WEBVTT

 $00:00:00.000 \longrightarrow 00:00:03.198$ Funding for Yale Cancer Answers is

NOTE Confidence: 0.934368003636363

 $00:00:03.198 \dashrightarrow 00:00:06.240$ provided by Smilow Cancer Hospital.

NOTE Confidence: 0.934368003636363

 $00:00:06.240 \longrightarrow 00:00:08.260$ Welcome to Yale Cancer Answers

NOTE Confidence: 0.934368003636363

 $00:00:08.260 \longrightarrow 00:00:10.280$ with Doctor Anees Chappar.

NOTE Confidence: 0.934368003636363

00:00:10.280 --> 00:00:12.150 Yale Cancer Answers features the

NOTE Confidence: 0.934368003636363

00:00:12.150 --> 00:00:13.646 latest information on cancer

NOTE Confidence: 0.934368003636363

 $00:00:13.646 \longrightarrow 00:00:15.550$ care by welcoming oncologists and

NOTE Confidence: 0.934368003636363

 $00{:}00{:}15.550 \dashrightarrow 00{:}00{:}17.758$ specialists who are on the forefront

NOTE Confidence: 0.934368003636363

00:00:17.819 --> 00:00:19.517 of the battle to fight cancer.

NOTE Confidence: 0.934368003636363

 $00{:}00{:}19.520 \dashrightarrow 00{:}00{:}21.776$ This week it's a conversation about

NOTE Confidence: 0.934368003636363

 $00:00:21.776 \longrightarrow 00:00:24.240$ cervical cancer with Doctor Mitchell Clark.

NOTE Confidence: 0.934368003636363

00:00:24.240 --> 00:00:25.890 Doctor Clark is an assistant

NOTE Confidence: 0.934368003636363

 $00{:}00{:}25.890 \dashrightarrow 00{:}00{:}27.292$ professor of obstetrics, gynecology,

NOTE Confidence: 0.934368003636363

 $00{:}00{:}27.292 \dashrightarrow 00{:}00{:}28.940$ and Reproductive sciences at

NOTE Confidence: 0.934368003636363

00:00:28.940 --> 00:00:31.000 the Yale School of Medicine,

00:00:31.000 --> 00:00:32.775 where Doctor Chagpar is a

NOTE Confidence: 0.934368003636363

 $00{:}00{:}32.775 \dashrightarrow 00{:}00{:}34.195$ professor of surgical oncology.

NOTE Confidence: 0.962864102272727

 $00:00:36.280 \longrightarrow 00:00:38.114$ Mitchell, maybe we can start off by

NOTE Confidence: 0.962864102272727

 $00{:}00{:}38.114 \dashrightarrow 00{:}00{:}39.939$ you telling us a little bit more

NOTE Confidence: 0.962864102272727

 $00:00:39.939 \longrightarrow 00:00:41.839$ about yourself and what it is you do.

NOTE Confidence: 0.906610118823529

 $00:00:42.280 \longrightarrow 00:00:43.600$ Absolutely. I'm

NOTE Confidence: 0.906610118823529

 $00{:}00{:}43.600 \dashrightarrow 00{:}00{:}45.580$ originally from Canada and I've been

NOTE Confidence: 0.906610118823529

 $00:00:45.640 \longrightarrow 00:00:47.320$ here at Yale now for four years.

NOTE Confidence: 0.906610118823529

00:00:47.320 --> 00:00:50.360 Prior to that at the University of Toronto,

NOTE Confidence: 0.906610118823529

 $00:00:50.360 \longrightarrow 00:00:52.383$ where a lot of my research in

NOTE Confidence: 0.906610118823529

00:00:52.383 --> 00:00:53.793 clinical activity was around

NOTE Confidence: 0.906610118823529

00:00:53.793 --> 00:00:55.239 cervical cancer prevention,

NOTE Confidence: 0.906610118823529

 $00:00:55.240 \longrightarrow 00:00:56.860$ awareness and obviously treatment of

NOTE Confidence: 0.906610118823529

 $00{:}00{:}56.860 \dashrightarrow 00{:}00{:}58.480$ those diagnosed with the disease.

NOTE Confidence: 0.906610118823529 00:00:58.480 --> 00:00:59.524 Here at Yale

NOTE Confidence: 0.906610118823529

 $00{:}00{:}59.524 \dashrightarrow 00{:}01{:}00.916$ I'm a gynecologic oncologist

 $00{:}01{:}00.916 \dashrightarrow 00{:}01{:}03.628$ and part of a really robust

NOTE Confidence: 0.906610118823529

 $00{:}01{:}03.628 \to 00{:}01{:}05.224$ multidisciplinary team caring for

NOTE Confidence: 0.906610118823529

00:01:05.224 --> 00:01:07.359 women with gynecologic cancers,

NOTE Confidence: 0.906610118823529

 $00:01:07.360 \longrightarrow 00:01:08.839$ including cervical cancer.

NOTE Confidence: 0.929857663

 $00:01:09.000 \longrightarrow 00:01:10.920$ So let's talk a little bit

NOTE Confidence: 0.929857663

 $00:01:10.920 \longrightarrow 00:01:12.200$ more about cervical cancer.

NOTE Confidence: 0.929857663

00:01:12.200 --> 00:01:15.467 Can you kind of paint us a broad

NOTE Confidence: 0.929857663

00:01:15.467 --> 00:01:18.360 overview of what exactly is the disease?

NOTE Confidence: 0.929857663

00:01:18.360 --> 00:01:22.170 How common is it?

NOTE Confidence: 0.929857663

 $00:01:22.170 \longrightarrow 00:01:24.320$ What's the mortality from it?

NOTE Confidence: 0.929857663

 $00:01:24.320 \longrightarrow 00:01:25.902$ I feel like a lot of us

NOTE Confidence: 0.929857663

 $00:01:25.902 \longrightarrow 00:01:27.000$ talk about cervical cancer,

NOTE Confidence: 0.929857663

 $00{:}01{:}27.000 \dashrightarrow 00{:}01{:}29.040$ but we might not know the real details.

NOTE Confidence: 0.944545186190476 00:01:29.520 --> 00:01:30.468 Absolutely. NOTE Confidence: 0.944545186190476

 $00:01:30.468 \longrightarrow 00:01:32.364$ We're very fortunate in this country

 $00:01:32.364 \longrightarrow 00:01:34.140$ to have seen a dramatic decrease

NOTE Confidence: 0.944545186190476

 $00:01:34.140 \longrightarrow 00:01:35.960$ in the rates of cervical cancer,

NOTE Confidence: 0.944545186190476

 $00:01:35.960 \longrightarrow 00:01:38.360$ both in incidence and mortality.

NOTE Confidence: 0.944545186190476

00:01:38.360 --> 00:01:40.151 And a lot of that has to do with

NOTE Confidence: 0.944545186190476

00:01:40.151 --> 00:01:41.799 our robust screening program.

NOTE Confidence: 0.944545186190476

00:01:41.800 --> 00:01:44.473 So many women are aware of the Pap smear,

NOTE Confidence: 0.944545186190476

 $00:01:44.480 \longrightarrow 00:01:46.598$ something that they talk very often

NOTE Confidence: 0.944545186190476

 $00:01:46.598 \longrightarrow 00:01:48.653$ with their gynecologists with and the

NOTE Confidence: 0.944545186190476

 $00{:}01{:}48.653 \longrightarrow 00{:}01{:}50.704$ design around that is to prevent these

NOTE Confidence: 0.944545186190476

 $00:01:50.704 \longrightarrow 00:01:52.387$ cancers and to detect them before

NOTE Confidence: 0.944545186190476

 $00{:}01{:}52.387 \dashrightarrow 00{:}01{:}54.400$ they even have a chance to develop.

NOTE Confidence: 0.944545186190476

 $00:01:54.400 \longrightarrow 00:01:56.100$ And so women will meet

NOTE Confidence: 0.944545186190476

 $00:01:56.100 \longrightarrow 00:01:57.120$ with their gynecologist,

NOTE Confidence: 0.944545186190476

 $00:01:57.120 \longrightarrow 00:01:59.272$ have a Pap smear performed in a certain

NOTE Confidence: 0.944545186190476

00:01:59.272 --> 00:02:01.556 interval of time and we try to detect these,

NOTE Confidence: 0.94454518619047600:02:01.560 --> 00:02:02.424 like I said,

 $00:02:02.424 \longrightarrow 00:02:04.440$ before we even develop into a cancer.

NOTE Confidence: 0.944545186190476

 $00:02:04.440 \longrightarrow 00:02:05.334$ Because of that,

NOTE Confidence: 0.944545186190476

 $00:02:05.334 \longrightarrow 00:02:07.122$ we've seen a real decrease in

NOTE Confidence: 0.944545186190476

 $00:02:07.122 \longrightarrow 00:02:08.798$ the rates of this disease.

NOTE Confidence: 0.944545186190476

 $00:02:08.800 \longrightarrow 00:02:11.368$ However, we do still continue to

NOTE Confidence: 0.944545186190476

00:02:11.368 --> 00:02:13.600 see patients present to the clinic,

NOTE Confidence: 0.944545186190476

 $00:02:13.600 \longrightarrow 00:02:15.105$ often those who are not up to

NOTE Confidence: 0.944545186190476

00:02:15.105 --> 00:02:16.280 date with their screening,

NOTE Confidence: 0.944545186190476

 $00:02:16.280 \longrightarrow 00:02:17.840$ not up to date with the Pap smear,

NOTE Confidence: 0.944545186190476

 $00{:}02{:}17.840 \dashrightarrow 00{:}02{:}19.500$ who have unfortunately gone on

NOTE Confidence: 0.944545186190476

 $00:02:19.500 \longrightarrow 00:02:21.160$ to develop a cervical cancer.

NOTE Confidence: 0.944545186190476

00:02:21.160 --> 00:02:22.189 Often times though,

NOTE Confidence: 0.944545186190476

 $00{:}02{:}22.189 \dashrightarrow 00{:}02{:}23.904$ these are still diagnosed at

NOTE Confidence: 0.944545186190476

 $00{:}02{:}23.904 \dashrightarrow 00{:}02{:}25.963$ early stage because unlike many

NOTE Confidence: 0.944545186190476

 $00:02:25.963 \longrightarrow 00:02:27.277$ other gynecologic cancers,

 $00:02:27.280 \longrightarrow 00:02:29.191$ they often have a symptom and for

NOTE Confidence: 0.944545186190476

 $00{:}02{:}29.191 \dashrightarrow 00{:}02{:}30.907$ many women that can be bleeding

NOTE Confidence: 0.944545186190476

 $00:02:30.907 \longrightarrow 00:02:32.581$ that is either irregular or out

NOTE Confidence: 0.944545186190476

 $00:02:32.581 \longrightarrow 00:02:34.200$ of sync with their menses,

NOTE Confidence: 0.944545186190476

 $00:02:34.200 \longrightarrow 00:02:35.952$ or bleeding in the post menopausal

NOTE Confidence: 0.944545186190476

 $00:02:35.952 \longrightarrow 00:02:37.559$ period when women have ceased

NOTE Confidence: 0.944545186190476

 $00:02:37.559 \longrightarrow 00:02:39.079$ having their menstrual period.

NOTE Confidence: 0.944545186190476

 $00:02:39.080 \longrightarrow 00:02:40.394$ Because of this,

NOTE Confidence: 0.944545186190476

 $00:02:40.394 \longrightarrow 00:02:42.584$ women present early where treatment

NOTE Confidence: 0.944545186190476

 $00:02:42.584 \longrightarrow 00:02:44.480$ options continue to be very

NOTE Confidence: 0.944545186190476

 $00:02:44.480 \longrightarrow 00:02:46.160$ favorable and for most women,

NOTE Confidence: 0.944545186190476

 $00:02:46.160 \longrightarrow 00:02:47.913$ they will experience a good

NOTE Confidence: 0.944545186190476

 $00:02:47.913 \longrightarrow 00:02:49.878$ outcome from their cancer care,

NOTE Confidence: 0.944545186190476

 $00:02:49.880 \longrightarrow 00:02:52.057$ meaning that we're able to treat these

NOTE Confidence: 0.944545186190476

 $00:02:52.057 \longrightarrow 00:02:53.396$ with curative, definitive intent.

NOTE Confidence: 0.944545186190476 00:02:53.396 --> 00:02:53.754 However,

 $00:02:53.754 \longrightarrow 00:02:56.260$ of course we will see and care

NOTE Confidence: 0.944545186190476

 $00{:}02{:}56.324 \rightarrow 00{:}02{:}58.586$ for women who present with more

NOTE Confidence: 0.944545186190476

 $00:02:58.586 \longrightarrow 00:02:59.717$ advanced stage disease, and

 $00:03:02.240 \longrightarrow 00:03:03.524$ there have never been as many

NOTE Confidence: 0.944545186190476

 $00:03:03.524 \longrightarrow 00:03:05.047$ options now as there have been

NOTE Confidence: 0.944545186190476

 $00:03:05.047 \longrightarrow 00:03:06.482$ in the past to care for those

NOTE Confidence: 0.944545186190476

 $00:03:06.534 \longrightarrow 00:03:08.074$ women who unfortunately do come

NOTE Confidence: 0.944545186190476

 $00:03:08.074 \longrightarrow 00:03:08.998$ with advanced disease.

NOTE Confidence: 0.885203705

 $00:03:10.320 \longrightarrow 00:03:13.720$ So let's talk a little bit more about

NOTE Confidence: 0.885203705

 $00:03:13.720 \longrightarrow 00:03:16.252$ how we can detect

NOTE Confidence: 0.885203705

 $00:03:16.252 \longrightarrow 00:03:17.518$ cervical cancer early.

NOTE Confidence: 0.885203705

 $00{:}03{:}17.520 \dashrightarrow 00{:}03{:}19.200$ Can you talk a little bit more

NOTE Confidence: 0.885203705

 $00:03:19.200 \longrightarrow 00:03:20.651$ about some of the guidelines

NOTE Confidence: 0.885203705

00:03:20.651 --> 00:03:21.995 in terms of screening?

NOTE Confidence: 0.914042474761905

 $00:03:22.360 \longrightarrow 00:03:24.385$ Absolutely. We're very fortunate that

NOTE Confidence: 0.914042474761905

 $00:03:24.385 \longrightarrow 00:03:27.671$ this is one cancer where there is robust

00:03:27.671 --> 00:03:30.200 data to support the use of screening.

NOTE Confidence: 0.914042474761905

 $00{:}03{:}30.200 \dashrightarrow 00{:}03{:}31.898$ Unlike other cancers like ovarian or

NOTE Confidence: 0.914042474761905

 $00{:}03{:}31.898 \dashrightarrow 00{:}03{:}33.800$ uterine where we don't have that data,

NOTE Confidence: 0.914042474761905

 $00:03:33.800 \longrightarrow 00:03:36.124$ the Pap smear has really been effective

NOTE Confidence: 0.914042474761905

 $00:03:36.124 \longrightarrow 00:03:38.152$ at detecting pre invasive disease or

NOTE Confidence: 0.914042474761905

 $00{:}03{:}38.152 \dashrightarrow 00{:}03{:}40.399$ changes in the cells of the cervix

NOTE Confidence: 0.914042474761905

 $00:03:40.459 \longrightarrow 00:03:42.475$ before they develop into a cancer.

NOTE Confidence: 0.914042474761905

 $00:03:42.480 \longrightarrow 00:03:45.189$ One of the most important discoveries has

NOTE Confidence: 0.914042474761905

 $00{:}03{:}45.189 \dashrightarrow 00{:}03{:}47.915$ been the association of the HPV virus in

NOTE Confidence: 0.914042474761905

 $00:03:47.915 \longrightarrow 00:03:50.158$ its development and role in cervical cancer.

NOTE Confidence: 0.914042474761905

00:03:50.158 --> 00:03:53.060 And so beginning all the way back in

NOTE Confidence: 0.914042474761905

 $00:03:53.060 \longrightarrow 00:03:55.895$ adolescence now we know it's important to

NOTE Confidence: 0.914042474761905

 $00{:}03{:}55.895 \dashrightarrow 00{:}03{:}57.988$ offer vaccination to both boys and girls

NOTE Confidence: 0.914042474761905

 $00:03:57.988 \longrightarrow 00:04:01.732$ ages 9 to 11 to help prevent HPV infection

NOTE Confidence: 0.914042474761905

 $00:04:01.732 \longrightarrow 00:04:03.840$ and eliminate or dramatically reduce

 $00:04:03.840 \longrightarrow 00:04:05.800$ that risk of developing down the road.

NOTE Confidence: 0.914042474761905

 $00{:}04{:}05.800 \dashrightarrow 00{:}04{:}07.752$ And so that data is very strong and

NOTE Confidence: 0.914042474761905

 $00:04:07.752 \longrightarrow 00:04:09.360$ supported by a number of different

NOTE Confidence: 0.914042474761905

 $00:04:09.360 \longrightarrow 00:04:11.528$ medical groups including Pediatrics.

NOTE Confidence: 0.914042474761905

 $00:04:11.528 \longrightarrow 00:04:14.460$ For those women who then either

NOTE Confidence: 0.914042474761905

00:04:14.460 --> 00:04:16.000 do or do not receive the vaccine,

NOTE Confidence: 0.914042474761905

 $00:04:16.000 \longrightarrow 00:04:18.254$ the guidelines for screening with the Pap

NOTE Confidence: 0.914042474761905

 $00{:}04{:}18.254 \dashrightarrow 00{:}04{:}20.517$ smear are still the same at this time.

NOTE Confidence: 0.914042474761905

 $00:04:20.520 \longrightarrow 00:04:22.560$ That may change down the road,

NOTE Confidence: 0.914042474761905

 $00:04:22.560 \longrightarrow 00:04:25.032$ but for now we've come up with

NOTE Confidence: 0.914042474761905

 $00{:}04{:}25.032 \dashrightarrow 00{:}04{:}26.849$ a combination test where we screen

NOTE Confidence: 0.914042474761905

 $00:04:26.849 \longrightarrow 00:04:29.359$ for both the HPV virus in the cells

NOTE Confidence: 0.914042474761905

 $00:04:29.360 \longrightarrow 00:04:31.328$ and the presence of any microscopic

NOTE Confidence: 0.914042474761905

 $00:04:31.328 \longrightarrow 00:04:33.184$ changes when our cytopathologists

NOTE Confidence: 0.914042474761905

 $00:04:33.184 \longrightarrow 00:04:35.696$ look under the microscope and if

NOTE Confidence: 0.914042474761905

 $00:04:35.696 \longrightarrow 00:04:37.424$ women have negative results from both

 $00{:}04{:}37.424 \dashrightarrow 00{:}04{:}38.840$ the HPV and the cells,

NOTE Confidence: 0.914042474761905

 $00:04:38.840 \longrightarrow 00:04:40.848$ they're actually eligible to

NOTE Confidence: 0.914042474761905

 $00:04:40.848 \longrightarrow 00:04:43.358$ be screened every five years.

NOTE Confidence: 0.914042474761905

 $00:04:43.360 \longrightarrow 00:04:45.844$ And for a lot of patients and for

NOTE Confidence: 0.914042474761905

 $00:04:45.844 \longrightarrow 00:04:48.245$ women that has been a big change from

NOTE Confidence: 0.914042474761905

 $00:04:48.245 \longrightarrow 00:04:50.520$ what used to be an annual screening.

NOTE Confidence: 0.914042474761905

 $00:04:50.520 \longrightarrow 00:04:53.248$ But we know that the association of a

NOTE Confidence: 0.914042474761905

 $00:04:53.248 \longrightarrow 00:04:55.692$ negative HPV test with that screening

NOTE Confidence: 0.914042474761905

 $00{:}04{:}55.692 \dashrightarrow 00{:}04{:}58.230$ confers a strong degree of protection

NOTE Confidence: 0.914042474761905

 $00{:}04{:}58.299 \dashrightarrow 00{:}05{:}00.955$ over the course of the next five years.

NOTE Confidence: 0.914042474761905

 $00:05:00.960 \longrightarrow 00:05:02.570$ And so women can feel reassured that

NOTE Confidence: 0.914042474761905

 $00:05:02.570 \longrightarrow 00:05:04.459$ they have a very low likelihood of going

NOTE Confidence: 0.914042474761905

 $00{:}05{:}04.459 \dashrightarrow 00{:}05{:}06.421$ on to develop a pre cancer or cancer

NOTE Confidence: 0.914042474761905

 $00:05:06.421 \longrightarrow 00:05:10.280$ of the cervix in the subsequent five years.

NOTE Confidence: 0.914042474761905

 $00:05:10.280 \longrightarrow 00:05:12.920$ In terms of detection though,

00:05:12.920 --> 00:05:13.964 and moving beyond screening,

NOTE Confidence: 0.914042474761905

 $00{:}05{:}13.964 \dashrightarrow 00{:}05{:}15.530$ patients need to present to the

NOTE Confidence: 0.914042474761905

 $00:05:15.574 \longrightarrow 00:05:17.242$ gynecologist in the interim if they

NOTE Confidence: 0.914042474761905

00:05:17.242 --> 00:05:18.890 feel that they're developing any of

NOTE Confidence: 0.914042474761905

 $00:05:18.890 \longrightarrow 00:05:20.354$ those symptoms I talked about earlier.

NOTE Confidence: 0.966519037

 $00{:}05{:}22.120 \dashrightarrow 00{:}05{:}25.004$ And so can you talk a little

NOTE Confidence: 0.966519037

00:05:25.004 --> 00:05:26.898 bit more about HPV vaccinations?

NOTE Confidence: 0.966519037

00:05:26.898 --> 00:05:30.411 I mean, it seems like we talk a lot about

NOTE Confidence: 0.966519037

 $00:05:30.411 \longrightarrow 00:05:33.232$ HPV in the association with cervical cancer,

NOTE Confidence: 0.966519037

 $00:05:33.240 \longrightarrow 00:05:36.120$ but some people might still be

NOTE Confidence: 0.966519037

00:05:36.120 --> 00:05:38.040 unaware about HPV vaccination,

NOTE Confidence: 0.966519037

 $00:05:38.040 \longrightarrow 00:05:40.632$ who should get it, when they should get it.

NOTE Confidence: 0.966519037

 $00:05:40.640 \longrightarrow 00:05:44.090$ And I understand that now the age guidelines

NOTE Confidence: 0.966519037

 $00:05:44.090 \longrightarrow 00:05:46.515$ for HPV vaccination have expanded.

NOTE Confidence: 0.966519037

 $00:05:46.520 \longrightarrow 00:05:48.320$ Can you talk a little bit more about that?

NOTE Confidence: 0.9299149475

 $00:05:48.520 \longrightarrow 00:05:51.012$ Absolutely. This is one of my favorite

 $00{:}05{:}51.012 \dashrightarrow 00{:}05{:}53.488$ topics because I think it's a unique

NOTE Confidence: 0.9299149475

 $00{:}05{:}53.488 \dashrightarrow 00{:}05{:}56.240$ example of a vaccine that can be thought

NOTE Confidence: 0.9299149475

 $00{:}05{:}56.314 \dashrightarrow 00{:}05{:}58.678$ of as a cancer prevention strategy.

NOTE Confidence: 0.9299149475

 $00:05:58.680 \longrightarrow 00:06:00.997$ I think when this first came out

NOTE Confidence: 0.9299149475

 $00:06:01.000 \longrightarrow 00:06:03.118$ in the early 2000s,

NOTE Confidence: 0.9299149475

 $00{:}06{:}03.120 \dashrightarrow 00{:}06{:}05.451$ there was a lot of reluctance around

NOTE Confidence: 0.9299149475

 $00:06:05.451 \longrightarrow 00:06:07.803$ providing a vaccine that was associated

NOTE Confidence: 0.9299149475

 $00:06:07.803 \longrightarrow 00:06:09.958$ with a sexually transmitted infection.

NOTE Confidence: 0.9299149475

 $00:06:09.960 \longrightarrow 00:06:12.894$ However, we've seen just a dramatic

NOTE Confidence: 0.9299149475

 $00{:}06{:}12.894 \dashrightarrow 00{:}06{:}15.880$ reduction in HPV associated cancers in

NOTE Confidence: 0.9299149475

 $00{:}06{:}15.880 \dashrightarrow 00{:}06{:}18.680$ patients who use this vaccine early on.

NOTE Confidence: 0.9299149475

 $00:06:18.680 \longrightarrow 00:06:21.340$ And so the ideal time to offer

NOTE Confidence: 0.9299149475

 $00{:}06{:}21.340 \dashrightarrow 00{:}06{:}23.802$ vaccination is really in that a dolescent

NOTE Confidence: 0.9299149475

 $00:06:23.802 \longrightarrow 00:06:26.714$ period prior to first exposure to HPV.

NOTE Confidence: 0.9299149475

 $00:06:26.720 \longrightarrow 00:06:28.316$ And so we typically say between

 $00:06:28.316 \longrightarrow 00:06:30.719$ the ages of 9 to 11 and I

NOTE Confidence: 0.9299149475

 $00{:}06{:}30.719 \dashrightarrow 00{:}06{:}31.995$ would strongly encourage women,

NOTE Confidence: 0.9299149475

00:06:32.000 --> 00:06:32.938 men, parents,

NOTE Confidence: 0.9299149475

 $00:06:32.938 \longrightarrow 00:06:35.752$ grandparents, to have a very frank

NOTE Confidence: 0.9299149475

 $00:06:35.752 \longrightarrow 00:06:38.169$ conversation with the pediatricians about

NOTE Confidence: 0.9299149475

00:06:38.169 --> 00:06:41.452 ensuring that the HPV vaccine is included

NOTE Confidence: 0.9299149475

 $00:06:41.525 \longrightarrow 00:06:44.316$ in the vaccine series for girls and boys.

NOTE Confidence: 0.9299149475

 $00:06:44.316 \longrightarrow 00:06:46.696$ We know from some internal data in

NOTE Confidence: 0.9299149475

 $00:06:46.696 \longrightarrow 00:06:49.066$ the state of Connecticut that the

NOTE Confidence: 0.9299149475

 $00{:}06{:}49.066 \dashrightarrow 00{:}06{:}51.179$ other vaccines recommended at 9 to 11

NOTE Confidence: 0.9299149475

00:06:51.179 --> 00:06:53.195 have an uptake rate over 90%.

NOTE Confidence: 0.9299149475

 $00:06:53.200 \longrightarrow 00:06:55.558$ But completion of the HPV vaccine

NOTE Confidence: 0.9299149475

00:06:55.558 --> 00:06:57.897 series in our state remains very

NOTE Confidence: 0.9299149475

 $00:06:57.897 \longrightarrow 00:06:59.955$ low at around 50 to 60%.

NOTE Confidence: 0.9299149475

 $00:06:59.960 \longrightarrow 00:07:01.560$ And there's really no reason

NOTE Confidence: 0.9299149475

 $00:07:01.560 \longrightarrow 00:07:02.840$ for this other than

 $00:07:03.762 \longrightarrow 00:07:05.606$ some misinformation and reluctance

NOTE Confidence: 0.9299149475

 $00{:}07{:}05.606 \dashrightarrow 00{:}07{:}07.882$ on providers and sometimes parents

NOTE Confidence: 0.9299149475

 $00{:}07{:}07.882 \dashrightarrow 00{:}07{:}10.437$ in seeing the benefit to the vaccine.

NOTE Confidence: 0.9299149475

00:07:10.440 --> 00:07:12.520 Although I don't treat head and neck cancer,

NOTE Confidence: 0.9299149475

 $00:07:12.520 \longrightarrow 00:07:14.788$ we are seeing a really robust set

NOTE Confidence: 0.9299149475

00:07:14.788 --> 00:07:16.590 of studies coming out demonstrating

NOTE Confidence: 0.9299149475

 $00:07:16.590 \longrightarrow 00:07:18.876$ the association of HPV with cancers

NOTE Confidence: 0.9299149475

 $00:07:18.876 \longrightarrow 00:07:20.600$ of the head and neck.

NOTE Confidence: 0.9299149475

 $00{:}07{:}20.600 \dashrightarrow 00{:}07{:}23.180$ And just another reason to reinforce

NOTE Confidence: 0.9299149475

 $00:07:23.180 \longrightarrow 00:07:25.310$ the parents and to children who are

NOTE Confidence: 0.9299149475

 $00{:}07{:}25.310 \dashrightarrow 00{:}07{:}26.926$ taking the vaccine that we should

NOTE Confidence: 0.9299149475

 $00:07:26.926 \longrightarrow 00:07:28.984$ really look at this as a cancer

NOTE Confidence: 0.9299149475

 $00:07:28.984 \longrightarrow 00:07:30.543$ prevention strategy as opposed to

NOTE Confidence: 0.9299149475

 $00:07:30.543 \longrightarrow 00:07:32.063$ something that is associated with

NOTE Confidence: 0.9299149475

 $00:07:32.063 \longrightarrow 00:07:33.736$ an infection that's acquired through

NOTE Confidence: 0.9299149475

 $00:07:33.736 \longrightarrow 00:07:34.440$ sexual activity.

 $00:07:35.400 \longrightarrow 00:07:40.314$ The reluctance on

NOTE Confidence: 0.899574332222222

 $00:07:40.314 \longrightarrow 00:07:45.078$ people to take this vaccine I think is

NOTE Confidence: 0.899574332222222

 $00:07:45.078 \longrightarrow 00:07:45.996$ really concerning.

NOTE Confidence: 0.899574332222222

 $00:07:46.000 \longrightarrow 00:07:47.666$ And we've seen this not only

NOTE Confidence: 0.899574332222222

00:07:47.666 --> 00:07:49.719 in our own state as you mentioned,

NOTE Confidence: 0.899574332222222

 $00:07:49.720 \longrightarrow 00:07:53.080$ but even globally.

NOTE Confidence: 0.899574332222222 00:07:53.080 --> 00:07:55.720 And I think NOTE Confidence: 0.899574332222222

00:07:55.720 --> 00:07:58.216 part of it is that

NOTE Confidence: 0.899574332222222

00:07:58.216 --> 00:08:00.280 parents may say,

NOTE Confidence: 0.899574332222222

 $00:08:00.280 \longrightarrow 00:08:03.220$ my child is not going to engage

NOTE Confidence: 0.899574332222222

00:08:03.220 --> 00:08:06.320 in premarital sexual activity.

NOTE Confidence: 0.899574332222222

 $00{:}08{:}06.320 \dashrightarrow 00{:}08{:}09.981$ And so why should I vaccinate them

NOTE Confidence: 0.899574332222222

 $00:08:09.981 \longrightarrow 00:08:13.200$ between the ages of nine and 11?

NOTE Confidence: 0.899574332222222

00:08:13.200 --> 00:08:15.384 Can you talk a little

NOTE Confidence: 0.899574332222222

 $00:08:15.384 \longrightarrow 00:08:17.160$ bit more about about that?

00:08:17.760 --> 00:08:18.972 Absolutely,

NOTE Confidence: 0.857562113333333

 $00:08:18.972 \longrightarrow 00:08:21.396$ it's parents and it's also providers.

NOTE Confidence: 0.857562113333333

00:08:21.400 --> 00:08:23.256 We've done a lot of work internally

NOTE Confidence: 0.857562113333333

 $00:08:23.256 \longrightarrow 00:08:25.040$ here in the state of Connecticut.

NOTE Confidence: 0.857562113333333

 $00:08:25.040 \longrightarrow 00:08:27.096$ I work with the Department of Health on

NOTE Confidence: 0.857562113333333

00:08:27.096 --> 00:08:30.825 this in educating both our Pediatrics

NOTE Confidence: 0.857562113333333

00:08:30.825 --> 00:08:32.852 colleagues around ways to bring

NOTE Confidence: 0.857562113333333

 $00:08:32.852 \longrightarrow 00:08:34.517$ up these discussions with parents.

NOTE Confidence: 0.857562113333333

 $00:08:34.520 \longrightarrow 00:08:35.636$ There's a lot of

NOTE Confidence: 0.857562113333333

 $00:08:35.640 \longrightarrow 00:08:37.848$ people who still feel uncomfortable for some

NOTE Confidence: 0.857562113333333

 $00:08:37.848 \longrightarrow 00:08:40.124$ reason or another addressing a sexually

NOTE Confidence: 0.857562113333333

 $00:08:40.124 \longrightarrow 00:08:43.559$ related topic in a patient of that age.

NOTE Confidence: 0.857562113333333

 $00:08:43.560 \longrightarrow 00:08:46.350$ But the data really speaks for itself and I

NOTE Confidence: 0.857562113333333

00:08:46.350 --> 00:08:49.260 think changing the narrative like I said,

NOTE Confidence: 0.857562113333333

 $00:08:49.260 \longrightarrow 00:08:52.347$ to reinforcing this is to prevent a

NOTE Confidence: 0.857562113333333

 $00:08:52.347 \longrightarrow 00:08:55.434$ cancer far down the road.

00:08:55.440 --> 00:08:58.736 You know, we're not looking to provide

NOTE Confidence: 0.857562113333333

 $00:08:58.736 \longrightarrow 00:09:01.472$ some sort of assurance to adolescents

NOTE Confidence: 0.857562113333333

 $00{:}09{:}01.472 \dashrightarrow 00{:}09{:}04.132$ that are having unprotected sex that it is safe

NOTE Confidence: 0.857562113333333

 $00:09:04.132 \longrightarrow 00:09:05.756$ because they're vaccinated.

NOTE Confidence: 0.857562113333333

 $00:09:05.760 \longrightarrow 00:09:07.050$ But really what we are looking

NOTE Confidence: 0.857562113333333

 $00:09:07.050 \longrightarrow 00:09:08.439$ at is the long game here,

NOTE Confidence: 0.857562113333333

 $00:09:08.440 \longrightarrow 00:09:10.960$ which is to prevent a cancer,

NOTE Confidence: 0.857562113333333

00:09:10.960 --> 00:09:12.480 a multitude of cancers actually,

NOTE Confidence: 0.857562113333333

 $00:09:12.480 \longrightarrow 00:09:14.820$ not just cervical cancer that

NOTE Confidence: 0.857562113333333

 $00:09:14.820 \longrightarrow 00:09:17.160$ could be really life limiting.

NOTE Confidence: 0.857562113333333

 $00:09:17.160 \longrightarrow 00:09:19.592$ And looking at the sort of long

NOTE Confidence: 0.857562113333333

 $00:09:19.592 \longrightarrow 00:09:21.458$ term investment of this very safe

NOTE Confidence: 0.8575621133333333

 $00{:}09{:}21.458 \dashrightarrow 00{:}09{:}23.040$ vaccine that has now been around

NOTE Confidence: 0.857562113333333

 $00:09:23.040 \longrightarrow 00:09:24.320$ for over a decade.

 $00:09:29.440 \longrightarrow 00:09:30.920$ If somebody is listening

NOTE Confidence: 0.897982256

 $00:09:30.920 \longrightarrow 00:09:32.736$ to this and they think, OK,

 $00:09:32.736 \longrightarrow 00:09:35.424$ I get it, but my child is now

NOTE Confidence: 0.897982256

 $00:09:35.424 \longrightarrow 00:09:38.379$ beyond the age of 9 to 11 and maybe

NOTE Confidence: 0.897982256

 $00:09:38.379 \longrightarrow 00:09:40.628$ they're in their late teens,

NOTE Confidence: 0.897982256

 $00:09:40.628 \longrightarrow 00:09:42.913$ maybe even their early 20s,

NOTE Confidence: 0.897982256

 $00:09:42.920 \longrightarrow 00:09:44.396$ can they still get the vaccine?

NOTE Confidence: 0.96292017

 $00:09:44.720 \longrightarrow 00:09:47.653$ Absolutely. We've got a great

NOTE Confidence: 0.96292017

 $00:09:47.653 \longrightarrow 00:09:49.651$ data set and clinical trials

NOTE Confidence: 0.96292017

 $00{:}09{:}49.651 \dashrightarrow 00{:}09{:}51.004$ showing effectiveness in what

NOTE Confidence: 0.96292017

 $00{:}09{:}51.004 \dashrightarrow 00{:}09{:}52.798$ we're calling the catch up cohort.

NOTE Confidence: 0.96292017

 $00:09:52.800 \longrightarrow 00:09:54.438$ So those are a group of people

NOTE Confidence: 0.96292017

 $00{:}09{:}54.438 \dashrightarrow 00{:}09{:}56.049$ who did not have the opportunity

NOTE Confidence: 0.96292017

 $00:09:56.049 \longrightarrow 00:09:58.037$ or maybe chose not to take the

NOTE Confidence: 0.96292017

 $00{:}09{:}58.095 \dashrightarrow 00{:}10{:}00.237$ vaccine in the earlier years

NOTE Confidence: 0.96292017

 $00:10:00.237 \dashrightarrow 00:10:01.596$ when it's initially recommended.

NOTE Confidence: 0.96292017

 $00:10:01.596 \longrightarrow 00:10:04.212$ But we do still see statistically

 $00:10:04.212 \longrightarrow 00:10:06.334$ significant benefits in a reduction

NOTE Confidence: 0.96292017

 $00{:}10{:}06.334 \dashrightarrow 00{:}10{:}08.204$ of HPV associated illnesses and

NOTE Confidence: 0.96292017

00:10:08.204 --> 00:10:10.436 cancers in those people taking the

NOTE Confidence: 0.96292017

 $00:10:10.436 \longrightarrow 00:10:12.879$ vaccine really up until their mid 20s.

NOTE Confidence: 0.96292017

 $00:10:12.880 \longrightarrow 00:10:14.770$ There is some new data to say

NOTE Confidence: 0.96292017

 $00:10:14.770 \longrightarrow 00:10:16.855$ that up until the sort of early

NOTE Confidence: 0.96292017

 $00:10:16.855 \longrightarrow 00:10:18.360$ 40s there may be benefit,

NOTE Confidence: 0.96292017

00:10:18.360 --> 00:10:20.286 but it's quite individualized and the

NOTE Confidence: 0.96292017

 $00{:}10{:}20.286 \dashrightarrow 00{:}10{:}22.164$ recommendation is for for people to

NOTE Confidence: 0.96292017

 $00:10:22.164 \longrightarrow 00:10:24.054$ discuss with their provider to see if

NOTE Confidence: 0.96292017

 $00:10:24.054 \longrightarrow 00:10:25.957$ maybe they would be a good candidate.

NOTE Confidence: 0.96292017

 $00:10:25.960 \longrightarrow 00:10:27.628$ But if we're looking at the

NOTE Confidence: 0.96292017

00:10:27.628 --> 00:10:29.670 cost benefit here or

NOTE Confidence: 0.96292017

 $00:10:29.670 \longrightarrow 00:10:30.834$ the risk benefit analysis,

NOTE Confidence: 0.96292017

 $00:10:30.840 \longrightarrow 00:10:32.440$ this vaccine is very safe.

NOTE Confidence: 0.96292017

 $00{:}10{:}32.440 \dashrightarrow 00{:}10{:}34.757$ We don't see any major safety signals.

00:10:34.760 --> 00:10:37.248 This has been around for a long time and

NOTE Confidence: 0.96292017

 $00{:}10{:}37.248 \operatorname{--}{>} 00{:}10{:}39.872$ if you can confer any reduction in risk,

NOTE Confidence: 0.96292017

 $00:10:39.880 \longrightarrow 00:10:42.211$ I think it's a really worthwhile

NOTE Confidence: 0.96292017

00:10:42.211 --> 00:10:44.288 conversation for both these teens

NOTE Confidence: 0.96292017

 $00{:}10{:}44.288 \to 00{:}10{:}46.718$ and 20 year olds to

NOTE Confidence: 0.96292017

 $00:10:49.742 \longrightarrow 00:10:50.998$ have with their doctors.

NOTE Confidence: 0.9442628775

 $00:10:52.240 \longrightarrow 00:10:54.565$ Is the vaccine covered by

NOTE Confidence: 0.9442628775

 $00:10:54.565 \longrightarrow 00:10:56.320$ most health plans?

NOTE Confidence: 0.913681879166667

 $00{:}10{:}56.320 \dashrightarrow 00{:}10{:}58.990$ Yes, most health plans do cover this

NOTE Confidence: 0.913681879166667

 $00:10:58.990 \longrightarrow 00:11:01.797$ because it is recommended by both the

NOTE Confidence: 0.913681879166667

00:11:01.797 --> 00:11:04.179 CDC and many major organizations

NOTE Confidence: 0.913681879166667

00:11:04.179 --> 00:11:07.637 who make our sort of national

NOTE Confidence: 0.913681879166667

 $00{:}11{:}07.637 \dashrightarrow 00{:}11{:}09.275$ guidelines around vaccination.

NOTE Confidence: 0.913681879166667

 $00:11:09.280 \longrightarrow 00:11:11.352$ And in the state of Connecticut for

NOTE Confidence: 0.913681879166667

 $00:11:11.352 \longrightarrow 00:11:13.564$ certain age groups it's covered as well.

 $00:11:13.564 \longrightarrow 00:11:15.334$ So these are things

NOTE Confidence: 0.913681879166667

00:11:15.334 --> 00:11:16.624 that you should definitely bring

NOTE Confidence: 0.913681879166667

 $00:11:16.624 \longrightarrow 00:11:17.999$ up with your pediatrician.

NOTE Confidence: 0.913681879166667

 $00{:}11{:}18.000 \dashrightarrow 00{:}11{:}20.544$ And now we actually have a number of

NOTE Confidence: 0.913681879166667

 $00:11:20.544 \longrightarrow 00:11:22.418$ pharmacists and pharmacies that carry

NOTE Confidence: 0.913681879166667

00:11:22.418 --> 00:11:24.764 the vaccine and do not necessarily

NOTE Confidence: 0.913681879166667

 $00:11:24.764 \longrightarrow 00:11:27.000$ require the prescription of an MD.

NOTE Confidence: 0.913681879166667

00:11:27.000 --> 00:11:28.908 And so I think you certainly

NOTE Confidence: 0.913681879166667

 $00{:}11{:}28.908 \dashrightarrow 00{:}11{:}30.712$ have that conversation with your

NOTE Confidence: 0.913681879166667

 $00:11:30.712 \longrightarrow 00:11:32.119$ trusted healthcare provider.

NOTE Confidence: 0.913681879166667

 $00:11:32.120 \longrightarrow 00:11:33.320$ And for those healthcare

NOTE Confidence: 0.913681879166667

 $00:11:33.320 \longrightarrow 00:11:34.520$ providers out there listening,

NOTE Confidence: 0.913681879166667

00:11:34.520 --> 00:11:36.625 I cannot reinforce enough the

NOTE Confidence: 0.913681879166667

00:11:36.625 --> 00:11:38.309 importance of your strong

NOTE Confidence: 0.913681879166667

 $00:11:38.309 \longrightarrow 00:11:40.000$ recommendation to parents and kids.

NOTE Confidence: 0.913681879166667

 $00{:}11{:}40.000 \dashrightarrow 00{:}11{:}42.436$ We know that's the number one reason,

 $00:11:42.440 \longrightarrow 00:11:44.660$ or that is associated with vaccine

NOTE Confidence: 0.913681879166667

 $00:11:44.660 \longrightarrow 00:11:46.140$ uptake, is recommendation because

NOTE Confidence: 0.913681879166667

00:11:46.205 --> 00:11:48.085 you have that strong therapeutic

NOTE Confidence: 0.913681879166667

00:11:48.085 --> 00:11:49.965 relationship with your patients and

NOTE Confidence: 0.913681879166667

 $00{:}11{:}50.025 \dashrightarrow 00{:}11{:}51.925$ their families and to either seek this

NOTE Confidence: 0.913681879166667

00:11:51.925 --> 00:11:53.463 through the clinic that you see that

NOTE Confidence: 0.913681879166667

 $00:11:53.463 \longrightarrow 00:11:55.169$ you get carrying or to see go to

NOTE Confidence: 0.913681879166667

 $00{:}11{:}55.169 \dashrightarrow 00{:}11{:}56.639$ local pharmacy who has it in stock.

NOTE Confidence: 0.904871485882353

 $00{:}11{:}57.680 \dashrightarrow 00{:}12{:}00.102$ Is the vaccine given in one shot

NOTE Confidence: 0.904871485882353

 $00:12:00.102 \longrightarrow 00:12:03.061$ or is it multiple shots that you

NOTE Confidence: 0.904871485882353

 $00:12:03.061 \longrightarrow 00:12:05.800$ require to get immunity?

NOTE Confidence: 0.86624038

 $00{:}12{:}05.800 \dashrightarrow 00{:}12{:}08.304$ Great question. So it is designed to be a

NOTE Confidence: 0.86624038

 $00:12:08.304 \longrightarrow 00:12:10.391$ multi shot regimen depending on the

NOTE Confidence: 0.86624038

 $00:12:10.391 \dashrightarrow 00:12:13.159$ age whether it will be two or three.

NOTE Confidence: 0.86624038

00:12:13.160 --> 00:12:15.608 Although we have seen some data

00:12:15.608 --> 00:12:17.990 coming out of countries that are lower

NOTE Confidence: 0.86624038

 $00{:}12{:}17.990 \dashrightarrow 00{:}12{:}20.408$ middle income where access to a repeated

NOTE Confidence: 0.86624038

 $00:12:20.408 \longrightarrow 00:12:22.676$ series is not reasonable or feasible

NOTE Confidence: 0.86624038

00:12:22.676 --> 00:12:25.358 and there has been some very exciting

NOTE Confidence: 0.86624038

 $00:12:25.360 \longrightarrow 00:12:26.932$ results showing strong immunogenicity

NOTE Confidence: 0.86624038

 $00:12:26.932 \longrightarrow 00:12:29.680$ even if you just get one shot.

NOTE Confidence: 0.86624038

 $00:12:29.680 \longrightarrow 00:12:32.248$ Obviously we recommend patients get all

NOTE Confidence: 0.86624038

00:12:32.248 --> 00:12:35.797 two or all three depending on their age,

NOTE Confidence: 0.86624038

 $00{:}12{:}35.800 \dashrightarrow 00{:}12{:}37.515$ but at least just getting the one

NOTE Confidence: 0.86624038

 $00:12:37.515 \longrightarrow 00:12:39.500$ seems to to confer some protection and

NOTE Confidence: 0.86624038

 $00:12:39.500 \longrightarrow 00:12:41.680$ that is long lasting at least.

NOTE Confidence: 0.961272151666667

 $00:12:42.440 \longrightarrow 00:12:44.258$ Can you clarify who gets two

NOTE Confidence: 0.961272151666667

 $00:12:44.258 \longrightarrow 00:12:46.320$ shots and who gets three shots?

NOTE Confidence: 0.961272151666667

 $00:12:46.320 \longrightarrow 00:12:47.760$ You mentioned that has

NOTE Confidence: 0.961272151666667

 $00:12:47.760 \longrightarrow 00:12:49.360$ something to do with age.

NOTE Confidence: 0.9594554425

 $00:12:49.360 \longrightarrow 00:12:52.920$ So in the younger 9 to 11 population,

 $00:12:52.920 \longrightarrow 00:12:55.710$ the 2 is fine. Those of us in the catch

NOTE Confidence: 0.9594554425

 $00:12:55.782 \longrightarrow 00:12:58.414$ up cohort who would be getting it in

NOTE Confidence: 0.9594554425

 $00:12:58.414 \longrightarrow 00:13:00.440$ the early 20s would be the three shot.

NOTE Confidence: 0.935269300833333

00:13:01.400 --> 00:13:04.193 OK, so let's suppose you have a

NOTE Confidence: 0.935269300833333

 $00{:}13{:}04.193 \dashrightarrow 00{:}13{:}07.079$ child who has gotten vaccinated.

NOTE Confidence: 0.935269300833333

 $00:13:07.080 \longrightarrow 00:13:09.984$ Do they still need Pap smears

NOTE Confidence: 0.935269300833333

00:13:09.984 --> 00:13:12.706 and HPV tests and if so,

NOTE Confidence: 0.935269300833333

 $00:13:12.706 \longrightarrow 00:13:13.754$ when should those start?

NOTE Confidence: 0.933524778571429

 $00:13:14.280 \longrightarrow 00:13:15.400$ That's a great question.

NOTE Confidence: 0.933524778571429

 $00:13:15.400 \longrightarrow 00:13:18.135$ For right now, we do not have any

NOTE Confidence: 0.933524778571429

00:13:18.135 --> 00:13:19.651 different guidelines for people

NOTE Confidence: 0.933524778571429

 $00{:}13{:}19.651 \dashrightarrow 00{:}13{:}22.279$ who are vaccinated or unvaccinated.

NOTE Confidence: 0.933524778571429

 $00{:}13{:}22.280 \dashrightarrow 00{:}13{:}24.806$ And the Pap smears usually start

NOTE Confidence: 0.933524778571429

 $00:13:24.806 \longrightarrow 00:13:26.800$ somewhere between 21 to 25.

NOTE Confidence: 0.933524778571429

 $00:13:26.800 \longrightarrow 00:13:28.963$ And we defer the HPV testing to

 $00:13:28.963 \longrightarrow 00:13:30.944$ around 30 just because we know

NOTE Confidence: 0.933524778571429

 $00:13:30.944 \longrightarrow 00:13:32.918$ this virus is so prevalent in

NOTE Confidence: 0.933524778571429

00:13:32.918 --> 00:13:35.252 the community and it takes many,

NOTE Confidence: 0.933524778571429

 $00:13:35.252 \longrightarrow 00:13:37.959$ many years for those cell changes to happen.

NOTE Confidence: 0.933524778571429

 $00:13:37.960 \longrightarrow 00:13:39.199$ So it can be a little complicated,

NOTE Confidence: 0.933524778571429

 $00:13:39.200 \longrightarrow 00:13:41.387$ but we have tried to make it as

NOTE Confidence: 0.933524778571429

 $00:13:41.387 \longrightarrow 00:13:43.450$ clear as possible for the

NOTE Confidence: 0.933524778571429

 $00:13:43.450 \longrightarrow 00:13:45.719$ family docs and gyns in the community.

NOTE Confidence: 0.933524778571429 00:13:45.720 --> 00:13:46.320 Perfect.

NOTE Confidence: 0.9385589

 $00:13:46.600 \longrightarrow 00:13:48.070$ Well, we need to take a short

NOTE Confidence: 0.9385589

 $00:13:48.070 \longrightarrow 00:13:49.520$ break for a medical minute.

NOTE Confidence: 0.9385589

 $00:13:49.520 \longrightarrow 00:13:51.256$ Please stay tuned to learn more about

NOTE Confidence: 0.9385589

 $00:13:51.256 \longrightarrow 00:13:53.073$ the care of patients with cervical

NOTE Confidence: 0.9385589

00:13:53.073 --> 00:13:55.107 cancer in honor of Cervical Cancer

NOTE Confidence: 0.9385589

00:13:55.107 --> 00:13:56.518 Awareness Month with my guest,

NOTE Confidence: 0.9385589

 $00:13:56.520 \longrightarrow 00:13:57.600$ Doctor Mitchell Clark.

00:13:58.160 --> 00:14:00.240 Funding for Yale Cancer Answers

NOTE Confidence: 0.909323426

 $00{:}14{:}00.240 \dashrightarrow 00{:}14{:}02.320$ comes from Smilow Cancer Hospital,

NOTE Confidence: 0.909323426

 $00:14:02.320 \longrightarrow 00:14:04.780$ where the lung cancer Screening program

NOTE Confidence: 0.909323426

00:14:04.780 --> 00:14:07.238 provides screening to those at risk

NOTE Confidence: 0.909323426

00:14:07.238 --> 00:14:09.118 for lung cancer and individualized,

NOTE Confidence: 0.909323426

 $00:14:09.120 \longrightarrow 00:14:11.880$ state-of-the-art evaluation of lung nodules.

NOTE Confidence: 0.909323426

00:14:11.880 --> 00:14:16.760 To learn more visit smilocancerhospital.org.

NOTE Confidence: 0.909323426

 $00:14:16.760 \longrightarrow 00:14:18.548$ Breast cancer is one of the

NOTE Confidence: 0.909323426

00:14:18.548 --> 00:14:20.160 most common cancers in women.

NOTE Confidence: 0.909323426

00:14:20.160 --> 00:14:21.471 In Connecticut alone,

NOTE Confidence: 0.909323426

00:14:21.471 --> 00:14:23.656 approximately 3500 women will be

NOTE Confidence: 0.909323426

 $00:14:23.656 \longrightarrow 00:14:26.118$ diagnosed with breast cancer this year.

NOTE Confidence: 0.909323426

 $00:14:26.120 \longrightarrow 00:14:27.695$ But there is hope thanks

NOTE Confidence: 0.909323426

 $00:14:27.695 \longrightarrow 00:14:28.640$ to earlier detection,

NOTE Confidence: 0.909323426

 $00:14:28.640 \longrightarrow 00:14:29.759$ non invasive treatments,

 $00:14:29.759 \longrightarrow 00:14:31.997$ and the development of novel therapies.

NOTE Confidence: 0.909323426

 $00:14:32.000 \longrightarrow 00:14:33.632$ To fight breast cancer,

NOTE Confidence: 0.909323426

 $00{:}14{:}33.632 \dashrightarrow 00{:}14{:}36.080$ women should schedule a baseline mammogram

NOTE Confidence: 0.909323426

 $00:14:36.143 \longrightarrow 00:14:38.807$ beginning at age 40 or earlier if they have

NOTE Confidence: 0.909323426

 $00:14:38.807 \longrightarrow 00:14:41.399$ risk factors associated with the disease.

NOTE Confidence: 0.909323426

00:14:41.400 --> 00:14:42.230 With screening,

NOTE Confidence: 0.909323426

 $00:14:42.230 \longrightarrow 00:14:43.060$ early detection,

NOTE Confidence: 0.909323426

00:14:43.060 --> 00:14:44.720 and a healthy lifestyle,

NOTE Confidence: 0.909323426

 $00:14:44.720 \longrightarrow 00:14:46.920$ breast cancer can be defeated.

NOTE Confidence: 0.909323426

 $00:14:46.920 \longrightarrow 00:14:48.724$ Clinical trials are currently

NOTE Confidence: 0.909323426

 $00:14:48.724 \longrightarrow 00:14:50.528$ underway at federally designated

NOTE Confidence: 0.909323426

 $00{:}14{:}50.528 \mathrel{--}{>} 00{:}14{:}51.920$ comprehensive cancer centers,

NOTE Confidence: 0.909323426

00:14:51.920 --> 00:14:53.820 such as Yale Cancer Center

NOTE Confidence: 0.909323426

 $00{:}14{:}53.820 \dashrightarrow 00{:}14{:}55.720$ and Smilow Cancer Hospital,

NOTE Confidence: 0.909323426

 $00:14:55.720 \longrightarrow 00:14:57.360$ to make innovative new

NOTE Confidence: 0.909323426

 $00:14:57.360 \longrightarrow 00:14:59.000$ treatments available to patients.

00:14:59.000 --> 00:15:01.510 Digital breast tomosynthesis or 3D

NOTE Confidence: 0.909323426

 $00{:}15{:}01.510 \dashrightarrow 00{:}15{:}04.020$ mammography is also transforming breast

NOTE Confidence: 0.909323426

 $00:15:04.088 \longrightarrow 00:15:06.312$ cancer screening by significantly

NOTE Confidence: 0.909323426

00:15:06.312 --> 00:15:07.980 reducing unnecessary procedures

NOTE Confidence: 0.909323426

 $00:15:07.980 \longrightarrow 00:15:10.600$ while picking up more cancers.

NOTE Confidence: 0.909323426

 $00:15:10.600 \longrightarrow 00:15:12.872$ More information is available

NOTE Confidence: 0.909323426

 $00:15:12.872 \longrightarrow 00:15:13.965$ at yalecancercenter.org.

NOTE Confidence: 0.909323426

 $00:15:13.965 \longrightarrow 00:15:17.115$ You're listening to Connecticut Public Radio.

NOTE Confidence: 0.909323426

 $00:15:17.120 \longrightarrow 00:15:17.560$ Welcome

NOTE Confidence: 0.957541114

 $00:15:17.560 \longrightarrow 00:15:19.080$ back to Yale Cancer Answers.

NOTE Confidence: 0.957541114

00:15:19.080 --> 00:15:20.600 This is Doctor Anees Chagpar,

NOTE Confidence: 0.957541114

 $00:15:20.600 \longrightarrow 00:15:22.679$ and I'm joined to night by my guest,

NOTE Confidence: 0.957541114

 $00:15:22.680 \longrightarrow 00:15:23.610$ Doctor Mitchell Clark.

NOTE Confidence: 0.957541114

 $00:15:23.610 \longrightarrow 00:15:25.160$ We're discussing the care of

NOTE Confidence: 0.957541114

 $00:15:25.160 \longrightarrow 00:15:26.599$ patients with cervical cancer.

 $00:15:26.600 \longrightarrow 00:15:27.984$ Now before the break,

NOTE Confidence: 0.957541114

 $00:15:27.984 \longrightarrow 00:15:30.704$ we talked a lot about screening and

NOTE Confidence: 0.957541114

 $00:15:30.704 \longrightarrow 00:15:34.148$ prevention with HPV tests and Pap smears

NOTE Confidence: 0.957541114

 $00:15:34.148 \longrightarrow 00:15:37.358$ and the very important HPV vaccine.

NOTE Confidence: 0.957541114

 $00:15:37.360 \longrightarrow 00:15:39.888$ But Mitchell, now I want to pivot a

NOTE Confidence: 0.957541114

00:15:39.888 --> 00:15:42.600 little bit into patients who

NOTE Confidence: 0.957541114

 $00:15:42.600 \longrightarrow 00:15:45.720$ are found to have cervical cancer.

 $00:15:46.686 \longrightarrow 00:15:49.419$ Can you talk a little bit more about

NOTE Confidence: 0.957541114

00:15:49.419 --> 00:15:51.399 how cervical cancer is diagnosed

NOTE Confidence: 0.957541114

00:15:51.399 --> 00:15:54.159 and how is that diagnosis made,

NOTE Confidence: 0.957541114

 $00:15:54.160 \longrightarrow 00:15:58.140$ whether on a Pap smear or symptomatically?

 $00{:}15{:}59.720 \dashrightarrow 00{:}16{:}01.934$ In general, we tend to detect

NOTE Confidence: 0.813147749333333

 $00:16:01.934 \longrightarrow 00:16:03.410$ these symptomatically because the

NOTE Confidence: 0.813147749333333

00:16:03.477 --> 00:16:05.553 Pap smear is really designed to

NOTE Confidence: 0.813147749333333

 $00:16:05.553 \longrightarrow 00:16:07.285$ detect precancerous changes where

NOTE Confidence: 0.813147749333333

 $00:16:07.285 \longrightarrow 00:16:09.450$ an intervention can be undertaken

NOTE Confidence: 0.813147749333333

 $00{:}16{:}09.514 \dashrightarrow 00{:}16{:}11.679$ to prevent development into cancer.

 $00:16:11.680 \longrightarrow 00:16:13.576$ And so patients will often have

NOTE Confidence: 0.813147749333333

 $00{:}16{:}13.576 \dashrightarrow 00{:}16{:}15.653$ some type of bleeding symptom or

NOTE Confidence: 0.813147749333333

00:16:15.653 --> 00:16:17.318 some pelvic discomfort or pain.

NOTE Confidence: 0.813147749333333

 $00:16:17.320 \longrightarrow 00:16:19.490$ But in general, there will be some

NOTE Confidence: 0.813147749333333

 $00:16:19.490 \longrightarrow 00:16:21.154$ bleeding either between the periods

NOTE Confidence: 0.813147749333333

 $00:16:21.154 \longrightarrow 00:16:22.834$ or in the postmenopausal period,

NOTE Confidence: 0.813147749333333

 $00:16:22.840 \longrightarrow 00:16:24.736$ which prompts an evaluation

NOTE Confidence: 0.813147749333333

 $00:16:24.736 \longrightarrow 00:16:26.158$ by the gynecologist.

NOTE Confidence: 0.813147749333333

00:16:26.160 --> 00:16:27.636 When patients go to the office,

NOTE Confidence: 0.813147749333333

 $00:16:27.640 \longrightarrow 00:16:29.632$ they can expect that their gynecologist

NOTE Confidence: 0.813147749333333

 $00{:}16{:}29.632 \dashrightarrow 00{:}16{:}32.220$ will offer a pelvic exam with a speculum

NOTE Confidence: 0.813147749333333

 $00:16:32.220 \longrightarrow 00:16:34.431$ to visualize the cervix in order to

NOTE Confidence: 0.813147749333333

 $00{:}16{:}34.431 \dashrightarrow 00{:}16{:}36.958$ see whether or not there's any obvious

NOTE Confidence: 0.813147749333333

 $00:16:36.958 \longrightarrow 00:16:38.790$ abnormality suggestive of a cancer.

NOTE Confidence: 0.813147749333333

 $00:16:38.790 \longrightarrow 00:16:41.010$ Very often a biopsy will be

00:16:41.010 --> 00:16:42.479 undertaken at that point,

NOTE Confidence: 0.813147749333333

 $00:16:42.480 \longrightarrow 00:16:44.268$ which can usually be accomplished in

NOTE Confidence: 0.813147749333333

00:16:44.268 --> 00:16:46.462 the office and that pathology and that

NOTE Confidence: 0.813147749333333

 $00:16:46.462 \longrightarrow 00:16:48.346$ result will help us better understand

NOTE Confidence: 0.813147749333333

00:16:48.346 --> 00:16:50.000 if those bleeding symptoms were

NOTE Confidence: 0.813147749333333

 $00:16:50.000 \longrightarrow 00:16:53.640$ related to a cervical cancer or not.

NOTE Confidence: 0.813147749333333

00:16:53.640 --> 00:16:55.960 And generally at that point,

NOTE Confidence: 0.813147749333333

 $00:16:55.960 \longrightarrow 00:16:57.610$ whether based on the suspicion of

NOTE Confidence: 0.813147749333333

 $00:16:57.610 \longrightarrow 00:16:59.332$ the exam or whether the gynecologist

NOTE Confidence: 0.813147749333333

 $00{:}16{:}59.332 \dashrightarrow 00{:}17{:}01.299$ would like to wait for the results

NOTE Confidence: 0.813147749333333

 $00:17:01.299 \longrightarrow 00:17:02.360$ of the pathology,

NOTE Confidence: 0.813147749333333

 $00:17:02.360 \longrightarrow 00:17:04.592$ they'll then refer that patient on

NOTE Confidence: 0.813147749333333

 $00{:}17{:}04.592 \dashrightarrow 00{:}17{:}07.043$ to some one like myself or our team

NOTE Confidence: 0.813147749333333

 $00:17:07.043 \longrightarrow 00:17:09.724$ within the GYN group in order

NOTE Confidence: 0.813147749333333

 $00:17:09.724 \longrightarrow 00:17:11.770$ to better understand the stage and

NOTE Confidence: 0.813147749333333

 $00:17:11.770 \longrightarrow 00:17:13.320$ treatment options for that patient.

00:17:13.600 --> 00:17:15.676 How are patients staged? I mean,

NOTE Confidence: 0.871593631666667

 $00:17:15.680 \longrightarrow 00:17:17.997$ is this a series of imaging tests?

NOTE Confidence: 0.831040628125

 $00:17:18.240 \longrightarrow 00:17:20.364$ Exactly, we stage these

NOTE Confidence: 0.831040628125

 $00:17:20.364 \longrightarrow 00:17:22.269$ patients clinically meaning we don't

NOTE Confidence: 0.831040628125

 $00{:}17{:}22.269 \dashrightarrow 00{:}17{:}24.399$ necessarily need to perform an operation.

NOTE Confidence: 0.831040628125

00:17:24.400 --> 00:17:27.235 And in order to understand this stage,

NOTE Confidence: 0.831040628125

 $00:17:27.240 \longrightarrow 00:17:29.275$ historically

NOTE Confidence: 0.831040628125

 $00:17:29.275 \longrightarrow 00:17:31.948$ we would do exam under anaesthesia.

00:17:34.200 --> 00:17:37.371 But now we have really high quality

NOTE Confidence: 0.831040628125

 $00:17:37.371 \longrightarrow 00:17:40.004$ imaging options and we partner with

NOTE Confidence: 0.831040628125

 $00{:}17{:}40.004 \dashrightarrow 00{:}17{:}42.159$ our radiology colleagues to generally

NOTE Confidence: 0.831040628125

00:17:42.159 --> 00:17:44.118 perform an MRI and a PET scan.

NOTE Confidence: 0.831040628125

 $00:17:44.120 \longrightarrow 00:17:46.619$ The MRI is important to better understand

NOTE Confidence: 0.831040628125

 $00:17:46.619 \longrightarrow 00:17:49.080$ the size and local features.

NOTE Confidence: 0.831040628125

 $00:17:49.080 \longrightarrow 00:17:51.180$ Local meaning within the

NOTE Confidence: 0.831040628125

00:17:51.180 --> 00:17:53.789 cervix of the tumor and then the PET

 $00:17:53.789 \longrightarrow 00:17:56.370$ scan helps us ensure or detect any

NOTE Confidence: 0.831040628125

 $00{:}17{:}56.370 {\:{\circ}{\circ}{\circ}}>00{:}17{:}58.788$ signs of metastatic disease outside of

NOTE Confidence: 0.831040628125

 $00:17:58.788 \longrightarrow 00:18:00.924$ the primary tumor within the cervix.

NOTE Confidence: 0.831040628125

00:18:00.924 --> 00:18:03.800 Once we have all of that information,

NOTE Confidence: 0.831040628125

 $00:18:03.800 \longrightarrow 00:18:05.852$ we sit down as a multidisciplinary

NOTE Confidence: 0.831040628125

 $00:18:05.852 \longrightarrow 00:18:07.647$ group and review those results

NOTE Confidence: 0.831040628125

 $00:18:07.647 \longrightarrow 00:18:09.807$ and then we can better understand

NOTE Confidence: 0.831040628125

 $00{:}18{:}09.807 \dashrightarrow 00{:}18{:}12.035$ which options that would be best

NOTE Confidence: 0.831040628125

 $00:18:12.035 \longrightarrow 00:18:13.475$ for each individual patient.

NOTE Confidence: 0.823290295714286

 $00:18:14.080 \longrightarrow 00:18:17.839$ Take us through the options,

NOTE Confidence: 0.823290295714286

 $00:18:17.840 \longrightarrow 00:18:20.432$ what on the table when it comes

NOTE Confidence: 0.823290295714286

 $00{:}18{:}20.432 \dashrightarrow 00{:}18{:}22.359$ to treatment of cervical cancer.

NOTE Confidence: 0.962148388333333

 $00:18:22.440 \longrightarrow 00:18:23.718$ A lot of this depends on,

NOTE Confidence: 0.962148388333333

 $00{:}18{:}23.720 \dashrightarrow 00{:}18{:}25.200$ you know, each individual patient,

NOTE Confidence: 0.962148388333333

 $00:18:25.200 \longrightarrow 00:18:27.797$ their age and what their goals are.

00:18:27.800 --> 00:18:28.896 And so, you know,

NOTE Confidence: 0.962148388333333

00:18:28.896 --> 00:18:30.266 we do unfortunately see some

NOTE Confidence: 0.962148388333333

 $00:18:30.266 \longrightarrow 00:18:31.706$ of these cancers occurring

NOTE Confidence: 0.962148388333333

 $00:18:31.706 \longrightarrow 00:18:33.556$ in women of reproductive age,

NOTE Confidence: 0.962148388333333

 $00:18:33.560 \longrightarrow 00:18:35.708$ perhaps those who have either not

NOTE Confidence: 0.962148388333333

00:18:35.708 --> 00:18:38.120 had an opportunity to carry a child,

NOTE Confidence: 0.962148388333333

 $00:18:38.120 \longrightarrow 00:18:39.715$ if that's within their family

NOTE Confidence: 0.962148388333333

00:18:39.715 --> 00:18:41.638 plan, or whether they're hoping to

NOTE Confidence: 0.962148388333333

00:18:41.638 --> 00:18:43.276 have more children down the road.

NOTE Confidence: 0.962148388333333

 $00:18:43.280 \longrightarrow 00:18:45.236$ But are faced with this diagnosis.

NOTE Confidence: 0.962148388333333

 $00{:}18{:}45.240 \dashrightarrow 00{:}18{:}47.466$ So the first thing they understand is

NOTE Confidence: 0.962148388333333

 $00:18:47.466 \longrightarrow 00:18:49.639$ does this patient have an interest

NOTE Confidence: 0.962148388333333

00:18:49.639 --> 00:18:51.559 in preserving her fertility options?

NOTE Confidence: 0.962148388333333

 $00:18:51.560 \longrightarrow 00:18:53.989$ We do know that for certain cancer

NOTE Confidence: 0.962148388333333

 $00:18:53.989 \longrightarrow 00:18:56.208$ stages or sizes of the tumor

NOTE Confidence: 0.962148388333333

 $00:18:56.208 \longrightarrow 00:18:57.676$ and in certain patients,

00:18:57.680 --> 00:18:59.630 a fertility sparing approach is very

NOTE Confidence: 0.962148388333333

 $00{:}18{:}59.630 \dashrightarrow 00{:}19{:}01.654$ reasonable and seems to have the

NOTE Confidence: 0.962148388333333

 $00{:}19{:}01.654 \dashrightarrow 00{:}19{:}03.319$ same long term on cologic outcomes,

NOTE Confidence: 0.962148388333333

 $00:19:03.320 \longrightarrow 00:19:04.304$ which is important.

NOTE Confidence: 0.962148388333333

 $00:19:04.304 \longrightarrow 00:19:05.944$ Obviously that pregnancy would be

NOTE Confidence: 0.962148388333333

 $00:19:05.944 \longrightarrow 00:19:07.763$ considered high risk down the road and

NOTE Confidence: 0.962148388333333

 $00:19:07.763 \longrightarrow 00:19:09.880$ there may be some issues in getting pregnant.

NOTE Confidence: 0.962148388333333

 $00{:}19{:}09.880 \to 00{:}19{:}11.623$ We've got many years worth of data

NOTE Confidence: 0.962148388333333

 $00:19:11.623 \longrightarrow 00:19:14.103$ now to so show that in certain women

NOTE Confidence: 0.962148388333333

 $00:19:14.103 \longrightarrow 00:19:16.176$ those options are reasonable and they

NOTE Confidence: 0.962148388333333

 $00:19:16.176 \longrightarrow 00:19:18.556$ do not have to compromise their

NOTE Confidence: 0.962148388333333

 $00:19:18.556 \longrightarrow 00:19:20.092$ oncology outcomes just for fertility.

NOTE Confidence: 0.962148388333333

 $00{:}19{:}20.092 \dashrightarrow 00{:}19{:}22.080$ So it's been a very exciting advance

NOTE Confidence: 0.962148388333333

 $00:19:22.131 \longrightarrow 00:19:23.937$ in the field for those women who

NOTE Confidence: 0.962148388333333

00:19:23.937 --> 00:19:25.366 are not interested on preserving

 $00:19:25.366 \longrightarrow 00:19:27.160$ their fertility or may not have

NOTE Confidence: 0.962148388333333

 $00{:}19{:}27.160 \dashrightarrow 00{:}19{:}28.970$ that option based on the results of

NOTE Confidence: 0.962148388333333

 $00:19:28.970 \longrightarrow 00:19:30.520$ those tests that we talked about,

NOTE Confidence: 0.962148388333333

 $00:19:30.520 \longrightarrow 00:19:31.600$ we then have to decide,

NOTE Confidence: 0.962148388333333

 $00:19:31.600 \longrightarrow 00:19:33.581$ is this a woman who would be

NOTE Confidence: 0.962148388333333

 $00:19:33.581 \longrightarrow 00:19:35.000$ best served with surgery,

NOTE Confidence: 0.962148388333333

00:19:35.000 --> 00:19:36.251 meaning radical hysterectomy

NOTE Confidence: 0.962148388333333

 $00:19:36.251 \longrightarrow 00:19:37.919$ to remove the uterus,

NOTE Confidence: 0.962148388333333

 $00:19:37.920 \longrightarrow 00:19:39.985$ cervix and tumor or do we think

NOTE Confidence: 0.962148388333333

 $00:19:39.985 \longrightarrow 00:19:42.153$ that this cancer will be best

NOTE Confidence: 0.962148388333333

 $00{:}19{:}42.153 \dashrightarrow 00{:}19{:}44.183$ controlled with a combination of

NOTE Confidence: 0.962148388333333

 $00:19:44.183 \longrightarrow 00:19:45.920$ chemotherapy and radiation?

NOTE Confidence: 0.962148388333333

 $00:19:45.920 \longrightarrow 00:19:47.628$ And a lot of that depends on

NOTE Confidence: 0.962148388333333

 $00:19:47.628 \longrightarrow 00:19:49.040$ the size of the tumor,

NOTE Confidence: 0.962148388333333

 $00:19:49.040 \longrightarrow 00:19:50.906$ some of the information we get

NOTE Confidence: 0.962148388333333

 $00:19:50.906 \dashrightarrow 00:19:52.659$ from the pathology in our exam,

 $00:19:52.659 \longrightarrow 00:19:53.478$ in the office.

NOTE Confidence: 0.95033454125

 $00:19:53.840 \longrightarrow 00:19:57.375$ And so for women who do want

NOTE Confidence: 0.95033454125

 $00:19:57.375 \longrightarrow 00:19:59.500$ to preserve their fertility,

NOTE Confidence: 0.95033454125

 $00:19:59.500 \longrightarrow 00:20:01.660$ clearly the radical hysterectomy

NOTE Confidence: 0.95033454125

 $00:20:01.660 \longrightarrow 00:20:04.800$ is not a viable option.

NOTE Confidence: 0.95033454125

 $00:20:04.800 \longrightarrow 00:20:06.760$ So what does their treatment

NOTE Confidence: 0.95033454125

00:20:06.760 --> 00:20:08.720 algorithm kind of look like?

NOTE Confidence: 0.896241514

 $00:20:09.240 \longrightarrow 00:20:11.788$ Right, so we do what is called

NOTE Confidence: 0.896241514

00:20:11.788 --> 00:20:12.880 a radical trachelectomy,

NOTE Confidence: 0.896241514

 $00:20:12.880 \longrightarrow 00:20:15.408$ which is a procedure to remove the cervix

NOTE Confidence: 0.896241514

 $00{:}20{:}15.408 \to 00{:}20{:}18.037$ and the tissue surrounding the cervix.

NOTE Confidence: 0.896241514

 $00{:}20{:}18.040 \dashrightarrow 00{:}20{:}19.546$ We also sample some lymph nodes

NOTE Confidence: 0.896241514

00:20:19.546 --> 00:20:21.388 at the same time to make sure

NOTE Confidence: 0.896241514

 $00:20:21.388 \longrightarrow 00:20:22.954$ that cancer has not spread.

NOTE Confidence: 0.896241514

 $00:20:22.960 \longrightarrow 00:20:24.200$ What we do then,

 $00:20:24.200 \longrightarrow 00:20:26.441$ after the cervix has been removed is

NOTE Confidence: 0.896241514

 $00:20:26.441 \longrightarrow 00:20:28.611$ reconstruct the uterus to the top of

NOTE Confidence: 0.896241514

00:20:28.611 --> 00:20:31.220 the vagina and place a device there

NOTE Confidence: 0.896241514

 $00:20:31.220 \longrightarrow 00:20:33.676$ called a circlage which helps prevent

NOTE Confidence: 0.896241514

00:20:33.676 --> 00:20:36.094 any dilation of the lower portion

NOTE Confidence: 0.896241514

 $00:20:36.094 \longrightarrow 00:20:38.919$ of the uterus during the pregnancy.

NOTE Confidence: 0.896241514

 $00:20:38.920 \longrightarrow 00:20:40.663$ It appears that this is a safe

NOTE Confidence: 0.896241514

00:20:40.663 --> 00:20:42.315 option for women who want

NOTE Confidence: 0.896241514

00:20:42.315 --> 00:20:43.439 to choose this approach,

NOTE Confidence: 0.896241514

 $00:20:43.440 \longrightarrow 00:20:45.704$ but as you can imagine there will be

NOTE Confidence: 0.896241514

 $00:20:45.704 \longrightarrow 00:20:47.358$ some challenges with the fertility.

NOTE Confidence: 0.896241514

00:20:47.360 --> 00:20:47.916 I'm sorry,

NOTE Confidence: 0.896241514

 $00:20:47.916 \longrightarrow 00:20:49.862$ with the pregnancy and will need to

NOTE Confidence: 0.896241514

 $00:20:49.862 \longrightarrow 00:20:52.357$ be closely monitored by a high risk team.

NOTE Confidence: 0.896241514

 $00:20:52.360 \longrightarrow 00:20:54.908$ But it appears that this surgery can

NOTE Confidence: 0.896241514

 $00:20:54.908 \longrightarrow 00:20:57.040$ be performed safely from a vaginal,

 $00:20:57.040 \longrightarrow 00:20:59.865$ laparoscopic or even a traditional

NOTE Confidence: 0.896241514

00:20:59.865 --> 00:21:01.560 open laparotomy approach.

NOTE Confidence: 0.896241514

 $00:21:01.560 \longrightarrow 00:21:02.545$ And patients tend to

NOTE Confidence: 0.896241514

 $00:21:02.545 \longrightarrow 00:21:03.800$ do well in the long term.

NOTE Confidence: 0.9490801075

 $00{:}21{:}04.920 \dashrightarrow 00{:}21{:}07.538$ Is this a longer or more complicated

NOTE Confidence: 0.9490801075

 $00:21:07.538 \longrightarrow 00:21:10.159$ procedure than the radical hysterectomy?

NOTE Confidence: 0.872467593333333

 $00:21:10.600 \longrightarrow 00:21:12.833$ Yeah, it can be a little bit

NOTE Confidence: 0.872467593333333

 $00:21:12.833 \longrightarrow 00:21:14.839$ longer and more complex.

NOTE Confidence: 0.872467593333333

00:21:14.840 --> 00:21:17.102 And that's why we certainly encourage

NOTE Confidence: 0.872467593333333

 $00{:}21{:}17.102 \dashrightarrow 00{:}21{:}20.172$ patients to see a group or a team

NOTE Confidence: 0.872467593333333

00:21:20.172 --> 00:21:22.037 with expertise in this procedure.

NOTE Confidence: 0.872467593333333

 $00:21:22.040 \longrightarrow 00:21:25.480$ But for those who do undergo the surgery,

NOTE Confidence: 0.872467593333333

 $00{:}21{:}25.480 {\: -->\:} 00{:}21{:}26.638$ they appear to have

NOTE Confidence: 0.872467593333333

 $00{:}21{:}26.640 \dashrightarrow 00{:}21{:}28.795$ comparable on cologic outcomes and have

NOTE Confidence: 0.872467593333333

 $00:21:28.795 \longrightarrow 00:21:31.959$ gone on to carry children down the road,

00:21:31.960 --> 00:21:33.290 which is always exciting to see those

NOTE Confidence: 0.872467593333333

 $00:21:33.290 \longrightarrow 00:21:34.451$ pictures in the office when patients

NOTE Confidence: 0.872467593333333

 $00:21:34.451 \longrightarrow 00:21:35.880$ come back to see us and follow up.

NOTE Confidence: 0.817037430625

 $00:21:36.280 \longrightarrow 00:21:40.360$ Yeah, I'm sure for the patients

NOTE Confidence: 0.817037430625

 $00:21:40.360 \longrightarrow 00:21:43.856$ for whom fertility is not a major concern,

NOTE Confidence: 0.817037430625

 $00:21:43.856 \longrightarrow 00:21:46.320$ you mentioned that there were two options.

NOTE Confidence: 0.817037430625

 $00:21:46.320 \longrightarrow 00:21:48.679$ One was the radical hysterectomy and the

NOTE Confidence: 0.817037430625

 $00:21:48.679 \longrightarrow 00:21:51.085$ other was chemotherapy and radiation.

NOTE Confidence: 0.817037430625

00:21:51.085 --> 00:21:53.960 Are those two equivalent oncologically?

NOTE Confidence: 0.945672965909091

00:21:54.280 --> 00:21:56.168 That's a great point and I bring that

NOTE Confidence: 0.945672965909091

 $00{:}21{:}56.168 \dashrightarrow 00{:}21{:}58.171$ up with my patients when I talk to

NOTE Confidence: 0.945672965909091

 $00:21:58.171 \longrightarrow 00:22:00.159$ them because they do appear equivalent.

NOTE Confidence: 0.945672965909091

 $00:22:00.160 \longrightarrow 00:22:02.456$ And what we're trying to do is

NOTE Confidence: 0.945672965909091

 $00:22:02.456 \longrightarrow 00:22:04.536$ identify patients who would not

NOTE Confidence: 0.945672965909091

 $00:22:04.536 \longrightarrow 00:22:06.596$ necessarily require adjuvant treatment.

NOTE Confidence: 0.945672965909091

00:22:06.600 --> 00:22:09.200 Meaning if someone is going to have surgery,

 $00:22:09.200 \longrightarrow 00:22:11.424$ we want to ensure that then after the

NOTE Confidence: 0.945672965909091

 $00{:}22{:}11.424 \dashrightarrow 00{:}22{:}13.233$ surgery there's no indication to give

NOTE Confidence: 0.945672965909091

 $00:22:13.233 \longrightarrow 00:22:15.027$ radiation after because we know the

NOTE Confidence: 0.945672965909091

 $00:22:15.083 \longrightarrow 00:22:17.064$ toxicity and side effects are worse if

NOTE Confidence: 0.945672965909091

 $00:22:17.064 \longrightarrow 00:22:19.235$ patients need a surgery and then we

NOTE Confidence: 0.945672965909091

 $00:22:19.235 \longrightarrow 00:22:21.519$ know they need radiation in addition to that.

NOTE Confidence: 0.945672965909091

 $00:22:21.520 \longrightarrow 00:22:23.403$ So we try to pre select patients

NOTE Confidence: 0.945672965909091

 $00:22:23.403 \longrightarrow 00:22:25.239$ to either need one or the other.

NOTE Confidence: 0.945672965909091

 $00:22:25.240 \longrightarrow 00:22:26.650$ For some reason,

NOTE Confidence: 0.945672965909091

 $00:22:26.650 \longrightarrow 00:22:29.000$ patients often perceive radiation or

NOTE Confidence: 0.945672965909091

 $00{:}22{:}29.000 \dashrightarrow 00{:}22{:}31.485$ chemotherapy as maybe not curative or

NOTE Confidence: 0.945672965909091

 $00:22:31.485 \longrightarrow 00:22:34.240$ I'm just trying to palliate this cancer.

NOTE Confidence: 0.945672965909091

 $00:22:34.240 \longrightarrow 00:22:35.990$ That is really not the case in

NOTE Confidence: 0.945672965909091

 $00:22:35.990 \longrightarrow 00:22:37.200$ cancer of the cervix.

NOTE Confidence: 0.945672965909091

 $00:22:37.200 \longrightarrow 00:22:39.925$ And we treat with a curative intent to

00:22:39.925 --> 00:22:42.760 make these cancers go away long term.

NOTE Confidence: 0.945672965909091

 $00{:}22{:}42.760 \longrightarrow 00{:}22{:}44.867$ So I try to help patients understand

NOTE Confidence: 0.945672965909091

 $00:22:44.867 \longrightarrow 00:22:47.361$ that we want to select an individualized

NOTE Confidence: 0.945672965909091

00:22:47.361 --> 00:22:49.647 treatment plan that is best suited

NOTE Confidence: 0.945672965909091

 $00:22:49.714 \longrightarrow 00:22:51.558$ for their individual scenario.

NOTE Confidence: 0.945672965909091

 $00:22:51.560 \longrightarrow 00:22:53.780$ And if that plan is radiation

NOTE Confidence: 0.945672965909091

 $00:22:53.780 \longrightarrow 00:22:54.520$ to chemotherapy,

NOTE Confidence: 0.945672965909091

 $00:22:54.520 \longrightarrow 00:22:56.495$ they should not feel that

NOTE Confidence: 0.945672965909091

00:22:56.495 --> 00:22:57.680 they're somehow being,

NOTE Confidence: 0.945672965909091 00:22:57.680 --> 00:22:58.178 you know, NOTE Confidence: 0.945672965909091

00:22:58.178 --> 00:22:59.921 put into a category that will not

NOTE Confidence: 0.945672965909091

00:22:59.921 --> 00:23:02.052 have the same outcomes of a patient

NOTE Confidence: 0.945672965909091

 $00:23:02.052 \longrightarrow 00:23:03.359$ undergoing a surgical approach.

NOTE Confidence: 0.938042660909091

00:23:04.720 --> 00:23:07.606 So if they're equivalent, why would

NOTE Confidence: 0.938042660909091

00:23:07.606 --> 00:23:10.640 anybody do the radical surgery?

NOTE Confidence: 0.81822455

 $00:23:10.640 \longrightarrow 00:23:13.300$ For the smaller tumors,

00:23:17.073 --> 00:23:19.088 they have one operation that tends

NOTE Confidence: 0.81822455

 $00:23:19.088 \longrightarrow 00:23:21.200$ to be a little bit less in terms

NOTE Confidence: 0.81822455

 $00:23:21.270 \longrightarrow 00:23:23.634$ of toxicity to the other pelvic

NOTE Confidence: 0.81822455

 $00:23:23.634 \longrightarrow 00:23:25.210$ structures because radiation can

NOTE Confidence: 0.81822455

 $00:23:25.274 \longrightarrow 00:23:27.158$ have some side effects on the bowel.

NOTE Confidence: 0.81822455

 $00{:}23{:}27.160 \dashrightarrow 00{:}23{:}29.428$ The bladder patients may experience some

NOTE Confidence: 0.81822455

 $00:23:29.428 \longrightarrow 00:23:32.353$ long term issues in terms of diarrhea

NOTE Confidence: 0.81822455

 $00:23:32.353 \longrightarrow 00:23:34.598$ or constipation or bladder irritation.

NOTE Confidence: 0.81822455

00:23:34.600 --> 00:23:35.792 In terms of toxicity,

NOTE Confidence: 0.81822455

00:23:35.792 --> 00:23:37.580 there certainly can be more toxicity

NOTE Confidence: 0.81822455

 $00{:}23{:}37.638 \dashrightarrow 00{:}23{:}39.078$ with the radiation approach,

NOTE Confidence: 0.81822455

 $00:23:39.080 \longrightarrow 00:23:41.078$ but when looking at the long

NOTE Confidence: 0.81822455

00:23:41.078 --> 00:23:42.077 term oncologic outcomes,

NOTE Confidence: 0.81822455

 $00:23:42.080 \longrightarrow 00:23:43.840$ they appear equivalent for

NOTE Confidence: 0.81822455

 $00:23:43.840 \longrightarrow 00:23:46.040$ certain stages of this cancer.

NOTE Confidence: 0.81822455

00:23:46.040 --> 00:23:48.210 Obviously if we find on the PET

 $00:23:48.210 \longrightarrow 00:23:50.343$ scan that the cancer is spread

NOTE Confidence: 0.81822455

 $00:23:50.343 \longrightarrow 00:23:52.233$ outside of the pelvic area,

NOTE Confidence: 0.81822455

00:23:52.240 --> 00:23:54.790 then neither surgery or radiation

NOTE Confidence: 0.81822455

 $00:23:54.790 \longrightarrow 00:23:56.320$ are necessarily indicated.

NOTE Confidence: 0.81822455

 $00{:}23{:}56.320 \dashrightarrow 00{:}23{:}58.738$ And we often choose a combination

NOTE Confidence: 0.81822455

 $00{:}23{:}58.738 \dashrightarrow 00{:}24{:}01.149$ of chemotherapy and some of these

NOTE Confidence: 0.81822455

 $00:24:01.149 \longrightarrow 00:24:02.560$ newer agents like immunotherapy

NOTE Confidence: 0.81822455

 $00{:}24{:}02.560 \dashrightarrow 00{:}24{:}04.600$ which many patients are asking about.

NOTE Confidence: 0.81822455

00:24:04.600 --> 00:24:06.994 And it's been very sort of present

NOTE Confidence: 0.81822455

 $00:24:06.994 \longrightarrow 00:24:09.577$ in the media and we're very

NOTE Confidence: 0.81822455

 $00:24:09.577 \longrightarrow 00:24:11.760$ excited to see that a lot of these

NOTE Confidence: 0.81822455

 $00:24:11.760 \longrightarrow 00:24:13.295$ immunotherapies and new drug

NOTE Confidence: 0.81822455

 $00{:}24{:}13.295 \dashrightarrow 00{:}24{:}15.200$ developments are showing promise in cancer of

NOTE Confidence: 0.81822455

 $00:24:15.200 \longrightarrow 00:24:16.080$ the cervix as well.

NOTE Confidence: 0.819863424615385

 $00:24:16.920 \longrightarrow 00:24:18.780$ So I want to get to the drugs

00:24:18.840 --> 00:24:20.912 in a minute, but just to finish

NOTE Confidence: 0.819863424615385

 $00{:}24{:}20.912 \dashrightarrow 00{:}24{:}22.702$ up the conversation with regards

NOTE Confidence: 0.819863424615385

 $00:24:22.702 \longrightarrow 00:24:25.256$ to fertility preservation and the

NOTE Confidence: 0.819863424615385

 $00:24:25.256 \longrightarrow 00:24:27.520$ different options for women who do

NOTE Confidence: 0.819863424615385

 $00:24:27.520 \longrightarrow 00:24:29.851$ want to preserve their fertility,

NOTE Confidence: 0.819863424615385

 $00:24:29.851 \longrightarrow 00:24:33.313$ is chemotherapy and radiation therapy an

NOTE Confidence: 0.819863424615385

 $00:24:33.313 \longrightarrow 00:24:36.564$ option if they choose to, for example,

NOTE Confidence: 0.819863424615385

 $00:24:36.564 \longrightarrow 00:24:40.210$ harvest their eggs or ovarian

NOTE Confidence: 0.819863424615385

 $00{:}24{:}40.210 \dashrightarrow 00{:}24{:}42.400$ tissue prior to the chemotherapy and

NOTE Confidence: 0.819863424615385

 $00:24:42.400 \longrightarrow 00:24:44.649$ radiation and that way they could

NOTE Confidence: 0.819863424615385

00:24:44.649 --> 00:24:46.474 avoid the more complicated surgery?

NOTE Confidence: 0.923030389565217

 $00:24:46.920 \longrightarrow 00:24:49.116$ Absolutely. The retrieval of the eggs

NOTE Confidence: 0.923030389565217

00:24:49.116 --> 00:24:51.405 is certainly possible and we have

NOTE Confidence: 0.923030389565217

 $00{:}24{:}51.405 {\:{\circ}{\circ}{\circ}}>00{:}24{:}53.320$ a wonderful group of reproductive

NOTE Confidence: 0.923030389565217

 $00:24:53.320 \longrightarrow 00:24:54.861$ endocrinologists that we work

NOTE Confidence: 0.923030389565217

00:24:54.861 --> 00:24:57.040 closely with who get patients in

 $00:24:57.040 \longrightarrow 00:24:58.940$ quickly to stimulate an ovarian

NOTE Confidence: 0.923030389565217

 $00:24:58.940 \longrightarrow 00:25:01.000$ cycle and retrieve those eggs.

NOTE Confidence: 0.923030389565217

00:25:01.000 --> 00:25:03.002 Now, if patients go on to receive

NOTE Confidence: 0.923030389565217

 $00:25:03.002 \longrightarrow 00:25:04.336$ the radiation and chemotherapy

NOTE Confidence: 0.923030389565217

 $00:25:04.336 \longrightarrow 00:25:05.996$ after the egg retrieval,

NOTE Confidence: 0.923030389565217

 $00:25:06.000 \longrightarrow 00:25:07.388$ the uterus will unfortunately

NOTE Confidence: 0.923030389565217

 $00:25:07.388 \longrightarrow 00:25:09.884$ not be able to function in the

NOTE Confidence: 0.923030389565217

 $00{:}25{:}09.884 \dashrightarrow 00{:}25{:}11.639$ capacity to carry a pregnancy.

NOTE Confidence: 0.923030389565217

 $00{:}25{:}11.640 \dashrightarrow 00{:}25{:}13.776$ But patients would have the option

NOTE Confidence: 0.923030389565217

 $00:25:13.776 \longrightarrow 00:25:16.266$ to use those harvested eggs with a

NOTE Confidence: 0.923030389565217

 $00:25:16.266 \longrightarrow 00:25:18.131$ gestational carrier or surrogate to

NOTE Confidence: 0.923030389565217

 $00:25:18.131 \longrightarrow 00:25:21.120$ carry a child that is genetically theirs.

NOTE Confidence: 0.923030389565217

00:25:21.120 --> 00:25:21.884 But unfortunately,

NOTE Confidence: 0.923030389565217

 $00{:}25{:}21.884 \dashrightarrow 00{:}25{:}24.558$ the radiation does do damage to the

NOTE Confidence: 0.923030389565217

00:25:24.558 --> 00:25:26.699 uterine structures in terms of its

 $00:25:26.699 \longrightarrow 00:25:29.318$ ability to carry a pregnancy down the road.

NOTE Confidence: 0.885923349230769

 $00{:}25{:}31.280 \dashrightarrow 00{:}25{:}35.051$ So moving on to the patients who have

NOTE Confidence: 0.885923349230769

 $00:25:35.051 \longrightarrow 00:25:37.360$ metastatic cancer for whom chemotherapy

NOTE Confidence: 0.885923349230769

00:25:37.360 --> 00:25:40.960 or immunotherapy are indicated,

NOTE Confidence: 0.885923349230769

 $00:25:40.960 \longrightarrow 00:25:43.336$ can you first of all tell us a little

NOTE Confidence: 0.885923349230769

00:25:43.336 --> 00:25:46.004 bit about how many patients or what

NOTE Confidence: 0.885923349230769

 $00:25:46.004 \longrightarrow 00:25:48.114$ proportion of patients with cervical

NOTE Confidence: 0.885923349230769

00:25:48.114 --> 00:25:50.046 cancer present with metastatic

NOTE Confidence: 0.885923349230769

 $00:25:50.046 \longrightarrow 00:25:52.524$ disease versus non metastatic and

NOTE Confidence: 0.885923349230769

 $00:25:52.524 \longrightarrow 00:25:54.879$ and what's their prognosis like?

NOTE Confidence: 0.850798004285714

 $00{:}25{:}55.600 \to 00{:}25{:}58.274$ Yes. Fortunately we do not see a

NOTE Confidence: 0.850798004285714

 $00:25:58.280 \longrightarrow 00:26:00.275$ high number of patients.

NOTE Confidence: 0.850798004285714

 $00:26:00.280 \longrightarrow 00:26:01.912$ We're probably talking in the order

NOTE Confidence: 0.850798004285714

 $00:26:01.912 \longrightarrow 00:26:04.062$ of five to 10% who are presenting

NOTE Confidence: 0.850798004285714

 $00:26:04.062 \longrightarrow 00:26:05.832$ with metastatic disease when they

NOTE Confidence: 0.850798004285714

 $00:26:05.832 \longrightarrow 00:26:07.559$ first show up to the clinic.

 $00:26:07.560 \longrightarrow 00:26:09.359$ And this is likely due to

NOTE Confidence: 0.850798004285714

 $00:26:09.360 \longrightarrow 00:26:11.195$ our excellent screening and patients

NOTE Confidence: 0.850798004285714

00:26:11.195 --> 00:26:13.987 being aware of the symptoms to get care

NOTE Confidence: 0.850798004285714

 $00:26:13.987 \longrightarrow 00:26:16.073$ to detect disease in its earliest stage.

NOTE Confidence: 0.850798004285714

00:26:16.080 --> 00:26:18.236 But when these patients do show up,

NOTE Confidence: 0.850798004285714

 $00:26:18.240 \longrightarrow 00:26:19.928$ you know for years we did not have

NOTE Confidence: 0.850798004285714

 $00:26:19.928 \longrightarrow 00:26:21.956$ much in terms of options to offer them.

NOTE Confidence: 0.850798004285714

 $00:26:21.960 \longrightarrow 00:26:23.648$ Cytotoxic chemotherapy was really

NOTE Confidence: 0.850798004285714

 $00:26:23.648 \longrightarrow 00:26:26.520$ all that we had and prognosis

NOTE Confidence: 0.850798004285714

 $00:26:26.520 \longrightarrow 00:26:28.758$ was not great for those patients.

NOTE Confidence: 0.850798004285714

 $00{:}26{:}28.760 \longrightarrow 00{:}26{:}31.203$ We're very excited to see the rapid

NOTE Confidence: 0.850798004285714

 $00:26:31.203 \longrightarrow 00:26:33.481$ expansion of drug development in the

NOTE Confidence: 0.850798004285714

 $00{:}26{:}33.481 \dashrightarrow 00{:}26{:}35.809$ cervical cancer space even over the

NOTE Confidence: 0.850798004285714

 $00{:}26{:}35.809 \dashrightarrow 00{:}26{:}38.176$ last three to four years where we

NOTE Confidence: 0.850798004285714

 $00:26:38.176 \longrightarrow 00:26:40.472$ have seen a number of new approvals

 $00:26:40.472 \longrightarrow 00:26:42.934$ and really ongoing interest and

NOTE Confidence: 0.850798004285714

 $00{:}26{:}42.934 \dashrightarrow 00{:}26{:}44.998$ excitement in additional clinical

NOTE Confidence: 0.850798004285714

 $00:26:44.998 \longrightarrow 00:26:47.376$ trials that will hopefully see

NOTE Confidence: 0.850798004285714

 $00:26:47.376 \longrightarrow 00:26:49.325$ these drugs brought into the ovarian

NOTE Confidence: 0.850798004285714

00:26:49.325 --> 00:26:51.479 cancer space to help more women.

NOTE Confidence: 0.902210003333333

 $00:26:52.200 \longrightarrow 00:26:54.312$ Can you talk a little

NOTE Confidence: 0.902210003333333

 $00:26:54.312 \longrightarrow 00:26:56.275$ bit about some of the ongoing

NOTE Confidence: 0.902210003333333

 $00{:}26{:}56.275 \dashrightarrow 00{:}26{:}57.985$ clinical trials and research

NOTE Confidence: 0.902210003333333

 $00{:}26{:}57.985 \dashrightarrow 00{:}26{:}59.960$ that you're most excited about?

NOTE Confidence: 0.900419812666666

 $00:27:00.360 \longrightarrow 00:27:01.080$ Yeah, absolutely.

NOTE Confidence: 0.900419812666666

 $00{:}27{:}01.080 \dashrightarrow 00{:}27{:}03.600$ You know like all cancers we often

NOTE Confidence: 0.900419812666666

 $00{:}27{:}03.600 \dashrightarrow 00{:}27{:}06.029$ see the new drugs develop for patients

NOTE Confidence: 0.900419812666666

00:27:06.029 --> 00:27:08.112 you know later in their cancer

NOTE Confidence: 0.900419812666666

00:27:08.112 --> 00:27:10.492 journey and it takes some time for

NOTE Confidence: 0.900419812666666

00:27:10.492 --> 00:27:13.280 those medications to trickle into

NOTE Confidence: 0.900419812666666

 $00:27:13.280 \longrightarrow 00:27:16.316$ the earlier phase of cancer treatment.

 $00:27:16.320 \longrightarrow 00:27:18.850$ And so use of immunotherapy

NOTE Confidence: 0.900419812666666

 $00:27:18.850 \longrightarrow 00:27:20.874$ in the earlier elements,

NOTE Confidence: 0.900419812666666

 $00:27:20.880 \longrightarrow 00:27:23.030$ meaning not waiting for

NOTE Confidence: 0.900419812666666

00:27:23.030 --> 00:27:25.180 recurrence or maybe in patients

NOTE Confidence: 0.900419812666666

 $00:27:25.257 \longrightarrow 00:27:27.124$ who have a tumor that is perhaps

NOTE Confidence: 0.900419812666666

 $00:27:27.124 \longrightarrow 00:27:28.720$ too big for fertility sparing.

NOTE Confidence: 0.900419812666666

00:27:28.720 --> 00:27:30.764 But maybe we can use an immunotherapy

NOTE Confidence: 0.900419812666666

 $00:27:30.764 \longrightarrow 00:27:33.092$ to shrink that down and then offer

NOTE Confidence: 0.900419812666666

 $00:27:33.092 \longrightarrow 00:27:34.837$ patients a fertility sparing option.

NOTE Confidence: 0.900419812666666

 $00:27:34.840 \longrightarrow 00:27:37.078$ I think would be very exciting

NOTE Confidence: 0.900419812666666

 $00{:}27{:}37.080 \dashrightarrow 00{:}27{:}38.840$ because with immunotherapy we really

NOTE Confidence: 0.900419812666666

 $00:27:38.840 \longrightarrow 00:27:41.356$ see a difference in the side effect

NOTE Confidence: 0.900419812666666

 $00{:}27{:}41.356 \dashrightarrow 00{:}27{:}43.076$ profile for patients as well.

NOTE Confidence: 0.900419812666666

 $00:27:43.080 \longrightarrow 00:27:44.900$ So it's not just about the

NOTE Confidence: 0.900419812666666

 $00:27:44.900 \longrightarrow 00:27:46.240$ long term cancer outcomes,

 $00:27:46.240 \longrightarrow 00:27:48.910$ but how patients feel their quality

NOTE Confidence: 0.900419812666666

 $00:27:48.910 \longrightarrow 00:27:50.913$ of life and their experience

NOTE Confidence: 0.900419812666666

 $00:27:50.913 \longrightarrow 00:27:52.397$ during their cancer care.

NOTE Confidence: 0.900419812666666

 $00:27:52.400 \longrightarrow 00:27:54.740$ And immunotherapy seems to be

NOTE Confidence: 0.900419812666666

 $00:27:54.740 \longrightarrow 00:27:56.841$ offering patients a different but

NOTE Confidence: 0.900419812666666

00:27:56.841 --> 00:27:58.776 in somewhat improved side effect

NOTE Confidence: 0.900419812666666

 $00:27:58.776 \longrightarrow 00:28:01.033$ profile when we compare it to

NOTE Confidence: 0.900419812666666

 $00:28:01.033 \longrightarrow 00:28:02.798$ some of the older chemotherapies.

NOTE Confidence: 0.900419812666666

 $00:28:02.800 \longrightarrow 00:28:03.904$ Other than that,

NOTE Confidence: 0.900419812666666

 $00:28:03.904 \longrightarrow 00:28:06.112$ we're excited to see some updated

NOTE Confidence: 0.900419812666666

 $00{:}28{:}06.112 \dashrightarrow 00{:}28{:}08.123$ cervical surgery trials that have

NOTE Confidence: 0.900419812666666

 $00:28:08.123 \longrightarrow 00:28:10.088$ been presented in conference format

NOTE Confidence: 0.900419812666666

 $00:28:10.088 \longrightarrow 00:28:12.392$ to suggest that maybe for certain

NOTE Confidence: 0.900419812666666

 $00:28:12.392 \longrightarrow 00:28:14.659$ women the radical surgery is not

NOTE Confidence: 0.900419812666666

00:28:14.659 --> 00:28:17.592 necessary anymore and we can do a

NOTE Confidence: 0.900419812666666

 $00:28:17.592 \longrightarrow 00:28:20.360$ smaller less invasive hysterectomy,

 $00:28:20.360 \longrightarrow 00:28:22.880$ but confer a similar long term

NOTE Confidence: 0.900419812666666

 $00:28:22.880 \longrightarrow 00:28:24.560$ outcome for those women.

NOTE Confidence: 0.900419812666666

 $00:28:24.560 \longrightarrow 00:28:26.216$ And that would be a real game changer

NOTE Confidence: 0.900419812666666

 $00:28:26.216 \longrightarrow 00:28:28.279$ in the surgical treatment of this cancer.

NOTE Confidence: 0.900419812666666

 $00:28:28.280 \longrightarrow 00:28:29.528$ So we look forward to that

NOTE Confidence: 0.900419812666666

00:28:29.528 --> 00:28:30.360 publication coming up soon.

NOTE Confidence: 0.891338373333333

 $00:28:31.080 \longrightarrow 00:28:32.880$ Doctor Mitchell Clark is an

NOTE Confidence: 0.891338373333333

 $00:28:32.880 \longrightarrow 00:28:34.320$ Assistant professor of Obstetrics,

NOTE Confidence: 0.891338373333333

 $00{:}28{:}34.320 \dashrightarrow 00{:}28{:}36.144$ Gynecology, and Reproductive Sciences

NOTE Confidence: 0.89133837333333

00:28:36.144 --> 00:28:38.880 at the Yale School of Medicine.

NOTE Confidence: 0.891338373333333

 $00:28:38.880 \longrightarrow 00:28:40.820$ If you have questions,

NOTE Confidence: 0.891338373333333

 $00:28:40.820 \longrightarrow 00:28:42.737$ the address is canceranswers@yale.edu,

NOTE Confidence: 0.891338373333333

 $00{:}28{:}42.737 \dashrightarrow 00{:}28{:}45.479$ and past editions of the program

NOTE Confidence: 0.891338373333333

00:28:45.479 --> 00:28:47.853 are available in audio and written

NOTE Confidence: 0.891338373333333

 $00:28:47.853 \longrightarrow 00:28:48.788$ form at yale cancercenter.org.

 $00{:}28{:}48.788 \dashrightarrow 00{:}28{:}51.252$ We hope you'll join us next week to

NOTE Confidence: 0.891338373333333

 $00{:}28{:}51.252 \dashrightarrow 00{:}28{:}53.137$ learn more about the fight against

NOTE Confidence: 0.891338373333333

 $00{:}28{:}53.137 --> 00{:}28{:}55.000$ cancer here on Connecticut Public Radio.

NOTE Confidence: 0.891338373333333

 $00{:}28{:}55.000 \dashrightarrow 00{:}28{:}57.562$ Funding for Yale Cancer Answers is

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 $00{:}28{:}57.562 \dashrightarrow 00{:}29{:}00.000$ provided by Smilow Cancer Hospital.