara,
- NOTE Confidence: 0.7527053
- 00:00:02.325 --> 00:00:04.650 Gulshan here at Yale University,
- NOTE Confidence: 0.7527053
- 00:00:04.650 --> 00:00:06.033 Yale Cancer Center,
- NOTE Confidence: 0.7527053
- $00{:}00{:}06{.}033 \dashrightarrow 00{:}00{:}07{.}416$ Smilow Cancer Hospital.
- NOTE Confidence: 0.7527053
- $00:00:07.420 \longrightarrow 00:00:10.345$ Welcome you to the third
- NOTE Confidence: 0.7527053
- 00:00:10.345 -> 00:00:12.685 breast CME lecture series.
- NOTE Confidence: 0.7527053
- $00{:}00{:}12.690 \dashrightarrow 00{:}00{:}15.567$ This today we're really fortunate to have
- NOTE Confidence: 0.7527053
- $00{:}00{:}15{.}567 \dashrightarrow 00{:}00{:}17{.}730$ three phenomenal speakers and panelists.
- NOTE Confidence: 0.7527053
- $00:00:17.730 \longrightarrow 00:00:19.830$ We're going to start with
- NOTE Confidence: 0.7527053
- 00:00:19.830 --> 00:00:21.090 Doctor Regina Hooley,
- NOTE Confidence: 0.7527053
- $00:00:21.090 \rightarrow 00:00:23.544$ who's professor of Radiology vice chair
- NOTE Confidence: 0.7527053
- $00:00:23.544 \rightarrow 00:00:26.525$ in the Department of Radiology in the
- NOTE Confidence: 0.7527053
- 00:00:26.525 --> 00:00:29.486 interim as division Chief for breast imaging,
- NOTE Confidence: 0.7527053
- $00:00:29.490 \rightarrow 00:00:32.850$ and then we go to Doctor Kristen Knowlton,

- NOTE Confidence: 0.7527053
- $00{:}00{:}32.850 \dashrightarrow 00{:}00{:}34.950$ our medical director for Radiation

 $00{:}00{:}34{.}950 \dashrightarrow 00{:}00{:}37{.}050$ Oncology at Yale at Hamden,

NOTE Confidence: 0.7527053

 $00:00:37.050 \rightarrow 00:00:39.990$ and then last but certainly not least,

NOTE Confidence: 0.7527053

00:00:39.990 --> 00:00:41.340 Doctor Tomer Abraham,

NOTE Confidence: 0.7527053

 $00:00:41.340 \dashrightarrow 00:00:44.040$ who is our director of breasts.

NOTE Confidence: 0.7527053

 $00:00:44.040 \rightarrow 00:00:45.114$ Microsurgical reconstruction and

NOTE Confidence: 0.7527053

 $00:00:45.114 \dashrightarrow 00:00:46.904$ breast reconstruction here at Yale.

NOTE Confidence: 0.7527053

 $00:00:46.910 \longrightarrow 00:00:49.058$ The format is that will have

NOTE Confidence: 0.7527053

 $00{:}00{:}49.058 \dashrightarrow 00{:}00{:}50.132$ three consecutive speakers.

NOTE Confidence: 0.7527053

 $00:00:50.140 \longrightarrow 00:00:52.674$ I really encourage you to put as

NOTE Confidence: 0.7527053

 $00{:}00{:}52.674 \dashrightarrow 00{:}00{:}55.142$ many questions as you want into the

NOTE Confidence: 0.7527053

 $00:00:55.142 \dashrightarrow 00:00:57.680$ chat box or the question to answer.

NOTE Confidence: 0.7527053

 $00:00:57.680 \longrightarrow 00:01:00.193$ Box will try to answer them as

NOTE Confidence: 0.7527053

 $00{:}01{:}00{.}193 \dashrightarrow 00{:}01{:}02{.}348$ much as possible in real time.

NOTE Confidence: 0.7527053

00:01:02.350 --> 00:01:04.498 Some will leave two to the

- $00:01:04.498 \longrightarrow 00:01:05.572$ end for discussion,
- NOTE Confidence: 0.7527053
- $00:01:05.580 \longrightarrow 00:01:08.387$ and with that I really appreciate everyone
- NOTE Confidence: 0.7527053
- $00:01:08.387 \rightarrow 00:01:11.316$ taking the time to log in and listen.
- NOTE Confidence: 0.7527053
- 00:01:11.320 --> 00:01:13.852 This is going to be recorded
- NOTE Confidence: 0.7527053
- 00:01:13.852 --> 00:01:16.150 so you can go back.
- NOTE Confidence: 0.7527053
- $00{:}01{:}16.150 \dashrightarrow 00{:}01{:}18.467$ If you want or share this with
- NOTE Confidence: 0.7527053
- 00:01:18.467 --> 00:01:20.242 friends and colleagues around the
- NOTE Confidence: 0.7527053
- $00:01:20.242 \rightarrow 00:01:22.027$ country and around the world,
- NOTE Confidence: 0.7527053
- $00{:}01{:}22.030 \dashrightarrow 00{:}01{:}23.760$ so with no further ado,
- NOTE Confidence: 0.7527053
- $00{:}01{:}23.760 \dashrightarrow 00{:}01{:}26.528$ we'll turn it over to doctor Doctor Hooley.
- NOTE Confidence: 0.738898
- 00:01:29.290 --> 00:01:32.320 OK, thanks so much doctor Golshan.
- NOTE Confidence: 0.738898
- $00:01:32.320 \longrightarrow 00:01:34.708$ It's really great to be here,
- NOTE Confidence: 0.738898
- 00:01:34.710 --> 00:01:38.310 so I'm going to start by sharing my
- NOTE Confidence: 0.738898
- $00:01:38.310 \longrightarrow 00:01:41.368$ slides and let me just get this.
- NOTE Confidence: 0.738898
- 00:01:41.370 --> 00:01:44.211 Uhm? Why OK? So?
- NOTE Confidence: 0.738898
- 00:01:44.211 --> 00:01:46.758 I'm going to talk a little bit about

- NOTE Confidence: 0.738898
- $00:01:46.758 \rightarrow 00:01:49.322$ breast cancer screening and, you know,

 $00{:}01{:}49{.}322 \dashrightarrow 00{:}01{:}52{.}130$ one size no longer fits all these days.

NOTE Confidence: 0.738898

 $00:01:52.130 \longrightarrow 00:01:53.880$ There's we're moving towards a

NOTE Confidence: 0.738898

 $00:01:53.880 \rightarrow 00:01:54.930$ more personalized screening,

NOTE Confidence: 0.738898

 $00{:}01{:}54{.}930 \dashrightarrow 00{:}01{:}57{.}372$ so I'm going to review screening

NOTE Confidence: 0.738898

 $00:01:57.372 \dashrightarrow 00:02:00.313$ it and show you where it's going

NOTE Confidence: 0.738898

 $00:02:00.313 \longrightarrow 00:02:03.162$ over the next 20 minutes or so.

NOTE Confidence: 0.738898

 $00{:}02{:}03{.}170 \dashrightarrow 00{:}02{:}05{.}683$ My disclosures I am on the Medical

NOTE Confidence: 0.738898

 $00:02:05.683 \dashrightarrow 00:02:07.851$ Advisory Board for dense breast dot NOTE Confidence: 0.738898

 $00:02:07.851 \rightarrow 00:02:10.224$ dash info and that's where I took

NOTE Confidence: 0.738898

 $00:02:10.295 \rightarrow 00:02:12.668$ some of my tables and figures from.

NOTE Confidence: 0.738898

 $00{:}02{:}12.670 \dashrightarrow 00{:}02{:}14.882$ That's a website that has a lot

NOTE Confidence: 0.738898

 $00:02:14.882 \longrightarrow 00:02:16.550$ of information on screening.

NOTE Confidence: 0.738898

00:02:16.550 --> 00:02:19.040 It's accurate and it's for

NOTE Confidence: 0.738898

 $00:02:19.040 \dashrightarrow 00:02:21.530$ patients as well as providers.

- $00:02:21.530 \longrightarrow 00:02:24.008$ So I'll start by reviewing the
- NOTE Confidence: 0.738898
- $00{:}02{:}24.008 \dashrightarrow 00{:}02{:}25.660$ background breast cancer course.
- NOTE Confidence: 0.738898
- $00:02:25.660 \rightarrow 00:02:28.956$ Worldwide is the most common cancer in women.
- NOTE Confidence: 0.738898
- $00:02:28.960 \longrightarrow 00:02:31.025$ It accounts for about 1/4
- NOTE Confidence: 0.738898
- $00{:}02{:}31.025 \dashrightarrow 00{:}02{:}32.677$ of all female cancers.
- NOTE Confidence: 0.738898
- $00{:}02{:}32{.}680 \dashrightarrow 00{:}02{:}35{.}158$ Is the leading cause of cancer
- NOTE Confidence: 0.738898
- 00:02:35.158 --> 00:02:36.397 related mortality worldwide?
- NOTE Confidence: 0.738898
- $00{:}02{:}36{.}400 \dashrightarrow 00{:}02{:}38{.}465$ About 15% of all female
- NOTE Confidence: 0.738898
- $00{:}02{:}38{.}465 \dashrightarrow 00{:}02{:}40{.}530$ cancer deaths in the US.
- NOTE Confidence: 0.738898
- 00:02:40.530 --> 00:02:42.595 Lung cancer is number one
- NOTE Confidence: 0.738898
- 00:02:42.595 --> 00:02:44.247 for cancer related mortality,
- NOTE Confidence: 0.738898
- $00:02:44.250 \rightarrow 00:02:45.132$ and interestingly,
- NOTE Confidence: 0.738898
- $00:02:45.132 \rightarrow 00:02:48.219$ the rates of breast cancer is rising
- NOTE Confidence: 0.738898
- $00:02:48.219 \rightarrow 00:02:50.632$ worldwide at about 6.4% per year.
- NOTE Confidence: 0.738898
- 00:02:50.632 --> 00:02:52.676 Nobody really knows why,
- NOTE Confidence: 0.738898
- $00:02:52.680 \longrightarrow 00:02:55.548$ but that adds up.

- NOTE Confidence: 0.738898
- $00{:}02{:}55{.}550 \dashrightarrow 00{:}02{:}57{.}475$ The World Health Organization reports

 $00:02:57.475 \longrightarrow 00:03:00.420$ that in 2018 there were 2,000,000 cases

NOTE Confidence: 0.738898

00:03:00.420 --> 00:03:02.810 of breast cancer diagnosed worldwide,

NOTE Confidence: 0.738898

 $00:03:02.810 \longrightarrow 00:03:05.799$ and by 2040 that'll rise to 3,000,000,

NOTE Confidence: 0.738898

 $00:03:05.800 \longrightarrow 00:03:08.000$ so it is significant.

NOTE Confidence: 0.738898

 $00{:}03{:}08{.}000 \dashrightarrow 00{:}03{:}09{.}100$ In general,

NOTE Confidence: 0.738898

 $00{:}03{:}09{.}100 \dashrightarrow 00{:}03{:}11.092$ the incidence of breast cancer is

NOTE Confidence: 0.738898

 $00:03:11.092 \rightarrow 00:03:13.030$ more frequent in developed countries,

NOTE Confidence: 0.738898

 $00:03:13.030 \longrightarrow 00:03:16.252$ as noted on the blue map on the left,

NOTE Confidence: 0.738898

 $00:03:16.260 \longrightarrow 00:03:18.402$ and this is likely due to

NOTE Confidence: 0.738898

00:03:18.402 --> 00:03:19.116 screening mammography.

NOTE Confidence: 0.738898

 $00:03:19.120 \longrightarrow 00:03:19.478$ However,

NOTE Confidence: 0.738898

00:03:19.478 --> 00:03:21.268 women diagnosed in developing countries,

NOTE Confidence: 0.738898

 $00{:}03{:}21{.}270 \dashrightarrow 00{:}03{:}23{.}250$ as noted on the map on

NOTE Confidence: 0.738898

 $00{:}03{:}23{.}250 \dashrightarrow 00{:}03{:}25{.}560$ the red map on the right,

00:03:25.560 --> 00:03:27.708 are more likely to be diagnosed NOTE Confidence: 0.738898 $00{:}03{:}27.708 \dashrightarrow 00{:}03{:}30.266$ at an advanced age and are more NOTE Confidence: 0.738898 $00:03:30.266 \longrightarrow 00:03:32.366$ likely to die from the disease. NOTE Confidence: 0.738898 00:03:32.370 -> 00:03:34.350 And maybe this is because there NOTE Confidence: 0.738898 $00:03:34.350 \rightarrow 00:03:36.660$ is pretends not to be formalized. NOTE Confidence: 0.738898 00:03:36.660 --> 00:03:38.876 Breast cancer screening in NOTE Confidence: 0.738898 00:03:38.876 - 00:03:40.538 these developing countries. NOTE Confidence: 0.738898 $00:03:40.540 \longrightarrow 00:03:42.370$ When it comes to breast cancer NOTE Confidence: 0.738898 $00:03:42.370 \longrightarrow 00:03:43.285$ screening and mammography, NOTE Confidence: 0.738898 $00:03:43.290 \rightarrow 00:03:46.068$ we've certainly come a long way. NOTE Confidence: 0.738898 00:03:46.070 -> 00:03:48.480 Breast cancers. NOTE Confidence: 0.738898 $00:03:48.480 \longrightarrow 00:03:50.695$ Screening and mammography was first NOTE Confidence: 0.738898 $00:03:50.695 \rightarrow 00:03:52.700$ introduced, probably in the 1960s, NOTE Confidence: 0.738898 $00{:}03{:}52{.}700 \dashrightarrow 00{:}03{:}55{.}655$ and this is a paper from 1967 NOTE Confidence: 0.738898 00:03:55.655 - 00:03:57.779 showing the new technology. NOTE Confidence: 0.738898 $00:03:57.780 \longrightarrow 00:04:00.874$ At the time there was film screen,

- NOTE Confidence: 0.738898
- 00:04:00.880 --> 00:04:03.538 mammography, and zero mammography as well.

 $00:04:03.540 \longrightarrow 00:04:05.312$ Pretty basic stuff that,

NOTE Confidence: 0.738898

 $00:04:05.312 \rightarrow 00:04:07.527$ compared to our standards today.

NOTE Confidence: 0.738898

 $00:04:07.530 \longrightarrow 00:04:10.030$ But even those studies were

NOTE Confidence: 0.738898

 $00:04:10.030 \longrightarrow 00:04:12.530$ able to show some cancers.

NOTE Confidence: 0.738898

 $00:04:12.530 \longrightarrow 00:04:13.754$ Of these days,

NOTE Confidence: 0.738898

00:04:13.754 --> 00:04:14.570 of course,

NOTE Confidence: 0.738898

 $00:04:14.570 \dashrightarrow 00:04:17.762$ Thomas synthesis or the 3D mammogram

NOTE Confidence: 0.738898

 $00{:}04{:}17.762 \dashrightarrow 00{:}04{:}19.890$ digital breast tomosynthesis is

NOTE Confidence: 0.738898

 $00:04:19.972 \longrightarrow 00:04:22.122$ becoming the standard of care

NOTE Confidence: 0.738898

 $00:04:22.122 \longrightarrow 00:04:24.738$ where we can see explicit detail

NOTE Confidence: 0.738898

 $00{:}04{:}24.738 \dashrightarrow 00{:}04{:}27.405$ of the breast tissue as well as.

NOTE Confidence: 0.738898

 $00{:}04{:}27{.}410 \dashrightarrow 00{:}04{:}29{.}744$ Small or or subtle cancers that

NOTE Confidence: 0.738898

 $00{:}04{:}29{.}744 \dashrightarrow 00{:}04{:}32{.}891$ are not well seen on the 2D

NOTE Confidence: 0.738898

 $00:04:32.891 \dashrightarrow 00:04:34.400$ traditional mammogram alone.

NOTE Confidence: 0.738898 $00:04:37.168 \longrightarrow 00:04:40.543$ one of the first centers in the NOTE Confidence: 0.738898 $00:04:40.543 \dashrightarrow 00:04:43.138$ United States to get tomosynthesis. NOTE Confidence: 0.738898 00:04:43.140 --> 00:04:45.692 I think it was back in 2011 and NOTE Confidence: 0.738898 00:04:45.692 - 00:04:48.743 a few years after that we became NOTE Confidence: 0.738898 00:04:48.743 --> 00:04:51.669 fully all of our mammograms were NOTE Confidence: 0.738898 $00{:}04{:}51{.}669 \dashrightarrow 00{:}04{:}54{.}717$ tomosynthesis and we were leaders in NOTE Confidence: 0.738898 $00:04:54.717 \rightarrow 00:04:57.699$ publishing led by Doctor Leon Philpotts. NOTE Confidence: 0.738898 $00{:}04{:}57.699 \dashrightarrow 00{:}05{:}00{.}114$ And so showing that tomosynthesis NOTE Confidence: 0.738898 $00:05:00.114 \rightarrow 00:05:01.080$ is beneficial NOTE Confidence: 0.82772106875 $00:05:01.149 \longrightarrow 00:05:03.633$ for screening and diagnosis of breast NOTE Confidence: 0.82772106875 $00{:}05{:}03.633 \dashrightarrow 00{:}05{:}06.667$ cancer among all women and among all ages. NOTE Confidence: 0.7707585 00:05:10.450 --> 00:05:11.515 Some screening mammography NOTE Confidence: 0.7707585 00:05:11.515 - 00:05:13.645 has been shown to save lives, NOTE Confidence: 0.7707585 $00:05:13.650 \rightarrow 00:05:15.070$ multiple randomized control trials, NOTE Confidence: 0.7707585 $00:05:15.070 \rightarrow 00:05:15.780$ and observation. 9

00:04:34.400 --> 00:04:37.168 Our group at Yale was lucky to be

 $00{:}05{:}15{.}780 \dashrightarrow 00{:}05{:}18{.}615$ ULL studies have shown that breast cancer

NOTE Confidence: 0.7707585

 $00:05:18.615 \longrightarrow 00:05:21.097$ mortality is increased by about 20 to 40%.

NOTE Confidence: 0.7707585

 $00{:}05{:}21{.}100 \dashrightarrow 00{:}05{:}23{.}674$ Is the only test that has been shown a

NOTE Confidence: 0.7707585

 $00:05:23.674 \rightarrow 00:05:26.430$ clear mortality reduction of breast cancer,

NOTE Confidence: 0.7707585

 $00:05:26.430 \rightarrow 00:05:28.992$ and this is mostly due to downshifting

NOTE Confidence: 0.7707585

 $00{:}05{:}28{.}992 \dashrightarrow 00{:}05{:}31{.}748$ up stage two and hired a stage one.

NOTE Confidence: 0.7707585

00:05:31.750 - 00:05:33.530 There are fewer node negative.

NOTE Confidence: 0.7707585

 $00:05:33.530 \rightarrow 00:05:35.660$ There are fewer negative invasive cancers,

NOTE Confidence: 0.7707585

 $00:05:35.660 \dashrightarrow 00:05:37.976$ less tumor process, better tumor biology.

NOTE Confidence: 0.7707585

 $00:05:37.980 \rightarrow 00:05:39.880$ And among screening detected cancers

NOTE Confidence: 0.7707585

00:05:39.880 --> 00:05:42.864 75% or stage zero DCIS or stage one

NOTE Confidence: 0.7707585

 $00:05:42.864 \rightarrow 00:05:45.194$ and among clinically detected cancer is

NOTE Confidence: 0.7707585

 $00{:}05{:}45{.}194 \dashrightarrow 00{:}05{:}49{.}350$ more than 50% are stage two or higher.

NOTE Confidence: 0.7707585

 $00{:}05{:}49{.}350 \dashrightarrow 00{:}05{:}50{.}910$ And here are some examples

NOTE Confidence: 0.7707585

 $00{:}05{:}50{.}910$ --> $00{:}05{:}52{.}470$ of some mammograms in women.

 $00:05:52.470 \dashrightarrow 00:05:54.966$ On the left hand side of the screen.

NOTE Confidence: 0.7707585

 $00{:}05{:}54{.}970 \dashrightarrow 00{:}05{:}57{.}328$ This is a 67 year old woman who had

NOTE Confidence: 0.7707585

 $00{:}05{:}57{.}328$ --> $00{:}05{:}59{.}327$ never had a screening mammogram.

NOTE Confidence: 0.7707585

 $00{:}05{:}59{.}330 \dashrightarrow 00{:}06{:}01{.}514$ She is a palpable 4 centimeter mass.

NOTE Confidence: 0.7707585

 $00{:}06{:}01{.}520 \dashrightarrow 00{:}06{:}04{.}008$ It's pirates 5. We know it's a cancer.

NOTE Confidence: 0.7707585

00:06:04.010 --> 00:06:05.570 This was a triple negative,

NOTE Confidence: 0.7707585

 $00{:}06{:}05{.}570 \dashrightarrow 00{:}06{:}07{.}719$ high grade cancer and we would think

NOTE Confidence: 0.7707585

 $00:06:07.719 \rightarrow 00:06:09.632$ that she would have, you know,

NOTE Confidence: 0.7707585

00:06:09.632 --> 00:06:10.876 regular speeding. Agra fee.

NOTE Confidence: 0.7707585

 $00{:}06{:}10.880 \dashrightarrow 00{:}06{:}13.296$ We would have caught this at an earlier

NOTE Confidence: 0.7707585

 $00{:}06{:}13.296$ --> $00{:}06{:}14.929$ earlier stage and smaller size.

NOTE Confidence: 0.7707585

 $00:06:14.930 \longrightarrow 00:06:16.046$ On the other hand,

NOTE Confidence: 0.7707585

 $00:06:16.046 \rightarrow 00:06:18.168$ in this patient there's a tiny new

NOTE Confidence: 0.7707585

 $00{:}06{:}18.168 \dashrightarrow 00{:}06{:}19.716$ group of calcifications there.

NOTE Confidence: 0.7707585

 $00:06:19.720 \longrightarrow 00:06:20.764$ Linear their branching.

NOTE Confidence: 0.7707585

 $00:06:20.764 \longrightarrow 00:06:22.156$ She's 15-6 years old.

- NOTE Confidence: 0.7707585
- $00:06:22.160 \rightarrow 00:06:24.610$ She has a screening mammogram every year,

 $00:06:24.610 \rightarrow 00:06:25.874$ so they're caught earlier,

NOTE Confidence: 0.7707585

 $00:06:25.874 \rightarrow 00:06:28.705$ and this was a very tiny 1.5 millimeter

NOTE Confidence: 0.7707585

00:06:28.705 --> 00:06:30.890 grade, two cancer, High Ki 67.

NOTE Confidence: 0.7707585

 $00:06:30.890 \longrightarrow 00:06:33.680$ So presumably this is a life

NOTE Confidence: 0.7707585

 $00{:}06{:}33.680 \dashrightarrow 00{:}06{:}36.160$ saving mammogram in this woman.

NOTE Confidence: 0.7707585

 $00:06:36.160 \rightarrow 00:06:38.128$ So despite the success of mammography,

NOTE Confidence: 0.7707585

 $00:06:38.130 \longrightarrow 00:06:39.069$ it is imperfect,

NOTE Confidence: 0.7707585

 $00:06:39.069 \longrightarrow 00:06:40.321$ is particularly limited in

NOTE Confidence: 0.7707585

 $00:06:40.321 \longrightarrow 00:06:41.740$ women with dense breasts.

NOTE Confidence: 0.7707585

 $00:06:41.740 \longrightarrow 00:06:43.530$ The overall false negative rate

NOTE Confidence: 0.7707585

00:06:43.530 --> 00:06:45.320 of mammography among all breast

NOTE Confidence: 0.7707585

 $00{:}06{:}45{.}385 \dashrightarrow 00{:}06{:}47{.}308$ densities is about 10 to 15% in

NOTE Confidence: 0.7707585

 $00{:}06{:}47{.}308 \dashrightarrow 00{:}06{:}49{.}276$ the overall sensitivity is 70 to

NOTE Confidence: 0.7707585

00:06:49.276 --> 00:06:51.404 90% dense breasts make it hard for

 $00:06:51.404 \rightarrow 00:06:53.369$ us because of the masking effect

NOTE Confidence: 0.7707585

 $00{:}06{:}53.369 \dashrightarrow 00{:}06{:}55.840$ where cancers tend to be white spot.

NOTE Confidence: 0.7707585

 $00{:}06{:}55{.}840 \dashrightarrow 00{:}06{:}57{.}814$ So there can be difficult to see

NOTE Confidence: 0.7707585

 $00{:}06{:}57{.}814 \dashrightarrow 00{:}06{:}59{.}491$ with the white fiber glandular

NOTE Confidence: 0.7707585

00:06:59.491 --> 00:07:01.795 tissue versus women with non dense

NOTE Confidence: 0.7707585

 $00{:}07{:}01.795 \dashrightarrow 00{:}07{:}03.907$ breasts where there's more fat and NOTE Confidence: 0.7707585

 $00:07:03.907 \longrightarrow 00:07:05.507$ less white gland or tissue.

NOTE Confidence: 0.7707585

 $00:07:05.510 \dashrightarrow 00:07:08.756$ And cancers are easier to identify.

NOTE Confidence: 0.7707585

00:07:08.760 --> 00:07:10.510 So screening mammography is very

NOTE Confidence: 0.7707585

 $00{:}07{:}10.510 \dashrightarrow 00{:}07{:}11.315$ controversial, controversial.

NOTE Confidence: 0.7707585

00:07:11.315 --> 00:07:14.500 I think we all know that our

NOTE Confidence: 0.7707585

00:07:14.500 $\operatorname{-->}$ 00:07:17.018 patients know that it's hard to

NOTE Confidence: 0.7707585

 $00{:}07{:}17.018 \dashrightarrow 00{:}07{:}18.923$ miss the articles in the.

NOTE Confidence: 0.7707585

 $00:07:18.930 \longrightarrow 00:07:21.378$ And in the press.

NOTE Confidence: 0.7707585

 $00{:}07{:}21.380 \dashrightarrow 00{:}07{:}24.098$ Over the past decade or so,

NOTE Confidence: 0.7707585

 $00:07:24.100 \rightarrow 00:07:26.830$ and screening has become more complicated,

- NOTE Confidence: 0.7707585
- $00:07:26.830 \rightarrow 00:07:29.924$ and this step partially because of the

00:07:29.924 --> 00:07:32.729 United States Protective Services Task Force,

NOTE Confidence: 0.7707585

 $00{:}07{:}32.730 \dashrightarrow 00{:}07{:}34.538$ who first issued recommendations

NOTE Confidence: 0.7707585

00:07:34.538 --> 00:07:36.798 on screening mammography in 2009

NOTE Confidence: 0.7707585

00:07:36.798 --> 00:07:39.088 and then reinstated them again,

NOTE Confidence: 0.7707585

 $00:07:39.090 \rightarrow 00:07:40.341$ didn't change them.

NOTE Confidence: 0.7707585

00:07:40.341 --> 00:07:40.758 Basically,

NOTE Confidence: 0.7707585

 $00:07:40.758 \dashrightarrow 00:07:43.260$ in 2015 and basically gave screening

NOTE Confidence: 0.7707585

00:07:43.331 --> 00:07:46.798 mammography, AB, and even a C rating.

NOTE Confidence: 0.7707585

00:07:46.800 --> 00:07:49.180 They basically said that having

NOTE Confidence: 0.7707585

 $00:07:49.180 \dashrightarrow 00:07:51.560$ a annual screening mammogram and

NOTE Confidence: 0.7707585

 $00:07:51.643 \longrightarrow 00:07:52.759$ women in there.

NOTE Confidence: 0.7707585

00:07:52.760 --> 00:07:55.120 40S was a C grade,

NOTE Confidence: 0.7707585

 $00{:}07{:}55{.}120 \dashrightarrow 00{:}07{:}59{.}878$ meaning that this service might be.

NOTE Confidence: 0.7707585

 $00{:}07{:}59.880 \dashrightarrow 00{:}08{:}01.928$ Offered in selected patients.

 $00:08:01.928 \rightarrow 00:08:03.976$ Depending on some circumstances

NOTE Confidence: 0.7707585

 $00:08:03.976 \rightarrow 00:08:06.330$ and then gave screening mammography

NOTE Confidence: 0.7707585

 $00:08:06.330 \longrightarrow 00:08:09.676$ every two years from age 50 to 74

NOTE Confidence: 0.7707585

 $00{:}08{:}09{.}676$ --> $00{:}08{:}12{.}835$ AB grade and you know when we're in medicine,

NOTE Confidence: 0.7707585

 $00:08:12.840 \dashrightarrow 00:08:15.864$ we generally like A's that we should

NOTE Confidence: 0.7707585

 $00:08:15.864 \rightarrow 00:08:17.160$ be offering this.

NOTE Confidence: 0.7707585

00:08:17.160 --> 00:08:20.506 But you know Decencies and also the

NOTE Confidence: 0.7707585

 $00{:}08{:}20.506 \dashrightarrow 00{:}08{:}21.940$ changing recommendations didn't

NOTE Confidence: 0.7707585

 $00{:}08{:}22.015 \dashrightarrow 00{:}08{:}24.619$ really sit right over all the task

NOTE Confidence: 0.7707585

 $00:08:24.619 \longrightarrow 00:08:25.363$ force again.

NOTE Confidence: 0.83849704

 $00:08:25.370 \dashrightarrow 00:08:26.666$ Recommended against screening

NOTE Confidence: 0.83849704

 $00:08:26.666 \longrightarrow 00:08:29.258$ mammogram of women in their 40s.

NOTE Confidence: 0.83849704

 $00:08:29.260 \rightarrow 00:08:31.615$ They also recommended against teaching

NOTE Confidence: 0.83849704

 $00:08:31.615 \rightarrow 00:08:34.560$ self breast examination they were against.

NOTE Confidence: 0.83849704

 $00{:}08{:}34{.}560 \dashrightarrow 00{:}08{:}36{.}189$ Clinical breast examination.

NOTE Confidence: 0.83849704

 $00:08:36.189 \rightarrow 00:08:39.447$ There were against screening women over

- NOTE Confidence: 0.83849704
- $00:08:39.447 \longrightarrow 00:08:42.650$ the age of 75 and they were really

 $00:08:42.650 \rightarrow 00:08:44.925$ only for screening women every other

NOTE Confidence: 0.83849704

 $00:08:44.925 \rightarrow 00:08:47.890$ year in the starting age 50 to 74.

NOTE Confidence: 0.83849704

 $00:08:47.890 \longrightarrow 00:08:49.610$ This is very controversial.

NOTE Confidence: 0.83849704

 $00:08:49.610 \dashrightarrow 00:08:51.760$ Patient advocacy groups primary care,

NOTE Confidence: 0.83849704

00:08:51.760 --> 00:08:53.050 oncology, radiology. Perhaps?

NOTE Confidence: 0.83849704

 $00:08:53.050 \rightarrow 00:08:56.060$ It was really just about saving money,

NOTE Confidence: 0.83849704

 $00:08:56.060 \dashrightarrow 00:08:59.070$ because it's certainly the less we screen,

NOTE Confidence: 0.83849704

00:08:59.070 --> 00:09:01.650 the more money we're going to

NOTE Confidence: 0.83849704

 $00:09:01.650 \longrightarrow 00:09:03.370$ save on healthcare dollars.

NOTE Confidence: 0.83849704

 $00:09:03.370 \longrightarrow 00:09:04.606$ And in all fairness.

NOTE Confidence: 0.83849704

 $00{:}09{:}04.606 \dashrightarrow 00{:}09{:}06.460$ These recommendations are very similar to

NOTE Confidence: 0.83849704

 $00{:}09{:}06{.}511 \dashrightarrow 00{:}09{:}08{.}376$ other countries that have nationalized

NOTE Confidence: 0.83849704

 $00{:}09{:}08.376$ --> $00{:}09{:}10.241$ health services and health programs,

NOTE Confidence: 0.83849704

 $00:09:10.250 \longrightarrow 00:09:11.845$ but we don't have that

00:09:11.845 - 00:09:13.440 here in the United States.

NOTE Confidence: 0.83849704

00:09:13.440 --> 00:09:15.358 So saying that this is what we

NOTE Confidence: 0.83849704

 $00:09:15.358 \longrightarrow 00:09:17.601$ should do in in a country that

NOTE Confidence: 0.83849704

 $00{:}09{:}17.601 \dashrightarrow 00{:}09{:}19.629$ doesn't have a full National Health

NOTE Confidence: 0.83849704

00:09:19.697 --> 00:09:21.737 Service doesn't seem to be fair,

NOTE Confidence: 0.83849704

 $00{:}09{:}21.740 \dashrightarrow 00{:}09{:}23.905$ and not mentioning that at

NOTE Confidence: 0.83849704

00:09:23.905 --> 00:09:25.637 all doesn't seem fair.

NOTE Confidence: 0.83849704

 $00:09:25.640 \longrightarrow 00:09:28.614$ I do want to focus on the fact that we really

NOTE Confidence: 0.83849704

 $00{:}09{:}28.614 \dashrightarrow 00{:}09{:}31.288$ should be screening women in their 40s,

NOTE Confidence: 0.83849704

 $00:09:31.290 \dashrightarrow 00:09:33.313$ and if there's one thing that you

NOTE Confidence: 0.83849704

00:09:33.313 --> 00:09:35.583 should take away for anyone who doesn't

NOTE Confidence: 0.83849704

00:09:35.583 - > 00:09:37.890 believe in screening women in their 40s,

NOTE Confidence: 0.83849704

 $00:09:37.890 \longrightarrow 00:09:39.774$ we need to screen women in

NOTE Confidence: 0.83849704

 $00:09:39.774 \rightarrow 00:09:41.030$ their 40s every year.

NOTE Confidence: 0.83849704

 $00:09:41.030 \longrightarrow 00:09:42.908$ So, so please take, you know,

NOTE Confidence: 0.83849704

 $00:09:42.910 \rightarrow 00:09:44.480$ lock this in from this,

- NOTE Confidence: 0.83849704
- $00:09:44.480 \longrightarrow 00:09:46.364$ talk women in their 40s have

 $00{:}09{:}46{.}364 \dashrightarrow 00{:}09{:}47{.}620$ higher interval cancer rates.

NOTE Confidence: 0.83849704

 $00:09:47.620 \longrightarrow 00:09:48.792$ They have denser breasts.

NOTE Confidence: 0.83849704

 $00{:}09{:}48.792 \dashrightarrow 00{:}09{:}50.944$ We know that interval cancers that are

NOTE Confidence: 0.83849704

00:09:50.944 --> 00:09:52.960 diagnosed between having a normal mammogram.

NOTE Confidence: 0.83849704

 $00:09:52.960 \rightarrow 00:09:54.432$ These are usually symptomatic.

NOTE Confidence: 0.83849704

 $00:09:54.432 \rightarrow 00:09:56.640$ Cancers tend to be more aggressive.

NOTE Confidence: 0.83849704

00:09:56.640 --> 00:09:59.440 Cancers in women have a shorter sojourn time,

NOTE Confidence: 0.83849704

 $00:09:59.440 \dashrightarrow 00:10:01.890$ and they tend to be faster growing.

NOTE Confidence: 0.83849704

 $00:10:01.890 \longrightarrow 00:10:04.710$ We also know that.

NOTE Confidence: 0.83849704

 $00:10:04.710 \longrightarrow 00:10:06.760$ There's higher survival for earlier

NOTE Confidence: 0.83849704

 $00:10:06.760 \dashrightarrow 00:10:08.400$ stage tumors, and, importantly,

NOTE Confidence: 0.83849704

 $00{:}10{:}08{.}400 \dashrightarrow 00{:}10{:}09{.}630$ there's ethnic differences.

NOTE Confidence: 0.83849704

 $00{:}10{:}09{.}630 \dashrightarrow 00{:}10{:}12{.}801$ Black and Hispanic women have a peak

NOTE Confidence: 0.83849704

 $00:10:12.801 \rightarrow 00:10:16.190$ incidence of breast cancer in ages 46 to 47,

 $00:10:16.190 \rightarrow 00:10:18.240$ so telling having a sweeping

NOTE Confidence: 0.83849704

 $00:10:18.240 \longrightarrow 00:10:19.470$ statement that says,

NOTE Confidence: 0.83849704

 $00:10:19.470 \longrightarrow 00:10:21.888$ you know we should only start

NOTE Confidence: 0.83849704

 $00:10:21.888 \rightarrow 00:10:25.127$ screening at age 50 is really doing

NOTE Confidence: 0.83849704

 $00{:}10{:}25{.}127 \dashrightarrow 00{:}10{:}27{.}697$ these patients a major disservice.

NOTE Confidence: 0.83849704

 $00:10:27.700 \longrightarrow 00:10:29.920$ Uhm?

NOTE Confidence: 0.83849704

 $00:10:29.920 \longrightarrow 00:10:32.332$ Here this graph shows that you

NOTE Confidence: 0.83849704

 $00:10:32.332 \rightarrow 00:10:34.639$ know breast cancer in the 40s,

NOTE Confidence: 0.83849704

 $00:10:34.640 \longrightarrow 00:10:36.600$ accounts for about 20% of

NOTE Confidence: 0.83849704

00:10:36.600 --> 00:10:38.168 all invasive breast cancer,

NOTE Confidence: 0.83849704

 $00{:}10{:}38{.}170 \dashrightarrow 00{:}10{:}40{.}528$ so it is a considerable fraction

NOTE Confidence: 0.83849704

 $00:10:40.528 \longrightarrow 00:10:42.100$ of the disease burden.

NOTE Confidence: 0.83849704

 $00:10:42.100 \longrightarrow 00:10:44.830$ So it is very important.

NOTE Confidence: 0.83849704

 $00:10:44.830 \longrightarrow 00:10:46.958$ So the screening guidelines,

NOTE Confidence: 0.83849704

00:10:46.958 --> 00:10:49.086 as they stand now.

NOTE Confidence: 0.83849704

00:10:49.090 --> 00:10:50.389 Among various organizations,

- NOTE Confidence: 0.83849704
- $00:10:50.389 \rightarrow 00:10:53.420$ looks kind of confusing in this table,
- NOTE Confidence: 0.83849704
- $00:10:53.420 \longrightarrow 00:10:56.258$ but it's pretty.
- NOTE Confidence: 0.83849704
- 00:10:56.260 --> 00:10:58.200 Think it's really pretty straightforward.
- NOTE Confidence: 0.83849704
- 00:10:58.200 --> 00:10:59.361 Basically, most organizations
- NOTE Confidence: 0.83849704
- $00:10:59.361 \longrightarrow 00:11:02.070$ say you should start at age 40,
- NOTE Confidence: 0.83849704
- $00{:}11{:}02{.}070 \dashrightarrow 00{:}11{:}04{.}434$ and with the exception of the
- NOTE Confidence: 0.83849704
- $00:11:04.434 \longrightarrow 00:11:06.320$ task force were offer it.
- NOTE Confidence: 0.83849704
- 00:11:06.320 --> 00:11:07.146 So again,
- NOTE Confidence: 0.83849704
- $00{:}11{:}07{.}146 \dashrightarrow 00{:}11{:}09{.}211$ this this reflects the patient
- NOTE Confidence: 0.83849704
- $00:11:09.211 \rightarrow 00:11:11.252$ shared decision making with ACOG
- NOTE Confidence: 0.83849704
- 00:11:11.252 --> 00:11:13.087 and the American Cancer Society
- NOTE Confidence: 0.83849704
- 00:11:13.087 --> 00:11:15.358 has the option also discharge date
- NOTE Confidence: 0.83849704
- $00:11:15.358 \longrightarrow 00:11:17.560$ page 40 and says really start
- NOTE Confidence: 0.83849704
- $00{:}11{:}17.560 \dashrightarrow 00{:}11{:}19.458$ annual screening at age 45,
- NOTE Confidence: 0.83849704
- 00:11:19.458 --> 00:11:22.241 so the American Cancer Society sort of
- NOTE Confidence: 0.83849704

 $00:11:22.241 \rightarrow 00:11:24.737$ bridge the gap between societies like

NOTE Confidence: 0.83849704

00:11:24.737 --> 00:11:26.950 the American College of Radiology.

NOTE Confidence: 0.83849704

 $00{:}11{:}26{.}950 \dashrightarrow 00{:}11{:}28{.}640$ And the United States Protective

NOTE Confidence: 0.83849704

 $00:11:28.640 \longrightarrow 00:11:29.654$ Services Task force.

NOTE Confidence: 0.83849704

 $00:11:29.660 \longrightarrow 00:11:31.694$ Life expectancy is a little bit

NOTE Confidence: 0.83849704

 $00{:}11{:}31{.}694 \dashrightarrow 00{:}11{:}33{.}050$ all over the place.

NOTE Confidence: 0.83849704

00:11:33.050 --> 00:11:34.745 I'm not so sure something

NOTE Confidence: 0.83849704

 $00:11:34.745 \longrightarrow 00:11:36.440$ magical happens at age 75.

NOTE Confidence: 0.83849704

00:11:36.440 --> 00:11:38.636 I think it's better to limit

NOTE Confidence: 0.83849704

 $00:11:38.636 \rightarrow 00:11:40.100$ screening when life expectancy

NOTE Confidence: 0.83849704

 $00:11:40.164 \longrightarrow 00:11:41.529$ is less than 10 years,

NOTE Confidence: 0.86362046

 $00{:}11{:}41{.}530 \dashrightarrow 00{:}11{:}43{.}120$ because we know these patients

NOTE Confidence: 0.86362046

 $00:11:43.120 \longrightarrow 00:11:45.133$ are not going to really benefit

NOTE Confidence: 0.86362046

 $00:11:45.133 \longrightarrow 00:11:46.948$ as much from early detection.

NOTE Confidence: 0.86362046

 $00:11:46.950 \longrightarrow 00:11:48.876$ So we have healthy patients who

NOTE Confidence: 0.86362046

00:11:48.876 --> 00:11:51.286 might be 76 years old and they

- NOTE Confidence: 0.86362046
- 00:11:51.286 --> 00:11:53.046 should still have a mammogram,
- NOTE Confidence: 0.86362046
- $00{:}11{:}53.050 \dashrightarrow 00{:}11{:}54.850$ perhaps, maybe not annually.
- NOTE Confidence: 0.86362046
- $00{:}11{:}54.850 \dashrightarrow 00{:}11{:}57.100$ Perhaps we can even consider
- NOTE Confidence: 0.86362046
- $00:11:57.100 \longrightarrow 00:11:58.837$ every one to two years.
- NOTE Confidence: 0.86362046
- $00{:}11{:}58{.}840 \dashrightarrow 00{:}12{:}00{.}723$ And then we have patients who might
- NOTE Confidence: 0.86362046
- 00:12:00.723 --> 00:12:03.128 be 70 or 69 years old or whatever,
- NOTE Confidence: 0.86362046
- $00:12:03.130 \longrightarrow 00:12:04.434$ or not that healthy.
- NOTE Confidence: 0.86362046
- $00:12:04.434 \longrightarrow 00:12:06.064$ And maybe don't need to
- NOTE Confidence: 0.86362046
- $00:12:06.064 \longrightarrow 00:12:07.787$ have a mammogram as well.
- NOTE Confidence: 0.86362046
- 00:12:07.790 --> 00:12:10.654 And again, as far as the interval goes,
- NOTE Confidence: 0.86362046
- $00:12:10.660 \longrightarrow 00:12:12.416$ most people say annually,
- NOTE Confidence: 0.86362046
- $00:12:12.416 \longrightarrow 00:12:15.549$ maybe every one to two years the
- NOTE Confidence: 0.86362046
- $00:12:15.549 \longrightarrow 00:12:18.033$ the task force being the extreme
- NOTE Confidence: 0.86362046
- $00{:}12{:}18.033 \dashrightarrow 00{:}12{:}20.259$ of every every other year.
- NOTE Confidence: 0.86362046
- $00{:}12{:}20{.}260 \dashrightarrow 00{:}12{:}22{.}600$ So in addition to the variable
- NOTE Confidence: 0.86362046

00:12:22.600 --> 00:12:23.770 mammographic screening recommendations,

NOTE Confidence: 0.86362046

00:12:23.770 --> 00:12:25.590 supplemental screening is also an

NOTE Confidence: 0.86362046

 $00:12:25.590 \rightarrow 00:12:28.060$ option for many of our patients.

NOTE Confidence: 0.86362046

 $00:12:28.060 \rightarrow 00:12:30.010$ This includes ultrasounds and MRI.

NOTE Confidence: 0.86362046

 $00{:}12{:}30{.}010 \dashrightarrow 00{:}12{:}31{.}558$ There's also newer technologies

NOTE Confidence: 0.86362046

 $00{:}12{:}31{.}558 \dashrightarrow 00{:}12{:}33{.}493$ such as molecular breast imaging

NOTE Confidence: 0.86362046

 $00{:}12{:}33{.}493 \dashrightarrow 00{:}12{:}35{.}873$ and contrast enhanced memo that are

NOTE Confidence: 0.86362046

 $00:12:35.873 \rightarrow 00:12:37.808$ really investigational at this time,

NOTE Confidence: 0.86362046

 $00{:}12{:}37{.}810 \dashrightarrow 00{:}12{:}40{.}722$ but they are on the verge of being

NOTE Confidence: 0.86362046

 $00:12:40.722 \rightarrow 00:12:43.267$ offered outside of the screening trials.

NOTE Confidence: 0.86362046

 $00{:}12{:}43{.}270 \dashrightarrow 00{:}12{:}45{.}110$ There are limited screening

NOTE Confidence: 0.86362046

 $00{:}12{:}45{.}110 \dashrightarrow 00{:}12{:}47{.}410$ trials that are going on.

NOTE Confidence: 0.86362046

 $00:12:47.410 \longrightarrow 00:12:50.210$ So these tools are right around the corner.

NOTE Confidence: 0.86362046

00:12:50.210 --> 00:12:52.310 I believe for more widespread use,

NOTE Confidence: 0.86362046

 $00:12:52.310 \longrightarrow 00:12:53.498$ widespread clinical use,

NOTE Confidence: 0.86362046

00:12:53.498 --> 00:12:55.874 but I'm only going to review

 $00:12:55.874 \rightarrow 00:12:57.932$ screening ultrasound and MRI today

NOTE Confidence: 0.86362046

 $00{:}12{:}57{.}932 \dashrightarrow 00{:}12{:}59{.}922$ because of the time constraints.

NOTE Confidence: 0.86362046

00:12:59.930 --> 00:13:01.616 So breast ultrasound screening is linked

NOTE Confidence: 0.86362046

 $00:13:01.616 \rightarrow 00:13:03.610$ to death dense breast notification laws.

NOTE Confidence: 0.86362046

 $00{:}13{:}03{.}610 \dashrightarrow 00{:}13{:}05{.}794$ We do a lot of breast ultrasound

NOTE Confidence: 0.86362046

 $00{:}13{:}05{.}794 \dashrightarrow 00{:}13{:}07{.}049$ screening in Connecticut because

NOTE Confidence: 0.86362046

 $00{:}13{:}07.049 \dashrightarrow 00{:}13{:}08.883$ we were the first state to have

NOTE Confidence: 0.86362046

 $00{:}13{:}08.883 \dashrightarrow 00{:}13{:}10.155$ a breast density notification

NOTE Confidence: 0.86362046

 $00:13:10.155 \longrightarrow 00:13:12.207$ law which was passed in 2009.

NOTE Confidence: 0.86362046

 $00:13:12.210 \longrightarrow 00:13:13.690$ Coincidentally the same month

NOTE Confidence: 0.86362046

 $00{:}13{:}13{.}690 \dashrightarrow 00{:}13{:}15{.}540$ that the United States Protective

NOTE Confidence: 0.86362046

00:13:15.540 --> 00:13:17.351 Services Task Force told us that

NOTE Confidence: 0.86362046

 $00{:}13{:}17{.}351 \dashrightarrow 00{:}13{:}19{.}058$ we should stop screening women in NOTE Confidence: 0.86362046

 $00:13:19.058 \longrightarrow 00:13:20.892$ their 40s and then we have the

NOTE Confidence: 0.86362046

 $00{:}13{:}20{.}892 \dashrightarrow 00{:}13{:}22{.}575$ Connecticut State saying that we

 $00:13:22.575 \rightarrow 00:13:24.500$ should be offering patients with

NOTE Confidence: 0.86362046

00:13:24.500 --> 00:13:26.690 dense breast screening ultrasound.

NOTE Confidence: 0.86362046

 $00:13:26.690 \longrightarrow 00:13:27.902$ The restless notification.

NOTE Confidence: 0.86362046

00:13:27.902 --> 00:13:29.518 Just as an aside,

NOTE Confidence: 0.86362046

 $00:13:29.520 \longrightarrow 00:13:30.892$ has become quite popular,

NOTE Confidence: 0.86362046

 $00{:}13{:}30.892 \dashrightarrow 00{:}13{:}33.962$ I think over 30 states in the United

NOTE Confidence: 0.86362046

00:13:33.962 --> 00:13:36.788 States have breast density notification laws.

NOTE Confidence: 0.86362046

 $00:13:36.790 \rightarrow 00:13:39.289$ There are countries in Europe and South

NOTE Confidence: 0.86362046

 $00{:}13{:}39{.}289 \dashrightarrow 00{:}13{:}41{.}640$ America that are considering breast.

NOTE Confidence: 0.80421704

 $00:13:44.200 \rightarrow 00:13:48.460$ Density notification guidelines as well.

NOTE Confidence: 0.80421704

00:13:48.460 --> 00:13:50.630 And women with dense breasts do benefit

NOTE Confidence: 0.80421704

 $00{:}13{:}50{.}630 \dashrightarrow 00{:}13{:}52{.}849$ from having a screening ultrasound.

NOTE Confidence: 0.80421704

 $00{:}13{:}52{.}850 \dashrightarrow 00{:}13{:}55{.}258$ Overall, the cancer detection rate is about

NOTE Confidence: 0.80421704

 $00{:}13{:}55{.}258 \dashrightarrow 00{:}13{:}57{.}977$ two to four per thousand women screen.

NOTE Confidence: 0.80421704

 $00{:}13{:}57{.}980 \dashrightarrow 00{:}14{:}00{.}129$ This is in addition to the approximate

NOTE Confidence: 0.80421704

 $00:14:00.129 \longrightarrow 00:14:02.018$ 5 cancers per thousand women

 $00{:}14{:}02.018 \dashrightarrow 00{:}14{:}03.830$ screen detected on mammography.

NOTE Confidence: 0.80421704

00:14:03.830 --> 00:14:06.616 We know that most cancers detected on

NOTE Confidence: 0.80421704

 $00{:}14{:}06{.}616$ --> $00{:}14{:}08{.}856$ screening ultrasound are small and node

NOTE Confidence: 0.80421704

 $00:14:08.856 \rightarrow 00:14:11.145$ negative and tend to be early stage,

NOTE Confidence: 0.80421704

 $00{:}14{:}11{.}150 \dashrightarrow 00{:}14{:}13{.}796$ so it's rational to think that

NOTE Confidence: 0.80421704

00:14:13.796 --> 00:14:15.560 finding these mammographic Leopold

NOTE Confidence: 0.80421704

 $00:14:15.637 \rightarrow 00:14:18.206$ cancers at an early stage in smaller

NOTE Confidence: 0.80421704

 $00{:}14{:}18.206 \dashrightarrow 00{:}14{:}20.600$ size will improve overall mortality.

NOTE Confidence: 0.80421704

 $00{:}14{:}20.600 \dashrightarrow 00{:}14{:}22.068$ Ultrasound screening is really

NOTE Confidence: 0.80421704

00:14:22.068 --> 00:14:23.903 well accepted by our patients.

NOTE Confidence: 0.80421704

00:14:23.910 --> 00:14:25.002 It's relatively inexpensive.

NOTE Confidence: 0.80421704

 $00{:}14{:}25{.}002 \dashrightarrow 00{:}14{:}28{.}329$ It costs about the same price as a mammogram.

NOTE Confidence: 0.80421704

 $00:14:28.330 \longrightarrow 00:14:29.798$ There's no Ivy contrast.

NOTE Confidence: 0.80421704

 $00{:}14{:}29.798 \dashrightarrow 00{:}14{:}30.899$ There's no compression.

NOTE Confidence: 0.80421704

 $00{:}14{:}30{.}900 \dashrightarrow 00{:}14{:}34{.}666$ It's widely available, so it can work.

 $00:14:34.670 \rightarrow 00:14:38.738$ Which is why we offer it to our patients.

NOTE Confidence: 0.80421704

 $00:14:38.740 \longrightarrow 00:14:40.780$ It also performs very well in

NOTE Confidence: 0.80421704

 $00{:}14{:}40.780 \dashrightarrow 00{:}14{:}42.623$ women with dense breast tissue

NOTE Confidence: 0.80421704

00:14:42.623 --> 00:14:44.708 before the mammogram is limited,

NOTE Confidence: 0.80421704

 $00{:}14{:}44{.}710 \dashrightarrow 00{:}14{:}46{.}570$ and that's because of the

NOTE Confidence: 0.80421704

 $00{:}14{:}46{.}570 \dashrightarrow 00{:}14{:}47{.}686$ contrast on ultrasound.

NOTE Confidence: 0.80421704

 $00{:}14{:}47.690 \dashrightarrow 00{:}14{:}49.355$ These small cancers on ultrasound

NOTE Confidence: 0.80421704

00:14:49.355 --> 00:14:51.800 tend to be dark or hypoechoic,

NOTE Confidence: 0.80421704

 $00{:}14{:}51{.}800 \dashrightarrow 00{:}14{:}54{.}327$ and dense breast tissue tends to look NOTE Confidence: 0.80421704

 $00{:}14{:}54{.}327 \dashrightarrow 00{:}14{:}56{.}639$ echogenic or white on the ultrasound,

NOTE Confidence: 0.80421704

 $00{:}14{:}56{.}640$ --> $00{:}14{:}59{.}320$ so we can see these little cancers that NOTE Confidence: 0.80421704

 $00{:}14{:}59{.}320$ --> $00{:}15{:}01{.}797$ are draped in the glandular tissue fairly NOTE Confidence: 0.80421704

 $00:15:01.797 \rightarrow 00:15:04.480$ well and they will be mammographic.

NOTE Confidence: 0.80421704

 $00{:}15{:}04{.}480 \dashrightarrow 00{:}15{:}07{.}714$ Leah called because they're just hiding NOTE Confidence: 0.80421704

00:15:07.714 --> 00:15:10.589 behind this glandular tissue as well.

NOTE Confidence: 0.80421704

00:15:10.590 --> 00:15:12.320 Breast density is also important,

00:15:12.320 --> 00:15:14.864 so I just want to review this briefly

NOTE Confidence: 0.80421704

 $00{:}15{:}14.864 \dashrightarrow 00{:}15{:}17.144$ because most of our more personalized

NOTE Confidence: 0.80421704

 $00{:}15{:}17{.}144 \dashrightarrow 00{:}15{:}19{.}508$ community in the direction that we're NOTE Confidence: 0.80421704

00:15:19.580 --> 00:15:22.076 going to go to is going to include

NOTE Confidence: 0.80421704

 $00{:}15{:}22.076 \dashrightarrow 00{:}15{:}24.355$ breast density as a factor in what

NOTE Confidence: 0.80421704

 $00{:}15{:}24.355 \dashrightarrow 00{:}15{:}26.435$ kind of screening patients should get

NOTE Confidence: 0.80421704

 $00{:}15{:}26{.}435 \dashrightarrow 00{:}15{:}28{.}577$ breast dense breasts is very common.

NOTE Confidence: 0.80421704

 $00{:}15{:}28{.}580 \dashrightarrow 00{:}15{:}31{.}000$ It's seen in about 50% of all

NOTE Confidence: 0.80421704

 $00{:}15{:}31{.}000 \dashrightarrow 00{:}15{:}32{.}725$ women in the United States.

NOTE Confidence: 0.80421704

 $00{:}15{:}32.730 \dashrightarrow 00{:}15{:}34.410$ We know there's an increased

NOTE Confidence: 0.80421704

 $00{:}15{:}34{.}410 \dashrightarrow 00{:}15{:}36{.}540$ risk of breast cancer in women.

NOTE Confidence: 0.80421704

 $00:15:36.540 \longrightarrow 00:15:38.616$ It's a 2/6 times increased risk,

NOTE Confidence: 0.80421704

 $00:15:38.620 \longrightarrow 00:15:41.030$ and it can be confusing.

NOTE Confidence: 0.80421704

 $00{:}15{:}41.030 \dashrightarrow 00{:}15{:}42.968$ When you see what they did,

NOTE Confidence: 0.80421704

 $00{:}15{:}42.970 \dashrightarrow 00{:}15{:}45.091$ you know two times increased risk and

 $00:15:45.091 \rightarrow 00:15:47.078$ then we'll see another article that

NOTE Confidence: 0.80421704

 $00{:}15{:}47.078 \dashrightarrow 00{:}15{:}49.444$ says four to six times increase risk,

NOTE Confidence: 0.80421704

 $00{:}15{:}49{.}450 \dashrightarrow 00{:}15{:}51{.}184$ and that's because it really depends

NOTE Confidence: 0.80421704

 $00:15:51.184 \rightarrow 00:15:52.819$ on what breast density category

NOTE Confidence: 0.80421704

 $00{:}15{:}52{.}819 \dashrightarrow 00{:}15{:}53{.}669$ you're comparing.

NOTE Confidence: 0.80421704

 $00{:}15{:}53.670 \dashrightarrow 00{:}15{:}56.204$ So if you compare women with extremely

NOTE Confidence: 0.80421704

 $00:15:56.204 \rightarrow 00:15:58.879$ dense breasts with women with fatty tissue.

NOTE Confidence: 0.80421704

 $00:15:58.880 \rightarrow 00:16:01.190$ Then the increased risk of developing

NOTE Confidence: 0.80421704

 $00{:}16{:}01{.}190 \dashrightarrow 00{:}16{:}03{.}445$ breast cancer for women with extremely

NOTE Confidence: 0.80421704

 $00:16:03.445 \longrightarrow 00:16:06.021$ dense breasts is 4 to 6 times higher

NOTE Confidence: 0.80421704

 $00{:}16{:}06{.}090 \dashrightarrow 00{:}16{:}08{.}238$ than the women with fatty breasts.

NOTE Confidence: 0.80421704

00:16:08.240 --> 00:16:08.588 However,

NOTE Confidence: 0.80421704

 $00:16:08.588 \rightarrow 00:16:10.676$ that's the minority of our patients

NOTE Confidence: 0.80421704

 $00{:}16{:}10.676 \dashrightarrow 00{:}16{:}12.200$ in the United States.

NOTE Confidence: 0.80421704

 $00:16:12.200 \longrightarrow 00:16:14.853$ Only about 10% of women have extremely

NOTE Confidence: 0.80421704

 $00:16:14.853 \rightarrow 00:16:16.944$ dense breast tissue and only about

 $00:16:16.944 \rightarrow 00:16:19.040 \ 10\%$ of women have fatty tissue.

NOTE Confidence: 0.80421704

 $00:16:19.040 \longrightarrow 00:16:21.416$ So 80% of our patients have

NOTE Confidence: 0.80421704

 $00{:}16{:}21.416 \dashrightarrow 00{:}16{:}23.000$ heterogeneously dense breasts or

NOTE Confidence: 0.80421704

 $00:16:23.074 \rightarrow 00:16:25.189$ scattered fibroglandular tissue.

NOTE Confidence: 0.80421704

 $00{:}16{:}25{.}190 \dashrightarrow 00{:}16{:}27{.}416$ And so if you compare women with

NOTE Confidence: 0.80421704

 $00{:}16{:}27{.}416 \dashrightarrow 00{:}16{:}29{.}213$ heterogeneously dense breasts with fatty

NOTE Confidence: 0.80421704

 $00{:}16{:}29{.}213 \dashrightarrow 00{:}16{:}30{.}785$ with with scattered fibroglandular,

NOTE Confidence: 0.80421704

 $00:16:30.790 \longrightarrow 00:16:32.890$ then you have only about two

NOTE Confidence: 0.80421704

 $00{:}16{:}32{.}890 \dashrightarrow 00{:}16{:}33{.}940$ times increase risk.

NOTE Confidence: 0.80421704

 $00:16:33.940 \longrightarrow 00:16:36.390$ So that's why that risk is variable,

NOTE Confidence: 0.80421704

 $00:16:36.390 \longrightarrow 00:16:37.440$ so it does.

NOTE Confidence: 0.80421704

 $00:16:37.440 \longrightarrow 00:16:38.840$ It is considered however,

NOTE Confidence: 0.80421704

 $00{:}16{:}38{.}840 \dashrightarrow 00{:}16{:}41{.}290$ a intermediate risk factor for breast cancer.

NOTE Confidence: 0.80421704

00:16:41.290 --> 00:16:42.590 It limits the mammogram.

NOTE Confidence: 0.80421704

 $00:16:42.590 \rightarrow 00:16:44.215$ There are higher interval cancer

 $00:16:44.215 \longrightarrow 00:16:46.091$ rates and worse prognosis for

NOTE Confidence: 0.80421704

 $00{:}16{:}46.091 \dashrightarrow 00{:}16{:}47.587$ these clinically detected cancers.

NOTE Confidence: 0.80421704

 $00:16:47.590 \longrightarrow 00:16:49.280$ So that's why breast density

NOTE Confidence: 0.80421704

 $00:16:49.280 \rightarrow 00:16:51.399$ is important and it can only

NOTE Confidence: 0.80421704

00:16:51.399 - 00:16:53.189 be diagnosed on a mammogram.

NOTE Confidence: 0.81505984

 $00{:}16{:}53{.}190 \dashrightarrow 00{:}16{:}55{.}680$ It can be diagnosed based on.

NOTE Confidence: 0.81505984

 $00{:}16{:}55{.}680 \dashrightarrow 00{:}16{:}58{.}216$ A breast exam and if the patient's breast

NOTE Confidence: 0.81505984

 $00:16:58.216 \rightarrow 00:17:01.129$ exam is sort of lumpy and difficult to do.

NOTE Confidence: 0.81505984

00:17:01.130 --> 00:17:03.062 Another option for women with dense

NOTE Confidence: 0.81505984

 $00{:}17{:}03.062 \dashrightarrow 00{:}17{:}05.000$ breasts is fast MRI screening.

NOTE Confidence: 0.81505984

 $00{:}17{:}05{.}000 \dashrightarrow 00{:}17{:}07{.}464$ It has been proposed for average risk.

NOTE Confidence: 0.81505984

 $00:17:07.470 \longrightarrow 00:17:08.934$ Women with dense breasts.

NOTE Confidence: 0.81505984

00:17:08.934 --> 00:17:11.130 It is been being done clinically

NOTE Confidence: 0.81505984

 $00{:}17{:}11{.}202 \dashrightarrow 00{:}17{:}13{.}098$ in other parts of the country.

NOTE Confidence: 0.81505984

 $00:17:13.100 \longrightarrow 00:17:15.206$ There's very little of it done

NOTE Confidence: 0.81505984

 $00:17:15.206 \rightarrow 00:17:16.963$ in Connecticut, but for example,

- NOTE Confidence: 0.81505984
- $00{:}17{:}16.963 \dashrightarrow 00{:}17{:}18.718$ University of Pennsylvania does a

00:17:18.718 --> 00:17:20.492 lot of fast, summarized meeting

NOTE Confidence: 0.81505984

 $00{:}17{:}20.492 \dashrightarrow 00{:}17{:}22.247$ for women with dense breasts.

NOTE Confidence: 0.81505984

00:17:22.250 --> 00:17:23.995 The first study was published

NOTE Confidence: 0.81505984

 $00:17:23.995 \longrightarrow 00:17:26.120$ back in 2014 by Christiana Cool.

NOTE Confidence: 0.81505984

00:17:26.120 --> 00:17:28.334 She's a highly regarded a radiologist

NOTE Confidence: 0.81505984

 $00{:}17{:}28{.}334 \dashrightarrow 00{:}17{:}31{.}159$ in Germany an she showed that with a.

NOTE Confidence: 0.81505984

 $00:17:31.160 \longrightarrow 00:17:33.484$ Very fast acquisition time of three minutes,

NOTE Confidence: 0.81505984

 $00{:}17{:}33{.}490 \dashrightarrow 00{:}17{:}35{.}849$ as opposed to about the the acquisition

NOTE Confidence: 0.81505984

 $00{:}17{:}35{.}849 \dashrightarrow 00{:}17{:}38{.}489$ time or scanning time of a traditional MRI,

NOTE Confidence: 0.81505984

 $00:17:38.490 \longrightarrow 00:17:42.340$ which is about 10 or 15 minutes.

NOTE Confidence: 0.81505984

00:17:42.340 --> 00:17:44.797 We could detect cancers at a very

NOTE Confidence: 0.81505984

00:17:44.797 --> 00:17:47.160 high rate of 18 per thousand,

NOTE Confidence: 0.81505984

 $00{:}17{:}47.160 \dashrightarrow 00{:}17{:}49.015$ and this has been replicated

NOTE Confidence: 0.81505984

 $00:17:49.015 \longrightarrow 00:17:50.870$ by other studies as well.

 $00{:}17{:}50{.}870 \dashrightarrow 00{:}17{:}53{.}156$ So overall, the cancer detection rate

NOTE Confidence: 0.81505984

 $00:17:53.156 \longrightarrow 00:17:56.069$ of MRI's about 15 to 18 per thousand,

NOTE Confidence: 0.81505984

 $00:17:56.070 \rightarrow 00:17:58.290$ which is higher than screening ultrasound.

NOTE Confidence: 0.81505984

00:17:58.290 --> 00:18:00.005 That supplemental yield is only

NOTE Confidence: 0.81505984

 $00:18:00.005 \rightarrow 00:18:02.370$ about two to four per thousand.

NOTE Confidence: 0.81505984

00:18:02.370 $\operatorname{-->}$ 00:18:04.596 But MRI is more expensive and

NOTE Confidence: 0.81505984

 $00:18:04.596 \longrightarrow 00:18:05.709$ requires Ivy contrast.

NOTE Confidence: 0.81505984

 $00{:}18{:}05{.}710 \dashrightarrow 00{:}18{:}07{.}964$ There's not a lot of MRI scanners

NOTE Confidence: 0.81505984

 $00{:}18{:}07{.}964 \dashrightarrow 00{:}18{:}10{.}539$ out there as opposed to ultrasound,

NOTE Confidence: 0.81505984

 $00:18:10.540 \longrightarrow 00:18:12.116$ so it's not as.

NOTE Confidence: 0.81505984

 $00:18:12.116 \longrightarrow 00:18:13.298$ Easy to perform.

NOTE Confidence: 0.81505984

 $00:18:13.300 \longrightarrow 00:18:15.708$ Patients may not like it as well.

NOTE Confidence: 0.81505984

00:18:15.710 --> 00:18:16.400 Takes longer,

NOTE Confidence: 0.81505984

 $00:18:16.400 \longrightarrow 00:18:17.780$ but it does work.

NOTE Confidence: 0.81505984

 $00:18:17.780 \longrightarrow 00:18:19.922$ The two year validation showed there

NOTE Confidence: 0.81505984

 $00{:}18{:}19{.}922 \dashrightarrow 00{:}18{:}22{.}378$ were no interval cancers so it was

 $00:18:22.378 \rightarrow 00:18:23.988$ really catching all those cancers.

NOTE Confidence: 0.81505984

00:18:23.990 --> 00:18:25.685 The sense the negative predicted

NOTE Confidence: 0.81505984

00:18:25.685 --> 00:18:27.867 value was high and the specificity

NOTE Confidence: 0.81505984

 $00{:}18{:}27.867 \dashrightarrow 00{:}18{:}29.567$ and positive predictive

NOTE Confidence: 0.81505984

 $00:18:29.567 \rightarrow 00:18:32.249$ value are also very good as well.

NOTE Confidence: 0.81505984

 $00:18:32.250 \longrightarrow 00:18:34.226$ So here is a 61 year old patient

NOTE Confidence: 0.81505984

 $00{:}18{:}34{.}226 \dashrightarrow 00{:}18{:}36{.}172$ with a pathogenic BRACA mutation

NOTE Confidence: 0.81505984

 $00:18:36.172 \rightarrow 00:18:38.482$ and Paris producting something over

NOTE Confidence: 0.81505984

00:18:38.482 --> 00:18:40.810 ectomy with a negative mammogram,

NOTE Confidence: 0.81505984

 $00{:}18{:}40{.}810$ --> $00{:}18{:}43{.}402$ and she had a MRI six months later NOTE Confidence: 0.81505984

 $00:18:43.402 \rightarrow 00:18:46.007$ and they saw this little cancer and

NOTE Confidence: 0.81505984

 $00{:}18{:}46.007 \dashrightarrow 00{:}18{:}49.178$ detected this so it can work in women NOTE Confidence: 0.81505984

 $00{:}18{:}49{.}178 \dashrightarrow 00{:}18{:}51{.}590$ with dense breasts and this woman.

NOTE Confidence: 0.81505984

00:18:51.590 --> 00:18:54.278 She also had high risk and which is

NOTE Confidence: 0.81505984

 $00{:}18{:}54{.}278$ --> $00{:}18{:}57{.}486$ where we do most of our breast MRI in NOTE Confidence: 0.81505984

00:18:57.486 --> 00:19:00.148 our practices for high risk screening,

NOTE Confidence: 0.81505984

 $00{:}19{:}00{.}150 \dashrightarrow 00{:}19{:}02{.}388$ and that's traditional.

NOTE Confidence: 0.81505984

 $00:19:02.390 \rightarrow 00:19:05.414$ I was screening MRI for high risk patients.

NOTE Confidence: 0.81505984

 $00:19:05.420 \longrightarrow 00:19:07.652$ Here's the list there Braca positive

NOTE Confidence: 0.81505984

 $00:19:07.652 \rightarrow 00:19:10.339$ patients they they have some of these

NOTE Confidence: 0.81505984

 $00:19:10.339 \rightarrow 00:19:12.234$ syndromes may have chest radiation,

NOTE Confidence: 0.81505984

 $00:19:12.240 \rightarrow 00:19:13.760$ usually eight years earlier,

NOTE Confidence: 0.81505984

 $00:19:13.760 \longrightarrow 00:19:14.900$ part age 30,

NOTE Confidence: 0.81505984

00:19:14.900 --> 00:19:16.790 an overall lifetime risk of

NOTE Confidence: 0.81505984

 $00:19:16.790 \rightarrow 00:19:19.046$ greater than 20% high risk women.

NOTE Confidence: 0.81505984

 $00{:}19{:}19{.}046 \dashrightarrow 00{:}19{:}21.650$ We recommend that they have an annual

NOTE Confidence: 0.81505984

00:19:21.720 --> 00:19:23.826 mammogram and MRI beginning around age

NOTE Confidence: 0.81505984

 $00{:}19{:}23.826 \dashrightarrow 00{:}19{:}27.298$ 25 to 30 and again this is the BRACA

NOTE Confidence: 0.81505984

 $00:19:27.298 \rightarrow 00:19:29.293$ positive patients and another high

NOTE Confidence: 0.81505984

 $00{:}19{:}29{.}300 \dashrightarrow 00{:}19{:}31{.}670$ risk patients and this is recommended

NOTE Confidence: 0.81505984

 $00:19:31.670 \longrightarrow 00:19:34.155$ by the American College of Radiology

- NOTE Confidence: 0.81505984
- $00:19:34.155 \rightarrow 00:19:36.240$ and the American Cancer Society.

 $00{:}19{:}36{.}240 \dashrightarrow 00{:}19{:}38{.}046$ We also know that it's reasonable

NOTE Confidence: 0.81505984

 $00:19:38.046 \rightarrow 00:19:39.979$ to delay the onset of mammographic

NOTE Confidence: 0.81505984

 $00:19:39.979 \rightarrow 00:19:41.977$ screening until the age of 30.

NOTE Confidence: 0.81505984

 $00:19:41.980 \longrightarrow 00:19:43.580$ In some of these patients,

NOTE Confidence: 0.81505984

 $00{:}19{:}43.580 \dashrightarrow 00{:}19{:}45.806$ and that's because of the radiation risk.

NOTE Confidence: 0.81505984

 $00{:}19{:}45{.}810 \dashrightarrow 00{:}19{:}47{.}718$ These patients are known to have

NOTE Confidence: 0.81505984

00:19:47.718 --> 00:19:48.672 increased radiation sensitivity,

NOTE Confidence: 0.81505984

 $00{:}19{:}48.680 \dashrightarrow 00{:}19{:}50.270$ particularly the BRACA one carriers

NOTE Confidence: 0.81505984

 $00:19:50.270 \longrightarrow 00:19:52.190$ and the P53 carriers, as well.

NOTE Confidence: 0.8335403

00:19:54.570 --> 00:19:56.390 So breast cancer risk

NOTE Confidence: 0.8335403

 $00{:}19{:}56{.}390 \dashrightarrow 00{:}19{:}58{.}665$ evaluation is a growing program.

NOTE Confidence: 0.8335403

 $00:19:58.670 \longrightarrow 00:20:02.030$ Most more and more breast centers today are

NOTE Confidence: 0.8335403

 $00{:}20{:}02{.}030 \dashrightarrow 00{:}20{:}04.580$ offering breast cancer risk assessment.

NOTE Confidence: 0.8335403

 $00:20:04.580 \longrightarrow 00:20:07.359$ This is in lieu in in coordination
$00:20:07.359 \rightarrow 00:20:10.040$ with interest in population health.

NOTE Confidence: 0.8335403

00:20:10.040 --> 00:20:12.315 We're doing more screening not

NOTE Confidence: 0.8335403

 $00:20:12.315 \longrightarrow 00:20:15.210$ only for breast cancer, but colon,

NOTE Confidence: 0.8335403

 $00:20:15.210 \rightarrow 00:20:18.420$ cancer, and other cancers as well.

NOTE Confidence: 0.8335403

 $00:20:18.420 \longrightarrow 00:20:21.108$ So with breast cancer risk evaluation,

NOTE Confidence: 0.8335403

 $00{:}20{:}21{.}110 \dashrightarrow 00{:}20{:}23{.}505$ there are multiple risk assessment

NOTE Confidence: 0.8335403

 $00:20:23.505 \longrightarrow 00:20:26.410$ tools that are very available online

NOTE Confidence: 0.8335403

 $00:20:26.410 \longrightarrow 00:20:29.014$ and the estimated risk can really

NOTE Confidence: 0.8335403

 $00:20:29.014 \rightarrow 00:20:31.889$ vary depending on which model you use.

NOTE Confidence: 0.8335403

 $00{:}20{:}31.890 \dashrightarrow 00{:}20{:}34.851$ Most centers are going for the tire

NOTE Confidence: 0.8335403

00:20:34.851 --> 00:20:37.135 acoustic model that's most widely

NOTE Confidence: 0.8335403

 $00{:}20{:}37.135 \dashrightarrow 00{:}20{:}39.475$ used and that also incorporates

NOTE Confidence: 0.8335403

00:20:39.475 - 00:20:41.769 breast density into that model.

NOTE Confidence: 0.8335403

00:20:41.770 --> 00:20:44.906 When we think about breast cancer risk,

NOTE Confidence: 0.8335403

 $00:20:44.910 \rightarrow 00:20:48.566$ we have to know that risk changes overtime.

NOTE Confidence: 0.8335403

00:20:48.570 --> 00:20:50.790 Unknown risk and change every year.

- NOTE Confidence: 0.8335403
- $00{:}20{:}50{.}790 \dashrightarrow 00{:}20{:}51{.}474$ For example,
- NOTE Confidence: 0.8335403
- $00:20:51.474 \longrightarrow 00:20:54.679$ you can have a patient who is just an
- NOTE Confidence: 0.8335403
- $00:20:54.679 \rightarrow 00:20:57.430$ average risk and then her sister was
- NOTE Confidence: 0.8335403
- $00{:}20{:}57{.}430 \dashrightarrow 00{:}21{:}00{.}037$ diagnosed with breast cancer at age 39,
- NOTE Confidence: 0.8335403
- $00{:}21{:}00{.}040 \dashrightarrow 00{:}21{:}02{.}256$ and that's going to bump up her her
- NOTE Confidence: 0.8335403
- $00{:}21{:}02{.}256 \dashrightarrow 00{:}21{:}04{.}468$ risk for breast cancer the following
- NOTE Confidence: 0.8335403
- $00{:}21{:}04.468 \dashrightarrow 00{:}21{:}06.850$ year and overtime the lifetime risk
- NOTE Confidence: 0.8335403
- 00:21:06.918 --> 00:21:08.878 increases decreases, excuse me,
- NOTE Confidence: 0.8335403
- $00{:}21{:}08{.}878 \dashrightarrow 00{:}21{:}11{.}670$ but the five and 10 year breast cancer
- NOTE Confidence: 0.8335403
- 00:21:11.746 --> 00:21:14.098 risk is also proportional to age,
- NOTE Confidence: 0.8335403
- $00:21:14.100 \longrightarrow 00:21:16.065$ so it's complicated and that's
- NOTE Confidence: 0.8335403
- $00{:}21{:}16.065 \dashrightarrow 00{:}21{:}18.580$ something that I think most breast.
- NOTE Confidence: 0.8335403
- 00:21:18.580 --> 00:21:18.949 Centers,
- NOTE Confidence: 0.8335403
- $00:21:18.949 \longrightarrow 00:21:21.163$ including our own will be doing
- NOTE Confidence: 0.8335403
- $00:21:21.163 \rightarrow 00:21:23.269$ within the next 5 to 10 years,
- NOTE Confidence: 0.8335403

 $00:21:23.270 \rightarrow 00:21:25.524$ so we're really moving beyond just starting

NOTE Confidence: 0.8335403

00:21:25.524 --> 00:21:28.629 at age 40 and having a mammogram every year,

NOTE Confidence: 0.8335403

 $00:21:28.630 \longrightarrow 00:21:30.310$ which is nice and simple,

NOTE Confidence: 0.8335403

00:21:30.310 --> 00:21:32.320 and it's nice for you know,

NOTE Confidence: 0.8335403

00:21:32.320 --> 00:21:33.990 buzzwords and things like that,

NOTE Confidence: 0.8335403

 $00:21:33.990 \rightarrow 00:21:36.000$ and advertising to something like this,

NOTE Confidence: 0.8335403

00:21:36.000 --> 00:21:37.340 which looks really complicated,

NOTE Confidence: 0.8335403

 $00:21:37.340 \rightarrow 00:21:39.350$ but it's really not that complicated,

NOTE Confidence: 0.8335403

 $00{:}21{:}39{.}350 \dashrightarrow 00{:}21{:}41{.}695$ so let me just review with you.

NOTE Confidence: 0.8335403

 $00:21:41.700 \longrightarrow 00:21:43.036$ Review this with you.

NOTE Confidence: 0.8335403

 $00:21:43.036 \longrightarrow 00:21:44.706$ So the first question is,

NOTE Confidence: 0.8335403

 $00{:}21{:}44.710 \dashrightarrow 00{:}21{:}46.846$ does the patient have at least

NOTE Confidence: 0.8335403

 $00:21:46.846 \rightarrow 00:21:49.220$ a 10 year life expectancy?

NOTE Confidence: 0.8335403

00:21:49.220 --> 00:21:49.722 If not,

NOTE Confidence: 0.8335403

 $00:21:49.722 \rightarrow 00:21:51.730$ then she would only have breast imaging is

NOTE Confidence: 0.8335403

 $00:21:51.787 \rightarrow 00:21:53.797$ there's a clinically suspicious finding.

- NOTE Confidence: 0.8335403
- $00{:}21{:}53.800 \dashrightarrow 00{:}21{:}56.112$ The majority of our patients will have a

 $00{:}21{:}56{.}112 \dashrightarrow 00{:}21{:}58{.}678$ 10 year life expectancy and then we ask,

NOTE Confidence: 0.8335403

 $00:21:58.680 \longrightarrow 00:22:00.808$ is she under the age of 25?

NOTE Confidence: 0.8335403

00:22:00.810 --> 00:22:01.352 A 75?

NOTE Confidence: 0.8335403

 $00:22:01.352 \longrightarrow 00:22:01.894$ If not,

NOTE Confidence: 0.8335403

 $00{:}22{:}01{.}894 \dashrightarrow 00{:}22{:}03{.}879$ she's over age 75 with healthy then

NOTE Confidence: 0.8335403

00:22:03.879 -> 00:22:05.649 maybe she would have an annual

NOTE Confidence: 0.8335403

 $00:22:05.649 \longrightarrow 00:22:07.220$ or BI annual mammogram.

NOTE Confidence: 0.8335403

 $00{:}22{:}07{.}220 \dashrightarrow 00{:}22{:}09{.}502$ Most of our patients are going to

NOTE Confidence: 0.8335403

 $00:22:09.502 \longrightarrow 00:22:12.004$ be under the age of 75 and then

NOTE Confidence: 0.8335403

 $00{:}22{:}12.004 \dashrightarrow 00{:}22{:}14.382$ we're going to look at the wrist and

NOTE Confidence: 0.8335403

 $00{:}22{:}14.382 \dashrightarrow 00{:}22{:}16.708$ if she is at high risk for breast

NOTE Confidence: 0.8335403

 $00{:}22{:}16.708 \dashrightarrow 00{:}22{:}18.398$ cancer then we would recommend

NOTE Confidence: 0.8335403

 $00{:}22{:}18{.}398 \dashrightarrow 00{:}22{:}19{.}412$ annual contrast enhanced.

NOTE Confidence: 0.8335403

 $00:22:19.420 \longrightarrow 00:22:22.236$ MRI beginning at age 25 or 30 and

00:22:22.236 --> 00:22:23.648 mammography beginning at age 30,

NOTE Confidence: 0.8335403

 $00{:}22{:}23.650 \dashrightarrow 00{:}22{:}26.194$ she can't have an MRI because it's she

NOTE Confidence: 0.8335403

 $00{:}22{:}26.194 \dashrightarrow 00{:}22{:}28.517$ can tolerate it or for whatever reason.

NOTE Confidence: 0.8335403

 $00{:}22{:}28{.}520 \dashrightarrow 00{:}22{:}30{.}809$ Then she would have an annual screening

NOTE Confidence: 0.8335403

 $00:22:30.809 \longrightarrow 00:22:32.748$ ultrasound in addition to her mammogram.

NOTE Confidence: 0.8335403

 $00{:}22{:}32{.}750 \dashrightarrow 00{:}22{:}35{.}198$ The majority of our patients that

NOTE Confidence: 0.8335403

 $00:22:35.198 \longrightarrow 00:22:37.972$ we are not going to be increased

NOTE Confidence: 0.8335403

 $00:22:37.972 \rightarrow 00:22:41.170$ risk and so then we want to be sure.

NOTE Confidence: 0.8335403

 $00{:}22{:}41{.}170 \dashrightarrow 00{:}22{:}43{.}368$ That they are under the age of

NOTE Confidence: 0.8335403

 $00:22:43.368 \longrightarrow 00:22:44.829$ over the age of 40.

NOTE Confidence: 0.8335403

 $00:22:44.830 \longrightarrow 00:22:47.270$ If they're not over the age of four.

NOTE Confidence: 0.8335403

 $00:22:47.270 \rightarrow 00:22:49.710$ If they're not over the age of 40,

NOTE Confidence: 0.8335403

 $00:22:49.710 \longrightarrow 00:22:52.104$ and we would just tell them to

NOTE Confidence: 0.8335403

 $00:22:52.104 \rightarrow 00:22:53.980$ start really screening at 40 at 40,

NOTE Confidence: 0.8335403

 $00:22:53.980 \longrightarrow 00:22:55.510$ we do the baseline mammogram.

NOTE Confidence: 0.8335403

 $00:22:55.510 \rightarrow 00:22:56.120$ Of course,

- NOTE Confidence: 0.8335403
- $00:22:56.120 \longrightarrow 00:22:57.950$ we always want to synthesis if

 $00:22:57.950 \longrightarrow 00:22:58.560$ it's available,

NOTE Confidence: 0.8403123

 $00:22:58.560 \rightarrow 00:23:00.688$ and if she has dense breast tissue,

NOTE Confidence: 0.8403123

 $00:23:00.690 \longrightarrow 00:23:02.742$ then we would also offer them

NOTE Confidence: 0.8403123

 $00{:}23{:}02{.}742 \dashrightarrow 00{:}23{:}04{.}525$ screening ultrasound or at some

NOTE Confidence: 0.8403123

 $00{:}23{:}04{.}525 \dashrightarrow 00{:}23{:}06{.}255$ places screening MRI as well.

NOTE Confidence: 0.8403123

 $00:23:06.260 \longrightarrow 00:23:07.964$ So that's the algorithm

NOTE Confidence: 0.8403123

 $00:23:07.964 \longrightarrow 00:23:09.668$ where it stands today.

NOTE Confidence: 0.8403123

 $00:23:09.670 \longrightarrow 00:23:12.310$ What about the future?

NOTE Confidence: 0.8403123

 $00:23:12.310 \rightarrow 00:23:14.814$ There are going to be more screening options.

NOTE Confidence: 0.8403123

 $00{:}23{:}14.820 \dashrightarrow 00{:}23{:}16.518$ We're going to have advancing knowledge

NOTE Confidence: 0.8403123

00:23:16.518 --> 00:23:19.020 of genetics so it will be better risk

NOTE Confidence: 0.8403123

 $00{:}23{:}19{.}020 \dashrightarrow 00{:}23{:}20{.}332$ assessment and more personalized

NOTE Confidence: 0.8403123

 $00{:}23{:}20{.}332 \dashrightarrow 00{:}23{:}22{.}040$ medicine will have new technology.

NOTE Confidence: 0.8403123

 $00:23:22.040 \rightarrow 00:23:23.930$ As I mentioned, molecular breast imaging,

00:23:23.930 --> 00:23:24.830 contrast enhanced mammography,

NOTE Confidence: 0.8403123

 $00{:}23{:}24{.}830 \dashrightarrow 00{:}23{:}27{.}380$ and of course AI will be more patient,

NOTE Confidence: 0.8403123

00:23:27.380 --> 00:23:28.268 shared decision making.

NOTE Confidence: 0.8403123

 $00:23:28.268 \rightarrow 00:23:30.340$ We're going to be talking more patience

NOTE Confidence: 0.8403123

 $00:23:30.394 \rightarrow 00:23:32.089$ and helping them filter information,

NOTE Confidence: 0.8403123

00:23:32.090 --> 00:23:33.350 medical information and guide

NOTE Confidence: 0.8403123

 $00:23:33.350 \longrightarrow 00:23:33.980$ their decisions.

NOTE Confidence: 0.8403123

 $00:23:33.980 \longrightarrow 00:23:35.640$ And of course, health.

NOTE Confidence: 0.8403123

 $00{:}23{:}35{.}640 \dashrightarrow 00{:}23{:}38{.}856$ Health care economics is going to play a

NOTE Confidence: 0.8403123

 $00:23:38.856 \rightarrow 00:23:41.910$ part in how we screen our patients as well.

NOTE Confidence: 0.8403123

 $00:23:41.910 \longrightarrow 00:23:43.710$ And what makes the most sense?

NOTE Confidence: 0.8122481

00:23:45.900 --> 00:23:47.450 Briefly, I'm just going to

NOTE Confidence: 0.8122481

 $00:23:47.450 \longrightarrow 00:23:48.380$ touch on overdiagnosis.

NOTE Confidence: 0.8122481

 $00:23:48.380 \rightarrow 00:23:50.480$ I know that there's some people probably

NOTE Confidence: 0.8122481

 $00{:}23{:}50{.}480 \dashrightarrow 00{:}23{:}52{.}064$ listening and thinking we shouldn't

NOTE Confidence: 0.8122481

 $00:23:52.064 \rightarrow 00:23:53.960$ screen so much because of overdiagnosis.

 $00:23:53.960 \rightarrow 00:23:56.130$ We could talk entire day about overdiagnosis,

NOTE Confidence: 0.8122481

00:23:56.130 --> 00:23:58.300 but I've condensed it into two slides,

NOTE Confidence: 0.8122481

 $00:23:58.300 \longrightarrow 00:24:00.589$ and here's an example of a case

NOTE Confidence: 0.8122481

 $00:24:00.589 \longrightarrow 00:24:02.638$ of over diagnosis of 59 year old.

NOTE Confidence: 0.8122481

 $00{:}24{:}02.640 \dashrightarrow 00{:}24{:}04.796$ She had a mass president or left

NOTE Confidence: 0.8122481

 $00:24:04.796 \longrightarrow 00:24:06.669$ outer breast stable for five years.

NOTE Confidence: 0.8122481

 $00:24:06.670 \longrightarrow 00:24:09.150$ It looks just like a little lymph node.

NOTE Confidence: 0.8122481

 $00:24:09.150 \longrightarrow 00:24:10.700$ We do tomosynthesis the first

NOTE Confidence: 0.8122481

 $00:24:10.700 \longrightarrow 00:24:12.250$ time she has atomo exam,

NOTE Confidence: 0.8122481

 $00{:}24{:}12{.}250 \dashrightarrow 00{:}24{:}13{.}542$ and there's little speculations.

NOTE Confidence: 0.8122481

 $00{:}24{:}13{.}542 \dashrightarrow 00{:}24{:}16{.}669$ And this turns out to be a great two tubular.

NOTE Confidence: 0.8122481

 $00{:}24{:}16.670$ --> $00{:}24{:}19.505$ My cancer probably would have done anything.

NOTE Confidence: 0.8122481

 $00{:}24{:}19.510 \dashrightarrow 00{:}24{:}22.446$ It's a low grade cancer and so perhaps

NOTE Confidence: 0.8122481

 $00{:}24{:}22{.}446 \dashrightarrow 00{:}24{:}25{.}579$ this is a true case of overdiagnosis.

NOTE Confidence: 0.8122481

 $00:24:25.580 \rightarrow 00:24:28.142$ We know that some screening detected cancers

 $00:24:28.142 \rightarrow 00:24:30.440$ may never become clinically evident.

NOTE Confidence: 0.8122481

 $00:24:30.440 \longrightarrow 00:24:32.582$ They Sgro very slowly with patients

NOTE Confidence: 0.8122481

 $00{:}24{:}32{.}582 \dashrightarrow 00{:}24{:}35{.}053$ that die of something else before

NOTE Confidence: 0.8122481

00:24:35.053 - 00:24:36.520 cancer becomes symptomatic.

NOTE Confidence: 0.8122481

00:24:36.520 --> 00:24:38.782 This example would be low grade

NOTE Confidence: 0.8122481

 $00{:}24{:}38.782 \dashrightarrow 00{:}24{:}40.970$ DCIS in an elderly patient.

NOTE Confidence: 0.8122481

00:24:40.970 --> 00:24:43.986 We might over treat these patients and give

NOTE Confidence: 0.8122481

 $00:24:43.986 \rightarrow 00:24:47.118$ him and subject them to potential hard.

NOTE Confidence: 0.8122481

00:24:47.120 --> 00:24:48.856 But the key is we don't know yet

NOTE Confidence: 0.8122481

 $00:24:48.856 \rightarrow 00:24:50.670$ which low grade cancers will become

NOTE Confidence: 0.8122481

 $00{:}24{:}50.670 \dashrightarrow 00{:}24{:}52.656$ lethal and when they'll become lethal,

NOTE Confidence: 0.8122481

 $00{:}24{:}52.660 \dashrightarrow 00{:}24{:}54.895$ and so hopefully more research

NOTE Confidence: 0.8122481

 $00:24:54.895 \longrightarrow 00:24:56.683$ will be able to.

NOTE Confidence: 0.8122481

 $00:24:56.690 \rightarrow 00:24:58.842$ To identify these cancers so that we'll know

NOTE Confidence: 0.8122481

 $00{:}24{:}58.842 \dashrightarrow 00{:}25{:}00.847$ more where we need to really treat them.

NOTE Confidence: 0.8122481

 $00{:}25{:}00{.}850 \dashrightarrow 00{:}25{:}04{.}706$ Where we can stand back a little bit.

 $00{:}25{:}04{.}710 \dashrightarrow 00{:}25{:}07{.}044$ AI tools and population health and

NOTE Confidence: 0.8122481

 $00{:}25{:}07{.}044 \dashrightarrow 00{:}25{:}09{.}330$ new technology are going to allow

NOTE Confidence: 0.8122481

 $00:25:09.330 \longrightarrow 00:25:10.650$ us to screen smarter.

NOTE Confidence: 0.8122481

 $00:25:10.650 \rightarrow 00:25:12.648$ We're going to know who needs

NOTE Confidence: 0.8122481

 $00{:}25{:}12.648 \dashrightarrow 00{:}25{:}15.099$ more and who needs less screening,

NOTE Confidence: 0.8122481

 $00{:}25{:}15{.}100 \dashrightarrow 00{:}25{:}18{.}133$ but it's going to take a lot of outcome

NOTE Confidence: 0.8122481

 $00:25:18.133 \rightarrow 00:25:20.659$ analysis and sufficient data right now.

NOTE Confidence: 0.8122481

 $00:25:20.660 \longrightarrow 00:25:23.257$ Our data collection is not that great.

NOTE Confidence: 0.8122481

 $00{:}25{:}23.260 \dashrightarrow 00{:}25{:}25.486$ Most of the cancer registries that.

NOTE Confidence: 0.8449189

 $00{:}25{:}27.740 \dashrightarrow 00{:}25{:}29.032$ Collect information on cancer.

NOTE Confidence: 0.8449189

 $00{:}25{:}29{.}032 \dashrightarrow 00{:}25{:}31{.}045$ Breast cancer. Do not look at the

NOTE Confidence: 0.8449189

 $00{:}25{:}31.045 \dashrightarrow 00{:}25{:}33.236$ method of detection so we don't know

NOTE Confidence: 0.8449189

 $00:25:33.236 \rightarrow 00:25:35.516$ how these cancers are being diagnosed,

NOTE Confidence: 0.8449189

 $00:25:35.520 \longrightarrow 00:25:36.816$ whether they are palpable

NOTE Confidence: 0.8449189

 $00{:}25{:}36{.}816 \dashrightarrow 00{:}25{:}38{.}760$ or whether they had to mow,

 $00:25:38.760 \rightarrow 00:25:40.734$ or that whether they were diagnosis

NOTE Confidence: 0.8449189

 $00{:}25{:}40{.}734 \dashrightarrow 00{:}25{:}42{.}320$ on screening ultrasound or MRI.

NOTE Confidence: 0.8449189

 $00{:}25{:}42{.}320 \dashrightarrow 00{:}25{:}44{.}861$ So the American College of Radiology is

NOTE Confidence: 0.8449189

 $00{:}25{:}44.861 \dashrightarrow 00{:}25{:}46.914$ working to include method of detection

NOTE Confidence: 0.8449189

 $00:25:46.914 \rightarrow 00:25:49.768$ in the BI RADS and then when we do that,

NOTE Confidence: 0.8449189

 $00:25:49.770 \longrightarrow 00:25:51.414$ hopefully the cancer registries

NOTE Confidence: 0.8449189

 $00{:}25{:}51{.}414 \dashrightarrow 00{:}25{:}53{.}469$ and the national databases will

NOTE Confidence: 0.8449189

 $00{:}25{:}53{.}469 \dashrightarrow 00{:}25{:}55{.}943$ accept this so that we can collect

NOTE Confidence: 0.8449189

 $00{:}25{:}55{.}943 \dashrightarrow 00{:}25{:}57{.}660$ information on new technology and

NOTE Confidence: 0.8449189

 $00:25:57.660 \rightarrow 00:25:59.865$ figure out what works and what doesn't.

NOTE Confidence: 0.8449189

 $00:25:59.870 \longrightarrow 00:26:00.833$ So in summary,

NOTE Confidence: 0.8449189

 $00:26:00.833 \rightarrow 00:26:02.117$ annual screening mammogram beginning

NOTE Confidence: 0.8449189

 $00{:}26{:}02{.}117 \dashrightarrow 00{:}26{:}04{.}269$ at age 40 saves the most lives

NOTE Confidence: 0.8449189

 $00:26:04.269 \longrightarrow 00:26:05.689$ women with dense breasts have

NOTE Confidence: 0.8449189

 $00{:}26{:}05{.}689 \dashrightarrow 00{:}26{:}07{.}552$ the option to choose supplemental

NOTE Confidence: 0.8449189

00:26:07.552 --> 00:26:09.076 screening ultrasound or MRI,

- NOTE Confidence: 0.8449189
- $00:26:09.080 \rightarrow 00:26:11.019$ high risk women benefit from annual MRI

 $00{:}26{:}11.019 \dashrightarrow 00{:}26{:}13.029$ in addition to screening mammography.

NOTE Confidence: 0.8449189

 $00:26:13.030 \longrightarrow 00:26:14.670$ Often this will start before

NOTE Confidence: 0.8449189

 $00:26:14.670 \longrightarrow 00:26:17.310$ the age of 40 and just one key.

NOTE Confidence: 0.8449189

00:26:17.310 --> 00:26:19.606 If a patient is having a supplement,

NOTE Confidence: 0.8449189

00:26:19.610 --> 00:26:21.906 an MRI in addition to our mammogram,

NOTE Confidence: 0.8449189

 $00:26:21.910 \longrightarrow 00:26:23.550$ she really doesn't need a

NOTE Confidence: 0.8449189

 $00:26:23.550 \longrightarrow 00:26:24.862$ screening ultrasound as well.

NOTE Confidence: 0.8449189

 $00:26:24.870 \longrightarrow 00:26:26.520$ We know in the future,

NOTE Confidence: 0.8449189

 $00:26:26.520 \longrightarrow 00:26:27.852$ vascular based imaging

NOTE Confidence: 0.8449189

 $00:26:27.852 \rightarrow 00:26:29.628$ will become more common.

NOTE Confidence: 0.8449189

 $00{:}26{:}29{.}630 \dashrightarrow 00{:}26{:}31{.}230$ It's interesting vascular based

NOTE Confidence: 0.8449189

00:26:31.230 --> 00:26:33.230 imaging may not necessarily require

NOTE Confidence: 0.8449189

 $00{:}26{:}33{.}230 \dashrightarrow 00{:}26{:}35{.}332$ Ivy contrast routine breast cancer

NOTE Confidence: 0.8449189

 $00:26:35.332 \rightarrow 00:26:37.387$ risk assessment will probably be

 $00{:}26{:}37{.}387 \dashrightarrow 00{:}26{:}39{.}773$ available to all women and artificial

NOTE Confidence: 0.8449189

 $00:26:39.773 \longrightarrow 00:26:41.305$ intelligence will definitely enhance

NOTE Confidence: 0.8449189

 $00:26:41.305 \longrightarrow 00:26:43.298$ the delivery of breast cancer

NOTE Confidence: 0.8449189

 $00:26:43.298 \rightarrow 00:26:44.906$ screening at multiple levels.

NOTE Confidence: 0.8449189

 $00{:}26{:}44{.}910 \dashrightarrow 00{:}26{:}46{.}586$ From effective efficient scheduling

NOTE Confidence: 0.8449189

 $00:26:46.586 \rightarrow 00:26:49.507$ to managing and analyzing new data to

NOTE Confidence: 0.8449189

 $00{:}26{:}49.507 \dashrightarrow 00{:}26{:}51.242$ helping the radiologist read better

NOTE Confidence: 0.8449189

00:26:51.242 --> 00:26:53.350 and faster and more accurately,

NOTE Confidence: 0.8449189

 $00{:}26{:}53{.}350 \dashrightarrow 00{:}26{:}55{.}882$ and also again help us determine

NOTE Confidence: 0.8449189

 $00{:}26{:}55{.}882 \dashrightarrow 00{:}26{:}59{.}312$ who needs what when so that we can

NOTE Confidence: 0.8449189

 $00{:}26{:}59{.}312 \dashrightarrow 00{:}27{:}01{.}796$ really serve our patients very well.

NOTE Confidence: 0.8449189

 $00{:}27{:}01.800 \dashrightarrow 00{:}27{:}03.888$ So I want to thank you for your

NOTE Confidence: 0.8449189

 $00{:}27{:}03.888 \dashrightarrow 00{:}27{:}06.180$ time and attention and will be

NOTE Confidence: 0.8449189

 $00:27:06.180 \longrightarrow 00:27:07.880$ available for questions later.

NOTE Confidence: 0.8449189

00:27:07.880 --> 00:27:09.570 Thanks, thank you Doctor Holy,

NOTE Confidence: 0.8449189

 $00{:}27{:}09{.}570 \dashrightarrow 00{:}27{:}09{.}910$ that

- NOTE Confidence: 0.8576684
- 00:27:09.910 --> 00:27:11.600 was fantastic. I mean honestly,

 $00:27:11.600 \longrightarrow 00:27:13.812$ the the amount of work that the

NOTE Confidence: 0.8576684

 $00:27:13.812 \longrightarrow 00:27:15.166$ our breast imaging colleagues

NOTE Confidence: 0.8576684

00:27:15.166 --> 00:27:17.511 and yuan in our group and others

NOTE Confidence: 0.8576684

00:27:17.511 -> 00:27:19.709 have done is is truly remarkable.

NOTE Confidence: 0.8576684

00:27:19.710 --> 00:27:22.552 And there's just so much new excitement

NOTE Confidence: 0.8576684

 $00{:}27{:}22.552 \dashrightarrow 00{:}27{:}25.614$ in the pipeline and kind of figuring out

NOTE Confidence: 0.8576684

 $00{:}27{:}25.614 \dashrightarrow 00{:}27{:}28.789$ what the next steps are going to be great.

NOTE Confidence: 0.8576684

00:27:28.790 --> 00:27:32.080 Next, move on to Doctor Knowl
ton to

NOTE Confidence: 0.8576684

 $00{:}27{:}32.080 \dashrightarrow 00{:}27{:}35.925$ discuss some of the recent changes and

NOTE Confidence: 0.8576684

 $00{:}27{:}35{.}925 \dashrightarrow 00{:}27{:}38{.}845$ advances in radiation the rapy and.

NOTE Confidence: 0.8576684

 $00{:}27{:}38.850 \dashrightarrow 00{:}27{:}40.250$ The floor is all yours.

NOTE Confidence: 0.7904694

00:27:46.440 --> 00:27:48.310 Hope you're on mute still.

NOTE Confidence: 0.8589882

 $00:28:18.350 \longrightarrow 00:28:20.403$ So while we're waiting

NOTE Confidence: 0.8589882

 $00:28:20.403 \longrightarrow 00:28:23.769$ for the slides to pop up.

00:28:23.770 --> 00:28:25.385 Regina, what are your thoughts

NOTE Confidence: 0.8589882

 $00{:}28{:}25{.}385 \dashrightarrow 00{:}28{:}27{.}451$ on how to screen an elderly

NOTE Confidence: 0.8589882

 $00:28:27.451 \longrightarrow 00:28:29.386$ woman after an index cancer?

NOTE Confidence: 0.8589882

 $00{:}28{:}29{.}390 \dashrightarrow 00{:}28{:}32{.}117$ For example, an 85 year old with a newly

NOTE Confidence: 0.8589882

 $00{:}28{:}32{.}117 \dashrightarrow 00{:}28{:}34{.}297$ diagnosed breast cancer after treatment,

NOTE Confidence: 0.8589882

 $00:28:34.300 \rightarrow 00:28:36.757$ does she need follow up image in?

NOTE Confidence: 0.8589882

00:28:36.760 --> 00:28:38.860 This is from Doctor Berger. Really

NOTE Confidence: 0.85043895

 $00:28:38.860 \longrightarrow 00:28:39.560$ great question.

NOTE Confidence: 0.85043895

00:28:39.560 --> 00:28:42.010 Yeah so generally women you know around

NOTE Confidence: 0.85043895

 $00:28:42.010 \longrightarrow 00:28:44.477$ 85 or 86 their their life expectancy.

NOTE Confidence: 0.85043895

 $00{:}28{:}44{.}480 \dashrightarrow 00{:}28{:}46{.}496$ Even healthy women is probably around

NOTE Confidence: 0.85043895

00:28:46.496 --> 00:28:49.340 six or seven years where the benefit of

NOTE Confidence: 0.85043895

 $00{:}28{:}49{.}340 \dashrightarrow 00{:}28{:}51{.}500$ early detection probably is not useful.

NOTE Confidence: 0.85043895

 $00:28:51.500 \rightarrow 00:28:54.436$ That said, I think it really depends on.

NOTE Confidence: 0.85043895

 $00:28:54.440 \longrightarrow 00:28:56.396$ On how healthy the patient is,

NOTE Confidence: 0.85043895

 $00:28:56.400 \rightarrow 00:28:58.668$ maybe she still likes having a mammogram

- NOTE Confidence: 0.85043895
- $00:28:58.668 \rightarrow 00:29:00.958$ love these older ladies of her healthy.

 $00{:}29{:}00{.}960 \dashrightarrow 00{:}29{:}03{.}424$ They still want to come in and get

NOTE Confidence: 0.85043895

 $00:29:03.424 \rightarrow 00:29:05.519$ their mammogram maybe every other year.

NOTE Confidence: 0.85043895

00:29:05.520 --> 00:29:07.150 I just wouldn't push it,

NOTE Confidence: 0.85043895

 $00{:}29{:}07{.}150 \dashrightarrow 00{:}29{:}09{.}439$ but there is still some shared decision

NOTE Confidence: 0.83871317

 $00:29:09.440 \longrightarrow 00:29:11.070$ making there got it excellent.

NOTE Confidence: 0.84972835

 $00:29:13.680 \rightarrow 00:29:16.585$ Hopefully you see my slides properly now.

NOTE Confidence: 0.84972835

00:29:16.590 --> 00:29:18.802 Looks great. OK, great, thank you.

NOTE Confidence: 0.84972835

 $00{:}29{:}18.802 \dashrightarrow 00{:}29{:}22.084$ So my title is as you can see is

NOTE Confidence: 0.84972835

 $00:29:22.084 \rightarrow 00:29:23.952$ deescalation of radiation therapy

NOTE Confidence: 0.84972835

 $00{:}29{:}23.952 \dashrightarrow 00{:}29{:}26.960$ for breast cancer for breast cancer.

NOTE Confidence: 0.84972835

00:29:26.960 --> 00:29:28.620 At less is more.

NOTE Confidence: 0.8602074

 $00{:}29{:}31{.}770 \dashrightarrow 00{:}29{:}34{.}713$ OK so I have no conflict of interest to

NOTE Confidence: 0.8602074

 $00{:}29{:}34.713 \dashrightarrow 00{:}29{:}37.667$ report related to this presentation an any.

NOTE Confidence: 0.8602074

 $00{:}29{:}37.670 \dashrightarrow 00{:}29{:}40.478$ I do not unfortunately have as many a we some

 $00:29:40.478 \rightarrow 00:29:42.840$ pictures as our two other presenters.

NOTE Confidence: 0.8602074

00:29:42.840 --> 00:29:45.390 However, any pictures that were used

NOTE Confidence: 0.8602074

 $00{:}29{:}45{.}390 \dashrightarrow 00{:}29{:}48{.}351$ here were taken from sites that allow NOTE Confidence: 0.8602074

 $00:29:48.351 \rightarrow 00:29:51.116$ use of their photos in this setting.

NOTE Confidence: 0.8602074

 $00{:}29{:}51{.}120 \dashrightarrow 00{:}29{:}54{.}016$ So when I after the title was submitted,

NOTE Confidence: 0.8602074

00:29:54.020 --> 00:29:56.924 you know D escalation in the setting of,

NOTE Confidence: 0.8602074

00:29:56.930 --> 00:29:58.745 you know, radiation therapy in

NOTE Confidence: 0.8602074

 $00:29:58.745 \rightarrow 00:30:00.560$ the setting of breast cancer.

NOTE Confidence: 0.8602074

 $00{:}30{:}00{.}560 \dashrightarrow 00{:}30{:}02{.}648$ I actually looked up the word

NOTE Confidence: 0.8602074

 $00{:}30{:}02{.}648 \dashrightarrow 00{:}30{:}05{.}397$ dees calation and I think maybe my title

NOTE Confidence: 0.8602074

 $00{:}30{:}05{.}397 \dashrightarrow 00{:}30{:}07{.}552$ is not grammatically correct because

NOTE Confidence: 0.8602074

00:30:07.552 --> 00:30:09.374 Merriam Webster Dictionary does not

NOTE Confidence: 0.8602074

 $00{:}30{:}09{.}374 \dashrightarrow 00{:}30{:}11.812$ say that this is a noun in anyway

NOTE Confidence: 0.8602074

 $00{:}30{:}11.812 \dashrightarrow 00{:}30{:}14.346$ and I tried hard copy and online.

NOTE Confidence: 0.8602074

 $00:30:14.350 \longrightarrow 00:30:17.954$ It is a will say that it is a verb that

NOTE Confidence: 0.8602074

 $00{:}30{:}17.954 \dashrightarrow 00{:}30{:}21.554$ can mean to limit to decrease in extent.

- NOTE Confidence: 0.8602074
- $00:30:21.560 \rightarrow 00:30:23.905$ Are to decrease in volume or scope.

 $00:30:23.910 \longrightarrow 00:30:26.334$ I was able to find a definition for

NOTE Confidence: 0.8602074

 $00:30:26.334 \rightarrow 00:30:28.598$ the noun in the free dictionary,

NOTE Confidence: 0.8602074

 $00:30:28.600 \rightarrow 00:30:30.610$ which is a reduction in intensity.

NOTE Confidence: 0.8602074

 $00:30:30.610 \longrightarrow 00:30:33.138$ So if we have any people that are

NOTE Confidence: 0.8602074

 $00{:}30{:}33.138 \dashrightarrow 00{:}30{:}35.473$ very much on top of their grammar

NOTE Confidence: 0.8602074

 $00:30:35.473 \rightarrow 00:30:37.979$ and my title may not be correct,

NOTE Confidence: 0.8602074

 $00:30:37.980 \longrightarrow 00:30:41.022$ I will say however that the title is more

NOTE Confidence: 0.8602074

 $00:30:41.022 \dashrightarrow 00:30:43.980$ in the spirit of the Marian Webster.

NOTE Confidence: 0.8602074

 $00{:}30{:}43{.}980 \dashrightarrow 00{:}30{:}47{.}756$ Definition where we are in the modern era,

NOTE Confidence: 0.8602074

 $00:30:47.760 \rightarrow 00:30:50.598$ aiming to limit the radiation limit,

NOTE Confidence: 0.8602074

 $00{:}30{:}50{.}600 \dashrightarrow 00{:}30{:}53{.}234$ the number of fractions limit the

NOTE Confidence: 0.8602074

 $00{:}30{:}53{.}234 \dashrightarrow 00{:}30{:}56{.}093$ dose that they treatment volumes and

NOTE Confidence: 0.8602074

 $00{:}30{:}56.093 \dashrightarrow 00{:}30{:}58.638$ also omit radiation when necessary.

NOTE Confidence: 0.8602074

 $00:30:58.640 \longrightarrow 00:31:01.080$ Really the free dictionary definition

 $00:31:01.080 \dashrightarrow 00:31:03.520$ doesn't make sense because we're

NOTE Confidence: 0.8602074

 $00{:}31{:}03.598 \dashrightarrow 00{:}31{:}05.823$ not really reducing the intensity

NOTE Confidence: 0.8602074

 $00:31:05.823 \longrightarrow 00:31:07.158$ of the radiation.

NOTE Confidence: 0.8602074

 $00{:}31{:}07{.}160 \dashrightarrow 00{:}31{:}10.616$ What we do when we are changing the

NOTE Confidence: 0.8602074

 $00{:}31{:}10.616 \dashrightarrow 00{:}31{:}12.970$ fractionation to a shorter fractionation

NOTE Confidence: 0.8602074

 $00:31:12.970 \rightarrow 00:31:17.150$ is we are using newer schemes of radiation.

NOTE Confidence: 0.8602074

 $00{:}31{:}17{.}150 \dashrightarrow 00{:}31{:}18{.}770$ To deliver the same biological

NOTE Confidence: 0.8602074

00:31:18.770 $\operatorname{-->}$ 00:31:21.628 effective dose so I do not feel that

NOTE Confidence: 0.8602074

00:31:21.628 --> 00:31:23.583 the free dictionary definition really

NOTE Confidence: 0.8602074

00:31:23.583 --> 00:31:25.839 beats what's happening in radiation.

NOTE Confidence: 0.8602074

 $00{:}31{:}25{.}840 \dashrightarrow 00{:}31{:}29{.}050$ But the Marian Webster one does.

NOTE Confidence: 0.8602074

 $00:31:29.050 \dashrightarrow 00:31:32.610$ So here we see, this is how we are D. NOTE Confidence: 0.8602074

00:31:32.610 --> 00:31:34.494 Escalating as I had mentioned with

NOTE Confidence: 0.8602074

 $00:31:34.494 \dashrightarrow 00:31:36.479$ the decrease in number of fractions

NOTE Confidence: 0.8602074

 $00:31:36.479 \dashrightarrow 00:31:38.495$ decrease in volume of tissue treated NOTE Confidence: 0.8602074

00:31:38.495 - 00:31:40.547 an omission of radiation therapy

- NOTE Confidence: 0.8602074
- 00:31:40.547 -> 00:31:41.870 for appropriate candidates.
- NOTE Confidence: 0.8602074
- $00{:}31{:}41.870 \dashrightarrow 00{:}31{:}43.907$ And this really does fit the less
- NOTE Confidence: 0.8602074
- $00:31:43.907 \dashrightarrow 00:31:46.528$ is more if we have less radiation
- NOTE Confidence: 0.8602074
- $00:31:46.528 \rightarrow 00:31:48.623$ we will have increased compliance.
- NOTE Confidence: 0.8602074
- $00:31:48.630 \dashrightarrow 00:31:50.838$ People will have if the fractionation
- NOTE Confidence: 0.8602074
- 00:31:50.838 --> 00:31:52.900 scheme is more convenient for them,
- NOTE Confidence: 0.8602074
- $00:31:52.900 \rightarrow 00:31:54.680$ whether they have traveled issues
- NOTE Confidence: 0.8602074
- $00:31:54.680 \longrightarrow 00:31:55.748$ or working issues.
- NOTE Confidence: 0.8602074
- $00{:}31{:}55{.}750 \dashrightarrow 00{:}31{:}58{.}042$ We're going to have more patients
- NOTE Confidence: 0.8602074
- $00:31:58.042 \longrightarrow 00:32:01.150$ that will be able to get it with less.
- NOTE Confidence: 0.8602074
- $00:32:01.150 \longrightarrow 00:32:03.285$ Stress there will be increased
- NOTE Confidence: 0.8602074
- $00:32:03.285 \rightarrow 00:32:05.420$ acceptance of the treatment course
- NOTE Confidence: 0.8602074
- $00:32:05.495 \dashrightarrow 00:32:07.625$ increased time for patients to work NOTE Confidence: 0.8602074
- $00{:}32{:}07.625 \dashrightarrow 00{:}32{:}10.280$ or to pursue their hobbies or take
- NOTE Confidence: 0.8602074
- $00{:}32{:}10{.}280 \dashrightarrow 00{:}32{:}12{.}608$ care of their families and increase
- NOTE Confidence: 0.8602074

- $00:32:12.608 \longrightarrow 00:32:13.790$ quality of life.
- NOTE Confidence: 0.85277045
- $00:32:15.860 \longrightarrow 00:32:17.021$ So moderate fractionation
- NOTE Confidence: 0.85277045
- $00:32:17.021 \longrightarrow 00:32:18.956$ is now really old news.
- NOTE Confidence: 0.85277045
- $00{:}32{:}18{.}960 \dashrightarrow 00{:}32{:}21{.}676$ At this point, we've all seen it.
- NOTE Confidence: 0.85277045
- $00:32:21.680 \longrightarrow 00:32:24.008$ This is what it is now.
- NOTE Confidence: 0.85277045
- 00:32:24.010 --> 00:32:25.950 Truly in the United States,
- NOTE Confidence: 0.85277045
- $00:32:25.950 \rightarrow 00:32:28.098$ the new standard of radiation therapy
- NOTE Confidence: 0.85277045
- $00{:}32{:}28.098 \dashrightarrow 00{:}32{:}30.426$ for the intact breast standard or
- NOTE Confidence: 0.85277045
- $00{:}32{:}30{.}426 \dashrightarrow 00{:}32{:}32{.}928$ conventional radiation to the whole breast.
- NOTE Confidence: 0.85277045
- $00:32:32.930 \longrightarrow 00:32:34.870$ It was for several decades,
- NOTE Confidence: 0.85277045
- 00:32:34.870 --> 00:32:36.810 50 Gray and 25 fractions,
- NOTE Confidence: 0.85277045
- $00:32:36.810 \longrightarrow 00:32:38.362$ meaning that the patient
- NOTE Confidence: 0.85277045
- $00:32:38.362 \longrightarrow 00:32:40.690$ needed to come for five weeks.
- NOTE Confidence: 0.85277045
- 00:32:40.690 00:32:43.735 And then there would be an optional
- NOTE Confidence: 0.85277045
- $00{:}32{:}43.735 \dashrightarrow 00{:}32{:}46.203$ tumor bed boost of an additional
- NOTE Confidence: 0.85277045
- $00:32:46.203 \rightarrow 00:32:48.970$ 10 to 16 Gray and five to 8.

 $00:32:48.970 \longrightarrow 00:32:50.695$ Actions which many women have

NOTE Confidence: 0.85277045

 $00:32:50.695 \rightarrow 00:32:52.075$ received over the years,

NOTE Confidence: 0.85277045

00:32:52.080 --> 00:32:54.551 so that's six to six and a

NOTE Confidence: 0.85277045

 $00:32:54.551 \longrightarrow 00:32:57.110$ half weeks of daily treatment.

NOTE Confidence: 0.85277045

 $00{:}32{:}57{.}110 \dashrightarrow 00{:}32{:}58{.}730$ Moderate fractionation for whole

NOTE Confidence: 0.85277045

 $00:32:58.730 \longrightarrow 00:32:59.945$ breast irradiation therapy,

NOTE Confidence: 0.85277045

 $00{:}32{:}59{.}950 \dashrightarrow 00{:}33{:}02{.}662$ which I'd like to stress in at this

NOTE Confidence: 0.85277045

 $00:33:02.662 \rightarrow 00:33:05.639$ time is without including the nodes.

NOTE Confidence: 0.85277045

00:33:05.640 --> 00:33:08.377 This is the new standard where we

NOTE Confidence: 0.85277045

00:33:08.377 -> 00:33:10.857 where the whole breast is being

NOTE Confidence: 0.85277045

00:33:10.857 --> 00:33:13.706 treated in 40 grey and 15 fractions

NOTE Confidence: 0.85277045

 $00{:}33{:}13.792 \dashrightarrow 00{:}33{:}16.186$ or 42.5 Gray and 16 fractions.

NOTE Confidence: 0.85277045

 $00:33:16.190 \longrightarrow 00:33:18.174$ That's really institutional preference.

NOTE Confidence: 0.85277045

 $00{:}33{:}18{.}174 \dashrightarrow 00{:}33{:}21{.}150$ Our institution at Yale we use

NOTE Confidence: 0.85277045

 $00{:}33{:}21{.}222 \dashrightarrow 00{:}33{:}23{.}504$ the 40 grey in the 15 fractions

 $00:33:23.504 \rightarrow 00:33:25.119$ from the start B trial,

NOTE Confidence: 0.85277045

 $00{:}33{:}25{.}120 \dashrightarrow 00{:}33{:}27{.}260$ and for these patients there's

NOTE Confidence: 0.85277045

 $00:33:27.260 \longrightarrow 00:33:29.863$ an optional tumor bed boost 10

NOTE Confidence: 0.85277045

00:33:29.863 - 00:33:31.399 Gray and for fractions.

NOTE Confidence: 0.85277045

 $00:33:31.400 \dashrightarrow 00:33:33.986$ So we're taking the standard or

NOTE Confidence: 0.85277045

 $00:33:33.986 \dashrightarrow 00:33:35.710$ conventional fractionation of five NOTE Confidence: 0.85277045

00:33:35.782 --> 00:33:37.806 to six to six and a half weeks,

NOTE Confidence: 0.85277045

 $00{:}33{:}37{.}810 \dashrightarrow 00{:}33{:}39{.}778$ and now it's become three to

NOTE Confidence: 0.85277045

 $00{:}33{:}39{.}778 \dashrightarrow 00{:}33{:}41{.}720$ four weeks for the patient.

NOTE Confidence: 0.82770544

 $00{:}33{:}43.790 \dashrightarrow 00{:}33{:}45.830$ And of course there's some

NOTE Confidence: 0.82770544

 $00:33:45.830 \longrightarrow 00:33:48.670$ data to back all of this up.

NOTE Confidence: 0.82770544

 $00:33:48.670 \longrightarrow 00:33:50.914$ These are the three largest trials

NOTE Confidence: 0.82770544

 $00:33:50.914 \rightarrow 00:33:53.181$ that have the longest follow-up that

NOTE Confidence: 0.82770544

00:33:53.181 - > 00:33:55.617 are used to backup or support the

NOTE Confidence: 0.82770544

 $00{:}33{:}55{.}617 \dashrightarrow 00{:}33{:}58{.}039$ use of moderate hypofractionation.

NOTE Confidence: 0.82770544

 $00:33:58.040 \rightarrow 00:34:02.116$ All three trials to start a the start B, and.

 $00:34:02.116 \longrightarrow 00:34:05.028$ There's no great name for this one.

NOTE Confidence: 0.82770544

00:34:05.030 --> 00:34:06.700 The Canadian Ontario Wayland trial.

NOTE Confidence: 0.82770544

00:34:06.700 --> 00:34:08.710 Depending on who you're talking about.

NOTE Confidence: 0.82770544

 $00{:}34{:}08{.}710 \dashrightarrow 00{:}34{:}10{.}042$ I learned from this.

NOTE Confidence: 0.82770544

 $00{:}34{:}10{.}042 \dashrightarrow 00{:}34{:}12{.}755$ I need to have make sure that any

NOTE Confidence: 0.82770544

00:34:12.755 --> 00:34:15.750 trials I have have a have a catchy name,

NOTE Confidence: 0.82770544

 $00{:}34{:}15.750 \dashrightarrow 00{:}34{:}18.062$ but the start a trial and start be

NOTE Confidence: 0.82770544

 $00{:}34{:}18.062 \dashrightarrow 00{:}34{:}20.551$ were done in England and the obviously

NOTE Confidence: 0.82770544

00:34:20.551 --> 00:34:23.120 the Canadian trial was done in Canada.

NOTE Confidence: 0.82770544

 $00:34:23.120 \longrightarrow 00:34:24.740$ They all compared their moderately

NOTE Confidence: 0.82770544

 $00:34:24.740 \longrightarrow 00:34:26.036$ hypofractionated regimens in whole

NOTE Confidence: 0.82770544

 $00{:}34{:}26{.}036$ --> $00{:}34{:}28{.}112$ breast radiation therapy to the standard

NOTE Confidence: 0.82770544

 $00:34:28.112 \longrightarrow 00:34:29.476$ conventional fractionation of welding.

NOTE Confidence: 0.82770544

 $00{:}34{:}29{.}480$ --> $00{:}34{:}32{.}208$ I guess we're going to call that conventional NOTE Confidence: 0.82770544

00:34:32.208 --> 00:34:34.509 'cause modern hypo frack is now standard,

 $00:34:34.510 \longrightarrow 00:34:37.382$ but 50 Gray in 25 fractions was the

NOTE Confidence: 0.82770544

 $00{:}34{:}37{.}382 \dashrightarrow 00{:}34{:}40{.}096$ standard arm and all Childs found

NOTE Confidence: 0.82770544

 $00{:}34{:}40.096 \dashrightarrow 00{:}34{:}42.491$ no significant difference in local

NOTE Confidence: 0.82770544

 $00{:}34{:}42{.}491 \dashrightarrow 00{:}34{:}44{.}622$ regional recurrence and overall

NOTE Confidence: 0.82770544

 $00:34:44.622 \longrightarrow 00:34:46.718$ survival for the patients.

NOTE Confidence: 0.82770544

 $00{:}34{:}46{.}720 \dashrightarrow 00{:}34{:}50{.}149$ At 10 years they did all use a slightly

NOTE Confidence: 0.82770544

 $00{:}34{:}50{.}149 \dashrightarrow 00{:}34{:}52{.}950$ different fractionation scheme to start.

NOTE Confidence: 0.82770544

00:34:52.950 --> 00:34:53.836 A trial,

NOTE Confidence: 0.82770544

 $00{:}34{:}53{.}836 \dashrightarrow 00{:}34{:}56{.}937$ had had patients receiving 41.6 Gray or

NOTE Confidence: 0.82770544

 $00{:}34{:}56{.}937 \dashrightarrow 00{:}35{:}00{.}520$ 39 Gray and 13 fractions over 5 weeks,

NOTE Confidence: 0.82770544

 $00:35:00.520 \rightarrow 00:35:03.628$ which is approximately 3 fractions per week.

NOTE Confidence: 0.82770544

 $00:35:03.630 \longrightarrow 00:35:06.100$ It's a little bit of.

NOTE Confidence: 0.82770544

 $00:35:06.100 \rightarrow 00:35:08.010$ More challenging regimen to schedule,

NOTE Confidence: 0.82770544

 $00{:}35{:}08.010 \dashrightarrow 00{:}35{:}09.920$ so most institutions are not

NOTE Confidence: 0.82770544

 $00:35:09.920 \longrightarrow 00:35:11.448$ really using this regiment,

NOTE Confidence: 0.82770544

 $00:35:11.450 \rightarrow 00:35:14.117$ but it is interesting that they did.

 $00:35:14.120 \longrightarrow 00:35:16.025$ Note that a significant significant

NOTE Confidence: 0.82770544

 $00{:}35{:}16.025 \dashrightarrow 00{:}35{:}18.426$ decrease in the number of patients

NOTE Confidence: 0.82770544

 $00{:}35{:}18.426$ --> $00{:}35{:}20.551$ with breast inducation adima intellect

NOTE Confidence: 0.82770544

00:35:20.551 --> 00:35:23.280 until inject ages in the 39 Gray

NOTE Confidence: 0.82770544

 $00:35:23.280 \dashrightarrow 00:35:25.200$ arm compared to the standard frac.

NOTE Confidence: 0.82770544

 $00:35:25.200 \longrightarrow 00:35:28.091$ The 41.6 Gray arm did not really

NOTE Confidence: 0.82770544

 $00:35:28.091 \rightarrow 00:35:31.415$ do any better as far as then the 50

NOTE Confidence: 0.82770544

 $00:35:31.415 \dashrightarrow 00:35:34.214$ Gray arm as far as acute effects

NOTE Confidence: 0.82770544

 $00{:}35{:}34{.}214 \dashrightarrow 00{:}35{:}36{.}968$ an late term effects as that.

NOTE Confidence: 0.82770544

00:35:36.970 --> 00:35:39.754 Start B, which is what Yale is using.

NOTE Confidence: 0.82770544

 $00:35:39.760 \longrightarrow 00:35:42.210$ That's the 50 Gray and 15 fractions.

NOTE Confidence: 0.82770544

 $00:35:42.210 \dashrightarrow 00:35:44.646$ So once a day Monday through Friday,

NOTE Confidence: 0.82770544

 $00{:}35{:}44.650 \dashrightarrow 00{:}35{:}45.694$ that's three weeks.

NOTE Confidence: 0.82770544

 $00:35:45.694 \rightarrow 00:35:47.434$ So once again their outcomes,

NOTE Confidence: 0.82770544

00:35:47.440 --> 00:35:48.976 local region of occurrence,

 $00:35:48.976 \longrightarrow 00:35:50.896$ overall survival at 10 years

NOTE Confidence: 0.82770544

 $00:35:50.896 \rightarrow 00:35:53.020$ was the same with the 50 Gray,

NOTE Confidence: 0.82770544

 $00{:}35{:}53{.}020 \dashrightarrow 00{:}35{:}54{.}770$ and there was a significant

NOTE Confidence: 0.82770544

00:35:54.770 --> 00:35:56.170 decrease in breast shrinkage,

NOTE Confidence: 0.82770544

 $00{:}35{:}56{.}170 \dashrightarrow 00{:}35{:}57{.}806$ breast edema and telangiectasia.

NOTE Confidence: 0.82770544

 $00{:}35{:}57{.}806 \dashrightarrow 00{:}36{:}01{.}119$ But age is in the 40 great arm.

NOTE Confidence: 0.82770544

 $00:36:01.120 \dashrightarrow 00:36:02.970$ The Canadian trial was interesting.

NOTE Confidence: 0.82770544

 $00:36:02.970 \longrightarrow 00:36:04.442$ That is slightly different.

NOTE Confidence: 0.82770544

 $00{:}36{:}04{.}442 \dashrightarrow 00{:}36{:}05{.}914$ 42.5 in 16 fractions,

NOTE Confidence: 0.82770544

 $00:36:05.920 \longrightarrow 00:36:10.169$ so that's three weeks and a day.

NOTE Confidence: 0.82770544

 $00{:}36{:}10.170 \dashrightarrow 00{:}36{:}11.602$ Subgroup analysis it's worthy

NOTE Confidence: 0.82770544

 $00:36:11.602 \longrightarrow 00:36:13.750$ of note that they did notice

NOTE Confidence: 0.82770544

 $00{:}36{:}13.816 \dashrightarrow 00{:}36{:}16.040$ increased local regional recurrence.

NOTE Confidence: 0.82770544

 $00:36:16.040 \longrightarrow 00:36:17.716$ In high grade tumors,

NOTE Confidence: 0.82770544

 $00:36:17.716 \longrightarrow 00:36:20.713$ with the Hypo frac with 15.6% of

NOTE Confidence: 0.82770544

 $00:36:20.713 \rightarrow 00:36:23.611$ patients who received with with high

- NOTE Confidence: 0.82770544
- 00:36:23.611 -> 00:36:26.774 grade tumors that had hypo fact

 $00:36:26.774 \longrightarrow 00:36:29.484$ experience in local regional recurrence

NOTE Confidence: 0.82770544

 $00:36:29.484 \longrightarrow 00:36:32.269$ versus 4.7 in the 50 Gray arm.

NOTE Confidence: 0.82770544

00:36:32.270 --> 00:36:32.620 However,

NOTE Confidence: 0.82770544

 $00:36:32.620 \dashrightarrow 00:36:35.420$ I will say that start B did look

NOTE Confidence: 0.82770544

 $00:36:35.420 \longrightarrow 00:36:38.742$ at that and did not find any any

NOTE Confidence: 0.82770544

 $00{:}36{:}38{.}742 \dashrightarrow 00{:}36{:}40{.}802$ difference in outcomes for the

NOTE Confidence: 0.82770544

 $00:36:40.802 \longrightarrow 00:36:41.900$ Grade 3 tumors,

NOTE Confidence: 0.82770544

 $00{:}36{:}41{.}900 \dashrightarrow 00{:}36{:}44{.}612$ so we tend to still treat those patients

NOTE Confidence: 0.82770544

 $00:36:44.612 \rightarrow 00:36:45.807$ with moderate hypofractionation

NOTE Confidence: 0.82770544

00:36:45.807 -> 00:36:48.057 and in the Canadian trial,

NOTE Confidence: 0.82770544

 $00{:}36{:}48.060 \dashrightarrow 00{:}36{:}50.550$ there was no significant difference

NOTE Confidence: 0.82770544

 $00:36:50.550 \rightarrow 00:36:53.730$ in acute toxicity or cosmetic outcome.

NOTE Confidence: 0.82770544

 $00{:}36{:}53{.}730 \dashrightarrow 00{:}36{:}55{.}767$ So may be we can tighten things up

NOTE Confidence: 0.82770544

 $00{:}36{:}55{.}767 \dashrightarrow 00{:}36{:}58{.}411$ a little bit more now and the newer

 $00:36:58.411 \longrightarrow 00:37:00.631$ regimens that are being brought out

NOTE Confidence: 0.82770544

 $00:37:00.631 \rightarrow 00:37:03.289$ there are now called Ultra Hypofractionation.

NOTE Confidence: 0.8578268

 $00:37:03.290 \longrightarrow 00:37:05.714$ And these once again are in for the

NOTE Confidence: 0.8578268

 $00:37:05.714 \rightarrow 00:37:08.240$ setting of whole breast radiation only.

NOTE Confidence: 0.8578268

 $00:37:08.240 \longrightarrow 00:37:10.982$ We are not yet talking about

NOTE Confidence: 0.8578268

 $00:37:10.982 \longrightarrow 00:37:12.810$ anything with the nodes.

NOTE Confidence: 0.8578268

 $00:37:12.810 \longrightarrow 00:37:14.690$ And we have two regiments,

NOTE Confidence: 0.8578268

 $00:37:14.690 \longrightarrow 00:37:16.565$ the fast regimen and the

NOTE Confidence: 0.8578268

 $00{:}37{:}16.565 \dashrightarrow 00{:}37{:}17.690$ Fast forward regimen.

NOTE Confidence: 0.8578268

 $00:37:17.690 \rightarrow 00:37:20.196$ Yale has adopted the FAST regimen which

NOTE Confidence: 0.8578268

 $00:37:20.196 \rightarrow 00:37:22.560$ we've been using with great success.

NOTE Confidence: 0.8578268

 $00:37:22.560 \longrightarrow 00:37:24.810$ We've been very happy with it.

NOTE Confidence: 0.8578268

 $00:37:24.810 \rightarrow 00:37:28.560$ We started using it in the fall of last year,

NOTE Confidence: 0.8578268

 $00:37:28.560 \longrightarrow 00:37:31.030$ so in the fast trial.

NOTE Confidence: 0.8578268

 $00{:}37{:}31{.}030 \dashrightarrow 00{:}37{:}34{.}180$ Patients were randomized to one fraction

NOTE Confidence: 0.8578268

 $00:37:34.180 \longrightarrow 00:37:37.626$ of radiation per week to a total of

- NOTE Confidence: 0.8578268
- 00:37:37.626 --> 00:37:40.530 28.5 Gray or to a total of 30 Gray,
- NOTE Confidence: 0.8578268
- $00{:}37{:}40{.}530 \dashrightarrow 00{:}37{:}43{.}394$ so that's 5.7 or 6 Gray once a
- NOTE Confidence: 0.8578268
- $00{:}37{:}43.394 \dashrightarrow 00{:}37{:}45.591$ week versus the more traditional
- NOTE Confidence: 0.8578268
- $00:37:45.591 \longrightarrow 00:37:48.375$ 50 Gray in the 25 fractions.
- NOTE Confidence: 0.8578268
- $00{:}37{:}48{.}380 \dashrightarrow 00{:}37{:}50{.}440$ This fast trial is randomized.
- NOTE Confidence: 0.8578268
- $00:37:50.440 \longrightarrow 00:37:51.676$ It's well done,
- NOTE Confidence: 0.8578268
- $00:37:51.676 \longrightarrow 00:37:54.560$ and it has 10 years of follow
- NOTE Confidence: 0.8578268
- $00:37:54.660 \longrightarrow 00:37:56.220$ up at this point,
- NOTE Confidence: 0.8578268
- $00:37:56.220 \rightarrow 00:37:58.968$ and there was no significant difference
- NOTE Confidence: 0.8578268
- $00:37:58.968 \longrightarrow 00:38:02.541$ in normal tissue affects in the 28.5 by
- NOTE Confidence: 0.8578268
- $00{:}38{:}02{.}541 \dashrightarrow 00{:}38{:}05{.}031$ ARM compared to the standard fractionation.
- NOTE Confidence: 0.8578268
- $00{:}38{:}05{.}040 \dashrightarrow 00{:}38{:}07{.}168$ And that's why I put that in.
- NOTE Confidence: 0.8578268
- $00{:}38{:}07{.}170 \dashrightarrow 00{:}38{:}09{.}996$ Read up there because that is really the arm
- NOTE Confidence: 0.8578268
- $00:38:09.996 \longrightarrow 00:38:12.932$ that we are treating on in the 28.5 Gray arm,
- NOTE Confidence: 0.8578268
- $00:38:12.940 \longrightarrow 00:38:14.879$ because the 30 Gray arm did have
- NOTE Confidence: 0.8578268

- $00:38:14.879 \rightarrow 00:38:16.589$ increase in normal tissue effects,
- NOTE Confidence: 0.8578268
- $00{:}38{:}16{.}590 \dashrightarrow 00{:}38{:}18{.}760$ so we're not using that.
- NOTE Confidence: 0.8578268
- $00:38:18.760 \rightarrow 00:38:21.100$ For all three dosing fractionation schemes,
- NOTE Confidence: 0.8578268
- 00:38:21.100 --> 00:38:21.490 however,
- NOTE Confidence: 0.8578268
- 00:38:21.490 --> 00:38:22.660 local regional recurrence,
- NOTE Confidence: 0.8578268
- $00:38:22.660 \longrightarrow 00:38:23.440$ distant recurrence,
- NOTE Confidence: 0.8578268
- $00:38:23.440 \rightarrow 00:38:25.390$ and overall survival were equivalent,
- NOTE Confidence: 0.8578268
- $00:38:25.390 \longrightarrow 00:38:27.730$ and this regimen has made it
- NOTE Confidence: 0.8578268
- $00{:}38{:}27.730 \dashrightarrow 00{:}38{:}29.290$ into the national guidelines.
- NOTE Confidence: 0.8578268
- $00:38:29.290 \rightarrow 00:38:31.258$ Now the NCC N guidelines saying
- NOTE Confidence: 0.8578268
- $00:38:31.258 \longrightarrow 00:38:33.462$ that it may be considered for
- NOTE Confidence: 0.8578268
- $00:38:33.462 \longrightarrow 00:38:35.904$ patients greater than 50 years of
- NOTE Confidence: 0.8578268
- $00:38:35.904 \rightarrow 00:38:38.648$ age with early stage breast cancer,
- NOTE Confidence: 0.8578268
- $00:38:38.650 \longrightarrow 00:38:41.146$ which they have defined as as
- NOTE Confidence: 0.8578268
- 00:38:41.146 --> 00:38:44.317 insight to T1T 2AN OI kind of put
- NOTE Confidence: 0.8578268
- $00:38:44.317 \rightarrow 00:38:47.229$ in that who do not require a boost,

- NOTE Confidence: 0.8578268
- $00:38:47.230 \rightarrow 00:38:50.446$ they had a few sentences about how boosted.

 $00{:}38{:}50{.}450 \dashrightarrow 00{:}38{:}52{.}090$ Difficult in this setting and

NOTE Confidence: 0.8578268

00:38:52.090 - 00:38:53.074 hasn't been established,

NOTE Confidence: 0.8578268

 $00:38:53.080 \longrightarrow 00:38:54.725$ but that's really how we

NOTE Confidence: 0.8578268

00:38:54.725 --> 00:38:56.370 are approaching it at Yale.

NOTE Confidence: 0.8578268

 $00{:}38{:}56{.}370 \dashrightarrow 00{:}38{:}58{.}930$ If we have a patient with early stage

NOTE Confidence: 0.8578268

00:38:58.930 - 00:39:01.306 cancer who does not require a boost,

NOTE Confidence: 0.8578268

 $00{:}39{:}01{.}310 \dashrightarrow 00{:}39{:}03{.}634$ and we're not quite ready for patients

NOTE Confidence: 0.8578268

 $00:39:03.634 \longrightarrow 00:39:06.224$ as young as 50 with just such a

NOTE Confidence: 0.8578268

00:39:06.224 --> 00:39:08.220 short term follow-up of 10 years,

NOTE Confidence: 0.8578268

 $00{:}39{:}08{.}220 \dashrightarrow 00{:}39{:}10{.}710$ so we are tending to lean

NOTE Confidence: 0.8578268

 $00{:}39{:}10{.}710 \dashrightarrow 00{:}39{:}12{.}880$ towards patients 65 and over.

NOTE Confidence: 0.8578268

 $00{:}39{:}12{.}880 \dashrightarrow 00{:}39{:}15{.}638$ Although if someone did have a a

NOTE Confidence: 0.8578268

 $00{:}39{:}15.638 \dashrightarrow 00{:}39{:}17.749$ needed transportation need or something

NOTE Confidence: 0.8578268

 $00:39:17.749 \longrightarrow 00:39:19.894$ that still fit this requirement,

 $00:39:19.900 \longrightarrow 00:39:22.378$ we would be open for that.

NOTE Confidence: 0.8578268

 $00:39:22.380 \longrightarrow 00:39:24.440$ The Fast forward has not.

NOTE Confidence: 0.8578268

 $00:39:24.440 \longrightarrow 00:39:27.478$ It is not yet widely adopted because

NOTE Confidence: 0.8578268

 $00{:}39{:}27{.}478 \dashrightarrow 00{:}39{:}30{.}996$ the data is only going out for five

NOTE Confidence: 0.8578268

 $00{:}39{:}30{.}996 \dashrightarrow 00{:}39{:}33{.}934$ years at this point and that is

NOTE Confidence: 0.8578268

 $00{:}39{:}33{.}934 \dashrightarrow 00{:}39{:}36{.}822$ looking at 26 or 27 Gray in five

NOTE Confidence: 0.8578268

00:39:36.830 --> 00:39:38.900 fractions just Monday through Friday.

NOTE Confidence: 0.8578268

00:39:38.900 --> 00:39:41.258 You're done in a week versus

NOTE Confidence: 0.8578268

 $00{:}39{:}41.258 \dashrightarrow 00{:}39{:}43.920$ the what's now the more modern.

NOTE Confidence: 0.8578268

00:39:43.920 --> 00:39:44.302 Standard,

NOTE Confidence: 0.8578268

 $00{:}39{:}44{.}302 \dashrightarrow 00{:}39{:}46{.}594$ then the modern standard hypo fractionation,

NOTE Confidence: 0.8578268

00:39:46.600 --> 00:39:48.898 40 Gray, and in 15 fractions.

NOTE Confidence: 0.8578268

 $00:39:48.900 \rightarrow 00:39:51.198$ The five year data is promising.

NOTE Confidence: 0.8578268

00:39:51.200 --> 00:39:52.728 It's showing non inferiority

NOTE Confidence: 0.8578268

 $00{:}39{:}52{.}728 \dashrightarrow 00{:}39{:}53{.}874$ and local control.

NOTE Confidence: 0.8578268

 $00:39:53.880 \dashrightarrow 00:39:55.815$ There are increased normal tissue

- NOTE Confidence: 0.8578268
- 00:39:55.815 --> 00:39:58.090 affects with the 27 Gray arm.

00:39:58.090 --> 00:40:00.520 So overtime I think we're going

NOTE Confidence: 0.8578268

 $00:40:00.520 \rightarrow 00:40:03.268$ to be very interesting to see what

NOTE Confidence: 0.8578268

 $00:40:03.268 \rightarrow 00:40:05.368$ happens with that 26 Gray arm.

NOTE Confidence: 0.8578268

00:40:05.370 --> 00:40:07.668 And if we get more data,

NOTE Confidence: 0.8578268

 $00{:}40{:}07.670 \dashrightarrow 00{:}40{:}10.344$ more longer term data under our belt,

NOTE Confidence: 0.8578268

 $00:40:10.350 \longrightarrow 00:40:12.335$ that may be something that

NOTE Confidence: 0.8578268

 $00:40:12.335 \longrightarrow 00:40:13.923$ we will be adopting.

NOTE Confidence: 0.8578268

00:40:13.930 --> 00:40:15.136 In the future,

NOTE Confidence: 0.8578268

 $00:40:15.136 \longrightarrow 00:40:17.548$ that would certainly be very convenient.

NOTE Confidence: 0.8369247

 $00{:}40{:}20.380 \dashrightarrow 00{:}40{:}23.425$ So, so far we've only talked about

NOTE Confidence: 0.8369247

 $00{:}40{:}23{.}425 \dashrightarrow 00{:}40{:}25{.}595$ using the HYPOFRACTIONATION in settings

NOTE Confidence: 0.8369247

 $00{:}40{:}25.595 \dashrightarrow 00{:}40{:}28.374$ where just the breast is being treated.

NOTE Confidence: 0.8369247

 $00:40:28.380 \longrightarrow 00:40:30.906$ What about in the setting of

NOTE Confidence: 0.8369247

 $00:40:30.906 \longrightarrow 00:40:32.590$ regional nodal or radiation,

 $00:40:32.590 \rightarrow 00:40:34.690$ or post master radiation therapy?

NOTE Confidence: 0.8369247

 $00:40:34.690 \rightarrow 00:40:37.742$ There is a growing body of maturing

NOTE Confidence: 0.8369247

 $00{:}40{:}37.742 \dashrightarrow 00{:}40{:}40{.}201$ data and accruing data in this

NOTE Confidence: 0.8369247

 $00{:}40{:}40{.}201 \dashrightarrow 00{:}40{:}43{.}234$ setting that we may see in the future

NOTE Confidence: 0.8369247

 $00:40:43.234 \longrightarrow 00:40:46.054$ that we are more widely adopting.

NOTE Confidence: 0.8369247

 $00:40:46.060 \longrightarrow 00:40:47.744$ The hypo fractionation for

NOTE Confidence: 0.8369247

 $00:40:47.744 \longrightarrow 00:40:49.428$ these patients as well.

NOTE Confidence: 0.8369247

 $00:40:49.430 \longrightarrow 00:40:51.525$ One trial that's ongoing right

NOTE Confidence: 0.8369247

 $00{:}40{:}51{.}525 \dashrightarrow 00{:}40{:}54{.}210$ now is the RT charm trial.

NOTE Confidence: 0.8369247

00:40:54.210 --> 00:40:56.860 And it's looking at moderately

NOTE Confidence: 0.8369247

 $00:40:56.860 \longrightarrow 00:40:58.450$ hypofractionated post mastectomy

NOTE Confidence: 0.8369247

 $00{:}40{:}58{.}450 \dashrightarrow 00{:}41{:}01{.}016$ radiation the rapy for patients who've

NOTE Confidence: 0.8369247

00:41:01.016 --> 00:41:02.928 had breast reconstruction comparing

NOTE Confidence: 0.8369247

00:41:02.928 --> 00:41:06.474 with the standard 50 Gray and patients

NOTE Confidence: 0.8369247

 $00{:}41{:}06{.}474 \dashrightarrow 00{:}41{:}08{.}518$ can have autologous reconstruction

NOTE Confidence: 0.8369247

 $00:41:08.518 \rightarrow 00:41:10.217$ implant reconstruction immediate

- NOTE Confidence: 0.8369247
- $00:41:10.217 \longrightarrow 00:41:14.956$ or delayed to be on this trial.
- NOTE Confidence: 0.8369247
- 00:41:14.960 --> 00:41:18.152 The fabric trial that is open at
- NOTE Confidence: 0.8369247
- $00{:}41{:}18{.}152 \dashrightarrow 00{:}41{:}21{.}858$ Yale Dr Mina Moran is RPI for that.
- NOTE Confidence: 0.8369247
- $00:41:21.860 \longrightarrow 00:41:23.990$ That's the study of radiation
- NOTE Confidence: 0.8369247
- $00:41:23.990 \longrightarrow 00:41:25.694$ fractionation on patient outcomes
- NOTE Confidence: 0.8369247
- 00:41:25.694 --> 00:41:27.199 after breast reconstruction
- NOTE Confidence: 0.8369247
- $00:41:27.199 \longrightarrow 00:41:29.219$ for invasive breast cancer,
- NOTE Confidence: 0.8369247
- $00{:}41{:}29{.}220 \dashrightarrow 00{:}41{:}31{.}520$ and this is randomized as
- NOTE Confidence: 0.8369247
- $00:41:31.520 \longrightarrow 00:41:32.900$ well to hypofractionation.
- NOTE Confidence: 0.8369247
- 00:41:32.900 --> 00:41:33.306 Plus,
- NOTE Confidence: 0.8369247
- $00{:}41{:}33{.}306 \dashrightarrow 00{:}41{:}35{.}742$ the more standard 50 Gray and
- NOTE Confidence: 0.8369247
- $00:41:35.742 \longrightarrow 00:41:38.090$ patience for this would have
- NOTE Confidence: 0.8369247
- $00:41:38.090 \rightarrow 00:41:40.715$ permanent implant or tissue expander.
- NOTE Confidence: 0.8369247
- $00:41:40.720 \dashrightarrow 00:41:43.480$ This is not for autologous patients.
- NOTE Confidence: 0.8369247
- $00{:}41{:}43{.}480 \dashrightarrow 00{:}41{:}45{.}830$ There is some published data.
- NOTE Confidence: 0.8369247
- $00:41:45.830 \longrightarrow 00:41:47.402$ That one can find,
- NOTE Confidence: 0.8369247
- $00:41:47.402 \rightarrow 00:41:48.188$ for example,

 $00:41:48.190 \rightarrow 00:41:51.350$ this trial out of China by Doctor Wang.

NOTE Confidence: 0.8369247

 $00{:}41{:}51{.}350 \dashrightarrow 00{:}41{:}53{.}774$ It's a randomized trial of standard

NOTE Confidence: 0.8369247

 $00{:}41{:}53.774 \dashrightarrow 00{:}41{:}54.986$ fractionation versus moderately

NOTE Confidence: 0.8369247

00:41:54.986 --> 00:41:56.542 hypofractionated patients in post

NOTE Confidence: 0.8369247

 $00{:}41{:}56{.}542 \dashrightarrow 00{:}41{:}57{.}646$ mast ectomy radiation therapy.

NOTE Confidence: 0.8369247

 $00:41:57.650 \rightarrow 00:42:00.408$ I read every word in the article.

NOTE Confidence: 0.8369247

 $00{:}42{:}00{.}410 \dashrightarrow 00{:}42{:}02{.}954$ I can find nothing that really

NOTE Confidence: 0.8369247

00:42:02.954 --> 00:42:05.083 discuss is if reconstruction was

NOTE Confidence: 0.8369247

 $00:42:05.083 \longrightarrow 00:42:06.878$ used and the median follow-up

NOTE Confidence: 0.8369247

 $00:42:06.878 \rightarrow 00:42:09.468$ is not that long at 58.5 months,

NOTE Confidence: 0.8369247

 $00:42:09.470 \longrightarrow 00:42:11.046$ but there is an.

NOTE Confidence: 0.8369247

 $00:42:11.046 \longrightarrow 00:42:13.410$ These were a little bit high.

NOTE Confidence: 0.8369247

 $00:42:13.410 \rightarrow 00:42:16.674$ These were some high risk patients as well.

NOTE Confidence: 0.8369247

 $00:42:16.680 \longrightarrow 00:42:18.465$ Four or more involved nodes

- NOTE Confidence: 0.8369247
- 00:42:18.465 -> 00:42:19.536 for everybody T3T4,
- NOTE Confidence: 0.8369247
- $00{:}42{:}19{.}540 \dashrightarrow 00{:}42{:}21{.}997$ but there was no difference in local
- NOTE Confidence: 0.8369247
- $00:42:21.997 \longrightarrow 00:42:23.826$ regional recurrence between the 50
- NOTE Confidence: 0.8369247
- $00:42:23.826 \rightarrow 00:42:25.626$ Gray in the moderate hypofractionation,
- NOTE Confidence: 0.8369247
- $00{:}42{:}25.630 \dashrightarrow 00{:}42{:}27.420$ but there was an increase
- NOTE Confidence: 0.8369247
- 00:42:27.420 --> 00:42:29.210 in grade 3 acute toxicity,
- NOTE Confidence: 0.8369247
- $00:42:29.210 \longrightarrow 00:42:31.000$ in the Hypo frac arm,
- NOTE Confidence: 0.8369247
- $00:42:31.000 \rightarrow 00:42:33.488$ so none of this has really LED for
- NOTE Confidence: 0.8369247
- $00{:}42{:}33.488 \dashrightarrow 00{:}42{:}36.010$ wide adoption of the of hypo frack in
- NOTE Confidence: 0.8369247
- $00:42:36.010 \longrightarrow 00:42:38.259$ the setting of treating regional nodes
- NOTE Confidence: 0.8369247
- $00{:}42{:}38{.}259 \dashrightarrow 00{:}42{:}40{.}669$ or post mastectomy radiation the rapy.
- NOTE Confidence: 0.8369247
- 00:42:40.670 --> 00:42:42.578 At this point I have done
- NOTE Confidence: 0.8369247
- $00:42:42.578 \longrightarrow 00:42:44.600$ it in very select patients.
- NOTE Confidence: 0.8369247
- $00{:}42{:}44{.}600 \dashrightarrow 00{:}42{:}47{.}204$ I think that the rest of our.
- NOTE Confidence: 0.8369247
- $00:42:47.210 \longrightarrow 00:42:49.802$ Group has but it has not yet been
- NOTE Confidence: 0.8369247

 $00:42:49.802 \longrightarrow 00:42:52.251$ adopted by the NCC N due to the

NOTE Confidence: 0.8369247

00:42:52.251 --> 00:42:54.289 paucity of data at this point.

NOTE Confidence: 0.8369247

 $00:42:54.290 \longrightarrow 00:42:54.984$ Although overtime,

NOTE Confidence: 0.8369247

 $00{:}42{:}54{.}984 \dashrightarrow 00{:}42{:}57{.}413$ I'm sure that charm and fabric will

NOTE Confidence: 0.8369247

 $00{:}42{:}57{.}413 \dashrightarrow 00{:}42{:}59{.}449$ provide us with a lot of information.

NOTE Confidence: 0.8805183

 $00{:}43{:}01.670 \dashrightarrow 00{:}43{:}04.724$ OK. So, another way,

NOTE Confidence: 0.8805183

 $00{:}43{:}04{.}724 \dashrightarrow 00{:}43{:}06{.}914$ besides shortening the treatment course

NOTE Confidence: 0.8805183

 $00:43:06.914 \rightarrow 00:43:10.113$ in the number of visits is by decreasing

NOTE Confidence: 0.8805183

 $00{:}43{:}10{.}113 \dashrightarrow 00{:}43{:}13{.}149$ the volume of tissue that we are treating.

NOTE Confidence: 0.8805183

 $00{:}43{:}13.150 \dashrightarrow 00{:}43{:}15.768$ One way that's been around for a while.

NOTE Confidence: 0.8805183

 $00{:}43{:}15.770 \dashrightarrow 00{:}43{:}18.008$ Actually, you post all probably know,

NOTE Confidence: 0.8805183

 $00{:}43{:}18.010 \dashrightarrow 00{:}43{:}19.510$ is accelerated partial breast

NOTE Confidence: 0.8805183

 $00:43:19.510 \longrightarrow 00:43:20.260$ irradiation therapy,

NOTE Confidence: 0.8805183

 $00{:}43{:}20{.}260 \dashrightarrow 00{:}43{:}22{.}420$ and until recently there was a

NOTE Confidence: 0.8805183

 $00{:}43{:}22{.}420 \dashrightarrow 00{:}43{:}24{.}370$ lack of longer term phase.

NOTE Confidence: 0.8805183

00:43:24.370 - > 00:43:26.884 Should say phase three up there

- NOTE Confidence: 0.8805183
- $00:43:26.884 \longrightarrow 00:43:29.582$ scuse me of longer term phase

 $00{:}43{:}29{.}582 \dashrightarrow 00{:}43{:}31{.}917$ three data supporting a PBI.

NOTE Confidence: 0.8805183

00:43:31.920 --> 00:43:34.917 We do have these two studies that I put

NOTE Confidence: 0.8805183

 $00{:}43{:}34{.}917 \dashrightarrow 00{:}43{:}37{.}898$ up here that now are have randomized

NOTE Confidence: 0.8805183

 $00:43:37.898 \rightarrow 00:43:41.120$ data giving us their ten year outcomes.

NOTE Confidence: 0.8805183

 $00:43:41.120 \longrightarrow 00:43:42.143$ The NSA BP.

NOTE Confidence: 0.8805183

 $00:43:42.143 \longrightarrow 00:43:44.189$ 39 that looked at whole breast

NOTE Confidence: 0.8805183

 $00{:}43{:}44{.}189 \dashrightarrow 00{:}43{:}46{.}586$ irradiation with standard frack versus

NOTE Confidence: 0.8805183

 $00{:}43{:}46.586 \dashrightarrow 00{:}43{:}48.578$ accelerated partial breast irradiation

NOTE Confidence: 0.8805183

 $00{:}43{:}48{.}578$ --> $00{:}43{:}51{.}034$ therapy using either breakey therapy or

NOTE Confidence: 0.8805183

 $00:43:51.034 \rightarrow 00:43:53.920$ external beam twice a day for 10 fractions.

NOTE Confidence: 0.8805183

 $00{:}43{:}53{.}920 \dashrightarrow 00{:}43{:}57{.}120$ So patients would be done in a week.

NOTE Confidence: 0.8805183

 $00{:}43{:}57.120 \dashrightarrow 00{:}43{:}58.664$ It's very interesting results,

NOTE Confidence: 0.8805183

 $00:43:58.664 \rightarrow 00:44:00.594$ so they were really looking

NOTE Confidence: 0.8805183

 $00:44:00.594 \rightarrow 00:44:01.999$ at in ipsilateral.

00:44:02.000 --> 00:44:03.275 Breast tumor recurrence.

NOTE Confidence: 0.8805183

00:44:03.275 --> 00:44:06.545 At 10 years it was found to be

NOTE Confidence: 0.8805183

 $00{:}44{:}06{.}545 \dashrightarrow 00{:}44{:}08{.}334$ 4% and the accelerated partial

NOTE Confidence: 0.8805183

00:44:08.334 --> 00:44:10.710 breast irradiation and 3% in the

NOTE Confidence: 0.8805183

 $00:44:10.710 \longrightarrow 00:44:12.685$ whole rest of radiation arm.

NOTE Confidence: 0.8805183

 $00:44:12.690 \rightarrow 00:44:15.066$ But based on their statistical analysis,

NOTE Confidence: 0.8805183

 $00:44:15.070 \rightarrow 00:44:17.836$ even though there's just that 1% difference,

NOTE Confidence: 0.8805183

 $00:44:17.836 \rightarrow 00:44:21.004$ it did not meet the criteria for equivalence,

NOTE Confidence: 0.8805183

 $00{:}44{:}21.010 \dashrightarrow 00{:}44{:}23.722$ so API was not bound to be equivalent

NOTE Confidence: 0.8805183

 $00{:}44{:}23.722 \dashrightarrow 00{:}44{:}26.550$ to whole breast or radiation therapy.

NOTE Confidence: 0.8805183

 $00:44:26.550 \longrightarrow 00:44:27.810$ That being said,

NOTE Confidence: 0.8805183

 $00{:}44{:}27.810 \dashrightarrow 00{:}44{:}29.910$ in the discussion the authors

NOTE Confidence: 0.8805183

 $00{:}44{:}29{.}910 \dashrightarrow 00{:}44{:}32{.}166$ discuss how with that 1% difference

NOTE Confidence: 0.8805183

 $00{:}44{:}32.166 \dashrightarrow 00{:}44{:}34.030$ in lower risk patients.

NOTE Confidence: 0.8805183

 $00{:}44{:}34{.}030 \dashrightarrow 00{:}44{:}36{.}851$ This still does perhaps leave the door

NOTE Confidence: 0.8805183

00:44:36.851 --> 00:44:40.615 open for a PBI for for low risk patients.

- NOTE Confidence: 0.8805183
- $00:44:40.620 \longrightarrow 00:44:41.535$ The Florence trial.
- NOTE Confidence: 0.8805183
- 00:44:41.535 --> 00:44:43.670 He has gained a lot of attention
- NOTE Confidence: 0.8805183
- $00{:}44{:}43.734 \dashrightarrow 00{:}44{:}45.954$ and that has treated accelerated
- NOTE Confidence: 0.8805183
- $00:44:45.954 \rightarrow 00:44:47.730$ partial breast irradiation therapy.
- NOTE Confidence: 0.8805183
- $00{:}44{:}47{.}730 \dashrightarrow 00{:}44{:}49{.}974$ So when we're trading with accelerated
- NOTE Confidence: 0.8805183
- 00:44:49.974 --> 00:44:51.470 partial breast radiation therapy,
- NOTE Confidence: 0.8805183
- $00:44:51.470 \rightarrow 00:44:54.438$ you probably all know that we are really
- NOTE Confidence: 0.8805183
- $00:44:54.438 \rightarrow 00:44:55.982$ concentrating the radiation therapy
- NOTE Confidence: 0.8805183
- $00{:}44{:}55{.}982 \dashrightarrow 00{:}44{:}58{.}565$ on the tumor bed and an expansion,
- NOTE Confidence: 0.8805183
- $00:44:58.570 \longrightarrow 00:45:00.440$ and therefore we are leaving
- NOTE Confidence: 0.8805183
- $00:45:00.440 \longrightarrow 00:45:01.936$ more of the well.
- NOTE Confidence: 0.8805183
- $00{:}45{:}01{.}940 \dashrightarrow 00{:}45{:}03{.}870$ We're leaving the uninvolved breast
- NOTE Confidence: 0.8805183
- $00{:}45{:}03{.}870 \dashrightarrow 00{:}45{:}06{.}573$ or a good portion of the uninvolved
- NOTE Confidence: 0.8805183
- $00:45:06.573 \longrightarrow 00:45:09.037$ rest out of the high dose area.
- NOTE Confidence: 0.8805183
- $00{:}45{:}09{.}040 \dashrightarrow 00{:}45{:}10{.}940$ And by tight ening our fields
- NOTE Confidence: 0.8805183

- $00{:}45{:}10{.}940 \dashrightarrow 00{:}45{:}12{.}460$ like this one can.
- NOTE Confidence: 0.8805183
- $00{:}45{:}12{.}460 \dashrightarrow 00{:}45{:}15{.}260$ Also.
- NOTE Confidence: 0.8805183
- $00:45:15.260 \rightarrow 00:45:18.548$ Less dose to the healthy tissues as well,
- NOTE Confidence: 0.8805183
- $00{:}45{:}18.550 \dashrightarrow 00{:}45{:}21.208$ so the Florence trial used accelerated
- NOTE Confidence: 0.8805183
- 00:45:21.208 --> 00:45:22.980 partial breast radiation therapy
- NOTE Confidence: 0.8805183
- $00{:}45{:}23.047 \dashrightarrow 00{:}45{:}24.955$ 30 Gray and five fractions using
- NOTE Confidence: 0.8805183
- $00{:}45{:}24.955 \dashrightarrow 00{:}45{:}27.273$ and I MRT approach versus whole
- NOTE Confidence: 0.8805183
- $00{:}45{:}27{.}273$ --> $00{:}45{:}29{.}229$ breast and standard fractionation.
- NOTE Confidence: 0.8805183
- $00{:}45{:}29{.}230 \dashrightarrow 00{:}45{:}32{.}518$ So at 10 years with their randomized trial,
- NOTE Confidence: 0.8805183
- $00{:}45{:}32{.}520 \dashrightarrow 00{:}45{:}34{.}986$ there was no significant difference in
- NOTE Confidence: 0.8805183
- $00{:}45{:}34{.}986 \dashrightarrow 00{:}45{:}36{.}630$ ipsilateral breast tumor recurrence.
- NOTE Confidence: 0.8805183
- $00:45:36.630 \longrightarrow 00:45:39.507$ It was 2.5% in the whole breast
- NOTE Confidence: 0.8805183
- $00:45:39.507 \longrightarrow 00:45:41.563$ versus 3.7% in the accelerated
- NOTE Confidence: 0.8805183
- $00{:}45{:}41.563 \dashrightarrow 00{:}45{:}43.207$ partial breast irradiation the rapy.
- NOTE Confidence: 0.8805183
- $00:45:43.210 \longrightarrow 00:45:45.670$ But based on their statistical analysis,
- NOTE Confidence: 0.8805183
- $00:45:45.670 \longrightarrow 00:45:46.996$ this was not.

- NOTE Confidence: 0.8805183
- 00:45:46.996 --> 00:45:47.880 Statistically different,

 $00:45:47.880 \rightarrow 00:45:49.880$ there was also significantly less

NOTE Confidence: 0.8805183

 $00:45:49.880 \longrightarrow 00:45:52.959$ acute in late term toxicity with the

NOTE Confidence: 0.8805183

 $00:45:52.959 \rightarrow 00:45:55.489$ accelerated partial breast radiation therapy,

NOTE Confidence: 0.8805183

 $00:45:55.490 \rightarrow 00:45:57.944$ so they partial breast irradiation therapy

NOTE Confidence: 0.8805183

 $00:45:57.944 \rightarrow 00:46:01.319$ has made it into the national guidelines.

NOTE Confidence: 0.8805183

 $00:46:01.320 \longrightarrow 00:46:04.449$ It's been there for a little while,

NOTE Confidence: 0.8805183

 $00:46:04.450 \longrightarrow 00:46:07.138$ but on the most recent iteration,

NOTE Confidence: 0.8805183

 $00{:}46{:}07{.}140 \dashrightarrow 00{:}46{:}09{.}375$ the Florence Regiment is listed

NOTE Confidence: 0.8805183

 $00:46:09.375 \longrightarrow 00:46:11.163$ as the preferred regimen,

NOTE Confidence: 0.8805183

 $00{:}46{:}11.170 \dashrightarrow 00{:}46{:}14.020$ and it is recommended that the

NOTE Confidence: 0.8805183

00:46:14.020 --> 00:46:16.397 Astro guidelines where I've put

NOTE Confidence: 0.8805183

 $00{:}46{:}16{.}397 \dashrightarrow 00{:}46{:}17{.}969$ a reference on here.

NOTE Confidence: 0.8805183

00:46:17.970 --> 00:46:21.018 As many of you may know,

NOTE Confidence: 0.8805183

00:46:21.020 --> 00:46:23.390 Astro has published guidelines regarding

 $00{:}46{:}23.390 \dashrightarrow 00{:}46{:}25.760$ who is suitable for accelerated

NOTE Confidence: 0.8805183

 $00{:}46{:}25.826$ --> $00{:}46{:}28.130$ partial breast irradiation therapy,

NOTE Confidence: 0.8805183

 $00:46:28.130 \longrightarrow 00:46:30.670$ and there are three groups,

NOTE Confidence: 0.845531

 $00:46:30.670 \rightarrow 00:46:33.354$ suitable cautionary and basically

NOTE Confidence: 0.845531

 $00:46:33.354 \longrightarrow 00:46:36.038$ do not treat unsuitable.

NOTE Confidence: 0.845531

 $00:46:36.040 \rightarrow 00:46:38.735$ So here at Yale, we are working.

NOTE Confidence: 0.845531

 $00{:}46{:}38{.}740 \dashrightarrow 00{:}46{:}40{.}670$ We do treat accelerated partial

NOTE Confidence: 0.845531

 $00:46:40.670 \longrightarrow 00:46:41.828$ breast irradiation therapy.

NOTE Confidence: 0.845531

 $00:46:41.830 \longrightarrow 00:46:44.525$ Although not very often for suitable cases,

NOTE Confidence: 0.845531

 $00:46:44.530 \longrightarrow 00:46:46.938$ just because the hypo frack is so

NOTE Confidence: 0.845531

 $00:46:46.938 \longrightarrow 00:46:49.729$ works out so well and you're really

NOTE Confidence: 0.845531

 $00{:}46{:}49{.}729 \dashrightarrow 00{:}46{:}52{.}243$ not saving the patient much time.

NOTE Confidence: 0.845531

 $00:46:52.250 \longrightarrow 00:46:54.284$ However, we are in the process

NOTE Confidence: 0.845531

 $00{:}46{:}54{.}284 \dashrightarrow 00{:}46{:}56{.}509$ of gearing up to start offering

NOTE Confidence: 0.845531

 $00:46:56.509 \longrightarrow 00:46:58.494$ treatment in the manner that

NOTE Confidence: 0.845531

 $00:46:58.494 \rightarrow 00:47:01.129$ was used in the Florence trial,

- NOTE Confidence: 0.845531
- $00{:}47{:}01{.}130 \dashrightarrow 00{:}47{:}03{.}476$ the 6th grade Perfection Times 5

 $00{:}47{:}03.476$ --> $00{:}47{:}06.249$ fractions and that was every other day.

NOTE Confidence: 0.845531

 $00{:}47{:}06{.}250 \dashrightarrow 00{:}47{:}07{.}042$ Using I MRT.

NOTE Confidence: 0.845531

 $00:47:07.042 \rightarrow 00:47:08.890$ So we are working with our physics

NOTE Confidence: 0.845531

 $00:47:08.947 \longrightarrow 00:47:10.903$ department and doing all the safety

NOTE Confidence: 0.845531

 $00{:}47{:}10{.}903 \dashrightarrow 00{:}47{:}12{.}961$ checks and getting our policies and

NOTE Confidence: 0.845531

 $00:47:12.961 \rightarrow 00:47:15.404$ procedures in place to start adopting that.

NOTE Confidence: 0.845531

 $00:47:15.410 \longrightarrow 00:47:18.570$ But we are not on line for that just yet.

NOTE Confidence: 0.81489193

 $00{:}47{:}21{.}220 \dashrightarrow 00{:}47{:}23{.}950$ So what about decreasing our the

NOTE Confidence: 0.81489193

 $00{:}47{:}23.950 \dashrightarrow 00{:}47{:}27.475$ amount of tissue that's treated in the

NOTE Confidence: 0.81489193

 $00:47:27.475 \longrightarrow 00:47:30.170$ setting of regional nodal irradiation?

NOTE Confidence: 0.81489193

 $00{:}47{:}30{.}170$ --> $00{:}47{:}32{.}627$ Well, there is some ongoing trials that NOTE Confidence: 0.81489193

 $00{:}47{:}32{.}627 \dashrightarrow 00{:}47{:}35{.}329$ we read before this is widely adopted NOTE Confidence: 0.81489193

 $00{:}47{:}35{.}329 \dashrightarrow 00{:}47{:}37{.}705$ to start eliminating our nodal fields.

NOTE Confidence: 0.81489193

 $00{:}47{:}37{.}710 \dashrightarrow 00{:}47{:}40{.}014$ In certain cases we need some

 $00:47:40.014 \rightarrow 00:47:41.860$ more guidance on that in,

NOTE Confidence: 0.81489193

 $00:47:41.860 \rightarrow 00:47:43.740$ especially in the post mastectomy

NOTE Confidence: 0.81489193

00:47:43.740 --> 00:47:45.622 setting you know who who,

NOTE Confidence: 0.81489193

 $00:47:45.622 \rightarrow 00:47:47.512$ when the patients have involved,

NOTE Confidence: 0.81489193

 $00{:}47{:}47{.}512 \dashrightarrow 00{:}47{:}50{.}284$ knows, who can we really skip treating

NOTE Confidence: 0.81489193

 $00{:}47{:}50{.}284 \dashrightarrow 00{:}47{:}52{.}904$ the regional nodes and still ensure

NOTE Confidence: 0.81489193

 $00:47:52.904 \rightarrow 00:47:55.279$ that we have excellent outcomes?

NOTE Confidence: 0.81489193

 $00:47:55.280 \longrightarrow 00:47:58.136$ This trial, the NSA BP 51 it was

NOTE Confidence: 0.81489193

 $00{:}47{:}58.136 \dashrightarrow 00{:}48{:}01.455$ open at Yale for a while and it

NOTE Confidence: 0.81489193

 $00{:}48{:}01{.}455 \dashrightarrow 00{:}48{:}04{.}119$ was very challenging to accrue to,

NOTE Confidence: 0.81489193

 $00:48:04.120 \longrightarrow 00:48:06.948$ and it was nationally quite difficult to

NOTE Confidence: 0.81489193

 $00{:}48{:}06{.}948 \dashrightarrow 00{:}48{:}10{.}555$ accrue too so really long trial may not name.

NOTE Confidence: 0.81489193

 $00:48:10.560 \rightarrow 00:48:14.580$ Maybe that was part of it that it's a bait.

NOTE Confidence: 0.81489193

 $00:48:14.580 \longrightarrow 00:48:16.986$ You can read the name there,

NOTE Confidence: 0.81489193

 $00:48:16.990 \longrightarrow 00:48:19.412$ but basically what it does is it

NOTE Confidence: 0.81489193

 $00:48:19.412 \rightarrow 00:48:21.523$ took patients who had pathologically

- NOTE Confidence: 0.81489193
- 00:48:21.523 --> 00:48:23.020 proven by biopsy,
- NOTE Confidence: 0.81489193
- $00:48:23.020 \rightarrow 00:48:25.310$ axillary nodal involvement who received.
- NOTE Confidence: 0.81489193
- 00:48:25.310 -> 00:48:26.276 Neoadjuvant chemotherapy.
- NOTE Confidence: 0.81489193
- 00:48:26.276 --> 00:48:28.691 Then they would undergo either
- NOTE Confidence: 0.81489193
- $00:48:28.691 \rightarrow 00:48:30.140$ lumpectomy or mastectomy.
- NOTE Confidence: 0.81489193
- $00:48:30.140 \longrightarrow 00:48:32.550$ And they could have Sentinel
- NOTE Confidence: 0.81489193
- 00:48:32.550 --> 00:48:33.996 lymph node biopsy,
- NOTE Confidence: 0.81489193
- $00:48:34.000 \rightarrow 00:48:36.290$ Sentinel lymph node biopsy converted
- NOTE Confidence: 0.81489193
- $00{:}48{:}36{.}290 \dashrightarrow 00{:}48{:}39{.}320$ to XI section or XI section.
- NOTE Confidence: 0.81489193
- 00:48:39.320 --> 00:48:42.616 But if they were converted to YPN 0
- NOTE Confidence: 0.81489193
- $00{:}48{:}42.616 \dashrightarrow 00{:}48{:}45.598$ then these patients were eligible.
- NOTE Confidence: 0.81489193
- 00:48:45.600 --> 00:48:46.065 Remember,
- NOTE Confidence: 0.81489193
- 00:48:46.065 --> 00:48:48.855 they had to have T1T3 pathologically
- NOTE Confidence: 0.81489193
- 00:48:48.855 --> 00:48:50.910 proven N1 disease upfront,
- NOTE Confidence: 0.81489193
- 00:48:50.910 --> 00:48:51.942 neoadjuvant, chemo,
- NOTE Confidence: 0.81489193

 $00{:}48{:}51{.}942 \dashrightarrow 00{:}48{:}55{.}554$ and then rendered YPNO in the axilla.

NOTE Confidence: 0.81489193

 $00{:}48{:}55{.}560 \dashrightarrow 00{:}48{:}58{.}098$ So arm one was omission of

NOTE Confidence: 0.81489193

00:48:58.098 --> 00:48:59.790 regional nodal irradiation therapy,

NOTE Confidence: 0.81489193

 $00:48:59.790 \rightarrow 00:49:02.244$ with so lumpectomy patients would only

NOTE Confidence: 0.81489193

 $00{:}49{:}02{.}244 \dashrightarrow 00{:}49{:}04{.}870$ have the breast treated high tangents.

NOTE Confidence: 0.81489193

 $00{:}49{:}04{.}870 \dashrightarrow 00{:}49{:}05{.}714$ Not allowed.

NOTE Confidence: 0.81489193

 $00{:}49{:}05{.}714 \dashrightarrow 00{:}49{:}07{.}824$ Mastectomy would have no radiation.

NOTE Confidence: 0.81489193

00:49:07.830 --> 00:49:08.739 An arm two,

NOTE Confidence: 0.81489193

00:49:08.739 --> 00:49:11.434 which was I call it the yes regional

NOTE Confidence: 0.81489193

 $00{:}49{:}11{.}434 \dashrightarrow 00{:}49{:}13{.}884$ nodal radiation therapy would treat

NOTE Confidence: 0.81489193

00:49:13.884 --> 00:49:17.304 in though that arm the whole breast

NOTE Confidence: 0.81489193

 $00{:}49{:}17{.}304 \dashrightarrow 00{:}49{:}20{.}058$ and the chest wall would receive

NOTE Confidence: 0.81489193

 $00{:}49{:}20.058 \dashrightarrow 00{:}49{:}21.774$ radiation plus regional nodal

NOTE Confidence: 0.81489193

 $00:49:21.774 \longrightarrow 00:49:23.864$ irradiation which was defined on

NOTE Confidence: 0.81489193

 $00:49:23.864 \rightarrow 00:49:26.519$ the trial as internal mammary nodes.

NOTE Confidence: 0.81489193

 $00:49:26.520 \longrightarrow 00:49:29.568$ Une dissected axilla.

- NOTE Confidence: 0.81489193
- $00:49:29.570 \longrightarrow 00:49:30.434$ And the superclass.
- NOTE Confidence: 0.81489193
- $00{:}49{:}30{.}434 \dashrightarrow 00{:}49{:}32{.}162$ So you're either getting a very
- NOTE Confidence: 0.81489193
- $00:49:32.162 \longrightarrow 00:49:34.308$ limited radiation or basically the full boat.
- NOTE Confidence: 0.81489193
- $00:49:34.310 \longrightarrow 00:49:35.930$ And I think that some people
- NOTE Confidence: 0.81489193
- $00{:}49{:}35{.}930 \dashrightarrow 00{:}49{:}38{.}337$ when I mean I know when I talk
- NOTE Confidence: 0.81489193
- $00:49:38.337 \longrightarrow 00:49:40.227$ to patients about the trial one,
- NOTE Confidence: 0.81489193
- $00:49:40.230 \longrightarrow 00:49:41.414$ either want they either
- NOTE Confidence: 0.81489193
- $00:49:41.414 \rightarrow 00:49:43.190$ wanted one arm or the other,
- NOTE Confidence: 0.81489193
- $00:49:43.190 \rightarrow 00:49:45.110$ and many people were reluctant to let go
- NOTE Confidence: 0.81489193
- $00:49:45.110 \rightarrow 00:49:47.327$ of the regional nodal radiation therapy.
- NOTE Confidence: 0.81489193
- $00:49:47.330 \rightarrow 00:49:49.682$ So I personally was not able to accrue
- NOTE Confidence: 0.81489193
- $00:49:49.682 \rightarrow 00:49:52.359$ anyone to the trial when I spoke with them.
- NOTE Confidence: 0.81489193
- $00{:}49{:}52{.}360 \dashrightarrow 00{:}49{:}54{.}138$ And I think that that was a
- NOTE Confidence: 0.81489193
- 00:49:54.138 --> 00:49:55.620 problem kind of nationwide,
- NOTE Confidence: 0.81489193
- $00:49:55.620 \longrightarrow 00:49:57.390$ but it's now closed to accrual.
- NOTE Confidence: 0.81489193

 $00:49:57.390 \rightarrow 00:49:58.870$ They've obviously reached their goal,

NOTE Confidence: 0.81489193

 $00{:}49{:}58.870 \dashrightarrow 00{:}50{:}00{.}118$ which is great.

NOTE Confidence: 0.81489193

 $00{:}50{:}00{.}118 \dashrightarrow 00{:}50{:}03{.}030$ And I am not aware of any

NOTE Confidence: 0.81489193

 $00:50:03.137 \rightarrow 00:50:06.487$ preliminary results at this time.

NOTE Confidence: 0.81489193

 $00{:}50{:}06{.}490 \dashrightarrow 00{:}50{:}08{.}518$ Another trial this is open at

NOTE Confidence: 0.81489193

 $00{:}50{:}08{.}518 \dashrightarrow 00{:}50{:}11{.}310$ Yale and we are actively accruing.

NOTE Confidence: 0.81489193

 $00:50:11.310 \longrightarrow 00:50:14.012$ So please we would love to have

NOTE Confidence: 0.81489193

 $00:50:14.012 \rightarrow 00:50:16.139$ your patience on this trial.

NOTE Confidence: 0.81489193

 $00{:}50{:}16.140 \dashrightarrow 00{:}50{:}18.947$ The MA 39 also called Taylor RT.

NOTE Confidence: 0.81489193

 $00:50:18.950 \longrightarrow 00:50:20.066$ This is different.

NOTE Confidence: 0.81489193

 $00:50:20.066 \longrightarrow 00:50:22.298$ This is not really looking at

NOTE Confidence: 0.81489193

 $00:50:22.298 \rightarrow 00:50:23.780$ response to chemotherapy.

NOTE Confidence: 0.81489193

 $00:50:23.780 \longrightarrow 00:50:26.288$ It is looking at omitting regional

NOTE Confidence: 0.81489193

 $00{:}50{:}26.288 \dashrightarrow 00{:}50{:}28.370$ nodal radiation the rapy for patients

NOTE Confidence: 0.81489193

 $00{:}50{:}28.370 \dashrightarrow 00{:}50{:}30.771$ who have a more favorable cancer as

NOTE Confidence: 0.81489193

 $00:50:30.771 \rightarrow 00:50:33.420$ far as biomarker risk is concerned.

- NOTE Confidence: 0.81489193
- $00:50:33.420 \dashrightarrow 00:50:35.940$ So the and the inclusion criteria.

 $00:50:35.940 \longrightarrow 00:50:37.428$ Changed extremely recently within

NOTE Confidence: 0.81489193

 $00:50:37.428 \longrightarrow 00:50:38.916$ the last eight weeks.

NOTE Confidence: 0.81489193

 $00:50:38.920 \rightarrow 00:50:41.158$ Initially when we open the trial,

NOTE Confidence: 0.81489193

 $00:50:41.160 \longrightarrow 00:50:43.398$ only T1 or T2 patients were

NOTE Confidence: 0.81489193

 $00:50:43.398 \longrightarrow 00:50:44.890$ allowed on the trial,

NOTE Confidence: 0.85038424

 $00:50:44.890 \rightarrow 00:50:47.874$ but now patients with T3 disease are allowed.

NOTE Confidence: 0.85038424

 $00{:}50{:}47.880 \dashrightarrow 00{:}50{:}50.680$ Also, a very recent change and what the

NOTE Confidence: 0.85038424

 $00{:}50{:}50{.}680 \dashrightarrow 00{:}50{:}53{.}100$ definition of low volume nodal disease.

NOTE Confidence: 0.85038424

 $00:50:53.100 \rightarrow 00:50:56.076$ What is this? Is the updated version here,

NOTE Confidence: 0.85038424

 $00:50:56.080 \rightarrow 00:50:58.090$ so if the patient had lumpectomy

NOTE Confidence: 0.85038424

 $00{:}50{:}58{.}090 \dashrightarrow 00{:}51{:}00{.}190$ or mastectomy an axe dissection,

NOTE Confidence: 0.85038424

 $00{:}51{:}00{.}190 \dashrightarrow 00{:}51{:}02{.}416$ they can have one to three positive

NOTE Confidence: 0.85038424

 $00:51:02.416 \longrightarrow 00:51:04.385$ nodes if they have lumpectomy

NOTE Confidence: 0.85038424

 $00:51:04.385 \rightarrow 00:51:06.285$ or mastectomy plus Sentinel.

00:51:06.290 --> 00:51:07.366 Lymph node biopsy only.

NOTE Confidence: 0.85038424

 $00:51:07.366 \rightarrow 00:51:10.108$ They can now have one to two positive nodes.

NOTE Confidence: 0.85038424

 $00:51:10.110 \longrightarrow 00:51:11.262$ That's a change.

NOTE Confidence: 0.85038424

 $00:51:11.262 \rightarrow 00:51:14.464$ And a huge change is that the archetype

NOTE Confidence: 0.85038424

 $00{:}51{:}14{.}464 \dashrightarrow 00{:}51{:}17{.}446$ score when this trial opened had to

NOTE Confidence: 0.85038424

 $00:51:17.446 \longrightarrow 00:51:20.639$ be 17 or less to enroll patients.

NOTE Confidence: 0.85038424

 $00:51:20.640 \rightarrow 00:51:22.974$ Now patients with an archetype score

NOTE Confidence: 0.85038424

 $00:51:22.974 \longrightarrow 00:51:25.938$ of 25 or less our are eligible.

NOTE Confidence: 0.85038424

00:51:25.940 --> 00:51:27.980 They cannot have had neoadjuvant

NOTE Confidence: 0.85038424

 $00:51:27.980 \longrightarrow 00:51:28.388$ chemotherapy.

NOTE Confidence: 0.85038424

 $00{:}51{:}28{.}390 \dashrightarrow 00{:}51{:}30{.}682$ They've also made it amendment allowing

NOTE Confidence: 0.85038424

 $00:51:30.682 \rightarrow 00:51:33.279$ for they are allowing for neoadjuvant.

NOTE Confidence: 0.85038424

00:51:33.280 --> 00:51:35.728 I should have said Neo there,

NOTE Confidence: 0.85038424

 $00:51:35.730 \longrightarrow 00:51:36.966$ excuse me.

NOTE Confidence: 0.85038424

00:51:36.966 --> 00:51:40.674 Neoadjuvant endocrine therapy is now allowed.

NOTE Confidence: 0.85038424

00:51:40.680 - 00:51:41.874 Agement chimos allowed.

- NOTE Confidence: 0.85038424
- $00:51:41.874 \rightarrow 00:51:43.864$ Agement endocrine therapy is allowed.

00:51:43.870 --> 00:51:45.064 Patients are randomized,

NOTE Confidence: 0.85038424

 $00{:}51{:}45{.}064 \dashrightarrow 00{:}51{:}47{.}054$ similar to the other one.

NOTE Confidence: 0.85038424

00:51:47.060 - 00:51:49.060 The no regional nodal radiation

NOTE Confidence: 0.85038424

 $00:51:49.060 \longrightarrow 00:51:50.660$ arm that no RNI,

NOTE Confidence: 0.85038424

 $00{:}51{:}50{.}660 \dashrightarrow 00{:}51{:}53{.}860$ so those patients would have to have whole

NOTE Confidence: 0.85038424

 $00:51:53.860 \rightarrow 00:51:56.238$ breast irradiation if they had lumpectomy,

NOTE Confidence: 0.85038424

 $00{:}51{:}56{.}240 \dashrightarrow 00{:}51{:}57{.}434$ but no radiation.

NOTE Confidence: 0.85038424

 $00:51:57.434 \longrightarrow 00:51:59.424$ If mastectomy and then yes,

NOTE Confidence: 0.85038424

 $00:51:59.430 \longrightarrow 00:52:00.108$ are in,

NOTE Confidence: 0.85038424

 $00{:}52{:}00{.}108 \dashrightarrow 00{:}52{:}02{.}142$ I would be whole breast irradiation

NOTE Confidence: 0.85038424

 $00{:}52{:}02{.}142 \dashrightarrow 00{:}52{:}04{.}264$ or chest wall irradiation depending

NOTE Confidence: 0.85038424

 $00{:}52{:}04{.}264 \dashrightarrow 00{:}52{:}07{.}006$ on their surgery and regional nodal.

NOTE Confidence: 0.85038424

 $00{:}52{:}07{.}010 \dashrightarrow 00{:}52{:}09{.}010$ And like the other trial,

NOTE Confidence: 0.85038424

00:52:09.010 --> 00:52:11.470 regional nodal means internal mammary nodes.

 $00:52:11.470 \longrightarrow 00:52:14.848$ Une dissected axela in the superclass.

NOTE Confidence: 0.85038424

 $00{:}52{:}14.850 \dashrightarrow 00{:}52{:}17.340$ And the primary endpoint is breast

NOTE Confidence: 0.85038424

00:52:17.340 --> 00:52:19.000 cancer recurrence free interval,

NOTE Confidence: 0.85038424

 $00:52:19.000 \rightarrow 00:52:21.905$ but of course they're over looking at.

NOTE Confidence: 0.85038424

00:52:21.910 --> 00:52:23.570 You know, local recurrence,

NOTE Confidence: 0.85038424

 $00{:}52{:}23.570 \dashrightarrow 00{:}52{:}25.228$ distant recurrence, side effects,

NOTE Confidence: 0.85038424

 $00:52:25.228 \rightarrow 00:52:27.298$ and lymphoedema risk as well.

NOTE Confidence: 0.8390835

 $00{:}52{:}30{.}050 \dashrightarrow 00{:}52{:}33{.}794$ So the last way to limit or dees calate the

NOTE Confidence: 0.8390835

 $00{:}52{:}33.794 \dashrightarrow 00{:}52{:}36.607$ radiation therapy is to just not do it.

NOTE Confidence: 0.8390835

 $00:52:36.610 \rightarrow 00:52:38.926$ That's the kind of most straightforward.

NOTE Confidence: 0.8390835

 $00{:}52{:}38{.}930 \dashrightarrow 00{:}52{:}42{.}278$ I think that a lot of us now are

NOTE Confidence: 0.8390835

 $00:52:42.278 \longrightarrow 00:52:45.099$ familiar with the CL GB 9343 trial.

NOTE Confidence: 0.8390835

00:52:45.100 --> 00:52:46.644 I can, you know,

NOTE Confidence: 0.8390835

 $00:52:46.644 \rightarrow 00:52:48.960$ memorize this one in my sleep.

NOTE Confidence: 0.8390835

 $00:52:48.960 \longrightarrow 00:52:50.775$ Those patients were 70 years

NOTE Confidence: 0.8390835

 $00:52:50.775 \longrightarrow 00:52:53.210$ of age or older T1 tumors.

- NOTE Confidence: 0.8390835
- $00:52:53.210 \longrightarrow 00:52:55.015$ They could be clinically or

 $00:52:55.015 \rightarrow 00:52:56.459$ pathologically node negative had

NOTE Confidence: 0.8390835

 $00:52:56.459 \longrightarrow 00:52:58.978$ to be hormone receptor positive and

NOTE Confidence: 0.8390835

 $00:52:58.978 \rightarrow 00:53:00.658$ lumpectomy with negative margins.

NOTE Confidence: 0.8390835

 $00:53:00.660 \dashrightarrow 00:53:03.369$ I put the negative margins in red

NOTE Confidence: 0.8390835

 $00{:}53{:}03{.}369 \dashrightarrow 00{:}53{:}05{.}450$ because for this trial negative

NOTE Confidence: 0.8390835

 $00:53:05.450 \dashrightarrow 00:53:08.794$ margins was defined as no tumor on Inc.

NOTE Confidence: 0.8390835

 $00{:}53{:}08{.}800 \dashrightarrow 00{:}53{:}10{.}785$ The patients were randomized to

NOTE Confidence: 0.8390835

 $00{:}53{:}10.785 \dashrightarrow 00{:}53{:}13.325$ ta
moxifen alone or whole breasts or

NOTE Confidence: 0.8390835

 $00:53:13.325 \rightarrow 00:53:15.745$ radiation therapy using a moderate

NOTE Confidence: 0.8390835

 $00:53:15.745 \rightarrow 00:53:17.681$ hypofractionation course plus tamoxifen.

NOTE Confidence: 0.8390835

00:53:17.690 --> 00:53:21.090 At 10 years you could see the overall

NOTE Confidence: 0.8390835

 $00{:}53{:}21.090 \dashrightarrow 00{:}53{:}24.286$ survival was the same 67% in Tamar T NOTE Confidence: 0.8390835

 $00:53:24.286 \longrightarrow 00:53:27.630$ and 66% in the Tam arm with a lot of NOTE Confidence: 0.8390835

 $00{:}53{:}27{.}630 \dashrightarrow 00{:}53{:}30{.}252$ those deaths being non breast cancer

 $00:53:30.252 \longrightarrow 00:53:33.114$ deaths and freedom from local regional

NOTE Confidence: 0.8390835

 $00{:}53{:}33{.}194 \dashrightarrow 00{:}53{:}36{.}640$ recurrence was 98% in the Tamar TR man,

NOTE Confidence: 0.8390835

 $00:53:36.640 \longrightarrow 00:53:39.112 \ 90\%$ in the Tamar that actually

NOTE Confidence: 0.8390835

 $00:53:39.112 \rightarrow 00:53:40.348$ was statistically significant,

NOTE Confidence: 0.8390835

 $00{:}53{:}40{.}350 \dashrightarrow 00{:}53{:}42{.}285$ there was a statistically significant

NOTE Confidence: 0.8390835

 $00{:}53{:}42.285 \dashrightarrow 00{:}53{:}45.225$ reduction in the risk of local regional

NOTE Confidence: 0.8390835

 $00:53:45.225 \rightarrow 00:53:48.033$ occurrence with the radiation being provided.

NOTE Confidence: 0.8390835

00:53:48.040 --> 00:53:49.850 So you might say, well,

NOTE Confidence: 0.8390835

 $00{:}53{:}49{.}850 \dashrightarrow 00{:}53{:}52{.}022$ this trial should support us doing

NOTE Confidence: 0.8390835

 $00{:}53{:}52{.}022 \dashrightarrow 00{:}53{:}52{.}746$ the radiation,

NOTE Confidence: 0.8390835

 $00{:}53{:}52{.}750 \dashrightarrow 00{:}53{:}54{.}795$ but because the overall survival

NOTE Confidence: 0.8390835

 $00{:}53{:}54{.}795 \dashrightarrow 00{:}53{:}56{.}840$ was not different and although

NOTE Confidence: 0.8390835

 $00:53:56.914 \rightarrow 00:53:58.540$ I don't have it up there,

NOTE Confidence: 0.8390835

 $00:53:58.540 \longrightarrow 00:54:00.712$ the very low rate of distant

NOTE Confidence: 0.8390835

 $00{:}54{:}00{.}712 \dashrightarrow 00{:}54{:}02{.}160$ recurrence was no different.

NOTE Confidence: 0.8390835

 $00:54:02.160 \longrightarrow 00:54:03.604$ The breast cancer specific

- NOTE Confidence: 0.8390835
- $00:54:03.604 \rightarrow 00:54:05.048$ mortality was not different,

 $00:54:05.050 \longrightarrow 00:54:07.210$ so the radiation was not doing

NOTE Confidence: 0.8390835

 $00:54:07.210 \longrightarrow 00:54:09.040$ anything to prevent those more.

NOTE Confidence: 0.8390835

 $00:54:09.040 \rightarrow 00:54:11.206$ One could argue more meaningful outcomes.

NOTE Confidence: 0.8390835

 $00{:}54{:}11{.}210 \dashrightarrow 00{:}54{:}12{.}164$ So this could.

NOTE Confidence: 0.8390835

 $00:54:12.164 \rightarrow 00:54:14.390$ This is used for two in support

NOTE Confidence: 0.8390835

 $00:54:14.466 \rightarrow 00:54:16.646$ of omitting radiation therapy for

NOTE Confidence: 0.8390835

 $00:54:16.646 \longrightarrow 00:54:18.826$ women that meet the criteria.

NOTE Confidence: 0.8390835

 $00{:}54{:}18{.}830 \dashrightarrow 00{:}54{:}21{.}377$ If I see patients and I have a 71

NOTE Confidence: 0.8390835

 $00{:}54{:}21{.}377 \dashrightarrow 00{:}54{:}23{.}824$ year old patient who is very who I

NOTE Confidence: 0.8390835

00:54:23.824 --> 00:54:26.046 feel has a life expectancy exceeding

NOTE Confidence: 0.8390835

 $00{:}54{:}26{.}046 \dashrightarrow 00{:}54{:}29{.}307$ 10 years or then we talk about hey,

NOTE Confidence: 0.8390835

 $00{:}54{:}29{.}307 \dashrightarrow 00{:}54{:}31{.}666$ may be we should do the radiation so.

NOTE Confidence: 0.8390835

00:54:31.670 --> 00:54:33.980 But it is good fodder for discussion

NOTE Confidence: 0.8390835

 $00{:}54{:}33{.}980 \dashrightarrow 00{:}54{:}36{.}832$ and an it can help to find those

 $00{:}54{:}36{.}832 \dashrightarrow 00{:}54{:}39{.}745$ patients for whom a mission of radiation

NOTE Confidence: 0.8390835

 $00:54:39.745 \rightarrow 00:54:42.355$ therapy would be certainly acceptable.

NOTE Confidence: 0.8390835

00:54:42.360 --> 00:54:42.678 Also,

NOTE Confidence: 0.8390835

 $00{:}54{:}42.678 \dashrightarrow 00{:}54{:}44.268$ patients are not going to

NOTE Confidence: 0.8390835

 $00:54:44.268 \longrightarrow 00:54:45.540$ take the endocrine therpay.

NOTE Confidence: 0.8390835

 $00:54:45.540 \dashrightarrow 00:54:48.150$ They really should get the radiation.

NOTE Confidence: 0.8390835

 $00:54:48.150 \longrightarrow 00:54:49.554$ Prime two is similar.

NOTE Confidence: 0.8390835

 $00:54:49.554 \longrightarrow 00:54:52.107$ It's a little bit behind as far

NOTE Confidence: 0.8390835

 $00:54:52.107 \rightarrow 00:54:54.339$ as how long it's been accruing

NOTE Confidence: 0.8390835

 $00:54:54.339 \longrightarrow 00:54:56.179$ and following out the data.

NOTE Confidence: 0.8390835

 $00:54:56.180 \longrightarrow 00:54:58.735$ The women can be 65 or older,

NOTE Confidence: 0.8390835

 $00:54:58.740 \longrightarrow 00:55:00.930$ T2 tumors up to three CM.

NOTE Confidence: 0.8390835

 $00:55:00.930 \rightarrow 00:55:02.502$ They must have pathologically

NOTE Confidence: 0.8390835

 $00:55:02.502 \rightarrow 00:55:04.467$ negative nodes with Sentinel node

NOTE Confidence: 0.8390835

00:55:04.467 --> 00:55:06.682 biopsy or XI section hormone receptor

NOTE Confidence: 0.8390835

 $00:55:06.682 \dashrightarrow 00:55:08.829$ positive and their definition of a

- NOTE Confidence: 0.8390835
- $00:55:08.829 \rightarrow 00:55:10.419$ negative margin is 1 millimeter.
- NOTE Confidence: 0.8390835
- $00{:}55{:}10{.}420 \dashrightarrow 00{:}55{:}12{.}616$ They live had some limits that
- NOTE Confidence: 0.8390835
- $00{:}55{:}12.616 \dashrightarrow 00{:}55{:}14.799$ the CL GB trial did not.
- NOTE Confidence: 0.8390835
- 00:55:14.800 00:55:18.076 The tumor could be grade 3 or have elvii,
- NOTE Confidence: 0.8390835
- $00{:}55{:}18.080 \dashrightarrow 00{:}55{:}19.990$ but you could not have.
- NOTE Confidence: 0.8390835
- 00:55:19.990 --> 00:55:22.096 Both an once again must have
- NOTE Confidence: 0.8390835
- 00:55:22.096 00:55:24.280 adequate their Bay and we see
- NOTE Confidence: 0.8390835
- $00:55:24.280 \rightarrow 00:55:26.398$ similar results at the five years.
- NOTE Confidence: 0.8390835
- $00{:}55{:}26{.}400 \dashrightarrow 00{:}55{:}28{.}444$ It almost mirrored the CLG be at
- NOTE Confidence: 0.8390835
- $00:55:28.444 \rightarrow 00:55:30.241$ the five years where ipsilateral
- NOTE Confidence: 0.8390835
- $00{:}55{:}30{.}241 \dashrightarrow 00{:}55{:}32{.}376$ breast tumor recurrence was around
- NOTE Confidence: 0.8390835
- 00:55:32.376 --> 00:55:34.940 1% in the radiation arm and 4%
- NOTE Confidence: 0.8390835
- $00:55:34.940 \longrightarrow 00:55:37.243$ in the no radiation arm with no
- NOTE Confidence: 0.8390835
- $00{:}55{:}37{.}243 \dashrightarrow 00{:}55{:}38{.}860$ difference in overall survival.
- NOTE Confidence: 0.8390835
- $00{:}55{:}38.860 \dashrightarrow 00{:}55{:}40.440$ There was a recent update
- NOTE Confidence: 0.8390835

00:55:40.440 --> 00:55:42.020 at the San Antonio Breast

NOTE Confidence: 0.82080436

 $00{:}55{:}42.087 \dashrightarrow 00{:}55{:}44.294$ Conference, however, that paper has

NOTE Confidence: 0.82080436

 $00:55:44.294 \rightarrow 00:55:46.199$ not followed showing similar results

NOTE Confidence: 0.82080436

 $00{:}55{:}46{.}199 \dashrightarrow 00{:}55{:}49{.}142$ as CLG be at 10 years with ipsilateral

NOTE Confidence: 0.82080436

 $00{:}55{:}49{.}142 \dashrightarrow 00{:}55{:}50{.}879$ breast tumor recurrence around 10.

NOTE Confidence: 0.82080436

 $00{:}55{:}50{.}880 \dashrightarrow 00{:}55{:}54{.}520$ In the know in the, I miss those up in

NOTE Confidence: 0.82080436

 $00{:}55{:}54{.}520 \dashrightarrow 00{:}55{:}58{.}490$ the no RT arm and then .9% in the RT arm.

NOTE Confidence: 0.82080436

 $00:55:58.490 \longrightarrow 00:56:00.970$ So I think that Prime 2 once

NOTE Confidence: 0.82080436

 $00{:}56{:}00{.}970 \dashrightarrow 00{:}56{:}02{.}746$ that paper comes out,

NOTE Confidence: 0.82080436

 $00:56:02.750 \rightarrow 00:56:05.518$ you know we may start offering for younger

NOTE Confidence: 0.82080436

 $00{:}56{:}05{.}518$ --> $00{:}56{:}08{.}317$ women or women with some larger tumors.

NOTE Confidence: 0.82080436

 $00:56:08.320 \rightarrow 00:56:11.328$ Omission of radiation therapy.

NOTE Confidence: 0.82080436

 $00:56:11.330 \dashrightarrow 00:56:14.048$ Now this is my last slide before I get

NOTE Confidence: 0.82080436

 $00:56:14.048 \rightarrow 00:56:16.666$ into the thank yous in the summaries,

NOTE Confidence: 0.82080436

 $00{:}56{:}16.670 \dashrightarrow 00{:}56{:}18.340$ and these are trials that

NOTE Confidence: 0.82080436

 $00:56:18.340 \longrightarrow 00:56:20.010$ I'm not that familiar with.

- NOTE Confidence: 0.82080436
- $00:56:20.010 \longrightarrow 00:56:21.680$ To be frank with you,
- NOTE Confidence: 0.82080436
- $00{:}56{:}21.680 \dashrightarrow 00{:}56{:}24.018$ there seemed to be more surgical trials,
- NOTE Confidence: 0.82080436
- $00:56:24.020 \rightarrow 00:56:26.024$ but I thought they were worth
- NOTE Confidence: 0.82080436
- 00:56:26.024 --> 00:56:27.026 just springing up.
- NOTE Confidence: 0.82080436
- $00{:}56{:}27.030 \dashrightarrow 00{:}56{:}29.694$ We have the comet trial open at Yale.
- NOTE Confidence: 0.82080436
- 00:56:29.700 --> 00:56:31.370 The Pi is doctor Golshan,
- NOTE Confidence: 0.82080436
- $00:56:31.370 \rightarrow 00:56:33.368$ and that if I'm understanding correctly,
- NOTE Confidence: 0.82080436
- $00:56:33.370 \longrightarrow 00:56:33.998$ looks at.
- NOTE Confidence: 0.82080436
- $00{:}56{:}33{.}998 \dashrightarrow 00{:}56{:}35{.}882$ You know what's considered a lower
- NOTE Confidence: 0.82080436
- $00{:}56{:}35{.}882 \dashrightarrow 00{:}56{:}38{.}521$ risk DCIS grade one and grade two and
- NOTE Confidence: 0.82080436
- $00{:}56{:}38{.}521 \dashrightarrow 00{:}56{:}40{.}245$ looking at endocrine the rapy alone
- NOTE Confidence: 0.82080436
- $00:56:40.245 \rightarrow 00:56:42.387$ with surveillance in lieu of surgery,
- NOTE Confidence: 0.82080436
- $00:56:42.390 \longrightarrow 00:56:43.080$ an obviously,
- NOTE Confidence: 0.82080436
- $00{:}56{:}43.080 \dashrightarrow 00{:}56{:}44.805$ if we don't do surgery.
- NOTE Confidence: 0.82080436
- $00:56:44.810 \rightarrow 00:56:46.658$ We're not coming to the radiation,
- NOTE Confidence: 0.82080436

 $00{:}56{:}46{.}660 \dashrightarrow 00{:}56{:}48{.}982$ so in a way this would be part of

NOTE Confidence: 0.82080436

 $00{:}56{:}48{.}982 \dashrightarrow 00{:}56{:}50{.}713$ omitting radiation and the Lord

NOTE Confidence: 0.82080436

 $00{:}56{:}50{.}713 \dashrightarrow 00{:}56{:}52{.}819$ trial is somewhat similar as well.

NOTE Confidence: 0.82080436

 $00:56:52.820 \rightarrow 00:56:53.928$ I'm for my homework.

NOTE Confidence: 0.82080436

 $00{:}56{:}53{.}928 \dashrightarrow 00{:}56{:}56{.}343$ I feel I need to learn a little

NOTE Confidence: 0.82080436

 $00:56:56.343 \longrightarrow 00:56:58.048$ bit more about these trials,

NOTE Confidence: 0.82080436

 $00:56:58.050 \rightarrow 00:57:00.514$ so I'll give you guys some homework too,

NOTE Confidence: 0.82080436

 $00:57:00.520 \longrightarrow 00:57:02.920$ but I felt that it would not be

NOTE Confidence: 0.82080436

 $00{:}57{:}02{.}920 \dashrightarrow 00{:}57{:}04{.}519$ complete without bringing it up,

NOTE Confidence: 0.82080436

 $00{:}57{:}04{.}520 \dashrightarrow 00{:}57{:}06{.}215$ but I think it's interesting

NOTE Confidence: 0.82080436

 $00{:}57{:}06{.}215 \dashrightarrow 00{:}57{:}08{.}235$ you know the question that seems

NOTE Confidence: 0.82080436

 $00:57:08.235 \longrightarrow 00:57:10.069$ to be being asked if I'm is,

NOTE Confidence: 0.82080436

00:57:10.070 --> 00:57:11.360 can screen detected low risk

NOTE Confidence: 0.82080436

00:57:11.360 --> 00:57:13.126 DCIS be managed by an active

NOTE Confidence: 0.82080436

 $00:57:13.126 \rightarrow 00:57:14.818$ surveillance strategy rather than.

NOTE Confidence: 0.82080436

 $00:57:14.820 \rightarrow 00:57:15.176$ Surgery.

- NOTE Confidence: 0.82080436
- 00:57:15.176 --> 00:57:16.244 So in summary,
- NOTE Confidence: 0.82080436
- $00{:}57{:}16{.}244 \dashrightarrow 00{:}57{:}18{.}929$ we are seeing you know in real
- NOTE Confidence: 0.82080436
- $00{:}57{:}18{.}929 \dashrightarrow 00{:}57{:}21{.}761$ time and working further towards a
- NOTE Confidence: 0.82080436
- $00:57:21.761 \rightarrow 00:57:24.116$ deescalation of radiation therapy for
- NOTE Confidence: 0.82080436
- $00:57:24.116 \rightarrow 00:57:26.261$ appropriate patients in regard to
- NOTE Confidence: 0.82080436
- $00{:}57{:}26{.}261 \dashrightarrow 00{:}57{:}28{.}705$ the number of treatment visits infractions,
- NOTE Confidence: 0.82080436
- $00:57:28.705 \longrightarrow 00:57:30.630$ the volume of tissue treated,
- NOTE Confidence: 0.82080436
- $00{:}57{:}30{.}630 \dashrightarrow 00{:}57{:}32{.}166$ and the appropriate emission
- NOTE Confidence: 0.82080436
- $00:57:32.166 \longrightarrow 00:57:33.318$ of radiation therapy,
- NOTE Confidence: 0.82080436
- $00:57:33.320 \longrightarrow 00:57:35.776$ and I'd like to thank you if you
- NOTE Confidence: 0.82080436
- $00:57:35.776 \rightarrow 00:57:38.488$ have any questions about any of the
- NOTE Confidence: 0.82080436
- $00{:}57{:}38{.}488 \dashrightarrow 00{:}57{:}41{.}789$ references or would like to discuss further.
- NOTE Confidence: 0.82080436
- 00:57:41.790 --> 00:57:44.286 That's my contact info,
- NOTE Confidence: 0.82080436
- $00{:}57{:}44.286 \dashrightarrow 00{:}57{:}44.910$ thanks.
- NOTE Confidence: 0.82080436
- $00{:}57{:}44{.}910 \dashrightarrow 00{:}57{:}45{.}280$ Thank
- NOTE Confidence: 0.85066074

 $00{:}57{:}45{.}280 \dashrightarrow 00{:}57{:}47{.}446$ you so much Doctor Knowlton wow

NOTE Confidence: 0.85066074

00:57:47.446 --> 00:57:49.640 three really fantastic talks and I

NOTE Confidence: 0.85066074

 $00{:}57{:}49{.}640 \dashrightarrow 00{:}57{:}51{.}355$ really appreciate everyone's time and NOTE Confidence: 0.85066074

 $00{:}57{:}51{.}355 \dashrightarrow 00{:}57{:}53{.}645$ effort in our audience for listening

NOTE Confidence: 0.85066074

 $00{:}57{:}53.645 \dashrightarrow 00{:}57{:}55.640$ and putting in some questions.

NOTE Confidence: 0.85066074

 $00{:}57{:}55{.}640 \dashrightarrow 00{:}57{:}57{.}860$ Please feel free to put in.

NOTE Confidence: 0.85066074

 $00{:}57{:}57{.}860 \dashrightarrow 00{:}58{:}00{.}576$ More questions will be happy to answer

NOTE Confidence: 0.85066074

 $00{:}58{:}00{.}576$ --> $00{:}58{:}03{.}934$ them and while we wait for those I have

NOTE Confidence: 0.85066074

 $00{:}58{:}03{.}934 \dashrightarrow 00{:}58{:}06{.}370$ a couple just list ening to the talks.

NOTE Confidence: 0.85066074

 $00{:}58{:}06{.}370 \dashrightarrow 00{:}58{:}08{.}590$ Maybe I'll start with Doctor, Doctor

NOTE Confidence: 0.85066074

 $00{:}58{:}08{.}590 \dashrightarrow 00{:}58{:}11{.}550$ Hooley and a little bit about the contrast.

NOTE Confidence: 0.85066074

00:58:11.550 --> 00:58:13.770 Enhance image Ng for screening and

NOTE Confidence: 0.85066074

 $00:58:13.770 \longrightarrow 00:58:16.438$ how you can do that without contrast.

NOTE Confidence: 0.85066074

00:58:16.440 --> 00:58:19.560 Potentially I was.

NOTE Confidence: 0.85066074

00:58:19.560 --> 00:58:21.076 You know like more,

NOTE Confidence: 0.85066074

00:58:21.076 --> 00:58:23.846 but you know you know where we're

- NOTE Confidence: 0.85066074
- $00:58:23.846 \rightarrow 00:58:26.723$ at in the United States and maybe
- NOTE Confidence: 0.85066074
- $00:58:26.723 \longrightarrow 00:58:28.359$ where we're going and
- NOTE Confidence: 0.8140599
- $00:58:28.360 \longrightarrow 00:58:30.760$ be great to hear about that.
- NOTE Confidence: 0.8140599
- 00:58:30.760 00:58:33.455 Sure, so uh, MRI has shown that
- NOTE Confidence: 0.8140599
- 00:58:33.455 --> 00:58:35.504 contrast enhanced screening has the
- NOTE Confidence: 0.8140599
- $00:58:35.504 \rightarrow 00:58:37.560$ highest cancer detection rate, right?
- NOTE Confidence: 0.8140599
- 00:58:37.560 --> 00:58:39.560 So because cancers are vascular,
- NOTE Confidence: 0.8140599
- 00:58:39.560 --> 00:58:41.008 and so you know,
- NOTE Confidence: 0.8140599
- $00:58:41.008 \rightarrow 00:58:43.960$ that's the way it's going with contrast,
- NOTE Confidence: 0.8140599
- 00:58:43.960 --> 00:58:44.870 enhanced mammography,
- NOTE Confidence: 0.8140599
- $00:58:44.870 \longrightarrow 00:58:47.600$ and even like in the breast
- NOTE Confidence: 0.8140599
- $00:58:47.600 \longrightarrow 00:58:49.460$ imaging which all require.
- NOTE Confidence: 0.8140599
- $00{:}58{:}49{.}460 \dashrightarrow 00{:}58{:}51{.}040$ You know Ivy contrast.
- NOTE Confidence: 0.8140599
- $00{:}58{:}51{.}040 \dashrightarrow 00{:}58{:}53{.}410$ There are some studies looking at
- NOTE Confidence: 0.8140599
- $00:58:53.481 \rightarrow 00:58:55.876$ MRI and diffusion weighted images,
- NOTE Confidence: 0.8140599

 $00:58:55.880 \longrightarrow 00:58:58.448$ or some people who say that

NOTE Confidence: 0.8140599

 $00:58:58.448 \rightarrow 00:59:00.160$ they will never happen.

NOTE Confidence: 0.8140599

 $00:59:00.160 \longrightarrow 00:59:02.746$ Some people say that it will

NOTE Confidence: 0.8140599

 $00:59:02.746 \longrightarrow 00:59:04.957$ perhaps somehow happen that you

NOTE Confidence: 0.8140599

00:59:04.957 --> 00:59:07.007 could do MRI with diffusion,

NOTE Confidence: 0.8140599

 $00{:}59{:}07{.}010 \dashrightarrow 00{:}59{:}09{.}716$ weighted imaging or some other technique

NOTE Confidence: 0.8140599

 $00:59:09.716 \longrightarrow 00:59:12.331$ that some really smart people are

NOTE Confidence: 0.8140599

 $00:59:12.331 \rightarrow 00:59:14.886$ going to invent and figure out some

NOTE Confidence: 0.8140599

00:59:14.886 --> 00:59:18.037 some sequences where we can look at

NOTE Confidence: 0.8140599

 $00:59:18.037 \rightarrow 00:59:20.391$ vascularity without Ivy contrast injection.

NOTE Confidence: 0.8140599

00:59:20.391 --> 00:59:23.096 Likewise, there are also some

NOTE Confidence: 0.8140599

 $00:59:23.096 \dashrightarrow 00:59:25.260$ ultrasound products out there.

NOTE Confidence: 0.8140599

00:59:25.260 --> 00:59:27.176 Randy Butler participated in

NOTE Confidence: 0.8140599

 $00{:}59{:}27.176 \dashrightarrow 00{:}59{:}29.092$ an auto acoustics ultrasound

NOTE Confidence: 0.8140599

 $00:59:29.092 \dashrightarrow 00:59:31.610$ study that was the optoacoustic.

NOTE Confidence: 0.8140599

00:59:31.610 --> 00:59:33.482 Ultrasound equipment was just

- NOTE Confidence: 0.8140599
- $00{:}59{:}33{.}482 \dashrightarrow 00{:}59{:}35{.}822$ FDA approved last January and

00:59:35.822 --> 00:59:38.378 it's basically looking at heating

NOTE Confidence: 0.8140599

 $00:59:38.378 \longrightarrow 00:59:40.390$ lasers and heating lights.

NOTE Confidence: 0.8140599

 $00:59:40.390 \rightarrow 00:59:43.156$ Laser light and heating the blood

NOTE Confidence: 0.8140599

 $00:59:43.156 \rightarrow 00:59:45.000$ vessels and looking determining

NOTE Confidence: 0.8140599

 $00:59:45.080 \rightarrow 00:59:47.710$ oxygenation within the blood vessels.

NOTE Confidence: 0.8140599

 $00:59:47.710 \dashrightarrow 00:59:51.189$ And she published a couple of articles.

NOTE Confidence: 0.8140599

00:59:51.190 --> 00:59:51.964 Common radiology,

NOTE Confidence: 0.8140599

 $00{:}59{:}51{.}964 \dashrightarrow 00{:}59{:}54{.}286$ which is our top journal showing

NOTE Confidence: 0.8140599

 $00:59:54.286 \rightarrow 00:59:55.928$ the vascularity within tumors

NOTE Confidence: 0.8140599

 $00{:}59{:}55{.}928 \dashrightarrow 00{:}59{:}57{.}948$ and superimposing that over a

NOTE Confidence: 0.8140599

 $00{:}59{:}57{.}948 \dashrightarrow 00{:}59{:}59{.}601$ traditional ultrasound so that

NOTE Confidence: 0.8140599

 $00{:}59{:}59{.}601 \dashrightarrow 01{:}00{:}01{.}476$ is vascular based without without

NOTE Confidence: 0.8140599

 $01{:}00{:}01{.}476 \dashrightarrow 01{:}00{:}04.710$ contrast and there's some other.

NOTE Confidence: 0.8140599

 $01{:}00{:}04.710 \dashrightarrow 01{:}00{:}05.760$ New ultrasound techniques.

- 01:00:05.760 --> 01:00:07.860 Also that are a little bit
- NOTE Confidence: 0.8140599
- $01:00:07.860 \longrightarrow 01:00:08.989$ different that measure.
- NOTE Confidence: 0.8140599
- 01:00:08.990 --> 01:00:11.138 They can measure vascularity as well,
- NOTE Confidence: 0.8140599
- $01:00:11.140 \longrightarrow 01:00:15.820$ so those are the ones that right now are.
- NOTE Confidence: 0.8140599
- $01:00:15.820 \dashrightarrow 01:00:17.748$ Active you know, and we could see it.
- NOTE Confidence: 0.8140599
- 01:00:17.750 --> 01:00:18.232 You know,
- NOTE Confidence: 0.8140599
- $01:00:18.232 \rightarrow 01:00:20.160$ in five or ten years or maybe sooner.
- NOTE Confidence: 0.8140599
- $01:00:20.160 \longrightarrow 01:00:20.642$ Who knows.
- NOTE Confidence: 0.8140599
- 01:00:20.642 --> 01:00:20.883 Well,
- NOTE Confidence: 0.8140599
- $01:00:20.883 \rightarrow 01:00:22.570$ actually opt acoustics is already out there,
- NOTE Confidence: 0.8140599
- $01:00:22.570 \longrightarrow 01:00:24.946$ so you have to wear fancy
- NOTE Confidence: 0.8140599
- $01:00:24.946 \longrightarrow 01:00:26.530$ space classes and stuff.
- NOTE Confidence: 0.8140599
- 01:00:26.530 --> 01:00:26.920 Awesome,
- NOTE Confidence: 0.8297859
- $01{:}00{:}26{.}920 \dashrightarrow 01{:}00{:}29{.}678$ thank you a question for Doctor Abraham.
- NOTE Confidence: 0.8297859
- $01:00:29.680 \longrightarrow 01:00:32.263$ What are some of the signs or
- NOTE Confidence: 0.8297859
- $01:00:32.263 \rightarrow 01:00:34.277$ indications that you know clinicians

- NOTE Confidence: 0.8297859
- $01:00:34.277 \rightarrow 01:00:36.767$ out there should be aware of,
- NOTE Confidence: 0.8297859
- $01:00:36.770 \longrightarrow 01:00:39.242$ for you know for those that end up
- NOTE Confidence: 0.8297859
- 01:00:39.242 --> 01:00:40.866 getting implants for reconstruction
- NOTE Confidence: 0.8297859
- $01{:}00{:}40.866 \dashrightarrow 01{:}00{:}43.226$ with the implant associated an aplastic
- NOTE Confidence: 0.8297859
- 01:00:43.226 --> 01:00:46.710 large cell lymphoma, which is, you know,
- NOTE Confidence: 0.8297859
- $01{:}00{:}46.710$ --> $01{:}00{:}51.168$ gotten some press in the last year or two.
- NOTE Confidence: 0.8297859
- $01{:}00{:}51{.}170 \dashrightarrow 01{:}00{:}53{.}744$ Dial yeah, so first of all the the presence
- NOTE Confidence: 0.8297859
- $01{:}00{:}53.744 \dashrightarrow 01{:}00{:}56.332$ of a textured implant which is obviously
- NOTE Confidence: 0.8297859
- $01{:}00{:}56{.}332 \dashrightarrow 01{:}00{:}59{.}009$ for some body who's not a plastic surgeon.
- NOTE Confidence: 0.8297859
- 01:00:59.010 --> 01:01:00.720 Maybe a little bit challenging.
- NOTE Confidence: 0.8297859
- 01:01:00.720 --> 01:01:03.107 So if there's any concern you know,
- NOTE Confidence: 0.8297859
- 01:01:03.110 --> 01:01:05.494 have the patient go back to the plastic
- NOTE Confidence: 0.8297859
- 01:01:05.494 --> 01:01:08.221 surgeon so you know because we are at
- NOTE Confidence: 0.8297859
- 01:01:08.221 --> 01:01:10.041 this point considering removing them
- NOTE Confidence: 0.8297859
- 01:01:10.041 --> 01:01:12.645 sort of prophylactically and then any change,
- NOTE Confidence: 0.8297859

01:01:12.650 --> 01:01:14.014 particularly a delayed ceroma,

NOTE Confidence: 0.8297859

 $01:01:14.014 \rightarrow 01:01:16.060$ is what is classically referred to.

NOTE Confidence: 0.8297859

01:01:16.060 --> 01:01:18.230 So you know in in breast surgery

NOTE Confidence: 0.8297859

01:01:18.230 --> 01:01:19.810 seromas are not uncommon,

NOTE Confidence: 0.8297859

 $01:01:19.810 \longrightarrow 01:01:22.323$ but you know, at the time of

NOTE Confidence: 0.8297859

01:01:22.323 --> 01:01:24.180 surgery or immediately following.

NOTE Confidence: 0.8297859

 $01:01:24.180 \longrightarrow 01:01:25.262$ Postmastectomy radiation,

NOTE Confidence: 0.8297859

 $01{:}01{:}25{.}262 \dashrightarrow 01{:}01{:}29{.}590$ but if there is a saroma that develops

NOTE Confidence: 0.8297859

01:01:29.680 --> 01:01:33.200 and delayed fashion to 310 years after an

NOTE Confidence: 0.8297859

 $01:01:33.200 \rightarrow 01:01:36.450$ implant is placed at sign for concern.

NOTE Confidence: 0.8297859

 $01{:}01{:}36.450 \dashrightarrow 01{:}01{:}38.906$ Thank you and maybe a last question.

NOTE Confidence: 0.8297859

 $01:01:38.910 \longrightarrow 01:01:39.966$ For doctor Knowlton.

NOTE Confidence: 0.8297859

01:01:39.966 --> 01:01:41.320 You know, I I,

NOTE Confidence: 0.8297859

 $01:01:41.320 \longrightarrow 01:01:41.970$ you know,

NOTE Confidence: 0.8297859

 $01{:}01{:}41{.}970 \dashrightarrow 01{:}01{:}44{.}380$ often we see patients that are over

NOTE Confidence: 0.8297859

 $01:01:44.380 \longrightarrow 01:01:47.061$ the age of 70 small your positive

- NOTE Confidence: 0.8297859
- $01:01:47.061 \rightarrow 01:01:49.231$ breast cancers and you know with
- NOTE Confidence: 0.8297859
- 01:01:49.231 --> 01:01:51.585 the LGB data that you showed you
- NOTE Confidence: 0.8297859
- 01:01:51.585 --> 01:01:53.005 know undergoing breast conservation
- NOTE Confidence: 0.8297859
- $01{:}01{:}53.005 \dashrightarrow 01{:}01{:}54.780$ and forgoing radiation and you
- NOTE Confidence: 0.8297859
- 01:01:54.835 --> 01:01:56.510 know doing anti estrogen therapy.
- NOTE Confidence: 0.8297859
- $01{:}01{:}56{.}510 \dashrightarrow 01{:}01{:}58{.}792$ But have you also seen the converse
- NOTE Confidence: 0.8297859
- 01:01:58.792 --> 01:02:01.346 where some would just prefer to do a
- NOTE Confidence: 0.8297859
- $01:02:01.346 \longrightarrow 01:02:03.398$ short course of radiation as opposed
- NOTE Confidence: 0.8297859
- $01:02:03.398 \rightarrow 01:02:05.306$ to putting themselves through?
- NOTE Confidence: 0.8297859
- 01:02:05.310 --> 01:02:07.977 You know 5 plus years of anti
- NOTE Confidence: 0.8297859
- $01:02:07.977 \longrightarrow 01:02:08.739$ estrogen therapy.
- NOTE Confidence: 0.8297859
- 01:02:08.740 --> 01:02:11.503 I guess like if we bias a patient one
- NOTE Confidence: 0.8297859
- $01:02:11.503 \rightarrow 01:02:14.428$ way or the other when they get to you,
- NOTE Confidence: 0.8297859
- 01:02:14.430 --> 01:02:15.378 how is that
- NOTE Confidence: 0.8341066
- $01:02:15.380 \rightarrow 01:02:17.900$ discussion go that I see this every week?
- NOTE Confidence: 0.8341066
01:02:17.900 --> 01:02:19.480 I would say every week.

NOTE Confidence: 0.8341066

01:02:19.480 --> 01:02:22.324 So and you know, I listen to the patient.

NOTE Confidence: 0.8341066

01:02:22.330 --> 01:02:25.274 Many of them come in with some biases

NOTE Confidence: 0.8341066

 $01:02:25.274 \rightarrow 01:02:27.439$ against the endocrine therapy.

NOTE Confidence: 0.8341066

01:02:27.440 --> 01:02:29.582 So that doctor Google doesn't do

NOTE Confidence: 0.8341066

01:02:29.582 --> 01:02:31.010 endocrine the rapy much justice.

NOTE Confidence: 0.8341066

 $01{:}02{:}31{.}010 \dashrightarrow 01{:}02{:}33{.}714$ So I talked to them about data showing

NOTE Confidence: 0.8341066

 $01:02:33.714 \longrightarrow 01:02:36.302$ that you know at least half of

NOTE Confidence: 0.8341066

 $01{:}02{:}36{.}302 \dashrightarrow 01{:}02{:}38{.}860$ patients really don't get any of these.

NOTE Confidence: 0.8341066

01:02:38.860 --> 01:02:41.002 You know, join aches or hot

NOTE Confidence: 0.8341066

 $01{:}02{:}41.002 \dashrightarrow 01{:}02{:}42.430$ flashes and that's placebo.

NOTE Confidence: 0.8341066

 $01{:}02{:}42{.}430 \dashrightarrow 01{:}02{:}44{.}220$ Patients got the same amount.

NOTE Confidence: 0.8341066

 $01{:}02{:}44.220 \dashrightarrow 01{:}02{:}47.076$ Maybe they should just give it a try.

NOTE Confidence: 0.8341066

 $01{:}02{:}47.080 \dashrightarrow 01{:}02{:}49.334$ I discussed the benefit of helping prevent

NOTE Confidence: 0.8341066

 $01:02:49.334 \longrightarrow 01:02:51.720$ breast cancer in the contralateral breast.

NOTE Confidence: 0.8341066

01:02:51.720 --> 01:02:54.219 An IV after I finish my spiel,

- NOTE Confidence: 0.8341066
- $01:02:54.220 \rightarrow 01:02:56.852$ it's attempting to get them to be

 $01:02:56.852 \rightarrow 01:02:58.559$ more open to AI or.

NOTE Confidence: 0.8341066

 $01:02:58.560 \rightarrow 01:03:00.402$ Tim, sometimes they will try it

NOTE Confidence: 0.8341066

 $01{:}03{:}00{.}402 \dashrightarrow 01{:}03{:}02{.}523$ and we'll check back in with each

NOTE Confidence: 0.8341066

 $01:03:02.523 \longrightarrow 01:03:04.179$ other in two to three months.

NOTE Confidence: 0.8341066

 $01:03:04.180 \longrightarrow 01:03:06.259$ And if they're still taking it in,

NOTE Confidence: 0.8341066

 $01:03:06.260 \rightarrow 01:03:07.145$ tolerating it super,

NOTE Confidence: 0.8341066

 $01:03:07.145 \longrightarrow 01:03:08.325$ or if they're not,

NOTE Confidence: 0.8341066

 $01{:}03{:}08{.}330 \dashrightarrow 01{:}03{:}10{.}650$ then I have come back and done the

NOTE Confidence: 0.8341066

01:03:10.650 --> 01:03:12.468 radiation at that point or even,

NOTE Confidence: 0.8341066

 $01:03:12.470 \longrightarrow 01:03:14.640$ or some if they might give my

NOTE Confidence: 0.8341066

 $01{:}03{:}14.640 \dashrightarrow 01{:}03{:}16.505$ initials feel an they still tell

NOTE Confidence: 0.8341066

01:03:16.505 --> 01:03:18.872 me I'm not by I'm not going to

NOTE Confidence: 0.8341066

 $01:03:18.872 \rightarrow 01:03:21.055$ take it no matter what I say, OK,

NOTE Confidence: 0.8341066

 $01{:}03{:}21.055 \dashrightarrow 01{:}03{:}23.415$ I hear you and then we would either.

NOTE Confidence: 0.8341066

- 01:03:23.420 --> 01:03:24.221 Do you know?
- NOTE Confidence: 0.8341066
- $01:03:24.221 \rightarrow 01:03:25.823$ Depending on the characteristics of the
- NOTE Confidence: 0.8341066
- $01:03:25.823 \rightarrow 01:03:27.569$ tumor and the patients comorbidities,
- NOTE Confidence: 0.8341066
- $01{:}03{:}27{.}570 \dashrightarrow 01{:}03{:}30{.}530$ we may do a fast regimen of once a week,
- NOTE Confidence: 0.8341066
- $01{:}03{:}30{.}530 \dashrightarrow 01{:}03{:}32{.}898$ or you may do the moderately hypo frack.
- NOTE Confidence: 0.8341066
- $01{:}03{:}32{.}900 \dashrightarrow 01{:}03{:}33{.}554$ The 15.
- NOTE Confidence: 0.8341066
- 01:03:33.554 --> 01:03:35.189 Plus or minus a boost,
- NOTE Confidence: 0.8341066
- $01:03:35.190 \longrightarrow 01:03:37.353$ so I certainly do see that that
- NOTE Confidence: 0.8341066
- $01:03:37.353 \longrightarrow 01:03:39.040$ quite quite often every week.
- NOTE Confidence: 0.8348222
- $01{:}03{:}39{.}860 \dashrightarrow 01{:}03{:}42{.}335$ Ann and maybe just to finish off on on
- NOTE Confidence: 0.8348222
- $01{:}03{:}42{.}335 \dashrightarrow 01{:}03{:}45{.}093$ that when they you said maybe try anti NOTE Confidence: 0.8348222
- $01:03:45.093 \rightarrow 01:03:47.159$ estrogen therapy for a month or two.
- NOTE Confidence: 0.8348222
- $01{:}03{:}47{.}160 \dashrightarrow 01{:}03{:}49{.}671$ Is there kind of a cut off where you
- NOTE Confidence: 0.8348222
- $01:03:49.671 \rightarrow 01:03:52.098$ would say that if they went with
- NOTE Confidence: 0.8348222
- $01{:}03{:}52.098 \dashrightarrow 01{:}03{:}54.095$ anti estrogen and decided to stop
- NOTE Confidence: 0.8348222
- $01:03:54.095 \rightarrow 01:03:56.271$ and wanted to come back to you to

- NOTE Confidence: 0.8348222
- $01:03:56.280 \rightarrow 01:03:57.800$ radiation where you'd feel comfortable.

 $01:03:58.580 \longrightarrow 01:04:00.090$ Well, that's a good question.

NOTE Confidence: 0.8677446

01:04:00.090 --> 01:04:01.956 You know two or three months

NOTE Confidence: 0.8677446

01:04:01.956 --> 01:04:03.700 I wouldn't even blink an eye,

NOTE Confidence: 0.8677446

 $01:04:03.700 \longrightarrow 01:04:05.460$ especially if they were taking

NOTE Confidence: 0.8677446

 $01:04:05.460 \longrightarrow 01:04:07.519$ endocrine therapy for the bulk of

NOTE Confidence: 0.8677446

 $01{:}04{:}07{.}519 \dashrightarrow 01{:}04{:}09{.}415$ that I have done up to six months.

NOTE Confidence: 0.8677446

01:04:09.420 $\operatorname{\text{-->}}$ 01:04:11.526 I have done it, but at that point we

NOTE Confidence: 0.8677446

01:04:11.526 --> 01:04:13.781 may ask the patient to have another

NOTE Confidence: 0.8677446

01:04:13.781 --> 01:04:15.740 Mamo before starting the radiation.

NOTE Confidence: 0.8677446

 $01{:}04{:}15{.}740 \dashrightarrow 01{:}04{:}17{.}552$ And sometimes I'll bring those patients

NOTE Confidence: 0.8677446

 $01{:}04{:}17{.}552 \dashrightarrow 01{:}04{:}19{.}349$ up in our multidisciplinary tumor board.

NOTE Confidence: 0.8677446

01:04:19.350 --> 01:04:22.005 I did have one patient where it was a

NOTE Confidence: 0.8677446

 $01{:}04{:}22.005 \dashrightarrow 01{:}04{:}24.170$ year out, but she was substantially high.

NOTE Confidence: 0.8677446

 $01:04:24.170 \longrightarrow 01:04:25.670$ Risk enough that I presented,

NOTE Confidence: 0.8677446

- 01:04:25.670 --> 01:04:27.242 or at our multidisciplinary
- NOTE Confidence: 0.8677446
- $01{:}04{:}27{.}242 \dashrightarrow 01{:}04{:}28{.}814$ tumor board we got.

 $01:04:28.820 \rightarrow 01:04:30.938$ Breast imaging no evidence that not.

NOTE Confidence: 0.8677446

 $01:04:30.940 \rightarrow 01:04:32.700$ There's nothing suspicious on that,

NOTE Confidence: 0.8677446

 $01{:}04{:}32.700 \dashrightarrow 01{:}04{:}34.470$ and I did offer radiation,

NOTE Confidence: 0.8677446

 $01{:}04{:}34{.}470 \dashrightarrow 01{:}04{:}36{.}437$ but beyond six months I would really

NOTE Confidence: 0.8677446

 $01:04:36.437 \rightarrow 01:04:38.311$ want to have a multidisciplinary

NOTE Confidence: 0.8677446

 $01:04:38.311 \longrightarrow 01:04:39.760$ discussion about that.

NOTE Confidence: 0.86417127

 $01:04:41.020 \rightarrow 01:04:43.015$ Thank you and again thank you all NOTE Confidence: 0.86417127

 $01:04:43.015 \rightarrow 01:04:45.044$ so much for these three wonderful NOTE Confidence: 0.86417127

01:04:45.044 --> 01:04:47.252 presentations I I learned so much NOTE Confidence: 0.86417127

 $01{:}04{:}47.252 \dashrightarrow 01{:}04{:}49.546$ in the course of the last hour and NOTE Confidence: 0.86417127

01:04:49.546 --> 01:04:52.020 a half and the great thing is that

NOTE Confidence: 0.86417127

 $01{:}04{:}52{.}020 \dashrightarrow 01{:}04{:}54{.}321$ this is recorded so others could go

NOTE Confidence: 0.86417127

01:04:54.321 --> 01:04:56.561 back and be able to look at that.

NOTE Confidence: 0.86417127

 $01:04:56.570 \longrightarrow 01:04:58.165$ Really thank the audience for

- NOTE Confidence: 0.86417127
- 01:04:58.165 --> 01:05:00.360 joining us for this series of three

 $01{:}05{:}00.360 \dashrightarrow 01{:}05{:}02.236$ breast CME's here at Yale and and

NOTE Confidence: 0.86417127

 $01{:}05{:}02.236 \dashrightarrow 01{:}05{:}03.908$ look forward to continuing them

NOTE Confidence: 0.86417127

 $01:05:03.908 \longrightarrow 01:05:05.588$ in the next academic year.

NOTE Confidence: 0.86417127

 $01:05:05.590 \longrightarrow 01:05:07.767$ So with that thank you so much.

NOTE Confidence: 0.86417127

 $01{:}05{:}07{.}770 \dashrightarrow 01{:}05{:}09{.}320$ Have a great weekend. Thank

NOTE Confidence: 0.86417127

01:05:09.320 --> 01:05:10.310 you, thank you.