WEBVTT

00:00:00.000 --> 00:00:02.460 Support for Yale Cancer Answers

NOTE Confidence: 0.85541624

 $00:00:02.460 \longrightarrow 00:00:04.920$ comes from AstraZeneca, dedicated

NOTE Confidence: 0.85541624

00:00:04.999 --> 00:00:07.344 to advancing options and providing

NOTE Confidence: 0.85541624

 $00:00:07.344 \longrightarrow 00:00:10.300$ hope for people living with cancer.

NOTE Confidence: 0.85541624

 $00{:}00{:}10.300 \dashrightarrow 00{:}00{:}13.940$ More information at a strazeneca-us.com.

NOTE Confidence: 0.85541624

 $00:00:13.940 \longrightarrow 00:00:15.860$ Welcome to Yale Cancer Answers with

NOTE Confidence: 0.85541624

00:00:15.860 --> 00:00:18.316 your host doctor Anees Chagpar.

NOTE Confidence: 0.85541624

 $00:00:18.316 \longrightarrow 00:00:20.176$ Yale Cancer Answers features the

NOTE Confidence: 0.85541624

00:00:20.176 --> 00:00:22.447 latest information on cancer care by

NOTE Confidence: 0.85541624

 $00{:}00{:}22.447 \dashrightarrow 00{:}00{:}23.911$ welcoming on cologists and specialists

NOTE Confidence: 0.85541624

 $00:00:23.911 \longrightarrow 00:00:26.405$ who are on the forefront of the

NOTE Confidence: 0.85541624

 $00:00:26.405 \longrightarrow 00:00:28.580$ battle to fight cancer. This week,

NOTE Confidence: 0.85541624

 $00{:}00{:}28.580 \dashrightarrow 00{:}00{:}30.365$ it's a conversation about colorectal

NOTE Confidence: 0.85541624

 $00:00:30.365 \longrightarrow 00:00:32.150$ cancer with Doctor Michael Cecchini.

NOTE Confidence: 0.85541624

00:00:32.150 --> 00:00:34.045 Doctor Cecchini is an assistant

 $00:00:34.045 \longrightarrow 00:00:35.940$ professor of medicine and medical

NOTE Confidence: 0.85541624

00:00:36.006 --> 00:00:37.968 oncology at the Yale School of

NOTE Confidence: 0.85541624

 $00{:}00{:}37.968 \dashrightarrow 00{:}00{:}40.036$ Medicine where Doctor Chagpar is

NOTE Confidence: 0.85541624

 $00:00:40.036 \longrightarrow 00:00:41.786$ a professor of surgical oncology.

NOTE Confidence: 0.8384141

 $00:00:43.140 \longrightarrow 00:00:45.210$ So Mike, maybe we can start

NOTE Confidence: 0.8384141

00:00:45.210 --> 00:00:47.952 off by you telling us a little

NOTE Confidence: 0.8384141

 $00:00:47.952 \longrightarrow 00:00:49.664$ bit about colorectal cancer.

NOTE Confidence: 0.8384141

00:00:49.670 --> 00:00:51.968 A little bit about the epidemiology.

NOTE Confidence: 0.8384141

 $00:00:51.970 \longrightarrow 00:00:54.658$ Who gets it? How common is it?

NOTE Confidence: 0.8384141

 $00:00:54.660 \longrightarrow 00:00:55.972$ How lethal is it?

NOTE Confidence: 0.8384141

 $00:00:55.972 \longrightarrow 00:00:57.940$ And then we'll get into some

NOTE Confidence: 0.8384141

00:00:58.012 --> 00:01:00.364 of the more recent updates with

NOTE Confidence: 0.8384141

 $00:01:00.364 \longrightarrow 00:01:02.720$ regards to screening of colorectal cancer.

NOTE Confidence: 0.8384141

 $00:01:02.720 \longrightarrow 00:01:05.030$ I am a gastrointestinal

NOTE Confidence: 0.8384141

 $00:01:05.030 \longrightarrow 00:01:07.815$ medical oncologist, and I see a variety

NOTE Confidence: 0.8384141

 $00:01:07.815 \longrightarrow 00:01:10.319$ of GI cancers, colorectal cancers and it is where

00:01:10.319 --> 00:01:13.168 I focus the majority of my research.

 $00:01:15.840 \longrightarrow 00:01:17.031$ It's quite common.

NOTE Confidence: 0.8384141

 $00:01:17.031 \longrightarrow 00:01:19.413$ There are about 150,000 cases diagnosed

NOTE Confidence: 0.8384141

 $00{:}01{:}19.413 \dashrightarrow 00{:}01{:}21.551$ annually in the United States and

NOTE Confidence: 0.8384141

 $00:01:21.551 \longrightarrow 00:01:23.231$ more than 50,000 annual deaths.

 $00{:}01{:}24.756 \dashrightarrow 00{:}01{:}28.087$ And I do think it needs to be stated

NOTE Confidence: 0.8384141

 $00:01:28.087 \longrightarrow 00:01:30.832$ that there is also a rise in incidence

NOTE Confidence: 0.8384141

 $00:01:30.832 \longrightarrow 00:01:33.597$ in adults less than age of 50.

NOTE Confidence: 0.8384141

00:01:33.600 --> 00:01:35.682 Although it is like many cancers,

NOTE Confidence: 0.8384141

 $00{:}01{:}35.682 \dashrightarrow 00{:}01{:}37.070$ predominantly a cancer of older

NOTE Confidence: 0.8384141

00:01:37.132 --> 00:01:39.147 individuals, for some unclear reason,

NOTE Confidence: 0.8384141

 $00{:}01{:}39.150 \dashrightarrow 00{:}01{:}41.120$ the incidence is actually rising

NOTE Confidence: 0.8384141

 $00:01:41.120 \longrightarrow 00:01:43.589$ in adults less than age of 50,

 $00:01:44.769 \longrightarrow 00:01:47.127$ while it is going down overall,

NOTE Confidence: 0.8384141

00:01:47.130 --> 00:01:50.315 due to effective screening by

NOTE Confidence: 0.8384141

 $00:01:50.315 \longrightarrow 00:01:53.500$ colonoscopy for adults over the

NOTE Confidence: 0.8384141

 $00:01:53.612 \longrightarrow 00:01:57.464$ age of 50.

 $00:02:03.230 \longrightarrow 00:02:05.778$ Patients with a personal history or

NOTE Confidence: 0.8384141

 $00:02:05.778 \longrightarrow 00:02:08.295$ family history of colorectal cancer are at

NOTE Confidence: 0.8384141

 $00:02:08.295 \longrightarrow 00:02:11.019$ increased risk for developing the disease.

NOTE Confidence: 0.8384141

00:02:11.020 --> 00:02:13.678 Personal history for large polyps etc.,

NOTE Confidence: 0.8384141

 $00:02:13.680 \longrightarrow 00:02:15.895$ certain polyps with certain characteristics

NOTE Confidence: 0.8384141

 $00:02:15.895 \longrightarrow 00:02:18.570$ increase the risk for colorectal cancer,

NOTE Confidence: 0.8384141

 $00:02:18.570 \longrightarrow 00:02:20.342$ but it is mostly sporadic,

NOTE Confidence: 0.8384141

 $00:02:20.342 \longrightarrow 00:02:21.228$ not familial.

NOTE Confidence: 0.8384141

 $00:02:21.230 \longrightarrow 00:02:23.006$ There are conditions like

NOTE Confidence: 0.8384141

00:02:23.006 --> 00:02:24.338 inflammatory bowel disease,

NOTE Confidence: 0.8384141

 $00{:}02{:}24.340 \longrightarrow 00{:}02{:}27.112$ prior radiation and then in rare

NOTE Confidence: 0.8384141

 $00:02:27.112 \longrightarrow 00:02:29.435$ circumstances inherited syndromes such as

NOTE Confidence: 0.8384141

 $00:02:29.435 \longrightarrow 00:02:31.889$ Lynch syndrome and something called FAP.

NOTE Confidence: 0.8384141

 $00:02:31.890 \longrightarrow 00:02:33.222$ Familial adenomatous polyposis syndrome.

 $00:02:34.110 \longrightarrow 00:02:35.882$ And other polyp syndromes.

NOTE Confidence: 0.8384141

 $00:02:35.882 \longrightarrow 00:02:37.654$ So when thinking about

 $00:02:37.660 \longrightarrow 00:02:39.945$ the fact that the majority

NOTE Confidence: 0.71678287

00:02:39.945 --> 00:02:41.773 of these are sporadic,

NOTE Confidence: 0.71678287

 $00:02:41.780 \longrightarrow 00:02:44.174$ are there any risk factors

NOTE Confidence: 0.71678287

 $00:02:44.174 \longrightarrow 00:02:47.177$ that people who don't have a family

NOTE Confidence: 0.71678287

00:02:47.177 --> 00:02:49.835 history should really be cognizant of?

NOTE Confidence: 0.71678287

 $00:02:49.840 \longrightarrow 00:02:51.955$ So I'm thinking here about

NOTE Confidence: 0.71678287

 $00:02:51.955 \longrightarrow 00:02:53.647$ things like you know,

NOTE Confidence: 0.71678287

00:02:53.650 --> 00:02:56.618 people often ask about smoking or alcohol,

NOTE Confidence: 0.71678287

 $00:02:56.620 \longrightarrow 00:02:59.364$ or smoked meats or other

NOTE Confidence: 0.71678287

 $00:02:59.364 \longrightarrow 00:03:02.129$ things that might increase their risk.

NOTE Confidence: 0.71678287

 $00:03:02.130 \longrightarrow 00:03:02.980$ So there

NOTE Confidence: 0.86934394

 $00:03:02.980 \longrightarrow 00:03:04.676$ isn't this clear association

NOTE Confidence: 0.86934394

 $00:03:04.676 \longrightarrow 00:03:05.948$ with some carcinogen,

NOTE Confidence: 0.86934394

 $00:03:05.950 \longrightarrow 00:03:07.634$ some cancer predisposing factor,

NOTE Confidence: 0.86934394

 $00:03:07.634 \longrightarrow 00:03:11.040$ like there is with lung cancer and smoking,

NOTE Confidence: 0.86934394

 $00:03:11.040 \longrightarrow 00:03:12.596$ for example.

 $00:03:12.596 \longrightarrow 00:03:16.809$ I'd say that the data is a bit mixed on

NOTE Confidence: 0.86934394

 $00{:}03{:}16.809 \dashrightarrow 00{:}03{:}19.491$ how important certain risk factors are.

NOTE Confidence: 0.86934394

00:03:19.500 --> 00:03:21.016 Certainly things like obesity,

NOTE Confidence: 0.86934394

 $00:03:21.016 \longrightarrow 00:03:23.290$ diabetes and red or processed meats

NOTE Confidence: 0.86934394

 $00:03:23.353 \longrightarrow 00:03:25.248$ increase risk and

NOTE Confidence: 0.86934394

00:03:25.250 --> 00:03:28.306 they may affect the rate to some degree,

NOTE Confidence: 0.86934394

 $00:03:28.310 \longrightarrow 00:03:31.165$ but the data again isn't

NOTE Confidence: 0.86934394

 $00:03:31.165 \longrightarrow 00:03:32.878$ always consistent.

NOTE Confidence: 0.86934394

 $00:03:32.880 \longrightarrow 00:03:34.950$ The smoked meats issue is

NOTE Confidence: 0.86934394

 $00:03:34.950 \longrightarrow 00:03:37.160$ more thought to be related to

NOTE Confidence: 0.86934394

 $00{:}03{:}37.160 \dashrightarrow 00{:}03{:}39.060$ gastric cancer or certainly seems

NOTE Confidence: 0.86934394

 $00:03:39.060 \longrightarrow 00:03:41.607$ to play a bit more of a role.

NOTE Confidence: 0.86934394

00:03:41.610 --> 00:03:43.350 Race also plays a role.

NOTE Confidence: 0.86934394

 $00:03:43.350 \longrightarrow 00:03:45.145$ African Americans have the highest

NOTE Confidence: 0.86934394

 $00:03:45.145 \longrightarrow 00:03:46.940$ colorectal cancer rates in the

00:03:46.997 --> 00:03:48.321 United States and mortality

NOTE Confidence: 0.86934394

 $00:03:48.321 \longrightarrow 00:03:49.976$ is also higher compared to

NOTE Confidence: 0.8248891

 $00:03:49.980 \longrightarrow 00:03:50.853$ other ethnic groups.

NOTE Confidence: 0.8248891

 $00:03:50.853 \longrightarrow 00:03:53.408$ So do we know why we see some

NOTE Confidence: 0.8248891

00:03:53.408 --> 00:03:55.216 of these epidemiologic trends?

NOTE Confidence: 0.8248891

 $00:03:55.220 \longrightarrow 00:03:57.314$ Why is it that more African

NOTE Confidence: 0.8248891

00:03:57.314 --> 00:03:58.710 Americans get colorectal cancer?

NOTE Confidence: 0.8248891

 $00:03:58.710 \longrightarrow 00:04:01.090$ Why is it that we're now seeing

NOTE Confidence: 0.8248891

 $00{:}04{:}01.090 \dashrightarrow 00{:}04{:}03.000$ more colorectal cancer occurring in

NOTE Confidence: 0.8248891

 $00:04:03.000 \longrightarrow 00:04:05.184$ adults younger than the age of 50?

NOTE Confidence: 0.8248891

 $00:04:05.190 \longrightarrow 00:04:06.795$ What are the factors in

NOTE Confidence: 0.8248891

 $00:04:06.795 \longrightarrow 00:04:07.758$ these particular populations

NOTE Confidence: 0.8248891

 $00:04:07.758 \longrightarrow 00:04:08.950$ that's increasing their risk?

NOTE Confidence: 0.8248891

 $00:04:08.950 \longrightarrow 00:04:09.570$ The short

NOTE Confidence: 0.8648499

 $00:04:09.570 \longrightarrow 00:04:11.448$ answer would be we don't know,

NOTE Confidence: 0.8648499

 $00:04:11.450 \longrightarrow 00:04:13.604$ and where there's a tremendous

 $00:04:13.604 \longrightarrow 00:04:15.954$ effort in trying to understand some of

NOTE Confidence: 0.8648499

00:04:15.954 --> 00:04:18.568 the risk factor and some of

NOTE Confidence: 0.8648499

 $00{:}04{:}18.568 \dashrightarrow 00{:}04{:}20.556$ the reasons for the increased risk in

NOTE Confidence: 0.8648499

 $00:04:20.556 \longrightarrow 00:04:23.900$ the groups that you just articulated.

NOTE Confidence: 0.8648499

 $00:04:23.900 \longrightarrow 00:04:25.520$ Interesting and to get back

NOTE Confidence: 0.8648499

 $00:04:25.520 \longrightarrow 00:04:27.140$ to the younger age group.

NOTE Confidence: 0.8648499

00:04:27.140 --> 00:04:29.436 It's not just that the incidence

NOTE Confidence: 0.8648499

 $00{:}04{:}29.436 \dashrightarrow 00{:}04{:}31.350$ has been static in that group,

NOTE Confidence: 0.8648499

 $00:04:31.350 \longrightarrow 00:04:33.078$ it's increasing and so we do

NOTE Confidence: 0.8648499

 $00:04:33.078 \longrightarrow 00:04:35.239$ think that it has some lifestyle factors,

NOTE Confidence: 0.8648499

 $00:04:35.240 \longrightarrow 00:04:36.860$ perhaps diet is a factor that is

NOTE Confidence: 0.8648499

 $00:04:36.860 \longrightarrow 00:04:38.156$ playing a role here,

NOTE Confidence: 0.8648499

 $00:04:38.160 \longrightarrow 00:04:39.780$ but we really don't know,

NOTE Confidence: 0.8648499

 $00:04:39.780 \longrightarrow 00:04:41.646$ and there's a tremendous area of

 $00:04:43.986 \longrightarrow 00:04:45.706$ research to try and understand why these inci-

dences

00:04:45.706 --> 00:04:47.548 are increasing in the young adults.

NOTE Confidence: 0.8648499

 $00:04:47.550 \longrightarrow 00:04:48.850$ But we don't know.

NOTE Confidence: 0.89139223

 $00:04:49.680 \longrightarrow 00:04:52.298$ And so as we see more incidence

NOTE Confidence: 0.89139223

 $00:04:52.298 \longrightarrow 00:04:55.293$ in younger people, one of the

NOTE Confidence: 0.89139223

00:04:55.293 --> 00:04:58.100 questions that might come up is,

NOTE Confidence: 0.89139223

 $00:04:58.100 \longrightarrow 00:04:59.240$ you know historically,

NOTE Confidence: 0.89139223

 $00:04:59.240 \longrightarrow 00:05:01.900$ and I know that the screening guidelines

NOTE Confidence: 0.89139223

00:05:01.967 --> 00:05:03.747 have recently changed to include

NOTE Confidence: 0.89139223

 $00{:}05{:}03.747 \dashrightarrow 00{:}05{:}06.099$ younger people in terms of routine

NOTE Confidence: 0.89139223

 $00:05:06.099 \longrightarrow 00:05:08.127$ screening for asymptomatic people.

NOTE Confidence: 0.89139223

 $00:05:08.130 \longrightarrow 00:05:10.914$ But when we think about the fact that

NOTE Confidence: 0.89139223

 $00:05:10.914 \longrightarrow 00:05:13.737$ over the last several several years,

NOTE Confidence: 0.89139223

 $00{:}05{:}13.740 \dashrightarrow 00{:}05{:}15.745$ we're starting to see more

NOTE Confidence: 0.89139223

 $00{:}05{:}15.745 \dashrightarrow 00{:}05{:}17.750$ colon cancer in younger people,

NOTE Confidence: 0.89139223

 $00:05:17.750 \longrightarrow 00:05:20.816$ how is it that they present because

NOTE Confidence: 0.89139223

 $00{:}05{:}20.820 \dashrightarrow 00{:}05{:}23.298$ they wouldn't have presented on a

 $00:05:23.298 \longrightarrow 00:05:24.537$ routine asymptomatic colonoscopy,

NOTE Confidence: 0.89139223

 $00{:}05{:}24.540 \dashrightarrow 00{:}05{:}26.608$ presumably because historically the

NOTE Confidence: 0.89139223

 $00:05:26.608 \longrightarrow 00:05:28.676$ guidelines had recommended starting

NOTE Confidence: 0.89139223

 $00:05:28.676 \longrightarrow 00:05:30.728$ colorectal screening at the age of 50.

NOTE Confidence: 0.89139223

 $00{:}05{:}30.730 \dashrightarrow 00{:}05{:}34.447$ So how are we picking up these cancers in

NOTE Confidence: 0.85516155

 $00:05:34.450 \longrightarrow 00:05:35.605$ younger people?

NOTE Confidence: 0.85516155

00:05:35.605 --> 00:05:37.530 Unfortunately, it's the last thing

NOTE Confidence: 0.85516155

 $00:05:37.530 \longrightarrow 00:05:39.409$ on many caregivers minds,

NOTE Confidence: 0.85516155

 $00:05:39.410 \longrightarrow 00:05:41.820$ medical professionals minds that

NOTE Confidence: 0.85516155

 $00{:}05{:}41.820 \dashrightarrow 00{:}05{:}44.629$ somebody symptoms would be related to

NOTE Confidence: 0.85516155

 $00{:}05{:}44.629 \to 00{:}05{:}47.245$ colon cancer if they are a younger adult.

NOTE Confidence: 0.85516155

 $00:05:47.250 \longrightarrow 00:05:49.770$ But the majority of patients, about

NOTE Confidence: 0.85516155

 $00{:}05{:}49.770 --> 00{:}05{:}52.299$ 3/4 of patients , will have some

NOTE Confidence: 0.85516155

 $00:05:52.300 \longrightarrow 00:05:54.496$ nonspecific change in their bowel habits.

 $00:05:57.614 \longrightarrow 00:05:59.270$ Half will have bleeding.

NOTE Confidence: 0.85516155

 $00{:}05{:}59.270 \dashrightarrow 00{:}06{:}01.105$ There's a palpable rectal mass

00:06:01.105 --> 00:06:02.940 in about 1/4 of patients,

NOTE Confidence: 0.85516155

 $00:06:02.940 \longrightarrow 00:06:05.100$ and iron deficency, or anemia isn't actually

NOTE Confidence: 0.85516155

 $00:06:05.100 \longrightarrow 00:06:07.349$ a sensitive as you might think.

NOTE Confidence: 0.85516155

 $00:06:07.350 \longrightarrow 00:06:10.242$ It's fewer than 20% of patients,

NOTE Confidence: 0.85516155

 $00{:}06{:}10.242 \dashrightarrow 00{:}06{:}11.972$ especially young adults that

NOTE Confidence: 0.85516155

 $00:06:11.972 \longrightarrow 00:06:14.318$ would present with iron deficiency anemia.

NOTE Confidence: 0.85516155

00:06:14.320 --> 00:06:15.076 So unfortunately,

NOTE Confidence: 0.85516155

 $00:06:15.076 \longrightarrow 00:06:17.344$ I have numerous patients in my

NOTE Confidence: 0.85516155

 $00:06:17.344 \longrightarrow 00:06:19.658$ practice that had some lower GI

NOTE Confidence: 0.85516155

 $00{:}06{:}19.658 \dashrightarrow 00{:}06{:}21.518$ bleeding that was attributed to

NOTE Confidence: 0.85516155

00:06:21.518 --> 00:06:23.120 hemorrhoids and incidence wise.

 $00:06:28.560 \longrightarrow 00:06:29.580$ Individuals should also

NOTE Confidence: 0.85516155

 $00:06:29.580 \longrightarrow 00:06:30.940$ listen to their bodies,

NOTE Confidence: 0.85516155

00:06:30.940 --> 00:06:32.640 and if something's not right,

NOTE Confidence: 0.85516155

 $00:06:32.640 \longrightarrow 00:06:34.000$ change in bowel habits,

NOTE Confidence: 0.85516155

 $00:06:34.000 \longrightarrow 00:06:34.340$ bleeding,

 $00:06:34.340 \longrightarrow 00:06:35.360$ they should take

NOTE Confidence: 0.85783

 $00:06:35.360 \longrightarrow 00:06:36.380$ those very seriously,

NOTE Confidence: 0.85783

 $00:06:36.380 \longrightarrow 00:06:37.740$ even if they're younger.

NOTE Confidence: 0.85783

 $00:06:37.740 \longrightarrow 00:06:39.440$ Is it the case that,

NOTE Confidence: 0.85783

 $00{:}06{:}39.440 \dashrightarrow 00{:}06{:}41.095$ as we've seen this increasing

NOTE Confidence: 0.85783

 $00{:}06{:}41.095 {\:{\circ}{\circ}{\circ}}>00{:}06{:}42.750$ incidence in younger people because

NOTE Confidence: 0.85783

 $00:06:42.806 \longrightarrow 00:06:44.536$ they are presenting with symptoms?

NOTE Confidence: 0.85783

 $00:06:44.540 \longrightarrow 00:06:46.048$ Presumably because screening was

NOTE Confidence: 0.85783

 $00:06:46.048 \longrightarrow 00:06:47.556$ not recommended for

NOTE Confidence: 0.85783

 $00:06:47.556 \longrightarrow 00:06:49.640$ people who were younger than age 50?

NOTE Confidence: 0.85783

 $00:06:49.640 \longrightarrow 00:06:51.470$ Is it the case that these

NOTE Confidence: 0.85783

00:06:51.470 --> 00:06:53.196 younger people that we were

NOTE Confidence: 0.85783

 $00{:}06{:}53.196 \dashrightarrow 00{:}06{:}54.928$ seeing colorectal cancers in

NOTE Confidence: 0.85783

 $00:06:54.930 \longrightarrow 00:06:56.205$ were actually presenting

NOTE Confidence: 0.85783

 $00:06:56.205 \longrightarrow 00:06:57.905$ with a higher stage,

 $00:06:57.910 \longrightarrow 00:06:59.610$ and what implications does

NOTE Confidence: 0.85783

 $00:06:59.610 \longrightarrow 00:07:01.310$ that have for prognosis?

NOTE Confidence: 0.8351151

 $00{:}07{:}01.990 \dashrightarrow 00{:}07{:}04.426$ Yeah, that's completely correct.

NOTE Confidence: 0.8351151

 $00:07:04.430 \longrightarrow 00:07:06.887$ Unfortunately, when you have a disease

NOTE Confidence: 0.8351151

 $00:07:06.887 \longrightarrow 00:07:08.959$ that is presenting because symptoms

NOTE Confidence: 0.8351151

00:07:08.959 --> 00:07:11.349 develop instead of asymptomatic screening,

NOTE Confidence: 0.8351151

 $00:07:11.350 \longrightarrow 00:07:13.390$ generally this stage is higher,

NOTE Confidence: 0.8351151

 $00:07:13.390 \longrightarrow 00:07:15.185$ so these younger adults generally

NOTE Confidence: 0.8351151

 $00{:}07{:}15.185 \dashrightarrow 00{:}07{:}17.498$ are diagnosed at a more advanced

NOTE Confidence: 0.8351151

00:07:17.498 --> 00:07:19.738 stage and sometimes have even

NOTE Confidence: 0.8351151

 $00{:}07{:}19.738 \dashrightarrow 00{:}07{:}21.530$ more aggressive biology overall.

NOTE Confidence: 0.8351151

 $00:07:21.530 \dashrightarrow 00:07:25.184$ So again, the stage is going to be higher.

NOTE Confidence: 0.8351151

 $00:07:25.190 \longrightarrow 00:07:27.075$ The younger adult population tends

NOTE Confidence: 0.8351151

 $00:07:27.075 \longrightarrow 00:07:29.927$ to do better than the older adult

NOTE Confidence: 0.8351151

 $00:07:29.927 \longrightarrow 00:07:32.603$ population for when you're matching them

NOTE Confidence: 0.8351151

 $00:07:32.610 \longrightarrow 00:07:35.298$ by stage, because they can probably

 $00:07:35.298 \longrightarrow 00:07:37.866$ withstand treatment better but they

NOTE Confidence: 0.8351151

 $00{:}07{:}37.866 {\:{\mbox{--}}\!>}\ 00{:}07{:}40.337$ are diagnosed at a more advanced stage

NOTE Confidence: 0.8351151

 $00:07:40.337 \longrightarrow 00:07:43.446$ then the patients that are

NOTE Confidence: 0.8351151

 $00:07:43.446 \longrightarrow 00:07:45.660$ diagnosed by asymptomatic screening and

NOTE Confidence: 0.84330237

 $00:07:45.660 \longrightarrow 00:07:48.453$ so now the American Cancer Society has

NOTE Confidence: 0.84330237

 $00:07:48.453 \dashrightarrow 00:07:51.508$ come out and said that they recommend

NOTE Confidence: 0.84330237

 $00:07:51.508 \longrightarrow 00:07:54.500$ starting screening at the age of 45.

NOTE Confidence: 0.84330237

 $00{:}07{:}54.500 \dashrightarrow 00{:}07{:}57.026$ Can you tell us more about

NOTE Confidence: 0.84330237

 $00:07:57.026 \longrightarrow 00:07:58.289$ their recommendations?

NOTE Confidence: 0.8451259

 $00:07:59.410 \longrightarrow 00:08:00.871$ Absolutely.

NOTE Confidence: 0.8451259

 $00:08:00.871 \dashrightarrow 00:08:03.306$ The American College of Gastroenterology

NOTE Confidence: 0.8451259

 $00:08:03.306 \longrightarrow 00:08:05.177$ initially recommended

NOTE Confidence: 0.8451259

 $00:08:05.177 \longrightarrow 00:08:07.257$ dropping the screening age to

NOTE Confidence: 0.8451259

00:08:07.257 --> 00:08:09.598 45 for adults at average risk,

NOTE Confidence: 0.8451259

 $00:08:09.600 \longrightarrow 00:08:12.042$ but the most widely followed

 $00:08:12.042 \longrightarrow 00:08:14.241$ guidelines are actually the US

NOTE Confidence: 0.8451259

 $00:08:14.241 \longrightarrow 00:08:16.237$ preventative Task Force guidelines,

NOTE Confidence: 0.8451259

 $00:08:16.240 \longrightarrow 00:08:18.455$ which the majority of primary

NOTE Confidence: 0.8451259

00:08:18.455 --> 00:08:19.784 care physicians follow,

NOTE Confidence: 0.8451259

 $00:08:19.790 \longrightarrow 00:08:22.180$ and they did change their

NOTE Confidence: 0.8451259

 $00{:}08{:}22.180 \dashrightarrow 00{:}08{:}25.581$ recommendation about a year or two ago

NOTE Confidence: 0.8451259

 $00{:}08{:}25.581 \dashrightarrow 00{:}08{:}28.347$ to propose a Grade B recommendation

NOTE Confidence: 0.8451259

 $00:08:28.347 \longrightarrow 00:08:30.977$ for adults over the age of 45.

NOTE Confidence: 0.8451259

 $00{:}08{:}30.980 \dashrightarrow 00{:}08{:}33.796$ But they still kept the greater

NOTE Confidence: 0.8451259

 $00:08:33.796 \longrightarrow 00:08:36.066$ recommendation for adults over the age of 50.

NOTE Confidence: 0.8451259

 $00{:}08{:}36.070 \dashrightarrow 00{:}08{:}37.580$ But just yesterday this was

NOTE Confidence: 0.8451259

 $00:08:37.580 \longrightarrow 00:08:39.570$ updated and now for all adults,

NOTE Confidence: 0.8451259

 $00:08:39.570 \longrightarrow 00:08:41.280$ they've listed a strong recommendation

NOTE Confidence: 0.8451259

 $00:08:41.280 \longrightarrow 00:08:43.379$ for adults over the age of 45,

NOTE Confidence: 0.8451259

00:08:43.380 --> 00:08:45.972 so I think now going forward that's really

NOTE Confidence: 0.8451259

00:08:45.972 --> 00:08:48.790 going to be the age we start screening

 $00:08:48.790 \longrightarrow 00:08:50.698$ almost all asymptomatic adults.

NOTE Confidence: 0.8451259

00:08:56.530 --> 00:08:58.280 Colonoscopy is a very powerful screening proce-

dure,

NOTE Confidence: 0.8451259

 $00:08:58.280 \longrightarrow 00:09:00.500$ not only because they can diagnose

NOTE Confidence: 0.8451259

 $00:09:00.500 \longrightarrow 00:09:02.962$ a cancer that's there and then we

NOTE Confidence: 0.8451259

 $00:09:02.962 \longrightarrow 00:09:04.786$ can deal with surgery

NOTE Confidence: 0.8451259

 $00:09:04.786 \longrightarrow 00:09:06.679$ or chemo as necessary,

NOTE Confidence: 0.8451259

 $00:09:06.680 \longrightarrow 00:09:08.780$ but they also remove

NOTE Confidence: 0.8451259

 $00{:}09{:}08.780 \dashrightarrow 00{:}09{:}09.480$ premalignant conditions.

NOTE Confidence: 0.8451259

 $00:09:09.480 \longrightarrow 00:09:11.712$ So they are helping prevent

NOTE Confidence: 0.8451259

 $00{:}09{:}11.712 \dashrightarrow 00{:}09{:}13.200$ the development of colorectal

NOTE Confidence: 0.8451259

 $00:09:13.262 \longrightarrow 00:09:14.727$ cancer even down the road.

NOTE Confidence: 0.8718187

 $00:09:15.350 \longrightarrow 00:09:17.632$ And there are

NOTE Confidence: 0.8718187

 $00:09:17.632 \longrightarrow 00:09:19.655$ so many screening tests now

NOTE Confidence: 0.8718187

 $00:09:19.655 \longrightarrow 00:09:21.611$ are recommended or that at

NOTE Confidence: 0.8718187

00:09:21.611 --> 00:09:23.700 least individuals could consider.

 $00:09:23.700 \longrightarrow 00:09:25.515$ So colonoscopy is often thought

NOTE Confidence: 0.8718187

00:09:25.515 --> 00:09:27.330 of as the gold standard,

NOTE Confidence: 0.8718187

 $00:09:27.330 \longrightarrow 00:09:29.412$ but some of these other tests

NOTE Confidence: 0.8718187

 $00:09:29.412 \longrightarrow 00:09:31.689$ seem to be really quite easy.

NOTE Confidence: 0.8718187

 $00:09:31.690 \longrightarrow 00:09:33.895$ Tell us a little bit about the

NOTE Confidence: 0.8718187

 $00:09:33.895 \longrightarrow 00:09:35.765$ different tests and the advantages

NOTE Confidence: 0.8718187

 $00:09:35.765 \longrightarrow 00:09:37.485$ and disadvantages of each.

NOTE Confidence: 0.8718187

00:09:37.490 --> 00:09:39.704 What do you recommend for patients

NOTE Confidence: 0.8718187

 $00:09:39.704 \longrightarrow 00:09:42.574$ who come to you and say,

NOTE Confidence: 0.8718187

00:09:42.574 --> 00:09:44.746 I heard about the updated guidelines,

NOTE Confidence: 0.8718187

 $00:09:44.750 \longrightarrow 00:09:47.526$ I'm now 45. What test should I have?

NOTE Confidence: 0.8580437

 $00{:}09{:}48.780 \dashrightarrow 00{:}09{:}50.957$ I can comment a little bit there.

NOTE Confidence: 0.8580437

 $00:09:50.960 \longrightarrow 00:09:52.510$ It's not exactly my area.

NOTE Confidence: 0.8580437

00:09:52.510 --> 00:09:52.806 Unfortunately,

NOTE Confidence: 0.8580437

 $00:09:52.806 \longrightarrow 00:09:54.878$ the majority of patients I see have

 $00:09:54.878 \longrightarrow 00:09:56.559$ already been diagnosed with cancer,

NOTE Confidence: 0.8580437

 $00{:}09{:}56.560 \dashrightarrow 00{:}09{:}57.490$ but absolutely colonoscopy is

NOTE Confidence: 0.8580437

 $00:09:57.490 \longrightarrow 00:09:58.730$ still the gold standard,

NOTE Confidence: 0.8580437

00:09:58.730 --> 00:10:00.949 so that would be my kind of

NOTE Confidence: 0.8580437

 $00{:}10{:}00.949 \dashrightarrow 00{:}10{:}02.256$ blanket recommendation. For those

NOTE Confidence: 0.8580437

 $00:10:02.256 \longrightarrow 00:10:04.014$ that aren't ready to do that,

NOTE Confidence: 0.8580437

00:10:04.020 --> 00:10:06.197 but are interested in doing some screening,

 $00:10:08.250 \longrightarrow 00:10:10.560$ there are test for fecal occult blood,

NOTE Confidence: 0.8580437

 $00:10:10.560 \longrightarrow 00:10:12.354$ so for small amounts of undetectable

NOTE Confidence: 0.8580437

 $00:10:12.354 \longrightarrow 00:10:14.497$ blood and

NOTE Confidence: 0.8580437

00:10:14.497 --> 00:10:16.261 that's an imperfect way to

NOTE Confidence: 0.8580437

 $00:10:16.261 \longrightarrow 00:10:18.563$ assess whether or not there's a

NOTE Confidence: 0.8580437

 $00{:}10{:}18.563 \dashrightarrow 00{:}10{:}20.123$ cancerous or precancerous condition.

NOTE Confidence: 0.8580437

 $00{:}10{:}20.130 \dashrightarrow 00{:}10{:}21.780$ Again, the colonoscopy offers the

NOTE Confidence: 0.8580437

 $00:10:21.780 \longrightarrow 00:10:23.430$ power to remove precancerous lesions,

NOTE Confidence: 0.8580437

 $00:10:23.430 \longrightarrow 00:10:25.050$ which probably are not doing

00:10:25.050 --> 00:10:27.060 much at that point in time,

NOTE Confidence: 0.8580437

 $00{:}10{:}27.060 \dashrightarrow 00{:}10{:}29.420$ but maybe missed by a test

NOTE Confidence: 0.8580437

 $00:10:29.420 \longrightarrow 00:10:31.169$ we're trying to detect small

NOTE Confidence: 0.8580437

 $00:10:31.169 \longrightarrow 00:10:33.329$ amounts of blood in the stool.

NOTE Confidence: 0.8580437

 $00:10:33.330 \longrightarrow 00:10:35.794$ There are also tests that actually try

NOTE Confidence: 0.8580437

00:10:35.794 --> 00:10:38.400 to detect DNA in in the stool, and

NOTE Confidence: 0.8580437

 $00:10:38.400 \longrightarrow 00:10:41.550$ that may be a more sensitive way,

NOTE Confidence: 0.8580437

 $00:10:41.550 \longrightarrow 00:10:43.884$ but also we're not removing anything

NOTE Confidence: 0.8580437

 $00{:}10{:}43.884 \dashrightarrow 00{:}10{:}45.815$ premalignant with that we have

NOTE Confidence: 0.8580437

 $00:10:45.815 \longrightarrow 00:10:47.957$ yet to develop a blood based test

NOTE Confidence: 0.8580437

 $00{:}10{:}47.960 \dashrightarrow 00{:}10{:}49.735$ that's diagnosing cancer before

NOTE Confidence: 0.8580437

 $00{:}10{:}49.735 \dashrightarrow 00{:}10{:}52.230$ it develops, or at an early stage.

NOTE Confidence: 0.8580437

 $00:10:52.230 \longrightarrow 00:10:54.010$ So there are companies that

NOTE Confidence: 0.8580437

 $00:10:54.010 \longrightarrow 00:10:55.434$ are working on that,

NOTE Confidence: 0.8580437

 $00:10:55.440 \longrightarrow 00:10:57.925$ but we have a ways to go,

NOTE Confidence: 0.8580437

 $00:10:57.930 \longrightarrow 00:11:00.499$ but most of these patients are seen

 $00:11:00.499 \longrightarrow 00:11:03.188$ by my colleagues in Gastroenterology

NOTE Confidence: 0.8580437

 $00:11:03.188 \longrightarrow 00:11:05.703$ for their screening discussions and

 $00:11:07.840 \longrightarrow 00:11:10.163$ they are able to give some more eloquent answers

NOTE Confidence: 0.8580437

 $00:11:10.163 \longrightarrow 00:11:10.997$ on that

NOTE Confidence: 0.8526096

 $00:11:11.000 \longrightarrow 00:11:12.890$ than I am.

NOTE Confidence: 0.8526096

00:11:12.890 --> 00:11:15.224 Mike, the other question, and this might

NOTE Confidence: 0.8526096

 $00:11:15.224 \longrightarrow 00:11:17.429$ be a tough question as well,

NOTE Confidence: 0.8526096

 $00:11:17.430 \longrightarrow 00:11:20.069$ is why the magic number of 45?

NOTE Confidence: 0.8526096

 $00{:}11{:}20.070 \dashrightarrow 00{:}11{:}22.716$ I mean, if we're seeing patients with

NOTE Confidence: 0.8526096

00:11:22.716 --> 00:11:25.334 younger colon cancers, why is it 45?

NOTE Confidence: 0.8526096

00:11:25.334 --> 00:11:28.361 Why not 40 or 42 or 38?

NOTE Confidence: 0.8526096

 $00:11:28.361 \longrightarrow 00:11:30.467$ How do people come up with

NOTE Confidence: 0.8526096

 $00{:}11{:}30.467 \dashrightarrow 00{:}11{:}33.206$ these numbers as to at what age

NOTE Confidence: 0.8526096

 $00{:}11{:}33.206 \dashrightarrow 00{:}11{:}34.818$ people should start screening?

NOTE Confidence: 0.8720362

00:11:35.830 --> 00:11:37.325 That's a great question and

NOTE Confidence: 0.8720362

00:11:37.325 --> 00:11:38.820 somebody asked the same question just last night.

 $00:11:45.100 \longrightarrow 00:11:47.172$ And I feel

NOTE Confidence: 0.8720362

00:11:47.172 --> 00:11:48.989 that same sentiment as well.

NOTE Confidence: 0.8720362

 $00{:}11{:}50.780 \dashrightarrow 00{:}11{:}53.500$ I think that this is a first step and we

NOTE Confidence: 0.8720362

00:11:53.572 --> 00:11:56.156 may be recommending 40 in a few years,

NOTE Confidence: 0.8720362

00:11:56.160 --> 00:11:58.221 but we'll have to see how the data and

NOTE Confidence: 0.8720362

 $00:11:58.221 \longrightarrow 00:12:00.546$ the number needed to treat the

NOTE Confidence: 0.8720362

 $00:12:00.546 \longrightarrow 00:12:02.592$ number of colonoscopies done to really

NOTE Confidence: 0.8720362

 $00:12:02.592 \longrightarrow 00:12:04.494$ prevent one colorectal cancer holds up

NOTE Confidence: 0.8720362

 $00{:}12{:}04.494 \dashrightarrow 00{:}12{:}07.460$ over time at these younger age groups.

NOTE Confidence: 0.8720362

 $00:12:07.460 \longrightarrow 00:12:08.630$ There's also

NOTE Confidence: 0.8720362

 $00{:}12{:}08.630 \dashrightarrow 00{:}12{:}10.173$ as you know,

NOTE Confidence: 0.8720362

 $00:12:10.173 \longrightarrow 00:12:12.411$ I think different opinions on

NOTE Confidence: 0.8720362

00:12:12.411 --> 00:12:15.260 the age of of mammography as well.

NOTE Confidence: 0.8720362

00:12:15.260 --> 00:12:16.066 But again,

NOTE Confidence: 0.8720362

00:12:16.066 --> 00:12:19.290 getting back to the time it takes

NOTE Confidence: 0.8720362

 $00:12:19.383 \longrightarrow 00:12:22.407$ for colorectal cancer to develop in

 $00{:}12{:}22.407 \dashrightarrow 00{:}12{:}26.027$ general somewhere on the order of a decade,

NOTE Confidence: 0.8720362

 $00{:}12{:}26.030 \dashrightarrow 00{:}12{:}28.214$ I think by lowering the age to 40

NOTE Confidence: 0.8720362

 $00:12:28.214 \longrightarrow 00:12:30.099$ we're really capturing that group.

NOTE Confidence: 0.8720362

 $00:12:30.100 \longrightarrow 00:12:32.431$ If we were to lower the age of 40

NOTE Confidence: 0.8720362

 $00:12:32.431 \longrightarrow 00:12:34.099$ we're really capturing that group

NOTE Confidence: 0.8720362

 $00:12:34.099 \longrightarrow 00:12:36.842$ in the 45 to 50 range versus right

NOTE Confidence: 0.8720362

 $00:12:36.842 \longrightarrow 00:12:39.173$ now with this age of 45.

NOTE Confidence: 0.8720362

00:12:39.180 --> 00:12:41.046 Or probably

NOTE Confidence: 0.8720362

 $00{:}12{:}41.050 \dashrightarrow 00{:}12{:}42.274$ we're helping prevent higher

NOTE Confidence: 0.8720362

 $00:12:42.274 \longrightarrow 00:12:44.500$ incidence in that 50 to 45 range.

NOTE Confidence: 0.8720362

00:12:44.500 --> 00:12:46.663 But as we started out the discussion

NOTE Confidence: 0.8720362

00:12:46.663 --> 00:12:49.103 really less than 50 is still seeing

NOTE Confidence: 0.8720362

 $00{:}12{:}49.103 \dashrightarrow 00{:}12{:}51.380$ an increased incidence of colon cancer.

NOTE Confidence: 0.8720362

 $00:12:51.380 \longrightarrow 00:12:53.837$ So I think this is a moving target and

NOTE Confidence: 0.8720362

 $00:12:53.837 \longrightarrow 00:12:56.518$ we will benefit over time

 $00:12:56.520 \longrightarrow 00:12:58.340$ lowering the age,

NOTE Confidence: 0.8720362

 $00{:}12{:}58.340 \dashrightarrow 00{:}12{:}59.924$ and I certainly, unfortunately,

NOTE Confidence: 0.8720362

 $00:12:59.924 \longrightarrow 00:13:02.300$ see patients in my practice below the

NOTE Confidence: 0.8720362

 $00:13:02.364 \longrightarrow 00:13:04.158$ age of 40 and 30 sometimes.

NOTE Confidence: 0.8264768

 $00:13:05.260 \longrightarrow 00:13:07.731$ Certainly it's going to be a

NOTE Confidence: 0.8264768

 $00{:}13{:}07.731 \dashrightarrow 00{:}13{:}09.988$ moving target that we will follow,

NOTE Confidence: 0.8264768

 $00:13:09.990 \longrightarrow 00:13:12.678$ but for right now we're going to take

NOTE Confidence: 0.8264768

00:13:12.678 --> 00:13:15.446 a short break for a medical minute.

NOTE Confidence: 0.8264768

00:13:15.450 --> 00:13:17.270 Please stay tuned to learn

NOTE Confidence: 0.8264768

 $00:13:17.270 \longrightarrow 00:13:19.090$ more about the treatment of

NOTE Confidence: 0.8264768

 $00:13:19.090 \longrightarrow 00:13:21.268$ colorectal cancer with my guest doctor

NOTE Confidence: 0.8264768

 $00:13:21.270 \longrightarrow 00:13:23.090$ Michael Cecchini.

NOTE Confidence: 0.8264768

 $00:13:23.090 \longrightarrow 00:13:25.160$ Support for Yale Cancer Answers comes from

Astrazeneca,

NOTE Confidence: 0.8264768

00:13:25.160 --> 00:13:26.816 working to eliminate

NOTE Confidence: 0.8264768

 $00:13:26.816 \longrightarrow 00:13:28.550$ cancer as a cause of death.

 $00:13:28.550 \longrightarrow 00:13:31.850$ Learn more at astrazeneca-u.com.

NOTE Confidence: 0.8264768

 $00:13:31.850 \longrightarrow 00:13:35.098$ This is a medical minute about lung cancer.

NOTE Confidence: 0.8264768

 $00{:}13{:}35.100 \dashrightarrow 00{:}13{:}37.648$ More than 85% of lung cancer diagnosis

NOTE Confidence: 0.8264768

 $00:13:37.648 \longrightarrow 00:13:40.576$ are related to smoking and quitting even

NOTE Confidence: 0.8264768

 $00:13:40.576 \longrightarrow 00:13:43.216$ after decades of use can significantly

NOTE Confidence: 0.8264768

 $00{:}13{:}43.289 \dashrightarrow 00{:}13{:}45.683$ reduce your risk of developing lung

NOTE Confidence: 0.8264768

 $00:13:45.683 \longrightarrow 00:13:47.661$ cancer for lung cancer patients.

NOTE Confidence: 0.8264768

00:13:47.661 --> 00:13:49.566 Clinical trials are currently underway

NOTE Confidence: 0.8264768

 $00:13:49.566 \longrightarrow 00:13:51.740$ to test innovative new treatments.

NOTE Confidence: 0.8264768

00:13:51.740 --> 00:13:54.746 Advances are being made by utilizing

NOTE Confidence: 0.8264768

 $00{:}13{:}54.746 {\:{\circ}{\circ}{\circ}}>00{:}13{:}56.750$ targeted the rapies and immunotherapy.

NOTE Confidence: 0.8264768

 $00:13:56.826 \longrightarrow 00:13:58.884$ The battle two trial aims to learn

NOTE Confidence: 0.8264768

00:13:58.884 --> 00:14:01.470 if a drug or combination of drugs

NOTE Confidence: 0.8264768

 $00{:}14{:}01.470 \dashrightarrow 00{:}14{:}03.918$ based on personal biomarkers can help

NOTE Confidence: 0.8264768

 $00:14:03.920 \longrightarrow 00:14:06.846$ to control non small cell lung cancer.

NOTE Confidence: 0.8264768

 $00:14:06.850 \longrightarrow 00:14:09.650$ More information is available

 $00:14:09.650 \longrightarrow 00:14:10.770$ at yalecancercenter.org.

NOTE Confidence: 0.8264768

 $00:14:10.770 \longrightarrow 00:14:15.450$ You're listening to Connecticut public radio.

NOTE Confidence: 0.8264768

 $00:14:15.450 \longrightarrow 00:14:15.830$ Welcome

NOTE Confidence: 0.84856975

 $00:14:15.830 \longrightarrow 00:14:17.720$ back to Yale Cancer Answers.

NOTE Confidence: 0.84856975

00:14:17.720 --> 00:14:19.988 This is doctor Anees Chagpar

NOTE Confidence: 0.84856975

 $00:14:19.988 \longrightarrow 00:14:22.365$ and I'm joined tonight by my

NOTE Confidence: 0.84856975

00:14:22.365 --> 00:14:24.137 guest doctor Michael Cecchini.

NOTE Confidence: 0.84856975

 $00{:}14{:}24.140 \dashrightarrow 00{:}14{:}26.015$ We're talking about the treatment

NOTE Confidence: 0.84856975

 $00{:}14{:}26.015 \dashrightarrow 00{:}14{:}28.263$ of colorectal cancer and Mike right

NOTE Confidence: 0.84856975

 $00:14:28.263 \longrightarrow 00:14:30.426$ before the break we were talking about

NOTE Confidence: 0.84856975

 $00{:}14{:}30.426 \dashrightarrow 00{:}14{:}32.840$ the new updated screening guidelines,

NOTE Confidence: 0.84856975

 $00:14:32.840 \longrightarrow 00:14:34.348$ which now are recommending

NOTE Confidence: 0.84856975

 $00{:}14{:}34.348 \dashrightarrow 00{:}14{:}35.856$ screening for colorectal cancer

NOTE Confidence: 0.84856975

 $00:14:35.860 \longrightarrow 00:14:38.506$ going back to the age of 45.

NOTE Confidence: 0.84856975

 $00:14:38.510 \longrightarrow 00:14:40.400$ One last question with regards

 $00:14:40.400 \longrightarrow 00:14:42.290$ to screening, before the break,

NOTE Confidence: 0.84856975

 $00:14:42.290 \longrightarrow 00:14:44.175$ you had mentioned that there

NOTE Confidence: 0.84856975

00:14:44.175 --> 00:14:45.683 are certain racial groups,

NOTE Confidence: 0.84856975

 $00:14:45.690 \longrightarrow 00:14:48.670$ for example, African Americans

NOTE Confidence: 0.84856975

00:14:48.670 --> 00:14:52.086 that tend to be diagnosed at a higher frequency,

NOTE Confidence: 0.84856975

 $00{:}14{:}52.090 \dashrightarrow 00{:}14{:}54.658$ tend to have a worse prognosis

NOTE Confidence: 0.84856975

 $00{:}14{:}54.658 \dashrightarrow 00{:}14{:}56.370$ than their Caucasian counterparts.

NOTE Confidence: 0.84856975

00:14:56.370 --> 00:14:58.830 So are the screening guidelines any

NOTE Confidence: 0.84856975

 $00:14:58.830 \longrightarrow 00:15:00.470$ different for African Americans

NOTE Confidence: 0.84856975

00:15:00.531 --> 00:15:01.509 versus Caucasian

NOTE Confidence: 0.84458965

00:15:01.510 --> 00:15:03.222 patients?

NOTE Confidence: 0.84458965

 $00:15:03.222 \longrightarrow 00:15:04.078$ There are slightly different recommendations

 $00:15:12.980 \longrightarrow 00:15:14.936$ Just as of yesterday the

NOTE Confidence: 0.84458965

 $00{:}15{:}14.936 \dashrightarrow 00{:}15{:}16.570$ US preventive task force has

NOTE Confidence: 0.84458965

 $00:15:16.570 \longrightarrow 00:15:18.453$ changed it 45 and above for all

NOTE Confidence: 0.84458965

 $00:15:18.453 \longrightarrow 00:15:20.394$ adults and so I think there

00:15:20.394 --> 00:15:22.012 were some high risk groups

NOTE Confidence: 0.84458965

 $00{:}15{:}22.012 \dashrightarrow 00{:}15{:}23.372$ including African Americans that were

NOTE Confidence: 0.84458965

 $00:15:23.372 \longrightarrow 00:15:24.950$ recommended 45 and above previously.

NOTE Confidence: 0.84458965

00:15:24.950 --> 00:15:27.350 But now it's just everybody 45.

 $00:15:27.730 \longrightarrow 00:15:29.650$ One wonders whether they will,

NOTE Confidence: 0.85510623

 $00{:}15{:}29.650 \dashrightarrow 00{:}15{:}32.184$ as we were talking about before the

NOTE Confidence: 0.85510623

 $00:15:32.184 \longrightarrow 00:15:35.008$ break and edging even earlier,

NOTE Confidence: 0.85510623

 $00:15:35.010 \longrightarrow 00:15:37.509$ whether they would make that now

NOTE Confidence: 0.85510623

 $00:15:37.509 \longrightarrow 00:15:40.757$ a new age for higher risk groups.

NOTE Confidence: 0.85510623

 $00{:}15{:}40.760 \dashrightarrow 00{:}15{:}43.032$ But I want to switch gears now and

NOTE Confidence: 0.85510623

 $00:15:43.032 \longrightarrow 00:15:45.648$ talk a little bit about what happens

NOTE Confidence: 0.85510623

 $00{:}15{:}45.648 \dashrightarrow 00{:}15{:}48.222$ to patients after they have been

NOTE Confidence: 0.85510623

 $00{:}15{:}48.222 \dashrightarrow 00{:}15{:}50.330$ diagnosed with colorectal cancer.

NOTE Confidence: 0.85510623

 $00{:}15{:}50.330 \dashrightarrow 00{:}15{:}52.604$ So somebody goes and they get

NOTE Confidence: 0.85510623

00:15:52.604 --> 00:15:54.540 their colonoscopy and you know,

NOTE Confidence: 0.85510623

 $00:15:54.540 \longrightarrow 00:15:56.754$ we talked about colonoscopy being a

00:15:56.754 --> 00:15:58.860 great modality that can actually

NOTE Confidence: 0.85510623

 $00:15:58.860 \longrightarrow 00:16:01.326$ find premalignant lesions and remove them.

NOTE Confidence: 0.85510623

00:16:01.330 --> 00:16:03.225 But let's suppose on colonoscopy

NOTE Confidence: 0.85510623

00:16:03.225 --> 00:16:05.655 a patient is found to actually

NOTE Confidence: 0.85510623

 $00:16:05.655 \longrightarrow 00:16:07.507$ have an invasive cancer.

NOTE Confidence: 0.85510623

 $00:16:07.510 \longrightarrow 00:16:09.960$ Tell us a little bit more about

NOTE Confidence: 0.85510623

 $00:16:09.960 \longrightarrow 00:16:11.984$ how the treatment really works

NOTE Confidence: 0.85510623

00:16:11.984 --> 00:16:14.234 in terms of managing patients

NOTE Confidence: 0.85510623

 $00:16:14.234 \longrightarrow 00:16:16.160$ with colorectal cancer.

NOTE Confidence: 0.85938984

00:16:16.160 --> 00:16:18.220 Absolutely so it's a very

NOTE Confidence: 0.85938984

 $00{:}16{:}18.220 \mathrel{--}{>} 00{:}16{:}19.044 \ \mathrm{multidisciplinary} \ \mathrm{effort},$

NOTE Confidence: 0.85938984

 $00{:}16{:}19.050 \dashrightarrow 00{:}16{:}20.678$ meaning there's numerous care

NOTE Confidence: 0.85938984

 $00{:}16{:}20.678 \dashrightarrow 00{:}16{:}22.713$ providers that are involved in

NOTE Confidence: 0.85938984

 $00{:}16{:}22.713 \dashrightarrow 00{:}16{:}24.408$ navigating somebody through a

NOTE Confidence: 0.85938984

 $00:16:24.408 \longrightarrow 00:16:26.044$ diagnosis of colorectal cancer.

NOTE Confidence: 0.85938984

 $00:16:26.050 \longrightarrow 00:16:28.516$ There's myself as a medical oncologist,

 $00:16:28.520 \longrightarrow 00:16:30.580$ there are our surgical colleagues.

NOTE Confidence: 0.85938984

 $00{:}16{:}30.580 \rightarrow 00{:}16{:}33.260$ There's our pathologists, radiologists,

NOTE Confidence: 0.85938984

 $00:16:33.260 \longrightarrow 00:16:35.270$ our radiation oncologists.

NOTE Confidence: 0.85938984

00:16:35.270 --> 00:16:36.940 Our nutritionists, social workers,

NOTE Confidence: 0.85938984

00:16:36.940 --> 00:16:38.300 everybody really involved here,

NOTE Confidence: 0.85938984

 $00:16:38.300 \longrightarrow 00:16:40.340$ so the first step to really

NOTE Confidence: 0.85938984

 $00:16:40.406 \longrightarrow 00:16:42.278$ know how we're going to treat

NOTE Confidence: 0.85938984

 $00{:}16{:}42.278 \rightarrow 00{:}16{:}43.930$ somebody's cancer is the stage.

NOTE Confidence: 0.85938984

 $00:16:43.930 \longrightarrow 00:16:45.928$ So that's not unique to colorectal

NOTE Confidence: 0.85938984

00:16:45.928 --> 00:16:47.920 cancer, it is very common in cancer.

NOTE Confidence: 0.85938984

 $00{:}16{:}47.920 \mathrel{--}{>} 00{:}16{:}50.496$ The stage will help dictate

NOTE Confidence: 0.85938984

 $00:16:50.496 \longrightarrow 00:16:53.518$ what the care is going to be.

NOTE Confidence: 0.85938984

 $00{:}16{:}53.518 \dashrightarrow 00{:}16{:}56.370$ Stage 1,2,3 and four is how we stage

NOTE Confidence: 0.85938984

 $00:16:56.370 \longrightarrow 00:16:58.576$ the cancer and I could probably spend

NOTE Confidence: 0.85938984

00:16:58.576 --> 00:17:00.574 hours talking about all of this.

 $00:17:00.580 \longrightarrow 00:17:03.037$ But stage one is basically a small

NOTE Confidence: 0.85938984

 $00:17:03.037 \longrightarrow 00:17:04.481$ cancer that's barely invaded

NOTE Confidence: 0.85938984

 $00:17:04.481 \longrightarrow 00:17:06.395$ into the wall of the colon.

NOTE Confidence: 0.85938984

 $00:17:06.400 \longrightarrow 00:17:09.127$ If we think of the colon as a tube,

NOTE Confidence: 0.85938984

 $00:17:09.130 \longrightarrow 00:17:10.006$ it's barely in.

NOTE Confidence: 0.85938984

00:17:10.006 --> 00:17:12.759 It starts on the inner part of that tube.

NOTE Confidence: 0.85938984

00:17:12.760 --> 00:17:14.578 It's barely invaded through the wall,

 $00:17:16.700 \longrightarrow 00:17:19.427$ and a tumor like that is just excised by surgery.

NOTE Confidence: 0.85938984

 $00{:}17{:}19.430 \dashrightarrow 00{:}17{:}21.638$ They may never even see me as a

NOTE Confidence: 0.85938984

 $00{:}17{:}21.638 \to 00{:}17{:}22.907$ medical oncologist because surgery

NOTE Confidence: 0.85938984

 $00{:}17{:}22.907 \dashrightarrow 00{:}17{:}25.189$ is curative in the majority of cases.

NOTE Confidence: 0.85938984

 $00:17:25.190 \longrightarrow 00:17:27.255$ A stage two cancer has gone a

NOTE Confidence: 0.85938984

 $00:17:27.255 \longrightarrow 00:17:29.128$ little bit further into that wall,

NOTE Confidence: 0.85938984

 $00{:}17{:}29.130 \dashrightarrow 00{:}17{:}30.936$ but hasn't spread to any lymph nodes.

NOTE Confidence: 0.85938984

 $00{:}17{:}30.940 \dashrightarrow 00{:}17{:}32.962$ Those patients will see a medical

NOTE Confidence: 0.85938984

 $00:17:32.962 \longrightarrow 00:17:34.915$ oncologist and it

 $00:17:34.915 \longrightarrow 00:17:36.547$ will be discussed whether or not

NOTE Confidence: 0.85938984

 $00:17:36.550 \longrightarrow 00:17:38.770$ they get chemotherapy after surgery to

NOTE Confidence: 0.85938984

 $00:17:38.770 \longrightarrow 00:17:40.645$ increase their cure rate and eradicate small

NOTE Confidence: 0.85938984

 $00:17:40.645 \longrightarrow 00:17:42.315$ amounts of possible residual disease

NOTE Confidence: 0.85938984

 $00:17:42.315 \longrightarrow 00:17:44.278$ based on risk factors.

NOTE Confidence: 0.85938984

00:17:44.280 --> 00:17:45.955 Stage three cancer means it's gone

NOTE Confidence: 0.85938984

 $00:17:45.955 \longrightarrow 00:17:47.295$ to the lymph nodes,

NOTE Confidence: 0.85938984

 $00:17:47.300 \longrightarrow 00:17:49.908$ so it's behaving a bit

NOTE Confidence: 0.85938984

 $00{:}17{:}49.908 \dashrightarrow 00{:}17{:}51.330$ more aggressively so a patient

NOTE Confidence: 0.85938984

 $00:17:51.330 \longrightarrow 00:17:53.346$ with an invasive mass, a colonoscopy is done.

NOTE Confidence: 0.85938984

00:17:53.350 --> 00:17:54.646 A surgery is done,

NOTE Confidence: 0.85938984

 $00:17:54.646 \longrightarrow 00:17:56.266$ lymph nodes are removed at

NOTE Confidence: 0.85938984

00:17:56.266 --> 00:17:57.720 the time of surgery

NOTE Confidence: 0.85938984

 $00:17:57.720 \longrightarrow 00:17:59.628$ in addition to the tumor if

NOTE Confidence: 0.85938984

00:17:59.628 --> 00:18:01.750 there's cancer in the lymph nodes.

NOTE Confidence: 0.85938984

 $00:18:01.750 \longrightarrow 00:18:03.766$ So if it's a stage three cancer,

 $00:18:03.770 \longrightarrow 00:18:05.594$ all of those patients are going

NOTE Confidence: 0.85938984

 $00:18:05.594 \longrightarrow 00:18:07.570$ to see a medical oncologist.

NOTE Confidence: 0.85938984

00:18:07.570 --> 00:18:08.581 And almost universally,

NOTE Confidence: 0.85938984

00:18:08.581 --> 00:18:10.603 as long as they're healthy afterwards,

NOTE Confidence: 0.85938984

 $00:18:10.610 \longrightarrow 00:18:12.602$ will get chemotherapy to hopefully increase

NOTE Confidence: 0.85938984

 $00:18:12.602 \longrightarrow 00:18:15.010$ their care.

NOTE Confidence: 0.85938984

 $00:18:15.010 \longrightarrow 00:18:16.358$ Like with many other cancers,

NOTE Confidence: 0.85938984

 $00:18:16.358 \longrightarrow 00:18:18.043$ stage 4 means it's spread more distantly,

NOTE Confidence: 0.85938984

 $00:18:18.050 \longrightarrow 00:18:20.325$ so cancer that started in the colon

NOTE Confidence: 0.85938984

00:18:20.325 --> 00:18:22.444 spread to the liver, the lung,

NOTE Confidence: 0.85938984

 $00:18:22.444 \longrightarrow 00:18:24.129$ the lining of the abdomen,

NOTE Confidence: 0.85938984

 $00:18:24.130 \longrightarrow 00:18:25.820$ which we call the peritoneum,

NOTE Confidence: 0.85938984

 $00{:}18{:}25.820 \dashrightarrow 00{:}18{:}28.524$ would make a cancer stage four.

NOTE Confidence: 0.85938984

 $00{:}18{:}28.530 \dashrightarrow 00{:}18{:}30.558$ One of those spots would make

NOTE Confidence: 0.85938984

 $00:18:30.558 \longrightarrow 00:18:31.910$ a cancer stage four,

 $00:18:31.910 \longrightarrow 00:18:34.943$ and there still may be a role for surgery.

 $00:18:36.980 \longrightarrow 00:18:38.356$ But chemotherapy is generally.

NOTE Confidence: 0.85938984

 $00:18:38.356 \longrightarrow 00:18:39.732$ Generally, where we will start,

NOTE Confidence: 0.85938984

 $00:18:39.732 \longrightarrow 00:18:42.510$ we think of it as a systemic disease

NOTE Confidence: 0.85938984

00:18:42.510 --> 00:18:43.782 throughout the body,

NOTE Confidence: 0.85938984

 $00:18:43.782 \longrightarrow 00:18:45.690$ and chemotherapy works throughout the body.

NOTE Confidence: 0.85938984

 $00{:}18{:}45.690 \dashrightarrow 00{:}18{:}47.598$ When it's working in those stage

NOTE Confidence: 0.85938984

 $00:18:47.598 \longrightarrow 00:18:49.412$ four cancers, though, there's

NOTE Confidence: 0.85938984

 $00:18:49.412 \longrightarrow 00:18:52.244$ a lot that we need to know to

NOTE Confidence: 0.85938984

 $00{:}18{:}52.244 \dashrightarrow 00{:}18{:}54.272$ per sonalize the therapy for the cancers.

NOTE Confidence: 0.85938984

 $00:18:54.280 \longrightarrow 00:18:56.503$ We do a lot of tests in the lab

NOTE Confidence: 0.85938984

 $00{:}18{:}56.503 \dashrightarrow 00{:}18{:}58.727$ and to characterize the cancer,

NOTE Confidence: 0.85938984

 $00:18:58.730 \longrightarrow 00:19:00.956$ is it mismatch, repair, deficient or not?

NOTE Confidence: 0.85938984

 $00{:}19{:}00.960 \dashrightarrow 00{:}19{:}02.555$ Are there mutations in genes

NOTE Confidence: 0.85938984

 $00:19:02.555 \longrightarrow 00:19:04.460$ called RAFS or not?

NOTE Confidence: 0.85938984

 $00:19:04.460 \longrightarrow 00:19:07.313$ And they tell us how we tweak the chemo,

00:19:07.320 --> 00:19:09.070 or maybe even offer immunotherapy

NOTE Confidence: 0.8263758

 $00:19:09.070 \longrightarrow 00:19:11.446$ to the patients, and then again,

NOTE Confidence: 0.8263758

 $00:19:11.450 \longrightarrow 00:19:13.808$ we will sometimes consider surgery to

NOTE Confidence: 0.8263758

 $00:19:13.808 \longrightarrow 00:19:16.219$ remove distant metastases in select cases,

NOTE Confidence: 0.8263758

 $00:19:16.220 \longrightarrow 00:19:18.266$ and that's why it's so important

NOTE Confidence: 0.8263758

 $00:19:18.266 \longrightarrow 00:19:20.979$ to have a multi disciplinary team.

NOTE Confidence: 0.8263758

 $00:19:20.980 \longrightarrow 00:19:23.116$ So a true team involved in

NOTE Confidence: 0.8263758

 $00:19:23.116 \longrightarrow 00:19:25.350$ the care of these patients,

NOTE Confidence: 0.8263758

 $00{:}19{:}25.350 \dashrightarrow 00{:}19{:}28.045$ even with stage four disease and all

NOTE Confidence: 0.8263758

 $00{:}19{:}28.045 \dashrightarrow 00{:}19{:}30.882$ of these cases are reviewed at our

NOTE Confidence: 0.8263758

 $00{:}19{:}30.882 \dashrightarrow 00{:}19{:}33.282$ tumor board with that whole team,

NOTE Confidence: 0.8263758

 $00:19:33.290 \longrightarrow 00:19:36.069$ I articulate how best

NOTE Confidence: 0.83710337

 $00:19:36.070 \longrightarrow 00:19:38.055$ to approach somebody's care in

NOTE Confidence: 0.83710337

 $00:19:38.055 \longrightarrow 00:19:40.040$ terms of these molecular genetics.

NOTE Confidence: 0.83710337

 $00:19:40.040 \longrightarrow 00:19:42.020$ The RAF mutations,

NOTE Confidence: 0.83710337

 $00:19:42.020 \longrightarrow 00:19:43.127$ the mismatch repair

00:19:43.127 --> 00:19:45.341 mutations you mentioned those in terms

NOTE Confidence: 0.83710337

 $00{:}19{:}45.341 \dashrightarrow 00{:}19{:}47.980$ of tweaking chemotherapy for stage four,

NOTE Confidence: 0.83710337

 $00:19:47.980 \longrightarrow 00:19:50.314$ are those also used in

NOTE Confidence: 0.83710337

 $00:19:50.314 \longrightarrow 00:19:51.870$ kind of tailoring therapy

NOTE Confidence: 0.83710337

 $00:19:51.870 \longrightarrow 00:19:54.980$ for people with earlier stage disease?

NOTE Confidence: 0.8320456

 $00:19:54.980 \longrightarrow 00:19:56.925$ If I could only know a couple

NOTE Confidence: 0.8320456

 $00:19:56.925 \longrightarrow 00:19:58.481$ things about the molecular

NOTE Confidence: 0.8320456

 $00:19:58.481 \longrightarrow 00:20:00.038$ characteristics of somebody's tumor,

NOTE Confidence: 0.8320456

00:20:00.040 --> 00:20:02.756 it would be the mismatch repair status,

NOTE Confidence: 0.8320456

 $00:20:02.760 \longrightarrow 00:20:05.286$ which is also sometimes called the

NOTE Confidence: 0.8320456

 $00:20:05.286 \longrightarrow 00:20:06.970$ microsatellite status or their

NOTE Confidence: 0.8320456

 $00:20:07.042 \longrightarrow 00:20:09.372$ RAF status.

NOTE Confidence: 0.8320456

 $00:20:09.372 \longrightarrow 00:20:10.924$ So in localized disease,

NOTE Confidence: 0.8320456

 $00:20:10.930 \longrightarrow 00:20:13.919$ the mismatch repair status is very important.

NOTE Confidence: 0.8320456

 $00{:}20{:}13.920 \dashrightarrow 00{:}20{:}16.200$ The RAF and the RAF status

 $00:20:16.200 \longrightarrow 00:20:17.720$ is not so important,

NOTE Confidence: 0.8320456

 $00:20:17.720 \longrightarrow 00:20:20:247$ so we often only send the latter

NOTE Confidence: 0.8320456

 $00{:}20{:}20{:}20{:}247 \dashrightarrow 00{:}20{:}21.900$ component for metastatic disease.

NOTE Confidence: 0.8320456

 $00:20:21.900 \longrightarrow 00:20:24.180$ But for localized cancer mismatch repair,

NOTE Confidence: 0.8320456

 $00:20:24.180 \longrightarrow 00:20:25.684$ deficient, or microsatellite instability

NOTE Confidence: 0.8320456

 $00:20:25.684 \longrightarrow 00:20:27.564$ high cancers generally have

NOTE Confidence: 0.8320456

00:20:27.564 --> 00:20:29.498 a more favorable prognosis,

NOTE Confidence: 0.8320456

 $00:20:29.500 \longrightarrow 00:20:31.390$ and sometimes we will take that

NOTE Confidence: 0.8320456

 $00{:}20{:}31.390 \dashrightarrow 00{:}20{:}33.440$ information and say you don't even

NOTE Confidence: 0.8320456

00:20:33.440 --> 00:20:34.904 need chemotherapy after surgery

NOTE Confidence: 0.8320456

 $00:20:34.904 \longrightarrow 00:20:37.324$ because of this

NOTE Confidence: 0.8320456

00:20:37.324 --> 00:20:39.554 finding of mismatch repair deficiency

NOTE Confidence: 0.8320456

 $00:20:39.554 \longrightarrow 00:20:40.892$ or microsatellite instability

NOTE Confidence: 0.8320456

 $00:20:40.900 \longrightarrow 00:20:43.684$ and it's less likely to come back

NOTE Confidence: 0.8320456

00:20:43.684 --> 00:20:46.329 and therefore you don't need chemotherapy.

NOTE Confidence: 0.8320456

 $00:20:46.330 \longrightarrow 00:20:48.106$ There's a lot of other factors

 $00:20:48.106 \longrightarrow 00:20:49.710$ that come into play there,

NOTE Confidence: 0.8320456

00:20:49.710 --> 00:20:51.717 so I don't want to say that all mismatch

NOTE Confidence: 0.8320456

00:20:51.717 --> 00:20:53.700 repair division microsatellite instability

NOTE Confidence: 0.8320456

 $00:20:53.700 \longrightarrow 00:20:54.928$ high tumors don't need

NOTE Confidence: 0.8320456

00:20:54.928 --> 00:20:55.849 chemotherapy after surgery,

NOTE Confidence: 0.8320456

 $00:20:55.850 \longrightarrow 00:20:57.380$ but it's generally thought to

NOTE Confidence: 0.8320456

 $00:20:57.380 \longrightarrow 00:20:58.604$ be a good prognosis.

NOTE Confidence: 0.8320456

00:20:58.610 --> 00:21:00.446 And we know from metastatic disease,

NOTE Confidence: 0.8320456

 $00:21:00.450 \longrightarrow 00:21:01.985$ those tumors are much more

NOTE Confidence: 0.8320456

 $00{:}21{:}01.985 \dashrightarrow 00{:}21{:}02.906$ sensitive to immunotherapy.

NOTE Confidence: 0.8320456

 $00:21:02.910 \longrightarrow 00:21:04.542$ Some of the most sensitive cancers

NOTE Confidence: 0.8320456

 $00:21:04.542 \longrightarrow 00:21:06.589$ that there are in fact to immunotherapy,

NOTE Confidence: 0.8320456

 $00:21:06.590 \longrightarrow 00:21:08.160$ and it's being investigated whether

NOTE Confidence: 0.8320456

 $00:21:08.160 \longrightarrow 00:21:10.070$ or not immunotherapy is going to

NOTE Confidence: 0.8320456

 $00:21:10.070 \longrightarrow 00:21:11.810$ increase cure rates in that population.

 $00:21:11.810 \longrightarrow 00:21:13.652$ And we have some of those

NOTE Confidence: 0.8320456

 $00:21:13.652 \longrightarrow 00:21:14.880$ clinical trials going on.

00:21:15.190 --> 00:21:17.026 That brings me to the next question,

NOTE Confidence: 0.8353081

 $00:21:17.030 \longrightarrow 00:21:19.380$ which is about clinical trials.

NOTE Confidence: 0.8353081

00:21:19.380 --> 00:21:21.405 Colorectal cancer has been around

NOTE Confidence: 0.8353081

 $00:21:21.405 \longrightarrow 00:21:24.187$ for a long time and is one of

NOTE Confidence: 0.8353081

 $00:21:24.190 \longrightarrow 00:21:26.801$ the leading cancers

NOTE Confidence: 0.8353081

 $00:21:26.801 \longrightarrow 00:21:28.669$ affecting both men and women,

NOTE Confidence: 0.8353081

 $00:21:28.670 \longrightarrow 00:21:30.824$ and so presumably there are some

NOTE Confidence: 0.8353081

 $00:21:30.824 \longrightarrow 00:21:33.087$ pretty standard regimens in terms of

NOTE Confidence: 0.8353081

 $00:21:33.087 \longrightarrow 00:21:35.373$ chemotherapy that we offer these patients.

NOTE Confidence: 0.8353081

 $00:21:35.380 \longrightarrow 00:21:37.964$ So tell us a little bit about when

NOTE Confidence: 0.8353081

00:21:37.964 --> 00:21:40.600 you offer people a standard regimen,

NOTE Confidence: 0.8353081

 $00:21:40.600 \longrightarrow 00:21:42.838$ and when you offer them a

NOTE Confidence: 0.86306745

 $00:21:42.840 \longrightarrow 00:21:44.935$ clinical trial?

NOTE Confidence: 0.86306745

00:21:44.935 --> 00:21:47.819 Clinical trials play a tremendous role in the man-

agement

 $00:21:47.819 \longrightarrow 00:21:50.367$ of a disease like colorectal cancer.

NOTE Confidence: 0.86306745

 $00{:}21{:}50.370 \longrightarrow 00{:}21{:}52.690$ And are really how we move the field

NOTE Confidence: 0.86306745

 $00:21:52.690 \longrightarrow 00:21:55.126$ forward and we've doubled and tripled the

NOTE Confidence: 0.86306745

 $00:21:55.126 \longrightarrow 00:21:57.361$ survival rate especially for metastatic

NOTE Confidence: 0.86306745

 $00:21:57.361 \longrightarrow 00:21:59.599$ disease over the last few decades.

NOTE Confidence: 0.86306745

 $00:21:59.600 \longrightarrow 00:22:01.260$ And that's because clinical trials

NOTE Confidence: 0.86306745

 $00:22:01.260 \longrightarrow 00:22:03.662$ brought new agents and drugs and

NOTE Confidence: 0.86306745

 $00:22:03.662 \longrightarrow 00:22:06.063$ treatment approaches into the fold and the

NOTE Confidence: 0.86306745

 $00:22:06.063 \longrightarrow 00:22:08.147$ treatments we have for metastatic disease,

NOTE Confidence: 0.86306745

 $00:22:08.150 \longrightarrow 00:22:10.112$ we use some of them again

NOTE Confidence: 0.86306745

 $00{:}22{:}10.112 \dashrightarrow 00{:}22{:}11.920$ after surgery we use drugs, and

NOTE Confidence: 0.86306745

 $00:22:11.920 \longrightarrow 00:22:14.736$ we like our acronyms or abbreviations so we

NOTE Confidence: 0.86306745

 $00:22:14.736 \longrightarrow 00:22:18.065$ we have a regimen we call folfox which is 5FU,

NOTE Confidence: 0.86306745

 $00{:}22{:}18.070 \dashrightarrow 00{:}22{:}19.860$ and oxaliplatin and a

NOTE Confidence: 0.86306745

 $00:22:19.860 \longrightarrow 00:22:20.934$ vitamin called leucovorin.

 $00:22:20.940 \longrightarrow 00:22:23.390$ It's really two chemo drugs together and we have

NOTE Confidence: 0.86306745

 $00:22:23.390 \longrightarrow 00:22:25.499$ another chemo regimen called FOLFIRI.

 $00:22:27.772 \longrightarrow 00:22:30.197$ so again two chemo drugs together just a

NOTE Confidence: 0.86306745

00:22:30.197 --> 00:22:32.870 second one instead of the oxaliplatin,

NOTE Confidence: 0.86306745

00:22:32.870 --> 00:22:35.678 and that's really the backbone of our care,

NOTE Confidence: 0.86306745

 $00:22:35.680 \longrightarrow 00:22:38.179$ and we can usually control a metastatic

NOTE Confidence: 0.86306745

00:22:38.179 --> 00:22:40.315 colorectal cancer patient for years

NOTE Confidence: 0.86306745

00:22:40.315 --> 00:22:41.995 with those two regimens together,

NOTE Confidence: 0.86306745

 $00:22:42.000 \longrightarrow 00:22:44.552$ but at some point we run out of

NOTE Confidence: 0.86306745

00:22:44.552 --> 00:22:46.210 mileage with those agents,

NOTE Confidence: 0.86306745

 $00:22:46.210 \longrightarrow 00:22:46.912$ resistance develops,

NOTE Confidence: 0.86306745

 $00{:}22{:}46.912 \dashrightarrow 00{:}22{:}48.667$ tolerability becomes an issue,

NOTE Confidence: 0.86306745

 $00:22:48.670 \longrightarrow 00:22:50.122$ something that necessitates us

NOTE Confidence: 0.86306745

 $00{:}22{:}50.122 \dashrightarrow 00{:}22{:}51.937$ moving on from those regimens.

NOTE Confidence: 0.86306745

 $00:22:51.940 \longrightarrow 00:22:53.998$ And we really don't have great

NOTE Confidence: 0.86306745

 $00:22:53.998 \longrightarrow 00:22:55.027$ agents after that,

00:22:55.030 --> 00:22:57.424 so I'm often thinking about clinical trials,

NOTE Confidence: 0.86306745

 $00:22:57.430 \longrightarrow 00:22:59.145$ novel clinical trials after those

NOTE Confidence: 0.86306745

00:22:59.145 --> 00:23:00.517 regimens have stopped working,

NOTE Confidence: 0.86306745

 $00:23:00.520 \longrightarrow 00:23:03.180$ but I am often thinking about clinical

NOTE Confidence: 0.86306745

 $00:23:03.180 \longrightarrow 00:23:05.656$ trials even initially where those

NOTE Confidence: 0.86306745

 $00:23:07.052 \longrightarrow 00:23:09.430$ agents will be added on,

NOTE Confidence: 0.86306745

 $00:23:09.430 \longrightarrow 00:23:10.790$ or different treatment approaches

NOTE Confidence: 0.86306745

00:23:10.790 --> 00:23:13.210 will be added onto those chemo drugs,

NOTE Confidence: 0.86306745

 $00{:}23{:}13.210 \dashrightarrow 00{:}23{:}15.256$ so they are good chemo backbones.

NOTE Confidence: 0.86306745

 $00:23:15.260 \longrightarrow 00:23:17.661$ We can do better and we are

NOTE Confidence: 0.86306745

00:23:17.661 --> 00:23:18.690 investigating numerous ways,

NOTE Confidence: 0.86306745

 $00:23:18.690 \longrightarrow 00:23:20.748$ adding an immunotherapy, new targeted drugs,

NOTE Confidence: 0.86306745

 $00:23:20.750 \longrightarrow 00:23:22.988$ new chemo drugs to those regimens.

NOTE Confidence: 0.86306745

 $00{:}23{:}22.990 \dashrightarrow 00{:}23{:}24.750$ But we're also investigating

NOTE Confidence: 0.86306745

 $00:23:24.750 \longrightarrow 00:23:26.395$ completely new regimens in the

NOTE Confidence: 0.86306745

 $00:23:26.395 \longrightarrow 00:23:28.620$ 3rd and the 4th line setting.

 $00:23:28.620 \longrightarrow 00:23:30.582$ There are third and fourth line

NOTE Confidence: 0.86306745

 $00{:}23{:}30.582 \dashrightarrow 00{:}23{:}31.890$ drugs available for patients

NOTE Confidence: 0.86306745

 $00:23:31.946 \longrightarrow 00:23:33.200$ with colorectal cancer,

NOTE Confidence: 0.86306745

 $00:23:33.200 \longrightarrow 00:23:35.657$ and there's a drug called task 102.

NOTE Confidence: 0.86306745

00:23:38.130 --> 00:23:40.650 But the effect of those is marginal

NOTE Confidence: 0.86306745

 $00:23:40.650 \longrightarrow 00:23:42.349$ compared to those

NOTE Confidence: 0.8266495

 $00:23:42.350 \longrightarrow 00:23:44.456$ other therapies that I mentioned.

NOTE Confidence: 0.8266495

 $00:23:44.460 \longrightarrow 00:23:46.910$ It sounds like clinical

NOTE Confidence: 0.8266495

 $00:23:46.910 \longrightarrow 00:23:49.040$ trials have two kind of roles.

NOTE Confidence: 0.8266495

 $00:23:49.040 \longrightarrow 00:23:51.574$ One is after our standard tried and

NOTE Confidence: 0.8266495

 $00{:}23{:}51.574 \dashrightarrow 00{:}23{:}53.460$ true regiment have failed and

NOTE Confidence: 0.8266495

 $00:23:53.460 \longrightarrow 00:23:55.602$ And we're looking for the best thing that might

NOTE Confidence: 0.8266495

 $00{:}23{:}57.836 \dashrightarrow 00{:}24{:}00.050$ help and move us further a field.

NOTE Confidence: 0.8266495

 $00:24:00.050 \longrightarrow 00:24:02.409$ And the other is in investigating novel

NOTE Confidence: 0.8266495

 $00:24:02.409 \longrightarrow 00:24:04.287$ therapies and straight out of the box.

 $00:24:04.290 \longrightarrow 00:24:05.199$ Is that right?

NOTE Confidence: 0.8266495

 $00{:}24{:}05.199 \dashrightarrow 00{:}24{:}06.108$ Yeah, that's

NOTE Confidence: 0.8318302

 $00:24:06.110 \longrightarrow 00:24:06.714$ definitely right.

NOTE Confidence: 0.8318302

 $00:24:08.230 \longrightarrow 00:24:10.054$ These treatments like folfox and folfiri

NOTE Confidence: 0.8318302

 $00:24:10.054 \longrightarrow 00:24:12.169$ have doubled and tripled the survival rate.

NOTE Confidence: 0.8318302

 $00:24:12.170 \longrightarrow 00:24:14.586$ But we can still do better than that.

NOTE Confidence: 0.8318302

 $00:24:14.590 \longrightarrow 00:24:16.718$ But they are the standard of care,

NOTE Confidence: 0.8318302

 $00:24:16.720 \longrightarrow 00:24:18.526$ and since they are so effective,

NOTE Confidence: 0.8318302

 $00:24:18.530 \longrightarrow 00:24:20.717$ we add on to those and we should add

NOTE Confidence: 0.8318302

 $00:24:20.717 \longrightarrow 00:24:23.550$ on to those so that patients get the

NOTE Confidence: 0.8318302

 $00:24:23.550 \longrightarrow 00:24:25.199$ best treatment available to them.

NOTE Confidence: 0.8318302

 $00:24:25.200 \longrightarrow 00:24:26.892$ When we've moved on to our

NOTE Confidence: 0.8318302

 $00:24:26.892 \longrightarrow 00:24:28.839$ third and our first fourth line,

NOTE Confidence: 0.8318302

 $00:24:28.840 \longrightarrow 00:24:30.868$ treatments is task one or two

 $00:24:32.590 \longrightarrow 00:24:33.619$ and start chemo pills.

NOTE Confidence: 0.8318302

 $00:24:33.619 \longrightarrow 00:24:35.677$ There is not a great alternative.

 $00:24:35.680 \longrightarrow 00:24:37.515$ They are not tolerated super

NOTE Confidence: 0.8318302

 $00:24:37.515 \longrightarrow 00:24:39.738$ well and their time

NOTE Confidence: 0.8318302

 $00{:}24{:}39.738 \dashrightarrow 00{:}24{:}41.308$ with Disease Control is not

NOTE Confidence: 0.8318302

 $00:24:41.308 \longrightarrow 00:24:43.570$ not as good as we would like,

NOTE Confidence: 0.8318302

 $00:24:43.570 \longrightarrow 00:24:45.901$ so that is a time that we try a

NOTE Confidence: 0.8318302

00:24:45.901 --> 00:24:48.029 more novel approach generally.

NOTE Confidence: 0.86994606

00:24:49.180 --> 00:24:52.492 So tell us a little bit more about

NOTE Confidence: 0.86994606

 $00:24:52.492 \longrightarrow 00:24:54.972$ your research and some of the

NOTE Confidence: 0.86994606

 $00{:}24{:}54.972 \longrightarrow 00{:}24{:}56.624$ things that you're particularly

NOTE Confidence: 0.86994606

00:24:56.630 --> 00:24:59.115 excited about in this field.

NOTE Confidence: 0.86994606

 $00:24:59.115 \longrightarrow 00:25:01.605$ I guess maybe I'll start by

NOTE Confidence: 0.86994606

 $00{:}25{:}01.605 \dashrightarrow 00{:}25{:}04.135$ talking about some of the things

NOTE Confidence: 0.86994606

00:25:04.135 --> 00:25:06.150 I'm excited about more broadly,

NOTE Confidence: 0.86994606

 $00{:}25{:}06.150 \dashrightarrow 00{:}25{:}09.210$ and one area that I think has garnered a lot

NOTE Confidence: 0.86994606

 $00:25:09.282 \longrightarrow 00:25:12.396$ of attention lately for colorectal cancer

NOTE Confidence: 0.86994606

 $00:25:12.396 \longrightarrow 00:25:15.260$ is something called circulating tumor DNA,

 $00:25:15.260 \longrightarrow 00:25:17.360$ where we can detect minimal

NOTE Confidence: 0.86994606

 $00{:}25{:}17.360 \dashrightarrow 00{:}25{:}19.460$ amounts of circulating tumor DNA

NOTE Confidence: 0.86994606

 $00{:}25{:}19.460 \dashrightarrow 00{:}25{:}22.088$ in the bloodstream after a surgery.

NOTE Confidence: 0.86994606

00:25:22.090 --> 00:25:26.474 So, for example, patients with stage two

NOTE Confidence: 0.86994606

 $00:25:26.474 \longrightarrow 00:25:29.578$ colorectal cancer that happens to have

NOTE Confidence: 0.86994606

 $00:25:29.580 \longrightarrow 00:25:31.638$ a blood test done that

NOTE Confidence: 0.86994606

 $00:25:31.638 \longrightarrow 00:25:33.670$ circulating tumor DNA is detected.

NOTE Confidence: 0.86994606

 $00:25:33.670 \longrightarrow 00:25:37.366$ Now we know that that patient is probably

NOTE Confidence: 0.86994606

00:25:37.366 --> 00:25:41.335 going to relapse if we don't do anything

NOTE Confidence: 0.86994606

 $00:25:41.340 \longrightarrow 00:25:41.922$ besides observation,

NOTE Confidence: 0.86994606

 $00:25:41.922 \longrightarrow 00:25:44.250$ so we can use a tool like that

NOTE Confidence: 0.86994606

 $00:25:44.313 \longrightarrow 00:25:45.798$ to decide who's high risk,

NOTE Confidence: 0.86994606

 $00:25:45.800 \longrightarrow 00:25:47.426$ who's low risk and that gives

NOTE Confidence: 0.86994606

 $00:25:47.426 \longrightarrow 00:25:48.510$ us opportunities to intensify

NOTE Confidence: 0.86994606

 $00:25:48.557 \longrightarrow 00:25:49.658$ and deintensify treatment.

00:25:49.660 --> 00:25:51.292 So trying to increase cure rates

NOTE Confidence: 0.86994606

 $00{:}25{:}51.292 \dashrightarrow 00{:}25{:}53.275$ for those that are high risk but

NOTE Confidence: 0.86994606

 $00:25:53.275 \longrightarrow 00:25:54.665$ also knowing when somebody is

NOTE Confidence: 0.86994606

00:25:54.665 --> 00:25:56.935 going to do well and maybe avoid

NOTE Confidence: 0.86994606

 $00:25:56.935 \longrightarrow 00:25:58.263$ circumstances of over treatment.

NOTE Confidence: 0.86994606

 $00:25:58.270 \longrightarrow 00:26:00.349$ So that's something as a field

NOTE Confidence: 0.86994606

 $00:26:00.350 \longrightarrow 00:26:01.534$ I think we're learning

NOTE Confidence: 0.86994606

 $00:26:01.534 \longrightarrow 00:26:03.014$ how to use these tests.

NOTE Confidence: 0.86994606

 $00:26:03.020 \longrightarrow 00:26:05.029$ We know they correlate really well with

NOTE Confidence: 0.86994606

00:26:05.029 --> 00:26:07.504 whether or not the cancer is going to come

NOTE Confidence: 0.86994606

 $00:26:07.504 \longrightarrow 00:26:09.559$ back when you're only doing observation,

NOTE Confidence: 0.86994606

 $00:26:09.560 \longrightarrow 00:26:11.653$ but we don't know how well it

NOTE Confidence: 0.86994606

 $00:26:11.653 \longrightarrow 00:26:13.270$ predicts for benefit from chemo

NOTE Confidence: 0.86994606

 $00{:}26{:}13.270 \dashrightarrow 00{:}26{:}16.028$ and most our studies are ongoing.

NOTE Confidence: 0.86994606

 $00:26:16.030 \longrightarrow 00:26:18.328$ We have some of those studies

NOTE Confidence: 0.86994606

 $00:26:18.328 \longrightarrow 00:26:20.360$ ongoing here at Yale.

 $00:26:20.360 \longrightarrow 00:26:22.670$ I also have

NOTE Confidence: 0.86994606

 $00:26:22.670 \longrightarrow 00:26:24.540$ a busy clinical practice and

NOTE Confidence: 0.86994606

00:26:24.540 --> 00:26:26.410 research program studying more novel

NOTE Confidence: 0.86994606

 $00:26:26.474 \longrightarrow 00:26:28.258$ therapies in colorectal cancer.

NOTE Confidence: 0.86994606

 $00:26:28.260 \longrightarrow 00:26:30.702$ So we have different types of

NOTE Confidence: 0.86994606

 $00:26:30.702 \longrightarrow 00:26:33.039$ trials we develop here at Yale.

NOTE Confidence: 0.86994606

 $00:26:33.040 \longrightarrow 00:26:35.931$ We have trials where we call them

NOTE Confidence: 0.86994606

 $00:26:35.931 \longrightarrow 00:26:38.229$ industry sponsored trials where we

NOTE Confidence: 0.86994606

 $00:26:38.230 \longrightarrow 00:26:40.606$ have worked with a company who's

NOTE Confidence: 0.86994606

 $00:26:40.606 \longrightarrow 00:26:43.053$ developed a drug and opened their

NOTE Confidence: 0.86994606

 $00:26:43.053 \longrightarrow 00:26:45.405$ trial that they came up with

 $00:26:46.634 \longrightarrow 00:26:49.800$ maybe with some input than us from us,

NOTE Confidence: 0.86994606

 $00{:}26{:}49.800 \dashrightarrow 00{:}26{:}53.456$ but we've had a little bit less

NOTE Confidence: 0.86994606

 $00{:}26{:}53.456 \rightarrow 00{:}26{:}56.108$ involvement, perhaps in a trial like that,

NOTE Confidence: 0.86994606

 $00:26:56.110 \longrightarrow 00:26:57.494$ and designing the trial,

NOTE Confidence: 0.86994606

 $00:26:57.494 \longrightarrow 00:27:00.036$ and in analyzing the data so those

 $00:27:00.036 \longrightarrow 00:27:01.604$ are industry sponsored

NOTE Confidence: 0.86994606

 $00:27:01.604 \longrightarrow 00:27:03.564$ trials that we have here.

NOTE Confidence: 0.86994606

 $00:27:03.570 \longrightarrow 00:27:06.506$ But we also have a robust program of

NOTE Confidence: 0.86994606

00:27:06.506 --> 00:27:08.049 investigator initiated trials here,

NOTE Confidence: 0.86994606

00:27:08.050 --> 00:27:10.898 and I have a couple open and one

NOTE Confidence: 0.86994606

00:27:10.898 --> 00:27:12.900 specifically in that third line,

NOTE Confidence: 0.86994606

00:27:12.900 --> 00:27:14.760 colorectal cancer Group, for example.

NOTE Confidence: 0.86994606

 $00:27:14.760 \longrightarrow 00:27:17.280$ This is a trial where we've come

NOTE Confidence: 0.86994606

 $00:27:17.280 \longrightarrow 00:27:18.860$ up with the idea,

NOTE Confidence: 0.86994606

 $00{:}27{:}18.860 \longrightarrow 00{:}27{:}21.737$ and maybe we've written a grant or

NOTE Confidence: 0.86994606

 $00{:}27{:}21.737 \dashrightarrow 00{:}27{:}24.389$ we've partnered with a drug company to

NOTE Confidence: 0.86994606

 $00:27:24.390 \longrightarrow 00:27:27.250$ tell them in a way that we think that

NOTE Confidence: 0.86994606

 $00{:}27{:}27.325 \dashrightarrow 00{:}27{:}30.259$ we could look at a new subtype of cancer,

NOTE Confidence: 0.86994606

00:27:30.260 --> 00:27:33.536 or a new way to look at

NOTE Confidence: 0.86994606

 $00:27:33.536 \longrightarrow 00:27:36.296$ their drug to leverage that and

 $00:27:36.300 \longrightarrow 00:27:38.000$ for patients with that disease,

NOTE Confidence: 0.86994606

 $00{:}27{:}38.000 \dashrightarrow 00{:}27{:}40.303$ so I have an investigator initiated trial

NOTE Confidence: 0.86994606

 $00:27:40.303 \longrightarrow 00:27:42.386$ for colorectal cancer that is received

NOTE Confidence: 0.86994606

00:27:42.386 --> 00:27:44.116 two different types of chemotherapy,

NOTE Confidence: 0.86994606

 $00:27:44.120 \longrightarrow 00:27:46.840$ where we look for a marker called MGMT.

NOTE Confidence: 0.86994606

 $00:27:46.840 \longrightarrow 00:27:48.880$ So we basically meet a patient,

 $00:27:49.879 \longrightarrow 00:27:51.877$ if they are potential candidate we will

NOTE Confidence: 0.86994606

00:27:51.877 --> 00:27:53.980 test their tumor for this marker,

NOTE Confidence: 0.86994606

 $00:27:53.980 \longrightarrow 00:27:56.002$ and if they have this marker

NOTE Confidence: 0.86994606

 $00:27:56.002 \longrightarrow 00:27:58.400$ which ends up being about 40% of

NOTE Confidence: 0.86994606

00:27:58.400 --> 00:28:00.440 patients if they have this marker,

NOTE Confidence: 0.86994606

 $00:28:00.440 \longrightarrow 00:28:02.384$ we will then offer them enrollment

NOTE Confidence: 0.86994606

 $00:28:02.384 \longrightarrow 00:28:03.680$ in a clinical trial.

NOTE Confidence: 0.75038743

 $00{:}28{:}07.994 \dashrightarrow 00{:}28{:}10.490$ So we basically identify this subgroup

NOTE Confidence: 0.75038743

 $00:28:10.544 \longrightarrow 00:28:12.704$ of colorectal cancer and then we had this

NOTE Confidence: 0.75038743

 $00:28:12.704 \longrightarrow 00:28:14.806$ trial that we came up with here at Yale.

 $00:28:14.810 \longrightarrow 00:28:16.658$ And we're also studying the

NOTE Confidence: 0.75038743

 $00{:}28{:}16.658 \operatorname{--}{>} 00{:}28{:}18.889$ outcome of patients with this to make

NOTE Confidence: 0.75038743

00:28:18.889 --> 00:28:20.767 sure that we're actually helping people,

NOTE Confidence: 0.75038743

 $00:28:20.770 \longrightarrow 00:28:22.996$ but also studying the science to develop

NOTE Confidence: 0.75038743

00:28:22.996 --> 00:28:24.859 the next generation of trials which,

NOTE Confidence: 0.75038743

00:28:24.860 --> 00:28:27.204 in my opinion will be leveraging the immune

NOTE Confidence: 0.75038743

00:28:27.204 --> 00:28:29.740 system to make it work for the majority

NOTE Confidence: 0.75038743

 $00:28:29.740 \longrightarrow 00:28:31.450$ of patients with colorectal cancer

NOTE Confidence: 0.75038743

 $00{:}28{:}31.450 \dashrightarrow 00{:}28{:}33.970$ as my colleagues in lung cancer and Melanoma

NOTE Confidence: 0.75038743

 $00:28:33.970 \longrightarrow 00:28:36.157$ have been doing for the last decade.

NOTE Confidence: 0.86857575

 $00{:}28{:}36.610 \dashrightarrow 00{:}28{:}38.890$ Doctor Michael Cecchini is an assistant

NOTE Confidence: 0.86857575

 $00:28:38.890 \longrightarrow 00:28:40.828$ professor of medicine and medical

NOTE Confidence: 0.86857575

 $00{:}28{:}40.828 \dashrightarrow 00{:}28{:}43.285$ on cology at the Yale School of Medicine.

NOTE Confidence: 0.86857575

00:28:43.290 --> 00:28:44.778 If you have questions,

NOTE Confidence: 0.86857575

 $00:28:44.778 \longrightarrow 00:28:46.266$ the address is canceranswers@yale.edu

NOTE Confidence: 0.86857575

 $00:28:46.266 \longrightarrow 00:28:48.321$ and past editions of the program

00:28:48.321 --> 00:28:50.199 are available in audio and written

NOTE Confidence: 0.86857575

 $00{:}28{:}50.254 \dashrightarrow 00{:}28{:}51.820$ form at yale cancercenter.org.

NOTE Confidence: 0.86857575

00:28:51.820 --> 00:28:54.556 We hope you'll join us next week to

NOTE Confidence: 0.86857575

 $00{:}28{:}54.556 \dashrightarrow 00{:}28{:}57.214$ learn more about the fight against

NOTE Confidence: 0.86857575

 $00{:}28{:}57.214 \dashrightarrow 00{:}29{:}00.064$ cancer here on Connecticut Public Radio.