WEBVTT

NOTE duration:"01:39:56" NOTE recognizability:0.852

NOTE language:en-us

NOTE Confidence: 0.90070841

 $00:00:00.000 \longrightarrow 00:00:02.280$ So I think we'll get started.

NOTE Confidence: 0.90070841

00:00:02.280 --> 00:00:03.700 My name is Claire Healy.

NOTE Confidence: 0.90070841

00:00:03.700 --> 00:00:05.470 I'm one of the genetic counseling

NOTE Confidence: 0.90070841

 $00:00:05.470 \longrightarrow 00:00:07.105$ managers and the smilow cancer

NOTE Confidence: 0.90070841

 $00:00:07.105 \longrightarrow 00:00:08.717$ genetics and prevention program.

NOTE Confidence: 0.90070841

 $00:00:08.720 \longrightarrow 00:00:11.138$ So, on behalf of the program,

NOTE Confidence: 0.90070841

00:00:11.140 --> 00:00:13.436 I'll welcome you all to The Tonight.

NOTE Confidence: 0.90070841

 $00:00:13.440 \longrightarrow 00:00:15.670$ Two of our seminar series,

NOTE Confidence: 0.90070841

 $00:00:15.670 \longrightarrow 00:00:18.304$ the title of tonight's seminar is

NOTE Confidence: 0.90070841

 $00:00:18.304 \longrightarrow 00:00:20.060$ implementing screening and prevention

NOTE Confidence: 0.90070841

 $00:00:20.124 \longrightarrow 00:00:21.608$ strategies for individuals identified

NOTE Confidence: 0.90070841

00:00:21.608 --> 00:00:24.330 to be at high risk for cancer.

NOTE Confidence: 0.90070841

 $00:00:24.330 \longrightarrow 00:00:26.285$ And a few housekeeping things

 $00:00:26.285 \longrightarrow 00:00:27.849$ before we get started.

NOTE Confidence: 0.90070841

 $00:00:27.850 \longrightarrow 00:00:30.496$ Please try and keep yourself muted and

NOTE Confidence: 0.90070841

 $00:00:30.496 \longrightarrow 00:00:32.809$ remain muted during all of the talks.

NOTE Confidence: 0.90070841

 $00:00:32.810 \longrightarrow 00:00:34.730$ We've saved time at the end of all

NOTE Confidence: 0.90070841

 $00:00:34.730 \longrightarrow 00:00:36.619$ of our lectures for questions,

NOTE Confidence: 0.90070841

 $00:00:36.620 \longrightarrow 00:00:39.060$ but feel free as we go through these

NOTE Confidence: 0.90070841

 $00:00:39.060 \dashrightarrow 00:00:41.578$ lectures to enter questions into the Q&A.

NOTE Confidence: 0.90070841

00:00:41.578 --> 00:00:43.168 And tonight we're going to

NOTE Confidence: 0.90070841

 $00{:}00{:}43.168 \dashrightarrow 00{:}00{:}44.990$ start with our first speaker,

NOTE Confidence: 0.90070841

 $00:00:44.990 \longrightarrow 00:00:46.166$ doctor Melanie Lynch.

NOTE Confidence: 0.90070841

 $00:00:46.166 \longrightarrow 00:00:48.518$ Doctor Lynch is director of breast

NOTE Confidence: 0.90070841

 $00{:}00{:}48.518 \longrightarrow 00{:}00{:}50.624$ surgery at the Smilow Cancer

NOTE Confidence: 0.90070841

00:00:50.624 --> 00:00:52.276 Hospital locations in Bridgeport,

NOTE Confidence: 0.90070841

 $00:00:52.280 \longrightarrow 00:00:53.426$ Fairfield and Trumbull,

NOTE Confidence: 0.90070841

 $00:00:53.426 \longrightarrow 00:00:55.718$ and the Norma from Breast Center.

NOTE Confidence: 0.90070841

 $00:00:55.720 \longrightarrow 00:00:57.695$ She's a board certified general

 $00:00:57.695 \longrightarrow 00:00:59.275$ surgeon and fellowship trained

NOTE Confidence: 0.90070841

 $00{:}00{:}59.275 \to 00{:}01{:}01.290$ surgical oncologist and Doctor Lynch.

NOTE Confidence: 0.90070841

 $00:01:01.290 \longrightarrow 00:01:02.290$ Thank you for joining us.

NOTE Confidence: 0.926895752142857

00:01:03.030 --> 00:01:04.660 Thank you, thank you for

NOTE Confidence: 0.926895752142857

 $00:01:04.660 \longrightarrow 00:01:05.964$ the kind introduction and

NOTE Confidence: 0.926895752142857

 $00:01:05.964 \longrightarrow 00:01:07.799$ for letting me join tonight.

NOTE Confidence: 0.926895752142857

 $00:01:07.800 \longrightarrow 00:01:09.420$ I'm gonna share my screen.

NOTE Confidence: 0.88438386

 $00:01:13.510 \longrightarrow 00:01:16.120$ How's that work? Yep.

NOTE Confidence: 0.866873423333333

 $00:01:18.520 \longrightarrow 00:01:20.938$ There we go. How's that look?

NOTE Confidence: 0.866873423333333

 $00{:}01{:}20.940 \dashrightarrow 00{:}01{:}25.285$ Perfect OK. So when we started

NOTE Confidence: 0.866873423333333

 $00{:}01{:}25.285 \dashrightarrow 00{:}01{:}26.694$ discussion of breast cancer risk,

NOTE Confidence: 0.866873423333333

 $00:01:26.694 \longrightarrow 00:01:28.410$ we certainly have to talk about

NOTE Confidence: 0.866873423333333

 $00{:}01{:}28.467 \dashrightarrow 00{:}01{:}30.217$ breast cancer incidence and looking

NOTE Confidence: 0.866873423333333

00:01:30.217 --> 00:01:32.293 at breast cancer incidence and how

NOTE Confidence: 0.866873423333333

 $00:01:32.293 \longrightarrow 00:01:33.925$ this has changed over the years.

 $00:01:33.930 \longrightarrow 00:01:36.600$ You can see how with increasing

NOTE Confidence: 0.866873423333333

 $00{:}01{:}36.600 \dashrightarrow 00{:}01{:}38.380$ screening mammography or breast

NOTE Confidence: 0.866873423333333

 $00:01:38.459 \longrightarrow 00:01:40.369$ cancer incidents did go up.

NOTE Confidence: 0.866873423333333

 $00:01:40.370 \longrightarrow 00:01:41.674$ Our mortality though has

NOTE Confidence: 0.866873423333333

00:01:41.674 --> 00:01:42.978 continued to go down,

NOTE Confidence: 0.866873423333333

 $00:01:42.980 \longrightarrow 00:01:45.213$ and that's because most of the cancers

NOTE Confidence: 0.866873423333333

00:01:45.213 --> 00:01:47.083 that were identifying now in the

NOTE Confidence: 0.866873423333333

00:01:47.083 --> 00:01:48.787 earlier stages when they are curable.

NOTE Confidence: 0.866873423333333

00:01:48.790 --> 00:01:50.962 You'll notice in this timeline you

NOTE Confidence: 0.866873423333333

 $00:01:50.962 \longrightarrow 00:01:53.304$ see this peak here in the 1980s.

NOTE Confidence: 0.866873423333333

 $00:01:53.304 \longrightarrow 00:01:54.960$ This is when screening.

NOTE Confidence: 0.866873423333333

00:01:54.960 --> 00:01:56.940 Went up dramatically when our first

NOTE Confidence: 0.866873423333333

 $00:01:56.940 \longrightarrow 00:01:59.109$ lady was diagnosed with breast cancer.

NOTE Confidence: 0.866873423333333

 $00:01:59.110 \longrightarrow 00:02:00.466$ The other thing you're going to

NOTE Confidence: 0.866873423333333

00:02:00.466 --> 00:02:01.990 notice here is this dramatic dropoff

NOTE Confidence: 0.866873423333333

 $00:02:01.990 \longrightarrow 00:02:03.430$ and breast cancer incidents that

 $00:02:03.430 \longrightarrow 00:02:05.203$ happened in the early 2000s with

NOTE Confidence: 0.866873423333333

 $00{:}02{:}05.203 \dashrightarrow 00{:}02{:}06.643$ the publication of the Women's

NOTE Confidence: 0.866873423333333

 $00:02:06.643 \longrightarrow 00:02:08.026$ Health Initiative trial that

NOTE Confidence: 0.866873423333333

 $00:02:08.026 \longrightarrow 00:02:10.041$ demonstrated a link between hormone

NOTE Confidence: 0.866873423333333

 $00:02:10.041 \longrightarrow 00:02:12.304$ replacement therapy at the time of

NOTE Confidence: 0.866873423333333

 $00:02:12.304 \longrightarrow 00:02:13.949$ menopause and breast cancer risk.

NOTE Confidence: 0.93377169777778

 $00:02:16.390 \longrightarrow 00:02:17.775$ When we think about what

NOTE Confidence: 0.93377169777778

00:02:17.775 --> 00:02:18.883 effects breast cancer risk,

NOTE Confidence: 0.93377169777778

 $00:02:18.890 \longrightarrow 00:02:20.696$ we know that there are a number

NOTE Confidence: 0.93377169777778

 $00{:}02{:}20.696 \dashrightarrow 00{:}02{:}22.324$ of factors that we can control

NOTE Confidence: 0.93377169777778

 $00:02:22.324 \longrightarrow 00:02:24.172$ and there are a number of factors

NOTE Confidence: 0.93377169777778

 $00:02:24.229 \longrightarrow 00:02:25.765$ that are out of our control.

NOTE Confidence: 0.93377169777778

 $00{:}02{:}25.770 \dashrightarrow 00{:}02{:}28.110$ We know that we can decrease

NOTE Confidence: 0.93377169777778

 $00{:}02{:}28.110 \dashrightarrow 00{:}02{:}30.356$ risk by maintaining a healthy

NOTE Confidence: 0.93377169777778

 $00:02:30.356 \longrightarrow 00:02:32.788$ weight by exercising regularly.

 $00:02:32.790 \longrightarrow 00:02:34.992$ And by limiting the amount of

NOTE Confidence: 0.93377169777778

00:02:34.992 --> 00:02:37.180 alcohol that we drink per week,

NOTE Confidence: 0.93377169777778

 $00:02:37.180 \longrightarrow 00:02:38.470$ we also know that there's some

NOTE Confidence: 0.93377169777778

 $00:02:38.470 \longrightarrow 00:02:39.710$ things that we can't control,

NOTE Confidence: 0.93377169777778

 $00:02:39.710 \longrightarrow 00:02:41.710$ including exposure to ionizing

NOTE Confidence: 0.93377169777778

 $00{:}02{:}41.710 \dashrightarrow 00{:}02{:}44.210$ radiation for treatment for cancer.

NOTE Confidence: 0.93377169777778

00:02:44.210 --> 00:02:46.478 When, especially at a young age,

NOTE Confidence: 0.93377169777778

 $00:02:46.480 \longrightarrow 00:02:48.470$ a family history of cancer,

NOTE Confidence: 0.93377169777778

 $00:02:48.470 \longrightarrow 00:02:51.270$ or an inherited genetic

NOTE Confidence: 0.93377169777778

 $00:02:51.270 \longrightarrow 00:02:53.370$ susceptibility to cancer.

NOTE Confidence: 0.93377169777778

 $00:02:53.370 \longrightarrow 00:02:55.422$ When we look at breast cancer

NOTE Confidence: 0.93377169777778

 $00:02:55.422 \longrightarrow 00:02:56.790$ and these risk factors,

NOTE Confidence: 0.93377169777778

 $00:02:56.790 \longrightarrow 00:02:58.082$ the risk is variable.

NOTE Confidence: 0.93377169777778

 $00:02:58.082 \longrightarrow 00:03:00.381$ We know that breast cancer risk is

NOTE Confidence: 0.93377169777778

 $00:03:00.381 \longrightarrow 00:03:02.467$ very closely related to age that women

NOTE Confidence: 0.93377169777778

 $00:03:02.467 \longrightarrow 00:03:04.832$ who are 70 years old or 10 times as

 $00:03:04.832 \longrightarrow 00:03:06.572$ likely to be diagnosed with breast

NOTE Confidence: 0.93377169777778

 $00:03:06.572 \longrightarrow 00:03:08.576$ cancer is someone in their 30s.

NOTE Confidence: 0.93377169777778

 $00:03:08.580 \longrightarrow 00:03:10.582$ We know that family history has a

NOTE Confidence: 0.93377169777778

00:03:10.582 --> 00:03:12.528 significant role in breast cancer risk,

NOTE Confidence: 0.93377169777778

 $00:03:12.530 \longrightarrow 00:03:14.654$ and it really depends on the

NOTE Confidence: 0.93377169777778

 $00:03:14.654 \longrightarrow 00:03:16.070$ number of affected relatives.

NOTE Confidence: 0.93377169777778

00:03:16.070 --> 00:03:17.742 Breast density also increases

NOTE Confidence: 0.93377169777778

 $00:03:17.742 \longrightarrow 00:03:18.996$ breast cancer risk.

NOTE Confidence: 0.93377169777778

 $00:03:19.000 \longrightarrow 00:03:20.379$ We're going to look at that in

NOTE Confidence: 0.93377169777778

 $00:03:20.379 \longrightarrow 00:03:21.564$ a minute hormone replacement

NOTE Confidence: 0.93377169777778

 $00:03:21.564 \longrightarrow 00:03:23.524$ therapy as we talked about.

NOTE Confidence: 0.93377169777778

 $00{:}03{:}23.530 \dashrightarrow 00{:}03{:}26.215$ The rapeutic radiation obesity has a

NOTE Confidence: 0.93377169777778

 $00{:}03{:}26.215 \dashrightarrow 00{:}03{:}29.439$ very significant role in breast cancer

NOTE Confidence: 0.93377169777778

 $00{:}03{:}29.439 \dashrightarrow 00{:}03{:}32.596$ risk and asked us regular alcohol use.

NOTE Confidence: 0.93377169777778

 $00:03:32.600 \longrightarrow 00:03:34.274$ I get many questions about breast

00:03:34.274 --> 00:03:35.680 density and breast cancer risk,

NOTE Confidence: 0.93377169777778

00:03:35.680 --> 00:03:38.458 and here's an example of what

NOTE Confidence: 0.93377169777778

 $00:03:38.458 \longrightarrow 00:03:40.310$ breast density looks like.

NOTE Confidence: 0.93377169777778

 $00:03:40.310 \longrightarrow 00:03:42.872$ This level one is an entirely

NOTE Confidence: 0.93377169777778

 $00:03:42.872 \longrightarrow 00:03:44.153$ fat replaced breast,

NOTE Confidence: 0.93377169777778

 $00:03:44.160 \longrightarrow 00:03:46.188$ which is more easily screened and

NOTE Confidence: 0.93377169777778

 $00:03:46.188 \longrightarrow 00:03:48.284$ is associated with a lower risk

NOTE Confidence: 0.93377169777778

 $00:03:48.284 \longrightarrow 00:03:50.440$ of breast cancer as opposed to an

NOTE Confidence: 0.93377169777778

 $00:03:50.440 \longrightarrow 00:03:51.865$ extremely dense breast which lowers

NOTE Confidence: 0.93377169777778

00:03:51.865 --> 00:03:53.231 the sensitivity of mammography

NOTE Confidence: 0.93377169777778

 $00{:}03{:}53.231 \mathrel{--}{>} 00{:}03{:}55.277$ but is also associated with an

NOTE Confidence: 0.93377169777778

 $00:03:55.277 \longrightarrow 00:03:56.849$ increased risk for breast cancer.

NOTE Confidence: 0.934777958461538

 $00:03:59.390 \longrightarrow 00:04:01.840$ When we think about breast cancer and

NOTE Confidence: 0.934777958461538

00:04:01.840 --> 00:04:04.000 inherited risk related to family history,

NOTE Confidence: 0.934777958461538

 $00:04:04.000 \longrightarrow 00:04:06.367$ we know that if we look at the total

NOTE Confidence: 0.934777958461538

 $00:04:06.367 \longrightarrow 00:04:08.645$ number of breast cancer cases 70 to 80%

 $00:04:08.650 \longrightarrow 00:04:11.128$ of them are unrelated to family history.

NOTE Confidence: 0.934777958461538

 $00:04:11.130 \longrightarrow 00:04:12.790$ Where a family history is

NOTE Confidence: 0.934777958461538

 $00:04:12.790 \longrightarrow 00:04:15.394$ associated with up to 20% of cases,

NOTE Confidence: 0.934777958461538

 $00:04:15.394 \longrightarrow 00:04:18.940$ and of those cases we know hereditary breast

NOTE Confidence: 0.934777958461538

 $00:04:18.940 \longrightarrow 00:04:21.778$ cancers make up five to 10% of the total.

NOTE Confidence: 0.953197208888889

 $00:04:24.830 \longrightarrow 00:04:26.450$ So how do we estimate

NOTE Confidence: 0.953197208888889

00:04:26.450 --> 00:04:27.746 individual breast cancer risk?

NOTE Confidence: 0.953197208888889

 $00:04:27.750 \longrightarrow 00:04:31.390$ There are a number of statistical models.

NOTE Confidence: 0.953197208888889

00:04:31.390 --> 00:04:33.400 And I think we're probably all

NOTE Confidence: 0.953197208888889

 $00{:}04{:}33.400 \dashrightarrow 00{:}04{:}35.620$ familiar of heard the quote that

NOTE Confidence: 0.953197208888889

00:04:35.620 --> 00:04:37.645 all statistical models are wrong,

NOTE Confidence: 0.953197208888889

 $00:04:37.650 \longrightarrow 00:04:39.134$ but some are useful.

NOTE Confidence: 0.953197208888889

 $00{:}04{:}39.134 \dashrightarrow 00{:}04{:}41.890$ And here's one that is particularly useful.

NOTE Confidence: 0.953197208888889

00:04:41.890 --> 00:04:44.620 This is called the Tyra Kuzyk model

NOTE Confidence: 0.953197208888889

00:04:44.620 --> 00:04:46.534 that takes into account some of

 $00:04:46.534 \longrightarrow 00:04:48.709$ the things we just talked about.

NOTE Confidence: 0.953197208888889

00:04:48.710 --> 00:04:53.150 Age agent men are key, height and weight.

NOTE Confidence: 0.953197208888889

00:04:53.150 --> 00:04:54.968 Childbirth, previous biopsies

NOTE Confidence: 0.953197208888889

 $00:04:54.968 \longrightarrow 00:04:56.786$ and their results,

NOTE Confidence: 0.953197208888889

 $00:04:56.790 \longrightarrow 00:04:59.850$ breast density and family history.

NOTE Confidence: 0.953197208888889

 $00:04:59.850 \longrightarrow 00:05:02.515$ We can enter these into this model

NOTE Confidence: 0.953197208888889

 $00:05:02.515 \longrightarrow 00:05:04.840$ and then calculated breast cancer

NOTE Confidence: 0.953197208888889

 $00:05:04.840 \longrightarrow 00:05:08.469$ risk for individual patients.

NOTE Confidence: 0.953197208888889

 $00:05:08.470 \longrightarrow 00:05:10.275$ We have guidelines for management

NOTE Confidence: 0.953197208888889

 $00:05:10.275 \longrightarrow 00:05:12.472$ patients who are considered at increased

NOTE Confidence: 0.953197208888889

 $00{:}05{:}12.472 \dashrightarrow 00{:}05{:}14.761$ risk for breast cancer and that has

NOTE Confidence: 0.953197208888889

00:05:14.761 --> 00:05:16.950 been defined by expert opinion at a

NOTE Confidence: 0.953197208888889

00:05:16.950 --> 00:05:18.795 lifetime risk of greater than 20%

NOTE Confidence: 0.953197208888889

00:05:18.795 --> 00:05:21.420 for women who fall into this group,

NOTE Confidence: 0.953197208888889

 $00:05:21.420 \longrightarrow 00:05:24.620$ we might consider advanced screening,

NOTE Confidence: 0.953197208888889

00:05:24.620 --> 00:05:26.740 which would include both

 $00:05:26.740 \longrightarrow 00:05:28.860$ mammogram and breast MRI.

NOTE Confidence: 0.953197208888889

 $00:05:28.860 \longrightarrow 00:05:31.058$ We use elements from the family history

NOTE Confidence: 0.953197208888889

 $00:05:31.058 \longrightarrow 00:05:32.689$ and the patient's personal history

NOTE Confidence: 0.953197208888889

 $00:05:32.689 \longrightarrow 00:05:34.887$ to decide the age to begin screening

NOTE Confidence: 0.953197208888889

 $00:05:34.887 \longrightarrow 00:05:36.651$ and most guidelines suggest that

NOTE Confidence: 0.953197208888889

 $00:05:36.651 \longrightarrow 00:05:38.733$ we stop screening within 10 years.

NOTE Confidence: 0.953197208888889

 $00:05:38.740 \longrightarrow 00:05:41.390$ At the end of life.

NOTE Confidence: 0.953197208888889

 $00:05:41.390 \longrightarrow 00:05:43.682$ I just wanted to share this

NOTE Confidence: 0.953197208888889

 $00{:}05{:}43.682 \dashrightarrow 00{:}05{:}46.077$ picture of a screening breast MRI

NOTE Confidence: 0.953197208888889

00:05:46.077 --> 00:05:48.429 from a recent patient of mine.

NOTE Confidence: 0.953197208888889

 $00:05:48.430 \longrightarrow 00:05:50.510$ This was a patient who in her mid

NOTE Confidence: 0.953197208888889

 $00{:}05{:}50.510 \dashrightarrow 00{:}05{:}52.381$ 30s was diagnosed with pancreatic

NOTE Confidence: 0.953197208888889

 $00{:}05{:}52.381 \dashrightarrow 00{:}05{:}54.085$ cancer and treated successfully

NOTE Confidence: 0.953197208888889

 $00{:}05{:}54.085 \dashrightarrow 00{:}05{:}56.640$ and was a long term survivor.

NOTE Confidence: 0.953197208888889

00:05:56.640 --> 00:05:58.850 She had been undergoing routine

 $00:05:58.850 \longrightarrow 00:06:00.618$ screening when her endocrinologist

NOTE Confidence: 0.953197208888889

 $00{:}06{:}00.618 \dashrightarrow 00{:}06{:}02.289$ suggest that she get genetic

NOTE Confidence: 0.953197208888889

 $00:06:02.289 \longrightarrow 00:06:04.389$ testing and she was found to have

NOTE Confidence: 0.953197208888889

 $00:06:04.389 \longrightarrow 00:06:06.075$ a mutation in the BRCA gene.

NOTE Confidence: 0.953197208888889

 $00:06:06.080 \longrightarrow 00:06:07.872$ She came to see me and we got

NOTE Confidence: 0.953197208888889

00:06:07.872 --> 00:06:09.717 a breast MRI for screening and

NOTE Confidence: 0.953197208888889

00:06:09.717 --> 00:06:11.387 despite having a very normal.

NOTE Confidence: 0.953197208888889

00:06:11.390 --> 00:06:12.360 Looking mammogram,

NOTE Confidence: 0.953197208888889

 $00:06:12.360 \longrightarrow 00:06:15.755$ she had this area on her of

NOTE Confidence: 0.953197208888889

 $00:06:15.755 \longrightarrow 00:06:17.999$ enhancement on her breast MRI

NOTE Confidence: 0.953197208888889

 $00{:}06{:}17.999 \dashrightarrow 00{:}06{:}20.507$ that was in occult breast cancer

NOTE Confidence: 0.953197208888889

 $00:06:20.510 \longrightarrow 00:06:23.806$ and so this is an example of how

NOTE Confidence: 0.953197208888889

 $00:06:23.806 \longrightarrow 00:06:26.154$ screening MRI adds to our ability

NOTE Confidence: 0.953197208888889

 $00:06:26.154 \longrightarrow 00:06:28.059$ to screen high risk patients.

NOTE Confidence: 0.87612866

00:06:30.400 --> 00:06:32.004 So my professional society,

NOTE Confidence: 0.87612866

00:06:32.004 --> 00:06:34.410 which is the American Society of

00:06:34.480 --> 00:06:36.543 Breast Surgeons, along with the

NOTE Confidence: 0.87612866

 $00{:}06{:}36.543 \dashrightarrow 00{:}06{:}37.867$ American College of Radiologists,

NOTE Confidence: 0.87612866

 $00:06:37.870 \longrightarrow 00:06:39.920$ have now moved towards a

NOTE Confidence: 0.87612866

 $00:06:39.920 \longrightarrow 00:06:41.560$ model of recommending risk

NOTE Confidence: 0.87612866

 $00:06:41.560 \longrightarrow 00:06:43.778$ based breast cancer screening,

NOTE Confidence: 0.87612866

 $00:06:43.780 \longrightarrow 00:06:46.456$ which includes a risk assessment for

NOTE Confidence: 0.87612866

 $00:06:46.456 \longrightarrow 00:06:49.821$ all women at by the age of 30 to

NOTE Confidence: 0.87612866

00:06:49.821 --> 00:06:52.047 determine if you're at average risk

NOTE Confidence: 0.87612866

00:06:52.047 --> 00:06:54.750 or higher than average risk and how

NOTE Confidence: 0.87612866

00:06:54.750 --> 00:06:56.790 women should be screened based on

NOTE Confidence: 0.87612866

 $00:06:56.790 \longrightarrow 00:06:58.469$ their individual risk assessment.

NOTE Confidence: 0.87612866

 $00:06:58.470 \longrightarrow 00:06:59.934$ It's a move from.

NOTE Confidence: 0.87612866

00:06:59.934 --> 00:07:02.920 Age based screening to risk based screening.

NOTE Confidence: 0.87612866

 $00:07:02.920 \longrightarrow 00:07:04.792$ And at women who are higher

NOTE Confidence: 0.87612866

 $00:07:04.792 \longrightarrow 00:07:05.728$ than average risk,

 $00:07:05.730 \longrightarrow 00:07:08.214$ who recommend starting with

NOTE Confidence: 0.87612866

 $00:07:08.214 \longrightarrow 00:07:11.319$ a mammogram and breast MRI,

NOTE Confidence: 0.87612866

 $00:07:11.320 \longrightarrow 00:07:13.616$ the MRI can start at a younger

NOTE Confidence: 0.87612866

 $00:07:13.616 \longrightarrow 00:07:15.510$ age at 25 if needed.

NOTE Confidence: 0.87612866

00:07:15.510 --> 00:07:17.238 If the family history suggests that,

NOTE Confidence: 0.87612866

 $00:07:17.240 \longrightarrow 00:07:19.625$ or if there's a genetic

NOTE Confidence: 0.87612866

 $00:07:19.625 \longrightarrow 00:07:21.533$ syndrome that suggests that.

NOTE Confidence: 0.87612866

 $00:07:21.540 \longrightarrow 00:07:23.416$ And also that women with a prior

NOTE Confidence: 0.87612866

 $00{:}07{:}23.416 \dashrightarrow 00{:}07{:}25.313$ history of breast cancer at a young

NOTE Confidence: 0.87612866

 $00:07:25.313 \longrightarrow 00:07:27.194$ age and with non dense breasts versus

NOTE Confidence: 0.87612866

 $00:07:27.194 \longrightarrow 00:07:28.868$ dense breasts that we might add

NOTE Confidence: 0.87612866

 $00:07:28.868 \longrightarrow 00:07:30.838$ MRI for women with dense breasts.

NOTE Confidence: 0.895820547894737

 $00:07:33.950 \longrightarrow 00:07:36.869$ So we know that genetics plays a

NOTE Confidence: 0.895820547894737

 $00:07:36.869 \longrightarrow 00:07:40.183$ role in breast cancer risk and that

NOTE Confidence: 0.895820547894737

 $00:07:40.183 \longrightarrow 00:07:42.928$ of those cases where genetics where

NOTE Confidence: 0.895820547894737

00:07:42.928 --> 00:07:44.596 there's a mutation in a breast

00:07:44.596 --> 00:07:46.784 cancer gene that the majority of the

NOTE Confidence: 0.895820547894737

 $00:07:46.784 \longrightarrow 00:07:48.409$ mutations that we identify associated

NOTE Confidence: 0.895820547894737

 $00{:}07{:}48.409 \dashrightarrow 00{:}07{:}50.260$ with breast cancer are two genes,

NOTE Confidence: 0.895820547894737

 $00:07:50.260 \longrightarrow 00:07:52.184$ BRCA, one and two.

NOTE Confidence: 0.895820547894737

 $00:07:52.184 \longrightarrow 00:07:54.589$ Although there were several other

NOTE Confidence: 0.895820547894737

 $00:07:54.589 \longrightarrow 00:07:56.394$ genetic syndromes associated

NOTE Confidence: 0.895820547894737

 $00:07:56.394 \longrightarrow 00:07:59.489$ with increase breast cancer risk.

NOTE Confidence: 0.895820547894737

 $00:07:59.490 \longrightarrow 00:08:01.188$ When we look at those genes,

NOTE Confidence: 0.895820547894737

 $00{:}08{:}01.190 \dashrightarrow 00{:}08{:}04.390$ we and make a plan for both screening

NOTE Confidence: 0.895820547894737

 $00:08:04.390 \longrightarrow 00:08:07.307$ and prevention for patients with genetic

NOTE Confidence: 0.895820547894737

 $00{:}08{:}07.307 \dashrightarrow 00{:}08{:}10.670$ syndromes we consider how penetrant gene is.

NOTE Confidence: 0.895820547894737

00:08:10.670 --> 00:08:13.232 How likely is a patient to develop

NOTE Confidence: 0.895820547894737

 $00{:}08{:}13.232 \dashrightarrow 00{:}08{:}16.010$ cancer if they have a mutation in that

NOTE Confidence: 0.895820547894737

 $00:08:16.010 \longrightarrow 00:08:19.260$ gene and so for the very high penetrance.

NOTE Confidence: 0.895820547894737

 $00:08:19.260 \longrightarrow 00:08:20.680$ Genes where there's a very

00:08:20.680 --> 00:08:21.816 high risk of cancer,

NOTE Confidence: 0.895820547894737

 $00{:}08{:}21.820 \longrightarrow 00{:}08{:}24.672$ we find those to be less common and

NOTE Confidence: 0.895820547894737

 $00:08:24.672 \longrightarrow 00:08:27.486$ those genes include BRCA one and two,

NOTE Confidence: 0.895820547894737

 $00:08:27.490 \longrightarrow 00:08:29.550$ which are more commonly known.

NOTE Confidence: 0.895820547894737

 $00:08:29.550 \longrightarrow 00:08:31.755$ Other genetic syndromes,

NOTE Confidence: 0.895820547894737

 $00:08:31.755 \longrightarrow 00:08:34.182$ including P53 and P-10.

NOTE Confidence: 0.895820547894737

 $00:08:34.182 \longrightarrow 00:08:35.310$ The modern,

NOTE Confidence: 0.895820547894737

 $00:08:35.310 \longrightarrow 00:08:37.662$ the moderate penetrance genes ATM palb

NOTE Confidence: 0.895820547894737

 $00:08:37.662 \longrightarrow 00:08:41.334$ 2 and check two have a lower risk of

NOTE Confidence: 0.895820547894737

 $00:08:41.334 \longrightarrow 00:08:43.364$ breast cancer associated with them,

NOTE Confidence: 0.895820547894737

 $00:08:43.370 \longrightarrow 00:08:45.862$ but they're much more common in the

NOTE Confidence: 0.895820547894737

00:08:45.862 --> 00:08:48.480 population and I just saw a very busy

NOTE Confidence: 0.895820547894737

 $00:08:48.480 \longrightarrow 00:08:50.793$ clinic today and I saw examples of

NOTE Confidence: 0.895820547894737

 $00:08:50.793 \longrightarrow 00:08:53.103$ patients with all three of those.

NOTE Confidence: 0.89582054789473700:08:53.110 --> 00:08:53.800 Mutations.

NOTE Confidence: 0.95199352375

 $00:08:56.800 \longrightarrow 00:08:59.796$ So when we talk about breast cancer

 $00:08:59.796 \longrightarrow 00:09:01.950$ prevention, we can identify a group

NOTE Confidence: 0.95199352375

 $00:09:01.950 \longrightarrow 00:09:04.208$ of women where we might consider

NOTE Confidence: 0.95199352375

00:09:04.208 --> 00:09:06.513 treatment to help reduce their

NOTE Confidence: 0.95199352375

00:09:06.513 --> 00:09:08.950 lifetime risk of breast cancer.

NOTE Confidence: 0.95199352375

 $00:09:08.950 \longrightarrow 00:09:11.944$ The chemo prevention criteria that are

NOTE Confidence: 0.95199352375

00:09:11.944 --> 00:09:14.304 commonly accepted include women who

NOTE Confidence: 0.95199352375

 $00:09:14.304 \longrightarrow 00:09:16.932$ are older than age 35 who have a life

NOTE Confidence: 0.95199352375

00:09:17.007 --> 00:09:19.562 expectancy of at least ten years and

NOTE Confidence: 0.95199352375

 $00:09:19.562 \longrightarrow 00:09:22.426$ have one of these high risk factors.

NOTE Confidence: 0.95199352375

 $00{:}09{:}22.430 \dashrightarrow 00{:}09{:}24.950$ We talked about thoracic radiation

NOTE Confidence: 0.95199352375

00:09:24.950 --> 00:09:27.388 for treatment, especially if you're.

NOTE Confidence: 0.95199352375

 $00{:}09{:}27.388 \dashrightarrow 00{:}09{:}30.244$ Young, A history of lobular carcinoma

NOTE Confidence: 0.95199352375

 $00{:}09{:}30.244 \dashrightarrow 00{:}09{:}33.198$ Insight 2A predicted five year cancer risk.

NOTE Confidence: 0.95199352375

 $00:09:33.200 \longrightarrow 00:09:35.432$ We looked at one model called the GAIL model.

NOTE Confidence: 0.95199352375

 $00:09:35.440 \longrightarrow 00:09:37.522$ There are called the tire acoustic

 $00:09:37.522 \longrightarrow 00:09:38.216$ model earlier.

NOTE Confidence: 0.95199352375

 $00:09:38.220 \longrightarrow 00:09:39.540$ There's also the GAIL model,

NOTE Confidence: 0.95199352375

 $00:09:39.540 \longrightarrow 00:09:42.108$ which is predictive of five year

NOTE Confidence: 0.95199352375

00:09:42.108 --> 00:09:44.282 cancer risk or any woman who

NOTE Confidence: 0.95199352375

 $00:09:44.282 \longrightarrow 00:09:46.250$ has a biopsy that shows atypical

NOTE Confidence: 0.95199352375

 $00:09:46.320 \longrightarrow 00:09:48.328$ cells or atypical hyperplasia.

NOTE Confidence: 0.945941082857143

 $00:09:50.910 \longrightarrow 00:09:52.506$ As we start to talk about prevention,

NOTE Confidence: 0.945941082857143

00:09:52.510 --> 00:09:54.170 I just wanted to clarify

NOTE Confidence: 0.945941082857143

 $00:09:54.170 \longrightarrow 00:09:55.166$ a couple definitions.

NOTE Confidence: 0.945941082857143

00:09:55.170 --> 00:09:57.310 The first one is Chemoprevention,

NOTE Confidence: 0.945941082857143

 $00:09:57.310 \longrightarrow 00:09:58.648$ which is the use of drugs,

NOTE Confidence: 0.945941082857143

 $00:09:58.650 \longrightarrow 00:10:01.098$ vitamins or other agents to reduce

NOTE Confidence: 0.945941082857143

00:10:01.098 --> 00:10:03.820 cancer risk and to delay the

NOTE Confidence: 0.945941082857143

 $00:10:03.820 \longrightarrow 00:10:06.350$ development or recurrence of cancer.

NOTE Confidence: 0.945941082857143

 $00{:}10{:}06.350 \dashrightarrow 00{:}10{:}07.920$ We have two medications that

NOTE Confidence: 0.945941082857143

 $00:10:07.920 \longrightarrow 00:10:09.490$ we types of medications we

 $00:10:09.554 \longrightarrow 00:10:11.498$ currently use for chemoprevention.

NOTE Confidence: 0.945941082857143

 $00:10:11.500 \longrightarrow 00:10:13.292$ The first is selective

NOTE Confidence: 0.945941082857143

 $00:10:13.292 \longrightarrow 00:10:14.636$ estrogen response modifiers.

NOTE Confidence: 0.945941082857143

00:10:14.640 --> 00:10:16.728 This is a drug you might have heard

NOTE Confidence: 0.945941082857143

 $00:10:16.728 \longrightarrow 00:10:18.710$ of called tamoxifen or Raloxifene.

NOTE Confidence: 0.945941082857143

 $00:10:18.710 \longrightarrow 00:10:22.016$ These block estrogen at its receptor.

NOTE Confidence: 0.945941082857143

 $00:10:22.020 \longrightarrow 00:10:23.892$ The other class of drugs we

NOTE Confidence: 0.945941082857143

 $00{:}10{:}23.892 \dashrightarrow 00{:}10{:}26.021$ might use or called the aromat

NOTE Confidence: 0.945941082857143

00:10:26.021 --> 00:10:28.046 ACE inhibitors and these reduce

NOTE Confidence: 0.945941082857143

 $00:10:28.046 \longrightarrow 00:10:29.930$ estrogen levels in the body.

NOTE Confidence: 0.945941082857143

00:10:29.930 --> 00:10:32.828 For women who are post menopausal by

NOTE Confidence: 0.945941082857143

 $00:10:32.828 \longrightarrow 00:10:35.509$ blocking an enzyme called aromat ace,

NOTE Confidence: 0.945941082857143

 $00{:}10{:}35.510 \dashrightarrow 00{:}10{:}38.373$ this is a quick diagram that just

NOTE Confidence: 0.945941082857143

 $00:10:38.373 \longrightarrow 00:10:40.524$ shows the difference of tamoxifen

NOTE Confidence: 0.945941082857143

 $00:10:40.524 \longrightarrow 00:10:43.068$ would block the binding of estrogens

 $00:10:43.068 \longrightarrow 00:10:45.658$ to the receptor on the cells.

NOTE Confidence: 0.945941082857143

00:10:45.660 --> 00:10:47.975 The Aromat ace inhibitors block

NOTE Confidence: 0.945941082857143

 $00:10:47.975 \longrightarrow 00:10:50.767$ the production of estrogens by the

NOTE Confidence: 0.945941082857143

 $00{:}10{:}50.767 \dashrightarrow 00{:}10{:}53.137$ peripheral fat cells in the body.

NOTE Confidence: 0.945941082857143

 $00:10:53.140 \longrightarrow 00:10:54.810$ Which is the primary source

NOTE Confidence: 0.945941082857143

 $00:10:54.810 \longrightarrow 00:10:56.146$ of estrogen after menopause?

NOTE Confidence: 0.85492289777778

 $00:10:58.810 \longrightarrow 00:10:59.678$ So there's been several

NOTE Confidence: 0.85492289777778

00:10:59.678 --> 00:11:00.763 studies that have been done.

NOTE Confidence: 0.85492289777778

 $00{:}11{:}00.770 \dashrightarrow 00{:}11{:}02.862$ Looking at these medications

NOTE Confidence: 0.85492289777778

 $00:11:02.862 \longrightarrow 00:11:04.954$ for breast cancer prevention,

NOTE Confidence: 0.85492289777778

 $00{:}11{:}04.960 \dashrightarrow 00{:}11{:}06.380$ these have been summarized

NOTE Confidence: 0.85492289777778

 $00:11:06.380 \longrightarrow 00:11:08.510$ in a meta analysis by EU.

NOTE Confidence: 0.854922897777778

 $00{:}11{:}08.510 \dashrightarrow 00{:}11{:}10.980$ S. Public Health task force.

NOTE Confidence: 0.85492289777778

00:11:10.980 --> 00:11:12.900 It's kind of a busy slide,

NOTE Confidence: 0.85492289777778

 $00:11:12.900 \longrightarrow 00:11:15.014$ but you can see over here in

NOTE Confidence: 0.85492289777778

 $00:11:15.014 \longrightarrow 00:11:16.862$ this column that when you

00:11:16.862 --> 00:11:18.606 take these studies altogether,

NOTE Confidence: 0.85492289777778

00:11:18.610 --> 00:11:21.042 they basically favors treatment,

NOTE Confidence: 0.85492289777778

 $00:11:21.042 \longrightarrow 00:11:24.082$ showing that these medications are

NOTE Confidence: 0.85492289777778

 $00:11:24.082 \longrightarrow 00:11:27.216$ effective in reducing breast cancer risk.

NOTE Confidence: 0.890003596818182

 $00{:}11{:}29.830 \dashrightarrow 00{:}11{:}33.446$ And there's a recent trial that we're all

NOTE Confidence: 0.890003596818182

 $00:11:33.446 \longrightarrow 00:11:37.296$ very excited about that looked at low dose

NOTE Confidence: 0.890003596818182

 $00:11:37.296 \longrightarrow 00:11:40.460$ tamoxifen for prevention of breast cancer.

NOTE Confidence: 0.890003596818182

 $00{:}11{:}40.460 \dashrightarrow 00{:}11{:}43.156$ So many women who are increased risk for

NOTE Confidence: 0.890003596818182

 $00:11:43.156 \longrightarrow 00:11:45.447$ cancer where we recommend medical therapy

NOTE Confidence: 0.890003596818182

 $00:11:45.447 \longrightarrow 00:11:48.213$ will often have symptoms or side effects

NOTE Confidence: 0.890003596818182

 $00:11:48.213 \longrightarrow 00:11:50.824$ related to therapy that limits its use.

NOTE Confidence: 0.890003596818182

 $00:11:50.830 \longrightarrow 00:11:52.706$ The dose of tamoxifen that we use

NOTE Confidence: 0.890003596818182

 $00{:}11{:}52.706 \dashrightarrow 00{:}11{:}54.454$ for treatment of cancer patients and

NOTE Confidence: 0.890003596818182

 $00:11:54.454 \longrightarrow 00:11:56.519$ that was used in the initial trials

NOTE Confidence: 0.890003596818182

00:11:56.577 --> 00:11:57.917 with 20 milligrams a day.

 $00:11:57.920 \longrightarrow 00:11:59.698$ The newest trial looked at a dose.

NOTE Confidence: 0.890003596818182

 $00:11:59.700 \longrightarrow 00:12:01.700$ Of five milligrams a day,

NOTE Confidence: 0.890003596818182

 $00:12:01.700 \longrightarrow 00:12:04.528$ and would that lower dose still be

NOTE Confidence: 0.890003596818182

00:12:04.528 --> 00:12:06.630 effective for cancer prevention?

NOTE Confidence: 0.890003596818182

 $00:12:06.630 \longrightarrow 00:12:09.886$ It was a randomized trial conducted at

NOTE Confidence: 0.890003596818182

 $00:12:09.886 \longrightarrow 00:12:12.618$ multiple sites that included 500 women

NOTE Confidence: 0.890003596818182

 $00:12:12.618 \longrightarrow 00:12:15.621$ who had a diagnosis of atypical abnormal

NOTE Confidence: 0.890003596818182

00:12:15.621 --> 00:12:18.656 cells on a biopsy or lobular carcinoma.

NOTE Confidence: 0.890003596818182

00:12:18.660 --> 00:12:19.450 Insight two,

NOTE Confidence: 0.890003596818182

 $00:12:19.450 \longrightarrow 00:12:21.820$ they were given 5 milligrams of

NOTE Confidence: 0.890003596818182

 $00{:}12{:}21.820 \longrightarrow 00{:}12{:}24.099$ tamoxifen a day for three years,

NOTE Confidence: 0.890003596818182

 $00:12:24.100 \longrightarrow 00:12:25.597$ or a placebo,

NOTE Confidence: 0.890003596818182

 $00:12:25.597 \longrightarrow 00:12:29.790$ and then they were followed for five years.

NOTE Confidence: 0.890003596818182

 $00:12:29.790 \longrightarrow 00:12:31.666$ Just a quick look at the data.

NOTE Confidence: 0.890003596818182

 $00:12:31.670 \longrightarrow 00:12:34.155$ If you look at the graphs here,

NOTE Confidence: 0.890003596818182

 $00:12:34.160 \longrightarrow 00:12:37.688$ these looked at the rates of breast cancer.

00:12:37.690 --> 00:12:40.360 Comparing the women who took placebo,

NOTE Confidence: 0.890003596818182

 $00:12:40.360 \longrightarrow 00:12:42.740$ which is the blue line to women

NOTE Confidence: 0.890003596818182

 $00:12:42.740 \longrightarrow 00:12:43.760$ who took tamoxifen,

NOTE Confidence: 0.890003596818182

 $00:12:43.760 \longrightarrow 00:12:47.522$ which is the red line and it showed that

NOTE Confidence: 0.890003596818182

 $00:12:47.522 \longrightarrow 00:12:50.005$ tamoxifen prevented about half of the

NOTE Confidence: 0.890003596818182

 $00:12:50.005 \longrightarrow 00:12:53.250$ episodes of breast cancer in these patients.

NOTE Confidence: 0.890003596818182

 $00:12:53.250 \longrightarrow 00:12:53.964$ Even better,

NOTE Confidence: 0.890003596818182

 $00:12:53.964 \longrightarrow 00:12:55.749$ if you look over here,

NOTE Confidence: 0.890003596818182

 $00:12:55.750 \longrightarrow 00:12:58.432$ it showed that of the adverse events

NOTE Confidence: 0.890003596818182

 $00:12:58.432 \longrightarrow 00:13:00.568$ that can be associated with tamoxifen,

NOTE Confidence: 0.890003596818182

00:13:00.570 --> 00:13:03.560 including a DVT or pulmonary

NOTE Confidence: 0.890003596818182

 $00:13:03.560 \longrightarrow 00:13:06.625$ embolism or uterine tumors that it

NOTE Confidence: 0.890003596818182

 $00{:}13{:}06.625 \dashrightarrow 00{:}13{:}09.649$ appeared that this lower dose of

NOTE Confidence: 0.890003596818182

 $00{:}13{:}09.649 --> 00{:}13{:}12.415$ tamoxifen was as safe as placebo.

NOTE Confidence: 0.890003596818182

 $00:13:12.420 \longrightarrow 00:13:15.668$ So this gives us a new effective

 $00:13:15.668 \longrightarrow 00:13:18.170$ tool for risk reduction.

NOTE Confidence: 0.890003596818182

 $00:13:18.170 \longrightarrow 00:13:18.938$ And of course,

NOTE Confidence: 0.890003596818182 00:13:18.938 --> 00:13:19.706 as a surgeon,

NOTE Confidence: 0.890003596818182

00:13:19.710 --> 00:13:21.670 I would need to talk about surgery

NOTE Confidence: 0.890003596818182

 $00:13:21.670 \longrightarrow 00:13:22.510$ for risk reduction.

NOTE Confidence: 0.890003596818182

 $00:13:22.510 \longrightarrow 00:13:25.526$ We only use this for patients with the

NOTE Confidence: 0.890003596818182

 $00:13:25.526 \longrightarrow 00:13:28.644$ BRCA one mutation who have the highest

NOTE Confidence: 0.890003596818182

 $00:13:28.644 \longrightarrow 00:13:31.343$ risk of breast cancer related to that

NOTE Confidence: 0.890003596818182

 $00:13:31.343 \longrightarrow 00:13:33.089$ previous graph that we looked at.

NOTE Confidence: 0.890003596818182

 $00:13:33.090 \longrightarrow 00:13:35.995$ So the studies that have looked at

NOTE Confidence: 0.890003596818182

 $00{:}13{:}35.995 \dashrightarrow 00{:}13{:}38.819$ surgery for risk reduction have only

NOTE Confidence: 0.890003596818182

00:13:38.819 --> 00:13:42.298 looked at this very high risk population.

NOTE Confidence: 0.890003596818182

 $00:13:42.300 \longrightarrow 00:13:44.393$ And in the large studies that have

NOTE Confidence: 0.890003596818182

00:13:44.393 --> 00:13:46.440 been combined and looked at together,

NOTE Confidence: 0.890003596818182

 $00:13:46.440 \longrightarrow 00:13:49.542$ the risk reduction by performing a

NOTE Confidence: 0.890003596818182

00:13:49.542 --> 00:13:52.373 preventive mastectomy is greater than 95%,

 $00:13:52.373 \longrightarrow 00:13:55.357$ and we know that the there's also a

NOTE Confidence: 0.890003596818182

 $00{:}13{:}55.357 \dashrightarrow 00{:}13{:}57.447$ mortality benefit for these patients

NOTE Confidence: 0.890003596818182

 $00:13:57.447 \longrightarrow 00:14:00.510$ that they live longer and do better.

NOTE Confidence: 0.890003596818182

 $00:14:00.510 \longrightarrow 00:14:02.198$ I just wanted to show a brief picture

NOTE Confidence: 0.890003596818182

 $00:14:02.198 \longrightarrow 00:14:03.684$ of a ***** sparing mastectomy

NOTE Confidence: 0.890003596818182

 $00:14:03.684 \longrightarrow 00:14:05.796$ 'cause many patients have a lot

NOTE Confidence: 0.890003596818182

 $00:14:05.796 \longrightarrow 00:14:07.812$ of questions about this when we

NOTE Confidence: 0.890003596818182

 $00:14:07.812 \longrightarrow 00:14:09.068$ talk about this operation,

NOTE Confidence: 0.890003596818182

00:14:09.070 --> 00:14:11.611 and I thought that this picture from

NOTE Confidence: 0.890003596818182

 $00:14:11.611 \longrightarrow 00:14:14.225$ a picture from this publication was

NOTE Confidence: 0.890003596818182

 $00:14:14.225 \longrightarrow 00:14:17.305$ very useful to show that when we

NOTE Confidence: 0.890003596818182

 $00:14:17.305 \longrightarrow 00:14:19.958$ do this procedure we can spare the

NOTE Confidence: 0.890003596818182

 $00:14:19.958 \longrightarrow 00:14:22.951$ entire skin pocket and the ***** that

NOTE Confidence: 0.890003596818182

 $00:14:22.951 \longrightarrow 00:14:26.598$ we can do a reconstruction with a.

NOTE Confidence: 0.890003596818182

00:14:26.600 --> 00:14:28.455 Collagen matrix with an implant

 $00:14:28.455 \longrightarrow 00:14:31.418$ or we can do use the patient's

NOTE Confidence: 0.890003596818182

00:14:31.418 --> 00:14:33.478 own tissue to reconstruct.

NOTE Confidence: 0.890003596818182

 $00:14:33.480 \longrightarrow 00:14:36.168$ And get a very get a very good

NOTE Confidence: 0.890003596818182

 $00:14:36.168 \longrightarrow 00:14:38.409$ cosmetic result and also have a

NOTE Confidence: 0.890003596818182

 $00:14:38.409 \longrightarrow 00:14:40.274$ very safe result for patients.

NOTE Confidence: 0.962877848333333

 $00:14:42.450 \longrightarrow 00:14:43.990$ And that we can take this into

NOTE Confidence: 0.962877848333333

00:14:43.990 --> 00:14:45.330 different types of surgeries now,

NOTE Confidence: 0.962877848333333

 $00:14:45.330 \longrightarrow 00:14:47.570$ and we can really craft an operation

NOTE Confidence: 0.962877848333333

 $00:14:47.570 \longrightarrow 00:14:50.206$ to help meet every patient's needs.

NOTE Confidence: 0.962877848333333

 $00:14:50.206 \longrightarrow 00:14:52.758$ Sometimes they're staged operations.

NOTE Confidence: 0.962877848333333

00:14:52.760 --> 00:14:54.618 Sometimes we reduce the skin pocket or

NOTE Confidence: 0.962877848333333

00:14:54.618 --> 00:14:56.186 change the shape of the skin pocket,

NOTE Confidence: 0.962877848333333

 $00:14:56.190 \longrightarrow 00:14:58.934$ but can always come up with a reconstruction

NOTE Confidence: 0.962877848333333

 $00:14:58.934 \longrightarrow 00:15:01.220$ plan that works well for patients.

NOTE Confidence: 0.962877848333333

 $00:15:01.220 \longrightarrow 00:15:03.052$ And then I would be remiss if I

NOTE Confidence: 0.962877848333333

 $00{:}15{:}03.052 \dashrightarrow 00{:}15{:}04.899$ didn't talk about primary prevention.

 $00:15:04.900 \longrightarrow 00:15:06.836$ I'm just at the end of my time,

NOTE Confidence: 0.962877848333333

 $00:15:06.840 \longrightarrow 00:15:08.960$ and so I'm just going to mention the

NOTE Confidence: 0.962877848333333

 $00:15:08.960 \longrightarrow 00:15:10.658$ importance of the plant based diet.

NOTE Confidence: 0.962877848333333

00:15:10.660 --> 00:15:13.306 We do have multiple studies that

NOTE Confidence: 0.962877848333333

 $00:15:13.306 \longrightarrow 00:15:15.710$ demonstrate that a diet that focuses

NOTE Confidence: 0.962877848333333

 $00:15:15.710 \longrightarrow 00:15:18.230$ on at least five servings of fruits

NOTE Confidence: 0.962877848333333

 $00:15:18.299 \longrightarrow 00:15:20.910$ and vegetables a day we know helps

NOTE Confidence: 0.962877848333333

 $00{:}15{:}20.910 \dashrightarrow 00{:}15{:}22.919$ reduce future breast cancer risk.

NOTE Confidence: 0.962877848333333

 $00{:}15{:}22.920 \to 00{:}15{:}25.960$ So with that I'm not going to go over my

NOTE Confidence: 0.962877848333333

 $00:15:26.041 \longrightarrow 00:15:27.870$ time and thank you for your attention.

NOTE Confidence: 0.881575216666667

00:15:35.830 --> 00:15:37.786 After lunch, thank you for such

NOTE Confidence: 0.881575216666667

 $00:15:37.786 \longrightarrow 00:15:39.856$ a nice talk to our attendees.

NOTE Confidence: 0.881575216666667

 $00{:}15{:}39.856 \dashrightarrow 00{:}15{:}42.028$ Feel free to enter your questions

NOTE Confidence: 0.881575216666667

00:15:42.028 --> 00:15:45.650 for Doctor Lynch into the Q&A.

NOTE Confidence: 0.881575216666667

00:15:45.650 --> 00:15:48.884 I would like to now introduce Dr.

 $00:15:48.890 \longrightarrow 00:15:51.440$ Shabeel or Doctor Laura is a

NOTE Confidence: 0.881575216666667

 $00{:}15{:}51.440 \dashrightarrow 00{:}15{:}52.715$ gastroenterologist and the

NOTE Confidence: 0.881575216666667

00:15:52.715 --> 00:15:54.969 director of the Smilow Cancer

NOTE Confidence: 0.881575216666667

 $00:15:54.969 \longrightarrow 00:15:56.729$ Genetics and Prevention program.

NOTE Confidence: 0.881575216666667

 $00:15:56.730 \longrightarrow 00:15:59.046$ He's also the director of the

NOTE Confidence: 0.881575216666667

 $00{:}15{:}59.046 \dashrightarrow 00{:}16{:}00.590$ Colon colorectal Cancer Prevention

NOTE Confidence: 0.881575216666667

 $00:16:00.650 \longrightarrow 00:16:02.670$ program at Yale University and

NOTE Confidence: 0.881575216666667

 $00:16:02.670 \longrightarrow 00:16:04.690$ Smilow Cancer Hospital and associate

NOTE Confidence: 0.881575216666667

00:16:04.751 --> 00:16:06.559 director for cancer screening.

NOTE Confidence: 0.881575216666667

 $00:16:06.560 \longrightarrow 00:16:07.650$ Thank you for joining us.

NOTE Confidence: 0.881575216666667

 $00{:}16{:}07.650 --> 00{:}16{:}08.440$ Doctor lore.

NOTE Confidence: 0.857792366

 $00{:}16{:}10.470 \dashrightarrow 00{:}16{:}11.350$ Thank you very much Sir.

NOTE Confidence: 0.857792366

 $00:16:11.350 \longrightarrow 00:16:12.568$ It's a pleasure to be here today.

NOTE Confidence: 0.857792366

 $00:16:12.570 \longrightarrow 00:16:14.818$ Let me see we can share the screen.

NOTE Confidence: 0.89897726

 $00:16:19.250 \longrightarrow 00:16:19.998$ Can we see well?

NOTE Confidence: 0.7657569

 $00:16:22.770 \longrightarrow 00:16:24.955$ Alright, I have noticed those are

 $00:16:24.955 \longrightarrow 00:16:28.922$ set to make, so when we're thinking

NOTE Confidence: 0.7657569

 $00:16:28.922 \longrightarrow 00:16:31.060$ about the cancer predisposition

NOTE Confidence: 0.7657569

 $00:16:31.060 \longrightarrow 00:16:34.090$ and and genetic defects by now,

NOTE Confidence: 0.7657569

 $00:16:34.090 \longrightarrow 00:16:37.946$ we know that it is about over 100

NOTE Confidence: 0.7657569

 $00:16:37.950 \longrightarrow 00:16:40.410$ genes that have been discovered that

NOTE Confidence: 0.7657569

 $00{:}16{:}40.410 \dashrightarrow 00{:}16{:}42.914$ they carry either high or moderate

NOTE Confidence: 0.7657569

 $00:16:42.914 \longrightarrow 00:16:45.290$ risk of cancer really defined as

NOTE Confidence: 0.7657569

 $00:16:45.290 \longrightarrow 00:16:47.265$ greater than two full relative

NOTE Confidence: 0.7657569

 $00{:}16{:}47.265 \dashrightarrow 00{:}16{:}49.904$ risk of having any type of cancer.

NOTE Confidence: 0.7657569

 $00:16:49.904 \longrightarrow 00:16:51.809$ So a significant number of

NOTE Confidence: 0.7657569

 $00{:}16{:}51.809 \dashrightarrow 00{:}16{:}54.110$ these genetic defects and they.

NOTE Confidence: 0.7657569

 $00:16:54.110 \longrightarrow 00:16:56.510$ Do affect many different organs,

NOTE Confidence: 0.7657569

 $00{:}16{:}56.510 {\:{\circ}{\circ}{\circ}}>00{:}16{:}59.432$ implying a higher risk of cancer

NOTE Confidence: 0.7657569

 $00:16:59.432 \longrightarrow 00:17:02.424$ when we look at the, uh,

NOTE Confidence: 0.7657569

 $00:17:02.424 \longrightarrow 00:17:04.026$ colorectal cancer specifically,

 $00:17:04.026 \longrightarrow 00:17:07.794$ and we look at the entire pile

NOTE Confidence: 0.7657569

 $00:17:07.794 \longrightarrow 00:17:09.486$ of colorectal cancers.

NOTE Confidence: 0.7657569

 $00:17:09.486 \longrightarrow 00:17:11.944$ But we'll see, is there.

NOTE Confidence: 0.7657569

 $00{:}17{:}11.944 \dashrightarrow 00{:}17{:}15.080$ But is that about 5% or a little bit

NOTE Confidence: 0.7657569

 $00{:}17{:}15.080 \dashrightarrow 00{:}17{:}18.025$ over 5% of all colorectal cancers will

NOTE Confidence: 0.7657569

00:17:18.025 --> 00:17:20.360 have an underlying high penetrance.

NOTE Confidence: 0.7657569

 $00:17:20.360 \longrightarrow 00:17:22.405$ Mutation germline mutation that would

NOTE Confidence: 0.7657569

 $00:17:22.405 \longrightarrow 00:17:25.090$ predispose to a higher risk of color.

NOTE Confidence: 0.7657569

00:17:25.090 --> 00:17:27.794 Colorectal cancer and about

NOTE Confidence: 0.7657569

 $00:17:27.794 \longrightarrow 00:17:30.774$ another 5% or so that would have

NOTE Confidence: 0.7657569

 $00:17:30.774 \longrightarrow 00:17:31.926$ moderate penetrance mutations.

NOTE Confidence: 0.7657569

 $00:17:31.930 \longrightarrow 00:17:33.700$ The ones that increase the risk

NOTE Confidence: 0.7657569

 $00:17:33.700 \longrightarrow 00:17:36.573$ but not to the level of the high

NOTE Confidence: 0.7657569

 $00:17:36.573 \longrightarrow 00:17:38.128$ penetrance mutations and if we

NOTE Confidence: 0.7657569

 $00:17:38.128 \longrightarrow 00:17:39.850$ look at the at this first group

NOTE Confidence: 0.7657569

00:17:39.916 --> 00:17:41.660 of high penetrance mutations,

 $00:17:41.660 \longrightarrow 00:17:43.736$ the more predominant ones are the

NOTE Confidence: 0.7657569

 $00{:}17{:}43.736 \dashrightarrow 00{:}17{:}45.770$ ones that cost Lynch syndrome.

NOTE Confidence: 0.7657569

00:17:45.770 --> 00:17:48.122 The ones due to germline mutations

NOTE Confidence: 0.7657569

 $00:17:48.122 \longrightarrow 00:17:50.180$ in the mismatch repair genes.

NOTE Confidence: 0.7657569

 $00:17:50.180 \longrightarrow 00:17:52.178$ And then at the lower number,

NOTE Confidence: 0.7657569

 $00:17:52.180 \longrightarrow 00:17:53.652$ but also very important,

NOTE Confidence: 0.7657569

 $00:17:53.652 \longrightarrow 00:17:55.860$ the ones that do cost polyposis,

NOTE Confidence: 0.7657569

00:17:55.860 --> 00:17:58.064 particularly APC or bailing

NOTE Confidence: 0.7657569

00:17:58.064 --> 00:18:00.819 mutations in the MYH gene,

NOTE Confidence: 0.7657569

 $00{:}18{:}00.820 \dashrightarrow 00{:}18{:}03.700$ we also find other mutations that

NOTE Confidence: 0.7657569

 $00:18:03.700 \longrightarrow 00:18:06.722$ are not as clearly well established

NOTE Confidence: 0.7657569

 $00:18:06.722 \longrightarrow 00:18:09.477$ as causing correct or increasing

NOTE Confidence: 0.7657569

00:18:09.477 --> 00:18:11.130 colorectal cancer risk,

NOTE Confidence: 0.7657569

00:18:11.130 --> 00:18:14.218 and among the moderate ones we do have,

NOTE Confidence: 0.7657569

 $00:18:14.220 \longrightarrow 00:18:17.530$ particularly a specific mutation in

00:18:17.530 --> 00:18:21.060 APC I 1307 K mutation, for instance.

NOTE Confidence: 0.7657569

00:18:21.060 --> 00:18:23.466 Check two mutations or monolithic myh

NOTE Confidence: 0.7657569

00:18:23.466 --> 00:18:26.288 mutations that again does increase the risk,

NOTE Confidence: 0.7657569

 $00:18:26.290 \longrightarrow 00:18:29.010$ but not to the level of the high

NOTE Confidence: 0.7657569

 $00:18:29.010 \longrightarrow 00:18:31.308$ risk or the high penetrance

NOTE Confidence: 0.7657569

 $00:18:31.308 \longrightarrow 00:18:34.368$ mutations that we see with lynching

NOTE Confidence: 0.7657569

 $00:18:34.368 \longrightarrow 00:18:36.838$ them for instance or or FP.

NOTE Confidence: 0.7657569

 $00:18:36.840 \longrightarrow 00:18:39.666$ And this is true for for the overall group

NOTE Confidence: 0.7657569

 $00{:}18{:}39.666 \dashrightarrow 00{:}18{:}42.498$ of individuals with corrective cancer,

NOTE Confidence: 0.7657569

 $00:18:42.500 \longrightarrow 00:18:44.294$ and certainly is true for the

NOTE Confidence: 0.7657569

 $00:18:44.294 \longrightarrow 00:18:45.980$ individuals that are older than 50,

NOTE Confidence: 0.7657569

 $00{:}18{:}45.980 \dashrightarrow 00{:}18{:}47.674$ which are the majority of this patient.

NOTE Confidence: 0.7657569

 $00:18:47.680 \longrightarrow 00:18:48.874$ So in general,

NOTE Confidence: 0.7657569

 $00:18:48.874 \longrightarrow 00:18:52.030$ but 10% will have these germline mutations.

NOTE Confidence: 0.7657569

 $00:18:52.030 \longrightarrow 00:18:54.460$ And 90% of them would not

NOTE Confidence: 0.7657569

 $00:18:54.460 \longrightarrow 00:18:55.675$ have these mutations.

00:18:55.680 --> 00:18:57.305 But if we look at younger individuals,

NOTE Confidence: 0.7657569

 $00:18:57.305 \longrightarrow 00:18:57.955$ for instance,

NOTE Confidence: 0.7657569

 $00:18:57.955 \longrightarrow 00:18:59.905$ individuals who are younger than 50

NOTE Confidence: 0.7657569

00:18:59.905 --> 00:19:01.668 who developed colorectal cancer,

NOTE Confidence: 0.7657569

 $00:19:01.670 \longrightarrow 00:19:03.945$ the proportion of individuals that

NOTE Confidence: 0.7657569

 $00:19:03.945 \longrightarrow 00:19:07.772$ will have a germline mutation related

NOTE Confidence: 0.7657569

 $00:19:07.772 \longrightarrow 00:19:10.878$ to cancer risk will be higher.

NOTE Confidence: 0.7657569

 $00:19:10.878 \longrightarrow 00:19:13.020$ That will go up to close to

NOTE Confidence: 0.7657569

 $00:19:13.096 \longrightarrow 00:19:14.330$ 20% being 10% lynching.

NOTE Confidence: 0.7657569

00:19:14.330 --> 00:19:18.118 And if we look even at a lower age looking

NOTE Confidence: 0.7657569

 $00{:}19{:}18.118 \dashrightarrow 00{:}19{:}21.205$ at individuals who are younger than 35,

NOTE Confidence: 0.7657569

 $00:19:21.210 \longrightarrow 00:19:22.086$ then here.

NOTE Confidence: 0.7657569

 $00:19:22.086 \longrightarrow 00:19:25.000$ We'll see that about 45% of those individuals

NOTE Confidence: 0.7657569

 $00{:}19{:}25.000 \dashrightarrow 00{:}19{:}26.740$ will have a German language issue.

NOTE Confidence: 0.7657569

 $00:19:26.740 \longrightarrow 00:19:28.725$ That's why it's so important

 $00:19:28.725 \longrightarrow 00:19:30.710$ that as individuals are diagnosed

NOTE Confidence: 0.7657569

 $00:19:30.780 \longrightarrow 00:19:32.640$ at a younger and younger age,

NOTE Confidence: 0.7657569

 $00:19:32.640 \longrightarrow 00:19:34.870$ we really do genetic testing

NOTE Confidence: 0.7657569

 $00:19:34.870 \longrightarrow 00:19:36.208$ on these individuals,

NOTE Confidence: 0.7657569

 $00:19:36.210 \longrightarrow 00:19:39.082$ because there are chances of having a an

NOTE Confidence: 0.7657569

00:19:39.082 --> 00:19:41.259 inherited cancer syndrome will be much,

NOTE Confidence: 0.7657569

00:19:41.260 --> 00:19:43.740 much higher than individuals who

NOTE Confidence: 0.7657569

 $00:19:43.740 \longrightarrow 00:19:47.129$ develop those cancers at an older age.

NOTE Confidence: 0.7657569

 $00{:}19{:}47.130 \dashrightarrow 00{:}19{:}51.072$ And we've looked at the representation

NOTE Confidence: 0.7657569

 $00:19:51.072 \longrightarrow 00:19:53.700$ among the colon cancers.

NOTE Confidence: 0.875331407857143

 $00{:}19{:}53.700 \dashrightarrow 00{:}19{:}57.183$ Of these cases, but what is the true actual

NOTE Confidence: 0.875331407857143

00:19:57.183 --> 00:19:59.759 incidence among the general population?

NOTE Confidence: 0.875331407857143

 $00:19:59.760 \longrightarrow 00:20:02.026$ So for the most common colon cancer syndrome,

NOTE Confidence: 0.875331407857143

00:20:02.026 --> 00:20:03.360 which would be a lynching, dromas?

NOTE Confidence: 0.875331407857143

00:20:03.360 --> 00:20:06.972 We mentioned one in 279 individuals,

NOTE Confidence: 0.875331407857143

 $00:20:06.972 \longrightarrow 00:20:08.516$ not people with cancer,

 $00:20:08.520 \longrightarrow 00:20:10.932$ but any individuals will have a

NOTE Confidence: 0.875331407857143

 $00{:}20{:}10.932 \dashrightarrow 00{:}20{:}14.092$ mutation in any one of these mismatch

NOTE Confidence: 0.875331407857143

00:20:14.092 --> 00:20:17.032 repair genes that cost Lynch syndrome.

NOTE Confidence: 0.875331407857143

 $00:20:17.040 \longrightarrow 00:20:19.184$ So that means that more than a million

NOTE Confidence: 0.875331407857143

00:20:19.184 --> 00:20:20.879 Americans do have leaned syndrome.

NOTE Confidence: 0.875331407857143

 $00:20:20.880 \longrightarrow 00:20:23.560$ Many of them have not been diagnosed yet.

NOTE Confidence: 0.875331407857143 00:20:23.560 --> 00:20:24.184 And there's.

NOTE Confidence: 0.875331407857143

 $00:20:24.184 \longrightarrow 00:20:27.172$ Plenty of work to be done in that scenario.

NOTE Confidence: 0.875331407857143

 $00:20:27.172 \longrightarrow 00:20:29.140$ On the other hand,

NOTE Confidence: 0.875331407857143

 $00:20:29.140 \longrightarrow 00:20:31.772$ important to point out that actually the

NOTE Confidence: 0.875331407857143

 $00:20:31.772 \longrightarrow 00:20:34.501$ mutations in the mismatch repair genes that

NOTE Confidence: 0.875331407857143

 $00:20:34.501 \longrightarrow 00:20:37.280$ cause in children that are more common

NOTE Confidence: 0.875331407857143

 $00{:}20{:}37.280 \dashrightarrow 00{:}20{:}39.770$ which are cheeks in particularly PMS.

NOTE Confidence: 0.875331407857143

 $00:20:39.770 \longrightarrow 00:20:43.418$ So those are the ones that

NOTE Confidence: 0.875331407857143

00:20:43.418 --> 00:20:45.306 carry a lower penetrance,

00:20:45.306 --> 00:20:48.367 meaning they have they have a lower risk of

NOTE Confidence: 0.875331407857143

 $00:20:48.367 \longrightarrow 00:20:50.726$ cancer that complicates things a little bit.

NOTE Confidence: 0.875331407857143

 $00:20:50.730 \longrightarrow 00:20:53.388$ So we have some genes that

NOTE Confidence: 0.875331407857143

 $00:20:53.388 \longrightarrow 00:20:55.196$ are less commonly mutated,

NOTE Confidence: 0.875331407857143

 $00:20:55.196 \longrightarrow 00:20:56.570$ but they cost.

NOTE Confidence: 0.875331407857143

00:20:56.570 --> 00:20:58.712 They have a much higher risk of

NOTE Confidence: 0.875331407857143

 $00:20:58.712 \longrightarrow 00:21:00.718$ cancer and then some others that

NOTE Confidence: 0.875331407857143

 $00:21:00.718 \longrightarrow 00:21:02.758$ are left that are more common,

NOTE Confidence: 0.875331407857143

 $00:21:02.760 \longrightarrow 00:21:05.046$ but yet their risk of cancer is not as

NOTE Confidence: 0.875331407857143

 $00:21:05.046 \longrightarrow 00:21:07.199$ high as you did with the other ones.

NOTE Confidence: 0.875331407857143

 $00{:}21{:}07.200 \dashrightarrow 00{:}21{:}09.132$ So that's also important to keep in

NOTE Confidence: 0.875331407857143

00:21:09.132 --> 00:21:11.200 mind and will see in a minute how

NOTE Confidence: 0.875331407857143

 $00:21:11.200 \longrightarrow 00:21:12.840$ we are looking at this differently

NOTE Confidence: 0.875331407857143

00:21:12.840 --> 00:21:14.416 depending on the jeans.

NOTE Confidence: 0.875331407857143

 $00:21:14.420 \longrightarrow 00:21:15.527$ For the most part,

NOTE Confidence: 0.875331407857143

00:21:15.527 --> 00:21:18.269 the majority of the colon cancer

 $00:21:18.269 \longrightarrow 00:21:20.310$ syndromes are autosomal dominant

NOTE Confidence: 0.875331407857143

 $00{:}21{:}20.310 \dashrightarrow 00{:}21{:}22.840$ public process and attenuated forms.

NOTE Confidence: 0.875331407857143

00:21:22.840 --> 00:21:23.772 Lynch syndrome.

NOTE Confidence: 0.875331407857143

00:21:23.772 --> 00:21:25.636 Those are autosomal dominant,

NOTE Confidence: 0.875331407857143

 $00:21:25.640 \longrightarrow 00:21:27.053$ maybe meaning that.

NOTE Confidence: 0.875331407857143

 $00:21:27.053 \longrightarrow 00:21:30.350$ The single a little a single imitation

NOTE Confidence: 0.875331407857143

00:21:30.440 --> 00:21:32.978 encrypted either from mum or that

NOTE Confidence: 0.875331407857143

 $00:21:32.978 \longrightarrow 00:21:35.750$ is enough to carry that mutation

NOTE Confidence: 0.875331407857143

 $00:21:35.750 \longrightarrow 00:21:38.245$ that causes the the syndrome.

NOTE Confidence: 0.875331407857143

00:21:38.250 --> 00:21:40.162 That's the majority again,

NOTE Confidence: 0.875331407857143

 $00:21:40.162 \longrightarrow 00:21:42.552$ or the colon cancer syndromes.

NOTE Confidence: 0.875331407857143

 $00:21:42.560 \longrightarrow 00:21:43.946$ But then there's a couple of them.

NOTE Confidence: 0.875331407857143

 $00{:}21{:}43.950 \dashrightarrow 00{:}21{:}45.862$ One is map and we'll talk about it

NOTE Confidence: 0.875331407857143

00:21:45.862 --> 00:21:48.554 in a second and then this MTH L1,

NOTE Confidence: 0.875331407857143

 $00:21:48.554 \longrightarrow 00:21:51.326$ where those are autosomal recessive diseases.

 $00:21:51.330 \longrightarrow 00:21:52.440$ That means that we did.

NOTE Confidence: 0.875331407857143

 $00:21:52.440 \longrightarrow 00:21:54.813$ We need to inherit 1 mutated copy

NOTE Confidence: 0.875331407857143

00:21:54.813 --> 00:21:57.376 from Mom and one from that in

NOTE Confidence: 0.875331407857143

 $00:21:57.376 \longrightarrow 00:21:59.584$ order to really have the disease.

NOTE Confidence: 0.875331407857143

 $00:21:59.590 \longrightarrow 00:22:01.210$ Loser again, less common.

NOTE Confidence: 0.875331407857143

00:22:01.210 --> 00:22:04.132 The majority of the colon cancer

NOTE Confidence: 0.875331407857143

 $00:22:04.132 \longrightarrow 00:22:06.736$ syndromes Paris autosomal dominant.

NOTE Confidence: 0.875331407857143

 $00:22:06.740 \longrightarrow 00:22:09.156$ So let's go a little bit over about

NOTE Confidence: 0.875331407857143

 $00{:}22{:}09.156 \dashrightarrow 00{:}22{:}10.784$ Lynch syndrome model and what we

NOTE Confidence: 0.875331407857143

 $00:22:10.784 \longrightarrow 00:22:12.900$ can do once we have it diagnosed.

NOTE Confidence: 0.875331407857143

 $00:22:12.900 \longrightarrow 00:22:14.629$ So the theology we talked about it,

NOTE Confidence: 0.875331407857143

 $00{:}22{:}14.630 \dashrightarrow 00{:}22{:}17.276$ it's a mutation in the germline that

NOTE Confidence: 0.875331407857143

 $00:22:17.276 \longrightarrow 00:22:19.975$ means that it's inherited in any one

NOTE Confidence: 0.875331407857143

 $00:22:19.975 \longrightarrow 00:22:22.790$ of these genes that are called mismatch

NOTE Confidence: 0.875331407857143

00:22:22.790 --> 00:22:24.689 repair genes to summer dominant.

NOTE Confidence: 0.875331407857143

 $00:22:24.689 \longrightarrow 00:22:25.568$ As we mentioned,

 $00{:}22{:}25.570 \dashrightarrow 00{:}22{:}26.994$ with variable penetrance and

NOTE Confidence: 0.875331407857143

 $00:22:26.994 \longrightarrow 00:22:29.633$ will go through this in a second

NOTE Confidence: 0.875331407857143

 $00:22:29.633 \longrightarrow 00:22:31.778$ and miniature diagnosis is wide.

NOTE Confidence: 0.875331407857143

00:22:31.780 --> 00:22:35.038 Wiley variable as will also see in a minute,

NOTE Confidence: 0.875331407857143

 $00:22:35.040 \longrightarrow 00:22:37.040$ but in general lower than

NOTE Confidence: 0.875331407857143

 $00:22:37.040 \longrightarrow 00:22:38.240$ sporadical rectal cancer,

NOTE Confidence: 0.875331407857143

 $00:22:38.240 \longrightarrow 00:22:41.320$ so we will see as we saw before,

NOTE Confidence: 0.875331407857143

 $00{:}22{:}41.320 \dashrightarrow 00{:}22{:}43.510$ that many of these younger individuals

NOTE Confidence: 0.875331407857143

00:22:43.510 --> 00:22:45.800 who have a higher percentage of

NOTE Confidence: 0.875331407857143

 $00{:}22{:}45.800 \to 00{:}22{:}48.068$ cases that will have Lynch Ingram

NOTE Confidence: 0.875331407857143

 $00{:}22{:}48.068 \dashrightarrow 00{:}22{:}50.269$ as opposed to older individuals.

NOTE Confidence: 0.875331407857143

 $00:22:50.270 \longrightarrow 00:22:51.440$ Only a few polyps or none,

NOTE Confidence: 0.875331407857143

 $00{:}22{:}51.440 \dashrightarrow 00{:}22{:}53.435$ and that's a problem that we often

NOTE Confidence: 0.875331407857143

 $00:22:53.435 \longrightarrow 00:22:55.609$ see many times because there are no

NOTE Confidence: 0.875331407857143

 $00:22:55.609 \longrightarrow 00:22:57.877$ polyps in people think that there will

00:22:57.877 --> 00:23:00.117 be no risk for developing colon cancer,

NOTE Confidence: 0.843196832857143

 $00{:}23{:}00.120 \dashrightarrow 00{:}23{:}02.276$ and in fact it has very little.

NOTE Confidence: 0.843196832857143

 $00:23:02.280 \longrightarrow 00:23:04.205$ To do the number of polyps and

NOTE Confidence: 0.843196832857143

 $00:23:04.205 \longrightarrow 00:23:05.861$ development of cancer in Lynch syndrome

NOTE Confidence: 0.843196832857143

 $00:23:05.861 \longrightarrow 00:23:08.100$ so it's never a marker for that at all,

NOTE Confidence: 0.843196832857143

00:23:08.100 --> 00:23:10.228 and we don't pay much attention to it

NOTE Confidence: 0.843196832857143

 $00:23:10.228 \longrightarrow 00:23:12.826$ at all and more right side to more

NOTE Confidence: 0.843196832857143

 $00:23:12.826 \longrightarrow 00:23:14.889$ than sporadic colon cancers in general.

NOTE Confidence: 0.843196832857143

00:23:14.890 --> 00:23:17.060 It's 70% of the Sprite.

NOTE Confidence: 0.843196832857143

 $00:23:17.060 \longrightarrow 00:23:18.680$ Colon cancers do happen in the

NOTE Confidence: 0.843196832857143

 $00:23:18.680 \longrightarrow 00:23:20.539$ in the distal part of the colon,

NOTE Confidence: 0.843196832857143

 $00{:}23{:}20.540 --> 00{:}23{:}21.196 \ ****** \ \mathrm{sigmoid},$

NOTE Confidence: 0.843196832857143

 $00:23:21.196 \longrightarrow 00:23:23.492$ and the left side of the colon.

NOTE Confidence: 0.843196832857143

 $00:23:23.500 \longrightarrow 00:23:24.570$ Yet in Lynch syndrome is

NOTE Confidence: 0.843196832857143

 $00:23:24.570 \longrightarrow 00:23:25.930$ more like a half and half,

NOTE Confidence: 0.843196832857143

 $00{:}23{:}25.930 \dashrightarrow 00{:}23{:}28.671$ so many more right sided tumors

00:23:28.671 --> 00:23:31.017 which do have implications when it

NOTE Confidence: 0.843196832857143

 $00:23:31.017 \longrightarrow 00:23:33.240$ comes to screening and surveillance.

NOTE Confidence: 0.843196832857143

 $00:23:33.240 \longrightarrow 00:23:35.640$ And very rapid cancer development.

NOTE Confidence: 0.843196832857143

00:23:35.640 --> 00:23:37.885 That's a key characteristic that

NOTE Confidence: 0.843196832857143

 $00:23:37.885 \longrightarrow 00:23:40.581$ cancers do develop very fast within

NOTE Confidence: 0.843196832857143

 $00:23:40.581 \longrightarrow 00:23:42.859$ two to three years we can go from.

NOTE Confidence: 0.843196832857143

 $00:23:42.859 \longrightarrow 00:23:44.980$ Early lesion to a cancer and that

NOTE Confidence: 0.843196832857143

 $00:23:45.055 \longrightarrow 00:23:47.876$ really informs how we do screening and

NOTE Confidence: 0.843196832857143

 $00:23:47.876 \longrightarrow 00:23:49.899$ surveillance for those individuals at

NOTE Confidence: 0.843196832857143

 $00{:}23{:}49.899 \dashrightarrow 00{:}23{:}52.517$ high risk of having a second cancer.

NOTE Confidence: 0.843196832857143 00:23:52.520 --> 00:23:53.834 In this case,

NOTE Confidence: 0.843196832857143

 $00:23:53.834 \longrightarrow 00:23:55.586$ a second colon cancer,

NOTE Confidence: 0.843196832857143

 $00{:}23{:}55.590 \dashrightarrow 00{:}23{:}58.318$ 30% at 10 years after the first diagnosis.

NOTE Confidence: 0.843196832857143

 $00:23:58.320 \longrightarrow 00:24:00.735$ That's why it is very important to

NOTE Confidence: 0.843196832857143

 $00:24:00.735 \longrightarrow 00:24:02.768$ either do very enhanced surveillance

 $00:24:02.768 \longrightarrow 00:24:05.552$ or even proceed with colectomy after

NOTE Confidence: 0.843196832857143

 $00{:}24{:}05.552 \dashrightarrow 00{:}24{:}08.597$ we have a diagnosis of a colon

NOTE Confidence: 0.843196832857143

 $00{:}24{:}08.597 \dashrightarrow 00{:}24{:}10.637$ cancer related with Lynch syndrome.

NOTE Confidence: 0.843196832857143 00:24:10.640 --> 00:24:11.176 And truly, NOTE Confidence: 0.843196832857143

 $00:24:11.176 \longrightarrow 00:24:13.052$ this is not a colon cancer syndrome.

NOTE Confidence: 0.843196832857143

 $00:24:13.060 \longrightarrow 00:24:14.430$ This is a multi cancer.

NOTE Confidence: 0.843196832857143

 $00:24:14.430 \longrightarrow 00:24:17.034$ In Rome with higher risk for cancer

NOTE Confidence: 0.843196832857143

 $00{:}24{:}17.034 \dashrightarrow 00{:}24{:}19.674$ from the Mitchell but also variants

NOTE Confidence: 0.843196832857143

00:24:19.674 --> 00:24:21.610 stomach small bowel hepatobiliary

NOTE Confidence: 0.843196832857143

 $00:24:21.610 \longrightarrow 00:24:23.868$ there ourselves a different number

NOTE Confidence: 0.843196832857143

 $00{:}24{:}23.868 \dashrightarrow 00{:}24{:}26.788$ of up types of cancers that have an

NOTE Confidence: 0.843196832857143

00:24:26.790 --> 00:24:28.770 increased risk and will sinnamon it

NOTE Confidence: 0.843196832857143

 $00:24:28.770 \longrightarrow 00:24:31.446$ right here and so over the last few

NOTE Confidence: 0.843196832857143

 $00{:}24{:}31.446 \dashrightarrow 00{:}24{:}33.384$ years we've really learned is that

NOTE Confidence: 0.843196832857143

00:24:33.455 --> 00:24:35.759 lynching room does have many flavors,

NOTE Confidence: 0.843196832857143

 $00:24:35.760 \longrightarrow 00:24:37.713$ and those really depend a lot on

 $00:24:37.713 \longrightarrow 00:24:40.010$ the type of mutation that we have.

NOTE Confidence: 0.843196832857143

 $00{:}24{:}40.010 \dashrightarrow 00{:}24{:}42.810$ Here we have the four genes implicated

NOTE Confidence: 0.843196832857143

 $00:24:42.810 \longrightarrow 00:24:44.938$ in Lynch syndrome here on the.

NOTE Confidence: 0.843196832857143

 $00:24:44.940 \longrightarrow 00:24:47.425$ Left side we have the column with

NOTE Confidence: 0.843196832857143

 $00:24:47.425 \longrightarrow 00:24:49.136$ the different cancer sites and

NOTE Confidence: 0.843196832857143

 $00:24:49.136 \longrightarrow 00:24:50.796$ then on the right side.

NOTE Confidence: 0.843196832857143

 $00:24:50.800 \longrightarrow 00:24:52.858$ Here we have the cumulative risk

NOTE Confidence: 0.843196832857143

 $00{:}24{:}52.858 \dashrightarrow 00{:}24{:}55.415$ for that for diagnosis to a lifetime

NOTE Confidence: 0.843196832857143

 $00:24:55.415 \longrightarrow 00:24:57.285$ for the general population just

NOTE Confidence: 0.843196832857143

 $00:24:57.285 \longrightarrow 00:24:58.660$ for comparison purposes.

NOTE Confidence: 0.843196832857143

 $00:24:58.660 \longrightarrow 00:24:59.980$ And as you'll see here,

NOTE Confidence: 0.843196832857143

 $00:24:59.980 \longrightarrow 00:25:01.120$ for colorectal cancer,

NOTE Confidence: 0.843196832857143

 $00{:}25{:}01.120 \dashrightarrow 00{:}25{:}03.780$ very high risk in MLH one message,

NOTE Confidence: 0.843196832857143

 $00:25:03.780 \longrightarrow 00:25:06.342$ two carriers a little less for MSH

NOTE Confidence: 0.843196832857143

 $00:25:06.342 \longrightarrow 00:25:09.072$ 6 and definitely lower risk for PMS

00:25:09.072 --> 00:25:11.400 two definitely much higher than the

NOTE Confidence: 0.843196832857143

00:25:11.476 --> 00:25:13.848 general population or population.

NOTE Confidence: 0.843196832857143

 $00:25:13.850 \longrightarrow 00:25:15.128 4.2\%$ over live.

NOTE Confidence: 0.843196832857143

 $00:25:15.128 \longrightarrow 00:25:18.610$ Time and here PMS two up to 20%,

NOTE Confidence: 0.843196832857143

00:25:18.610 --> 00:25:20.395 but definitely less than the other one,

NOTE Confidence: 0.843196832857143

 $00{:}25{:}20.400 \dashrightarrow 00{:}25{:}22.980$ so that's also we mentioned that

NOTE Confidence: 0.843196832857143

 $00:25:22.980 \longrightarrow 00:25:25.342$ it's a difference that we take into

NOTE Confidence: 0.843196832857143

 $00{:}25{:}25.342 \dashrightarrow 00{:}25{:}26.950$ account and to meet real cancer.

NOTE Confidence: 0.843196832857143

 $00{:}25{:}26.950 \dashrightarrow 00{:}25{:}28.580$ There are important differences too.

NOTE Confidence: 0.843196832857143

 $00:25:28.580 \longrightarrow 00:25:33.008$ Also with the lower.

NOTE Confidence: 0.843196832857143

 $00{:}25{:}33.010 \dashrightarrow 00{:}25{:}34.774$ Percentage of individuals developing

NOTE Confidence: 0.843196832857143

 $00:25:34.774 \longrightarrow 00:25:37.879$ it when they have PMS two mutations

NOTE Confidence: 0.843196832857143

 $00:25:37.879 \longrightarrow 00:25:41.335$ and then there are also very a unique cases.

NOTE Confidence: 0.843196832857143

 $00:25:41.340 \longrightarrow 00:25:43.622$ For instance when it comes to the

NOTE Confidence: 0.843196832857143

00:25:43.622 --> 00:25:45.036 urothelial tract, renal pelvis,

NOTE Confidence: 0.843196832857143

00:25:45.036 --> 00:25:45.792 ureter, bladder,

 $00:25:45.792 \longrightarrow 00:25:48.631$ where we see kind of a clustering

NOTE Confidence: 0.843196832857143

 $00:25:48.631 \longrightarrow 00:25:51.091$ of the individuals and families

NOTE Confidence: 0.843196832857143

00:25:51.091 --> 00:25:52.567 with these cancers.

NOTE Confidence: 0.843196832857143

 $00:25:52.570 \longrightarrow 00:25:56.140$ In mutation carriers for MSH.

NOTE Confidence: 0.843196832857143 00:25:56.140 --> 00:25:57.054 2 genes. NOTE Confidence: 0.843196832857143

 $00:25:57.054 \longrightarrow 00:25:59.796$ So that's where they really tend

NOTE Confidence: 0.843196832857143

 $00:25:59.796 \longrightarrow 00:26:00.710$ to concentrate.

NOTE Confidence: 0.843196832857143

 $00:26:00.710 \longrightarrow 00:26:02.410$ Or for instance in pancreas,

NOTE Confidence: 0.843196832857143

 $00:26:02.410 \longrightarrow 00:26:04.738$ where this really has been much

NOTE Confidence: 0.843196832857143

 $00{:}26{:}04.738 \longrightarrow 00{:}26{:}06.703$ more clearly associated with Emily

NOTE Confidence: 0.843196832857143

 $00:26:06.703 \longrightarrow 00:26:08.761$ to one mutation carriers and much

NOTE Confidence: 0.843196832857143 00:26:08.761 --> 00:26:09.790 less with the NOTE Confidence: 0.749362615454546

 $00:26:09.858 \longrightarrow 00:26:12.400$ other ones, and definitely not with PMS two.

NOTE Confidence: 0.749362615454546

 $00:26:12.400 \longrightarrow 00:26:15.216$ So we are left with those very important

NOTE Confidence: 0.749362615454546

 $00:26:15.216 \longrightarrow 00:26:17.348$ differences that really are informing us

00:26:17.348 --> 00:26:20.010 on how we are approaching Lynch syndrome.

NOTE Confidence: 0.749362615454546

00:26:20.010 --> 00:26:24.470 Again, we no longer calling syndrome as a

NOTE Confidence: 0.749362615454546

 $00:26:24.470 \longrightarrow 00:26:27.487$ whole and we tend to say more like MLH.

NOTE Confidence: 0.749362615454546

 $00:26:27.490 \longrightarrow 00:26:29.506$ One related Lynch syndrome or PMS

NOTE Confidence: 0.749362615454546

 $00:26:29.506 \longrightarrow 00:26:31.799$ 2 links in there just because.

NOTE Confidence: 0.749362615454546

00:26:31.800 --> 00:26:35.195 They seem to have a important enough

NOTE Confidence: 0.749362615454546

 $00:26:35.195 \longrightarrow 00:26:37.927$ differences as you are seeing here

NOTE Confidence: 0.749362615454546

 $00:26:37.927 \longrightarrow 00:26:40.947$ and when we look at these one P M S2,

NOTE Confidence: 0.749362615454546

 $00{:}26{:}40.950 \dashrightarrow 00{:}26{:}42.896$ which as we mentioned is the one

NOTE Confidence: 0.749362615454546

 $00:26:42.896 \longrightarrow 00:26:45.308$ that is the most common of them all.

NOTE Confidence: 0.749362615454546

 $00:26:45.310 \longrightarrow 00:26:47.794$ The risk is really concentrated in

NOTE Confidence: 0.749362615454546

 $00:26:47.794 \longrightarrow 00:26:49.315$ colorectal and endometrial plus

NOTE Confidence: 0.749362615454546

 $00{:}26{:}49.315 \dashrightarrow 00{:}26{:}50.965$ minus 4 Berry and definitely does

NOTE Confidence: 0.749362615454546

 $00:26:50.965 \longrightarrow 00:26:52.800$ not seem that there's an increased

NOTE Confidence: 0.749362615454546

 $00:26:52.800 \longrightarrow 00:26:54.702$ risk for all these other cancers.

NOTE Confidence: 0.749362615454546

 $00:26:54.710 \longrightarrow 00:26:57.470$ So our surveillance is definitely different.

 $00:26:57.470 \longrightarrow 00:27:00.135$ Looking at these cancer risks

NOTE Confidence: 0.749362615454546

 $00:27:00.135 \longrightarrow 00:27:02.800$ when we are looking at.

NOTE Confidence: 0.749362615454546

 $00{:}27{:}02.800 \dashrightarrow 00{:}27{:}04.788$ Average age at presentation.

NOTE Confidence: 0.749362615454546

00:27:04.788 --> 00:27:06.776 Important differences here too.

NOTE Confidence: 0.749362615454546

 $00:27:06.780 \longrightarrow 00:27:09.204$ And when we look at Colon

NOTE Confidence: 0.749362615454546

 $00:27:09.204 \longrightarrow 00:27:11.470$ that's younger for Emily Joanna.

NOTE Confidence: 0.749362615454546

 $00:27:11.470 \longrightarrow 00:27:14.098$ Message 2 mutation carriers.

NOTE Confidence: 0.749362615454546

 $00:27:14.098 \longrightarrow 00:27:17.722$ Yet it's older for MSH 6IN,

NOTE Confidence: 0.749362615454546

 $00{:}27{:}17.722 \dashrightarrow 00{:}27{:}20.049$ particularly for PMS two individuals.

NOTE Confidence: 0.749362615454546

 $00:27:20.049 \longrightarrow 00:27:22.761$ And if you look at here at the

NOTE Confidence: 0.749362615454546

00:27:22.761 --> 00:27:25.004 bracket here for PMS two 6166 it's

NOTE Confidence: 0.749362615454546

 $00:27:25.004 \longrightarrow 00:27:26.914$ important to remember right now.

NOTE Confidence: 0.749362615454546

 $00{:}27{:}26.920 \dashrightarrow 00{:}27{:}29.422$ Last year the average age of

NOTE Confidence: 0.749362615454546

 $00:27:29.422 \longrightarrow 00:27:31.434$ colorectal cancer had gone down

NOTE Confidence: 0.749362615454546

 $00:27:31.434 \longrightarrow 00:27:33.210$ to 67 in the US population.

 $00:27:33.210 \longrightarrow 00:27:35.226$ So that's pretty close to what we

NOTE Confidence: 0.749362615454546

 $00{:}27{:}35.226 \dashrightarrow 00{:}27{:}37.110$ would see with PMS two mutation

NOTE Confidence: 0.749362615454546

00:27:37.110 --> 00:27:39.336 carriers so many times you'll see me

NOTE Confidence: 0.749362615454546

 $00:27:39.403 \longrightarrow 00:27:41.455$ individuals Lynch syndrome due to a

NOTE Confidence: 0.749362615454546

 $00:27:41.455 \longrightarrow 00:27:44.099$ PMS two mutation that you will be

NOTE Confidence: 0.749362615454546

 $00{:}27{:}44.099 \dashrightarrow 00{:}27{:}47.060$ not very spectacular and the age of

NOTE Confidence: 0.749362615454546

 $00:27:47.150 \longrightarrow 00:27:49.714$ onset is not going to be that different

NOTE Confidence: 0.749362615454546

 $00:27:49.714 \longrightarrow 00:27:51.644$ from the general population and and

NOTE Confidence: 0.749362615454546

 $00:27:51.644 \longrightarrow 00:27:53.884$ often we may not even suspect that

NOTE Confidence: 0.749362615454546

 $00:27:53.949 \longrightarrow 00:27:56.665$ the patient can actually have Lynch syndrome.

NOTE Confidence: 0.749362615454546

 $00{:}27{:}56.670 \dashrightarrow 00{:}27{:}58.536$ When it comes to individual cancers,

NOTE Confidence: 0.749362615454546

 $00:27:58.540 \longrightarrow 00:28:00.574$ he just seemed to be a little more equal.

NOTE Confidence: 0.749362615454546

 $00:28:00.580 \longrightarrow 00:28:03.205$ Here when it comes to age of

NOTE Confidence: 0.749362615454546

 $00{:}28{:}03.205 \dashrightarrow 00{:}28{:}04.899$ presentation of these cancers

NOTE Confidence: 0.749362615454546

 $00:28:04.899 \longrightarrow 00:28:07.339$ around all the different genes.

NOTE Confidence: 0.749362615454546

 $00:28:07.340 \longrightarrow 00:28:08.160$ So what do we do?

 $00:28:08.160 \longrightarrow 00:28:09.840$ And in terms of surveillance.

NOTE Confidence: 0.749362615454546

 $00:28:09.840 \longrightarrow 00:28:12.384$ So for colorectal we do start with high

NOTE Confidence: 0.749362615454546

00:28:12.384 --> 00:28:15.138 quality and meaning high quality colonoscopy.

NOTE Confidence: 0.749362615454546

 $00:28:15.140 \longrightarrow 00:28:18.116$ What it really means is that we need

NOTE Confidence: 0.749362615454546

 $00:28:18.116 \longrightarrow 00:28:21.064$ to make sure that the preparation

NOTE Confidence: 0.749362615454546

 $00:28:21.064 \longrightarrow 00:28:23.180$ is adequate and optimal.

NOTE Confidence: 0.749362615454546 00:28:23.180 --> 00:28:23.914 Then, uh, NOTE Confidence: 0.749362615454546

 $00:28:23.914 \longrightarrow 00:28:26.116$ and also that endoscopies do spend

NOTE Confidence: 0.749362615454546

00:28:26.116 --> 00:28:28.002 the time really carefully looking

NOTE Confidence: 0.749362615454546

 $00:28:28.002 \longrightarrow 00:28:31.023$ at the at the colon to make sure

NOTE Confidence: 0.749362615454546

00:28:31.023 --> 00:28:33.158 that we're not missing anything,

NOTE Confidence: 0.749362615454546 00:28:33.160 --> 00:28:33.617 because, NOTE Confidence: 0.749362615454546 00:28:33.617 --> 00:28:34.074 again, NOTE Confidence: 0.749362615454546

 $00{:}28{:}34.074 \dashrightarrow 00{:}28{:}36.359$ particularly right side lesions often

NOTE Confidence: 0.749362615454546

00:28:36.359 --> 00:28:39.110 would start very flat and may be

 $00:28:39.110 \longrightarrow 00:28:41.072$ easily missed and into three years

NOTE Confidence: 0.749362615454546

 $00:28:41.137 \longrightarrow 00:28:43.356$ we have a full blown cancer there,

NOTE Confidence: 0.749362615454546

 $00:28:43.360 \longrightarrow 00:28:44.968$ so very, very important.

NOTE Confidence: 0.749362615454546

 $00:28:44.968 \longrightarrow 00:28:47.590$ The quality of the call and ask

NOTE Confidence: 0.749362615454546

 $00:28:47.590 \longrightarrow 00:28:50.233$ be leading at ages 20 to 25, but.

NOTE Confidence: 0.749362615454546

 $00{:}28{:}50.233 \dashrightarrow 00{:}28{:}53.057$ At 30 to 35 for the mutation carriers

NOTE Confidence: 0.749362615454546

 $00{:}28{:}53.057 \dashrightarrow 00{:}28{:}56.022$ of MSA CHEEKS and PMS two just because

NOTE Confidence: 0.749362615454546

 $00:28:56.022 \longrightarrow 00:28:58.760$ of what we were showing before,

NOTE Confidence: 0.749362615454546

 $00:28:58.760 \longrightarrow 00:29:00.678$ which is that they tend to present

NOTE Confidence: 0.749362615454546

 $00:29:00.678 \longrightarrow 00:29:04.250$ later in life or if.

NOTE Confidence: 0.749362615454546

 $00{:}29{:}04.250 \dashrightarrow 00{:}29{:}06.462$ To five years prior to the earliest

NOTE Confidence: 0.749362615454546

 $00:29:06.462 \longrightarrow 00:29:08.089$ colorectal cancer in the family.

NOTE Confidence: 0.749362615454546

 $00:29:08.090 \longrightarrow 00:29:10.519$ If that was diagnosed before the age

NOTE Confidence: 0.749362615454546

 $00:29:10.519 \longrightarrow 00:29:13.210$ of 25 or again. 34 M SH6 or PMS.

NOTE Confidence: 0.749362615454546

 $00:29:13.210 \longrightarrow 00:29:14.034$ Two carriers.

NOTE Confidence: 0.749362615454546

 $00:29:14.034 \longrightarrow 00:29:16.455$ So looking at this specific genetic

00:29:16.455 --> 00:29:18.585 defect and also the family history

NOTE Confidence: 0.749362615454546

 $00:29:18.585 \longrightarrow 00:29:19.650$ and what's happened

NOTE Confidence: 0.868767805833333

 $00:29:19.707 \longrightarrow 00:29:22.060$ with them. And we repeated every

NOTE Confidence: 0.868767805833333

 $00:29:22.060 \longrightarrow 00:29:24.730$ one to two years and again.

NOTE Confidence: 0.868767805833333

 $00:29:24.730 \longrightarrow 00:29:26.963$ The reason for that is because of

NOTE Confidence: 0.868767805833333

 $00:29:26.963 \longrightarrow 00:29:29.339$ how fast it cancers do develop,

NOTE Confidence: 0.868767805833333

00:29:29.340 --> 00:29:31.728 and there's good studies showing that

NOTE Confidence: 0.868767805833333

 $00{:}29{:}31.728 \dashrightarrow 00{:}29{:}34.260$ repeating it every one to two years.

NOTE Confidence: 0.868767805833333

 $00{:}29{:}34.260 \dashrightarrow 00{:}29{:}36.276$ The great majority of the cancers

NOTE Confidence: 0.868767805833333

00:29:36.276 --> 00:29:38.000 get caught right in time.

NOTE Confidence: 0.868767805833333

 $00:29:38.000 \longrightarrow 00:29:43.328$ At early stage the majority being able to be.

NOTE Confidence: 0.868767805833333

 $00:29:43.330 \longrightarrow 00:29:45.736$ Taken out in this copy clean

NOTE Confidence: 0.868767805833333

00:29:45.736 --> 00:29:46.939 then causing minimum.

NOTE Confidence: 0.868767805833333

 $00:29:46.940 \longrightarrow 00:29:47.698$ This disruption.

NOTE Confidence: 0.868767805833333

 $00:29:47.698 \longrightarrow 00:29:50.351$ Doing it this way and not finding

 $00:29:50.351 \longrightarrow 00:29:52.769$ them advanced cancers when it comes

NOTE Confidence: 0.868767805833333

 $00{:}29{:}52.769 \dashrightarrow 00{:}29{:}55.290$ to stomach and small bowel cancer.

NOTE Confidence: 0.868767805833333

 $00:29:55.290 \longrightarrow 00:29:57.006$ We've seen a lot of variability

NOTE Confidence: 0.868767805833333

00:29:57.006 --> 00:29:58.879 depending on the continent and and

NOTE Confidence: 0.868767805833333

00:29:58.879 --> 00:30:00.227 that repeats everywhere actually.

NOTE Confidence: 0.868767805833333

 $00:\!30:\!00.230 \dashrightarrow 00:\!30:\!03.494$ So the the incidence of overall incidents in

NOTE Confidence: 0.868767805833333

 $00:30:03.494 \longrightarrow 00:30:06.570$ the different regions of the world does also.

NOTE Confidence: 0.868767805833333

00:30:06.570 --> 00:30:08.831 Playing a role in the development of

NOTE Confidence: 0.868767805833333

 $00:30:08.831 \longrightarrow 00:30:11.228$ cancer in Lynch syndrome patients too.

NOTE Confidence: 0.868767805833333

 $00:30:11.230 \longrightarrow 00:30:12.814$ So for instance.

NOTE Confidence: 0.868767805833333

 $00{:}30{:}12.814 --> 00{:}30{:}14.398$ Here in EU.

NOTE Confidence: 0.868767805833333

 $00:30:14.400 \longrightarrow 00:30:17.292$ S This really the risk is

NOTE Confidence: 0.868767805833333

 $00:30:17.292 \longrightarrow 00:30:19.220$ not that spectacularly high,

NOTE Confidence: 0.868767805833333

 $00:30:19.220 \longrightarrow 00:30:21.870$ and the server and surveillance

NOTE Confidence: 0.868767805833333

 $00:30:21.870 \longrightarrow 00:30:25.384$ has really not been shown to make

NOTE Confidence: 0.868767805833333

 $00:30:25.384 \longrightarrow 00:30:27.720$ a significant difference because,

 $00:30:27.720 \longrightarrow 00:30:28.752$ uh, because again,

NOTE Confidence: 0.868767805833333

00:30:28.752 --> 00:30:31.560 because of the risk not being that high,

NOTE Confidence: 0.868767805833333

 $00{:}30{:}31.560 \dashrightarrow 00{:}30{:}33.605$ but certainly for individuals or

NOTE Confidence: 0.868767805833333

 $00:30:33.605 \longrightarrow 00:30:36.290$ families who are of Asian descent.

NOTE Confidence: 0.868767805833333

 $00:30:36.290 \longrightarrow 00:30:40.100$ We definitely an ask for EGD,

NOTE Confidence: 0.868767805833333

 $00:30:40.100 \longrightarrow 00:30:41.975$ with extended within OSCA P

NOTE Confidence: 0.868767805833333

 $00:30:41.975 \longrightarrow 00:30:43.499$ every three to five.

NOTE Confidence: 0.868767805833333

 $00:30:43.500 \longrightarrow 00:30:45.744$ Years beginning at 40 and every

NOTE Confidence: 0.868767805833333

 $00:30:45.744 \longrightarrow 00:30:48.778$ three to five years and the uh,

NOTE Confidence: 0.868767805833333

 $00{:}30{:}48.778 \dashrightarrow 00{:}30{:}51.163$ there's some recent data that

NOTE Confidence: 0.868767805833333

00:30:51.163 --> 00:30:54.110 probably suggests that for the given,

NOTE Confidence: 0.868767805833333

 $00:30:54.110 \longrightarrow 00:30:57.008$ the small risk and the little that is added,

NOTE Confidence: 0.868767805833333

00:30:57.010 --> 00:30:58.255 adding any detour,

NOTE Confidence: 0.868767805833333

 $00:30:58.255 \longrightarrow 00:31:00.330$ colonoscopy probably doesn't make sense

NOTE Confidence: 0.868767805833333

 $00:31:00.330 \longrightarrow 00:31:03.300$ to do that for the overall population.

00:31:03.300 --> 00:31:05.220 But again, there's no strong data

NOTE Confidence: 0.868767805833333

00:31:05.220 --> 00:31:07.480 showing that baseline Helicobacter pylori,

NOTE Confidence: 0.868767805833333

 $00:31:07.480 \longrightarrow 00:31:09.100$ testing and eradication.

NOTE Confidence: 0.868767805833333

 $00:31:09.100 \longrightarrow 00:31:09.718$ We do that.

NOTE Confidence: 0.868767805833333

 $00:31:09.718 \longrightarrow 00:31:10.130$ We don't.

NOTE Confidence: 0.868767805833333

 $00:31:10.130 \longrightarrow 00:31:12.830$ We do not want to carcinogens

NOTE Confidence: 0.868767805833333

 $00:31:12.830 \longrightarrow 00:31:14.162$ heading back there.

NOTE Confidence: 0.868767805833333

 $00:31:14.162 \longrightarrow 00:31:15.938$ Tyler is a underlines,

NOTE Confidence: 0.868767805833333

00:31:15.940 --> 00:31:18.136 a gastric cancer and certainly we

NOTE Confidence: 0.868767805833333

 $00:31:18.136 \longrightarrow 00:31:20.459$ don't like to have a carcinogen

NOTE Confidence: 0.868767805833333

 $00:31:20.459 \longrightarrow 00:31:22.823$ on top of a susceptibility of

NOTE Confidence: 0.868767805833333

 $00:31:22.823 \longrightarrow 00:31:24.740$ colorectal of gastric cancer.

NOTE Confidence: 0.868767805833333

 $00:31:24.740 \longrightarrow 00:31:27.337$ So we try to test and eliminate.

NOTE Confidence: 0.868767805833333

00:31:27.340 --> 00:31:28.312 You know,

NOTE Confidence: 0.868767805833333

 $00:31:28.312 \longrightarrow 00:31:30.595$ individuals who test positive when

NOTE Confidence: 0.868767805833333

 $00:31:30.595 \longrightarrow 00:31:32.270$ it comes to endometrial cancer.

00:31:32.270 --> 00:31:35.770 No good data proving benefit from screening,

NOTE Confidence: 0.868767805833333

 $00{:}31{:}35.770 \dashrightarrow 00{:}31{:}37.960$ but we do know that intermedia

NOTE Confidence: 0.868767805833333

 $00:31:37.960 \longrightarrow 00:31:39.948$ biopsies are highly sensitive and

NOTE Confidence: 0.868767805833333

00:31:39.948 --> 00:31:41.800 specific as diagnostic procedures,

NOTE Confidence: 0.868767805833333

00:31:41.800 --> 00:31:43.090 and that's what's being used

NOTE Confidence: 0.868767805833333

 $00:31:43.090 \longrightarrow 00:31:44.380$ every one to two years.

NOTE Confidence: 0.868767805833333

00:31:44.380 --> 00:31:46.996 Starting at age 30 to 35, trans.

NOTE Confidence: 0.868767805833333

 $00:31:46.996 \longrightarrow 00:31:49.220$ Vaginal ultrasound which is.

NOTE Confidence: 0.868767805833333

00:31:49.220 --> 00:31:49.690 Uh,

NOTE Confidence: 0.868767805833333

 $00{:}31{:}49.690 \dashrightarrow 00{:}31{:}52.510$ used for Varian Cancer in premenopausal

NOTE Confidence: 0.868767805833333

 $00:31:52.510 \longrightarrow 00:31:55.184$ women is not recommended and

NOTE Confidence: 0.868767805833333

 $00:31:55.184 \longrightarrow 00:31:58.124$ hysterectomy is definitely a risk

NOTE Confidence: 0.868767805833333

 $00{:}31{:}58.124 \dashrightarrow 00{:}32{:}00.844$ reducing option that works well

NOTE Confidence: 0.868767805833333

 $00:32:00.844 \longrightarrow 00:32:03.460$ and being well proven and it

NOTE Confidence: 0.868767805833333

 $00:32:03.460 \longrightarrow 00:32:06.300$ really needs to be typed in an

00:32:06.300 --> 00:32:08.260 individualized way and really trying

NOTE Confidence: 0.868767805833333

 $00{:}32{:}08.336 \dashrightarrow 00{:}32{:}11.296$ to see if that can be done right

NOTE Confidence: 0.868767805833333

00:32:11.296 --> 00:32:13.348 after childbearing age is completed,

NOTE Confidence: 0.868767805833333

00:32:13.350 --> 00:32:15.300 but family history is important and

NOTE Confidence: 0.868767805833333

 $00:32:15.300 \longrightarrow 00:32:17.200$ genetic defect is important in order

NOTE Confidence: 0.868767805833333

 $00:32:17.200 \longrightarrow 00:32:19.090$ to really putting it all together and.

NOTE Confidence: 0.868767805833333

 $00:32:19.090 \longrightarrow 00:32:21.463$ And and counseling on when it's the

NOTE Confidence: 0.868767805833333

 $00:32:21.463 \longrightarrow 00:32:23.769$ right time for that hysterectomy.

NOTE Confidence: 0.868767805833333

 $00:32:23.770 \longrightarrow 00:32:26.250$ For ovarian cancer we mentioned

NOTE Confidence: 0.868767805833333

 $00:32:26.250 \longrightarrow 00:32:28.730$ before trans vaginal ultrasound or

NOTE Confidence: 0.868767805833333

 $00:32:28.814 \longrightarrow 00:32:30.894$ see a 125 are being used and we

NOTE Confidence: 0.868767805833333

 $00:32:30.894 \longrightarrow 00:32:32.892$ do know also that bilateral self

NOTE Confidence: 0.868767805833333

 $00:32:32.892 \longrightarrow 00:32:35.268$ Ingle S pingo fracta me definitely

NOTE Confidence: 0.868767805833333

 $00:32:35.268 \longrightarrow 00:32:37.124$ reduce the incidence of ovarian

NOTE Confidence: 0.868767805833333

 $00:32:37.124 \longrightarrow 00:32:39.862$ cancer and we would not do it for

NOTE Confidence: 0.868767805833333

00:32:39.862 --> 00:32:41.972 PMS two carriers because probably

 $00:32:41.972 \longrightarrow 00:32:43.660$ there's no increased risk

NOTE Confidence: 0.831592605

 $00:32:43.731 \longrightarrow 00:32:45.777$ in this group as we saw

NOTE Confidence: 0.831592605

 $00:32:45.777 \longrightarrow 00:32:47.141$ before for pancreas cancer.

NOTE Confidence: 0.831592605

 $00:32:47.150 \longrightarrow 00:32:48.530$ As we mentioned before,

NOTE Confidence: 0.831592605

 $00:32:48.530 \longrightarrow 00:32:49.565$ very clustered around.

NOTE Confidence: 0.831592605

00:32:49.570 --> 00:32:51.845 Emily Quan, I'm about this gene and

NOTE Confidence: 0.831592605

 $00:32:51.845 \longrightarrow 00:32:54.702$ that's the one that when there's a, uh,

NOTE Confidence: 0.831592605

 $00:32:54.702 \longrightarrow 00:32:58.286$ a family member who's had pancreas cancer.

NOTE Confidence: 0.831592605

 $00:32:58.290 \longrightarrow 00:33:00.768$ In this, have that mutation really

NOTE Confidence: 0.831592605

 $00:33:00.768 \longrightarrow 00:33:03.147$ recommend screening starting at age 50

NOTE Confidence: 0.831592605

 $00:33:03.147 \longrightarrow 00:33:05.464$ or 10 years earlier than the youngest

NOTE Confidence: 0.831592605

 $00:33:05.464 \longrightarrow 00:33:07.586$ pancreas cancer in the family for

NOTE Confidence: 0.831592605

 $00{:}33{:}07.586 \dashrightarrow 00{:}33{:}09.886$ individuals with more than one first or

NOTE Confidence: 0.831592605

 $00:33:09.886 \longrightarrow 00:33:11.326$ second degree relative with pancreas,

NOTE Confidence: 0.831592605

 $00:33:11.330 \longrightarrow 00:33:13.754$ and they know carcinoma

00:33:13.754 --> 00:33:16.178 GUR still very unclear.

NOTE Confidence: 0.831592605

 $00{:}33{:}16.180 \dashrightarrow 00{:}33{:}17.750$ Remember we talked that there's

NOTE Confidence: 0.831592605

 $00:33:17.750 \longrightarrow 00:33:20.059$ a lot of class ring around the.

NOTE Confidence: 0.831592605

 $00:33:20.060 \longrightarrow 00:33:21.545$ Gene and no,

NOTE Confidence: 0.831592605

00:33:21.545 --> 00:33:24.515 no clear evidence to support screening,

NOTE Confidence: 0.831592605

 $00:33:24.520 \longrightarrow 00:33:28.456$ but annual urinalysis is usually done.

NOTE Confidence: 0.831592605

 $00{:}33{:}28.460 \dashrightarrow 00{:}33{:}31.491$ It's a cheap method and there's

NOTE Confidence: 0.831592605

 $00:33:31.491 \longrightarrow 00:33:34.051$ some sporadic data that shows that

NOTE Confidence: 0.831592605

 $00:33:34.051 \longrightarrow 00:33:36.802$ that's been able to help in terms

NOTE Confidence: 0.831592605

 $00:33:36.884 \longrightarrow 00:33:39.208$ of identifying early lesions.

NOTE Confidence: 0.831592605

 $00:33:39.210 \longrightarrow 00:33:41.530$ Or as CNS cancer,

NOTE Confidence: 0.831592605

 $00:33:41.530 \longrightarrow 00:33:44.550$ which also for lynching there's a

NOTE Confidence: 0.831592605

 $00:33:44.550 \longrightarrow 00:33:47.010$ slightly increased risk annual physical

NOTE Confidence: 0.831592605

 $00:33:47.010 \longrightarrow 00:33:49.130$ examinations without neurological exam

NOTE Confidence: 0.831592605

 $00:33:49.130 \longrightarrow 00:33:52.930$ starting at age 25 and 30 is recommended,

NOTE Confidence: 0.831592605

 $00:33:52.930 \longrightarrow 00:33:55.144$ and yet we don't have strong data on that,

 $00{:}33{:}55.150 \dashrightarrow 00{:}33{:}57.170$ and particularly because the risk

NOTE Confidence: 0.831592605

00:33:57.170 --> 00:33:59.190 is not that extraordinary high.

NOTE Confidence: 0.831592605

00:33:59.190 --> 00:34:00.958 How about surgical management?

NOTE Confidence: 0.831592605

 $00:34:00.958 \longrightarrow 00:34:04.171$ For once colon cancer is diagnosed there

NOTE Confidence: 0.831592605

 $00:34:04.171 \longrightarrow 00:34:07.087$ should be strong consideration for subtotal,

NOTE Confidence: 0.831592605

 $00:34:07.090 \longrightarrow 00:34:08.288$ subtotal colectomy.

NOTE Confidence: 0.831592605

00:34:08.288 --> 00:34:13.080 Uh and Elyria earlier Ecklund as Thomas is,

NOTE Confidence: 0.831592605

 $00:34:13.080 \longrightarrow 00:34:15.114$ and that's because again what we

NOTE Confidence: 0.831592605

00:34:15.114 --> 00:34:16.910 mentioned before the very high

NOTE Confidence: 0.831592605

 $00:34:16.910 \longrightarrow 00:34:18.810$ risk of developing another cancer.

NOTE Confidence: 0.831592605

 $00{:}34{:}18.810 \dashrightarrow 00{:}34{:}21.492$ So it is important that surgeons

NOTE Confidence: 0.831592605

 $00:34:21.492 \longrightarrow 00:34:24.300$ do have it diagnosis before the

NOTE Confidence: 0.831592605

 $00{:}34{:}24.300 \dashrightarrow 00{:}34{:}26.156$ upgrade and but again,

NOTE Confidence: 0.831592605

 $00:34:26.160 \longrightarrow 00:34:27.108$ as we mentioned before,

NOTE Confidence: 0.831592605

 $00:34:27.108 \longrightarrow 00:34:29.381$ if we are going to be of our patients

 $00:34:29.381 \longrightarrow 00:34:31.229$ are going to be very compliant and

NOTE Confidence: 0.831592605

 $00:34:31.283 \longrightarrow 00:34:32.758$ willing to have this colonoscopy

NOTE Confidence: 0.831592605

 $00:34:32.758 \longrightarrow 00:34:34.233$ every one to two years.

NOTE Confidence: 0.831592605

 $00:34:34.240 \longrightarrow 00:34:36.420$ That's a reasonable option too.

NOTE Confidence: 0.831592605

 $00:34:36.420 \longrightarrow 00:34:38.359$ But again, knowing that we do have

NOTE Confidence: 0.831592605

 $00:34:38.359 \longrightarrow 00:34:40.229$ a pretty high risk once we had.

NOTE Confidence: 0.831592605

 $00{:}34{:}40.230 \dashrightarrow 00{:}34{:}42.696$ One colon cancer of developing a

NOTE Confidence: 0.831592605

00:34:42.696 --> 00:34:44.276 second one prophylactic surgery.

NOTE Confidence: 0.831592605

00:34:44.276 --> 00:34:44.654 Definitely,

NOTE Confidence: 0.831592605

 $00:34:44.654 \longrightarrow 00:34:46.166$ as we mentioned before,

NOTE Confidence: 0.831592605

00:34:46.170 --> 00:34:48.260 hysterectomy offer ectomy should be

NOTE Confidence: 0.831592605

 $00:34:48.260 \longrightarrow 00:34:49.932$ discussed with mutation carriers.

NOTE Confidence: 0.831592605

 $00:34:49.940 \longrightarrow 00:34:52.115$ After completion of childbearing age

NOTE Confidence: 0.831592605

 $00:34:52.115 \longrightarrow 00:34:55.525$ or also depending on the on the family

NOTE Confidence: 0.831592605

00:34:55.525 --> 00:34:57.450 history and situation that could

NOTE Confidence: 0.831592605

 $00:34:57.450 \longrightarrow 00:35:00.770$ be even earlier and we do know that

 $00:35:00.770 \longrightarrow 00:35:03.310$ that reduces endometrial and ovarian cancer.

NOTE Confidence: 0.831592605

00:35:03.310 --> 00:35:04.750 A prophylactic colectomy

NOTE Confidence: 0.831592605

 $00:35:04.750 \longrightarrow 00:35:06.670$ has not been recommended,

NOTE Confidence: 0.831592605

 $00:35:06.670 \longrightarrow 00:35:08.166$ but in chemo prophylaxis

NOTE Confidence: 0.831592605

 $00:35:08.166 \longrightarrow 00:35:10.410$ is used and we do use.

NOTE Confidence: 0.831592605

 $00:35:10.410 \longrightarrow 00:35:13.178$ That we have good data and two

NOTE Confidence: 0.831592605

00:35:13.178 --> 00:35:15.210 adult aspirins a day for at least

NOTE Confidence: 0.831592605

 $00:35:15.210 \longrightarrow 00:35:17.427$ a year and a half of continuing

NOTE Confidence: 0.831592605

 $00:35:17.427 \longrightarrow 00:35:20.049$ intake every day with a significant

NOTE Confidence: 0.831592605

 $00{:}35{:}20.049 \dashrightarrow 00{:}35{:}21.720$ reduction in colorectal cancer.

NOTE Confidence: 0.831592605

 $00{:}35{:}21.720 \dashrightarrow 00{:}35{:}24.485$ The problem is that toxicity of two

NOTE Confidence: 0.831592605

 $00:35:24.485 \longrightarrow 00:35:26.928$ adult aspirins is quite significant,

NOTE Confidence: 0.831592605

 $00{:}35{:}26.930 \dashrightarrow 00{:}35{:}30.440$ particularly among the older individuals.

NOTE Confidence: 0.831592605

 $00{:}35{:}30.440 \dashrightarrow 00{:}35{:}33.314$ So we do individualize the option

NOTE Confidence: 0.831592605

 $00:35:33.314 \longrightarrow 00:35:36.769$ here and also we really pending on

00:35:36.769 --> 00:35:39.557 more data on lower doses particularly.

NOTE Confidence: 0.831592605

 $00{:}35{:}39.557 \dashrightarrow 00{:}35{:}43.070$ Now there are studies are looking at one,

NOTE Confidence: 0.831592605

 $00:35:43.070 \longrightarrow 00:35:46.782$ an adult aspirin and one baby aspirin a day.

NOTE Confidence: 0.831592605

 $00{:}35{:}46.782 \dashrightarrow 00{:}35{:}48.950$ If see if they do have that effect.

NOTE Confidence: 0.831592605

 $00:35:48.950 \longrightarrow 00:35:51.242$ Because certainly baby aspirin has been

NOTE Confidence: 0.831592605

 $00:35:51.242 \longrightarrow 00:35:53.706$ shown to reduce colorectal cancer in

NOTE Confidence: 0.831592605

00:35:53.706 --> 00:35:55.896 the sporadic population quite dramatically,

NOTE Confidence: 0.831592605

00:35:55.900 --> 00:35:58.126 so we're hoping that lower doses will

NOTE Confidence: 0.831592605

 $00:35:58.126 \longrightarrow 00:36:00.633$ also have a significant effect among

NOTE Confidence: 0.831592605

 $00:36:00.633 \longrightarrow 00:36:03.108$ individuals who have Lynch syndrome.

NOTE Confidence: 0.831592605

00:36:03.110 --> 00:36:04.272 Switching gears,

NOTE Confidence: 0.831592605

 $00{:}36{:}04.272 \dashrightarrow 00{:}36{:}07.177$ much less common but certainly

NOTE Confidence: 0.831592605

00:36:07.177 --> 00:36:08.920 very significant morbidity

NOTE Confidence: 0.826281593333333

 $00:36:09.000 \longrightarrow 00:36:11.756$ and mortality, and these APC gene.

NOTE Confidence: 0.826281593333333

00:36:11.756 --> 00:36:14.240 It's causing familial other matters purposes,

NOTE Confidence: 0.826281593333333

 $00:36:14.240 \longrightarrow 00:36:17.397$ with the very first gene that was

00:36:17.397 --> 00:36:20.797 identified to cause the GI Cancer syndrome.

NOTE Confidence: 0.826281593333333

 $00{:}36{:}20.800 \dashrightarrow 00{:}36{:}22.936$ This is not a simple dominant disease again,

NOTE Confidence: 0.826281593333333

 $00:36:22.940 \longrightarrow 00:36:25.020$ so we just one mutated.

NOTE Confidence: 0.826281593333333

 $00:36:25.020 \longrightarrow 00:36:27.380$ A little is enough to cause the disease.

NOTE Confidence: 0.826281593333333

 $00:36:27.380 \longrightarrow 00:36:28.880$ Individuals develop hundreds

NOTE Confidence: 0.826281593333333

 $00:36:28.880 \longrightarrow 00:36:31.380$ to thousands of other numbers,

NOTE Confidence: 0.826281593333333

 $00:36:31.380 \longrightarrow 00:36:33.230$ polyps the penetrance is very,

NOTE Confidence: 0.826281593333333

 $00:36:33.230 \longrightarrow 00:36:35.729$ very high for both adenomas and cancer.

NOTE Confidence: 0.826281593333333

 $00{:}36{:}35.730 \dashrightarrow 00{:}36{:}37.818$ Almost everyone if we don't remove

NOTE Confidence: 0.826281593333333

 $00{:}36{:}37.818 \dashrightarrow 00{:}36{:}39.952$ the colon and cancer develops again

NOTE Confidence: 0.826281593333333

 $00:36:39.952 \longrightarrow 00:36:42.660$ in almost 100% of cases by the 40s.

NOTE Confidence: 0.826281593333333

 $00:36:42.660 \longrightarrow 00:36:44.816$ If there is no collective before that,

NOTE Confidence: 0.826281593333333

 $00:36:44.820 \longrightarrow 00:36:46.160$ the onset of the disease,

NOTE Confidence: 0.826281593333333

 $00:36:46.160 \longrightarrow 00:36:48.680$ usually in the teens and the noble

NOTE Confidence: 0.826281593333333

 $00:36:48.680 \longrightarrow 00:36:50.680$ mutations are common cause to 30%,

 $00:36:50.680 \longrightarrow 00:36:52.696$ we may see at the noble mutation

NOTE Confidence: 0.826281593333333

 $00:36:52.696 \longrightarrow 00:36:54.638$ meaning that there is no family history

NOTE Confidence: 0.826281593333333

 $00:36:54.638 \longrightarrow 00:36:56.521$ and all of a sudden this patient

NOTE Confidence: 0.826281593333333

 $00:36:56.521 \longrightarrow 00:36:58.600$ does have a mutation from that on.

NOTE Confidence: 0.826281593333333

 $00:36:58.600 \longrightarrow 00:37:00.580$ These individual can transmit

NOTE Confidence: 0.826281593333333

00:37:00.580 --> 00:37:03.055 that mutation to the offspring,

NOTE Confidence: 0.826281593333333

00:37:03.060 --> 00:37:05.279 so that's very different from Lynch syndrome,

NOTE Confidence: 0.826281593333333

 $00:37:05.280 \longrightarrow 00:37:07.730$ where the immense majority of

NOTE Confidence: 0.826281593333333

 $00:37:07.730 \longrightarrow 00:37:10.180$ the cases are funding vacations.

NOTE Confidence: 0.826281593333333

 $00:37:10.180 \longrightarrow 00:37:12.765$ They've been that happened many

NOTE Confidence: 0.826281593333333

 $00{:}37{:}12.765 \dashrightarrow 00{:}37{:}16.020$ generations ago, so there's a almost.

NOTE Confidence: 0.826281593333333

00:37:16.020 --> 00:37:19.726 Always a family history and and family

NOTE Confidence: 0.826281593333333

 $00:37:19.726 \longrightarrow 00:37:22.780$ members who will have the mutation

NOTE Confidence: 0.826281593333333

 $00:37:22.878 \longrightarrow 00:37:25.825$ when it comes to cancers in faps.

NOTE Confidence: 0.826281593333333

 $00:37:25.830 \longrightarrow 00:37:27.565$ The great majority of individuals

NOTE Confidence: 0.826281593333333

00:37:27.565 --> 00:37:29.638 will have their colectomy before they

 $00:37:29.638 \longrightarrow 00:37:31.306$ develop cancer and they do well,

NOTE Confidence: 0.826281593333333

 $00:37:31.310 \longrightarrow 00:37:34.124$ but this is really the biggest nightmare

NOTE Confidence: 0.826281593333333

 $00:37:34.130 \longrightarrow 00:37:35.894$ for us taking care of these patients,

NOTE Confidence: 0.826281593333333

 $00:37:35.900 \longrightarrow 00:37:38.856$ which are the duodenal cancers?

NOTE Confidence: 0.826281593333333

 $00:37:38.856 \longrightarrow 00:37:42.492$ 5 to 11% of these individuals

NOTE Confidence: 0.826281593333333

 $00:37:42.492 \longrightarrow 00:37:45.750$ do develop these cancers and.

NOTE Confidence: 0.826281593333333

 $00:37:45.750 \longrightarrow 00:37:48.284$ Uh, and uh and they are important.

NOTE Confidence: 0.826281593333333

 $00{:}37{:}48.290 \dashrightarrow 00{:}37{:}50.600$ A cause of mobility and the most

NOTE Confidence: 0.826281593333333

 $00{:}37{:}50.600 \dashrightarrow 00{:}37{:}52.889$ important cause of mortality nowadays.

NOTE Confidence: 0.826281593333333

 $00:37:52.890 \longrightarrow 00:37:55.146$ There are other cancer type pancreas

NOTE Confidence: 0.826281593333333

 $00:37:55.146 \longrightarrow 00:37:57.310$ or thyroid or middle blastoma.

NOTE Confidence: 0.826281593333333

00:37:57.310 --> 00:37:58.534 An inhibitor blastoma,

NOTE Confidence: 0.826281593333333

 $00{:}37{:}58.534 \dashrightarrow 00{:}38{:}00.982$ particularly in very very young kids,

NOTE Confidence: 0.826281593333333

 $00:38:00.990 \longrightarrow 00:38:04.910$ but the risks are not extremely high.

NOTE Confidence: 0.826281593333333

 $00:38:04.910 \longrightarrow 00:38:07.584$ But anyway, something to pay attention to.

 $00:38:07.590 \longrightarrow 00:38:12.350$ And interestingly, there's these.

NOTE Confidence: 0.826281593333333

 $00:38:12.350 \longrightarrow 00:38:15.038$ Lose association that we call genotype

NOTE Confidence: 0.826281593333333

 $00:38:15.038 \longrightarrow 00:38:17.233$ phenotype meaning depending or where

NOTE Confidence: 0.826281593333333

00:38:17.233 --> 00:38:19.550 the genetic defect in this genies we

NOTE Confidence: 0.826281593333333

 $00:38:19.550 \longrightarrow 00:38:21.910$ may have different manifestations.

NOTE Confidence: 0.826281593333333

 $00{:}38{:}21.910 \dashrightarrow 00{:}38{:}23.866$ For instance desmoid tumors.

NOTE Confidence: 0.826281593333333

 $00:38:23.866 \longrightarrow 00:38:26.311$ This this connective tissue tumors

NOTE Confidence: 0.826281593333333

 $00:38:26.311 \longrightarrow 00:38:29.498$ that often can be a true nightmare for

NOTE Confidence: 0.8262815933333333

00:38:29.498 --> 00:38:31.850 patients with faps because of their

NOTE Confidence: 0.826281593333333

00:38:31.850 --> 00:38:34.910 their Mass Effect pushes other organs,

NOTE Confidence: 0.826281593333333

 $00:38:34.910 \longrightarrow 00:38:36.838$ particularly in the abdomen.

NOTE Confidence: 0.826281593333333

 $00:38:36.838 \longrightarrow 00:38:40.208$ Those are usually clustered in the three

NOTE Confidence: 0.826281593333333

 $00:38:40.208 \longrightarrow 00:38:43.015$ prime region of the gene with other.

NOTE Confidence: 0.826281593333333

00:38:43.020 --> 00:38:44.928 A characteristic like Garner

NOTE Confidence: 0.826281593333333

 $00:38:44.928 \longrightarrow 00:38:47.790$ syndrome with a soft tissue tumors

NOTE Confidence: 0.826281593333333

 $00:38:47.868 \longrightarrow 00:38:50.465$ that those will be much more often

 $00:38:50.465 \longrightarrow 00:38:53.020$ seen when they are found in meat.

NOTE Confidence: 0.826281593333333

 $00:38:53.020 \longrightarrow 00:38:54.502$ They are found in medications and

NOTE Confidence: 0.826281593333333

 $00{:}38{:}54.502 \dashrightarrow 00{:}38{:}56.386$ what we call the Mediator, Mediator,

NOTE Confidence: 0.826281593333333

 $00:38:56.386 \longrightarrow 00:38:58.366$ cluster region in the action.

NOTE Confidence: 0.826281593333333

 $00:38:58.370 \longrightarrow 00:39:00.650$ The last action of the gene.

NOTE Confidence: 0.826281593333333

 $00:39:00.650 \longrightarrow 00:39:02.258$ So at any rate,

NOTE Confidence: 0.826281593333333

 $00:39:02.258 \longrightarrow 00:39:04.268$ forms usually clustering and mutations

NOTE Confidence: 0.826281593333333

 $00:39:04.268 \longrightarrow 00:39:07.219$ in the five prime end of the gene two.

NOTE Confidence: 0.826281593333333

 $00:39:07.220 \longrightarrow 00:39:08.928$ So there's some correlation

NOTE Confidence: 0.826281593333333

 $00:39:08.928 \longrightarrow 00:39:11.490$ between where the mutation is and

NOTE Confidence: 0.826281593333333

 $00{:}39{:}11.567 \dashrightarrow 00{:}39{:}13.597$ what the actual phenotype is.

NOTE Confidence: 0.826281593333333

 $00:39:13.600 \longrightarrow 00:39:17.020$ Though this is far from perfect

NOTE Confidence: 0.826281593333333

 $00:39:17.020 \longrightarrow 00:39:20.485$ and this is a little bit harder.

NOTE Confidence: 0.826281593333333

 $00:39:20.490 \longrightarrow 00:39:23.234$ Be arguably almost anyone when we see

NOTE Confidence: 0.826281593333333

 $00:39:23.234 \longrightarrow 00:39:25.304$ all these problems really suspect

00:39:25.304 --> 00:39:28.188 easily that the patient may have faps,

NOTE Confidence: 0.826281593333333

 $00:39:28.190 \longrightarrow 00:39:28.723$ but,

NOTE Confidence: 0.826281593333333

 $00:39:28.723 \longrightarrow 00:39:29.256$ uh,

NOTE Confidence: 0.826281593333333

 $00:39:29.256 \longrightarrow 00:39:32.454$ but attenuated faps is is much

NOTE Confidence: 0.826281593333333

 $00:39:32.454 \longrightarrow 00:39:34.190$ more complicated issue.

NOTE Confidence: 0.826281593333333

00:39:34.190 --> 00:39:36.248 Usually it's less than 100 polyps,

NOTE Confidence: 0.826281593333333

 $00:39:36.250 \longrightarrow 00:39:37.974$ located predominantly in the

NOTE Confidence: 0.826281593333333

 $00:39:37.974 \longrightarrow 00:39:40.560$ right colon and those are

NOTE Confidence: 0.795267754

00:39:40.637 --> 00:39:43.485 policies that add up over time and many

NOTE Confidence: 0.795267754

00:39:43.485 --> 00:39:46.061 times we do see patients who develop

NOTE Confidence: 0.795267754

 $00{:}39{:}46.061 \dashrightarrow 00{:}39{:}48.502$ 20 polyps now and 15 polyps later,

NOTE Confidence: 0.795267754

00:39:48.502 --> 00:39:51.110 and often we just done added app and

NOTE Confidence: 0.795267754

 $00:39:51.179 \longrightarrow 00:39:53.643$ say well this is looking like there

NOTE Confidence: 0.795267754

 $00{:}39{:}53.643 \dashrightarrow 00{:}39{:}56.139$ is something going on and they it may

NOTE Confidence: 0.795267754

 $00:39:56.139 \longrightarrow 00:39:57.953$ be a form of attenuated polyposis.

NOTE Confidence: 0.795267754

 $00{:}39{:}57.953 \dashrightarrow 00{:}40{:}00.611$ So important to suspect when we

 $00:40:00.611 \longrightarrow 00:40:02.730$ have particularly a number of

NOTE Confidence: 0.795267754

 $00{:}40{:}02.730 \dashrightarrow 00{:}40{:}04.515$ polyps that's in the 20s.

NOTE Confidence: 0.795267754

 $00:40:04.520 \longrightarrow 00:40:06.845$ 30 uh, because then suspicion

NOTE Confidence: 0.795267754

 $00:40:06.845 \longrightarrow 00:40:09.170$ for that should be high.

NOTE Confidence: 0.795267754

 $00{:}40{:}09.170 \dashrightarrow 00{:}40{:}10.820$ The answer of polyps and cancers,

NOTE Confidence: 0.795267754

 $00:40:10.820 \longrightarrow 00:40:12.804$ usually ten years later,

NOTE Confidence: 0.795267754

 $00:40:12.804 \longrightarrow 00:40:15.780$ on average than faps and and.

NOTE Confidence: 0.795267754

00:40:15.780 --> 00:40:17.996 But again, there's a lot of variability here,

NOTE Confidence: 0.795267754

 $00:40:18.000 \longrightarrow 00:40:20.620$ and these individuals do also

NOTE Confidence: 0.795267754

00:40:20.620 --> 00:40:22.716 develop funding gland polyps,

NOTE Confidence: 0.795267754

00:40:22.720 --> 00:40:25.560 often in the stomach, and they can proceed.

NOTE Confidence: 0.795267754

00:40:25.560 --> 00:40:27.240 The development of colon polyps,

NOTE Confidence: 0.795267754

 $00:40:27.240 \longrightarrow 00:40:29.487$ so particularly when we do and asked

NOTE Confidence: 0.795267754

 $00{:}40{:}29.487 \dashrightarrow 00{:}40{:}32.322$ is where we see funding line polyps in

NOTE Confidence: 0.795267754

 $00:40:32.322 \longrightarrow 00:40:34.730$ individuals who do not have protein.

 $00:40:34.730 \longrightarrow 00:40:36.510$ I'm thinking there's there

NOTE Confidence: 0.795267754

 $00{:}40{:}36.510 \dashrightarrow 00{:}40{:}38.735$ goes an anti acid medication.

NOTE Confidence: 0.795267754

00:40:38.740 --> 00:40:40.075 Strong antacid medications,

NOTE Confidence: 0.795267754

 $00:40:40.075 \longrightarrow 00:40:43.190$ which they also cause funding lamb polyps.

NOTE Confidence: 0.795267754

 $00:40:43.190 \longrightarrow 00:40:45.200$ Then we suspect that there could

NOTE Confidence: 0.795267754

00:40:45.200 --> 00:40:47.266 be some form of Poly policies

NOTE Confidence: 0.795267754

 $00:40:47.266 \longrightarrow 00:40:49.360$ and we need to pursue that.

NOTE Confidence: 0.795267754

 $00:40:49.360 \longrightarrow 00:40:52.048$ So what do we do when we have

NOTE Confidence: 0.795267754

 $00{:}40{:}52.048 \dashrightarrow 00{:}40{:}54.005$ it diagnosed individual with a

NOTE Confidence: 0.795267754

 $00:40:54.005 \longrightarrow 00:40:56.805$ with a mutation in the APC gene?

NOTE Confidence: 0.795267754

 $00{:}40{:}56.810 \dashrightarrow 00{:}41{:}01.448$ Well, we start colonoscopies at each.

NOTE Confidence: 0.795267754

 $00:41:01.450 \longrightarrow 00:41:05.070$ 15 and every 12 months.

NOTE Confidence: 0.795267754

 $00:41:05.070 \longrightarrow 00:41:05.972$ In dumb.

NOTE Confidence: 0.795267754

 $00{:}41{:}05.972 --> 00{:}41{:}06.874 \ \mathrm{Once}, \ \mathrm{uh},$

NOTE Confidence: 0.795267754

 $00:41:06.874 \longrightarrow 00:41:09.580$ the number of polyps becomes too

NOTE Confidence: 0.795267754

 $00:41:09.669 \longrightarrow 00:41:12.639$ overwhelming to be able to really

 $00:41:12.639 \longrightarrow 00:41:15.330$ keep up removing those polyps.

NOTE Confidence: 0.795267754

 $00:41:15.330 \longrightarrow 00:41:17.260$ Then that's when surgery is

NOTE Confidence: 0.795267754

 $00:41:17.260 \longrightarrow 00:41:18.804$ indicated in those cases,

NOTE Confidence: 0.795267754

 $00:41:18.810 \longrightarrow 00:41:20.856$ and and there are two options,

NOTE Confidence: 0.795267754

 $00:41:20.860 \longrightarrow 00:41:24.822$ one of them is collecting with ileal

NOTE Confidence: 0.795267754

00:41:24.822 --> 00:41:26.349 rectal anastomosis, particularly,

NOTE Confidence: 0.795267754

 $00:41:26.349 \longrightarrow 00:41:28.683$ the ***** is not very effective

NOTE Confidence: 0.795267754

 $00:41:28.683 \longrightarrow 00:41:30.610$ with a lot of polyps,

NOTE Confidence: 0.795267754

 $00:41:30.610 \longrightarrow 00:41:31.935$ and then the ***** need

NOTE Confidence: 0.795267754

 $00:41:31.935 \longrightarrow 00:41:33.680$ surveillance every 6 to 12 months.

NOTE Confidence: 0.795267754

00:41:33.680 --> 00:41:34.218 With sigmoid,

NOTE Confidence: 0.795267754

 $00:41:34.218 \longrightarrow 00:41:34.487$ osca,

NOTE Confidence: 0.795267754

 $00{:}41{:}34.487 \dashrightarrow 00{:}41{:}36.848$ P or the other option is a little

NOTE Confidence: 0.795267754

 $00:41:36.848 \longrightarrow 00:41:37.668$ pouch channel.

NOTE Confidence: 0.795267754

00:41:37.670 --> 00:41:39.222 Analyzed Moses and uh,

 $00:41:39.222 \longrightarrow 00:41:42.903$ and in this case the ***** is gone too.

NOTE Confidence: 0.795267754

 $00:41:42.903 \longrightarrow 00:41:46.060$ But what the pouch which is made

NOTE Confidence: 0.795267754

 $00:41:46.169 \longrightarrow 00:41:48.979$ of small bowel does develop.

NOTE Confidence: 0.795267754

 $00:41:48.980 \longrightarrow 00:41:51.605$ Or that's a often develop

NOTE Confidence: 0.795267754

 $00:41:51.605 \longrightarrow 00:41:53.705$ polyps in there too,

NOTE Confidence: 0.795267754

 $00:41:53.710 \longrightarrow 00:41:55.901$ and that needs to release as much

NOTE Confidence: 0.795267754

 $00:41:55.901 \longrightarrow 00:41:58.803$ as the other as much as the dealer

NOTE Confidence: 0.795267754

 $00:41:58.803 \longrightarrow 00:42:00.315$ rectal anastomosis wants to.

NOTE Confidence: 0.795267754

 $00:42:00.320 \longrightarrow 00:42:02.700$ And if there are large or flat

NOTE Confidence: 0.795267754

 $00:42:02.700 \longrightarrow 00:42:04.489$ lesions or lesions with bill,

NOTE Confidence: 0.795267754

 $00:42:04.490 \longrightarrow 00:42:06.110$ is Histology or high grade

NOTE Confidence: 0.795267754

 $00:42:06.110 \longrightarrow 00:42:08.150$ dysplasia then those need to match.

NOTE Confidence: 0.795267754

 $00{:}42{:}08.150 \dashrightarrow 00{:}42{:}11.438$ Closer surveillance when it comes to

NOTE Confidence: 0.795267754

 $00{:}42{:}11.438 \to 00{:}42{:}13.630$ duodenal periampullary cancer again.

NOTE Confidence: 0.795267754

 $00:42:13.630 \longrightarrow 00:42:14.917$ Small bowel cancers.

NOTE Confidence: 0.795267754

00:42:14.917 --> 00:42:17.062 One of the biggest nightmares

 $00:42:17.062 \longrightarrow 00:42:19.697$ that we have with FAP patients.

NOTE Confidence: 0.795267754

 $00:42:19.700 \longrightarrow 00:42:21.920$ We do upper endoscopy with side

NOTE Confidence: 0.795267754

 $00:42:21.920 \longrightarrow 00:42:24.506$ viewing scopes to make sure that we

NOTE Confidence: 0.795267754

 $00:42:24.506 \longrightarrow 00:42:26.907$ see well the Impala of batter batter,

NOTE Confidence: 0.795267754

 $00:42:26.910 \longrightarrow 00:42:30.000$ which is one of the main

NOTE Confidence: 0.795267754

 $00:42:30.000 \longrightarrow 00:42:31.939$ problems developing adenomas and

NOTE Confidence: 0.795267754

 $00:42:31.939 \longrightarrow 00:42:34.304$ later cancers in that area.

NOTE Confidence: 0.795267754

 $00:42:34.310 \longrightarrow 00:42:38.680$ And we do start starting around age 20 to 25.

NOTE Confidence: 0.795267754

 $00{:}42{:}38.680 {\:{\circ}{\circ}{\circ}}>00{:}42{:}40.328$ For gastric cancer prevention,

NOTE Confidence: 0.795267754

 $00:42:40.328 \longrightarrow 00:42:41.564$ as we mentioned,

NOTE Confidence: 0.795267754

 $00:42:41.570 \longrightarrow 00:42:43.604$ many of these patients with FFP

NOTE Confidence: 0.795267754

 $00:42:43.604 \longrightarrow 00:42:45.734$ do have funded gland polyps and

NOTE Confidence: 0.795267754

 $00:42:45.734 \longrightarrow 00:42:47.846$ if they have even focal low

NOTE Confidence: 0.795267754

 $00{:}42{:}47.846 \dashrightarrow 00{:}42{:}50.004$ grade dysplasia and none of them

NOTE Confidence: 0.795267754

 $00:42:50.004 \longrightarrow 00:42:51.734$ are particularly large they are

 $00:42:51.734 \longrightarrow 00:42:53.850$ tend to be very benign and they

NOTE Confidence: 0.795267754

 $00:42:53.850 \longrightarrow 00:42:55.030$ won't transform into cancer.

NOTE Confidence: 0.795267754

 $00:42:55.030 \longrightarrow 00:42:57.271$ Now we see some of them that are

NOTE Confidence: 0.795267754

 $00:42:57.271 \longrightarrow 00:42:59.828$ too large or larger than one centimeter

NOTE Confidence: 0.7407378185

 $00:42:59.830 \longrightarrow 00:43:02.721$ or they have read displeasure then the

NOTE Confidence: 0.7407378185

 $00{:}43{:}02.721 \dashrightarrow 00{:}43{:}06.027$ risk of cancer does increase and and we

NOTE Confidence: 0.7407378185

 $00:43:06.027 \longrightarrow 00:43:08.938$ may end up even indicating distract me so.

NOTE Confidence: 0.7407378185

 $00:43:08.938 \longrightarrow 00:43:10.774$ Very important to follow that app

NOTE Confidence: 0.7407378185

 $00{:}43{:}10.774 \longrightarrow 00{:}43{:}12.955$ even though the majority of cases do,

NOTE Confidence: 0.7407378185

 $00:43:12.960 \longrightarrow 00:43:14.556$ they behave never nine.

NOTE Confidence: 0.7407378185

 $00{:}43{:}14.556 \dashrightarrow 00{:}43{:}16.950$ Wait and for thyroid cancer risks

NOTE Confidence: 0.7407378185

 $00:43:17.025 \longrightarrow 00:43:19.057$ the recommendation is ultrasounds

NOTE Confidence: 0.7407378185

 $00:43:19.057 \longrightarrow 00:43:21.654$ and repeating them every two to

NOTE Confidence: 0.7407378185

 $00{:}43{:}21.654 \dashrightarrow 00{:}43{:}23.628$ five years just to make sure we're

NOTE Confidence: 0.7407378185

 $00:43:23.628 \longrightarrow 00:43:25.420$ not missing anything there.

NOTE Confidence: 0.7407378185

 $00:43:25.420 \longrightarrow 00:43:26.980$ For the attenuated forms,

 $00:43:26.980 \longrightarrow 00:43:29.760$ it really what informs what we do

NOTE Confidence: 0.7407378185

00:43:29.760 --> 00:43:31.968 really depends on the Poly burden.

NOTE Confidence: 0.7407378185

 $00:43:31.970 \longrightarrow 00:43:33.834$ And as we mentioned,

NOTE Confidence: 0.7407378185

 $00:43:33.834 \longrightarrow 00:43:35.698$ there's a great variability.

NOTE Confidence: 0.7407378185

 $00{:}43{:}35.700 \dashrightarrow 00{:}43{:}39.312$ Some of them have a Poly burden

NOTE Confidence: 0.7407378185

 $00:43:39.312 \longrightarrow 00:43:40.860$ that it's very.

NOTE Confidence: 0.7407378185

00:43:40.860 --> 00:43:41.964 Relatively easy to handle,

NOTE Confidence: 0.7407378185

 $00:43:41.964 \longrightarrow 00:43:43.068$ and the scopic Lee,

NOTE Confidence: 0.7407378185

 $00:43:43.070 \longrightarrow 00:43:45.079$ meaning that we can remove good number

NOTE Confidence: 0.7407378185

 $00:43:45.079 \longrightarrow 00:43:47.167$ of problems every time we do colonoscopy.

NOTE Confidence: 0.7407378185

 $00{:}43{:}47.170 \dashrightarrow 00{:}43{:}49.258$ Then we just do colonoscopies and

NOTE Confidence: 0.7407378185

 $00:43:49.258 \longrightarrow 00:43:50.959$ polypectomy everyone to two years

NOTE Confidence: 0.7407378185

 $00:43:50.959 \longrightarrow 00:43:52.716$ and in many cases will be able

NOTE Confidence: 0.7407378185

 $00:43:52.716 \longrightarrow 00:43:54.585$ to keep up with those polyps and

NOTE Confidence: 0.7407378185

00:43:54.585 --> 00:43:56.786 there will be no need for surgery.

 $00:43:56.786 \longrightarrow 00:43:59.444$ After endoscopy again needs to be

NOTE Confidence: 0.7407378185

 $00:43:59.444 \longrightarrow 00:44:02.325$ done for the small bowel cancer

NOTE Confidence: 0.7407378185

 $00:44:02.325 \longrightarrow 00:44:06.555$ risk and adenomas and Anne Anne.

NOTE Confidence: 0.7407378185

 $00:44:06.560 \longrightarrow 00:44:08.396$ At Chemoprevention is another

NOTE Confidence: 0.7407378185

00:44:08.396 --> 00:44:11.150 option here and Slingback is the

NOTE Confidence: 0.7407378185

 $00:44:11.225 \longrightarrow 00:44:14.442$ most well established A1 and this

NOTE Confidence: 0.7407378185

 $00:44:14.442 \longrightarrow 00:44:17.492$ is particularly use and it's very

NOTE Confidence: 0.7407378185

 $00:44:17.492 \longrightarrow 00:44:19.572$ much focused on individuals who

NOTE Confidence: 0.7407378185

 $00{:}44{:}19.572 \dashrightarrow 00{:}44{:}22.092$ already had surgery in who have

NOTE Confidence: 0.7407378185

00:44:22.092 --> 00:44:24.208 either remaining ***** or pouch

NOTE Confidence: 0.7407378185

 $00{:}44{:}24.208 \dashrightarrow 00{:}44{:}26.962$ to try to reduce the development

NOTE Confidence: 0.7407378185

 $00:44:26.962 \longrightarrow 00:44:29.098$ of products in this area.

NOTE Confidence: 0.7407378185

 $00:44:29.100 \longrightarrow 00:44:31.333$ When we have a Poly burden that

NOTE Confidence: 0.7407378185

 $00:44:31.333 \longrightarrow 00:44:33.605$ we just can't handle in this

NOTE Confidence: 0.7407378185

 $00:44:33.605 \longrightarrow 00:44:35.665$ completely anymore then that's when

NOTE Confidence: 0.7407378185

00:44:35.665 --> 00:44:38.185 we will suggest colectomy again.

 $00:44:38.185 \longrightarrow 00:44:41.575$ We see there a erectile anastomosis

NOTE Confidence: 0.7407378185

00:44:41.575 --> 00:44:43.760 or proper colectomy,

NOTE Confidence: 0.7407378185

 $00:44:43.760 \longrightarrow 00:44:45.776$ and the creation of the pouch.

NOTE Confidence: 0.7407378185

00:44:45.780 --> 00:44:47.946 So it's really how the patient

NOTE Confidence: 0.7407378185

 $00:44:47.946 \longrightarrow 00:44:49.760$ behaves in terms of how,

NOTE Confidence: 0.7407378185

00:44:49.760 --> 00:44:53.096 how many polyps the patient develops,

NOTE Confidence: 0.7407378185

 $00:44:53.100 \longrightarrow 00:44:54.496$ how fast they developed,

NOTE Confidence: 0.7407378185

 $00{:}44{:}54.496 \dashrightarrow 00{:}44{:}57.295$ and that will really informs us if we

NOTE Confidence: 0.7407378185

 $00{:}44{:}57.295 \dashrightarrow 00{:}44{:}59.521$ can really keep up with removal and

NOTE Confidence: 0.7407378185

 $00:44:59.521 \longrightarrow 00:45:01.664$ topically or at some point we decide

NOTE Confidence: 0.7407378185

 $00:45:01.664 \longrightarrow 00:45:04.049$ that that's not safe anymore and we

NOTE Confidence: 0.7407378185

 $00:45:04.049 \longrightarrow 00:45:06.467$ need to proceed with the surgery.

NOTE Confidence: 0.7407378185

 $00{:}45{:}06.470 \dashrightarrow 00{:}45{:}09.638$ And this is the newer a Poly process.

NOTE Confidence: 0.7407378185

 $00:45:09.640 \longrightarrow 00:45:11.944$ One of the newer polyposis syndromes

NOTE Confidence: 0.7407378185

 $00:45:11.944 \longrightarrow 00:45:13.860$ that we're less familiar with,

 $00:45:13.860 \longrightarrow 00:45:16.716$ uh, that we called MAP or myh

NOTE Confidence: 0.7407378185

 $00{:}45{:}16.716 \dashrightarrow 00{:}45{:}17.940$ associated public process.

NOTE Confidence: 0.7407378185

00:45:17.940 --> 00:45:18.195 Remember,

NOTE Confidence: 0.7407378185

 $00:45:18.195 \longrightarrow 00:45:20.235$ we talked that this is an auto somal,

NOTE Confidence: 0.7407378185

 $00:45:20.240 \longrightarrow 00:45:22.739$ recessive meaning that we do need mum,

NOTE Confidence: 0.7407378185

 $00:45:22.740 \longrightarrow 00:45:25.456$ and that mum the budget for mum

NOTE Confidence: 0.7407378185

 $00:45:25.456 \longrightarrow 00:45:28.440$ and the budget from that in order

NOTE Confidence: 0.7407378185

 $00:45:28.440 \longrightarrow 00:45:30.600$ to really have the disease.

NOTE Confidence: 0.7407378185

 $00:45:30.600 \longrightarrow 00:45:32.022$ That means that most of the

NOTE Confidence: 0.7407378185

 $00:45:32.022 \longrightarrow 00:45:33.640$ time we would skip generations,

NOTE Confidence: 0.7407378185

 $00:45:33.640 \longrightarrow 00:45:35.831$ so mum and that would not have

NOTE Confidence: 0.7407378185

 $00:45:35.831 \longrightarrow 00:45:36.770$ the disease yet.

NOTE Confidence: 0.7407378185

00:45:36.770 --> 00:45:38.230 You could have sibling schools,

NOTE Confidence: 0.7407378185

 $00:45:38.230 \longrightarrow 00:45:39.922$ have it if they inherited both

NOTE Confidence: 0.7407378185

 $00:45:39.922 \longrightarrow 00:45:41.569$ bad genes from mom and Dad.

NOTE Confidence: 0.7407378185 00:45:41.570 --> 00:45:41.882 So,

 $00:45:41.882 \longrightarrow 00:45:44.378$ but a third close to a third of

NOTE Confidence: 0.7407378185

 $00:45:44.378 \longrightarrow 00:45:47.019$ patients who have a typical familiar

NOTE Confidence: 0.7407378185

00:45:47.019 --> 00:45:48.819 level numbers public process,

NOTE Confidence: 0.7407378185

 $00:45:48.820 \longrightarrow 00:45:50.829$ we know that they look like adenomatous

NOTE Confidence: 0.7407378185

 $00{:}45{:}50.829 \dashrightarrow 00{:}45{:}52.701$ polyp policies and do not have an

NOTE Confidence: 0.7407378185

00:45:52.701 --> 00:45:54.330 APC mutation where they will have is.

NOTE Confidence: 0.7407378185

 $00:45:54.330 \longrightarrow 00:45:56.355$ Actually these two mutations in

NOTE Confidence: 0.7407378185

 $00:45:56.355 \longrightarrow 00:45:59.178$ the emoji and a quarter of the

NOTE Confidence: 0.7407378185

00:45:59.178 --> 00:46:01.344 patients who have between 10 and

NOTE Confidence: 0.7407378185

 $00:46:01.344 \longrightarrow 00:46:04.126$ 100 women of 30 polyps will have

NOTE Confidence: 0.7407378185

 $00:46:04.126 \longrightarrow 00:46:06.111$ my limitations in their bodies.

NOTE Confidence: 0.7407378185

 $00:46:06.120 \longrightarrow 00:46:08.120$ So particularly in these individuals.

NOTE Confidence: 0.7407378185

 $00:46:08.120 \longrightarrow 00:46:10.658$ That looked more like attenuated polyposis.

NOTE Confidence: 0.76990028

00:46:10.660 --> 00:46:13.415 That's where the that the the, the,

NOTE Confidence: 0.76990028

 $00:46:13.415 \longrightarrow 00:46:16.320$ the line is a little bit blurred

00:46:16.320 --> 00:46:19.418 with the attenuated forms of IPC,

NOTE Confidence: 0.76990028

 $00:46:19.420 \longrightarrow 00:46:21.400$ the age of onset, 40s, fifties,

NOTE Confidence: 0.76990028

00:46:21.400 --> 00:46:24.016 risk of cancer. Very, very high,

NOTE Confidence: 0.76990028

00:46:24.016 --> 00:46:26.824 almost complete penetrance by age 60,

NOTE Confidence: 0.76990028

 $00:46:26.830 \longrightarrow 00:46:28.978$ not 40 like in every people.

NOTE Confidence: 0.76990028

00:46:28.980 --> 00:46:31.160 Page 60 the great majority,

NOTE Confidence: 0.76990028

00:46:31.160 --> 00:46:33.862 if they did not have their polyps

NOTE Confidence: 0.76990028

 $00:46:33.862 \longrightarrow 00:46:35.690$ removed or surgery removed,

NOTE Confidence: 0.76990028

 $00{:}46{:}35.690 \dashrightarrow 00{:}46{:}39.365$ and the big the main differences between.

NOTE Confidence: 0.76990028

00:46:39.370 --> 00:46:41.570 AMFAP and a map again.

NOTE Confidence: 0.76990028

 $00:46:41.570 \longrightarrow 00:46:45.332$ The dominant a pattern versus recessive

NOTE Confidence: 0.76990028

00:46:45.332 --> 00:46:49.210 pattern for a map number of polyps.

NOTE Confidence: 0.76990028

 $00:46:49.210 \longrightarrow 00:46:50.863$ Again for faps.

NOTE Confidence: 0.76990028

 $00:46:50.863 \longrightarrow 00:46:54.721$ Typical faps more than 100 polyps for

NOTE Confidence: 0.76990028

 $00:46:54.721 \longrightarrow 00:46:58.027$ map smaller number less than 100.

NOTE Confidence: 0.76990028

 $00:46:58.030 \longrightarrow 00:46:59.172$ Many times.

00:46:59.172 --> 00:47:03.101 Agent diagnosis older for map and a big

NOTE Confidence: 0.76990028

00:47:03.101 --> 00:47:04.886 difference in extra colonic disease,

NOTE Confidence: 0.76990028

00:47:04.890 --> 00:47:07.122 particularly upper GI tract

NOTE Confidence: 0.76990028

 $00:47:07.122 \longrightarrow 00:47:08.796$ adenomas and cancer.

NOTE Confidence: 0.76990028

 $00:47:08.800 \longrightarrow 00:47:10.834$ You know, as opposed to the

NOTE Confidence: 0.76990028

00:47:10.834 --> 00:47:12.800 very very high numbers for FAP,

NOTE Confidence: 0.76990028

00:47:12.800 --> 00:47:14.656 and that's made two more the same thing.

NOTE Confidence: 0.76990028

00:47:14.660 --> 00:47:15.358 So much,

NOTE Confidence: 0.76990028

00:47:15.358 --> 00:47:17.452 much lower incidence of both upper

NOTE Confidence: 0.76990028

 $00{:}47{:}17.452 \dashrightarrow 00{:}47{:}20.100$ GI tract cancers and desmoid tumor's.

NOTE Confidence: 0.76990028

00:47:20.100 --> 00:47:22.420 Big difference from that standpoint,

NOTE Confidence: 0.76990028

00:47:22.420 --> 00:47:24.895 but risks certainly very hyper

NOTE Confidence: 0.76990028

 $00{:}47{:}24.895 \dashrightarrow 00{:}47{:}27.370$ correctly cancers we saw before

NOTE Confidence: 0.76990028

 $00:47:27.452 \longrightarrow 00:47:30.260$ for both FP and and MAP and the

NOTE Confidence: 0.76990028

 $00:47:30.260 \longrightarrow 00:47:32.340$ three minute surveillance is really

 $00:47:32.340 \longrightarrow 00:47:35.357$ very very much the same as what

NOTE Confidence: 0.76990028

 $00:47:35.360 \longrightarrow 00:47:37.706$ we do with that invated faps,

NOTE Confidence: 0.76990028

 $00:47:37.710 \longrightarrow 00:47:39.060$ which again if we can keep.

NOTE Confidence: 0.76990028

00:47:39.060 --> 00:47:40.208 Up with Poly prayer,

NOTE Confidence: 0.76990028

 $00:47:40.208 \longrightarrow 00:47:41.930$ the pilot burden through at the

NOTE Confidence: 0.76990028

 $00:47:41.991 \longrightarrow 00:47:44.100$ scopic removal. That's what we'll do.

NOTE Confidence: 0.76990028

 $00:47:44.100 \longrightarrow 00:47:46.020$ And if at some point that's

NOTE Confidence: 0.76990028

 $00:47:46.088 \longrightarrow 00:47:47.459$ not feasible anymore,

NOTE Confidence: 0.76990028

 $00{:}47{:}47.460 \dashrightarrow 00{:}47{:}50.140$ that's when will suggest surgery,

NOTE Confidence: 0.76990028

 $00:47:50.140 \longrightarrow 00:47:52.340$ so not much different from

NOTE Confidence: 0.76990028

 $00:47:52.340 \longrightarrow 00:47:54.276$ the attenuated forms finally,

NOTE Confidence: 0.76990028

00:47:54.276 --> 00:47:56.740 so ready polyposis syndrome.

NOTE Confidence: 0.76990028

 $00:47:56.740 \longrightarrow 00:47:58.720$ This is a thread piloting the

NOTE Confidence: 0.76990028

 $00:47:58.720 \longrightarrow 00:48:00.610$ right side of the column.

NOTE Confidence: 0.76990028

 $00:48:00.610 \longrightarrow 00:48:03.160$ This is the syndrome that

NOTE Confidence: 0.76990028

 $00:48:03.160 \longrightarrow 00:48:05.200$ we've defined for years,

 $00:48:05.200 \longrightarrow 00:48:06.908$ and yet at this point we really

NOTE Confidence: 0.76990028

00:48:06.908 --> 00:48:08.454 don't have a genetic defect

NOTE Confidence: 0.76990028

 $00:48:08.454 \longrightarrow 00:48:09.970$ that's associated with it.

NOTE Confidence: 0.76990028

00:48:09.970 --> 00:48:13.450 There's some some jeans have been

NOTE Confidence: 0.76990028

 $00:48:13.450 \longrightarrow 00:48:16.170$ a loosely associated with it,

NOTE Confidence: 0.76990028

 $00{:}48{:}16.170 \longrightarrow 00{:}48{:}18.786$ but really no strong data on that either,

NOTE Confidence: 0.76990028

 $00:48:18.790 \longrightarrow 00:48:20.775$ which makes things very challenging

NOTE Confidence: 0.76990028

 $00{:}48{:}20.775 \dashrightarrow 00{:}48{:}23.596$ when it comes to really having a

NOTE Confidence: 0.76990028

 $00{:}48{:}23.596 \dashrightarrow 00{:}48{:}26.522$ unified approach to a disease when we

NOTE Confidence: 0.76990028

 $00{:}48{:}26.522 \dashrightarrow 00{:}48{:}28.970$ really don't have a clear theology.

NOTE Confidence: 0.76990028

 $00{:}48{:}28.970 \dashrightarrow 00{:}48{:}31.470$ The inheritance pattern is unclear,

NOTE Confidence: 0.76990028

00:48:31.470 --> 00:48:34.422 some data has pointed at us

NOTE Confidence: 0.76990028

00:48:34.422 --> 00:48:36.586 all dominant type of pattern,

NOTE Confidence: 0.76990028

 $00{:}48{:}36.586 \dashrightarrow 00{:}48{:}39.934$ but other data has pointed towards

NOTE Confidence: 0.76990028

 $00:48:39.934 \longrightarrow 00:48:41.857$ and formal recessive.

 $00{:}48{:}41.860 \dashrightarrow 00{:}48{:}44.878$ Patterns who are really still unclear

NOTE Confidence: 0.76990028

 $00:48:44.880 \longrightarrow 00:48:47.953$ and the numbers in in these cases

NOTE Confidence: 0.76990028

 $00:48:47.953 \longrightarrow 00:48:50.872$ do coexist with shredded polyps too,

NOTE Confidence: 0.76990028

 $00:48:50.872 \longrightarrow 00:48:53.644$ so it's not all about rated polyps,

NOTE Confidence: 0.76990028

 $00:48:53.650 \longrightarrow 00:48:55.258$ and most of them will find

NOTE Confidence: 0.76990028

 $00:48:55.258 \longrightarrow 00:48:56.830$ a mix pattern of polyps.

NOTE Confidence: 0.76990028

 $00:48:56.830 \longrightarrow 00:48:59.120$ The miniature of colorectal cancer

NOTE Confidence: 0.76990028

 $00:48:59.120 \longrightarrow 00:49:01.410$ diagnosis is 55 and relative

NOTE Confidence: 0.76990028

 $00:49:01.482 \longrightarrow 00:49:03.535$ risk of cancer 5.4 on average,

NOTE Confidence: 0.76990028

 $00:49:03.535 \longrightarrow 00:49:05.605$ and maybe there seems to be

NOTE Confidence: 0.76990028

 $00{:}49{:}05.605 \dashrightarrow 00{:}49{:}07.540$ some different phenotypes,

NOTE Confidence: 0.76990028

 $00:49:07.540 \longrightarrow 00:49:09.700$ some of them being more severe

NOTE Confidence: 0.76990028

 $00:49:09.700 \longrightarrow 00:49:11.140$ with large right side.

NOTE Confidence: 0.76990028

 $00:49:11.140 \longrightarrow 00:49:12.796$ This isolated at the nomads and.

NOTE Confidence: 0.76990028

00:49:12.800 --> 00:49:15.760 Young age of onset, but again every time,

NOTE Confidence: 0.76990028

 $00:49:15.760 \longrightarrow 00:49:17.506$ but we don't have a specific

 $00:49:17.506 \longrightarrow 00:49:19.689$ gene that's behind the disease.

NOTE Confidence: 0.76990028

 $00:49:19.689 \longrightarrow 00:49:21.288$ Often it's less.

NOTE Confidence: 0.76990028

 $00:49:21.290 \longrightarrow 00:49:22.784$ It's a little bit more challenging

NOTE Confidence: 0.76990028

 $00:49:22.784 \longrightarrow 00:49:24.356$ to really have a unified idea

NOTE Confidence: 0.76990028

 $00:49:24.356 \longrightarrow 00:49:25.400$ of what's going on,

NOTE Confidence: 0.76990028

 $00:49:25.400 \longrightarrow 00:49:27.956$ and we've got by this clinical

NOTE Confidence: 0.76990028

00:49:27.956 --> 00:49:30.205 criteria that were originally set

NOTE Confidence: 0.76990028

 $00{:}49{:}30.205 \dashrightarrow 00{:}49{:}32.550$ up by the World Gastroenterology

NOTE Confidence: 0.76990028

00:49:32.550 --> 00:49:35.154 organization that will revise in 2019,

NOTE Confidence: 0.76990028

 $00:49:35.154 \longrightarrow 00:49:38.238$ or basically as looking at number

NOTE Confidence: 0.76990028

 $00:49:38.238 \longrightarrow 00:49:41.119$ of serrated lesions in the colon

NOTE Confidence: 0.76990028

 $00:49:41.119 \longrightarrow 00:49:43.615$ and the size of these lesions.

NOTE Confidence: 0.76014794

 $00{:}49{:}43.620 \mathrel{--}{>} 00{:}49{:}45.834$ That we really kind of helped

NOTE Confidence: 0.76014794

 $00:49:45.834 \longrightarrow 00:49:47.745$ us classifying patients do have

NOTE Confidence: 0.76014794

 $00:49:47.745 \longrightarrow 00:49:49.560$ several Poly process or not.

00:49:49.560 --> 00:49:51.890 There's nothing magic about these

NOTE Confidence: 0.76014794

 $00{:}49{:}51.890 \dashrightarrow 00{:}49{:}54.220$ criteria and actually the criteria

NOTE Confidence: 0.76014794

 $00:49:54.291 \longrightarrow 00:49:56.685$ got a little bit loose and because

NOTE Confidence: 0.76014794

 $00:49:56.685 \longrightarrow 00:49:58.932$ we're missing a lot of cases that

NOTE Confidence: 0.76014794

 $00:49:58.932 \longrightarrow 00:50:01.304$ were not fulfilling in 2010 criteria

NOTE Confidence: 0.76014794

00:50:01.304 --> 00:50:04.016 and yet they were developing cancer

NOTE Confidence: 0.76014794

 $00:50:04.016 \dashrightarrow 00:50:06.956$ at similar rate as as the other ones.

NOTE Confidence: 0.76014794

00:50:06.960 --> 00:50:09.036 Therefore, that's how that got changed.

NOTE Confidence: 0.76014794

 $00:50:09.040 \dashrightarrow 00:50:11.678$ And the biggest change is really counting

NOTE Confidence: 0.76014794

 $00:50:11.678 \longrightarrow 00:50:14.350$ serrated and hyperplastic lesions.

NOTE Confidence: 0.76014794

00:50:14.350 --> 00:50:16.117 A proximal to the ***** instead

NOTE Confidence: 0.76014794

00:50:16.117 --> 00:50:18.619 of proximal to the sigmoid colon

NOTE Confidence: 0.76014794

 $00:50:18.619 \longrightarrow 00:50:20.656$ when it comes to counting.

NOTE Confidence: 0.76014794

 $00:50:20.656 \longrightarrow 00:50:23.386$ Accounting for these lesions for

NOTE Confidence: 0.76014794

 $00:50:23.386 \longrightarrow 00:50:26.586$ this rare public process and so on.

NOTE Confidence: 0.76014794

 $00:50:26.586 \longrightarrow 00:50:28.987$ What we do in terms of surveillance.

 $00{:}50{:}28.990 \dashrightarrow 00{:}50{:}30.762$ Colonoscopy with polypectomy until

NOTE Confidence: 0.76014794

 $00{:}50{:}30.762 \dashrightarrow 00{:}50{:}33.866$ all polyps that are larger than 5

NOTE Confidence: 0.76014794

 $00:50:33.866 \longrightarrow 00:50:35.716$ millimeters are removed and then

NOTE Confidence: 0.76014794

 $00{:}50{:}35.716 \dashrightarrow 00{:}50{:}38.177$ with that more clear colon we

NOTE Confidence: 0.76014794

00:50:38.177 --> 00:50:39.548 would repeat colonoscopy.

NOTE Confidence: 0.76014794

 $00:50:39.550 \longrightarrow 00:50:41.783$ Went to three years depending on number

NOTE Confidence: 0.76014794

 $00:50:41.783 \longrightarrow 00:50:43.930$ and size of polyps, and certainly.

NOTE Confidence: 0.76014794

 $00:50:43.930 \longrightarrow 00:50:46.310$ If there's no good way to keep

NOTE Confidence: 0.76014794

00:50:46.310 --> 00:50:48.640 up with this polyps and again,

NOTE Confidence: 0.76014794

 $00:50:48.640 \longrightarrow 00:50:50.397$ it's tricky because some of these are

NOTE Confidence: 0.76014794

 $00:50:50.397 \longrightarrow 00:50:52.289$ very flat and hard to see sometimes.

NOTE Confidence: 0.76014794

 $00:50:52.290 \longrightarrow 00:50:54.778$ Then, consider surgical referral,

NOTE Confidence: 0.76014794

 $00{:}50{:}54.778 \dashrightarrow 00{:}50{:}58.510$ particularly if we find that evidence

NOTE Confidence: 0.76014794

 $00:50:58.598 \longrightarrow 00:51:01.838$ of hybrid displeasure in those cases,

NOTE Confidence: 0.76014794

 $00:51:01.840 \longrightarrow 00:51:07.588$ so the this is a list of a Poly process

 $00:51:07.588 \longrightarrow 00:51:10.004$ syndromes that, as you can see,

NOTE Confidence: 0.76014794

 $00{:}51{:}10.004 \dashrightarrow 00{:}51{:}12.219$ the number of genes that are associated

NOTE Confidence: 0.76014794

 $00:51:12.219 \longrightarrow 00:51:15.549$ with them has grown over the last few years.

NOTE Confidence: 0.76014794

00:51:15.550 --> 00:51:18.252 Even though many of them are really

NOTE Confidence: 0.76014794

 $00:51:18.252 \longrightarrow 00:51:19.410$ not that frequent,

NOTE Confidence: 0.76014794

00:51:19.410 --> 00:51:22.704 we've mentioned about APC causing faps

NOTE Confidence: 0.76014794

 $00:51:22.704 \longrightarrow 00:51:26.408$ and the attenuated form myh causing map.

NOTE Confidence: 0.76014794

00:51:26.410 --> 00:51:29.302 Then this might less common these

NOTE Confidence: 0.76014794

 $00{:}51{:}29.302 \dashrightarrow 00{:}51{:}30.748$ people polymerase proof reading

NOTE Confidence: 0.76014794

00:51:30.748 --> 00:51:32.673 associated Poly process due to

NOTE Confidence: 0.76014794

 $00{:}51{:}32.673 \dashrightarrow 00{:}51{:}34.318$ this genetic germline defects,

NOTE Confidence: 0.76014794

00:51:34.318 --> 00:51:37.671 gram one for hereditary mix Poly poses

NOTE Confidence: 0.76014794

 $00{:}51{:}37.671 \dashrightarrow 00{:}51{:}40.562$ or these other anti NTHL one and then

NOTE Confidence: 0.76014794

00:51:40.562 --> 00:51:41.852 the hammer tomatoes fully process

NOTE Confidence: 0.76014794

 $00:51:41.852 \longrightarrow 00:51:43.594$ that we've known for years because

NOTE Confidence: 0.76014794

 $00:51:43.594 \longrightarrow 00:51:45.024$ of their very unique phenotypes.

00:51:45.030 --> 00:51:45.842 Boots jiggers.

NOTE Confidence: 0.76014794

00:51:45.842 --> 00:51:47.872 Juvenile Poly policy is piton

NOTE Confidence: 0.76014794

00:51:47.872 --> 00:51:49.750 hammer toma tumor syndrome,

NOTE Confidence: 0.76014794

 $00:51:49.750 \longrightarrow 00:51:50.989$ Cowden for instance.

NOTE Confidence: 0.76014794

 $00{:}51{:}50.989 \dashrightarrow 00{:}51{:}53.880$ Those I'm not gonna get into right

NOTE Confidence: 0.76014794

 $00:51:53.962 \longrightarrow 00:51:56.433$ now to basically I think just to

NOTE Confidence: 0.76014794

 $00:51:56.433 \longrightarrow 00:51:58.752$ leave you with this that when it

NOTE Confidence: 0.76014794

 $00:51:58.752 \longrightarrow 00:51:59.756$ comes to Poly process,

NOTE Confidence: 0.76014794

 $00:51:59.760 \longrightarrow 00:52:02.864$ things are not more often not clear cut.

NOTE Confidence: 0.76014794

 $00:52:02.870 \longrightarrow 00:52:05.607$ We may have FAP patients who would

NOTE Confidence: 0.76014794

00:52:05.607 --> 00:52:08.456 have not only I'm at this point

NOTE Confidence: 0.76014794

00:52:08.456 --> 00:52:10.446 but also so Reddit polyps,

NOTE Confidence: 0.76014794

 $00:52:10.450 \dashrightarrow 00:52:12.904$ serrated polyp poses usually does include

NOTE Confidence: 0.76014794

 $00{:}52{:}12.904 \to 00{:}52{:}16.069$ a lot of patients or patients who have.

NOTE Confidence: 0.76014794

00:52:16.070 --> 00:52:17.250 Not only is really pose,

 $00:52:17.250 \longrightarrow 00:52:18.990$ but also the number this polyps.

NOTE Confidence: 0.76014794

 $00{:}52{:}18.990 \dashrightarrow 00{:}52{:}22.246$ So at mix type of polyps is very

NOTE Confidence: 0.76014794

 $00:52:22.246 \longrightarrow 00:52:24.998$ commonly seen in many of those

NOTE Confidence: 0.76014794

00:52:24.998 --> 00:52:27.308 syndromes and I'm so grateful.

NOTE Confidence: 0.76014794

00:52:27.310 --> 00:52:28.620 And that's,

NOTE Confidence: 0.76014794 00:52:28.620 --> 00:52:29.275 uh, NOTE Confidence: 0.76014794

 $00:52:29.275 \longrightarrow 00:52:33.860$ that's important to remember and will.

NOTE Confidence: 0.76014794

 $00:52:33.860 \longrightarrow 00:52:35.840$ I will leave it here and then at the

NOTE Confidence: 0.76014794

 $00:52:35.840 \longrightarrow 00:52:38.099$ end will be happy to take any questions.

NOTE Confidence: 0.76014794

00:52:38.100 --> 00:52:39.010 Thank you very much.

NOTE Confidence: 0.80562399

00:52:42.230 --> 00:52:44.869 Alright, thank you so much Doctor Lohr.

NOTE Confidence: 0.80562399

 $00:52:44.870 \longrightarrow 00:52:47.085$ Next I'd like to introduce

NOTE Confidence: 0.80562399

00:52:47.085 --> 00:52:48.414 Doctor James Farrell.

NOTE Confidence: 0.80562399

 $00{:}52{:}48.420 \dashrightarrow 00{:}52{:}50.718$ Dr Ferrell is an expert in

NOTE Confidence: 0.80562399

00:52:50.718 --> 00:52:51.867 pancreatic disease treatment,

NOTE Confidence: 0.80562399

 $00:52:51.870 \longrightarrow 00:52:53.778$ and research is board

00:52:53.778 --> 00:52:55.686 certified in internal medicine,

NOTE Confidence: 0.80562399

 $00{:}52{:}55.690 \dashrightarrow 00{:}52{:}57.310$ gastroenterology in clinical pharmacology.

NOTE Confidence: 0.80562399

 $00:52:57.310 \longrightarrow 00:52:59.740$ He leads the Yale Center for

NOTE Confidence: 0.80562399

 $00{:}52{:}59.806 \dashrightarrow 00{:}53{:}01.202$ Pancreatic Disease at Yale

NOTE Confidence: 0.80562399

00:53:01.202 --> 00:53:02.947 School of Medicine and Yale,

NOTE Confidence: 0.80562399

00:53:02.950 --> 00:53:04.120 New Haven Hospital,

NOTE Confidence: 0.80562399

 $00:53:04.120 \longrightarrow 00:53:06.070$ as well as the Yale

NOTE Confidence: 0.80562399

 $00{:}53{:}06.070 \dashrightarrow 00{:}53{:}07.400$ Interventional endoscopy program.

NOTE Confidence: 0.80562399

 $00:53:07.400 \longrightarrow 00:53:09.199$ Thank you for joining us Doctor Farrell.

NOTE Confidence: 0.71146149

 $00:53:20.780 \longrightarrow 00:53:22.170$ Doctor Farrell are you there?

NOTE Confidence: 0.958416425

00:53:30.120 --> 00:53:33.720 Can you hear me? Yes, perfect,

NOTE Confidence: 0.958416425

 $00:53:33.720 \longrightarrow 00:53:36.650$ thank you. Let me get my slides up.

NOTE Confidence: 0.33324143

00:53:39.750 --> 00:53:40.380 Uhm?

NOTE Confidence: 0.6488389

 $00:53:52.160 \longrightarrow 00:53:52.590$ Quick.

NOTE Confidence: 0.6786091

 $00:53:55.220 \longrightarrow 00:53:55.560$ Away.

00:54:00.280 --> 00:54:01.465 Again, good evening everybody.

NOTE Confidence: 0.847528166666667

00:54:01.465 --> 00:54:03.390 Thanks for the invitation to

NOTE Confidence: 0.847528166666667

 $00:54:03.390 \longrightarrow 00:54:04.930$ participate again this year.

NOTE Confidence: 0.847528166666667

 $00:54:04.930 \longrightarrow 00:54:08.090$ Uh, in this mini symposium.

NOTE Confidence: 0.847528166666667

00:54:08.090 --> 00:54:11.018 I had actually, uh.

NOTE Confidence: 0.847528166666667

 $00.54:11.020 \longrightarrow 00.54:13.027$ We only plan to talk for about 10 or

NOTE Confidence: 0.847528166666667

00:54:13.027 --> 00:54:15.316 15 minutes because it's late and I'm

NOTE Confidence: 0.847528166666667

00.54.15.316 --> 00.54.17.014 sure there's other speakers as well,

NOTE Confidence: 0.847528166666667

 $00:54:17.020 \longrightarrow 00:54:20.170$ so I'm probably going to keep my

NOTE Confidence: 0.847528166666667

00:54:20.170 --> 00:54:22.564 comments fairly brief and just cover

NOTE Confidence: 0.847528166666667

 $00{:}54{:}22.564 \dashrightarrow 00{:}54{:}25.144$ some of the issues related to screening

NOTE Confidence: 0.847528166666667

 $00:54:25.144 \longrightarrow 00:54:28.048$ and prevention for high risk pancreas

NOTE Confidence: 0.847528166666667

 $00:54:28.048 \longrightarrow 00:54:29.922$ cancer relatively ultimately focusing

NOTE Confidence: 0.847528166666667

 $00:54:29.922 \longrightarrow 00:54:32.428$ on the high risk genetics cases and.

NOTE Confidence: 0.847528166666667

00:54:32.430 --> 00:54:34.698 Because it's it's not as a mature a topic

NOTE Confidence: 0.847528166666667

 $00:54:34.698 \longrightarrow 00:54:37.130$ as perhaps in the realm of colon cancer,

 $00:54:37.130 \longrightarrow 00:54:38.842$ which you heard about,

NOTE Confidence: 0.847528166666667

 $00:54:38.842 \longrightarrow 00:54:40.554$ or pressure ovarian cancer.

NOTE Confidence: 0.847528166666667

 $00:54:40.560 \longrightarrow 00:54:42.270$ You'll see a lot of it is still under

NOTE Confidence: 0.847528166666667

 $00:54:42.270 \longrightarrow 00:54:43.738$ kind of the context of research,

NOTE Confidence: 0.847528166666667

 $00:54:43.740 \longrightarrow 00:54:45.315$ and I've added my contact

NOTE Confidence: 0.847528166666667

 $00:54:45.315 \longrightarrow 00:54:46.890$ information in the last slide.

NOTE Confidence: 0.847528166666667

00:54:46.890 --> 00:54:48.948 If anybody wants to reach out to

NOTE Confidence: 0.847528166666667

 $00{:}54{:}48.948 \dashrightarrow 00{:}54{:}51.299$ me with any additional questions.

NOTE Confidence: 0.847528166666667

 $00:54:51.300 \longrightarrow 00:54:53.646$ So let me just put this.

NOTE Confidence: 0.9128058

00:54:56.520 --> 00:54:56.930 Sorry.

NOTE Confidence: 0.83835633

 $00:54:58.990 \longrightarrow 00:55:01.480$ We get rid of this.

NOTE Confidence: 0.83835633

 $00:55:01.480 \longrightarrow 00:55:03.448$ There's an annoying bar on my.

NOTE Confidence: 0.766363395

 $00{:}55{:}07.100 --> 00{:}55{:}08.906$ I don't know where that is

NOTE Confidence: 0.766363395

 $00:55:08.906 \longrightarrow 00:55:10.960$ that bar on your screen too.

NOTE Confidence: 0.766363395

 $00:55:10.960 \longrightarrow 00:55:14.740$ Oh here we go, OK? Put that.

 $00:55:14.740 \longrightarrow 00:55:17.155$ Let me put that down there OK?

NOTE Confidence: 0.766363395

 $00{:}55{:}17.160 \dashrightarrow 00{:}55{:}19.309$ So when we think just to remind

NOTE Confidence: 0.766363395

00:55:19.309 --> 00:55:21.678 people we think of pancreatic cancer,

NOTE Confidence: 0.766363395

 $00:55:21.680 \longrightarrow 00:55:23.584$ you know, compared to some of the other.

NOTE Confidence: 0.897605106363637

 $00:55:29.810 \longrightarrow 00:55:31.832$ Here we go. We compared with

NOTE Confidence: 0.897605106363637

 $00:55:31.832 \longrightarrow 00:55:33.840$ some of the other cancers.

NOTE Confidence: 0.897605106363637

 $00:55:33.840 \longrightarrow 00:55:35.142$ Now we think of the overall

NOTE Confidence: 0.897605106363637

 $00:55:35.142 \longrightarrow 00:55:35.793$ incidence of pancreas.

NOTE Confidence: 0.897605106363637

00:55:35.800 --> 00:55:38.584 Cancer is actually, you know it's low on

NOTE Confidence: 0.897605106363637

 $00:55:38.584 \longrightarrow 00:55:41.627$ the list #9 or 10 for both men and women.

NOTE Confidence: 0.897605106363637

 $00:55:41.630 \longrightarrow 00:55:43.653$ But the real challenge is of course

NOTE Confidence: 0.897605106363637

 $00{:}55{:}43.653 \dashrightarrow 00{:}55{:}45.450$ when it comes to cancer related

NOTE Confidence: 0.897605106363637

 $00:55:45.450 \longrightarrow 00:55:47.792$ deaths and it jumps up into the list

NOTE Confidence: 0.897605106363637

 $00{:}55{:}47.792 \rightarrow 00{:}55{:}49.840$ to number the number 3 or #4 spot.

NOTE Confidence: 0.897605106363637

00:55:49.840 --> 00:55:52.480 And so you know with, uh,

NOTE Confidence: 0.897605106363637

 $00:55:52.480 \longrightarrow 00:55:55.248$ an average of around 56,000

 $00:55:55.248 \longrightarrow 00:55:58.688$ cases in the current year.

NOTE Confidence: 0.897605106363637

00:55:58.690 --> 00:56:00.865 It's guesstimated that by 2030

NOTE Confidence: 0.897605106363637

 $00:56:00.865 \longrightarrow 00:56:03.344$ or so pancreatic cancer will be

NOTE Confidence: 0.897605106363637

 $00:56:03.344 \longrightarrow 00:56:05.782$ the second most common cause for

NOTE Confidence: 0.897605106363637

00:56:05.782 --> 00:56:07.438 cancer related deaths, you know,

NOTE Confidence: 0.897605106363637

 $00:56:07.438 \longrightarrow 00:56:09.500$ and a lot of that has to do with.

NOTE Confidence: 0.897605106363637

 $00:56:09.500 \longrightarrow 00:56:11.768$ More progress that's made in other areas

NOTE Confidence: 0.897605106363637

 $00{:}56{:}11.768 \dashrightarrow 00{:}56{:}13.640$ of treatment and particularly prevention

NOTE Confidence: 0.897605106363637

 $00{:}56{:}13.640 \dashrightarrow 00{:}56{:}16.154$ and less so with pancreatic cancer.

NOTE Confidence: 0.897605106363637

 $00:56:16.160 \longrightarrow 00:56:17.535$ Although there have been some

NOTE Confidence: 0.897605106363637

 $00:56:17.535 \longrightarrow 00:56:18.910$ advances in both the areas

NOTE Confidence: 0.897605106363637

00:56:18.963 --> 00:56:20.339 of treatment and prevention,

NOTE Confidence: 0.897605106363637

00:56:20.340 --> 00:56:22.060 but just not as dramatic

NOTE Confidence: 0.897605106363637

 $00:56:22.060 \longrightarrow 00:56:23.436$ as with other malignancy.

NOTE Confidence: 0.897605106363637

 $00:56:23.440 \longrightarrow 00:56:24.708$ So a huge challenge.

00:56:26.770 --> 00:56:31.427 Uhm? I think it's also worth stating that.

NOTE Confidence: 0.942917709166667

 $00{:}56{:}33.970 \dashrightarrow 00{:}56{:}36.273$ It's important to kind of understand the

NOTE Confidence: 0.942917709166667

 $00:56:36.273 \longrightarrow 00:56:38.290$ different stages for pancreatic cancer,

NOTE Confidence: 0.942917709166667

 $00:56:38.290 \longrightarrow 00:56:41.350$ because this is one of the issues that we

NOTE Confidence: 0.942917709166667

 $00:56:41.350 \longrightarrow 00:56:45.110$ have with any sort of surveillance strategy,

NOTE Confidence: 0.942917709166667

00:56:45.110 --> 00:56:46.958 and so for this particular patient,

NOTE Confidence: 0.942917709166667

 $00:56:46.960 \longrightarrow 00:56:48.810$ this is a CT scan,

NOTE Confidence: 0.942917709166667

 $00.56.48.810 \longrightarrow 00.56.51.150$ and so for this particular patient,

NOTE Confidence: 0.942917709166667

 $00:56:51.150 \longrightarrow 00:56:54.048$ this is a small pancreatic cancer

NOTE Confidence: 0.942917709166667

 $00:56:54.048 \longrightarrow 00:56:57.220$ involving the head of the pancreas.

NOTE Confidence: 0.942917709166667

 $00:56:57.220 \longrightarrow 00:56:59.556$ Probably the order of 1 1/2 to 2

NOTE Confidence: 0.942917709166667

 $00:56:59.556 \longrightarrow 00:57:01.502$ centimeters or so in size, and these

NOTE Confidence: 0.942917709166667

 $00:57:01.502 \longrightarrow 00:57:03.338$ are important blood vessels around it,

NOTE Confidence: 0.942917709166667

 $00:57:03.340 \longrightarrow 00:57:05.500$ but this mass is actually somewhat

NOTE Confidence: 0.942917709166667

 $00:57:05.500 \longrightarrow 00:57:07.490$ distinct from these blood vessels,

NOTE Confidence: 0.942917709166667

 $00{:}57{:}07.490 \dashrightarrow 00{:}57{:}08.820$ and so typically a surgeon

 $00:57:08.820 \longrightarrow 00:57:10.470$ would be able to remove this.

NOTE Confidence: 0.942917709166667

 $00{:}57{:}10.470 \dashrightarrow 00{:}57{:}12.170$ So even though the nomenclature

NOTE Confidence: 0.942917709166667

 $00:57:12.170 \longrightarrow 00:57:13.530$ can be quite confusing,

NOTE Confidence: 0.942917709166667

 $00:57:13.530 \longrightarrow 00:57:15.147$ this is in a very straightforward way.

NOTE Confidence: 0.942917709166667

 $00:57:15.150 \longrightarrow 00:57:17.826$ We think about in terms of

NOTE Confidence: 0.942917709166667

00:57:17.826 --> 00:57:19.164 resectable pancreatic cancer,

NOTE Confidence: 0.942917709166667

00:57:19.170 --> 00:57:21.720 you see the liver over here on the left side,

NOTE Confidence: 0.942917709166667

 $00:57:21.720 \longrightarrow 00:57:23.894$ and the kidneys as well now.

NOTE Confidence: 0.942917709166667

 $00:57:23.894 \longrightarrow 00:57:25.952$ If you move on from that a

NOTE Confidence: 0.942917709166667

00:57:25.952 --> 00:57:27.310 little bit and again,

NOTE Confidence: 0.942917709166667

 $00{:}57{:}27.310 \dashrightarrow 00{:}57{:}29.788$ looking at again another CT scan,

NOTE Confidence: 0.942917709166667

 $00:57:29.790 \longrightarrow 00:57:32.737$ you can see in the arrow here.

NOTE Confidence: 0.942917709166667

00:57:32.740 --> 00:57:33.940 Another large mask,

NOTE Confidence: 0.942917709166667

 $00{:}57{:}33.940 \dashrightarrow 00{:}57{:}36.740$ but now this mass is beginning to

NOTE Confidence: 0.942917709166667

 $00:57:36.825 \longrightarrow 00:57:39.520$ involve and in case a blood vessel

 $00:57:39.520 \longrightarrow 00:57:42.120$ and an important blood vessel here,

NOTE Confidence: 0.942917709166667

00:57:42.120 --> 00:57:44.080 and for this reason, even though you say,

NOTE Confidence: 0.942917709166667

00:57:44.080 --> 00:57:46.796 well, it's still confined to the pancreas,

NOTE Confidence: 0.942917709166667

 $00:57:46.800 \longrightarrow 00:57:49.095$ or at least the head of the pancreas because

NOTE Confidence: 0.942917709166667

 $00:57:49.095 \longrightarrow 00:57:51.259$ of its involvement in a blood vessel.

NOTE Confidence: 0.942917709166667

 $00:57:51.260 \longrightarrow 00:57:53.353$ This makes it more difficult for a

NOTE Confidence: 0.942917709166667

 $00:57:53.353 \longrightarrow 00:57:55.079$ surgeon to consider removing this.

NOTE Confidence: 0.942917709166667

00:57:55.080 --> 00:57:56.358 Again, there may not be evidence,

NOTE Confidence: 0.942917709166667

 $00:57:56.360 \longrightarrow 00:57:57.816$ at least to the visible eye of disease

NOTE Confidence: 0.942917709166667

 $00:57:57.816 \longrightarrow 00:57:59.513$ elsewhere in the liver, and so on.

NOTE Confidence: 0.942917709166667

00:57:59.513 --> 00:58:01.379 But this still would not be

NOTE Confidence: 0.942917709166667

 $00:58:01.379 \longrightarrow 00:58:03.150$ considered surgically resectable.

NOTE Confidence: 0.942917709166667

00:58:03.150 --> 00:58:04.790 In its current state,

NOTE Confidence: 0.942917709166667

 $00:58:04.790 \longrightarrow 00:58:08.759$ and so we call this locally advanced disease.

NOTE Confidence: 0.942917709166667

00:58:08.760 --> 00:58:10.650 And then the most dramatic stage,

NOTE Confidence: 0.942917709166667 00:58:10.650 --> 00:58:11.544 of course,

00:58:11.544 --> 00:58:13.779 is individuals who present with

NOTE Confidence: 0.942917709166667

 $00:58:13.779 \longrightarrow 00:58:15.962$ disease outside of the pancreas

NOTE Confidence: 0.942917709166667

00:58:15.962 --> 00:58:18.067 at the time of presentation.

NOTE Confidence: 0.942917709166667

 $00:58:18.070 \longrightarrow 00:58:19.920$ Often it's in the liver,

NOTE Confidence: 0.942917709166667

 $00:58:19.920 \longrightarrow 00:58:21.840$ sometimes it's up in the chest,

NOTE Confidence: 0.942917709166667

 $00:58:21.840 \longrightarrow 00:58:23.120$ and often sometimes then again,

NOTE Confidence: 0.942917709166667

 $00:58:23.120 \longrightarrow 00:58:24.458$ it's in what's called the peritoneum.

NOTE Confidence: 0.942917709166667

 $00{:}58{:}24.460 \dashrightarrow 00{:}58{:}28.580$ So implants here shown on this CT scan,

NOTE Confidence: 0.942917709166667 00:58:28.580 --> 00:58:29.538 so again, NOTE Confidence: 0.942917709166667

 $00:58:29.538 \longrightarrow 00:58:32.412$ this would not be considered surgically

NOTE Confidence: 0.942917709166667

00:58:32.412 --> 00:58:33.990 resectable removable disease,

NOTE Confidence: 0.942917709166667

 $00{:}58{:}33.990 \dashrightarrow 00{:}58{:}37.032$ and would in fact be considered

NOTE Confidence: 0.942917709166667

 $00{:}58{:}37.032 --> 00{:}58{:}38.046 \text{ metastatic disease}.$

NOTE Confidence: 0.942917709166667

 $00:58:38.050 \longrightarrow 00:58:41.508$ To put this into some perspective then.

NOTE Confidence: 0.942917709166667 00:58:41.510 --> 00:58:41.938 Uhm,

 $00:58:41.938 \longrightarrow 00:58:44.506$ only about 15% of all patients

NOTE Confidence: 0.942917709166667

 $00{:}58{:}44.506 \dashrightarrow 00{:}58{:}46.379$ present with that surgically

NOTE Confidence: 0.942917709166667

 $00{:}58{:}46.379 \dashrightarrow 00{:}58{:}48.884$ resectable stage and early stage

NOTE Confidence: 0.942917709166667

 $00:58:48.884 \longrightarrow 00:58:52.347$ that a surgeon can go in and remove.

NOTE Confidence: 0.942917709166667

 $00:58:52.350 \longrightarrow 00:58:54.436$ And this is the group of patients

NOTE Confidence: 0.942917709166667

 $00:58:54.436 \longrightarrow 00:58:56.013$ that really offer the best

NOTE Confidence: 0.942917709166667

 $00:58:56.013 \longrightarrow 00:58:57.563$ potential for those that present

NOTE Confidence: 0.942917709166667

 $00:58:57.563 \longrightarrow 00:58:59.837$ with at the stage with the cancer.

NOTE Confidence: 0.942917709166667

 $00{:}58{:}59.840 {\:{\circ}{\circ}{\circ}}>00{:}59{:}01.856$ And so the the mean average survival

NOTE Confidence: 0.942917709166667

 $00:59:01.856 \longrightarrow 00:59:04.168$ is in the region of 2025 months.

NOTE Confidence: 0.942917709166667

 $00{:}59{:}04.168 --> 00{:}59{:}06.622$ But of course there can be

NOTE Confidence: 0.942917709166667

 $00:59:06.622 \longrightarrow 00:59:07.910$ extremes with that.

NOTE Confidence: 0.942917709166667

 $00:59:07.910 \longrightarrow 00:59:08.980$ For the other two groups,

NOTE Confidence: 0.942917709166667 00:59:08.980 --> 00:59:09.449 however, NOTE Confidence: 0.942917709166667

00:59:09.449 --> 00:59:11.794 it splits somewhat evenly between

NOTE Confidence: 0.942917709166667

 $00:59:11.794 \longrightarrow 00:59:14.158$ patients presenting with locally advanced

 $00:59:14.158 \longrightarrow 00:59:16.678$ disease as well as metastatic disease,

NOTE Confidence: 0.942917709166667

 $00{:}59{:}16.680 \dashrightarrow 00{:}59{:}18.880$ and so it just gets at the important

NOTE Confidence: 0.942917709166667

 $00{:}59{:}18.880 \dashrightarrow 00{:}59{:}21.221$ issue that although there are newer

NOTE Confidence: 0.942917709166667

 $00:59:21.221 \longrightarrow 00:59:23.386$ treatments and somewhat better medical

NOTE Confidence: 0.942917709166667

 $00:59:23.386 \longrightarrow 00:59:25.805$ treatments for this disease than there were,

NOTE Confidence: 0.942917709166667

 $00:59:25.810 \longrightarrow 00:59:26.303$ say,

NOTE Confidence: 0.942917709166667

 $00:59:26.303 \longrightarrow 00:59:28.768$ 15 or 20 years ago.

NOTE Confidence: 0.942917709166667

 $00:59:28.770 \longrightarrow 00:59:30.714$ Will focus to make any sort of dent in

NOTE Confidence: 0.942917709166667

 $00{:}59{:}30.714 \dashrightarrow 00{:}59{:}32.697$ this disease is really early detection.

NOTE Confidence: 0.880974128636363

 $00{:}59{:}35.070 \dashrightarrow 00{:}59{:}37.526$ And part of that reason where it becomes

NOTE Confidence: 0.880974128636363

 $00:59:37.526 \longrightarrow 00:59:39.721$ challenging is because of course the

NOTE Confidence: 0.880974128636363

 $00:59:39.721 \longrightarrow 00:59:41.241$ symptoms associated with pancreatic

NOTE Confidence: 0.880974128636363

 $00{:}59{:}41.241 \longrightarrow 00{:}59{:}43.299$ cancer are very nonspecific, so.

NOTE Confidence: 0.880974128636363

 $00{:}59{:}43.299 \dashrightarrow 00{:}59{:}45.322$ Uhm, you know if you think about

NOTE Confidence: 0.880974128636363

 $00:59:45.322 \longrightarrow 00:59:47.595$ them and how these patients will

00:59:47.595 --> 00:59:49.630 present at the symptomatic point,

NOTE Confidence: 0.880974128636363

00:59:49.630 --> 00:59:51.550 at least you know abdominal pain.

NOTE Confidence: 0.880974128636363

 $00:59:51.550 \longrightarrow 00:59:53.986$ Weight loss are can be common symptoms,

NOTE Confidence: 0.880974128636363

 $00:59:53.990 \longrightarrow 00:59:55.166$ but they're very nonspecific.

NOTE Confidence: 0.880974128636363

00:59:55.166 --> 00:59:56.342 You get abdominal pains

NOTE Confidence: 0.880974128636363

 $00:59:56.342 \longrightarrow 00:59:57.780$ when also from a gallstone.

NOTE Confidence: 0.880974128636363

00:59:57.780 --> 00:59:59.410 It doesn't necessarily have to

NOTE Confidence: 0.880974128636363

 $00:59:59.410 \longrightarrow 01:00:00.714$ be a pancreatic malignancy,

NOTE Confidence: 0.880974128636363

 $01:00:00.720 \longrightarrow 01:00:03.030$ and the same thing for weight loss.

NOTE Confidence: 0.880974128636363

 $01:00:03.030 \longrightarrow 01:00:04.050$ When you look at other symptoms,

NOTE Confidence: 0.880974128636363

 $01:00:04.050 \longrightarrow 01:00:05.990$ like jaundice and dark urine,

NOTE Confidence: 0.880974128636363

01:00:05.990 --> 01:00:07.510 know you could certainly kind of begin to

NOTE Confidence: 0.880974128636363

 $01:00:07.510 \longrightarrow 01:00:09.230$ focus in on things related to the pancreas,

NOTE Confidence: 0.880974128636363

01:00:09.230 --> 01:00:11.588 but still very nonspecific, and again,

NOTE Confidence: 0.880974128636363

01:00:11.590 --> 01:00:13.270 there's other symptoms like nausea,

NOTE Confidence: 0.880974128636363

 $01:00:13.270 \longrightarrow 01:00:14.510$ vomiting, depression,

01:00:14.510 --> 01:00:16.370 anorexia, but again,

NOTE Confidence: 0.880974128636363

01:00:16.370 --> 01:00:18.450 have a multitude of causes,

NOTE Confidence: 0.880974128636363

01:00:18.450 --> 01:00:20.295 and pancreatic cancer is certainly

NOTE Confidence: 0.880974128636363

 $01:00:20.295 \longrightarrow 01:00:22.550$ not high up on that list.

NOTE Confidence: 0.880974128636363

 $01:00:22.550 \longrightarrow 01:00:24.356$ Two ones that are also worth

NOTE Confidence: 0.880974128636363

01:00:24.356 --> 01:00:25.560 thinking about are acute

NOTE Confidence: 0.880974128636363

 $01:00:25.622 \longrightarrow 01:00:27.667$ pancreatitis and new onset diabetes.

NOTE Confidence: 0.880974128636363

 $01{:}00{:}27.670 \dashrightarrow 01{:}00{:}29.578$ And we'll come back and talk a little bit

NOTE Confidence: 0.880974128636363

 $01:00:29.578 \longrightarrow 01:00:31.600$ more about the new onset diabetes later on.

NOTE Confidence: 0.880974128636363

 $01:00:31.600 \longrightarrow 01:00:34.114$ In terms of ways that patients

NOTE Confidence: 0.880974128636363

01:00:34.114 --> 01:00:36.287 with pancreatic cancer may present

NOTE Confidence: 0.880974128636363

 $01:00:36.287 \dashrightarrow 01:00:38.807$ that we should be familiar with.

NOTE Confidence: 0.880974128636363

 $01{:}00{:}38.810 \dashrightarrow 01{:}00{:}40.861$ So therefore when we think about the

NOTE Confidence: 0.880974128636363

01:00:40.861 --> 01:00:42.689 goals of pancreatic cancer screening,

NOTE Confidence: 0.880974128636363

 $01:00:42.690 \longrightarrow 01:00:45.651$ it has been stated in guidelines that

01:00:45.651 --> 01:00:47.876 a successful screening program should

NOTE Confidence: 0.880974128636363

 $01{:}00{:}47.876 \longrightarrow 01{:}00{:}50.170$ detect and treat what's considered

NOTE Confidence: 0.880974128636363

 $01:00:50.170 \longrightarrow 01:00:53.110$ early stage or resectable margin negative.

NOTE Confidence: 0.880974128636363

 $01:00:53.110 \longrightarrow 01:00:55.640$ So there's no tumor left

NOTE Confidence: 0.880974128636363

01:00:55.640 --> 01:00:57.158 behind pancreatic cancer.

NOTE Confidence: 0.880974128636363

01:00:57.160 --> 01:01:00.643 As well as a lesions that are not cancerous,

NOTE Confidence: 0.880974128636363

 $01:01:00.650 \longrightarrow 01:01:02.486$ so called precancerous lesions,

NOTE Confidence: 0.880974128636363

 $01:01:02.486 \longrightarrow 01:01:06.351$ and these include a variety of very well

NOTE Confidence: 0.880974128636363

 $01:01:06.351 \longrightarrow 01:01:08.391$ established pathologic and entities

NOTE Confidence: 0.880974128636363

01:01:08.391 --> 01:01:11.940 called Pan Inns or IPM nsor MCMS.

NOTE Confidence: 0.880974128636363

 $01:01:11.940 \longrightarrow 01:01:13.490$ These are types of sometimes

NOTE Confidence: 0.880974128636363

 $01:01:13.490 \longrightarrow 01:01:15.670$ types of cysts in the pancreas.

NOTE Confidence: 0.880974128636363

01:01:15.670 --> 01:01:17.880 And some of them do have imaging

NOTE Confidence: 0.880974128636363

01:01:17.880 --> 01:01:20.490 carlitz that can be seen on a CT scan,

NOTE Confidence: 0.880974128636363

01:01:20.490 --> 01:01:22.191 but unfortunately some of them don't and

NOTE Confidence: 0.880974128636363

01:01:22.191 --> 01:01:24.329 it can be quite difficult to identify,

01:01:24.330 --> 01:01:28.164 but ideally picking up high grade

NOTE Confidence: 0.880974128636363

 $01:01:28.164 \longrightarrow 01:01:30.081$ dysplastic precancerous lesions

NOTE Confidence: 0.880974128636363

 $01:01:30.081 \longrightarrow 01:01:33.690$ would really be a huge step forward

NOTE Confidence: 0.880974128636363

 $01:01:33.690 \longrightarrow 01:01:35.130$ in the management.

NOTE Confidence: 0.880974128636363

 $01:01:35.130 \longrightarrow 01:01:39.078$ Prognosis for this group of patients.

NOTE Confidence: 0.880974128636363

01:01:39.080 --> 01:01:40.495 So without getting into it

NOTE Confidence: 0.880974128636363

01:01:40.495 --> 01:01:41.627 in too much detail,

NOTE Confidence: 0.880974128636363

 $01:01:41.630 \longrightarrow 01:01:43.620$ I'll just state very briefly

NOTE Confidence: 0.880974128636363

 $01{:}01{:}43.620 \dashrightarrow 01{:}01{:}46.171$ that we do not perform general

NOTE Confidence: 0.880974128636363

 $01:01:46.171 \longrightarrow 01:01:48.976$ screening in the general population.

NOTE Confidence: 0.880974128636363

 $01:01:48.980 \longrightarrow 01:01:51.276$ There's a variety of reasons for that.

NOTE Confidence: 0.880974128636363

 $01:01:51.280 \longrightarrow 01:01:53.020$ There is no simple single

NOTE Confidence: 0.880974128636363

 $01:01:53.020 \longrightarrow 01:01:54.880$ blood test that you know.

NOTE Confidence: 0.880974128636363

 $01:01:54.880 \longrightarrow 01:01:56.532$ If you have no risk factors related

NOTE Confidence: 0.880974128636363

 $01:01:56.532 \longrightarrow 01:01:58.035$ to pancreatic disease, you can get.

 $01:01:58.035 \longrightarrow 01:01:59.625$ It's not to say people aren't

NOTE Confidence: 0.880974128636363

 $01:01:59.625 \longrightarrow 01:02:00.899$ working in that direction,

NOTE Confidence: 0.880974128636363

 $01:02:00.900 \longrightarrow 01:02:02.472$ but it's a very challenging area

NOTE Confidence: 0.880974128636363

 $01:02:02.472 \longrightarrow 01:02:04.981$ and so right now we don't offer

NOTE Confidence: 0.880974128636363

 $01:02:04.981 \longrightarrow 01:02:07.416$ or talk about necessarily general

NOTE Confidence: 0.880974128636363

01:02:07.416 --> 01:02:10.278 screening for the general population,

NOTE Confidence: 0.880974128636363

 $01:02:10.280 \longrightarrow 01:02:12.904$ but we do focus on is trying to

NOTE Confidence: 0.880974128636363

01:02:12.904 --> 01:02:15.655 study an enriching groups and the

NOTE Confidence: 0.880974128636363

 $01{:}02{:}15.655 \dashrightarrow 01{:}02{:}17.959$ three major groups that we study

NOTE Confidence: 0.880974128636363

 $01:02:17.959 \longrightarrow 01:02:19.800$ and that we think about when we

NOTE Confidence: 0.880974128636363

01:02:19.867 --> 01:02:21.743 think about pancreatic cancer

NOTE Confidence: 0.880974128636363

01:02:21.743 --> 01:02:23.619 surveillance are pancreatic cysts,

NOTE Confidence: 0.880974128636363 01:02:23.620 --> 01:02:24.200 diabetes, NOTE Confidence: 0.880974128636363

 $01:02:24.200 \longrightarrow 01:02:27.100$ and then familial pancreatic cancer.

 $\begin{aligned} & \text{NOTE Confidence: } 0.880974128636363\\ & 01:02:27.100 --> 01:02:27.490 \text{ Very briefly,} \end{aligned}$

NOTE Confidence: 0.880974128636363

 $01:02:27.490 \longrightarrow 01:02:28.855$ I'm not going to spend much time.

01:02:28.860 --> 01:02:30.340 Talking about pancreatic cysts,

NOTE Confidence: 0.880974128636363

 $01{:}02{:}30.340 \dashrightarrow 01{:}02{:}32.560$ but pancreatic cysts are exceedingly common,

NOTE Confidence: 0.880974128636363

 $01:02:32.560 \longrightarrow 01:02:35.290$ so anywhere between you know 10 to

NOTE Confidence: 0.880974128636363

 $01:02:35.290 \longrightarrow 01:02:37.633$ 40% of CT scans and MRI's that are

NOTE Confidence: 0.880974128636363

 $01:02:37.633 \longrightarrow 01:02:39.533$ done for patients coming into hospital

NOTE Confidence: 0.880974128636363

 $01:02:39.533 \longrightarrow 01:02:41.857$ and hospital will have a small cyst.

NOTE Confidence: 0.876685077

 $01:02:41.860 \longrightarrow 01:02:43.590$ The vast majority of assists

NOTE Confidence: 0.876685077

01:02:43.590 --> 01:02:45.320 will not develop into cancer,

NOTE Confidence: 0.876685077

 $01:02:45.320 \longrightarrow 01:02:47.273$ but most of those cysts can actually

NOTE Confidence: 0.876685077

 $01:02:47.273 \dashrightarrow 01:02:49.580$ be can be considered precancerous

NOTE Confidence: 0.876685077

 $01:02:49.580 \longrightarrow 01:02:51.855$ when you think at a national level.

NOTE Confidence: 0.876685077

 $01:02:51.860 \longrightarrow 01:02:53.544$ It's guesstimated that probably

NOTE Confidence: 0.876685077

01:02:53.544 --> 01:02:55.578 around 6 million. Individuals in EU.

NOTE Confidence: 0.876685077

 $01:02:55.578 \longrightarrow 01:02:57.370$ S have some form of pancreatic says,

NOTE Confidence: 0.876685077

 $01:02:57.370 \longrightarrow 01:03:00.366$ so it's not a small, trivial issue.

 $01:03:00.366 \longrightarrow 01:03:01.906$ The risk may be low,

NOTE Confidence: 0.876685077

 $01:03:01.910 \longrightarrow 01:03:03.457$ but kind of on a global scale.

NOTE Confidence: 0.876685077

 $01:03:03.460 \longrightarrow 01:03:05.924$ It adds up, and so it's something that

NOTE Confidence: 0.876685077

 $01:03:05.930 \longrightarrow 01:03:08.919$ we certainly take note of and have

NOTE Confidence: 0.876685077

 $01:03:08.919 \longrightarrow 01:03:12.108$ guidelines in place to try and manage this.

NOTE Confidence: 0.876685077

01:03:12.110 --> 01:03:13.710 Not necessarily the new kid on the block,

NOTE Confidence: 0.876685077

 $01:03:13.710 \longrightarrow 01:03:15.222$ but something that's you're going to

NOTE Confidence: 0.876685077

 $01:03:15.222 \longrightarrow 01:03:17.537$ hear more and more about is the interplay

NOTE Confidence: 0.876685077

 $01{:}03{:}17.537 \dashrightarrow 01{:}03{:}19.112$ between diabetes and pancreatic cancer.

NOTE Confidence: 0.876685077

01:03:19.120 --> 01:03:20.236 So for sure,

NOTE Confidence: 0.876685077

 $01{:}03{:}20.236 \dashrightarrow 01{:}03{:}21.724$ for individuals with diabetes,

NOTE Confidence: 0.876685077

 $01:03:21.730 \longrightarrow 01:03:23.470$ it's well known that they are

NOTE Confidence: 0.876685077

 $01:03:23.470 \longrightarrow 01:03:25.495$ at a slightly increased risk of

NOTE Confidence: 0.876685077

 $01{:}03{:}25.495 \dashrightarrow 01{:}03{:}26.710$ developing pancreatic cancer.

NOTE Confidence: 0.876685077

01:03:26.710 --> 01:03:29.446 But probably the much more interesting

NOTE Confidence: 0.876685077

 $01{:}03{:}29.446 \dashrightarrow 01{:}03{:}32.414$ direction is the idea of pancreatic

 $01:03:32.414 \longrightarrow 01:03:35.606$ cancer leading and presenting as diabetes,

NOTE Confidence: 0.876685077

 $01{:}03{:}35.610 \longrightarrow 01{:}03{:}38.112$ and this is more than just an issue of

NOTE Confidence: 0.876685077

 $01:03:38.112 \longrightarrow 01:03:41.037$ the tumor taking over the pancreatic gland.

NOTE Confidence: 0.876685077

 $01:03:41.040 \longrightarrow 01:03:43.273$ There's some other factors going on here

NOTE Confidence: 0.876685077

 $01:03:43.273 \longrightarrow 01:03:45.938$ that people are beginning to scratch away at.

NOTE Confidence: 0.876685077

01:03:45.940 --> 01:03:48.244 And the result may provide actually

NOTE Confidence: 0.876685077

01:03:48.244 --> 01:03:51.730 an opportunity for for screening.

NOTE Confidence: 0.876685077

 $01:03:51.730 \longrightarrow 01:03:53.698$ In one perspective case control study

NOTE Confidence: 0.876685077

 $01{:}03{:}53.698 \dashrightarrow 01{:}03{:}56.712$ that was done of a large number of

NOTE Confidence: 0.876685077

 $01:03:56.712 \longrightarrow 01:03:58.344$ newly diagnosed pancreatic duct

NOTE Confidence: 0.876685077

 $01{:}03{:}58.344 \dashrightarrow 01{:}04{:}00.533$ adenocarcinoma is the vast majority of

NOTE Confidence: 0.876685077

 $01:04:00.533 \longrightarrow 01:04:03.084$ patients had some form of fasting blood,

NOTE Confidence: 0.876685077

 $01{:}04{:}03.084 \dashrightarrow 01{:}04{:}05.380$ blue blood, glucose abnormality,

NOTE Confidence: 0.876685077

01:04:05.380 --> 01:04:08.126 some of them actually had, you know,

NOTE Confidence: 0.876685077

01:04:08.126 --> 01:04:08.832 documented diabetes,

 $01:04:08.832 \longrightarrow 01:04:11.359$ and about half of them had what's

NOTE Confidence: 0.876685077

 $01{:}04{:}11.359 \dashrightarrow 01{:}04{:}13.435$ called new onset diabetes within a

NOTE Confidence: 0.876685077

01:04:13.435 --> 01:04:16.028 period of time before the presentation,

NOTE Confidence: 0.876685077

 $01:04:16.030 \longrightarrow 01:04:17.790$ so this cannot be ignored.

NOTE Confidence: 0.876685077

01:04:17.790 --> 01:04:19.680 There's something going on with

NOTE Confidence: 0.876685077

01:04:19.680 --> 01:04:21.192 diabetes and pancreatic cancer.

NOTE Confidence: 0.876685077

01:04:21.200 --> 01:04:23.788 Uhm, that's worth studying.

NOTE Confidence: 0.876685077

 $01{:}04{:}23.790 \dashrightarrow 01{:}04{:}26.634$ When we look at individuals who

NOTE Confidence: 0.876685077

 $01{:}04{:}26.634 \dashrightarrow 01{:}04{:}28.530$ subsequently have an association

NOTE Confidence: 0.876685077

 $01:04:28.610 \longrightarrow 01:04:31.018$ between pancreatic duct adenocarcinoma

NOTE Confidence: 0.876685077

 $01:04:31.018 \longrightarrow 01:04:33.426$ and elevated blood sugars,

NOTE Confidence: 0.876685077

 $01:04:33.430 \longrightarrow 01:04:35.398$ certain studies have been able to

NOTE Confidence: 0.876685077

01:04:35.398 --> 01:04:38.040 go back and track the kind of slow

NOTE Confidence: 0.876685077

 $01{:}04{:}38.040 \dashrightarrow 01{:}04{:}40.420$ eyes of blood sugars anywhere up to

NOTE Confidence: 0.876685077

 $01:04:40.420 \longrightarrow 01:04:42.928$ about 36 months before the clinical

NOTE Confidence: 0.876685077

 $01:04:42.928 \longrightarrow 01:04:44.713$ presentation of pancreatic cancer.

 $01:04:44.713 \longrightarrow 01:04:47.851$ So this then is being translated

NOTE Confidence: 0.876685077

 $01:04:47.851 \longrightarrow 01:04:50.678$ into another way to try and enrich

NOTE Confidence: 0.876685077

01:04:50.678 --> 01:04:52.682 or find certain populations who

NOTE Confidence: 0.876685077

 $01:04:52.682 \longrightarrow 01:04:55.064$ are at higher risk for developing

NOTE Confidence: 0.876685077

 $01:04:55.064 \longrightarrow 01:04:56.930$ pancreatic cancer and study it.

NOTE Confidence: 0.876685077

01:04:56.930 --> 01:04:58.414 And so this is very much at

NOTE Confidence: 0.876685077

01:04:58.414 --> 01:04:59.580 a research level right now,

NOTE Confidence: 0.876685077

 $01:04:59.580 \longrightarrow 01:05:01.090$ but it is gathering speed.

NOTE Confidence: 0.853211456

01:05:03.230 --> 01:05:05.165 The final and big area that I do want

NOTE Confidence: 0.853211456

01:05:05.165 --> 01:05:07.405 to talk to you about this evening

NOTE Confidence: 0.853211456

 $01{:}05{:}07.405 \dashrightarrow 01{:}05{:}08.717$ is familial pancreatic cancer,

NOTE Confidence: 0.853211456

 $01:05:08.720 \longrightarrow 01:05:10.940$ so it's guesstimated that when

NOTE Confidence: 0.853211456

 $01{:}05{:}10.940 \dashrightarrow 01{:}05{:}13.160$ you think about all patients

NOTE Confidence: 0.853211456

 $01:05:13.239 \longrightarrow 01:05:15.799$ presenting with pancreatic cancer.

NOTE Confidence: 0.853211456

 $01:05:15.800 \longrightarrow 01:05:18.062$ About a total of anywhere between

 $01:05:18.062 \longrightarrow 01:05:21.140$ 10 or 15% of these patients will

NOTE Confidence: 0.853211456

 $01:05:21.140 \longrightarrow 01:05:23.460$ have either a familial component,

NOTE Confidence: 0.853211456

 $01:05:23.460 \longrightarrow 01:05:24.890$ meaning when you ask them

NOTE Confidence: 0.853211456

01:05:24.890 --> 01:05:26.034 about their family history,

NOTE Confidence: 0.853211456

 $01:05:26.040 \longrightarrow 01:05:28.595$ they'll tell you that they have a.

NOTE Confidence: 0.853211456

01:05:28.600 --> 01:05:31.696 You know, two first degree relatives.

NOTE Confidence: 0.853211456

01:05:31.700 --> 01:05:33.024 One first degree relatives,

NOTE Confidence: 0.853211456

 $01:05:33.024 \longrightarrow 01:05:34.740$ several secondary relatives, and so on.

NOTE Confidence: 0.853211456

 $01:05:34.740 \longrightarrow 01:05:35.460$ So does it.

NOTE Confidence: 0.853211456

 $01:05:35.460 \longrightarrow 01:05:37.086$ I definitely lineages going on in

NOTE Confidence: 0.853211456

01:05:37.086 --> 01:05:38.779 that family when you ask it off,

NOTE Confidence: 0.853211456

01:05:38.780 --> 01:05:39.760 people forget to ask,

NOTE Confidence: 0.853211456

01:05:39.760 --> 01:05:41.557 but I think now people are becoming

NOTE Confidence: 0.853211456

 $01:05:41.557 \longrightarrow 01:05:43.848$ more aware of that and then a certain

NOTE Confidence: 0.853211456

 $01:05:43.848 \longrightarrow 01:05:45.333$ percentage of these patients then.

NOTE Confidence: 0.853211456

 $01:05:45.340 \longrightarrow 01:05:47.764$ We actually have a documented and

 $01:05:47.764 \longrightarrow 01:05:50.000$ detectable germline mutation that we can

NOTE Confidence: 0.853211456

 $01:05:50.000 \longrightarrow 01:05:52.216$ find in the blood that can further kind

NOTE Confidence: 0.853211456

 $01:05:52.285 \longrightarrow 01:05:54.634$ of steer and guide us about what to do.

NOTE Confidence: 0.853211456

01:05:54.640 --> 01:05:56.620 Uhm, when we think about

NOTE Confidence: 0.853211456

01:05:56.620 --> 01:05:57.808 familial pancreatic cancer,

NOTE Confidence: 0.853211456

 $01:05:57.810 \longrightarrow 01:05:59.362$ obviously the more family

NOTE Confidence: 0.853211456

 $01:05:59.362 \longrightarrow 01:06:00.914$ members that are affected,

NOTE Confidence: 0.853211456

 $01:06:00.920 \longrightarrow 01:06:02.630$ the greater your relative risk

NOTE Confidence: 0.853211456

 $01{:}06{:}02.630 \dashrightarrow 01{:}06{:}03.998$ of developing pancreatic cancer.

NOTE Confidence: 0.853211456

01:06:04.000 --> 01:06:06.706 So if you've got three first

NOTE Confidence: 0.853211456

 $01:06:06.706 \longrightarrow 01:06:07.608$ degree relatives.

NOTE Confidence: 0.853211456

 $01{:}06{:}07.610 --> 01{:}06{:}08.078 \ \mathrm{Uhm},$

NOTE Confidence: 0.853211456

 $01{:}06{:}08.078 \dashrightarrow 01{:}06{:}11.213$ you have a 32 full relative risk

NOTE Confidence: 0.853211456

 $01:06:11.213 \longrightarrow 01:06:13.318$ compared to individuals who don't

NOTE Confidence: 0.853211456

 $01:06:13.318 \longrightarrow 01:06:15.799$ have that type of family history.

01:06:15.800 --> 01:06:18.677 If you've got one first degree relative,

NOTE Confidence: 0.853211456

 $01:06:18.680 \longrightarrow 01:06:20.220$ it's unclear what the significance

NOTE Confidence: 0.853211456

 $01:06:20.220 \longrightarrow 01:06:22.288$ of that is in terms of whether

NOTE Confidence: 0.853211456

 $01:06:22.288 \longrightarrow 01:06:23.698$ we act upon it or not,

NOTE Confidence: 0.853211456

 $01:06:23.700 \longrightarrow 01:06:25.996$ and so it doesn't meet the definitive

NOTE Confidence: 0.853211456

 $01:06:25.996 \longrightarrow 01:06:28.113$ criteria for saying someone has a

NOTE Confidence: 0.853211456

 $01:06:28.113 \longrightarrow 01:06:29.898$ familial pancreatic cancer comes from

NOTE Confidence: 0.853211456

 $01:06:29.898 \longrightarrow 01:06:32.169$ a familial pancreatic cancer kindred.

NOTE Confidence: 0.853211456

01:06:32.170 --> 01:06:33.510 We certainly take notice,

NOTE Confidence: 0.853211456

 $01:06:33.510 \longrightarrow 01:06:34.515$ especially when individuals

NOTE Confidence: 0.853211456

01:06:34.515 --> 01:06:36.030 are young and families.

NOTE Confidence: 0.853211456

01:06:36.030 --> 01:06:37.720 But again, having just one.

NOTE Confidence: 0.853211456

 $01:06:37.720 \longrightarrow 01:06:38.516$ Family member.

NOTE Confidence: 0.853211456

 $01:06:38.516 \longrightarrow 01:06:40.904$ I probably does not meet those.

NOTE Confidence: 0.853211456

01:06:40.910 --> 01:06:42.398 You know definite criteria.

NOTE Confidence: 0.853211456

 $01:06:42.398 \longrightarrow 01:06:44.258$ It's also interesting to note

 $01:06:44.258 \longrightarrow 01:06:46.695$ that despite a lot of knowledge

NOTE Confidence: 0.853211456

01:06:46.695 --> 01:06:48.295 about familial pancreatic cancer,

NOTE Confidence: 0.853211456

01:06:48.300 --> 01:06:50.730 and the fact that it runs in the family,

NOTE Confidence: 0.853211456

 $01:06:50.730 \longrightarrow 01:06:53.520$ the entire mode of transmission

NOTE Confidence: 0.853211456

 $01:06:53.520 \longrightarrow 01:06:56.310$ and hardens is still unclear.

NOTE Confidence: 0.853211456

 $01:06:56.310 \longrightarrow 01:06:58.746$ The most common abnormality that's found

NOTE Confidence: 0.853211456

01:06:58.746 --> 01:07:01.348 from a genetic perspective is the bracket,

NOTE Confidence: 0.853211456

01:07:01.350 --> 01:07:01.730 two mutation,

NOTE Confidence: 0.853211456

01:07:01.730 --> 01:07:03.060 but it's still as you can see,

NOTE Confidence: 0.853211456

 $01:07:03.060 \longrightarrow 01:07:05.533$ only found it up to 20% of patients,

NOTE Confidence: 0.853211456

01:07:05.533 --> 01:07:08.439 so it's still not a large number of patients,

NOTE Confidence: 0.853211456

 $01:07:08.440 \longrightarrow 01:07:09.752$ and there are probably.

NOTE Confidence: 0.853211456

 $01:07:09.752 \longrightarrow 01:07:10.080$ Other,

NOTE Confidence: 0.853211456

 $01{:}07{:}10.080 \longrightarrow 01{:}07{:}12.010$ either genes that haven't been

NOTE Confidence: 0.853211456

01:07:12.010 --> 01:07:13.940 discovered or or defined yet,

 $01:07:13.940 \longrightarrow 01:07:16.562$ or some other shared environmental issues

NOTE Confidence: 0.853211456

 $01:07:16.562 \longrightarrow 01:07:19.769$ that we still have to scratch away at.

NOTE Confidence: 0.853211456

 $01:07:19.770 \longrightarrow 01:07:22.443$ So here is a list of the broad familial

NOTE Confidence: 0.853211456

 $01:07:22.443 \longrightarrow 01:07:24.870$ syndromes associated with pancreatic cancer.

NOTE Confidence: 0.853211456

 $01:07:24.870 \longrightarrow 01:07:26.858$ Most of them you will hear about

NOTE Confidence: 0.853211456

01:07:26.858 --> 01:07:28.890 in some other form this evening,

NOTE Confidence: 0.853211456

 $01:07:28.890 \longrightarrow 01:07:32.274$ and we've certainly very commonly talked

NOTE Confidence: 0.853211456

01:07:32.274 --> 01:07:35.719 about bracket two and bracket one,

NOTE Confidence: 0.853211456

 $01:07:35.720 \longrightarrow 01:07:37.532$ and increasingly recognizing the

NOTE Confidence: 0.853211456

01:07:37.532 --> 01:07:41.359 importance of pal B2 as a player in

NOTE Confidence: 0.853211456

 $01{:}07{:}41.359 \dashrightarrow 01{:}07{:}43.924$ familial risk for pancreatic cancer.

NOTE Confidence: 0.853211456 01:07:43.930 --> 01:07:44.258 Also, NOTE Confidence: 0.853211456

01:07:44.258 --> 01:07:46.226 pretty girl you heard just Dr

NOTE Confidence: 0.853211456

01:07:46.226 --> 01:07:48.340 lower torque talk about hereditary

NOTE Confidence: 0.853211456

 $01:07:48.340 \longrightarrow 01:07:49.936$ nonpolyposis colon cancer.

NOTE Confidence: 0.853211456

 $01:07:49.940 \longrightarrow 01:07:52.075$ A variety of hereditary pancreatitis

 $01:07:52.075 \longrightarrow 01:07:54.210$ syndromes have been defined as

NOTE Confidence: 0.853211456

 $01{:}07{:}54.276 \dashrightarrow 01{:}07{:}56.251$ risk factors for the development

NOTE Confidence: 0.853211456

01:07:56.251 --> 01:07:58.532 of pancreatic cancer and then at

NOTE Confidence: 0.853211456

 $01:07:58.532 \longrightarrow 01:08:00.682$ P-16 has a very large or or fan FA.

NOTE Confidence: 0.853211456

 $01:08:00.682 \longrightarrow 01:08:02.680$ MM is a very large risk factor for the

NOTE Confidence: 0.853211456

 $01{:}08{:}02.738 \dashrightarrow 01{:}08{:}04.910$ development of pancreatic cancer as well.

NOTE Confidence: 0.85730927375

01:08:07.040 --> 01:08:09.880 Uhm? What we actually do for these patients,

NOTE Confidence: 0.85730927375

 $01:08:09.880 \longrightarrow 01:08:11.470$ similar to the other patients that

NOTE Confidence: 0.85730927375

 $01{:}08{:}11.470 \dashrightarrow 01{:}08{:}12.954$ we see with pancreatic cysts as

NOTE Confidence: 0.85730927375

 $01{:}08{:}12.954 \dashrightarrow 01{:}08{:}14.752$ well as now as we look a little bit

NOTE Confidence: 0.85730927375

01:08:14.752 --> 01:08:16.306 more closely at new onset diabetes,

NOTE Confidence: 0.85730927375

 $01:08:16.310 \longrightarrow 01:08:18.680$ is really kind of performed in

NOTE Confidence: 0.85730927375

 $01{:}08{:}18.680 \dashrightarrow 01{:}08{:}19.865$ a multidisciplinary approach.

NOTE Confidence: 0.85730927375

01:08:19.870 --> 01:08:22.090 Uh, currently?

NOTE Confidence: 0.85730927375

 $01:08:22.090 \longrightarrow 01:08:23.730$ The standard approach is to

01:08:23.730 --> 01:08:25.370 start with non invasive imaging,

NOTE Confidence: 0.85730927375

 $01{:}08{:}25.370 \dashrightarrow 01{:}08{:}28.858$ either a CT scan or preferably an MRI.

NOTE Confidence: 0.85730927375

 $01:08:28.860 \longrightarrow 01:08:30.040$ Depending on what is found,

NOTE Confidence: 0.85730927375

 $01:08:30.040 \longrightarrow 01:08:32.784$ then a certain subgroup of patients will

NOTE Confidence: 0.85730927375

 $01:08:32.784 \longrightarrow 01:08:35.035$ undergo an endoscopic evaluation to take

NOTE Confidence: 0.85730927375

 $01{:}08{:}35.035 \dashrightarrow 01{:}08{:}37.748$ a closer look at the pancreas to look,

NOTE Confidence: 0.85730927375

01:08:37.748 --> 01:08:39.812 particularly at SIS looking for masses

NOTE Confidence: 0.85730927375

 $01:08:39.812 \longrightarrow 01:08:42.220$ and to biopsy suspicious lesions.

NOTE Confidence: 0.85730927375

 $01{:}08{:}42.220 \longrightarrow 01{:}08{:}44.065$ And then worrisome groups of

NOTE Confidence: 0.85730927375

01:08:44.065 --> 01:08:45.910 patients will ultimately be referred

NOTE Confidence: 0.85730927375

 $01{:}08{:}45.969 \dashrightarrow 01{:}08{:}47.739$ for surgery to remove a portion

NOTE Confidence: 0.85730927375

 $01:08:47.739 \longrightarrow 01:08:49.690$ of the pancreas that is either

NOTE Confidence: 0.85730927375

 $01:08:49.690 \longrightarrow 01:08:51.904$ very concerning or does have a

NOTE Confidence: 0.85730927375

 $01:08:51.904 \longrightarrow 01:08:53.564$ documented cancer associated with it.

NOTE Confidence: 0.85730927375

 $01:08:53.564 \longrightarrow 01:08:57.106$ So this is done in a very prospective

NOTE Confidence: 0.85730927375

 $01{:}08{:}57.106 \dashrightarrow 01{:}08{:}58.909$ multidisciplinary type of approach.

 $01{:}09{:}01.060 \dashrightarrow 01{:}09{:}02.620$ These are the rules of patients

NOTE Confidence: 0.83398393777778

 $01{:}09{:}02.620 \dashrightarrow 01{:}09{:}05.397$ that we see in our current high risk

NOTE Confidence: 0.83398393777778

 $01:09:05.397 \longrightarrow 01:09:07.069$ pancreas cancer surveillance program.

NOTE Confidence: 0.833983937777778

 $01:09:07.070 \longrightarrow 01:09:09.820$ In our early detection clinic.

NOTE Confidence: 0.83398393777778

 $01:09:09.820 \longrightarrow 01:09:11.284$ I think about them in terms

NOTE Confidence: 0.833983937777778

 $01:09:11.284 \longrightarrow 01:09:12.260$ of four broad groups.

NOTE Confidence: 0.833983937777778

01:09:12.260 --> 01:09:13.364 Poutier goes, of course,

NOTE Confidence: 0.833983937777778

01:09:13.364 --> 01:09:15.517 which has a very high risk of

NOTE Confidence: 0.83398393777778

 $01{:}09{:}15.517 \dashrightarrow 01{:}09{:}16.819$ developing pancreatic cancer.

NOTE Confidence: 0.833983937777778

 $01:09:16.820 \longrightarrow 01:09:19.455$ We talked about the familial

NOTE Confidence: 0.833983937777778

 $01:09:19.455 \longrightarrow 01:09:21.035$ pancreatic cancer kindreds.

NOTE Confidence: 0.833983937777778

 $01:09:21.035 \longrightarrow 01:09:22.610$ We typically start.

NOTE Confidence: 0.833983937777778

 $01{:}09{:}22.610 \dashrightarrow 01{:}09{:}28.034$ At the age of 55 or 10 years younger than

NOTE Confidence: 0.83398393777778

01:09:28.034 --> 01:09:30.698 the youngest individual in the family,

NOTE Confidence: 0.833983937777778

 $01:09:30.700 \longrightarrow 01:09:33.844$ and it does require to have two or

01:09:33.844 --> 01:09:36.649 more members with pancreatic cancer,

NOTE Confidence: 0.83398393777778

 $01:09:36.650 \longrightarrow 01:09:38.154$ one of which is a first degree member.

NOTE Confidence: 0.833983937777778

 $01:09:38.160 \longrightarrow 01:09:40.836$ So there are some defined criteria.

NOTE Confidence: 0.833983937777778

 $01:09:40.840 \longrightarrow 01:09:42.505$ Then there are the better

NOTE Confidence: 0.83398393777778

01:09:42.505 --> 01:09:43.736 characterized individuals that, again,

NOTE Confidence: 0.833983937777778

01:09:43.736 --> 01:09:44.866 you're hearing about this evening.

NOTE Confidence: 0.83398393777778

 $01:09:44.870 \longrightarrow 01:09:48.370$ The germline mutations that have.

NOTE Confidence: 0.83398393777778

 $01:09:48.370 \longrightarrow 01:09:50.435$ But that must have at least one

NOTE Confidence: 0.83398393777778

01:09:50.435 --> 01:09:52.450 family member with pancreatic cancer,

NOTE Confidence: 0.833983937777778

 $01:09:52.450 \longrightarrow 01:09:55.264$ so there is a higher group which

NOTE Confidence: 0.83398393777778

01:09:55.264 --> 01:09:56.727 includes P16 bracket, two,

NOTE Confidence: 0.833983937777778

 $01:09:56.727 \longrightarrow 01:09:58.526$ probably 2 and now ATM is in

NOTE Confidence: 0.83398393777778

 $01:09:58.526 \longrightarrow 01:10:00.224$ that higher group and a lower

NOTE Confidence: 0.83398393777778

01:10:00.224 --> 01:10:01.904 risk group that we still study,

NOTE Confidence: 0.83398393777778

01:10:01.910 --> 01:10:04.136 which includes the Braca one population

NOTE Confidence: 0.833983937777778

 $01:10:04.136 \longrightarrow 01:10:06.859$ as well as the HNPCC population,

 $01:10:06.860 \longrightarrow 01:10:08.570$ but just just remember that for

NOTE Confidence: 0.833983937777778

01:10:08.570 --> 01:10:10.250 the majority of these patients,

NOTE Confidence: 0.83398393777778

01:10:10.250 --> 01:10:11.910 with the exception of P-16,

NOTE Confidence: 0.833983937777778

 $01:10:11.910 \longrightarrow 01:10:13.821$ it does require there to be some

NOTE Confidence: 0.833983937777778

01:10:13.821 --> 01:10:15.679 family history of pancreatic cancer,

NOTE Confidence: 0.833983937777778

 $01:10:15.680 \longrightarrow 01:10:17.940$ and then we also mentioned

NOTE Confidence: 0.83398393777778

 $01:10:17.940 \longrightarrow 01:10:18.844$ hereditary pancreatitis.

NOTE Confidence: 0.833983937777778 01:10:18.850 --> 01:10:19.178 Currently,

NOTE Confidence: 0.83398393777778

 $01:10:19.178 \longrightarrow 01:10:21.837$ as of this week we have about 205

NOTE Confidence: 0.83398393777778

 $01:10:21.837 \longrightarrow 01:10:23.622$ patients that we are actively

NOTE Confidence: 0.833983937777778

01:10:23.622 --> 01:10:26.003 managing and following in our high

NOTE Confidence: 0.833983937777778

 $01:10:26.003 \longrightarrow 01:10:27.779$ risk pancreas surveillance program.

NOTE Confidence: 0.833983937777778

 $01{:}10{:}27.780 \dashrightarrow 01{:}10{:}29.980$ And again you can see the breakdown there.

NOTE Confidence: 0.83398393777778

 $01{:}10{:}29.980 \dashrightarrow 01{:}10{:}31.765$ There's a large number that we don't

NOTE Confidence: 0.833983937777778

01:10:31.765 --> 01:10:34.010 have any sort of germline mutation status,

 $01:10:34.010 \longrightarrow 01:10:35.739$ but a fairly large number have some

NOTE Confidence: 0.83398393777778

01:10:35.739 --> 01:10:37.288 abnormality in a DNA repair gene.

NOTE Confidence: 0.866257938888889

01:10:40.140 --> 01:10:41.589 Just to kind of look at this and say,

NOTE Confidence: 0.866257938888889

 $01:10:41.590 \longrightarrow 01:10:43.270$ you know this is not as mature

NOTE Confidence: 0.866257938888889

 $01:10:43.270 \longrightarrow 01:10:45.079$ world as what you're hearing for

NOTE Confidence: 0.866257938888889

 $01:10:45.079 \longrightarrow 01:10:46.789$ colon cancer and breast cancer.

NOTE Confidence: 0.866257938888889

01:10:46.790 --> 01:10:47.946 Even for ovarian cancer,

NOTE Confidence: 0.866257938888889

 $01:10:47.946 \longrightarrow 01:10:50.332$ but it is important to say that there

NOTE Confidence: 0.866257938888889

 $01:10:50.332 \longrightarrow 01:10:52.102$ is involved data and there does

NOTE Confidence: 0.866257938888889

 $01:10:52.102 \longrightarrow 01:10:54.166$ appear to be data that says support

NOTE Confidence: 0.866257938888889

 $01{:}10{:}54.170 \dashrightarrow 01{:}10{:}56.420$ surveillance in high risk individuals.

NOTE Confidence: 0.866257938888889

 $01:10:56.420 \longrightarrow 01:10:58.904$ From the perspective of an improved

NOTE Confidence: 0.866257938888889

 $01:10:58.904 \longrightarrow 01:11:00.560$ outcome associated with those

NOTE Confidence: 0.866257938888889

 $01:11:00.628 \longrightarrow 01:11:02.260$ individuals that have cancers

NOTE Confidence: 0.866257938888889

 $01:11:02.260 \longrightarrow 01:11:05.108$ detected as part of a surveillance as

NOTE Confidence: 0.866257938888889

 $01:11:05.108 \longrightarrow 01:11:07.130$ opposed to those that just present

 $01:11:07.130 \longrightarrow 01:11:08.450$ sporadically or with symptoms.

NOTE Confidence: 0.866257938888889

 $01:11:08.450 \longrightarrow 01:11:10.100$ So at least kind of.

NOTE Confidence: 0.866257938888889

01:11:10.100 --> 01:11:13.292 Early data to support that this is a

NOTE Confidence: 0.866257938888889

01:11:13.292 --> 01:11:16.044 good strategy and does does hopefully

NOTE Confidence: 0.866257938888889

 $01:11:16.044 \longrightarrow 01:11:20.363$ will improve overall survival in this cohort.

NOTE Confidence: 0.866257938888889

01:11:20.370 --> 01:11:22.295 So I'll finish on that and just

NOTE Confidence: 0.866257938888889

01:11:22.295 --> 01:11:23.869 summarize the important point to note.

NOTE Confidence: 0.866257938888889

 $01:11:23.870 \longrightarrow 01:11:26.438$ Is that right now we still don't have

NOTE Confidence: 0.866257938888889

 $01:11:26.440 \longrightarrow 01:11:30.010$ don't recommend general population screening.

NOTE Confidence: 0.866257938888889

 $01:11:30.010 \longrightarrow 01:11:31.682$ But it is an area that's being worked

NOTE Confidence: 0.866257938888889

 $01:11:31.682 \longrightarrow 01:11:33.248$ on and there are certain blood

NOTE Confidence: 0.866257938888889

 $01:11:33.248 \longrightarrow 01:11:34.623$ tests that are either available

NOTE Confidence: 0.866257938888889

 $01:11:34.623 \longrightarrow 01:11:36.140$ or coming down the pipeline.

NOTE Confidence: 0.866257938888889

 $01:11:36.140 \longrightarrow 01:11:39.170$ Trying to address this particular issue.

NOTE Confidence: 0.866257938888889

01:11:39.170 --> 01:11:41.162 For pancreatic cancer,

01:11:41.162 --> 01:11:44.005 it's now considered standard of

NOTE Confidence: 0.866257938888889

 $01:11:44.005 \longrightarrow 01:11:46.530$ care for the appropriate indication.

NOTE Confidence: 0.866257938888889

 $01:11:46.530 \longrightarrow 01:11:48.602$ Although we have a variety of research

NOTE Confidence: 0.866257938888889

 $01:11:48.602 \longrightarrow 01:11:50.482$ studies that are open that follow

NOTE Confidence: 0.866257938888889

01:11:50.482 --> 01:11:52.354 this group of patients that involve

NOTE Confidence: 0.866257938888889

01:11:52.354 --> 01:11:55.055 again combinations of imaging with MRI

NOTE Confidence: 0.866257938888889

 $01:11:55.055 \longrightarrow 01:11:58.680$ or endoscopic ultrasound overtime.

NOTE Confidence: 0.866257938888889

 $01:11:58.680 \longrightarrow 01:12:00.020$ We talked about pancreatic cysts

NOTE Confidence: 0.866257938888889

 $01:12:00.020 \longrightarrow 01:12:01.360$ as another high risk group,

NOTE Confidence: 0.866257938888889

01:12:01.360 --> 01:12:03.460 and it's a big volume issue,

NOTE Confidence: 0.866257938888889

 $01{:}12{:}03.460 \dashrightarrow 01{:}12{:}05.315$ and we've opened a study the ekach

NOTE Confidence: 0.866257938888889

01:12:05.315 --> 01:12:07.748 two and eight five study here at Yale

NOTE Confidence: 0.866257938888889

 $01:12:07.748 \longrightarrow 01:12:09.323$ to actually study this particular

NOTE Confidence: 0.866257938888889

01:12:09.385 --> 01:12:11.893 group in terms of surveillance and

NOTE Confidence: 0.866257938888889

 $01:12:11.893 \longrightarrow 01:12:13.147$ different surveillance protocols.

NOTE Confidence: 0.866257938888889

 $01:12:13.150 \longrightarrow 01:12:15.462$ And I would advise you just to keep

 $01:12:15.462 \longrightarrow 01:12:18.178$ your eye on the diabetes space for

NOTE Confidence: 0.866257938888889

 $01{:}12{:}18.178 \dashrightarrow 01{:}12{:}20.248$ this particularly new onset diabetes.

NOTE Confidence: 0.866257938888889

01:12:20.250 --> 01:12:21.678 And maybe we'll be looking at

NOTE Confidence: 0.866257938888889

01:12:21.678 --> 01:12:23.030 combining all these risk factors,

NOTE Confidence: 0.866257938888889

01:12:23.030 --> 01:12:25.194 be it family history,

NOTE Confidence: 0.866257938888889

01:12:25.194 --> 01:12:26.276 pancreatic cyst,

NOTE Confidence: 0.866257938888889

 $01:12:26.280 \longrightarrow 01:12:29.234$ as well as their blood sugar levels.

NOTE Confidence: 0.866257938888889

 $01{:}12{:}29.240 \dashrightarrow 01{:}12{:}31.872$ I'll also just give a plug for our

NOTE Confidence: 0.866257938888889

 $01{:}12{:}31.872 \dashrightarrow 01{:}12{:}33.377$ pancreatic cancer early detection

NOTE Confidence: 0.866257938888889

 $01{:}12{:}33.377 \dashrightarrow 01{:}12{:}35.729$ clinic that is based with Doctor

NOTE Confidence: 0.866257938888889

01:12:35.729 --> 01:12:38.158 Laura's group at the St Rayfield campus

NOTE Confidence: 0.866257938888889

 $01:12:38.160 \longrightarrow 01:12:40.116$ and my contact information is there.

NOTE Confidence: 0.866257938888889

 $01:12:40.120 \longrightarrow 01:12:41.698$ If any body has any specific questions

NOTE Confidence: 0.866257938888889

 $01:12:41.698 \longrightarrow 01:12:43.150$ for us over time, thank you.

NOTE Confidence: 0.863016425

01:12:46.640 --> 01:12:48.782 Great, thank you so much Doctor Farrell

 $01:12:48.782 \longrightarrow 01:12:51.190$ up in the interest of time will

NOTE Confidence: 0.863016425

 $01:12:51.190 \longrightarrow 01:12:53.326$ quickly move over to Doctor Ratner.

NOTE Confidence: 0.863016425

 $01:12:53.330 \longrightarrow 01:12:56.186$ UM Elena Ratner is a board certified

NOTE Confidence: 0.863016425

01:12:56.186 --> 01:12:57.410 gynecological oncologist with

NOTE Confidence: 0.863016425

01:12:57.478 --> 01:12:59.562 special interest in chemotherapy

NOTE Confidence: 0.863016425

01:12:59.562 --> 01:13:01.125 targeted drug development,

NOTE Confidence: 0.863016425

01:13:01.130 --> 01:13:02.940 patient quality of life programs,

NOTE Confidence: 0.863016425

01:13:02.940 --> 01:13:04.416 and early cancer detection,

NOTE Confidence: 0.863016425

 $01{:}13{:}04.416 \dashrightarrow 01{:}13{:}07.052$ she's the director of the discovery to

NOTE Confidence: 0.863016425

 $01:13:07.052 \longrightarrow 01:13:08.867$ cure early ovarian cancer detection

NOTE Confidence: 0.863016425

01:13:08.867 --> 01:13:11.200 program and founder and director of

NOTE Confidence: 0.863016425

 $01:13:11.200 \longrightarrow 01:13:13.250$ the Sexuality Intimacy and Menopause.

NOTE Confidence: 0.863016425

 $01:13:13.250 \longrightarrow 01:13:14.945$ Cancer survivorship program

NOTE Confidence: 0.863016425

 $01:13:14.945 \longrightarrow 01:13:16.640$ welcome Doctor Ratner.

NOTE Confidence: 0.863016425

01:13:16.640 --> 01:13:17.690 Thank you for joining us.

NOTE Confidence: 0.916921888

 $01:13:18.500 \longrightarrow 01:13:20.190$ Thank you so much Claire.

 $01:13:20.190 \longrightarrow 01:13:22.409$ It is so great to be here.

NOTE Confidence: 0.916921888

01:13:22.410 --> 01:13:24.600 I'm going to share my screen.

NOTE Confidence: 0.916921888

 $01:13:24.600 \longrightarrow 01:13:26.550$ Bear with me. This is frequently

NOTE Confidence: 0.916921888

01:13:26.550 --> 01:13:28.950 my Achilles heel. Uhm?

NOTE Confidence: 0.908272

01:13:34.370 --> 01:13:37.594 OK. Oh, this actually seems to have worked.

NOTE Confidence: 0.840947530769231

 $01:13:37.600 \longrightarrow 01:13:40.904$ This is lovely, so I had the

NOTE Confidence: 0.840947530769231

01:13:40.904 --> 01:13:43.630 privilege today to speak to you

NOTE Confidence: 0.840947530769231

 $01:13:43.630 \longrightarrow 01:13:50.686$ about UM yet another component of.

NOTE Confidence: 0.840947530769231

 $01{:}13{:}50.690 \dashrightarrow 01{:}13{:}52.990$ The screening and early detection

NOTE Confidence: 0.840947530769231

 $01:13:52.990 \longrightarrow 01:13:56.147$ in patients who we consider to be

NOTE Confidence: 0.840947530769231

01:13:56.147 --> 01:13:58.469 at high risk for different cancers,

NOTE Confidence: 0.840947530769231

 $01:13:58.470 \longrightarrow 01:13:59.530$ hereditary cancers,

NOTE Confidence: 0.840947530769231

 $01{:}13{:}59.530 \dashrightarrow 01{:}14{:}02.180$ and that being ovarian cancer.

NOTE Confidence: 0.813414463636364

 $01:14:04.550 \longrightarrow 01:14:06.454$ Once. Here we go.

NOTE Confidence: 0.813414463636364

 $01:14:06.454 \longrightarrow 01:14:09.950$ So the premise of this that many,

 $01:14:09.950 \longrightarrow 01:14:12.729$ many have now spoken before me is

NOTE Confidence: 0.813414463636364

 $01:14:12.729 \longrightarrow 01:14:14.927$ this the driving hypothesis that

NOTE Confidence: 0.813414463636364

01:14:14.927 --> 01:14:17.693 many patients may be at increased

NOTE Confidence: 0.813414463636364

 $01:14:17.693 \longrightarrow 01:14:20.244$ risk for several cancers based

NOTE Confidence: 0.813414463636364

01:14:20.244 --> 01:14:22.824 on personal or family history,

NOTE Confidence: 0.813414463636364

01:14:22.830 --> 01:14:25.194 genetic status, personal history,

NOTE Confidence: 0.813414463636364

01:14:25.194 --> 01:14:26.967 but typical hyperplasia,

NOTE Confidence: 0.813414463636364

 $01:14:26.970 \longrightarrow 01:14:28.955$ and it's so important because

NOTE Confidence: 0.813414463636364

 $01:14:28.955 \longrightarrow 01:14:31.452$ so much in our current culture

NOTE Confidence: 0.813414463636364

 $01:14:31.452 \longrightarrow 01:14:34.008$ is becoming not about you know.

NOTE Confidence: 0.813414463636364

01:14:34.010 --> 01:14:35.000 Especially you know.

NOTE Confidence: 0.813414463636364

01:14:35.000 --> 01:14:36.320 In, particularly in cancer,

NOTE Confidence: 0.813414463636364

 $01:14:36.320 \longrightarrow 01:14:38.056$ you know the conversation now is really.

NOTE Confidence: 0.813414463636364

 $01:14:38.060 \longrightarrow 01:14:40.376$ No longer about what do we

NOTE Confidence: 0.813414463636364

01:14:40.376 --> 01:14:41.920 do to curing cancer,

NOTE Confidence: 0.813414463636364

 $01:14:41.920 \longrightarrow 01:14:44.230$ and it's not even as much

 $01:14:44.230 \longrightarrow 01:14:46.286$ about early detection as those

NOTE Confidence: 0.813414463636364

 $01:14:46.286 \longrightarrow 01:14:48.466$ two had been so challenging.

NOTE Confidence: 0.813414463636364

01:14:48.470 --> 01:14:50.705 A lot of conversations currently

NOTE Confidence: 0.813414463636364

 $01:14:50.705 \longrightarrow 01:14:52.493$ are about cancer prevention,

NOTE Confidence: 0.813414463636364

 $01:14:52.500 \longrightarrow 01:14:55.160$ so that is why this risk assessment

NOTE Confidence: 0.813414463636364

 $01:14:55.160 \longrightarrow 01:14:57.880$ is so important because there are

NOTE Confidence: 0.813414463636364

 $01:14:57.880 \longrightarrow 01:15:00.380$ options for either surveillance or

NOTE Confidence: 0.813414463636364

 $01:15:00.380 \longrightarrow 01:15:03.009$ risk reduction for these patients

NOTE Confidence: 0.813414463636364

 $01:15:03.009 \longrightarrow 01:15:05.724$ and for their family members.

NOTE Confidence: 0.813414463636364 01:15:05.730 --> 01:15:06.039 Uhm,

NOTE Confidence: 0.813414463636364

 $01{:}15{:}06.039 \dashrightarrow 01{:}15{:}07.584$ and management of these patients

NOTE Confidence: 0.813414463636364

 $01:15:07.584 \longrightarrow 01:15:10.212$ up to now has been there very much

NOTE Confidence: 0.813414463636364

01:15:10.212 --> 01:15:12.210 piece meal by variety of providers

NOTE Confidence: 0.813414463636364

 $01:15:12.273 \longrightarrow 01:15:14.085$ in several groups and this is,

NOTE Confidence: 0.813414463636364 01:15:14.090 --> 01:15:14.640 you know, NOTE Confidence: 0.813414463636364 $01:15:14.640 \longrightarrow 01:15:16.565$ they might kind of my passion again.

NOTE Confidence: 0.813414463636364

 $01:15:16.570 \longrightarrow 01:15:17.358$ In particular,

NOTE Confidence: 0.813414463636364

01:15:17.358 --> 01:15:20.116 brain cancer is that the signs and

NOTE Confidence: 0.813414463636364

01:15:20.116 --> 01:15:22.347 symptoms of being cancer so unique,

NOTE Confidence: 0.813414463636364

 $01:15:22.350 \longrightarrow 01:15:24.684$ but also still make that patients

NOTE Confidence: 0.813414463636364

01:15:24.684 --> 01:15:27.066 they frequently get seen by different

NOTE Confidence: 0.813414463636364

 $01:15:27.066 \longrightarrow 01:15:29.322$ providers who do great job ruling

NOTE Confidence: 0.813414463636364

 $01:15:29.322 \longrightarrow 01:15:31.689$ out there 'cause of the symptoms.

NOTE Confidence: 0.813414463636364

 $01:15:31.690 \longrightarrow 01:15:34.546$ But do not connect the pieces to

NOTE Confidence: 0.813414463636364

 $01:15:34.550 \longrightarrow 01:15:36.390$ appreciate that these signs and

NOTE Confidence: 0.813414463636364

 $01{:}15{:}36.390 \dashrightarrow 01{:}15{:}37.740$ symptoms will vary in cancer.

NOTE Confidence: 0.813414463636364

01:15:37.740 --> 01:15:39.406 And that is why it's so important

NOTE Confidence: 0.813414463636364

 $01:15:39.406 \longrightarrow 01:15:41.497$ that we come up with a comprehensive

NOTE Confidence: 0.813414463636364

 $01:15:41.497 \longrightarrow 01:15:43.250$ approach to this patient population.

NOTE Confidence: 0.7436802925

 $01:15:45.500 \longrightarrow 01:15:47.300$ So here is a cancer is as clear,

NOTE Confidence: 0.7436802925

 $01:15:47.300 \longrightarrow 01:15:49.830$ discussed 10% of all cancers,

 $01:15:49.830 \longrightarrow 01:15:52.286$ probably higher than that.

NOTE Confidence: 0.7436802925

 $01{:}15{:}52.286 \to 01{:}15{:}55.530$ Mutations within a single data jeans.

NOTE Confidence: 0.7436802925

01:15:55.530 --> 01:15:57.178 But of course, again,

NOTE Confidence: 0.7436802925

01:15:57.178 --> 01:15:59.238 Astaire discussed whole exome sequencing.

NOTE Confidence: 0.7436802925

 $01{:}15{:}59.240 \dashrightarrow 01{:}16{:}00.780$ Our understanding of cancer

NOTE Confidence: 0.7436802925

01:16:00.780 --> 01:16:02.705 genetics is about to change,

NOTE Confidence: 0.7436802925

 $01:16:02.710 \longrightarrow 01:16:05.447$ and this percentage is going to grow.

NOTE Confidence: 0.7436802925

01:16:05.450 --> 01:16:06.641 In my population,

NOTE Confidence: 0.7436802925

 $01:16:06.641 \longrightarrow 01:16:09.420$ the risk factors that we look at

NOTE Confidence: 0.7436802925

01:16:09.504 --> 01:16:11.808 early age of onset of cancer,

NOTE Confidence: 0.7436802925

01:16:11.810 --> 01:16:13.550 multiple affected family members

NOTE Confidence: 0.7436802925

 $01:16:13.550 \longrightarrow 01:16:16.160$ related cancers in their family and

NOTE Confidence: 0.7436802925

 $01{:}16{:}16{:}224 \dashrightarrow 01{:}16{:}18{.}548$ again in the world of ovarian cancer

NOTE Confidence: 0.7436802925

 $01:16:18.548 \longrightarrow 01:16:20.867$ is so important that we don't forget

NOTE Confidence: 0.7436802925

 $01:16:20.867 \longrightarrow 01:16:23.123$ that it's not only women and it's

 $01:16:23.123 \longrightarrow 01:16:25.361$ not only over impressed that there's

NOTE Confidence: 0.7436802925

 $01{:}16{:}25.361 \dashrightarrow 01{:}16{:}27.020$ many other associated cancers,

NOTE Confidence: 0.7436802925

01:16:27.020 --> 01:16:28.588 such as pancreatic cancer,

NOTE Confidence: 0.7436802925

01:16:28.588 --> 01:16:30.548 that apparel just so beautifully

NOTE Confidence: 0.7436802925

 $01:16:30.548 \longrightarrow 01:16:32.473$ talked about such as Melanoma,

NOTE Confidence: 0.7436802925

01:16:32.473 --> 01:16:34.819 such as prostate cancer in males

NOTE Confidence: 0.7436802925

 $01:16:34.819 \longrightarrow 01:16:37.322$ and for us in in the in, the female.

NOTE Confidence: 0.7436802925

 $01:16:37.322 \longrightarrow 01:16:39.098$ Only feels it's always very important

NOTE Confidence: 0.7436802925

 $01{:}16{:}39.098 \to 01{:}16{:}41.250$ to remind the patients that when I'm

NOTE Confidence: 0.7436802925

 $01:16:41.250 \longrightarrow 01:16:42.755$ asking them about family history,

NOTE Confidence: 0.7436802925

 $01:16:42.760 \longrightarrow 01:16:44.518$ I'm not just asking about their

NOTE Confidence: 0.7436802925

 $01{:}16{:}44.518 \dashrightarrow 01{:}16{:}45.690$ mom or their grandmother.

NOTE Confidence: 0.7436802925

01:16:45.690 --> 01:16:47.860 I'm also asking about the

NOTE Confidence: 0.7436802925

 $01:16:47.860 \longrightarrow 01:16:49.596$ paternal line as well.

NOTE Confidence: 0.7436802925

01:16:49.600 --> 01:16:51.056 Multiple primaries,

NOTE Confidence: 0.7436802925

 $01:16:51.056 \longrightarrow 01:16:53.240$ male breast cancer,

01:16:53.240 --> 01:16:53.946 Jewish ancestry,

NOTE Confidence: 0.7436802925

 $01:16:53.946 \longrightarrow 01:16:56.417$ and then the subtype of the

NOTE Confidence: 0.7436802925

 $01:16:56.417 \longrightarrow 01:16:58.228$ ovarian cancer that they have.

NOTE Confidence: 0.9626932

01:17:00.460 --> 01:17:02.220 So I won't go into this,

NOTE Confidence: 0.9626932

 $01:17:02.220 \longrightarrow 01:17:03.557$ but we already heard so much about

NOTE Confidence: 0.9626932

 $01:17:03.557 \longrightarrow 01:17:06.680$ that today, so there's a one BRCA

NOTE Confidence: 0.9626932

 $01:17:06.680 \longrightarrow 01:17:08.820$ 2 increase the risk of breast,

NOTE Confidence: 0.9626932

01:17:08.820 --> 01:17:10.800 ovarian, prostate, and NBRC.

NOTE Confidence: 0.9626932

01:17:10.800 --> 01:17:13.275 2 increase risk of breast,

NOTE Confidence: 0.9626932

01:17:13.280 --> 01:17:15.228 ovarian, prostate in men,

NOTE Confidence: 0.9626932

 $01{:}17{:}15.228 {\:\raisebox{--}{\text{--}}}{\:\raisebox{--}{\text{--}}}{\:\raisebox{--}{\text{--}}} 01{:}17{:}17.663$ as well as pancreatic cancer

NOTE Confidence: 0.9626932

 $01:17:17.663 \longrightarrow 01:17:19.830$ and male breast cancer.

NOTE Confidence: 0.9626932

 $01{:}17{:}19.830 \dashrightarrow 01{:}17{:}22.482$ The these genes increase the risk

NOTE Confidence: 0.9626932

01:17:22.482 --> 01:17:24.250 of cancer space substantially,

NOTE Confidence: 0.9626932

 $01:17:24.250 \longrightarrow 01:17:25.447$ so breast cancer,

01:17:25.447 --> 01:17:28.240 being the most common as high as

NOTE Confidence: 0.9626932

 $01:17:28.240 \longrightarrow 01:17:32.100$ 85% black 180% bracket two and

NOTE Confidence: 0.9626932

 $01:17:32.100 \longrightarrow 01:17:34.998$ then as high as 60% for Brock and

NOTE Confidence: 0.9626932

01:17:34.998 --> 01:17:37.210 one for the risk of varying cancer

NOTE Confidence: 0.9626932

 $01:17:37.283 \longrightarrow 01:17:39.594$ and as high as 40% for bracket.

NOTE Confidence: 0.9626932

 $01:17:39.594 \longrightarrow 01:17:43.820$ Two in in ovarian cancer in bracket 2.

NOTE Confidence: 0.810510846666667

 $01{:}17{:}50.410 \dashrightarrow 01{:}17{:}52.106$ And the estimated lifetime

NOTE Confidence: 0.810510846666667

01:17:52.106 --> 01:17:54.226 cancer risks of other cancers,

NOTE Confidence: 0.810510846666667

 $01{:}17{:}54.230 \dashrightarrow 01{:}17{:}55.560$ such as pancreatic and prostate.

NOTE Confidence: 0.810510846666667

01:17:55.560 --> 01:17:57.107 Male breasts, are also, as you know,

NOTE Confidence: 0.810510846666667

 $01{:}17{:}57.110 \dashrightarrow 01{:}18{:}00.200$ increased with again as high as

NOTE Confidence: 0.810510846666667

 $01:18:00.200 \longrightarrow 01:18:03.290$ doubling for prostate cancer increasing.

NOTE Confidence: 0.810510846666667

 $01:18:03.290 \longrightarrow 01:18:04.746$ Again, it's like apparel,

NOTE Confidence: 0.810510846666667

 $01:18:04.746 \longrightarrow 01:18:05.838$ just talked about,

NOTE Confidence: 0.810510846666667

 $01:18:05.840 \dashrightarrow 01:18:10.550$ and then five to 10% in male breast cancer.

NOTE Confidence: 0.810510846666667

 $01:18:10.550 \longrightarrow 01:18:12.412$ So I'm going to jump into the

01:18:12.412 --> 01:18:13.570 garage cancers because again,

NOTE Confidence: 0.810510846666667

 $01:18:13.570 \longrightarrow 01:18:15.922$ you have heard so much already about other

NOTE Confidence: 0.810510846666667

 $01:18:15.922 \longrightarrow 01:18:18.259$ cancers and risk for the genetic mutations.

NOTE Confidence: 0.810510846666667

01:18:18.260 --> 01:18:20.045 So I will talk about ovarian cancer.

NOTE Confidence: 0.810510846666667

01:18:20.050 --> 01:18:21.820 Ovarian cancer is not the most

NOTE Confidence: 0.810510846666667

01:18:21.820 --> 01:18:23.430 common kind of classical agency.

NOTE Confidence: 0.810510846666667

01:18:23.430 --> 01:18:25.100 The most common cause malignancy

NOTE Confidence: 0.810510846666667

 $01:18:25.100 \longrightarrow 01:18:26.436$ is the uterine cancer,

NOTE Confidence: 0.810510846666667

 $01:18:26.440 \longrightarrow 01:18:28.966$ but it's by far the deadliest.

NOTE Confidence: 0.810510846666667

 $01:18:28.970 \longrightarrow 01:18:31.473$ There's 22,000 cases they

NOTE Confidence: 0.810510846666667

01:18:31.473 --> 01:18:32.997 get diagnosed every year,

NOTE Confidence: 0.810510846666667

 $01:18:33.000 \longrightarrow 01:18:36.756$ and 15,000 women die every year.

NOTE Confidence: 0.810510846666667

01:18:36.760 --> 01:18:39.190 So as much as much as we have tried,

NOTE Confidence: 0.810510846666667

01:18:39.190 --> 01:18:41.600 you know this is not for the lack of trying.

NOTE Confidence: 0.810510846666667

 $01:18:41.600 \longrightarrow 01:18:43.231$ A lot of research has got in

 $01:18:43.231 \longrightarrow 01:18:45.140$ to be in cancer management.

NOTE Confidence: 0.810510846666667

 $01:18:45.140 \longrightarrow 01:18:47.625$ A lot of research has gone into

NOTE Confidence: 0.810510846666667

01:18:47.630 --> 01:18:51.982 chemotherapy regimens and resistance,

NOTE Confidence: 0.810510846666667

01:18:51.982 --> 01:18:54.620 chemotherapy resistance regiments,

NOTE Confidence: 0.810510846666667

 $01:18:54.620 \longrightarrow 01:18:58.760$ and we've done so much research and so much

NOTE Confidence: 0.810510846666667

 $01:18:58.846 \longrightarrow 01:19:02.506$ advancement and surgical cancer management.

NOTE Confidence: 0.810510846666667

 $01:19:02.510 \dashrightarrow 01:19:04.316$ You know I can now do surgeries.

NOTE Confidence: 0.810510846666667

 $01:19:04.320 \longrightarrow 01:19:05.331$ Laparoscopic Lee where

NOTE Confidence: 0.810510846666667

01:19:05.331 --> 01:19:07.016 women go home same day.

NOTE Confidence: 0.810510846666667

01:19:07.020 --> 01:19:09.324 Where in the past you know five years back

NOTE Confidence: 0.810510846666667

 $01:19:09.324 \longrightarrow 01:19:11.615$ women will help would have a huge incision.

NOTE Confidence: 0.810510846666667

01:19:11.620 --> 01:19:13.237 On their bellies, and would stay in

NOTE Confidence: 0.810510846666667

 $01:19:13.237 \longrightarrow 01:19:14.479$ the hospital longer than a week.

NOTE Confidence: 0.810510846666667

 $01:19:14.480 \longrightarrow 01:19:16.993$ So so the field is moving and

NOTE Confidence: 0.810510846666667

01:19:16.993 --> 01:19:19.319 things have have been done,

NOTE Confidence: 0.810510846666667

 $01:19:19.320 \longrightarrow 01:19:22.064$ but sadly it has not moved the

01:19:22.064 --> 01:19:23.980 mortality of this disease,

NOTE Confidence: 0.810510846666667

 $01:19:23.980 \longrightarrow 01:19:25.564$ and that is unacceptable.

NOTE Confidence: 0.810510846666667

 $01:19:25.564 \longrightarrow 01:19:28.472$ The big part of this challenge in

NOTE Confidence: 0.810510846666667

01:19:28.472 --> 01:19:31.226 improvement in mortality is again the

NOTE Confidence: 0.810510846666667

01:19:31.226 --> 01:19:33.388 staff that unfortunately this cancer

NOTE Confidence: 0.810510846666667

 $01:19:33.388 \longrightarrow 01:19:36.504$ is continue to be diagnosed at a later stage.

NOTE Confidence: 0.810510846666667

01:19:36.504 --> 01:19:38.492 I will talk a little bit about

NOTE Confidence: 0.810510846666667

 $01:19:38.492 \longrightarrow 01:19:40.184$ difficulty of this and why this

NOTE Confidence: 0.810510846666667

 $01{:}19{:}40.184 \dashrightarrow 01{:}19{:}42.180$ cancer is diagnosed at a later stage.

NOTE Confidence: 0.810510846666667

 $01:19:42.180 \longrightarrow 01:19:45.246$ But most cancers are still a diagnosis.

NOTE Confidence: 0.810510846666667

01:19:45.250 --> 01:19:46.990 Stage three and stage four,

NOTE Confidence: 0.810510846666667

 $01:19:46.990 \longrightarrow 01:19:48.870$ and the difference in survival

NOTE Confidence: 0.810510846666667

 $01{:}19{:}48.870 \dashrightarrow 01{:}19{:}50.750$ between the woman who's diagnosed

NOTE Confidence: 0.810510846666667

 $01:19:50.815 \longrightarrow 01:19:52.579$ with stage one is life saving.

NOTE Confidence: 0.810510846666667

 $01:19:52.580 \longrightarrow 01:19:54.668$ You know somebody who's like those

01:19:54.668 --> 01:19:57.216 to stage one has 92 to 95% chance

NOTE Confidence: 0.810510846666667

 $01{:}19{:}57.216 \dashrightarrow 01{:}19{:}59.424$ of survival versus only as low

NOTE Confidence: 0.810510846666667

 $01:19:59.424 \longrightarrow 01:20:01.104$ as 20% in advance stages.

NOTE Confidence: 0.810510846666667

 $01:20:01.104 \longrightarrow 01:20:04.363$ That is why it is so important for us

NOTE Confidence: 0.810510846666667

01:20:04.363 --> 01:20:07.226 to try to detect these cancers early,

NOTE Confidence: 0.810510846666667

01:20:07.230 --> 01:20:10.494 but more importantly, to try to prevent them.

NOTE Confidence: 0.810510846666667

 $01:20:10.500 \longrightarrow 01:20:12.190$ So part of the challenge.

NOTE Confidence: 0.810510846666667

01:20:12.190 --> 01:20:14.122 Are this limitation is that we have

NOTE Confidence: 0.810510846666667

 $01:20:14.122 \longrightarrow 01:20:15.785$ always been told we have always

NOTE Confidence: 0.810510846666667

 $01:20:15.785 \longrightarrow 01:20:17.345$ said there are varying cancer is

NOTE Confidence: 0.810510846666667

 $01{:}20{:}17.345 \dashrightarrow 01{:}20{:}19.412$ a disease that whispers, you know,

NOTE Confidence: 0.810510846666667

 $01{:}20{:}19.412 \to 01{:}20{:}21.222$ for generations we were told, you know,

NOTE Confidence: 0.810510846666667

 $01:20:21.222 \longrightarrow 01:20:22.278$ there's just nothing you can do.

NOTE Confidence: 0.810510846666667

01:20:22.280 --> 01:20:23.988 You can never find these cancers early.

NOTE Confidence: 0.810510846666667

 $01:20:23.990 \longrightarrow 01:20:26.120$ They are always like this.

NOTE Confidence: 0.810510846666667

 $01{:}20{:}26.120 \dashrightarrow 01{:}20{:}28.106$ There's no symptoms until the disease

01:20:28.106 --> 01:20:30.129 and stage three and stage four,

NOTE Confidence: 0.810510846666667

 $01{:}20{:}30.130 \dashrightarrow 01{:}20{:}31.677$ so there's really nothing that we as

NOTE Confidence: 0.810510846666667

 $01:20:31.677 \longrightarrow 01:20:33.356$ a field can do to make it better.

NOTE Confidence: 0.810510846666667

 $01:20:33.360 \longrightarrow 01:20:35.496$ But we know that it is very much

NOTE Confidence: 0.810510846666667

 $01:20:35.496 \longrightarrow 01:20:36.440$ not the case.

NOTE Confidence: 0.810510846666667

 $01:20:36.440 \longrightarrow 01:20:38.768$ We now know that ovarian cancer

NOTE Confidence: 0.810510846666667

01:20:38.768 --> 01:20:39.932 doesn't necessarily whisper,

NOTE Confidence: 0.810510846666667

 $01:20:39.940 \longrightarrow 01:20:42.194$ it's really that a lot of people

NOTE Confidence: 0.810510846666667

 $01:20:42.194 \longrightarrow 01:20:43.619$ are not listening to it.

NOTE Confidence: 0.810510846666667

 $01:20:43.620 \longrightarrow 01:20:46.224$ And that has to do with awareness

NOTE Confidence: 0.810510846666667

 $01:20:46.224 \longrightarrow 01:20:47.340$ on the patients

NOTE Confidence: 0.934914226666667

 $01:20:47.425 \longrightarrow 01:20:48.489$ patient sides.

NOTE Confidence: 0.934914226666667

 $01{:}20{:}48.490 \dashrightarrow 01{:}20{:}49.740$ The vagueness of the symptoms,

NOTE Confidence: 0.934914226666667

 $01:20:49.740 \longrightarrow 01:20:52.420$ but also some limitations on

NOTE Confidence: 0.934914226666667

 $01:20:52.420 \longrightarrow 01:20:55.100$ the provider side as well.

 $01:20:55.100 \longrightarrow 01:20:57.375$ So some very good studies came out.

NOTE Confidence: 0.934914226666667

01:20:57.380 --> 01:20:59.284 This is one of the Seminole ones

NOTE Confidence: 0.934914226666667

01:20:59.284 --> 01:21:01.243 by Barbara Golf from Seattle that

NOTE Confidence: 0.934914226666667

 $01:21:01.243 \longrightarrow 01:21:03.053$ talked about that ovarian cancer

NOTE Confidence: 0.934914226666667

01:21:03.053 --> 01:21:05.199 presents with these specific symptoms,

NOTE Confidence: 0.934914226666667

01:21:05.200 --> 01:21:07.200 abdominal discomfort, GI discomfort,

NOTE Confidence: 0.934914226666667

01:21:07.200 --> 01:21:09.389 pain, constitutional, urine, pelvic,

NOTE Confidence: 0.934914226666667

 $01:21:09.389 \longrightarrow 01:21:12.767$ and even though great majority of

NOTE Confidence: 0.934914226666667

 $01:21:12.767 \longrightarrow 01:21:15.621$ them in stage three and four that

NOTE Confidence: 0.934914226666667

 $01:21:15.621 \longrightarrow 01:21:17.868$ that is 7% of patients in stage

NOTE Confidence: 0.934914226666667

 $01{:}21{:}17.868 \dashrightarrow 01{:}21{:}20.119$ three and four had the symptoms,

NOTE Confidence: 0.934914226666667

 $01:21:20.120 \longrightarrow 01:21:22.276$ 89% of women in stage one and

NOTE Confidence: 0.934914226666667

 $01:21:22.276 \longrightarrow 01:21:24.500$ two had those symptoms as well.

NOTE Confidence: 0.934914226666667

 $01:21:24.500 \longrightarrow 01:21:26.270$ And this study kind of debunked.

NOTE Confidence: 0.934914226666667

 $01:21:26.270 \longrightarrow 01:21:28.178$ This whole concept that we had.

NOTE Confidence: 0.934914226666667

 $01:21:28.180 \longrightarrow 01:21:30.676$ Talked about this so long before that the

01:21:30.676 --> 01:21:33.355 women in the early stage had no symptoms.

NOTE Confidence: 0.934914226666667

01:21:33.360 --> 01:21:34.034 Barbara Gold,

NOTE Confidence: 0.934914226666667

 $01:21:34.034 \longrightarrow 01:21:36.056$ they clearly kind of looked into

NOTE Confidence: 0.934914226666667

 $01:21:36.056 \longrightarrow 01:21:38.578$ who who are the patients who ended

NOTE Confidence: 0.934914226666667

 $01:21:38.578 \longrightarrow 01:21:40.358$ up having this ovarian cancer.

NOTE Confidence: 0.934914226666667

01:21:40.360 --> 01:21:40.876 Because, honestly,

NOTE Confidence: 0.934914226666667

01:21:40.876 --> 01:21:42.940 like any of us looking at the symptoms,

NOTE Confidence: 0.934914226666667

 $01:21:42.940 \longrightarrow 01:21:44.752$ it looks very concerning because all

NOTE Confidence: 0.934914226666667

 $01{:}21{:}44.752 \dashrightarrow 01{:}21{:}47.186$ of us experience these symptoms and but

NOTE Confidence: 0.934914226666667

 $01{:}21{:}47.186 \dashrightarrow 01{:}21{:}49.454$ she very much created this assessment.

NOTE Confidence: 0.934914226666667

 $01:21:49.460 \longrightarrow 01:21:51.672$ Risk assessment for women and for the

NOTE Confidence: 0.934914226666667

01:21:51.672 --> 01:21:53.759 women who actually had ovarian cancer.

NOTE Confidence: 0.934914226666667

 $01{:}21{:}53.760 \dashrightarrow 01{:}21{:}58.310$ This woman had it consistently.

NOTE Confidence: 0.934914226666667

 $01:21:58.310 \longrightarrow 01:22:01.698$ Once every single day for two weeks

NOTE Confidence: 0.934914226666667

01:22:01.700 --> 01:22:04.248 compared to women who had them every

01:22:04.248 --> 01:22:07.357 two to two to three times per month,

NOTE Confidence: 0.934914226666667

 $01:22:07.360 \longrightarrow 01:22:09.850$ and often associated either with

NOTE Confidence: 0.934914226666667

01:22:09.850 --> 01:22:12.340 population or their menstrual cycles.

NOTE Confidence: 0.934914226666667

01:22:12.340 --> 01:22:12.667 Also,

NOTE Confidence: 0.934914226666667

01:22:12.667 --> 01:22:14.302 having more than one symptom

NOTE Confidence: 0.934914226666667

 $01:22:14.302 \longrightarrow 01:22:16.016$ was much more associated with

NOTE Confidence: 0.934914226666667

 $01:22:16.016 \longrightarrow 01:22:17.726$ ovarian cancer than those women.

NOTE Confidence: 0.934914226666667

01:22:17.730 --> 01:22:20.280 They just had hormonal changes,

NOTE Confidence: 0.934914226666667

 $01:22:20.280 \longrightarrow 01:22:22.269$ so this very much with Samuel study in this,

NOTE Confidence: 0.934914226666667

01:22:22.270 --> 01:22:24.134 I think gives us a voice and gives

NOTE Confidence: 0.934914226666667

 $01{:}22{:}24.134 \dashrightarrow 01{:}22{:}26.338$ us the opportunity to educate our

NOTE Confidence: 0.934914226666667

 $01:22:26.338 \longrightarrow 01:22:28.428$ patients and educate communities about.

NOTE Confidence: 0.934914226666667

 $01:22:28.430 \longrightarrow 01:22:29.650$ Listening to your bodies and

NOTE Confidence: 0.934914226666667

 $01:22:29.650 \longrightarrow 01:22:30.870$ knowing when something is right.

NOTE Confidence: 0.934914226666667

01:22:30.870 --> 01:22:32.460 It's not right and not always

NOTE Confidence: 0.934914226666667

 $01:22:32.460 \longrightarrow 01:22:33.970$ just assuming that the symptoms

 $01:22:33.970 \longrightarrow 01:22:35.550$ you're experiencing a hormonal

NOTE Confidence: 0.934914226666667

 $01:22:35.550 \longrightarrow 01:22:36.735$ symptoms visible cyst.

NOTE Confidence: 0.934914226666667

01:22:36.740 --> 01:22:39.695 Symptoms are persistent and symptoms

NOTE Confidence: 0.934914226666667

01:22:39.695 --> 01:22:43.197 of multiple than you would need

NOTE Confidence: 0.934914226666667

 $01:22:43.197 \longrightarrow 01:22:46.319$ to be evaluated to rule this out.

NOTE Confidence: 0.934914226666667

 $01:22:46.320 \longrightarrow 01:22:49.836$ So as I mentioned 25,000 cases,

NOTE Confidence: 0.934914226666667

 $01:22:49.840 \longrightarrow 01:22:51.492$ a lot of deaths,

NOTE Confidence: 0.934914226666667

 $01:22:51.492 \longrightarrow 01:22:54.530$ most common cause of death by farm

NOTE Confidence: 0.934914226666667

01:22:54.530 --> 01:22:57.799 and with Joanne Cancer and 4th leading

NOTE Confidence: 0.934914226666667

 $01:22:57.799 \longrightarrow 01:23:01.879$ cause of cancer death in the United States.

NOTE Confidence: 0.934914226666667

 $01:23:01.880 \longrightarrow 01:23:04.392$ So to talk a little bit more about

NOTE Confidence: 0.934914226666667

 $01:23:04.392 \longrightarrow 01:23:06.889$ how these cancers can be prevented,

NOTE Confidence: 0.934914226666667

 $01{:}23{:}06.890 \dashrightarrow 01{:}23{:}08.703$ which is really kind of the the

NOTE Confidence: 0.934914226666667

01:23:08.703 --> 01:23:10.657 motif that I want to talk about,

NOTE Confidence: 0.934914226666667

 $01:23:10.660 \longrightarrow 01:23:12.669$ is what can we do for prevention?

 $01:23:12.670 \longrightarrow 01:23:14.212$ I think it's important to understand

NOTE Confidence: 0.934914226666667

 $01:23:14.212 \longrightarrow 01:23:16.416$ who are the women who are at risk

NOTE Confidence: 0.934914226666667

01:23:16.416 --> 01:23:17.536 for epithelial ovarian cancers,

NOTE Confidence: 0.934914226666667

01:23:17.540 --> 01:23:19.730 which are the common ovarian cancers,

NOTE Confidence: 0.934914226666667

 $01:23:19.730 \longrightarrow 01:23:22.986$ so there's a couple of theories to this.

NOTE Confidence: 0.934914226666667

01:23:22.990 --> 01:23:24.600 There's actually two different theories,

NOTE Confidence: 0.934914226666667

 $01:23:24.600 \longrightarrow 01:23:25.726$ overbearing cancer.

NOTE Confidence: 0.934914226666667

 $01:23:25.726 \longrightarrow 01:23:27.978$ One the most common,

NOTE Confidence: 0.934914226666667

 $01:23:27.980 \longrightarrow 01:23:32.068$ and the oldest is this incessant ambulation.

NOTE Confidence: 0.934914226666667

 $01:23:32.070 \longrightarrow 01:23:33.446$ So the more times,

NOTE Confidence: 0.934914226666667

 $01:23:33.446 \longrightarrow 01:23:35.510$ the more that the women ambulates,

NOTE Confidence: 0.934914226666667

 $01:23:35.510 \longrightarrow 01:23:38.470$ the more risk she has on this tumorigenesis.

NOTE Confidence: 0.934914226666667

 $01:23:38.470 \longrightarrow 01:23:41.145$ Carcinogenesis so women who have

NOTE Confidence: 0.934914226666667

01:23:41.145 --> 01:23:43.402 had early monarchy, late menopause,

NOTE Confidence: 0.934914226666667

 $01:23:43.402 \longrightarrow 01:23:45.684$ who haven't had a lot of children

NOTE Confidence: 0.934914226666667

 $01:23:45.684 \longrightarrow 01:23:48.104$ who didn't breastfeed and who had

01:23:48.104 --> 01:23:50.630 infertility due to probably multiple issues,

NOTE Confidence: 0.934914226666667

 $01:23:50.630 \longrightarrow 01:23:53.699$ as well as did not use birth control pills,

NOTE Confidence: 0.934914226666667

 $01:23:53.700 \longrightarrow 01:23:55.212$ and the reasoning for this is

NOTE Confidence: 0.934914226666667

 $01:23:55.212 \longrightarrow 01:23:56.901$ similar that the more times that

NOTE Confidence: 0.934914226666667

01:23:56.901 --> 01:23:57.849 you're not ovulating,

NOTE Confidence: 0.827783358

 $01:23:57.850 \longrightarrow 01:24:00.604$ the less risk there is that

NOTE Confidence: 0.827783358

 $01:24:00.604 \longrightarrow 01:24:02.440$ this tabulation happened and.

NOTE Confidence: 0.827783358

01:24:02.440 --> 01:24:04.148 Precipitate some sort of

NOTE Confidence: 0.827783358

 $01:24:04.148 \longrightarrow 01:24:05.429$ a cancer development.

NOTE Confidence: 0.827783358

 $01{:}24{:}05.430 \dashrightarrow 01{:}24{:}08.628$ The more recent thinking of again

NOTE Confidence: 0.827783358

01:24:08.628 --> 01:24:11.918 cancer Genesis is actually not that the

NOTE Confidence: 0.827783358

01:24:11.920 --> 01:24:13.918 cancer actually comes from the ovaries,

NOTE Confidence: 0.827783358

 $01:24:13.920 \longrightarrow 01:24:15.605$ but rather the cancer comes

NOTE Confidence: 0.827783358

01:24:15.605 --> 01:24:16.953 from the fallopian tubes,

NOTE Confidence: 0.827783358

01:24:16.960 --> 01:24:18.733 and we actually have a lot of thinking now,

01:24:18.740 --> 01:24:21.345 especially for women with hereditary

NOTE Confidence: 0.827783358

 $01:24:21.345 \longrightarrow 01:24:24.600$ germline cancers like a BRCA cancer,

NOTE Confidence: 0.827783358

01:24:24.600 --> 01:24:27.669 we very much believe that the origin of the

NOTE Confidence: 0.827783358

 $01:24:27.669 \longrightarrow 01:24:30.289$ disease is really in the fallopian tubes.

NOTE Confidence: 0.827783358

 $01:24:30.290 \longrightarrow 01:24:32.880$ Come here after being cancer.

NOTE Confidence: 0.827783358

01:24:32.880 --> 01:24:33.882 Genetic mutations,

NOTE Confidence: 0.827783358

 $01:24:33.882 \longrightarrow 01:24:37.389$ of course is the biggest risk factor

NOTE Confidence: 0.827783358

01:24:37.389 --> 01:24:39.342 predisposition to being cancer

NOTE Confidence: 0.827783358

01:24:39.342 --> 01:24:42.246 that is between brocco one bracket,

NOTE Confidence: 0.827783358

01:24:42.250 --> 01:24:46.690 2 Lynch and now newly discovered

NOTE Confidence: 0.827783358

 $01:24:46.690 \longrightarrow 01:24:48.170$ additional genes.

NOTE Confidence: 0.827783358

01:24:48.170 --> 01:24:49.430 As I mentioned before,

NOTE Confidence: 0.827783358

 $01:24:49.430 \longrightarrow 01:24:51.320$ women with Brock one have as

NOTE Confidence: 0.827783358

 $01:24:51.387 \longrightarrow 01:24:53.252$ high as 46% chance of ovarian

NOTE Confidence: 0.827783358

 $01:24:53.252 \longrightarrow 01:24:56.220$ cancer as high as 23% in bracket.

NOTE Confidence: 0.827783358

 $01{:}24{:}56.220 \dashrightarrow 01{:}24{:}59.055$ Two carriers with a lifetime risk in

 $01:24:59.055 \longrightarrow 01:25:02.670$ general population of 1.4 to 1.5%,

NOTE Confidence: 0.827783358

 $01:25:02.670 \longrightarrow 01:25:06.030$ so significantly increased incidence.

NOTE Confidence: 0.827783358 01:25:06.030 --> 01:25:08.510 Uhm? NOTE Confidence: 0.827783358

 $01:25:08.510 \longrightarrow 01:25:10.981$ This is similar data that's shows that

NOTE Confidence: 0.827783358

01:25:10.981 --> 01:25:13.648 the risk of rock ovarian cancer with

NOTE Confidence: 0.827783358

01:25:13.648 --> 01:25:16.650 brocco one and bracket 2 gene mutation,

NOTE Confidence: 0.827783358

 $01:25:16.650 \longrightarrow 01:25:19.560$ both of breast and ovarian.

NOTE Confidence: 0.827783358

 $01:25:19.560 \longrightarrow 01:25:21.080$ So what can be done?

NOTE Confidence: 0.827783358

 $01:25:21.080 \longrightarrow 01:25:22.940$ What other factors that can reduce

NOTE Confidence: 0.827783358

 $01:25:22.940 \longrightarrow 01:25:24.640$ the risk of ovarian cancer?

NOTE Confidence: 0.827783358

 $01:25:24.640 \longrightarrow 01:25:25.820$ And there's some simple one.

NOTE Confidence: 0.827783358

 $01:25:25.820 \longrightarrow 01:25:27.717$ So multi parity really for the same

NOTE Confidence: 0.827783358

 $01{:}25{:}27.717 \dashrightarrow 01{:}25{:}29.677$ reasoning that I gave you before that,

NOTE Confidence: 0.827783358

 $01:25:29.680 \longrightarrow 01:25:32.794$ the more that the woman is pregnant,

NOTE Confidence: 0.827783358

 $01:25:32.800 \longrightarrow 01:25:34.252$ the lashes ovulating.

 $01:25:34.252 \longrightarrow 01:25:37.156$ You have to have five children

NOTE Confidence: 0.827783358

 $01:25:37.156 \longrightarrow 01:25:40.012$ to decrease your risk by 50%.

NOTE Confidence: 0.827783358

 $01:25:40.012 \longrightarrow 01:25:41.740$ I have four children.

NOTE Confidence: 0.827783358

 $01:25:41.740 \longrightarrow 01:25:44.636$ I'm very close to the benefit and you

NOTE Confidence: 0.827783358

01:25:44.636 --> 01:25:47.433 have to breastfeed every single one

NOTE Confidence: 0.827783358

 $01{:}25{:}47.433 \dashrightarrow 01{:}25{:}50.421$ for a year for additional benefit.

NOTE Confidence: 0.827783358

 $01:25:50.430 \longrightarrow 01:25:54.567$ One of one of the very big.

NOTE Confidence: 0.827783358

 $01:25:54.570 \longrightarrow 01:25:56.806$ Important points of chemoprevention

NOTE Confidence: 0.827783358

 $01:25:56.806 \longrightarrow 01:26:01.538$ in ovarian cancer is the use of oral

NOTE Confidence: 0.827783358

 $01:26:01.538 \longrightarrow 01:26:03.356$ contraceptives and that is something

NOTE Confidence: 0.827783358

 $01{:}26{:}03.356 \dashrightarrow 01{:}26{:}05.120$ that I talk about excessively and

NOTE Confidence: 0.827783358

 $01{:}26{:}05.182 \dashrightarrow 01{:}26{:}06.977$ use every opportunity to communicate

NOTE Confidence: 0.827783358

 $01{:}26{:}06.977 \dashrightarrow 01{:}26{:}08.772$ this message because there's a

NOTE Confidence: 0.827783358

 $01:26:08.828 \longrightarrow 01:26:10.328$ lot of misinformation and lack

NOTE Confidence: 0.827783358

 $01:26:10.328 \longrightarrow 01:26:12.225$ of knowledge about use of oral

NOTE Confidence: 0.827783358

01:26:12.225 --> 01:26:13.410 contraception's in women.

01:26:13.410 --> 01:26:16.277 But we know due to that theory

NOTE Confidence: 0.827783358

 $01:26:16.277 \longrightarrow 01:26:19.231$ that I showed you before about the

NOTE Confidence: 0.827783358

01:26:19.231 --> 01:26:21.736 population that that increases risk

NOTE Confidence: 0.827783358

 $01:26:21.736 \longrightarrow 01:26:25.520$ that use of ocps birth control pills.

NOTE Confidence: 0.827783358

 $01:26:25.520 \longrightarrow 01:26:29.190$ Significantly decreases risk ovarian cancer.

NOTE Confidence: 0.827783358

01:26:29.190 --> 01:26:31.332 If a woman uses birth control pills

NOTE Confidence: 0.827783358

01:26:31.332 --> 01:26:33.230 for five years during her lifetime

NOTE Confidence: 0.827783358

 $01:26:33.230 \longrightarrow 01:26:35.372$ doesn't have to be at the same

NOTE Confidence: 0.827783358

 $01{:}26{:}35.434 \dashrightarrow 01{:}26{:}37.269$ time could be just cumulative.

NOTE Confidence: 0.827783358

01:26:37.270 --> 01:26:39.896 It decreases her risk by 50% if

NOTE Confidence: 0.827783358

 $01:26:39.896 \longrightarrow 01:26:42.600$ she uses up a 10 or 15 years,

NOTE Confidence: 0.827783358

 $01:26:42.600 \longrightarrow 01:26:44.380$ it can include increase,

NOTE Confidence: 0.827783358

 $01:26:44.380 \longrightarrow 01:26:47.909$ decrease the risk by its highest 80 to 90%,

NOTE Confidence: 0.827783358

 $01:26:47.910 \longrightarrow 01:26:49.824$ and that risk reduction is not

NOTE Confidence: 0.827783358

01:26:49.824 --> 01:26:51.100 just for general population,

01:26:51.100 --> 01:26:54.047 it's also for women with BRCA mutations,

NOTE Confidence: 0.827783358

 $01:26:54.050 \longrightarrow 01:26:56.120$ so it will bear C1 mutation.

NOTE Confidence: 0.827783358

 $01:26:56.120 \longrightarrow 01:26:58.556$ Is a 40% chance of ovarian cancer

NOTE Confidence: 0.827783358

 $01:26:58.556 \longrightarrow 01:27:00.930$ and she uses birth control pills

NOTE Confidence: 0.827783358

 $01:27:00.930 \longrightarrow 01:27:03.426$ for five years that now reduces

NOTE Confidence: 0.827783358

 $01:27:03.426 \longrightarrow 01:27:07.139$ her risk to 20% and so forth.

NOTE Confidence: 0.827783358

 $01:27:07.140 \longrightarrow 01:27:09.300$ Tubal ligation, or even better,

NOTE Confidence: 0.827783358

 $01:27:09.300 \longrightarrow 01:27:10.300$ in this day and age,

NOTE Confidence: 0.827783358

 $01:27:10.300 \longrightarrow 01:27:14.296$ removal of the tubes is another

NOTE Confidence: 0.827783358

 $01:27:14.296 \longrightarrow 01:27:16.851$ very significant protective factor.

NOTE Confidence: 0.827783358

 $01:27:16.851 \longrightarrow 01:27:20.157$ It has relative risk of .3,

NOTE Confidence: 0.827783358

 $01:27:20.160 \longrightarrow 01:27:21.900$ so you can significantly reduce

NOTE Confidence: 0.827783358

01:27:21.900 --> 01:27:24.330 the risk by either tying the tubes,

NOTE Confidence: 0.827783358

 $01:27:24.330 \longrightarrow 01:27:25.908$ or even better, be moving it.

NOTE Confidence: 0.827783358

 $01:27:25.910 \longrightarrow 01:27:29.669$ And I think that is something that.

NOTE Confidence: 0.915851026111111

01:27:29.670 --> 01:27:31.644 Supports the theory that I talked

 $01:27:31.644 \longrightarrow 01:27:33.765$ about that the cancer might actually

NOTE Confidence: 0.915851026111111

 $01{:}27{:}33.765 \dashrightarrow 01{:}27{:}36.003$ be coming from the fall opian tubes.

NOTE Confidence: 0.915851026111111

01:27:36.010 --> 01:27:37.830 You know, nowadays tubal ligation,

NOTE Confidence: 0.915851026111111

01:27:37.830 --> 01:27:39.426 really, it's a little bit old school,

NOTE Confidence: 0.915851026111111

 $01:27:39.430 \longrightarrow 01:27:41.506$ and I again thoroughly argued that

NOTE Confidence: 0.915851026111111

 $01:27:41.506 \longrightarrow 01:27:43.609$ if you're going to tie tubes,

NOTE Confidence: 0.915851026111111

01:27:43.610 --> 01:27:45.410 you should just remove them entirely,

NOTE Confidence: 0.915851026111111

 $01:27:45.410 \longrightarrow 01:27:46.915$ and anybody who's having hysterectomy

NOTE Confidence: 0.915851026111111

01:27:46.915 --> 01:27:48.420 for benign reasons should always

NOTE Confidence: 0.915851026111111

 $01:27:48.464 \longrightarrow 01:27:49.969$ have their fallopian tubes removed.

NOTE Confidence: 0.9158510261111111

01:27:49.970 --> 01:27:52.754 I will never leave a fellow P2 behind

NOTE Confidence: 0.915851026111111

01:27:52.754 --> 01:27:56.023 because I very much see it as a very

NOTE Confidence: 0.915851026111111

 $01{:}27{:}56.023 \dashrightarrow 01{:}27{:}58.280$ significant origin of carcinogenesis.

NOTE Confidence: 0.9158510261111111

 $01:27:58.280 \longrightarrow 01:28:00.368$ And then of course, the most definitive one,

NOTE Confidence: 0.915851026111111

 $01:28:00.370 \longrightarrow 01:28:03.058$ but also reserved for the highest population,

 $01:28:03.060 \longrightarrow 01:28:05.316$ which is a risk reducing stopping

NOTE Confidence: 0.915851026111111

 $01:28:05.316 \longrightarrow 01:28:06.068$ over ectomy.

NOTE Confidence: 0.915851026111111

 $01:28:06.070 \longrightarrow 01:28:09.538$ Removal of both ovaries and tubes.

NOTE Confidence: 0.915851026111111

 $01:28:09.540 \longrightarrow 01:28:12.942$ Uhm, these are the relative risks I

NOTE Confidence: 0.915851026111111

 $01:28:12.942 \longrightarrow 01:28:15.680$ mentioned before umso breastfeeding.

NOTE Confidence: 0.915851026111111

01:28:15.680 --> 01:28:18.980 Really party infertility.

NOTE Confidence: 0.915851026111111

01:28:18.980 --> 01:28:20.760 Previous pregnancy ocps all

NOTE Confidence: 0.915851026111111

 $01:28:20.760 \longrightarrow 01:28:22.540$ those things I discussed.

NOTE Confidence: 0.915851026111111

01:28:22.540 --> 01:28:25.676 The only thing I didn't mention is the

NOTE Confidence: 0.915851026111111

01:28:25.680 --> 01:28:28.140 family history that even know somebody

NOTE Confidence: 0.9158510261111111

 $01{:}28{:}28.140 \dashrightarrow 01{:}28{:}31.109$ who does not have genetic mutation.

NOTE Confidence: 0.915851026111111

 $01{:}28{:}31.110 \dashrightarrow 01{:}28{:}33.420$ Having relative with ovarian cancer and

NOTE Confidence: 0.915851026111111

 $01:28:33.420 \longrightarrow 01:28:36.437$ then compared to two or three relatives

NOTE Confidence: 0.9158510261111111

 $01:28:36.437 \longrightarrow 01:28:38.782$ with a variant cancer significantly

NOTE Confidence: 0.915851026111111

 $01:28:38.782 \longrightarrow 01:28:41.198$ increases relative risk of developing it.

NOTE Confidence: 0.915851026111111

 $01:28:41.200 \longrightarrow 01:28:42.936$ So options for viewing

01:28:42.936 --> 01:28:44.238 cancer risk management.

NOTE Confidence: 0.915851026111111 01:28:44.240 --> 01:28:44.916 And yeah, NOTE Confidence: 0.915851026111111 01:28:44.916 --> 01:28:45.592 you know,

01.28.44.910 --> 01.28.45.592 you know,

NOTE Confidence: 0.9158510261111111

01:28:45.592 --> 01:28:48.046 I always think of risk management pretty

NOTE Confidence: 0.9158510261111111

 $01:28:48.046 \longrightarrow 01:28:50.559$ much the same for every cancer entity,

NOTE Confidence: 0.915851026111111

 $01:28:50.560 \longrightarrow 01:28:53.192$ so I same As for breast same As

NOTE Confidence: 0.915851026111111

 $01:28:53.192 \longrightarrow 01:28:55.278$ for pancreas enzymes for ovary.

NOTE Confidence: 0.915851026111111

 $01{:}28{:}55.280 \dashrightarrow 01{:}28{:}58.331$ So the way I look at it as surveillance

NOTE Confidence: 0.915851026111111

01:28:58.331 --> 01:29:00.066 chemoprevention and again the most

NOTE Confidence: 0.915851026111111

 $01{:}29{:}00.066 \dashrightarrow 01{:}29{:}02.064$ definitive but the one reserved for

NOTE Confidence: 0.9158510261111111

01:29:02.126 --> 01:29:04.246 really the population at highest

NOTE Confidence: 0.915851026111111

01:29:04.246 --> 01:29:05.942 risk is prophylactic surgery.

NOTE Confidence: 0.915851026111111

 $01:29:05.950 \longrightarrow 01:29:07.440$ So here is the trouble.

NOTE Confidence: 0.915851026111111

 $01:29:07.440 \longrightarrow 01:29:11.958$ The trouble with. Start with the hardest.

NOTE Confidence: 0.915851026111111

01:29:11.958 --> 01:29:14.193 The trouble with surveillance in

01:29:14.193 --> 01:29:16.448 ovarian cancer is because unfortunately

NOTE Confidence: 0.915851026111111

 $01:29:16.448 \longrightarrow 01:29:19.046$ we do not have good modalities

NOTE Confidence: 0.915851026111111

 $01:29:19.122 \longrightarrow 01:29:21.217$ to detect these cancers early,

NOTE Confidence: 0.915851026111111

01:29:21.220 --> 01:29:22.970 and it's due for many different issues.

NOTE Confidence: 0.915851026111111

 $01:29:22.970 \longrightarrow 01:29:26.589$ I'm not going to bore you with

NOTE Confidence: 0.915851026111111

 $01:29:26.589 \longrightarrow 01:29:29.110$ the challenges of low PPD.

NOTE Confidence: 0.915851026111111

 $01:29:29.110 \longrightarrow 01:29:32.350$ And that you need 10% PvP in order

NOTE Confidence: 0.915851026111111

 $01:29:32.350 \longrightarrow 01:29:34.920$ to achieve this 10% PPV screening

NOTE Confidence: 0.915851026111111

01:29:34.920 --> 01:29:38.245 of general population must have

NOTE Confidence: 0.915851026111111

01:29:38.250 --> 01:29:39.489 very high specificity,

NOTE Confidence: 0.915851026111111

 $01:29:39.489 \longrightarrow 01:29:42.380$ which is almost impossible with these tests.

NOTE Confidence: 0.915851026111111

 $01:29:42.380 \longrightarrow 01:29:46.650$ So all our markers unfortunately have low

NOTE Confidence: 0.915851026111111

 $01:29:46.650 \longrightarrow 01:29:48.960$ specificity and also suboptimal sensitivity.

NOTE Confidence: 0.9158510261111111

01:29:48.960 --> 01:29:52.022 Having to do with great deal with

NOTE Confidence: 0.915851026111111

 $01:29:52.022 \longrightarrow 01:29:54.227$ low prevalence in our population.

NOTE Confidence: 0.915851026111111

 $01:29:54.230 \longrightarrow 01:29:56.148$ That is why the two markers that

 $01:29:56.148 \longrightarrow 01:29:58.129$ we use for this are limited.

NOTE Confidence: 0.915851026111111 01:29:58.130 --> 01:29:58.808 You know, NOTE Confidence: 0.915851026111111 01:29:58.808 --> 01:29:59.486 seeing 125. NOTE Confidence: 0.915851026111111

01:29:59.486 --> 01:30:02.023 Is the one you probably hear the

NOTE Confidence: 0.915851026111111

 $01:30:02.023 \longrightarrow 01:30:04.591$ most about antigen expressed by fetal

NOTE Confidence: 0.915851026111111

01:30:04.591 --> 01:30:06.690 amniotic and coelomic epithelial?

NOTE Confidence: 0.915851026111111

 $01:30:06.690 \longrightarrow 01:30:08.493$ It's very complicated.

NOTE Confidence: 0.915851026111111

01:30:08.493 --> 01:30:12.852 It's super has has multiple false positives,

NOTE Confidence: 0.915851026111111

01:30:12.852 --> 01:30:14.766 multiple false negatives,

NOTE Confidence: 0.915851026111111

 $01:30:14.770 \dashrightarrow 01:30:17.275$ many different entities like benign

NOTE Confidence: 0.9158510261111111

 $01:30:17.275 \longrightarrow 01:30:21.328$ joint disease or GI disease increased at

NOTE Confidence: 0.915851026111111

 $01:30:21.328 \longrightarrow 01:30:24.248$ elevated significantly without malignancy.

NOTE Confidence: 0.915851026111111

 $01:30:24.250 \dashrightarrow 01:30:25.890$ Other malignancies elevated and

NOTE Confidence: 0.915851026111111

01:30:25.890 --> 01:30:27.940 unfortunately in early stage like

NOTE Confidence: 0.915851026111111

01:30:27.940 --> 01:30:29.977 stage one disease great majority,

 $01:30:29.980 \longrightarrow 01:30:33.566$ a percentage of symmetry 5 is within

NOTE Confidence: 0.915851026111111

 $01:30:33.566 \longrightarrow 01:30:35.406$ normal limits and there's multiple

NOTE Confidence: 0.915851026111111

 $01:30:35.406 \longrightarrow 01:30:36.720$ different biomarkers that we.

NOTE Confidence: 0.915851026111111

 $01:30:36.720 \longrightarrow 01:30:38.538$ Looking at there's different ones somewhere.

NOTE Confidence: 0.915851026111111

01:30:38.540 --> 01:30:40.890 Actually good for specific subtypes

NOTE Confidence: 0.915851026111111 01:30:40.890 --> 01:30:41.830 of cancers. NOTE Confidence: 0.915851026111111

 $01:30:41.830 \longrightarrow 01:30:42.457$ Others are not,

NOTE Confidence: 0.915851026111111

 $01:30:42.457 \longrightarrow 01:30:44.130$ and there's a lot of companies right now,

NOTE Confidence: 0.9158510261111111

 $01:30:44.130 \longrightarrow 01:30:45.775$ and there's no research that's

NOTE Confidence: 0.915851026111111

01:30:45.775 --> 01:30:47.805 being done in the industry about

NOTE Confidence: 0.9158510261111111

 $01{:}30{:}47.805 \dashrightarrow 01{:}30{:}49.743$ trying to come up with different

NOTE Confidence: 0.915851026111111

01:30:49.743 --> 01:30:52.017 biomarkers to try to improve early

NOTE Confidence: 0.915851026111111

01:30:52.017 --> 01:30:53.259 detection and sensitivity.

NOTE Confidence: 0.9158510261111111

 $01:30:53.260 \longrightarrow 01:30:55.252$ Specificity of the disease.

NOTE Confidence: 0.915851026111111

 $01:30:55.252 \longrightarrow 01:30:57.244$ There are other limitations.

NOTE Confidence: 0.807583436

 $01:30:57.250 \longrightarrow 01:30:58.580$ Ultrasounds also sound like now,

 $01:30:58.580 \longrightarrow 01:30:59.576$ so they're good entity.

NOTE Confidence: 0.807583436

 $01{:}30{:}59.576 \dashrightarrow 01{:}31{:}01.070$ It's something that we really use,

NOTE Confidence: 0.807583436

01:31:01.070 --> 01:31:03.296 and it's really quite good, but again,

NOTE Confidence: 0.807583436

01:31:03.296 --> 01:31:05.312 just because of how the brain cancer

NOTE Confidence: 0.807583436

01:31:05.312 --> 01:31:07.297 is is found and how frequently

NOTE Confidence: 0.807583436

 $01:31:07.297 \longrightarrow 01:31:08.937$ it's in the Philippine tubes.

NOTE Confidence: 0.807583436

01:31:08.940 --> 01:31:11.236 The pie and specially its primary pet,

NOTE Confidence: 0.807583436

01:31:11.240 --> 01:31:12.998 Neil, and that even the ovaries,

NOTE Confidence: 0.807583436

 $01:31:13.000 \longrightarrow 01:31:15.368$ the ultrasounds again sadly

NOTE Confidence: 0.807583436

 $01:31:15.368 \longrightarrow 01:31:17.736$ frequently miss early disease.

NOTE Confidence: 0.807583436

01:31:17.740 --> 01:31:19.590 Miss Stage One, stage 2.

NOTE Confidence: 0.85240450625

 $01:31:21.630 \longrightarrow 01:31:24.918$ The Ocps is what I talked about before,

NOTE Confidence: 0.85240450625

 $01:31:24.920 \longrightarrow 01:31:27.480$ and this is the data that we have

NOTE Confidence: 0.85240450625

 $01:31:27.480 \longrightarrow 01:31:29.920$ that shows great risk reduction in

NOTE Confidence: 0.85240450625

01:31:29.920 --> 01:31:32.500 women who used birth control pills,

 $01:31:32.500 \longrightarrow 01:31:35.970$ especially over cumulative many years.

NOTE Confidence: 0.85240450625

 $01:31:35.970 \longrightarrow 01:31:37.916$ And then the most definitive one would

NOTE Confidence: 0.85240450625

 $01:31:37.916 \longrightarrow 01:31:40.428$ be a risk reduction with prophylactic.

NOTE Confidence: 0.85240450625

01:31:40.430 --> 01:31:41.480 You know, I don't actually

NOTE Confidence: 0.85240450625

 $01:31:41.480 \longrightarrow 01:31:42.530$ ever use the word prophylactic.

NOTE Confidence: 0.85240450625

01:31:42.530 --> 01:31:45.253 I use the word risk reducing over

NOTE Confidence: 0.85240450625

 $01:31:45.253 \longrightarrow 01:31:47.619$ ectomy in avoidant ovarian cancer.

NOTE Confidence: 0.85240450625

 $01:31:47.620 \longrightarrow 01:31:49.324$ This is some of the older

NOTE Confidence: 0.85240450625

01:31:49.324 --> 01:31:50.460 literature from our institution,

NOTE Confidence: 0.85240450625

01:31:50.460 --> 01:31:53.325 from the computer Schwartz from here who

NOTE Confidence: 0.85240450625

 $01:31:53.325 \longrightarrow 01:31:57.780$ published in those days in 94 that if all

NOTE Confidence: 0.85240450625

 $01{:}31{:}57.890 \dashrightarrow 01{:}32{:}02.677$ women had their ovaries removed at age 50,

NOTE Confidence: 0.85240450625

 $01:32:02.677 \longrightarrow 01:32:04.972$ if they were having benign

NOTE Confidence: 0.85240450625

 $01:32:04.972 \longrightarrow 01:32:06.310$ hysterectomy than 12%.

NOTE Confidence: 0.85240450625

 $01:32:06.310 \longrightarrow 01:32:08.038$ Of women might avoid

NOTE Confidence: 0.85240450625

01:32:08.038 --> 01:32:09.334 developing ovarian cancer.

 $01:32:09.340 \longrightarrow 01:32:11.335$ You know in that days in 94

NOTE Confidence: 0.85240450625

01:32:11.335 --> 01:32:12.929 and probably 10 years ago,

NOTE Confidence: 0.85240450625

01:32:12.930 --> 01:32:14.386 we kind of used to do it routinely.

NOTE Confidence: 0.85240450625

01:32:14.390 --> 01:32:16.763 We used to take out ovaries routinely

NOTE Confidence: 0.85240450625

 $01:32:16.763 \longrightarrow 01:32:18.928$ in this population of this age women,

NOTE Confidence: 0.85240450625

 $01:32:18.930 \longrightarrow 01:32:20.694$ but now more studies are available

NOTE Confidence: 0.85240450625

 $01:32:20.694 \longrightarrow 01:32:22.649$ and there's some good studies that

NOTE Confidence: 0.85240450625

 $01:32:22.649 \longrightarrow 01:32:24.459$ show that there's possibly possibly

NOTE Confidence: 0.85240450625

 $01:32:24.459 \longrightarrow 01:32:26.388$ and probably benefit to the ovaries.

NOTE Confidence: 0.85240450625

 $01:32:26.390 \longrightarrow 01:32:29.148$ All the waves all the way to age 65.

NOTE Confidence: 0.85240450625

01:32:29.148 --> 01:32:31.650 So now we are not as quick to take

NOTE Confidence: 0.85240450625

 $01:32:31.724 \longrightarrow 01:32:34.292$ out ovaries in age 50 or so forth

NOTE Confidence: 0.85240450625

 $01:32:34.292 \longrightarrow 01:32:36.477$ because we now have to balance.

NOTE Confidence: 0.85240450625

 $01:32:36.480 \longrightarrow 01:32:37.556$ The risks and benefits,

NOTE Confidence: 0.85240450625

 $01:32:37.556 \longrightarrow 01:32:39.516$ and this is again why it's so

01:32:39.516 --> 01:32:41.497 important to understand who is at risk,

NOTE Confidence: 0.85240450625

 $01{:}32{:}41.500 --> 01{:}32{:}42.760$ who has a high risk.

NOTE Confidence: 0.85240450625

01:32:42.760 --> 01:32:45.166 So for those women you certainly

NOTE Confidence: 0.85240450625

01:32:45.166 --> 01:32:47.066 would would want to remove their

NOTE Confidence: 0.85240450625

 $01:32:47.066 \longrightarrow 01:32:49.380$ ovaries if you could.

NOTE Confidence: 0.85240450625

 $01:32:49.380 \longrightarrow 01:32:50.840$ And then the prophylactic for

NOTE Confidence: 0.85240450625

 $01:32:50.840 \longrightarrow 01:32:52.850$ bingo for ectomy in BRCA carriers.

NOTE Confidence: 0.85240450625

 $01:32:52.850 \longrightarrow 01:32:53.700$ At this and the women,

NOTE Confidence: 0.85240450625

 $01{:}32{:}53.700 \longrightarrow 01{:}32{:}56.010$ of course for the highest risk

NOTE Confidence: 0.85240450625

 $01:32:56.010 \longrightarrow 01:32:57.165$ for this disease,

NOTE Confidence: 0.85240450625

 $01:32:57.170 \longrightarrow 01:32:58.630$ multiple studies have been done.

NOTE Confidence: 0.85240450625

 $01:32:58.630 \longrightarrow 01:33:01.103$ This is just one of them that

NOTE Confidence: 0.85240450625

 $01:33:01.103 \longrightarrow 01:33:03.515$ showed that it significantly

NOTE Confidence: 0.85240450625

01:33:03.515 --> 01:33:05.927 decreased risk ovarian cancer,

NOTE Confidence: 0.85240450625

 $01:33:05.930 \longrightarrow 01:33:09.110$ and this study this women even

NOTE Confidence: 0.85240450625

 $01:33:09.110 \longrightarrow 01:33:11.718$ after risk reducing over Ectomy

 $01:33:11.718 \longrightarrow 01:33:14.116$ had a 1.3% peritoneal cancer.

NOTE Confidence: 0.85240450625

 $01:33:14.116 \longrightarrow 01:33:16.284$ That number is lower.

NOTE Confidence: 0.85240450625

 $01:33:16.290 \longrightarrow 01:33:18.145$ Now we doing the surgery little bit

NOTE Confidence: 0.85240450625

 $01:33:18.145 \longrightarrow 01:33:19.502$ more aggressively, a little bit.

NOTE Confidence: 0.85240450625

 $01:33:19.502 \longrightarrow 01:33:21.420$ Medically we take a little bit more,

NOTE Confidence: 0.85240450625

01:33:21.420 --> 01:33:22.311 but you know,

NOTE Confidence: 0.85240450625

01:33:22.311 --> 01:33:24.093 I always counsel women that they

NOTE Confidence: 0.85240450625

01:33:24.093 --> 01:33:26.042 probably have 1% chance of still

NOTE Confidence: 0.85240450625

 $01:33:26.042 \longrightarrow 01:33:27.254$ develop development cardinal

NOTE Confidence: 0.85240450625

 $01:33:27.254 \longrightarrow 01:33:29.300$ cancer even after the offer.

NOTE Confidence: 0.85240450625

01:33:29.300 --> 01:33:29.792 Ectomy,

NOTE Confidence: 0.85240450625

01:33:29.792 --> 01:33:32.488 but truly compared to you know

NOTE Confidence: 0.85240450625

 $01:33:32.490 \longrightarrow 01:33:34.146$ 6% of this population.

NOTE Confidence: 0.85240450625

01:33:34.146 --> 01:33:36.216 It's also very important to

NOTE Confidence: 0.85240450625

 $01:33:36.216 \longrightarrow 01:33:39.140$ note that when the women remove

01:33:39.140 --> 01:33:41.148 their ovaries before menopause,

NOTE Confidence: 0.85240450625

 $01:33:41.150 \longrightarrow 01:33:43.650$ it also reduces their risk

NOTE Confidence: 0.85240450625

 $01:33:43.650 \longrightarrow 01:33:46.150$ of breast cancer by 50%.

NOTE Confidence: 0.85240450625

 $01:33:46.150 \longrightarrow 01:33:47.950$ And it's also important to note

NOTE Confidence: 0.85240450625

 $01:33:47.950 \longrightarrow 01:33:49.679$ that for these women in this.

NOTE Confidence: 0.85240450625

 $01:33:49.680 \longrightarrow 01:33:52.656$ Providers who are young when we remove our,

NOTE Confidence: 0.85240450625

 $01:33:52.660 \longrightarrow 01:33:53.528$ they're always.

NOTE Confidence: 0.85240450625

 $01:33:53.528 \longrightarrow 01:33:56.132$ Not only is it acceptable or

NOTE Confidence: 0.85240450625

 $01{:}33{:}56.132 --> 01{:}33{:}58.918$ OK to put them on hormones,

NOTE Confidence: 0.85240450625

 $01:33:58.920 \longrightarrow 01:34:00.920$ once you remove the always,

NOTE Confidence: 0.85240450625

 $01{:}34{:}00.920 \dashrightarrow 01{:}34{:}03.904$ it is actually proven and studied and not

NOTE Confidence: 0.85240450625

01:34:03.904 --> 01:34:07.018 only is it imperative for their heart,

NOTE Confidence: 0.85240450625

 $01:34:07.020 \longrightarrow 01:34:09.164$ their lot and their bones and their mood

NOTE Confidence: 0.85240450625

 $01{:}34{:}09.164 \dashrightarrow 01{:}34{:}11.307$ and their symptoms and their condition.

NOTE Confidence: 0.85240450625

 $01:34:11.310 \longrightarrow 01:34:13.160$ But there's been studies that

NOTE Confidence: 0.85240450625

 $01{:}34{:}13.160 \dashrightarrow 01{:}34{:}15.490$ talked about safety in the breast

 $01:34:15.490 \longrightarrow 01:34:17.130$ cancer population that because

NOTE Confidence: 0.85240450625

 $01{:}34{:}17.130 \dashrightarrow 01{:}34{:}19.591$ women still have the 50% reduction.

NOTE Confidence: 0.85240450625

01:34:19.591 --> 01:34:22.468 Of the breast cancer just from the

NOTE Confidence: 0.85240450625

 $01:34:22.468 \longrightarrow 01:34:24.587$ offer ectomy that even the women

NOTE Confidence: 0.85240450625

 $01:34:24.587 \longrightarrow 01:34:27.085$ who will put a very big dose in

NOTE Confidence: 0.85240450625

 $01:34:27.085 \longrightarrow 01:34:29.469$ the study of hormones post be a so

NOTE Confidence: 0.90073631

01:34:29.470 --> 01:34:32.190 they did not have an increased risk of

NOTE Confidence: 0.90073631

 $01:34:32.190 \longrightarrow 01:34:34.706$ breast cancer after five and seven years.

NOTE Confidence: 0.90073631

01:34:34.710 --> 01:34:36.288 So that's actually a day ****

NOTE Confidence: 0.90073631

 $01:34:36.290 \longrightarrow 01:34:38.420$ point to know because that

NOTE Confidence: 0.90073631

 $01:34:38.420 \longrightarrow 01:34:40.832$ sometimes is something that's that.

NOTE Confidence: 0.90073631

 $01:34:40.832 \longrightarrow 01:34:43.869$ That's miss misconstrued it in

NOTE Confidence: 0.90073631

 $01:34:43.869 \longrightarrow 01:34:45.014$ the patient population that they

NOTE Confidence: 0.90073631

 $01:34:45.014 \longrightarrow 01:34:46.550$ worry they could not have hormones,

NOTE Confidence: 0.90073631

 $01:34:46.550 \longrightarrow 01:34:48.867$ and that's not at all the case.

 $01:34:48.870 \longrightarrow 01:34:51.175$ So in conclusion, ovarian cancer

NOTE Confidence: 0.90073631

01:34:51.175 --> 01:34:53.480 continues to be very challenging.

NOTE Confidence: 0.90073631

 $01:34:53.480 \longrightarrow 01:34:55.505$ Ovarian cancer continues to be

NOTE Confidence: 0.90073631

01:34:55.505 --> 01:34:57.530 very challenging because we are

NOTE Confidence: 0.90073631

 $01:34:57.602 \longrightarrow 01:34:59.497$ failing to diagnose it early.

NOTE Confidence: 0.90073631

 $01:34:59.500 \longrightarrow 01:35:03.150$ We are, and again not that the lack of Shank,

NOTE Confidence: 0.90073631

 $01:35:03.150 \dashrightarrow 01:35:05.299$ not because we're not aware of it.

NOTE Confidence: 0.90073631

 $01:35:05.300 \dashrightarrow 01:35:08.359$ It's more because we are so limited

NOTE Confidence: 0.90073631

 $01:35:08.360 \longrightarrow 01:35:10.688$ by the entities that we have

NOTE Confidence: 0.90073631

 $01:35:10.688 \longrightarrow 01:35:12.848$ for early detection between the

NOTE Confidence: 0.90073631

 $01:35:12.848 \longrightarrow 01:35:14.459$ ultrasounds and biomarkers,

NOTE Confidence: 0.90073631

 $01:35:14.460 \longrightarrow 01:35:16.788$ and because of that it is so important

NOTE Confidence: 0.90073631

 $01:35:16.788 \longrightarrow 01:35:18.890$ to understand who are the women at risk.

NOTE Confidence: 0.90073631

 $01:35:18.890 \longrightarrow 01:35:20.230$ So that their genetic

NOTE Confidence: 0.90073631

 $01:35:20.230 \longrightarrow 01:35:21.570$ mutations can be checked,

NOTE Confidence: 0.90073631

 $01:35:21.570 \longrightarrow 01:35:24.066$ and if they're truly at at increased risk,

 $01:35:24.070 \longrightarrow 01:35:27.248$ we can offer them surgical risk reduction.

NOTE Confidence: 0.90073631

 $01{:}35{:}27.250 \dashrightarrow 01{:}35{:}29.084$ Nowadays we're doing a lot of risk

NOTE Confidence: 0.90073631

01:35:29.084 --> 01:35:30.798 reduction in younger women with just

NOTE Confidence: 0.90073631

 $01:35:30.798 \longrightarrow 01:35:32.253$ removing their fallopian tubes to

NOTE Confidence: 0.90073631

 $01{:}35{:}32.253 \dashrightarrow 01{:}35{:}33.878$ support the theory that I mentioned

NOTE Confidence: 0.90073631

 $01:35:33.878 \longrightarrow 01:35:35.681$ to you before this cancer is coming

NOTE Confidence: 0.90073631

 $01:35:35.681 \longrightarrow 01:35:37.236$ from the Philippine tubes only.

NOTE Confidence: 0.90073631

 $01:35:37.240 \longrightarrow 01:35:38.566$ And there's a big trial that's

NOTE Confidence: 0.90073631

01:35:38.566 --> 01:35:39.450 going on right now,

NOTE Confidence: 0.90073631

 $01:35:39.450 \longrightarrow 01:35:41.790$ just looking at the risk reduction

NOTE Confidence: 0.90073631

01:35:41.790 --> 01:35:43.350 from fallopian tubes alone.

NOTE Confidence: 0.90073631

 $01:35:43.350 \longrightarrow 01:35:46.078$ But the key again is to understand who's

NOTE Confidence: 0.90073631

 $01:35:46.078 \longrightarrow 01:35:48.994$ risk and what can be done for this risk.

NOTE Confidence: 0.90073631

 $01:35:49.000 \longrightarrow 01:35:51.796$ Reduction and similar to the Farrell.

NOTE Confidence: 0.90073631

 $01:35:51.800 \longrightarrow 01:35:54.971$ I similarly have a practice where we

 $01:35:54.971 \longrightarrow 01:35:57.384$ have something called discovery to

NOTE Confidence: 0.90073631

 $01:35:57.384 \longrightarrow 01:36:00.128$ cure special practice where we take

NOTE Confidence: 0.90073631

 $01:36:00.128 \longrightarrow 01:36:04.144$ care of women at higher risk both with

NOTE Confidence: 0.90073631

01:36:04.144 --> 01:36:06.688 chemo prevention and surveillance.

NOTE Confidence: 0.90073631

 $01:36:06.690 \longrightarrow 01:36:09.390$ And then at most extreme times

NOTE Confidence: 0.90073631

 $01:36:09.390 \longrightarrow 01:36:12.240$ of high risk surgical prevention.

NOTE Confidence: 0.90073631

 $01:36:12.240 \longrightarrow 01:36:13.710$ Thank you so much for your attention.

NOTE Confidence: 0.850972539090909

 $01:36:19.450 \longrightarrow 01:36:21.730$ Great, thank you so much to

NOTE Confidence: 0.850972539090909

 $01:36:21.730 \longrightarrow 01:36:23.980$ all of our speakers tonight.

NOTE Confidence: 0.850972539090909

 $01:36:23.980 \longrightarrow 01:36:26.540$ There are a few questions in the chat

NOTE Confidence: 0.850972539090909

 $01:36:26.540 \longrightarrow 01:36:29.643$ but are in the Q&A but if anyone else

NOTE Confidence: 0.850972539090909

 $01:36:29.643 \longrightarrow 01:36:32.240$ has questions feel free to type them in.

NOTE Confidence: 0.850972539090909

 $01{:}36{:}32.240 \dashrightarrow 01{:}36{:}34.361$ Doctor Farrell there was a question in

NOTE Confidence: 0.850972539090909

01:36:34.361 --> 01:36:36.958 there for you and I'll sort of paraphrase,

NOTE Confidence: 0.850972539090909

 $01:36:36.960 \longrightarrow 01:36:39.445$ but if a patient has a mutation

NOTE Confidence: 0.850972539090909

 $01:36:39.445 \longrightarrow 01:36:41.461$ that this associated with an

01:36:41.461 --> 01:36:43.656 increased risk for pancreatic cancer,

NOTE Confidence: 0.850972539090909

 $01:36:43.660 \longrightarrow 01:36:46.159$ should they automatically be referred to you,

NOTE Confidence: 0.850972539090909

01:36:46.160 --> 01:36:48.302 or is family history of factor

NOTE Confidence: 0.850972539090909

 $01:36:48.302 \longrightarrow 01:36:49.730$ in consideration of referral?

NOTE Confidence: 0.915323972380952

 $01:36:51.320 \longrightarrow 01:36:53.816$ So we do. We do follow the guidelines

NOTE Confidence: 0.915323972380952

 $01:36:53.816 \longrightarrow 01:36:56.378$ that are out there that are constantly

NOTE Confidence: 0.915323972380952

01:36:56.378 --> 01:36:58.930 being kind of revised and reviewed.

NOTE Confidence: 0.915323972380952

 $01:36:58.930 \longrightarrow 01:37:02.549$ But essentially it boils down to exactly.

NOTE Confidence: 0.927462713846154

01:37:07.730 --> 01:37:09.434 Essentially boils down to for most

NOTE Confidence: 0.927462713846154

 $01:37:09.434 \longrightarrow 01:37:11.339$ of the mutations that are out there,

NOTE Confidence: 0.927462713846154

01:37:11.340 --> 01:37:15.043 they do require a family history and

NOTE Confidence: 0.927462713846154

 $01:37:15.043 \longrightarrow 01:37:18.658$ the exceptions are P16 and put Jaegers.

NOTE Confidence: 0.927462713846154

 $01{:}37{:}18.660 \dashrightarrow 01{:}37{:}20.844$ Uhm, there have been some discussions

NOTE Confidence: 0.927462713846154

01:37:20.844 --> 01:37:23.349 about opening it up so that we would

NOTE Confidence: 0.927462713846154

01:37:23.349 --> 01:37:25.324 end up surveying individuals with just

 $01:37:25.324 \longrightarrow 01:37:27.550$ those high risk germline mutations we

NOTE Confidence: 0.927462713846154

01:37:27.606 --> 01:37:29.250 talked about so bracket two probably

NOTE Confidence: 0.927462713846154

 $01:37:29.250 \longrightarrow 01:37:31.492$ to an ATM that isn't standard of

NOTE Confidence: 0.927462713846154

01:37:31.492 --> 01:37:33.257 care or followed any particular

NOTE Confidence: 0.927462713846154

 $01:37:33.257 \longrightarrow 01:37:34.860$ guidelines at this point in time.

NOTE Confidence: 0.927462713846154

01:37:34.860 --> 01:37:36.993 So so I would say that you know I

NOTE Confidence: 0.927462713846154

 $01:37:36.993 \longrightarrow 01:37:39.118$ think you have to realize there are.

NOTE Confidence: 0.927462713846154

 $01:37:39.120 \dashrightarrow 01:37:40.445$ There are some German mutations

NOTE Confidence: 0.927462713846154

 $01:37:40.445 \longrightarrow 01:37:42.464$ that on their own are enough to

NOTE Confidence: 0.927462713846154

 $01:37:42.464 \longrightarrow 01:37:43.744$ justify surveillance but other

NOTE Confidence: 0.927462713846154

 $01:37:43.744 \longrightarrow 01:37:45.480$ ones require the family history.

NOTE Confidence: 0.927462713846154

01:37:45.480 --> 01:37:47.010 Having said all of that,

NOTE Confidence: 0.927462713846154

 $01:37:47.010 \longrightarrow 01:37:48.834$ there are times when we talk to patients.

NOTE Confidence: 0.927462713846154

01:37:48.840 --> 01:37:51.192 Who have incomplete family histories or

NOTE Confidence: 0.927462713846154

01:37:51.192 --> 01:37:53.850 they're still waiting For more information?

NOTE Confidence: 0.927462713846154

 $01:37:53.850 \longrightarrow 01:37:55.320$ So for those sorts of individuals,

 $01:37:55.320 \longrightarrow 01:37:57.273$ I just tell them to come into the clinic.

NOTE Confidence: 0.92746271384615401:37:57.280 --> 01:37:57.937 We can talk.

NOTE Confidence: 0.927462713846154

 $01:37:57.937 \longrightarrow 01:37:59.470$ We can tease out other issues of

NOTE Confidence: 0.927462713846154

01:37:59.522 --> 01:38:01.177 pancreatic disease and the family,

NOTE Confidence: 0.927462713846154

 $01{:}38{:}01.180 \dashrightarrow 01{:}38{:}03.412$ and kind of at least reassure them and

NOTE Confidence: 0.927462713846154

 $01:38:03.412 \longrightarrow 01:38:05.334$ give them answers to specific concerns

NOTE Confidence: 0.927462713846154

 $01:38:05.334 \longrightarrow 01:38:07.039$ they have about pancreatic disease.

NOTE Confidence: 0.927462713846154

 $01:38:07.040 \longrightarrow 01:38:09.957$ But the short answer is knowing

NOTE Confidence: 0.927462713846154

01:38:09.957 --> 01:38:11.545 which germline mutations required

NOTE Confidence: 0.927462713846154

01:38:11.545 --> 01:38:13.530 the family history is important.

NOTE Confidence: 0.848645824285714

01:38:16.100 --> 01:38:18.459 Great thank you and then Doctor Lynch.

NOTE Confidence: 0.848645824285714

 $01:38:18.460 \longrightarrow 01:38:20.880$ Uhm, there was some conversation.

NOTE Confidence: 0.848645824285714

 $01{:}38{:}20.880 \dashrightarrow 01{:}38{:}22.742$ I think in the Q&A about whether

NOTE Confidence: 0.848645824285714

 $01:38:22.742 \longrightarrow 01:38:24.858$ or not to routinely include breast

NOTE Confidence: 0.848645824285714

 $01:38:24.858 \longrightarrow 01:38:27.366$ ultrasounds or whether or not that

 $01:38:27.366 \longrightarrow 01:38:29.464$ should really only be reserved for

NOTE Confidence: 0.848645824285714

01:38:29.464 --> 01:38:31.660 women with high risk or dense tissue.

NOTE Confidence: 0.848645824285714

 $01:38:31.660 \longrightarrow 01:38:34.710$ Would you like to comment on that? Sure.

NOTE Confidence: 0.8374126625

01:38:36.940 --> 01:38:41.180 Am I muted now? Nope, you're fine,

NOTE Confidence: 0.8374126625

 $01:38:41.180 \longrightarrow 01:38:43.634$ so supplemental screening is meant for

NOTE Confidence: 0.8374126625

 $01:38:43.634 \longrightarrow 01:38:46.350$ women who have dense breasts where

NOTE Confidence: 0.8374126625

 $01:38:46.350 \longrightarrow 01:38:49.368$ traditional mammography is not as sensitive.

NOTE Confidence: 0.8374126625

 $01:38:49.370 \longrightarrow 01:38:52.286$ Supplemental screening can be with whole

NOTE Confidence: 0.8374126625

 $01:38:52.286 \longrightarrow 01:38:55.119$ breast ultrasound or with breast MRI.

NOTE Confidence: 0.8374126625

 $01:38:55.120 \longrightarrow 01:38:56.680$ Connecticut is unique in the

NOTE Confidence: 0.8374126625

 $01:38:56.680 \longrightarrow 01:38:58.713$ country that the first dense breast

NOTE Confidence: 0.8374126625

 $01{:}38{:}58.713 \dashrightarrow 01{:}39{:}00.768$ legislation was passed in Connecticut,

NOTE Confidence: 0.8374126625

 $01:39:00.770 \longrightarrow 01:39:02.204$ and immediately Connecticut

NOTE Confidence: 0.8374126625

 $01{:}39{:}02.204 \dashrightarrow 01{:}39{:}04.594$ radiologists jumped on using whole

NOTE Confidence: 0.8374126625

 $01:39:04.594 \longrightarrow 01:39:06.533$ breast ultrasound for supplemental

NOTE Confidence: 0.8374126625

 $01{:}39{:}06.533 \dashrightarrow 01{:}39{:}08.365$ screening for those patients.

 $01:39:08.370 \longrightarrow 01:39:10.170$ And so there's a very.

NOTE Confidence: 0.8374126625

 $01:39:10.170 \longrightarrow 01:39:11.910$ Deep clinical experience here

NOTE Confidence: 0.8374126625

 $01:39:11.910 \longrightarrow 01:39:13.650$ with supplemental screening with

NOTE Confidence: 0.8374126625

 $01:39:13.650 \longrightarrow 01:39:15.220$ whole breast ultrasound.

NOTE Confidence: 0.8374126625

01:39:15.220 --> 01:39:17.698 Other parts of the country have moved

NOTE Confidence: 0.8374126625

 $01:39:17.698 \longrightarrow 01:39:19.715$ more towards using breast MRI which

NOTE Confidence: 0.8374126625

01:39:19.715 --> 01:39:22.300 is a much more costly and much less

NOTE Confidence: 0.8374126625

 $01:39:22.300 \longrightarrow 01:39:24.325$ specific modality because they just

NOTE Confidence: 0.8374126625

01:39:24.325 --> 01:39:26.562 don't have the clinical experience

NOTE Confidence: 0.8374126625

 $01:39:26.562 \longrightarrow 01:39:28.927$ that you have at Connecticut.

NOTE Confidence: 0.8374126625

 $01:39:28.930 \longrightarrow 01:39:30.682$ And so the whole breast ultrasound

NOTE Confidence: 0.8374126625

 $01:39:30.682 \longrightarrow 01:39:32.795$ should only be used as a screening

NOTE Confidence: 0.8374126625

 $01{:}39{:}32.795 \dashrightarrow 01{:}39{:}34.577$ modality for women who have dense

NOTE Confidence: 0.8374126625

 $01:39:34.577 \longrightarrow 01:39:36.668$ breast tissue or for or who are at

NOTE Confidence: 0.8374126625

 $01:39:36.668 \longrightarrow 01:39:38.030$ increased risk for breast cancer.

 $01:39:41.090 \longrightarrow 01:39:43.160$ Alright, thank you so much.

NOTE Confidence: 0.874942472

01:39:43.160 --> 01:39:44.745 It doesn't look like we've

NOTE Confidence: 0.874942472

 $01:39:44.745 \longrightarrow 01:39:46.013$ received any more questions,

NOTE Confidence: 0.874942472

 $01:39:46.020 \longrightarrow 01:39:47.721$ so I think it will end for

NOTE Confidence: 0.874942472

 $01:39:47.721 \longrightarrow 01:39:49.089$ the night since it's late.

NOTE Confidence: 0.874942472

 $01:39:49.090 \longrightarrow 01:39:50.602$ Thank you all again for speaking

NOTE Confidence: 0.874942472

 $01:39:50.602 \longrightarrow 01:39:52.690$ with us to night. Thank you.

NOTE Confidence: 0.818875522

 $01:39:53.640 \longrightarrow 01:39:56.000$ Thanks, Claire, thank you all. Thank you.