## WEBVTT

00:00:00.000 --> 00:00:02.850 Support for Yale Cancer Answers

NOTE Confidence: 0.8574418

 $00:00:02.850 \longrightarrow 00:00:05.130$  comes from AstraZeneca, dedicated

NOTE Confidence: 0.8574418

 $00:00:05.130 \longrightarrow 00:00:09.192$  to advancing options and providing

NOTE Confidence: 0.8574418

00:00:09.192 --> 00:00:13.447 hope for people living with

NOTE Confidence: 0.8574418

 $00:00:13.447 \dashrightarrow 00:00:14.298$  cancer. More information at a strazeneca-us.com.

NOTE Confidence: 0.8574418

 $00:00:14.300 \longrightarrow 00:00:16.502$  Welcome to Yale Cancer Answers with

NOTE Confidence: 0.8574418

00:00:16.502 --> 00:00:18.720 your host, Doctor Anees Chappar.

NOTE Confidence: 0.8574418

 $00:00:18.720 \longrightarrow 00:00:20.570$  Yale Cancer Answers features the

NOTE Confidence: 0.8574418

 $00:00:20.570 \longrightarrow 00:00:23.115$  latest information on cancer care by

NOTE Confidence: 0.8574418

 $00{:}00{:}23.115 \dashrightarrow 00{:}00{:}24.807$  welcoming on cologists and specialists

NOTE Confidence: 0.8574418

 $00:00:24.807 \longrightarrow 00:00:27.084$  who are on the forefront of the

NOTE Confidence: 0.8574418

 $00:00:27.084 \longrightarrow 00:00:29.026$  battle to fight cancer. This week

NOTE Confidence: 0.8574418

 $00{:}00{:}29.026 \dashrightarrow 00{:}00{:}30.518$  it's a conversation about

NOTE Confidence: 0.8574418

 $00:00:30.518 \longrightarrow 00:00:32.010$  neuroendocrine tumors in colon

NOTE Confidence: 0.8574418

 $00:00:32.072 \longrightarrow 00:00:33.797$  cancer with Doctor Pamela Kunz.

 $00{:}00{:}33.800 \dashrightarrow 00{:}00{:}36.194$  Doctor Kunz is director of GI Medical

NOTE Confidence: 0.8574418

00:00:36.194 --> 00:00:38.271 Oncology at the Yale School of

NOTE Confidence: 0.8574418

 $00:00:38.271 \longrightarrow 00:00:40.245$  Medicine where Doctor Chagpar is

NOTE Confidence: 0.8574418

00:00:40.245 --> 00:00:42.640 a professor of surgical oncology.

NOTE Confidence: 0.86497337

 $00:00:43.740 \longrightarrow 00:00:46.236$  Pam, maybe we can start off

NOTE Confidence: 0.86497337

 $00:00:46.236 \longrightarrow 00:00:47.900$  by setting the context?

NOTE Confidence: 0.86497337

 $00{:}00{:}47.900 \dashrightarrow 00{:}00{:}49.660$  What exactly are neuroendocrine

NOTE Confidence: 0.86497337

 $00:00:49.660 \longrightarrow 00:00:52.300$  tumors and what do they have

NOTE Confidence: 0.86497337

 $00:00:52.378 \longrightarrow 00:00:54.138$  to do with colon cancer?

NOTE Confidence: 0.89152914

 $00:00:55.470 \longrightarrow 00:00:56.232$  Great question.

NOTE Confidence: 0.89152914

 $00{:}00{:}56.232 \dashrightarrow 00{:}00{:}57.756$  So neuroendocrine tumors are

NOTE Confidence: 0.89152914

 $00:00:57.756 \longrightarrow 00:00:59.750$  just another type of cancer.

NOTE Confidence: 0.89152914

 $00{:}00{:}59.750 \dashrightarrow 00{:}01{:}01.670$  They can originate actually in

NOTE Confidence: 0.89152914

00:01:01.670 --> 00:01:04.030 almost any part of the body,

NOTE Confidence: 0.89152914

 $00:01:04.030 \longrightarrow 00:01:06.358$  most commonly in the GI tract

NOTE Confidence: 0.89152914

 $00:01:06.360 \longrightarrow 00:01:09.248$  and in the lungs and what makes them

 $00:01:09.248 \longrightarrow 00:01:11.852$  different from colon cancer is what the

NOTE Confidence: 0.89152914

 $00:01:11.852 \longrightarrow 00:01:14.530$  cells look like under the microscope.

NOTE Confidence: 0.89152914

 $00:01:14.530 \longrightarrow 00:01:16.570$  So it's actually a completely different

NOTE Confidence: 0.89152914

00:01:16.570 --> 00:01:19.199 type of cancer than colon adenocarcinoma,

NOTE Confidence: 0.89152914

 $00:01:19.200 \longrightarrow 00:01:21.140$  which is the most common

NOTE Confidence: 0.89152914

 $00:01:21.140 \longrightarrow 00:01:22.692$  type of colon cancer.

NOTE Confidence: 0.87630314

00:01:23.760 --> 00:01:25.324 So these neuroendocrine tumors

NOTE Confidence: 0.87630314

 $00:01:25.324 \longrightarrow 00:01:27.670$  they can arise in the colon,

NOTE Confidence: 0.87630314

 $00:01:27.670 \longrightarrow 00:01:30.407$  which would make them a colon cancer.

NOTE Confidence: 0.87630314

 $00:01:30.410 \longrightarrow 00:01:33.140$  But they look different under the microscope.

NOTE Confidence: 0.87630314

 $00:01:33.140 \longrightarrow 00:01:35.486$  So they're not exactly the same

NOTE Confidence: 0.87630314

 $00{:}01{:}35.490 \dashrightarrow 00{:}01{:}37.054$ garden variety colon cancer

NOTE Confidence: 0.87630314

00:01:37.054 --> 00:01:39.009 that we usually think about?

NOTE Confidence: 0.8862858

 $00:01:39.720 \longrightarrow 00:01:42.786$  That's correct, and so we would call

NOTE Confidence: 0.8862858

00:01:42.786 --> 00:01:45.318 those a neuroendocrine tumor of the

 $00:01:45.318 \longrightarrow 00:01:47.592$  colon and what's unique about these

NOTE Confidence: 0.8862858

 $00:01:47.592 \longrightarrow 00:01:50.595$  is that we try our best to

NOTE Confidence: 0.8862858

 $00:01:50.595 \longrightarrow 00:01:52.476$  identify where these cancers start,

NOTE Confidence: 0.8862858

 $00:01:52.476 \longrightarrow 00:01:54.048$  because that has implications

NOTE Confidence: 0.8862858

 $00:01:54.048 \longrightarrow 00:01:56.479$  on how we treat that cancer.

NOTE Confidence: 0.8862858

 $00:01:56.480 \longrightarrow 00:01:59.266$  So they may start in the colon,

NOTE Confidence: 0.8862858

 $00:01:59.270 \longrightarrow 00:02:02.056$  which is in fact actually quite rare.

NOTE Confidence: 0.8862858

00:02:02.060 --> 00:02:03.736 Most commonly, they'll originate

NOTE Confidence: 0.8862858

 $00:02:03.736 \longrightarrow 00:02:06.250$  in the small intestines in the

NOTE Confidence: 0.8862858

 $00:02:06.320 \longrightarrow 00:02:08.050$  pancreas and in the lungs,

NOTE Confidence: 0.8862858

 $00{:}02{:}08.050 \dashrightarrow 00{:}02{:}10.948$  and they can spread to lymph nodes

NOTE Confidence: 0.8862858

 $00:02:10.950 \longrightarrow 00:02:12.610$  or to the liver.

NOTE Confidence: 0.8862858

 $00:02:12.610 \longrightarrow 00:02:14.685$  And so when someone says

NOTE Confidence: 0.8862858

 $00{:}02{:}14.685 \dashrightarrow 00{:}02{:}16.998$  they have a colon cancer,

NOTE Confidence: 0.8862858

 $00:02:17.000 \longrightarrow 00:02:19.155$  we often just assume that

NOTE Confidence: 0.8862858

 $00{:}02{:}19.155 \dashrightarrow 00{:}02{:}20.448$  that's colon adenocarcinoma.

 $00:02:20.450 \longrightarrow 00:02:23.048$  The garden variety, as you said.

NOTE Confidence: 0.8862858

 $00:02:23.050 \longrightarrow 00:02:25.619$  But what's very important is that we

NOTE Confidence: 0.8862858

00:02:25.619 --> 00:02:28.753 rely on our pathologists to tell us

NOTE Confidence: 0.8862858

00:02:28.753 --> 00:02:31.687 exactly what histologic type, that means,

NOTE Confidence: 0.8862858

 $00:02:31.690 \longrightarrow 00:02:34.084$  what the cancer cells look like

NOTE Confidence: 0.8862858

 $00:02:34.084 \longrightarrow 00:02:36.227$  under the microscope to determine

NOTE Confidence: 0.8862858

 $00:02:36.227 \longrightarrow 00:02:39.029$  whether it's an adenocarcinoma or a

NOTE Confidence: 0.860685275454545

00:02:39.030 --> 00:02:40.398 neuroendocrine tumor.

NOTE Confidence: 0.860685275454545

 $00:02:40.398 \longrightarrow 00:02:42.450$  Let's talk a little bit more

NOTE Confidence: 0.860685275454545

 $00{:}02{:}42.516 \to 00{:}02{:}44.116$  about how that process actually

NOTE Confidence: 0.860685275454545

 $00:02:44.116 \longrightarrow 00:02:46.229$  happens and what the big deal is.

NOTE Confidence: 0.860685275454545

 $00:02:46.230 \longrightarrow 00:02:47.982$  I mean, for many people they

NOTE Confidence: 0.860685275454545

 $00:02:47.982 \longrightarrow 00:02:49.958$  may think a cancer is a cancer,

NOTE Confidence: 0.860685275454545

 $00:02:49.960 \longrightarrow 00:02:51.969$  and I don't want

NOTE Confidence: 0.860685275454545

 $00:02:51.970 \longrightarrow 00:02:53.686$  neuroendocrine cancers.

00:02:53.690 --> 00:02:55.120 I don't want this cancers,

NOTE Confidence: 0.860685275454545

 $00{:}02{:}55.120 \dashrightarrow 00{:}02{:}57.129$  and I don't want that cancer,

NOTE Confidence: 0.860685275454545

 $00:02:57.130 \longrightarrow 00:02:58.570$  I just don't want cancer.

NOTE Confidence: 0.860685275454545

 $00:02:58.570 \longrightarrow 00:03:01.769$  I'm beginning to sound like Doctor Seuss.

NOTE Confidence: 0.860685275454545

 $00:03:01.770 \longrightarrow 00:03:06.664$  But how do we differentiate between an

NOTE Confidence: 0.860685275454545

 $00:03:06.664 \longrightarrow 00:03:09.460$  adenocarcinoma and a neuroendocrine tumor?

NOTE Confidence: 0.860685275454545

 $00:03:09.460 \longrightarrow 00:03:12.950$  And why is that important?

NOTE Confidence: 0.8867054

 $00:03:14.490 \longrightarrow 00:03:17.890$  So when a patient first develops

NOTE Confidence: 0.8867054

 $00{:}03{:}17.890 \dashrightarrow 00{:}03{:}20.238$  symptoms that may bring them to,

NOTE Confidence: 0.8867054

 $00:03:20.240 \longrightarrow 00:03:22.295$  for example, their primary care

NOTE Confidence: 0.8867054

 $00{:}03{:}22.295 \dashrightarrow 00{:}03{:}23.939$  doctor or a gastroenterologist,

NOTE Confidence: 0.8867054

 $00:03:23.940 \longrightarrow 00:03:27.132$  some of the symptoms may in fact

NOTE Confidence: 0.8867054

 $00:03:27.132 \longrightarrow 00:03:29.607$  overlap between having any sort of

NOTE Confidence: 0.8867054

00:03:29.607 --> 00:03:32.570 cancer of the colon or the GI tract.

NOTE Confidence: 0.8867054

 $00:03:32.570 \longrightarrow 00:03:34.934$  They may have abdominal pain or

NOTE Confidence: 0.8867054

 $00:03:34.934 \longrightarrow 00:03:37.100$  changes in their bowel habits,

 $00:03:37.100 \longrightarrow 00:03:39.970$  and then they may undergo a biopsy.

NOTE Confidence: 0.8867054

 $00:03:39.970 \longrightarrow 00:03:42.847$  That biopsy could be through a colonoscopy,

NOTE Confidence: 0.8867054

 $00:03:42.850 \longrightarrow 00:03:45.430$  or, if the cancer has spread

NOTE Confidence: 0.8867054

 $00:03:45.430 \longrightarrow 00:03:47.500$  somewhere else it may be

NOTE Confidence: 0.8867054

 $00:03:47.500 \longrightarrow 00:03:49.570$  a biopsy of that spot,

NOTE Confidence: 0.8867054

 $00:03:49.570 \longrightarrow 00:03:52.433$  like a biopsy of the liver and

NOTE Confidence: 0.8867054

 $00:03:52.433 \longrightarrow 00:03:54.539$  once that biopsy is taken,

NOTE Confidence: 0.8867054

 $00:03:54.540 \longrightarrow 00:03:56.892$  that tissue, the tumor tissue

NOTE Confidence: 0.8867054

 $00{:}03{:}56.892 \dashrightarrow 00{:}03{:}59.803$  goes to a pathologist as a

NOTE Confidence: 0.8867054

 $00:03:59.803 \longrightarrow 00:04:02.329$  doctor that specializes in looking at

NOTE Confidence: 0.8867054

 $00{:}04{:}02.329 \dashrightarrow 00{:}04{:}05.304$  cells under the microscope to help us

NOTE Confidence: 0.8867054

 $00:04:05.304 \longrightarrow 00:04:08.500$  determine exactly what type of cancer it is,

NOTE Confidence: 0.8867054

 $00:04:08.500 \longrightarrow 00:04:12.339$  they will look at what the cells look like.

NOTE Confidence: 0.8867054

 $00:04:12.340 \longrightarrow 00:04:14.878$  They will also do very special

NOTE Confidence: 0.8867054

 $00:04:14.878 \longrightarrow 00:04:17.460$  stains to help us identify

 $00:04:17.460 \longrightarrow 00:04:19.510$  certain characteristics of those cells,

NOTE Confidence: 0.8867054

 $00{:}04{:}19.510 \dashrightarrow 00{:}04{:}21.560$  and it matters because every

NOTE Confidence: 0.8867054

 $00:04:21.560 \longrightarrow 00:04:23.200$  cancer is treated differently.

NOTE Confidence: 0.8867054

 $00:04:23.200 \longrightarrow 00:04:25.664$  We now have large clinical trials that

NOTE Confidence: 0.8867054

 $00:04:25.664 \longrightarrow 00:04:29.421$  tell us one cancer may do better with a

NOTE Confidence: 0.8867054

 $00:04:29.421 \longrightarrow 00:04:31.810$  different chemotherapy versus another,

NOTE Confidence: 0.8867054

 $00{:}04{:}31.810 \dashrightarrow 00{:}04{:}34.715$  and so it's very critical in fact

NOTE Confidence: 0.8867054

 $00:04:34.715 \longrightarrow 00:04:37.040$  to determine what type of cancer

NOTE Confidence: 0.8867054

 $00:04:37.040 \longrightarrow 00:04:39.960$  that is in order for us to tailor

NOTE Confidence: 0.8867054

 $00:04:39.960 \longrightarrow 00:04:42.465$  that treatment to the patient.

NOTE Confidence: 0.81843877

 $00:04:43.750 \longrightarrow 00:04:46.300$  And also you know,

NOTE Confidence: 0.81843877

00:04:46.300 --> 00:04:49.700 I think going back to what you had

NOTE Confidence: 0.81843877

 $00:04:49.700 \longrightarrow 00:04:52.250$  said earlier, the cell of origin

NOTE Confidence: 0.81843877

 $00:04:52.250 \longrightarrow 00:04:54.375$  for these cancers is different.

NOTE Confidence: 0.81843877

 $00:04:54.380 \longrightarrow 00:04:57.348$  So for adenocarcinomas as you mentioned,

NOTE Confidence: 0.81843877

 $00:04:57.350 \longrightarrow 00:05:00.241$  those are cancers that arise in the

 $00:05:00.241 \longrightarrow 00:05:03.299$  colon in the glands of the colon,

NOTE Confidence: 0.81843877

 $00{:}05{:}03.300 \dashrightarrow 00{:}05{:}05.000$  whereas these neuroendocrine tumors

NOTE Confidence: 0.81843877

 $00:05:05.000 \longrightarrow 00:05:07.125$  they may arise somewhere else.

NOTE Confidence: 0.81843877

 $00:05:07.130 \longrightarrow 00:05:09.590$  Now do normal endocrine tumors that

NOTE Confidence: 0.81843877

 $00:05:09.590 \longrightarrow 00:05:12.174$  you mentioned that can arise most

NOTE Confidence: 0.81843877

00:05:12.174 --> 00:05:14.344 commonly in the small intestine,

NOTE Confidence: 0.81843877

 $00:05:14.350 \longrightarrow 00:05:17.146$  or the pancreas or the lung.

NOTE Confidence: 0.81843877

 $00:05:17.150 \longrightarrow 00:05:19.586$  Do those metastasize to the colon,

NOTE Confidence: 0.81843877

 $00{:}05{:}19.590 \dashrightarrow 00{:}05{:}22.032$  or when you find a neuroendocrine

NOTE Confidence: 0.81843877

 $00:05:22.032 \longrightarrow 00:05:23.660$  tumor of the colon,

NOTE Confidence: 0.81843877

00:05:23.660 --> 00:05:26.096 is it generally a neuroendocrine tumor,

NOTE Confidence: 0.81843877

 $00:05:26.100 \longrightarrow 00:05:28.949$  albiet rare that started in the colon?

NOTE Confidence: 0.81843877

 $00:05:28.950 \longrightarrow 00:05:31.400$  Usually we label these

NOTE Confidence: 0.866588

 $00:05:31.400 \longrightarrow 00:05:33.430$  based on where they start,

NOTE Confidence: 0.866588

 $00:05:33.430 \longrightarrow 00:05:36.279$  so if we're calling it a colon,

00:05:36.280 --> 00:05:38.315 neuroendocrine tumor or a small

NOTE Confidence: 0.866588

 $00{:}05{:}38.315 \dashrightarrow 00{:}05{:}39.536$  intestine neuroendocrine tumor,

NOTE Confidence: 0.866588

 $00{:}05{:}39.540 \dashrightarrow 00{:}05{:}41.964$  that's because we believe they started

NOTE Confidence: 0.866588

 $00:05:41.964 \longrightarrow 00:05:44.419$  in those places and they start,

NOTE Confidence: 0.866588

 $00:05:44.420 \longrightarrow 00:05:46.315$  you're absolutely right from cells

NOTE Confidence: 0.866588

 $00{:}05{:}46.315 \dashrightarrow 00{:}05{:}48.738$  that are different from these glandular

NOTE Confidence: 0.866588

00:05:48.738 --> 00:05:50.586 cells that an adenocarcinoma

NOTE Confidence: 0.866588

 $00:05:50.590 \longrightarrow 00:05:51.814$  originate from neuroendocrine

NOTE Confidence: 0.866588

 $00:05:51.814 \longrightarrow 00:05:53.038$  cells are unique.

NOTE Confidence: 0.866588

 $00:05:53.040 \longrightarrow 00:05:55.075$  They happened to be scattered

NOTE Confidence: 0.866588

00:05:55.075 --> 00:05:56.296 throughout the body.

NOTE Confidence: 0.866588

 $00:05:56.300 \longrightarrow 00:05:57.932$  They share features of

NOTE Confidence: 0.866588

00:05:57.932 --> 00:05:59.564 some typical cancer cells,

NOTE Confidence: 0.866588

 $00:05:59.570 \longrightarrow 00:06:01.748$  but one thing that makes them

NOTE Confidence: 0.866588

 $00:06:01.748 \longrightarrow 00:06:04.213$  unique is that some of them

NOTE Confidence: 0.866588

00:06:04.213 --> 00:06:06.089 can actually secrete hormones.

00:06:06.090 --> 00:06:08.946 That's how they get their name endocrine.

NOTE Confidence: 0.866588

 $00:06:08.950 \longrightarrow 00:06:11.170$  And so these cancers that

NOTE Confidence: 0.866588

00:06:11.170 --> 00:06:13.440 originate in the small intestine,

NOTE Confidence: 0.866588

00:06:13.440 --> 00:06:14.292 for example,

NOTE Confidence: 0.866588

00:06:14.292 --> 00:06:16.422 sometimes can secrete a hormone

NOTE Confidence: 0.866588

 $00:06:16.422 \longrightarrow 00:06:18.586$  called seroton in that can cause

NOTE Confidence: 0.866588

00:06:18.586 --> 00:06:20.616 things like diarrhea and flushing.

NOTE Confidence: 0.866588

 $00:06:20.620 \longrightarrow 00:06:23.254$  And some of the pancreatic neuroendocrine

NOTE Confidence: 0.866588

 $00:06:23.254 \longrightarrow 00:06:26.259$  cancers can secrete other types of hormones,

NOTE Confidence: 0.866588

 $00:06:26.260 \longrightarrow 00:06:27.140$  for example,

NOTE Confidence: 0.866588

 $00:06:27.140 \longrightarrow 00:06:27.580$  insulin,

NOTE Confidence: 0.866588

 $00:06:27.580 \longrightarrow 00:06:31.040$  that can make your blood sugar quite low.

NOTE Confidence: 0.866588

 $00{:}06{:}31.040 \dashrightarrow 00{:}06{:}33.770$  So it's a combination of

NOTE Confidence: 0.866588

 $00:06:33.770 \longrightarrow 00:06:36.011$  things that helps us eventually

NOTE Confidence: 0.866588

 $00:06:36.011 \longrightarrow 00:06:37.975$  lead to that diagnosis,

 $00:06:37.980 \longrightarrow 00:06:38.410$  and

NOTE Confidence: 0.8542836

 $00{:}06{:}38.410 \dashrightarrow 00{:}06{:}41.020$  then tailor that treatment and so

NOTE Confidence: 0.8542836

 $00:06:41.020 \longrightarrow 00:06:44.521$  if a patient were to present and they

NOTE Confidence: 0.8542836

 $00:06:44.521 \longrightarrow 00:06:48.167$  go and they have a colonoscopy and they

NOTE Confidence: 0.8542836

 $00:06:48.167 \longrightarrow 00:06:51.519$  have a biopsy and the biopsy shows

NOTE Confidence: 0.8542836

00:06:51.520 --> 00:06:54.052 a neuroendocrine origin is it likely

NOTE Confidence: 0.8542836

00:06:54.052 --> 00:06:56.320 that started in neuroendocrine

NOTE Confidence: 0.8542836

 $00:06:56.320 \longrightarrow 00:06:58.850$  cells of the colon itself?

NOTE Confidence: 0.8542836

 $00{:}06{:}58.850 \longrightarrow 00{:}07{:}01.834$  Or does this prompt then a little search

NOTE Confidence: 0.8542836

 $00:07:01.834 \longrightarrow 00:07:04.122$  to see whether that neuroendocrine

NOTE Confidence: 0.8542836

 $00{:}07{:}04.122 \dashrightarrow 00{:}07{:}07.517$  tumor that was found in the colon

NOTE Confidence: 0.8542836

00:07:07.597 --> 00:07:10.297 actually came from somewhere else,

NOTE Confidence: 0.8542836

 $00:07:10.300 \longrightarrow 00:07:13.018$  or how common would that be

NOTE Confidence: 0.8542836

 $00:07:13.018 \longrightarrow 00:07:16.250$  for it to migrate to the colon?

NOTE Confidence: 0.8542836

 $00:07:16.250 \longrightarrow 00:07:19.746$  Many of our listeners may know that garden

NOTE Confidence: 0.8542836

 $00{:}07{:}19.746 \dashrightarrow 00{:}07{:}22.658$  variety colon cancer goes other places.

 $00:07:22.660 \longrightarrow 00:07:25.690$  It goes to the liver and

NOTE Confidence: 0.8542836

 $00:07:25.690 \longrightarrow 00:07:27.946$  so on and so forth.

NOTE Confidence: 0.8542836

 $00:07:27.950 \longrightarrow 00:07:29.450$  But do these neuroendocrine

NOTE Confidence: 0.8542836

 $00:07:29.450 \longrightarrow 00:07:30.950$  tumors that may start,

NOTE Confidence: 0.8542836

 $00:07:30.950 \longrightarrow 00:07:33.206$  for example, in the small bowel,

NOTE Confidence: 0.8542836

 $00:07:33.210 \longrightarrow 00:07:35.090$  end up in the colon?

NOTE Confidence: 0.8613419

 $00:07:35.970 \longrightarrow 00:07:37.900$  That would be very unusual.

NOTE Confidence: 0.8613419

 $00:07:37.900 \longrightarrow 00:07:39.810$  They would more commonly spread

NOTE Confidence: 0.8613419

 $00:07:39.810 \longrightarrow 00:07:42.520$  to lymph nodes and to the liver,

NOTE Confidence: 0.8613419

 $00:07:42.520 \longrightarrow 00:07:44.440$  but to your original question,

NOTE Confidence: 0.8613419

 $00{:}07{:}44.440 \dashrightarrow 00{:}07{:}46.630$  we do something called a staging

NOTE Confidence: 0.8613419

 $00:07:46.630 \longrightarrow 00:07:49.688$  work up really at the time anyone is

NOTE Confidence: 0.8613419

 $00{:}07{:}49.688 \dashrightarrow 00{:}07{:}51.968$  diagnosed with any sort of cancer

NOTE Confidence: 0.8613419

 $00:07:52.043 \longrightarrow 00:07:54.407$  that helps us determine the extent

NOTE Confidence: 0.8613419

00:07:54.407 --> 00:07:56.760 of the cancer where perhaps has

00:07:56.760 --> 00:07:58.685 the cancer spread anywhere else.

NOTE Confidence: 0.8613419

 $00{:}07{:}58.690 \dashrightarrow 00{:}08{:}02.010$  We do that by using a CTE or a CAT

NOTE Confidence: 0.8613419

 $00:08:02.117 \longrightarrow 00:08:05.733$  scan that helps us look at the chest,

NOTE Confidence: 0.8613419

 $00:08:05.740 \longrightarrow 00:08:07.890$  the abdomen and the pelvis.

NOTE Confidence: 0.8613419

 $00:08:07.890 \longrightarrow 00:08:10.648$  For other areas of cancer we will

NOTE Confidence: 0.8613419

 $00:08:10.648 \longrightarrow 00:08:13.307$  also sometimes do blood work that

NOTE Confidence: 0.8613419

 $00:08:13.307 \longrightarrow 00:08:15.627$  includes looking at blood tests,

NOTE Confidence: 0.8613419

 $00:08:15.630 \longrightarrow 00:08:17.338$  cell counts, liver tests,

NOTE Confidence: 0.8613419

 $00{:}08{:}17.338 \dashrightarrow 00{:}08{:}20.830$  kidney tests to also see if there is

NOTE Confidence: 0.8613419

 $00:08:20.830 \longrightarrow 00:08:23.368$  any other effect on other organs,

NOTE Confidence: 0.8613419

 $00:08:23.370 \longrightarrow 00:08:24.230$  and so

NOTE Confidence: 0.874066

 $00:08:24.230 \longrightarrow 00:08:26.065$  you'll do this regardless of

NOTE Confidence: 0.874066

 $00:08:26.065 \longrightarrow 00:08:27.900$  whether they presented with a

NOTE Confidence: 0.874066

 $00{:}08{:}27.967 \dashrightarrow 00{:}08{:}30.427$  neuroendocrine tumor or whether they

NOTE Confidence: 0.874066

 $00:08:30.427 \longrightarrow 00:08:32.395$  presented with an adenocarcinoma?

NOTE Confidence: 0.874066

 $00:08:32.400 \longrightarrow 00:08:34.980$  That's correct, yes

 $00:08:34.980 \longrightarrow 00:08:38.704$  and

NOTE Confidence: 0.859899785714285

 $00{:}08{:}38.710 \dashrightarrow 00{:}08{:}42.262$  kind of getting back to where we started

NOTE Confidence: 0.859899785714285

 $00:08:42.262 \longrightarrow 00:08:45.419$  in terms of patient presentation,

NOTE Confidence: 0.859899785714285

00:08:45.420 --> 00:08:48.510 you had mentioned that neuroendocrine tumors,

NOTE Confidence: 0.859899785714285

 $00:08:48.510 \longrightarrow 00:08:52.129$  because they tend to secrete these hormones,

NOTE Confidence: 0.859899785714285

 $00:08:52.130 \longrightarrow 00:08:56.176$  they can present with symptoms of diarrhea

NOTE Confidence: 0.859899785714285

 $00:08:56.176 \longrightarrow 00:08:59.868$  and flushing and so on and so forth.

NOTE Confidence: 0.859899785714285

00:08:59.870 --> 00:09:03.140 Whereas many colon cancers actually

NOTE Confidence: 0.859899785714285

 $00{:}09{:}03.140 \dashrightarrow 00{:}09{:}05.756$  may be completely asymptomatic

NOTE Confidence: 0.859899785714285

 $00:09:05.760 \longrightarrow 00:09:07.890$  often because we have screening,

NOTE Confidence: 0.859899785714285

 $00:09:07.890 \longrightarrow 00:09:10.020$  For our listeners,

NOTE Confidence: 0.859899785714285

 $00:09:10.020 \longrightarrow 00:09:12.582$  there was an update to the

NOTE Confidence: 0.859899785714285

 $00{:}09{:}12.582 \dashrightarrow 00{:}09{:}14.290$  screening guidelines for colon

NOTE Confidence: 0.859899785714285

 $00:09:14.367 \longrightarrow 00:09:16.839$  cancer that was recently put out.

NOTE Confidence: 0.859899785714285

 $00:09:16.840 \longrightarrow 00:09:19.390$  Do you want to tell us

 $00:09:19.390 \longrightarrow 00:09:21.946$  a little bit more about that?

NOTE Confidence: 0.8655688

 $00:09:21.950 \longrightarrow 00:09:22.754$  Yes, definitely,

NOTE Confidence: 0.8655688

 $00:09:22.754 \longrightarrow 00:09:25.568$  and I think that's also another key

NOTE Confidence: 0.8655688

00:09:25.568 --> 00:09:27.907 between the garden variety,

NOTE Confidence: 0.8655688

 $00:09:27.910 \longrightarrow 00:09:29.886$  colon adenocarcinoma and neuroendocrine

NOTE Confidence: 0.8655688

 $00:09:29.886 \longrightarrow 00:09:33.300$  tumors is that there are precursors or

NOTE Confidence: 0.8655688

 $00{:}09{:}33.300 \dashrightarrow 00{:}09{:}35.180$  pre cancers to colon adenocarcinoma

NOTE Confidence: 0.8655688

 $00:09:35.180 \longrightarrow 00:09:37.410$  that we can detect as polyps.

NOTE Confidence: 0.8655688

 $00:09:37.410 \longrightarrow 00:09:40.917$  So small little growths within the colon,

NOTE Confidence: 0.8655688

 $00:09:40.920 \longrightarrow 00:09:44.077$  we can detect and remove and prevent

NOTE Confidence: 0.8655688

 $00:09:44.077 \longrightarrow 00:09:48.233$  cancer and the way we do that is through

NOTE Confidence: 0.8655688

00:09:48.233 --> 00:09:51.301 colonoscopies and so last week the

NOTE Confidence: 0.8655688

 $00:09:51.301 \longrightarrow 00:09:54.805$  large guidelines body called the United

NOTE Confidence: 0.8655688

00:09:54.805 --> 00:09:57.528 States Preventive Services Task Force,

NOTE Confidence: 0.8655688

 $00:09:57.528 \longrightarrow 00:10:00.108$  a large organization that

NOTE Confidence: 0.8655688

 $00:10:00.110 \longrightarrow 00:10:02.140$  helps determine guidelines for screening,

 $00:10:02.140 \longrightarrow 00:10:05.388$  came out out with a new recommendation.

NOTE Confidence: 0.8655688

00:10:05.390 --> 00:10:08.288 It's in draft format right now, to

NOTE Confidence: 0.8655688

 $00:10:08.288 \longrightarrow 00:10:10.397$  lower the colon cancer screening

NOTE Confidence: 0.8655688

 $00:10:10.397 \longrightarrow 00:10:13.509$  age to 45 from the age of 50,

NOTE Confidence: 0.8655688

 $00:10:13.510 \longrightarrow 00:10:17.155$  so this is moving it earlier by five years,

NOTE Confidence: 0.8655688

 $00:10:17.160 \longrightarrow 00:10:19.440$  and that's for people that have

NOTE Confidence: 0.8655688

00:10:19.440 --> 00:10:22.029 an average risk of colon cancer,

NOTE Confidence: 0.8655688

 $00:10:22.030 \longrightarrow 00:10:24.732$  so no strong family history

NOTE Confidence: 0.8655688

 $00:10:24.732 \longrightarrow 00:10:27.223$  or personal history or other risk

NOTE Confidence: 0.8655688

 $00:10:27.223 \longrightarrow 00:10:29.743$  factors that would increase your risk.

NOTE Confidence: 0.8655688

00:10:29.750 --> 00:10:32.300 This is for average risk individuals.

NOTE Confidence: 0.8655688

 $00:10:32.300 \longrightarrow 00:10:33.548$  And so why

NOTE Confidence: 0.89123785

 $00:10:33.550 \longrightarrow 00:10:35.630$  did they do that?

NOTE Confidence: 0.89123785

 $00:10:35.630 \longrightarrow 00:10:37.814$  Why are they now thinking that

NOTE Confidence: 0.89123785

 $00:10:37.814 \longrightarrow 00:10:40.620$  people need to get screened earlier?

 $00:10:40.620 \longrightarrow 00:10:42.700$  Are we finding cancers at

NOTE Confidence: 0.89123785

 $00:10:42.700 \longrightarrow 00:10:45.172$  earlier ages?

NOTE Confidence: 0.89123785

 $00:10:45.172 \longrightarrow 00:10:47.270$  We are in fact finding cancers at earlier ages

NOTE Confidence: 0.89123785

 $00:10:47.270 \longrightarrow 00:10:49.766$  really, since the 1990s,

NOTE Confidence: 0.89123785

 $00:10:49.770 \longrightarrow 00:10:52.712$  we've seen an increase of 2% per

NOTE Confidence: 0.89123785

 $00{:}10{:}52.712 \dashrightarrow 00{:}10{:}55.364$  year of the incidence of colon

NOTE Confidence: 0.89123785

 $00:10:55.364 \longrightarrow 00:10:58.507$  cancer in people under the age of 55.

NOTE Confidence: 0.89123785

 $00:10:58.510 \longrightarrow 00:11:01.025$  Some other organizations,

NOTE Confidence: 0.89123785

 $00{:}11{:}01.025 \dashrightarrow 00{:}11{:}03.540$  the American College of Gastroenterology

NOTE Confidence: 0.89123785

 $00:11:03.540 \longrightarrow 00:11:05.368$  decreased their screening recommendation

NOTE Confidence: 0.89123785

 $00{:}11{:}05.368 --> 00{:}11{:}08.460$  age to 45 years for black men.

NOTE Confidence: 0.89123785

 $00:11:08.460 \longrightarrow 00:11:11.673$  This was in the mid 2000s and in 2018

NOTE Confidence: 0.89123785

00:11:11.673 --> 00:11:14.987 the American Cancer Society reduced that

NOTE Confidence: 0.89123785

 $00:11:14.987 \longrightarrow 00:11:18.733$  colon cancer screening age to 45 for

NOTE Confidence: 0.89123785

00:11:18.733 --> 00:11:22.224 all people and that was just two years ago,

NOTE Confidence: 0.89123785

 $00:11:22.224 \longrightarrow 00:11:25.410$  and I think that over the last few years

00:11:25.496 --> 00:11:28.712 we've seen just stronger evidence to

NOTE Confidence: 0.89123785

 $00{:}11{:}28.712 \dashrightarrow 00{:}11{:}31.250$  support lowering this screening age,

NOTE Confidence: 0.89123785

 $00:11:31.250 \longrightarrow 00:11:33.470$  and therefore the United States

NOTE Confidence: 0.89123785

00:11:33.470 --> 00:11:35.690 Preventive Services Task Force came

NOTE Confidence: 0.89123785

 $00{:}11{:}35.757 \dashrightarrow 00{:}11{:}38.007$  out with this recommendation last

NOTE Confidence: 0.89123785

 $00:11:38.010 \longrightarrow 00:11:39.010$  week and

NOTE Confidence: 0.844091

00:11:39.010 --> 00:11:42.685 the screening guidelines for colon

NOTE Confidence: 0.844091

00:11:42.685 --> 00:11:46.939 cancer may be a little bit confusing for

NOTE Confidence: 0.844091

00:11:46.939 --> 00:11:50.482 some of our listeners because it really

NOTE Confidence: 0.844091

 $00:11:50.482 \longrightarrow 00:11:53.946$  depends on the type of test.

NOTE Confidence: 0.844091

00:11:53.950 --> 00:11:56.932 Sometimes they say get a colonoscopy

NOTE Confidence: 0.844091

 $00:11:56.932 \longrightarrow 00:12:00.915$  every 10 years, but then there are other

NOTE Confidence: 0.844091

 $00{:}12{:}00.915 \dashrightarrow 00{:}12{:}03.906$  tests like flexible sigmoidoscopy.

NOTE Confidence: 0.844091

 $00:12:03.906 \longrightarrow 00:12:05.898$  There are contact tests.

NOTE Confidence: 0.844091

 $00:12:05.900 \longrightarrow 00:12:08.580$  There are now tests like

 $00{:}12{:}08.580 \rightarrow 00{:}12{:}10.920$  Cologuard so stool DNA tests.

NOTE Confidence: 0.844091

 $00:12:10.920 \dashrightarrow 00:12:14.446$  There are fecal occult blood tests, can you

NOTE Confidence: 0.844091

 $00{:}12{:}14.446 \dashrightarrow 00{:}12{:}17.526$  help our listeners to understand

NOTE Confidence: 0.844091

00:12:17.526 --> 00:12:21.103 these different tests and what they

NOTE Confidence: 0.844091

00:12:21.103 --> 00:12:24.490 should be doing in terms of screening?

NOTE Confidence: 0.844091

 $00:12:24.490 \longrightarrow 00:12:27.142$  Because when they read the

NOTE Confidence: 0.844091

 $00:12:27.142 \longrightarrow 00:12:30.579$  guidelines it may get a little confusing.

NOTE Confidence: 0.86578053

 $00:12:31.290 \longrightarrow 00:12:33.810$  So your team

NOTE Confidence: 0.86578053

 $00{:}12{:}33.810 \dashrightarrow 00{:}12{:}36.090$  of doctors will help guide you to

NOTE Confidence: 0.86578053

 $00:12:36.090 \longrightarrow 00:12:37.566$  select the test that's

NOTE Confidence: 0.86578053

 $00:12:37.566 \longrightarrow 00:12:39.780$  best for you and

NOTE Confidence: 0.86578053

00:12:39.780 --> 00:12:41.256 full disclosure,

NOTE Confidence: 0.86578053

 $00:12:41.256 \longrightarrow 00:12:43.470$  my husband is a gastroenterologist and

NOTE Confidence: 0.86578053

 $00:12:43.470 \longrightarrow 00:12:46.782$  we talk about this a lot at home,

NOTE Confidence: 0.86578053

 $00:12:46.790 \longrightarrow 00:12:49.652$  and I'll

NOTE Confidence: 0.86578053

 $00:12:49.652 \longrightarrow 00:12:52.767$  quote something that he says which is any

 $00:12:52.767 \longrightarrow 00:12:55.278$  screening is better than no screening.

NOTE Confidence: 0.86578053

 $00{:}12{:}55.280 \dashrightarrow 00{:}12{:}58.223$  And so I think your first stop

NOTE Confidence: 0.86578053

00:12:58.223 --> 00:13:01.300 is talking to your primary care doctor.

NOTE Confidence: 0.86578053

 $00:13:01.300 \longrightarrow 00:13:03.715$  So these are the doctors that will

NOTE Confidence: 0.86578053

 $00:13:03.715 \longrightarrow 00:13:06.261$  often refer you to get colon cancer

NOTE Confidence: 0.86578053

 $00:13:06.261 \longrightarrow 00:13:08.415$  screening that is right for you.

NOTE Confidence: 0.86578053

 $00:13:08.420 \longrightarrow 00:13:11.356$  Your next stop usually is with a gastroenterologist

NOTE Confidence: 0.86578053

 $00:13:11.356 \longrightarrow 00:13:13.633$  and they will talk with

NOTE Confidence: 0.86578053

00:13:13.633 --> 00:13:16.229 you about this range of screening and

NOTE Confidence: 0.86578053

00:13:16.229 --> 00:13:18.781 you did a very nice job listing

NOTE Confidence: 0.86578053

 $00{:}13{:}18.781 \dashrightarrow 00{:}13{:}21.182$  those options and these are tests

NOTE Confidence: 0.86578053

 $00{:}13{:}21.182 \dashrightarrow 00{:}13{:}23.730$  that look for hidden blood in stools.

NOTE Confidence: 0.86578053

 $00{:}13{:}23.730 \dashrightarrow 00{:}13{:}25.860$  Those are called occult blood tests.

NOTE Confidence: 0.86578053

 $00:13:25.860 \longrightarrow 00:13:28.121$  There is the DNA based test so

NOTE Confidence: 0.86578053

 $00:13:28.121 \longrightarrow 00:13:30.450$  we know that colon cancers can

 $00:13:30.450 \longrightarrow 00:13:33.006$  actually shed DNA into the stool.

NOTE Confidence: 0.86578053

 $00:13:33.010 \longrightarrow 00:13:35.380$  And we can look for that.

NOTE Confidence: 0.86578053

 $00:13:35.380 \longrightarrow 00:13:38.458$  A sigmoidoscopy will look just in the

NOTE Confidence: 0.86578053

00:13:38.458 --> 00:13:41.307 bottom portion of your large intestine,

NOTE Confidence: 0.86578053

 $00:13:41.310 \longrightarrow 00:13:42.790$  called the sigmoid colon,

NOTE Confidence: 0.86578053

 $00:13:42.790 \longrightarrow 00:13:45.497$  so it will only detect that and it is

NOTE Confidence: 0.86578053

 $00{:}13{:}45.497 \dashrightarrow 00{:}13{:}47.557$  an actual camera that's inserted

NOTE Confidence: 0.86578053

 $00:13:47.557 \longrightarrow 00:13:49.205$  into the sigmoid colon.

NOTE Confidence: 0.86578053

00:13:49.210 --> 00:13:52.094 A full colonoscopy will have a camera

NOTE Confidence: 0.86578053

00:13:52.094 --> 00:13:55.126 inserted into the entirety of your colon,

NOTE Confidence: 0.86578053

 $00:13:55.130 \longrightarrow 00:13:58.290$  and so there's a huge range of options.

NOTE Confidence: 0.86578053

00:13:58.290 --> 00:14:01.055 And I agree it can be confusing,

NOTE Confidence: 0.86578053

 $00:14:01.060 \longrightarrow 00:14:03.080$  but I think that the

NOTE Confidence: 0.86578053

 $00:14:03.080 \longrightarrow 00:14:05.432$  best thing is to really talk with

NOTE Confidence: 0.86578053

 $00:14:05.432 \longrightarrow 00:14:07.707$  your primary care doctor and gastroenterologist

NOTE Confidence: 0.86578053

 $00:14:07.707 \longrightarrow 00:14:09.327$  about these options.

 $00:14:09.330 \longrightarrow 00:14:11.406$  Some tests may be better for

NOTE Confidence: 0.86578053

00:14:11.406 --> 00:14:12.444 different patients,

NOTE Confidence: 0.86578053

 $00:14:12.450 \longrightarrow 00:14:15.568$  but let me talk a little bit about

NOTE Confidence: 0.86578053

 $00:14:15.570 \longrightarrow 00:14:17.784$  some of the advantages of why

NOTE Confidence: 0.86578053

 $00{:}14{:}17.784 \dashrightarrow 00{:}14{:}19.260$  colonoscopy and perhaps even

NOTE Confidence: 0.86578053

 $00:14:19.326 \longrightarrow 00:14:21.234$  sigmoidoscopy outweigh some of

NOTE Confidence: 0.86578053

 $00:14:21.234 \longrightarrow 00:14:23.209$  the others right after we take

 $00:14:25.794 \longrightarrow 00:14:28.408$  a short break for a medical minute.

NOTE Confidence: 0.86005306

 $00{:}14{:}28.410 \dashrightarrow 00{:}14{:}30.666$  Please stay tuned to learn more

NOTE Confidence: 0.86005306

00:14:30.666 --> 00:14:32.170 information about colon cancer

NOTE Confidence: 0.86005306

 $00{:}14{:}32.239 \dashrightarrow 00{:}14{:}34.340$  with my guest, Doctor Pamela Kunz.

NOTE Confidence: 0.8461651

 $00:14:34.340 \longrightarrow 00:14:37.808$  Support for Yale Cancer Answers

NOTE Confidence: 0.8461651

 $00:14:37.808 \longrightarrow 00:14:40.120$  comes from AstraZeneca, dedicated

NOTE Confidence: 0.8461651

 $00{:}14{:}40.205 \dashrightarrow 00{:}14{:}43.429$  to providing innovative treatment

NOTE Confidence: 0.8461651

 $00:14:43.429 \longrightarrow 00:14:47.459$  options for people living with

NOTE Confidence: 0.8461651

 $00:14:47.459 \longrightarrow 00:14:48.265$  cancer. Learn more at a strazeneca-us.com.

 $00:14:48.270 \longrightarrow 00:14:51.196$  This is a medical minute about genetic

NOTE Confidence: 0.8461651

00:14:51.196 --> 00:14:53.738 testing which can be useful for

NOTE Confidence: 0.8461651

 $00:14:53.738 \longrightarrow 00:14:56.156$  people with certain types of cancer

NOTE Confidence: 0.8461651

 $00:14:56.156 \longrightarrow 00:14:58.876$  that seem to run in their families.

NOTE Confidence: 0.8461651

 $00:14:58.880 \longrightarrow 00:15:01.382$  Patients that are considered at risk

NOTE Confidence: 0.8461651

 $00:15:01.382 \longrightarrow 00:15:03.854$  receive genetic counseling and testing so

NOTE Confidence: 0.8461651

 $00:15:03.854 \longrightarrow 00:15:06.056$  informed medical decisions can be based

NOTE Confidence: 0.8461651

 $00:15:06.056 \longrightarrow 00:15:08.670$  on their own personal risk assessment.

NOTE Confidence: 0.8461651

 $00{:}15{:}08.670 \dashrightarrow 00{:}15{:}10.480$  Resources for genetic counseling and

NOTE Confidence: 0.8461651

 $00:15:10.480 \longrightarrow 00:15:12.290$  testing are available at federally

NOTE Confidence: 0.8461651

 $00{:}15{:}12.341 \dashrightarrow 00{:}15{:}14.377$  designated comprehensive cancer centers.

NOTE Confidence: 0.8461651

 $00:15:14.380 \longrightarrow 00:15:16.012$  Interdisciplinary teams include geneticists,

NOTE Confidence: 0.8461651

 $00{:}15{:}16.012 \dashrightarrow 00{:}15{:}17.316$  genetic counselors, physicians,

NOTE Confidence: 0.8461651

 $00:15:17.316 \longrightarrow 00:15:18.288$  and nurses

NOTE Confidence: 0.8461651

 $00:15:18.288 \longrightarrow 00:15:20.718$  who work together to provide

00:15:20.718 --> 00:15:22.961 risk assessment and steps to

NOTE Confidence: 0.8461651

 $00{:}15{:}22.961 \dashrightarrow 00{:}15{:}24.956$  prevent the development of cancer.

NOTE Confidence: 0.8461651

00:15:24.960 --> 00:15:26.740 More information is available

NOTE Confidence: 0.8461651

 $00:15:26.740 \longrightarrow 00:15:27.630$  at yalecancercenter.org.

NOTE Confidence: 0.8461651

 $00:15:27.630 \longrightarrow 00:15:31.230$  You're listening to Connecticut Public Radio.

NOTE Confidence: 0.8461651

 $00:15:31.230 \longrightarrow 00:15:31.630$  Welcome

NOTE Confidence: 0.86434764

 $00:15:31.630 \longrightarrow 00:15:33.630$  back to Yale Cancer Answers.

NOTE Confidence: 0.86434764

 $00{:}15{:}33.630 \dashrightarrow 00{:}15{:}35.808$  This is doctor in Anees Chagpar

NOTE Confidence: 0.86434764

 $00{:}15{:}35.808 \dashrightarrow 00{:}15{:}38.221$  and I'm joined to night by

NOTE Confidence: 0.86434764

00:15:38.221 --> 00:15:40.426 my guest doctor Pamela Kunz.

NOTE Confidence: 0.86434764

 $00{:}15{:}40.430 \dashrightarrow 00{:}15{:}42.430$  We're talking about colon cancer,

NOTE Confidence: 0.86434764

00:15:42.430 --> 00:15:43.537 and neuroendocrine tumors,

NOTE Confidence: 0.86434764

 $00:15:43.537 \longrightarrow 00:15:46.120$  and right before the break we were

NOTE Confidence: 0.86434764

 $00{:}15{:}46.184 \dashrightarrow 00{:}15{:}48.149$  talking about some recent updates

NOTE Confidence: 0.86434764

 $00:15:48.149 \longrightarrow 00:15:50.608$  to the colon cancer guidelines that

NOTE Confidence: 0.86434764

 $00{:}15{:}50.608 {\:{\mbox{--}}\!>}\ 00{:}15{:}52.728$  recommend that every body at

 $00:15:52.728 \longrightarrow 00:15:55.230$  average risk start getting their colon

NOTE Confidence: 0.86434764

 $00{:}15{:}55.230 \dashrightarrow 00{:}15{:}58.430$  cancer screening done at the age of 45.

NOTE Confidence: 0.86434764

00:15:58.430 --> 00:16:00.992 Now, for anybody who's read those

NOTE Confidence: 0.86434764

00:16:00.992 --> 00:16:02.700 colon cancer screening guidelines,

NOTE Confidence: 0.86434764

 $00:16:02.700 \longrightarrow 00:16:04.410$  it's a little bit confusing.

NOTE Confidence: 0.86434764

 $00:16:04.410 \longrightarrow 00:16:06.120$  There's all kinds of tests

NOTE Confidence: 0.86434764

00:16:06.120 --> 00:16:08.200 that are out there, and Pamela,

NOTE Confidence: 0.86434764

 $00{:}16{:}08.200 \dashrightarrow 00{:}16{:}10.330$  you were telling us right before

NOTE Confidence: 0.86434764

 $00:16:10.330 \longrightarrow 00:16:12.657$  the break that this is a decision

NOTE Confidence: 0.86434764

00:16:12.657 --> 00:16:14.624 that you really need to make

NOTE Confidence: 0.86434764

 $00{:}16{:}14.624 \dashrightarrow 00{:}16{:}16.379$  with your health care team.

NOTE Confidence: 0.86434764

 $00:16:16.380 \longrightarrow 00:16:17.744$  Your primary care doctor,

NOTE Confidence: 0.86434764

 $00{:}16{:}17.744 \dashrightarrow 00{:}16{:}18.426$  your gastroenterologist.

NOTE Confidence: 0.86434764

 $00:16:18.430 \longrightarrow 00:16:20.590$  But you are going to make a pitch

NOTE Confidence: 0.86434764

 $00:16:20.590 \longrightarrow 00:16:23.219$  for a particular form of screening.

 $00:16:23.220 \longrightarrow 00:16:26.298$  So tell us a little bit more about that.

NOTE Confidence: 0.88890046

 $00{:}16{:}27.420 \to 00{:}16{:}30.227$  That's right, so there are a number

NOTE Confidence: 0.88890046

 $00:16:30.227 \longrightarrow 00:16:33.256$  of options, but I was going to talk a

NOTE Confidence: 0.88890046

 $00:16:33.256 \longrightarrow 00:16:35.840$  little bit more about colonoscopies.

NOTE Confidence: 0.88890046

 $00:16:35.840 \longrightarrow 00:16:37.905$  I think that colonoscopies really

NOTE Confidence: 0.88890046

00:16:37.905 --> 00:16:40.416 meet a number of different needs

NOTE Confidence: 0.88890046

00:16:40.416 --> 00:16:42.660 in terms of the screening goals,

NOTE Confidence: 0.88890046

 $00:16:42.660 \longrightarrow 00:16:45.572$  so number one, to take

NOTE Confidence: 0.88890046

00:16:45.572 --> 00:16:49.334 a step back to describe them,

NOTE Confidence: 0.88890046

 $00:16:49.334 \longrightarrow 00:16:52.046$  your gastroenterologist will use a

NOTE Confidence: 0.88890046

 $00{:}16{:}52.046 \dashrightarrow 00{:}16{:}54.686$  small camera on the end of a tube

NOTE Confidence: 0.88890046

 $00:16:54.690 \longrightarrow 00:16:57.150$  and that allows them to detect

NOTE Confidence: 0.88890046

 $00:16:57.150 \longrightarrow 00:16:59.455$  small polyps, which are these

NOTE Confidence: 0.88890046

00:16:59.455 --> 00:17:01.760 precancerous spots and remove them,

NOTE Confidence: 0.88890046

 $00:17:01.760 \longrightarrow 00:17:04.476$  and I think that is critical

NOTE Confidence: 0.88890046

00:17:04.476 --> 00:17:07.289 in terms of cancer prevention.

00:17:07.290 --> 00:17:10.321 Some of these other tools might identify

NOTE Confidence: 0.88890046

 $00{:}17{:}10.321 \dashrightarrow 00{:}17{:}13.750$  that perhaps you have a precancerous lesion,

NOTE Confidence: 0.88890046

00:17:13.750 --> 00:17:16.510 or perhaps you have a cancer,

NOTE Confidence: 0.88890046

 $00:17:16.510 \longrightarrow 00:17:19.372$  but don't also enable the ability

NOTE Confidence: 0.88890046

00:17:19.372 --> 00:17:22.040 to actually remove that polyp,

NOTE Confidence: 0.88890046

00:17:22.040 --> 00:17:24.848 so that's why I think colonoscopies

NOTE Confidence: 0.88890046

 $00:17:24.848 \longrightarrow 00:17:27.200$  really are probably the best

NOTE Confidence: 0.88890046

 $00:17:27.200 \longrightarrow 00:17:29.696$  tool and considered the gold standard.

 $00:17:30.120 \longrightarrow 00:17:34.224$  So just to be honest, r

NOTE Confidence: 0.8687898

 $00:17:34.224 \longrightarrow 00:17:36.702$  I think a lot of people when

NOTE Confidence: 0.8687898

 $00:17:36.702 \longrightarrow 00:17:38.879$  they think about colonoscopy,

NOTE Confidence: 0.8687898

 $00:17:38.880 \longrightarrow 00:17:42.435$  the things that kind of make people less than

NOTE Confidence: 0.8687898

00:17:42.435 --> 00:17:45.548 enamored with the technique, is number 1,

NOTE Confidence: 0.8687898

 $00{:}17{:}45.548 \dashrightarrow 00{:}17{:}48.048$  the prep because your colon needs

NOTE Confidence: 0.8687898

 $00:17:48.050 \longrightarrow 00:17:50.927$  to be really clean for somebody to

NOTE Confidence: 0.8687898

00:17:50.927 --> 00:17:53.932 put a camera in there and actually

 $00:17:53.932 \longrightarrow 00:17:56.953$  be able to see anything and #2,

NOTE Confidence: 0.8687898

00:17:56.953 --> 00:17:59.425 the whole thought of having

NOTE Confidence: 0.8687898

00:17:59.430 --> 00:18:02.778 to put up your bottom end is not particularly

NOTE Confidence: 0.8687898

00:18:02.778 --> 00:18:05.444 appealing to people when they can think of

NOTE Confidence: 0.8687898

00:18:05.450 --> 00:18:07.928 instead just sending in a stool sample,

NOTE Confidence: 0.8687898

00:18:07.930 --> 00:18:09.862 which although not appealing,

NOTE Confidence: 0.8687898

 $00:18:09.862 \longrightarrow 00:18:12.760$  sounds a little bit nicer than

NOTE Confidence: 0.8687898

 $00{:}18{:}12.841 \longrightarrow 00{:}18{:}15.817$  putting a tube up your bottom end so

NOTE Confidence: 0.8687898

 $00:18:15.820 \longrightarrow 00:18:19.735$  if you were to do the other, say,

NOTE Confidence: 0.8687898

00:18:19.735 --> 00:18:23.340 a fecal occult blood test or a

NOTE Confidence: 0.8687898

 $00:18:23.340 \longrightarrow 00:18:27.175$  stool DNA test that now

NOTE Confidence: 0.8687898

00:18:27.175 --> 00:18:31.010 is being marketed to patients,

NOTE Confidence: 0.8687898

 $00:18:31.010 \longrightarrow 00:18:32.108$  if that's negative,

NOTE Confidence: 0.8687898

 $00:18:32.108 \longrightarrow 00:18:34.670$  how confident are you in the results?

NOTE Confidence: 0.8687898

00:18:34.670 --> 00:18:35.768 If it's positive,

 $00:18:35.768 \longrightarrow 00:18:38.330$  you'll likely end up needing a colonoscopy.

NOTE Confidence: 0.8687898

 $00:18:38.330 \longrightarrow 00:18:39.428$  Is that right?

NOTE Confidence: 0.8687898

00:18:39.428 --> 00:18:40.160 That's right,

NOTE Confidence: 0.8575937

 $00:18:40.160 \longrightarrow 00:18:42.356$  so if those tests are positive,

NOTE Confidence: 0.8575937

 $00:18:42.360 \longrightarrow 00:18:45.280$  you will still need to do the prep.

NOTE Confidence: 0.8575937

 $00:18:45.280 \longrightarrow 00:18:47.320$  I think that's one of the

NOTE Confidence: 0.8575937

 $00:18:47.320 \longrightarrow 00:18:49.152$  aspects of a colonoscopy that

NOTE Confidence: 0.8575937

 $00:18:49.152 \longrightarrow 00:18:51.137$  most people are worried about.

NOTE Confidence: 0.8575937

 $00:18:51.140 \longrightarrow 00:18:53.492$  That's when you have to drink a

NOTE Confidence: 0.8575937

 $00:18:53.492 \longrightarrow 00:18:55.405$  special fluid that helps clean

NOTE Confidence: 0.8575937

00:18:55.405 --> 00:18:58.324 out your colon in order for the

NOTE Confidence: 0.8575937

 $00:18:58.324 \longrightarrow 00:19:00.290$  gastroenterologist to really see a shiny,

NOTE Confidence: 0.8575937

 $00:19:00.290 \longrightarrow 00:19:03.020$  clean colon and detect the polyps so

NOTE Confidence: 0.8575937

 $00:19:03.020 \longrightarrow 00:19:05.528$  the prep is scary.

NOTE Confidence: 0.8575937

 $00:19:05.530 \longrightarrow 00:19:08.407$  And in terms of these other options,

NOTE Confidence: 0.8575937

00:19:08.410 --> 00:19:09.577 if it's negative,

00:19:09.577 --> 00:19:13.340 so if a fecal occult blood test is negative,

NOTE Confidence: 0.8575937

 $00{:}19{:}13.340 \dashrightarrow 00{:}19{:}16.217$  or the stool DNA test is negative,

NOTE Confidence: 0.8575937

00:19:16.220 --> 00:19:18.680 it's reassuring, but it's not 100%.

NOTE Confidence: 0.86405677

 $00:19:20.090 \longrightarrow 00:19:23.338$  And colonoscopy really allows the

NOTE Confidence: 0.86405677

 $00{:}19{:}23.338 \dashrightarrow 00{:}19{:}25.496$  gastroenterologist to look inside your

NOTE Confidence: 0.86405677

00:19:25.496 --> 00:19:28.264 colon and see if there are any polyps,

NOTE Confidence: 0.86405677

 $00:19:28.270 \longrightarrow 00:19:29.670$  and to remove them.

NOTE Confidence: 0.86405677

 $00:19:29.670 \longrightarrow 00:19:32.338$  Now before the break we were also

NOTE Confidence: 0.86405677

 $00:19:32.338 \longrightarrow 00:19:34.294$  talking about neuroendocrine tumors

NOTE Confidence: 0.86405677

 $00:19:34.294 \longrightarrow 00:19:37.559$  and you had mentioned that

NOTE Confidence: 0.86405677

 $00:19:37.559 \longrightarrow 00:19:40.535$  these are from a different cell of origin.

NOTE Confidence: 0.86405677

 $00:19:40.540 \longrightarrow 00:19:42.172$  They often secrete hormones,

 $00:19:44.220 \longrightarrow 00:19:46.758$  and rarely they can actually

NOTE Confidence: 0.86405677

 $00:19:46.758 \longrightarrow 00:19:49.130$  reside inside the colon as well.

NOTE Confidence: 0.86405677

00:19:49.130 --> 00:19:51.230 Now does a colonoscopy

NOTE Confidence: 0.86405677

 $00:19:51.230 \longrightarrow 00:19:52.630$  find these as well,

 $00:19:52.630 \longrightarrow 00:19:55.157$  or are these kind of hidden and

NOTE Confidence: 0.86405677

 $00:19:55.157 \longrightarrow 00:19:57.558$  the only way that you can really

NOTE Confidence: 0.86405677

00:19:57.558 --> 00:20:00.188 find them is when you present with

NOTE Confidence: 0.86405677

00:20:00.190 --> 00:20:01.669 symptoms?

NOTE Confidence: 0.8746865

00:20:01.670 --> 00:20:04.466 A colonoscopy will help us detect any

NOTE Confidence: 0.8746865

 $00:20:04.466 \longrightarrow 00:20:08.076$  abnormalities in the colon actually, and it

NOTE Confidence: 0.8746865

 $00:20:08.076 \longrightarrow 00:20:11.527$  will help detect other types of cancers.

NOTE Confidence: 0.8746865

 $00:20:11.530 \longrightarrow 00:20:14.882$  It will help detect other types of conditions

NOTE Confidence: 0.8746865

00:20:14.882 --> 00:20:17.939 such as inflammatory bowel disease,

NOTE Confidence: 0.8746865

 $00:20:17.940 \longrightarrow 00:20:20:470$  but what's unique about neuroendocrine

NOTE Confidence: 0.8746865

 $00{:}20{:}20{:}470 \dashrightarrow 00{:}20{:}24.031$  tumors is that they don't have a

NOTE Confidence: 0.8746865

 $00:20:24.031 \longrightarrow 00:20:26.401$  precursor or a precancerous spot

NOTE Confidence: 0.8746865

 $00:20:26.401 \longrightarrow 00:20:28.780$  that develops before the cancer.

NOTE Confidence: 0.8746865

 $00:20:28.780 \longrightarrow 00:20:31.804$  So very likely if a neuroendocrine

NOTE Confidence: 0.8746865

 $00:20:31.804 \longrightarrow 00:20:33.316$  tumor is present

00:20:33.320 --> 00:20:36.638 in the colon, it's already a cancer,

NOTE Confidence: 0.8746865

00:20:36.640 --> 00:20:38.790 whereas for colonoscopy the

NOTE Confidence: 0.8746865

 $00:20:38.790 \longrightarrow 00:20:42.061$  intent is to try to catch cancers

NOTE Confidence: 0.8746865

 $00{:}20{:}42.061 \dashrightarrow 00{:}20{:}45.163$  earlier before they are even cancers.

NOTE Confidence: 0.8746865

 $00:20:45.170 \longrightarrow 00:20:47.070$  So detect the polyps.

NOTE Confidence: 0.8656054

00:20:48.630 --> 00:20:50.710 And the guidelines for colonoscopy,

NOTE Confidence: 0.8656054

00:20:50.710 --> 00:20:52.334 if I remember correctly,

NOTE Confidence: 0.8656054

 $00:20:52.334 \longrightarrow 00:20:55.290$  are for a colonoscopy every 10 years.

NOTE Confidence: 0.8656054

 $00{:}20{:}55.290 --> 00{:}20{:}57.370$  Some people may look at

NOTE Confidence: 0.8656054

 $00:20:57.370 \longrightarrow 00:20:59.450$  that and say 10 years.

NOTE Confidence: 0.8656054

 $00{:}20{:}59.450 \dashrightarrow 00{:}21{:}01.946$  What happens if I develop one

NOTE Confidence: 0.8656054

 $00:21:01.946 \longrightarrow 00:21:03.610$  of these precancerous polyps

NOTE Confidence: 0.8656054

 $00:21:03.610 \longrightarrow 00:21:04.855$  in the interim,

NOTE Confidence: 0.8656054

 $00:21:04.855 \longrightarrow 00:21:07.345$  is 10 years really the guideline,

NOTE Confidence: 0.8656054

 $00:21:07.350 \longrightarrow 00:21:09.846$  and what do you say to

NOTE Confidence: 0.8656054

 $00:21:09.846 \longrightarrow 00:21:11.510$  people who have those

 $00:21:11.510 \longrightarrow 00:21:14.005$  concerns?

NOTE Confidence: 0.8656054

00:21:14.005 --> 00:21:15.668 10 years is the guideline that's assuming

NOTE Confidence: 0.8656054

00:21:15.668 --> 00:21:18.164 that you again have average risk,

NOTE Confidence: 0.8656054

 $00:21:18.170 \longrightarrow 00:21:19.890$  and assuming that

NOTE Confidence: 0.8656054

 $00:21:19.890 \longrightarrow 00:21:21.908$  first, colonoscopy is completely normal.

NOTE Confidence: 0.8656054

 $00:21:21.908 \longrightarrow 00:21:23.893$  If that colonoscopy shows polyps,

NOTE Confidence: 0.8656054

00:21:23.900 --> 00:21:27.076 very likely you're asked to come back sooner,

NOTE Confidence: 0.8656054

 $00{:}21{:}27.080 \dashrightarrow 00{:}21{:}29.336$  often within three years to see

NOTE Confidence: 0.8656054

 $00:21:29.336 \longrightarrow 00:21:31.860$  if there are any more polyps.

NOTE Confidence: 0.8656054

00:21:31.860 --> 00:21:34.646 But if your colonoscopy is totally clean,

NOTE Confidence: 0.8656054

00:21:34.650 --> 00:21:38.223 you are often asked to return in 10 years,

NOTE Confidence: 0.8656054

 $00{:}21{:}38.230 \dashrightarrow 00{:}21{:}40.726$  and that's because what we've learned

NOTE Confidence: 0.8656054

 $00{:}21{:}40.726 \dashrightarrow 00{:}21{:}43.400$  about the biology of polyps is it

NOTE Confidence: 0.8656054

 $00:21:43.400 \longrightarrow 00:21:46.039$  often can take 10 years for

NOTE Confidence: 0.8656054

 $00:21:46.039 \longrightarrow 00:21:48.967$  a polyp to turn into a cancer.

 $00:21:48.970 \longrightarrow 00:21:49.816$  Now that's

NOTE Confidence: 0.8656054

 $00{:}21{:}49.816 \dashrightarrow 00{:}21{:}52.777$  I would say on average or typical

NOTE Confidence: 0.8656054

 $00:21:52.777 \longrightarrow 00:21:56.040$  there are exceptions to that rule, and

NOTE Confidence: 0.87377954

 $00:21:56.040 \longrightarrow 00:21:59.910$  so the good news for all of our listeners,

NOTE Confidence: 0.87377954

 $00:21:59.910 \longrightarrow 00:22:03.294$  of course, is that if you do undergo

NOTE Confidence: 0.87377954

 $00:22:03.294 \longrightarrow 00:22:05.930$  a colonoscopy as Doctor Kunz is

NOTE Confidence: 0.87377954

 $00:22:05.930 \longrightarrow 00:22:08.940$  recommending starting at the age of 45,

NOTE Confidence: 0.87377954

 $00:22:08.940 \longrightarrow 00:22:10.660$  if it's completely clean,

NOTE Confidence: 0.87377954

 $00:22:10.660 \longrightarrow 00:22:13.240$  you don't have to drink that

NOTE Confidence: 0.87377954

 $00:22:13.320 \longrightarrow 00:22:15.390$  prep for another 10 years,

NOTE Confidence: 0.87377954

 $00:22:15.390 \longrightarrow 00:22:19.660$  which is always a nice thing to know as well.

NOTE Confidence: 0.87377954

00:22:19.660 --> 00:22:20.920 Doctor Kunz,

NOTE Confidence: 0.87377954

 $00:22:20.920 \longrightarrow 00:22:23.056$  you had mentioned that

NOTE Confidence: 0.87377954

 $00{:}22{:}23.060 \dashrightarrow 00{:}22{:}25.125$  for these polyps you can kind of

NOTE Confidence: 0.87377954

 $00:22:25.125 \longrightarrow 00:22:28.098$  take them out at the time of the

NOTE Confidence: 0.87377954

 $00:22:28.098 \longrightarrow 00:22:29.714$  colonoscopy and potentially prevent

 $00:22:29.714 \longrightarrow 00:22:31.599$  yourself from getting a cancer.

NOTE Confidence: 0.87377954

 $00{:}22{:}31.600 \dashrightarrow 00{:}22{:}34.085$  But if you've got a neuroendocrine tumor,

NOTE Confidence: 0.87377954

 $00:22:34.090 \longrightarrow 00:22:36.589$  that's often a cancer that's already there.

NOTE Confidence: 0.87377954

 $00:22:36.590 \longrightarrow 00:22:39.355$  And sometimes you can find colon cancers

NOTE Confidence: 0.87377954

 $00:22:39.355 \longrightarrow 00:22:42.234$  that are already in the form of a

NOTE Confidence: 0.87377954

 $00:22:42.234 \longrightarrow 00:22:44.419$  colon cancer before finding it just as

NOTE Confidence: 0.8727535

 $00:22:44.420 \longrightarrow 00:22:46.910$  a polyp. Is that right?

NOTE Confidence: 0.8727535

 $00:22:46.910 \longrightarrow 00:22:49.943$  Yes, and so the biopsy that's done at the time

NOTE Confidence: 0.8727535

 $00:22:49.943 \longrightarrow 00:22:53.124$  of the colonoscopy can help us to tell

NOTE Confidence: 0.8727535

 $00:22:53.130 \longrightarrow 00:22:55.026$  what kind of cancer this is,

NOTE Confidence: 0.8727535

 $00:22:55.030 \longrightarrow 00:22:56.920$  is this an adenocarcinoma?

NOTE Confidence: 0.8727535

 $00:22:56.920 \longrightarrow 00:22:58.816$  Is it just a pre cancer?

NOTE Confidence: 0.8727535

 $00{:}22{:}58.820 \dashrightarrow 00{:}23{:}00.400$  Is this a neuroendocrine cancer?

NOTE Confidence: 0.8727535

 $00:23:00.400 \longrightarrow 00:23:02.682$  So if it's a pre cancer and

NOTE Confidence: 0.8727535

 $00:23:02.682 \longrightarrow 00:23:04.508$  the polyps removed is that it?

 $00:23:04.510 \longrightarrow 00:23:06.400$  Do you have to take anymore

NOTE Confidence: 0.8727535

 $00{:}23{:}06.400 \dashrightarrow 00{:}23{:}08.049$  medications or is removing the

NOTE Confidence: 0.8727535

00:23:08.049 --> 00:23:10.011 polyp and getting your follow up

NOTE Confidence: 0.8727535

00:23:10.011 --> 00:23:13.200 colonoscopy all you need to do?

NOTE Confidence: 0.89113325

 $00:23:13.200 \longrightarrow 00:23:15.718$  If all that is detected is a

NOTE Confidence: 0.89113325

00:23:15.718 --> 00:23:17.770 polyp and they're able to

NOTE Confidence: 0.89113325

00:23:17.854 --> 00:23:20.139 completely remove it

NOTE Confidence: 0.89113325

 $00:23:20.140 \longrightarrow 00:23:22.110$  then the recommendation is just

NOTE Confidence: 0.89113325

00:23:22.110 --> 00:23:23.686 following up your gastroenterologist

NOTE Confidence: 0.89113325

 $00:23:23.686 \longrightarrow 00:23:25.930$  says in terms of recommended intervals.

NOTE Confidence: 0.89113325

00:23:25.930 --> 00:23:28.246 So if they find multiple polyps,

NOTE Confidence: 0.89113325

00:23:28.250 --> 00:23:31.338 or even just one, it will certainly be,

NOTE Confidence: 0.89113325

 $00:23:31.340 \longrightarrow 00:23:34.562$  please come back and see us before 10 years

NOTE Confidence: 0.89113325

 $00:23:34.562 \longrightarrow 00:23:37.510$  but there is no treatment needed.

NOTE Confidence: 0.89113325

 $00:23:37.510 \longrightarrow 00:23:39.054$  There's no chemotherapy needed,

NOTE Confidence: 0.89113325

 $00:23:39.054 \longrightarrow 00:23:40.984$  and nothing else is needed.

 $00:23:43.730 \longrightarrow 00:23:47.324$  Let's move on to

NOTE Confidence: 0.90031546

 $00:23:47.324 \longrightarrow 00:23:49.720$  the other two scenarios.

NOTE Confidence: 0.90031546

 $00:23:49.720 \longrightarrow 00:23:53.308$  Let's suppose this is an actual

NOTE Confidence: 0.90031546

 $00:23:53.308 \longrightarrow 00:23:55.102$  garden variety adenocarcinoma.

NOTE Confidence: 0.90031546

 $00:23:55.110 \longrightarrow 00:23:56.910$  What happens then?

NOTE Confidence: 0.87233305

 $00:23:58.270 \longrightarrow 00:24:01.038$  So if we determine that based on the

NOTE Confidence: 0.87233305

 $00:24:01.038 \longrightarrow 00:24:03.828$  biopsy that it's a colon adenocarcinoma,

NOTE Confidence: 0.87233305

 $00:24:03.830 \longrightarrow 00:24:05.800$  then patients are usually

NOTE Confidence: 0.87233305

 $00{:}24{:}05.800 \dashrightarrow 00{:}24{:}08.200$  referred to see an oncology team.

NOTE Confidence: 0.87233305

 $00:24:08.200 \longrightarrow 00:24:09.784$  That team consists of

NOTE Confidence: 0.87233305

00:24:09.784 --> 00:24:11.368 usually a medical oncologist,

NOTE Confidence: 0.87233305

00:24:11.370 --> 00:24:13.746 like myself, and often a surgeon,

NOTE Confidence: 0.87233305

 $00:24:13.750 \longrightarrow 00:24:16.990$  and we will embark on this staging work up

NOTE Confidence: 0.87233305

 $00:24:16.990 \longrightarrow 00:24:20.110$  that I'd mentioned a little bit earlier.

NOTE Confidence: 0.87233305

 $00:24:20.110 \longrightarrow 00:24:23.183$  So that includes blood work and that

NOTE Confidence: 0.87233305

 $00:24:23.183 \longrightarrow 00:24:26.416$  will usually also include a CT scan of

 $00:24:26.416 \longrightarrow 00:24:29.550$  the chest and the abdomen and the pelvis.

NOTE Confidence: 0.87233305

 $00:24:29.550 \longrightarrow 00:24:31.340$  To determine extent of disease,

NOTE Confidence: 0.87233305

 $00:24:31.340 \longrightarrow 00:24:32.056$  meaning, where

NOTE Confidence: 0.87233305

 $00:24:32.056 \longrightarrow 00:24:33.846$  has the cancer gone?

NOTE Confidence: 0.87233305

 $00:24:33.850 \longrightarrow 00:24:36.349$  Is it localized just in the colon?

NOTE Confidence: 0.87233305

 $00{:}24{:}36.350 \dashrightarrow 00{:}24{:}38.569$  Has it spread to nearby lymph nodes

NOTE Confidence: 0.87233305

 $00:24:38.569 \longrightarrow 00:24:40.649$  or has it spread further,

NOTE Confidence: 0.87233305

 $00:24:40.650 \longrightarrow 00:24:43.506$  perhaps to the liver or to the lungs?

NOTE Confidence: 0.87176913

00:24:44.920 --> 00:24:47.020 And so, let's say it

NOTE Confidence: 0.87176913

 $00:24:47.020 \longrightarrow 00:24:48.700$  hasn't spread anywhere then what?

NOTE Confidence: 0.87176913

 $00:24:48.700 \longrightarrow 00:24:51.493$  Then we will often have

NOTE Confidence: 0.87176913

 $00:24:51.493 \longrightarrow 00:24:53.320$  a multidisciplinary team meeting.

NOTE Confidence: 0.87176913

 $00{:}24{:}53.320 \dashrightarrow 00{:}24{:}56.680$  We do this for many of our cancers.

NOTE Confidence: 0.87176913

 $00:24:56.680 \longrightarrow 00:24:58.780$  It's called a tumor board.

NOTE Confidence: 0.87176913

 $00:24:58.780 \longrightarrow 00:25:01.398$  In fact, we have our GI cancer

 $00:25:01.398 \longrightarrow 00:25:03.400$  tumor board this afternoon,

NOTE Confidence: 0.87176913

 $00{:}25{:}03.400 \dashrightarrow 00{:}25{:}06.120$  and the tumor board is a place where

NOTE Confidence: 0.87176913

00:25:06.120 --> 00:25:08.440 there are multiple specialists,

NOTE Confidence: 0.87176913

 $00:25:08.440 \longrightarrow 00:25:09.280$  medical oncologists,

NOTE Confidence: 0.87176913

00:25:09.280 --> 00:25:10.540 surgeons, pathologists, radiologists,

NOTE Confidence: 0.87176913

 $00{:}25{:}10.540 \dashrightarrow 00{:}25{:}13.078$  a whole group of doctors that

NOTE Confidence: 0.87176913

 $00{:}25{:}13.078 \dashrightarrow 00{:}25{:}15.250$  will help determine the next

NOTE Confidence: 0.87176913

 $00:25:15.250 \longrightarrow 00:25:17.854$  best plan for someone who has a

NOTE Confidence: 0.87176913

 $00:25:17.854 \longrightarrow 00:25:19.678$  localized colon cancer that often

NOTE Confidence: 0.87176913

00:25:19.678 --> 00:25:21.897 the next step is often a surgery

NOTE Confidence: 0.87176913

00:25:21.897 --> 00:25:24.560 to remove a portion of the colon

NOTE Confidence: 0.87176913

 $00{:}25{:}24.560 \rightarrow 00{:}25{:}26.460$  that contains the cancer plus

NOTE Confidence: 0.87176913

 $00{:}25{:}26.460 \to 00{:}25{:}28.360$  some additional colon to make

NOTE Confidence: 0.87176913

 $00:25:28.360 \longrightarrow 00:25:30.647$  sure that we've removed enough and

NOTE Confidence: 0.87176913

00:25:30.647 --> 00:25:33.076 also some lymph nodes to help us

NOTE Confidence: 0.87176913

 $00:25:33.076 \longrightarrow 00:25:35.202$  determine if the cancer

 $00:25:35.202 \longrightarrow 00:25:37.270$  has spread to those lymph nodes.

NOTE Confidence: 0.8579789

 $00:25:38.360 \longrightarrow 00:25:40.465$  And then is chemotherapy or

NOTE Confidence: 0.8579789

 $00:25:40.465 \longrightarrow 00:25:42.570$  radiation in their future as well?

NOTE Confidence: 0.8579789

 $00:25:42.570 \longrightarrow 00:25:44.675$  That depends on

NOTE Confidence: 0.8579789

00:25:44.675 --> 00:25:46.780 the stage of the tumor.

NOTE Confidence: 0.8579789

 $00:25:46.780 \longrightarrow 00:25:49.306$  So now that the patient

NOTE Confidence: 0.8579789

 $00:25:49.310 \longrightarrow 00:25:51.030$  has had their surgery,

NOTE Confidence: 0.8579789

 $00:25:51.030 \longrightarrow 00:25:53.610$  we are able to accurately determine

NOTE Confidence: 0.8579789

 $00{:}25{:}53.692 \dashrightarrow 00{:}25{:}56.900$  what stage they have in this stage is

NOTE Confidence: 0.8579789

 $00:25:56.900 \longrightarrow 00:25:59.408$  determined based on three key features,

NOTE Confidence: 0.8579789

 $00{:}25{:}59.410 \dashrightarrow 00{:}26{:}01.936$  and that's called the TNM staging.

NOTE Confidence: 0.8579789

00:26:01.940 --> 00:26:04.768 which stands for tumor (T), nodes (N), and metas-

tases (M).

NOTE Confidence: 0.8579789

00:26:04.768 --> 00:26:07.841 And the T stage generally refers to

NOTE Confidence: 0.8579789

 $00{:}26{:}07.841 \longrightarrow 00{:}26{:}11.300$ ia combination of the size and then

NOTE Confidence: 0.8579789

 $00:26:11.300 \longrightarrow 00:26:14.244$  how deep in the lining of the colon

 $00:26:14.244 \longrightarrow 00:26:16.986$  that tumor has spread, the N stage

NOTE Confidence: 0.8579789

 $00:26:16.986 \longrightarrow 00:26:19.793$  refers to the number of lymph nodes

NOTE Confidence: 0.8579789

 $00{:}26{:}19.793 \dashrightarrow 00{:}26{:}22.193$  involved and the M stage refers

NOTE Confidence: 0.8579789

 $00:26:22.193 \longrightarrow 00:26:24.170$  to has the cancer metastasized

NOTE Confidence: 0.8579789

 $00:26:24.170 \longrightarrow 00:26:26.510$  or spread to a distant location,

NOTE Confidence: 0.8579789

 $00:26:26.510 \longrightarrow 00:26:28.850$  like the liver or the lungs,

NOTE Confidence: 0.8579789

 $00:26:28.850 \longrightarrow 00:26:30.800$  and so our pathologists help

NOTE Confidence: 0.8579789

 $00:26:30.800 \longrightarrow 00:26:32.360$  us with that.

NOTE Confidence: 0.8579789

 $00:26:32.360 \longrightarrow 00:26:35.090$  The CT scan itself also helps us,

NOTE Confidence: 0.8579789

 $00:26:35.090 \longrightarrow 00:26:37.547$  and so for someone with a colon

NOTE Confidence: 0.8579789

00:26:37.547 --> 00:26:40.160 cancer it's a little bit nuanced,

NOTE Confidence: 0.8579789

 $00:26:40.160 \longrightarrow 00:26:42.590$  but I would say in general,

NOTE Confidence: 0.8579789

 $00:26:42.590 \longrightarrow 00:26:45.416$  if someone has a colon cancer

NOTE Confidence: 0.8579789

 $00:26:45.416 \longrightarrow 00:26:48.459$  that is stage three or greater,

NOTE Confidence: 0.8579789

00:26:48.460 --> 00:26:51.876 that would mean that they have

 $00:26:51.880 \longrightarrow 00:26:53.832$  local lymph nodes involved

NOTE Confidence: 0.8579789

 $00{:}26{:}53.832 {\:{\circ}{\circ}{}}> 00{:}26{:}56.272$  that usually does mean that

NOTE Confidence: 0.8368627

 $00:26:56.280 \longrightarrow 00:26:58.460$  they need post surgical chemotherapy

NOTE Confidence: 0.8368627

 $00:26:58.460 \longrightarrow 00:27:01.925$  and so now let's move to the

NOTE Confidence: 0.8368627

00:27:01.925 --> 00:27:03.129 neuroendocrine situation.

NOTE Confidence: 0.8368627

 $00:27:03.130 \longrightarrow 00:27:05.142$  How are these different?

NOTE Confidence: 0.8368627

 $00:27:05.142 \longrightarrow 00:27:08.160$  How often do you find metastases

NOTE Confidence: 0.8368627

 $00:27:08.252 \longrightarrow 00:27:10.457$  at the time of diagnosis?

NOTE Confidence: 0.8368627

 $00{:}27{:}10.460 \dashrightarrow 00{:}27{:}12.528$  Are these resected surgically?

NOTE Confidence: 0.8368627

 $00:27:12.528 \longrightarrow 00:27:15.630$  Is there more often medical management?

NOTE Confidence: 0.8368627

 $00{:}27{:}15.630 \mathrel{--}{>} 00{:}27{:}18.600$  How is your approach similar or

NOTE Confidence: 0.8368627

 $00{:}27{:}18.600 \dashrightarrow 00{:}27{:}22.350$  different to regular colon cancer?

NOTE Confidence: 0.8368627

 $00:27:22.350 \longrightarrow 00:27:24.318$  Well, I think that

NOTE Confidence: 0.835318900000001

 $00:27:24.320 \longrightarrow 00:27:26.944$  the work up for many of these GI

NOTE Confidence: 0.835318900000001

 $00:27:26.944 \longrightarrow 00:27:29.463$  cancers are the same where we get a

NOTE Confidence: 0.835318900000001

00:27:29.463 --> 00:27:31.757 biopsy and we do this staging work

 $00:27:31.757 \longrightarrow 00:27:34.487$  up with blood tests and a CT scan.

NOTE Confidence: 0.835318900000001

 $00:27:34.487 \longrightarrow 00:27:36.449$  And then we meet and

NOTE Confidence: 0.835318900000001

 $00:27:36.450 \longrightarrow 00:27:38.400$  we have a tumor board discussion

NOTE Confidence: 0.835318900000001

 $00:27:38.400 \longrightarrow 00:27:40.719$  to come up with the next plan,

NOTE Confidence: 0.835318900000001

 $00:27:40.720 \longrightarrow 00:27:42.688$  so those are the common principles.

NOTE Confidence: 0.835318900000001

00:27:42.690 --> 00:27:43.749 But you're right,

NOTE Confidence: 0.835318900000001

 $00:27:43.749 \longrightarrow 00:27:45.514$  the treatment plan and tailoring

NOTE Confidence: 0.835318900000001

 $00{:}27{:}45.514 \dashrightarrow 00{:}27{:}47.358$  that treatment to the patient often

NOTE Confidence: 0.835318900000001

 $00{:}27{:}47.358 \dashrightarrow 00{:}27{:}49.413$  differs by cancer and so that is

NOTE Confidence: 0.835318900000001

 $00{:}27{:}49.413 \dashrightarrow 00{:}27{:}50.889$  true for neuroendocrine tumors.

NOTE Confidence: 0.835318900000001

 $00:27:50.890 \longrightarrow 00:27:52.039$  Neuroendocrine tumors are

NOTE Confidence: 0.835318900000001

 $00:27:52.039 \longrightarrow 00:27:53.954$  often much slower growing than

NOTE Confidence: 0.835318900000001

 $00{:}27{:}53.954 \dashrightarrow 00{:}27{:}55.410$  their adenocarcinoma counterparts,

NOTE Confidence: 0.835318900000001

 $00:27:55.410 \longrightarrow 00:27:57.648$  and neuroendocrine

NOTE Confidence: 0.835318900000001

00:27:57.648 --> 00:27:59.788 tumors have a very different

 $00:27:59.788 \longrightarrow 00:28:01.510$  system of classification.

NOTE Confidence: 0.835318900000001

00:28:01.510 --> 00:28:05.434 I won't go into all of those details now,

NOTE Confidence: 0.835318900000001

 $00:28:05.440 \longrightarrow 00:28:08.254$  but that does help us determine

NOTE Confidence: 0.835318900000001

 $00:28:08.254 \longrightarrow 00:28:11.538$  what the next best step is and

NOTE Confidence: 0.835318900000001

 $00:28:11.540 \longrightarrow 00:28:15.578$  we do include things like surgery.

NOTE Confidence: 0.835318900000001

00:28:15.580 --> 00:28:18.064 Sometimes patients will have had the

NOTE Confidence: 0.835318900000001

00:28:18.064 --> 00:28:21.108 cancer spread at the time of diagnosis,

NOTE Confidence: 0.835318900000001

 $00:28:21.110 \longrightarrow 00:28:23.230$  and if that's the case,

NOTE Confidence: 0.835318900000001

 $00:28:23.230 \longrightarrow 00:28:24.580$  we have medications,

NOTE Confidence: 0.835318900000001

00:28:24.580 --> 00:28:25.930 including some chemotherapies

NOTE Confidence: 0.835318900000001

 $00:28:25.930 \longrightarrow 00:28:28.330$  that help us slow down the

NOTE Confidence: 0.865631

 $00:28:28.330 \longrightarrow 00:28:31.930$  growth of that cancer, and so the

NOTE Confidence: 0.865631

 $00:28:31.930 \longrightarrow 00:28:34.076$  chemotherapies though are different than

NOTE Confidence: 0.865631

 $00:28:34.076 \longrightarrow 00:28:37.260$  what you would get for a regular colon

NOTE Confidence: 0.865631

 $00:28:37.260 \longrightarrow 00:28:38.956$  cancer?

NOTE Confidence: 0.865631

 $00:28:38.956 \longrightarrow 00:28:41.080$  This is an important

 $00:28:41.080 \longrightarrow 00:28:43.630$  take home for every cancer type.

NOTE Confidence: 0.865631

 $00{:}28{:}43.630 \dashrightarrow 00{:}28{:}46.100$  The chemotherapy regimen

NOTE Confidence: 0.865631

 $00:28:46.100 \longrightarrow 00:28:48.788$  is often different

NOTE Confidence: 0.865631

 $00:28:48.788 \longrightarrow 00:28:50.819$  depending on that cancer type.

NOTE Confidence: 0.865631

00:28:50.820 --> 00:28:52.388 There's sometimes some overlap,

NOTE Confidence: 0.865631

 $00:28:52.390 \longrightarrow 00:28:54.376$  but for the most part,

NOTE Confidence: 0.865631

 $00:28:54.376 \longrightarrow 00:28:57.197$  the way we determine if a chemotherapy

NOTE Confidence: 0.865631

 $00{:}28{:}57.197 \dashrightarrow 00{:}28{:}59.552$  regimen works for a given cancer

NOTE Confidence: 0.865631

 $00:28:59.552 \longrightarrow 00:29:01.427$  is through a clinical trial.

NOTE Confidence: 0.865631

00:29:01.430 --> 00:29:04.020 Clinical trials are ways we test new

NOTE Confidence: 0.865631

00:29:04.020 --> 00:29:05.956 medicines or new combinations of

NOTE Confidence: 0.865631

 $00{:}29{:}05.956 \dashrightarrow 00{:}29{:}08.218$  medicines and prove that it works

NOTE Confidence: 0.865631

 $00{:}29{:}08.218 \dashrightarrow 00{:}29{:}10.860$  in a very specific cancer type.

NOTE Confidence: 0.865631

00:29:10.860 --> 00:29:11.250 Doctor Pamela Kunz

NOTE Confidence: 0.8612261

 $00:29:11.250 \longrightarrow 00:29:14.482$  is the director of GI Medical

 $00:29:14.482 \longrightarrow 00:29:17.496$  Oncology at the Yale School of Medicine.

NOTE Confidence: 0.8612261

00:29:17.500 --> 00:29:19.056 If you have questions,

NOTE Confidence: 0.8612261

 $00{:}29{:}19.056 \dashrightarrow 00{:}29{:}20.612$  the address is canceranswers@yale.edu

NOTE Confidence: 0.8612261

 $00:29:20.612 \longrightarrow 00:29:22.760$  and past editions of the program

NOTE Confidence: 0.8612261

 $00{:}29{:}22.760 \dashrightarrow 00{:}29{:}24.722$  are available in audio and written

NOTE Confidence: 0.8612261

 $00{:}29{:}24.783 \dashrightarrow 00{:}29{:}26.418$  form at yale cancercenter.org.

NOTE Confidence: 0.8612261

 $00:29:26.420 \longrightarrow 00:29:29.260$  We hope you'll join us next week to

NOTE Confidence: 0.8612261

 $00:29:29.260 \longrightarrow 00:29:32.026$  learn more about the fight against

NOTE Confidence: 0.8612261

 $00:29:32.026 \longrightarrow 00:29:34.990$  cancer here on Connecticut Public Radio.