WEBVTT

00:00:00.000 --> 00:00:02.150 Support for Yale Cancer Answers

NOTE Confidence: 0.855571337619048

 $00{:}00{:}02.150 \dashrightarrow 00{:}00{:}04.300$ comes from AstraZeneca, dedicated

NOTE Confidence: 0.855571337619048

 $00:00:04.368 \longrightarrow 00:00:06.418$ to advancing options and providing

NOTE Confidence: 0.855571337619048

00:00:06.418 --> 00:00:09.000 hope for people living with cancer.

NOTE Confidence: 0.855571337619048

 $00:00:09.000 \longrightarrow 00:00:10.209$ More information at

NOTE Confidence: 0.91329014

 $00:00:12.380 \longrightarrow 00:00:14.990$ astrazeneca-us.com.

NOTE Confidence: 0.91329014

00:00:14.990 --> 00:00:16.892 Welcome to Yale Cancer Answers with

NOTE Confidence: 0.91329014

00:00:16.892 --> 00:00:19.348 your host doctor Anees Chagpar.

NOTE Confidence: 0.91329014

 $00{:}00{:}19.348 \dashrightarrow 00{:}00{:}21.223$ Yale Cancer Answers features the

NOTE Confidence: 0.91329014

00:00:21.223 --> 00:00:23.485 latest information on cancer care by

NOTE Confidence: 0.91329014

 $00{:}00{:}23.485 \dashrightarrow 00{:}00{:}24.937$ welcoming on cologists and specialists

NOTE Confidence: 0.91329014

 $00:00:24.937 \longrightarrow 00:00:27.115$ who are on the forefront of the

NOTE Confidence: 0.91329014

 $00{:}00{:}27.115 \dashrightarrow 00{:}00{:}28.910$ battle to fight cancer. This week

NOTE Confidence: 0.91329014

 $00{:}00{:}28.910 \dashrightarrow 00{:}00{:}30.970$ it's a conversation about pancreatic

NOTE Confidence: 0.91329014

 $00:00:30.970 \longrightarrow 00:00:33.030$ cancer with Doctor John Kunstman.

00:00:33.030 --> 00:00:34.482 Doctor Kunstman is assistant

NOTE Confidence: 0.91329014

00:00:34.482 --> 00:00:35.934 professor of surgical oncology

NOTE Confidence: 0.91329014

00:00:35.934 --> 00:00:38.039 at the Yale School of Medicine,

NOTE Confidence: 0.91329014

 $00:00:38.040 \longrightarrow 00:00:40.128$ where Doctor Chagpar is a

NOTE Confidence: 0.91329014

00:00:40.128 --> 00:00:41.520 professor of surgical oncology.

NOTE Confidence: 0.880256621176471

 $00:00:42.520 \longrightarrow 00:00:44.656$ John, maybe we can start off by you

NOTE Confidence: 0.880256621176471

 $00{:}00{:}44.656 \dashrightarrow 00{:}00{:}47.001$ telling us a little bit more about

NOTE Confidence: 0.880256621176471

 $00:00:47.001 \longrightarrow 00:00:49.092$ pancreatic cancer. How common is it?

NOTE Confidence: 0.880256621176471

 $00{:}00{:}49.092 \dashrightarrow 00{:}00{:}51.790$ Who gets it, and why should we care?

NOTE Confidence: 0.88128455

 $00:00:51.820 \longrightarrow 00:00:53.890$ Well, I think there's several

NOTE Confidence: 0.88128455

 $00{:}00{:}53.890 \dashrightarrow 00{:}00{:}55.960$ components to that answer.

NOTE Confidence: 0.88128455

 $00{:}00{:}55.960 \dashrightarrow 00{:}00{:}58.510$ Anybody can get pancreas cancer,

NOTE Confidence: 0.88128455

 $00:00:58.510 \longrightarrow 00:01:00.379$ but it is generally a disease that,

NOTE Confidence: 0.88128455

 $00:01:00.380 \longrightarrow 00:01:02.865$ like most cancers, occurs as we age.

NOTE Confidence: 0.88128455

 $00:01:02.870 \longrightarrow 00:01:04.124$ There is a little bit more

NOTE Confidence: 0.88128455

 $00:01:04.124 \longrightarrow 00:01:05.309$ likelihood for men to get it,

 $00:01:05.310 \longrightarrow 00:01:07.050$ but of course women can

NOTE Confidence: 0.88128455

 $00{:}01{:}07.050 \dashrightarrow 00{:}01{:}08.442$ get pancreas cancer too.

NOTE Confidence: 0.88128455

 $00:01:08.450 \longrightarrow 00:01:09.764$ I think it's a disease that

NOTE Confidence: 0.88128455

 $00:01:09.764 \longrightarrow 00:01:11.140$ we should all be aware of,

NOTE Confidence: 0.88128455

 $00:01:11.140 \longrightarrow 00:01:14.158$ because as most cancers can be

NOTE Confidence: 0.88128455

00:01:14.158 --> 00:01:15.903 screened for nowadays, pancreas

NOTE Confidence: 0.88128455

 $00:01:15.903 \longrightarrow 00:01:17.534$ cancer is one that we really don't

NOTE Confidence: 0.88128455

 $00:01:17.534 \longrightarrow 00:01:19.349$ have an effective screening test for.

NOTE Confidence: 0.88128455

 $00:01:19.350 \dashrightarrow 00:01:21.717$ So we want every body to be aware of it.

NOTE Confidence: 0.88128455

00:01:21.720 --> 00:01:23.016 Also, by 2030,

NOTE Confidence: 0.88128455

00:01:23.016 --> 00:01:24.744 the National Cancer Institute

NOTE Confidence: 0.88128455

 $00{:}01{:}24.744 \dashrightarrow 00{:}01{:}26.820$ predicts that pancreas cancer will

NOTE Confidence: 0.88128455

 $00{:}01{:}26.820 \dashrightarrow 00{:}01{:}28.950$ be the second leading cause of

NOTE Confidence: 0.88128455

 $00{:}01{:}28.950 \dashrightarrow 00{:}01{:}31.080$ cancer death in the United States,

NOTE Confidence: 0.88128455

 $00:01:31.080 \longrightarrow 00:01:32.814$ so I think it's something that's

 $00:01:32.814 \longrightarrow 00:01:33.970$ worth our attention.

NOTE Confidence: 0.771251464

 $00:01:34.380 \longrightarrow 00:01:36.392$ John, why is that?

NOTE Confidence: 0.771251464

00:01:36.392 --> 00:01:38.728 Why is it going to be the second

NOTE Confidence: 0.771251464

 $00:01:38.728 \longrightarrow 00:01:41.097$ leading cause of cancer related deaths?

NOTE Confidence: 0.771251464

 $00:01:41.100 \longrightarrow 00:01:42.780$ I hadn't heard that before.

NOTE Confidence: 0.771251464

 $00:01:42.780 \longrightarrow 00:01:44.936$ Is it because it's getting more common,

NOTE Confidence: 0.771251464

00:01:44.940 --> 00:01:46.868 or is it because it's getting more lethal?

NOTE Confidence: 0.891962664

 $00:01:47.700 \longrightarrow 00:01:50.160$ There is an increase in the

NOTE Confidence: 0.891962664

 $00{:}01{:}50.160 \dashrightarrow 00{:}01{:}51.800$ prevalence of pancreas cancer,

NOTE Confidence: 0.891962664

 $00:01:51.800 \longrightarrow 00:01:53.330$ although it's not the main reason.

NOTE Confidence: 0.891962664

 $00:01:53.330 \longrightarrow 00:01:54.392$ The main reason is that

NOTE Confidence: 0.891962664

 $00:01:54.392 \longrightarrow 00:01:56.870$ the more common cancers that

NOTE Confidence: 0.891962664

 $00{:}01{:}56.940 \dashrightarrow 00{:}01{:}59.022$ currently are more apt to cause

NOTE Confidence: 0.891962664

 $00{:}01{:}59.022 \dashrightarrow 00{:}02{:}01.420$ cancer deaths in the United States,

NOTE Confidence: 0.891962664

 $00:02:01.420 \longrightarrow 00:02:02.810$ the treatment of those cancers,

NOTE Confidence: 0.891962664

 $00:02:02.810 \longrightarrow 00:02:04.365$ such as breast cancer or

 $00:02:04.365 \longrightarrow 00:02:05.920$ lung cancer or colon cancer,

NOTE Confidence: 0.891962664

 $00:02:05.920 \longrightarrow 00:02:07.180$ which are all more common

NOTE Confidence: 0.891962664

 $00:02:07.180 \longrightarrow 00:02:07.936$ than pancreas cancer,

NOTE Confidence: 0.891962664

 $00:02:07.940 \longrightarrow 00:02:10.396$ are improving and the death rate is falling.

NOTE Confidence: 0.891962664

 $00:02:10.400 \longrightarrow 00:02:12.410$ Whereas in pancreas cancer the death

NOTE Confidence: 0.891962664

 $00:02:12.410 \longrightarrow 00:02:14.588$ rate hasn't improved at the same rate.

NOTE Confidence: 0.883112377692308

00:02:14.760 --> 00:02:17.651 So let's talk a little bit about

NOTE Confidence: 0.883112377692308

 $00{:}02{:}17.651 \dashrightarrow 00{:}02{:}20.026$ pancreatic cancer and you

NOTE Confidence: 0.883112377692308

 $00:02:20.026 \longrightarrow 00:02:23.116$ mentioned that we don't

NOTE Confidence: 0.883112377692308

 $00:02:23.116 \longrightarrow 00:02:25.856$ have screening for pancreatic cancer,

NOTE Confidence: 0.883112377692308

 $00:02:25.860 \longrightarrow 00:02:27.768$ but it certainly is a cancer

NOTE Confidence: 0.883112377692308

 $00:02:27.768 \longrightarrow 00:02:29.679$ that people should be aware of.

NOTE Confidence: 0.883112377692308

 $00{:}02{:}29.680 \dashrightarrow 00{:}02{:}32.080$ How can people

NOTE Confidence: 0.883112377692308

 $00:02:32.080 \longrightarrow 00:02:34.200$ understand whether or not they

NOTE Confidence: 0.883112377692308

 $00:02:34.200 \longrightarrow 00:02:35.896$ have pancreatic cancer when

 $00:02:35.896 \longrightarrow 00:02:37.780$ there is no screening test.

NOTE Confidence: 0.883112377692308

 $00{:}02{:}37.780 \longrightarrow 00{:}02{:}39.544$ Can you tell us what the symptoms

NOTE Confidence: 0.883112377692308

 $00:02:39.544 \longrightarrow 00:02:41.770$ are that we might be looking out for?

NOTE Confidence: 0.873055005416667

 $00:02:42.340 \longrightarrow 00:02:43.532$ That's a terrific question,

NOTE Confidence: 0.873055005416667

 $00:02:43.532 \longrightarrow 00:02:45.935$ and because that is one of the

NOTE Confidence: 0.873055005416667

 $00:02:45.935 \longrightarrow 00:02:47.597$ main reasons that the death rate

NOTE Confidence: 0.873055005416667

00:02:47.597 --> 00:02:49.170 for pancreas cancer is so high,

NOTE Confidence: 0.873055005416667

 $00:02:49.170 \longrightarrow 00:02:51.618$ and it's viewed as such an aggressive cancer.

NOTE Confidence: 0.873055005416667

 $00:02:51.620 \longrightarrow 00:02:53.170$ Many times patients are unaware

NOTE Confidence: 0.873055005416667

 $00:02:53.170 \longrightarrow 00:02:55.111$ when they have a pancreas cancer

NOTE Confidence: 0.873055005416667

 $00{:}02{:}55.111 \dashrightarrow 00{:}02{:}56.746$ until it's become quite advanced

NOTE Confidence: 0.873055005416667

 $00{:}02{:}56.746 \dashrightarrow 00{:}02{:}58.819$ and the symptoms are quite subtle.

NOTE Confidence: 0.873055005416667

 $00:02:58.820 \longrightarrow 00:03:01.501$ In terms of the symptoms that most

NOTE Confidence: 0.873055005416667

 $00:03:01.501 \longrightarrow 00:03:04.127$ people will experience there are very mild

NOTE Confidence: 0.873055005416667

00:03:04.127 --> 00:03:06.007 things like abdominal discomfort,

NOTE Confidence: 0.873055005416667

 $00:03:06.010 \longrightarrow 00:03:07.640$ things that could easily be

00:03:07.640 --> 00:03:08.944 attributed to something else,

NOTE Confidence: 0.873055005416667

 $00:03:08.950 \longrightarrow 00:03:10.782$ such as a stomachache or just eating

NOTE Confidence: 0.873055005416667

 $00{:}03{:}10.782 \longrightarrow 00{:}03{:}12.787$ a bad meal or something like that.

NOTE Confidence: 0.873055005416667

00:03:12.790 --> 00:03:14.590 But for patients with pancreas cancer,

NOTE Confidence: 0.873055005416667

 $00:03:14.590 \longrightarrow 00:03:17.327$ that discomfort persists for a long time.

NOTE Confidence: 0.873055005416667

00:03:17.330 --> 00:03:19.416 It's not episodic, it's not going away.

NOTE Confidence: 0.873055005416667

00:03:19.420 --> 00:03:20.885 It's something that really should

NOTE Confidence: 0.873055005416667

 $00:03:20.885 \longrightarrow 00:03:23.030$ lead to a visit to the doctor.

NOTE Confidence: 0.873055005416667

 $00:03:23.030 \longrightarrow 00:03:24.848$ Also, things that are not subtle

NOTE Confidence: 0.873055005416667

 $00:03:24.848 \longrightarrow 00:03:26.925$ but can sometimes go unrecognized by

NOTE Confidence: 0.873055005416667

00:03:26.925 --> 00:03:28.930 patients as being very important,

NOTE Confidence: 0.873055005416667

 $00:03:28.930 \longrightarrow 00:03:31.600$ are things like jaundice or pancreatitis.

NOTE Confidence: 0.873055005416667

 $00{:}03{:}31.600 \dashrightarrow 00{:}03{:}33.730$ Those are obviously big time medical

NOTE Confidence: 0.873055005416667

 $00:03:33.730 \longrightarrow 00:03:35.150$ issues that deserve attention,

NOTE Confidence: 0.873055005416667

 $00:03:35.150 \longrightarrow 00:03:37.999$ but many times can go on unappreciated

00:03:37.999 --> 00:03:40.456 as pancreas cancer being the cause

NOTE Confidence: 0.873055005416667

 $00:03:40.456 \longrightarrow 00:03:42.772$ of those findings for too long.

NOTE Confidence: 0.873055005416667

 $00:03:42.780 \longrightarrow 00:03:45.300$ I'd also like to mention weight loss.

NOTE Confidence: 0.873055005416667

00:03:45.300 --> 00:03:46.900 Unfortunately, in the United States,

NOTE Confidence: 0.873055005416667

 $00:03:46.900 \longrightarrow 00:03:48.572$ many people have trouble,

NOTE Confidence: 0.873055005416667

00:03:48.572 --> 00:03:49.408 myself included,

NOTE Confidence: 0.873055005416667

 $00:03:49.410 \longrightarrow 00:03:51.978$ losing weight and when we're adults

NOTE Confidence: 0.873055005416667

00:03:51.980 --> 00:03:54.086 it's difficult to lose weight durably

NOTE Confidence: 0.873055005416667

00:03:54.086 --> 00:03:56.569 without a major lifestyle change,

NOTE Confidence: 0.873055005416667

 $00:03:56.570 \longrightarrow 00:03:58.496$ and many patients with pancreas cancer

NOTE Confidence: 0.873055005416667

 $00{:}03{:}58.496 \dashrightarrow 00{:}04{:}00.839$ We noticed over the past weeks to

NOTE Confidence: 0.873055005416667

00:04:00.839 --> 00:04:02.831 months that they've lost weight without

NOTE Confidence: 0.873055005416667

 $00:04:02.831 \longrightarrow 00:04:04.779$ making any major lifestyle changes.

NOTE Confidence: 0.873055005416667

00:04:04.780 --> 00:04:06.502 Many patients with pancreas cancer

NOTE Confidence: 0.873055005416667

 $00:04:06.502 \longrightarrow 00:04:08.546$ find that the first sign was that

NOTE Confidence: 0.873055005416667

 $00{:}04{:}08.546 \dashrightarrow 00{:}04{:}10.238$ unrecognized weight loss when they go

00:04:10.238 --> 00:04:12.227 back and think about what might have

NOTE Confidence: 0.873055005416667

 $00{:}04{:}12.227 \dashrightarrow 00{:}04{:}14.220$ happened prior to their diagnosis.

NOTE Confidence: 0.840703778461538

 $00:04:14.470 \longrightarrow 00:04:17.515$ After what duration of time should

NOTE Confidence: 0.840703778461538

00:04:17.515 --> 00:04:20.070 people with these symptoms go in and

NOTE Confidence: 0.840703778461538

 $00:04:20.070 \longrightarrow 00:04:22.750$ seek medical advice?

NOTE Confidence: 0.840703778461538

00:04:22.750 --> 00:04:25.418 Is that a day, a week, a month, a year?

NOTE Confidence: 0.87244379375

00:04:26.070 --> 00:04:28.318 I think it really gets into the weeks,

NOTE Confidence: 0.87244379375

 $00:04:28.320 \longrightarrow 00:04:30.468$ something that

NOTE Confidence: 0.87244379375

 $00:04:30.468 \longrightarrow 00:04:32.980$ can be attributed to one of those

NOTE Confidence: 0.87244379375

 $00:04:32.980 \longrightarrow 00:04:35.002$ other causes like a stomach bug.

NOTE Confidence: 0.87244379375

00:04:35.010 --> 00:04:36.500 Usually we're feeling better within

NOTE Confidence: 0.87244379375

 $00:04:36.500 \longrightarrow 00:04:38.744$ a week once we start having those

NOTE Confidence: 0.87244379375

 $00:04:38.744 \longrightarrow 00:04:40.474$ vague symptoms and they're really

NOTE Confidence: 0.87244379375

 $00{:}04{:}40.474 \dashrightarrow 00{:}04{:}42.310$ starting to affect our lives once

NOTE Confidence: 0.87244379375

 $00:04:42.310 \longrightarrow 00:04:44.025$ we get to the weeks time frame,

 $00:04:44.030 \longrightarrow 00:04:46.039$ it's time to go see your doctor.

NOTE Confidence: 0.87244379375

 $00{:}04{:}46.040 \dashrightarrow 00{:}04{:}47.825$ Also same thing with the weight loss.

NOTE Confidence: 0.87244379375

 $00:04:47.830 \longrightarrow 00:04:49.570$ A few pounds is not a big deal and it

NOTE Confidence: 0.87244379375

00:04:49.618 --> 00:04:51.494 might just be that you're doing better

NOTE Confidence: 0.87244379375

 $00:04:51.494 \longrightarrow 00:04:53.094$ with your exercise regimen or watching

NOTE Confidence: 0.87244379375

 $00:04:53.094 \longrightarrow 00:04:54.837$ what you eat a little bit better.

NOTE Confidence: 0.87244379375

 $00:04:54.840 \longrightarrow 00:04:57.213$ But when we start losing 10,15

NOTE Confidence: 0.87244379375

 $00{:}04{:}57.213 \dashrightarrow 00{:}04{:}59.511$ or 20 pounds without making a

NOTE Confidence: 0.87244379375

 $00{:}04{:}59.511 \dashrightarrow 00{:}05{:}01.210$ major major lifestyle change,

NOTE Confidence: 0.87244379375

 $00:05:01.210 \longrightarrow 00:05:02.160$ that should start to wave

NOTE Confidence: 0.87244379375

 $00:05:02.160 \longrightarrow 00:05:03.320$ the red flag a little bit.

NOTE Confidence: 0.919222495

 $00:05:04.380 \longrightarrow 00:05:07.196$ And so when we go to our doctor, what

NOTE Confidence: 0.919222495

00:05:07.196 --> 00:05:10.044 should we be expecting our doctor to do?

NOTE Confidence: 0.924222323333333

 $00:05:10.240 \longrightarrow 00:05:13.552$ It really should be a lot of questions,

NOTE Confidence: 0.924222323333333

 $00:05:13.560 \longrightarrow 00:05:14.634$ detailed questions when

NOTE Confidence: 0.924222323333333

 $00:05:14.634 \longrightarrow 00:05:16.782$ you go to see your doctor,

 $00:05:16.790 \longrightarrow 00:05:19.195$ a physical examination for possible

NOTE Confidence: 0.924222323333333

 $00{:}05{:}19.195 \dashrightarrow 00{:}05{:}21.119$ diagnosis of pancreas cancer.

NOTE Confidence: 0.924222323333333

00:05:21.120 --> 00:05:23.196 Apart from jaundice or the weight

NOTE Confidence: 0.924222323333333

 $00:05:23.196 \longrightarrow 00:05:25.030$ loss might not reveal a lot,

NOTE Confidence: 0.924222323333333

 $00:05:25.030 \longrightarrow 00:05:26.990$ but those careful questions about

NOTE Confidence: 0.924222323333333

 $00:05:26.990 \longrightarrow 00:05:28.950$ the nature of the symptoms,

NOTE Confidence: 0.924222323333333

 $00:05:28.950 \longrightarrow 00:05:31.666$ their duration and some of the specifics

NOTE Confidence: 0.924222323333333

 $00:05:31.666 \longrightarrow 00:05:34.150$ is really where the attention may

NOTE Confidence: 0.924222323333333

 $00{:}05{:}34.150 \dashrightarrow 00{:}05{:}36.341$ bring up a possible diagnosis of a

NOTE Confidence: 0.92422323333333

 $00:05:36.341 \longrightarrow 00:05:39.035$ cancer you might want to prepare yourself

NOTE Confidence: 0.924222323333333

 $00:05:39.035 \longrightarrow 00:05:41.150$ for some uncomfortable questions too,

NOTE Confidence: 0.924222323333333

 $00:05:41.150 \longrightarrow 00:05:42.992$ about things like your bowel function

NOTE Confidence: 0.924222323333333

 $00:05:42.992 \dashrightarrow 00:05:45.489$ because those can be affected by a pancreas cancer.

NOTE Confidence: 0.924222323333333

 $00:05:45.490 \longrightarrow 00:05:46.984$ And those are just your

NOTE Confidence: 0.924222323333333

 $00:05:46.984 \longrightarrow 00:05:48.834$ doctor trying to get to the bottom

 $00:05:48.834 \longrightarrow 00:05:50.174$ of those symptoms or findings.

 $00:06:08.290 \longrightarrow 00:06:09.490$ Should we be more concerned

NOTE Confidence: 0.894777987826087

 $00:06:09.490 \longrightarrow 00:06:11.150$ if we have a family history?

NOTE Confidence: 0.894777987826087

 $00:06:11.150 \longrightarrow 00:06:13.166$ Is pancreatic cancer one of those

NOTE Confidence: 0.894777987826087

 $00:06:13.166 \longrightarrow 00:06:15.850$ where we should get to know our family

NOTE Confidence: 0.894777987826087

 $00:06:15.850 \longrightarrow 00:06:17.752$ history and who's got what?

NOTE Confidence: 0.894777987826087

 $00:06:17.760 \longrightarrow 00:06:19.716$ Because that might increase our risk.

NOTE Confidence: 0.890899602

 $00:06:20.520 \longrightarrow 00:06:23.373$ It is actually that's one of the

NOTE Confidence: 0.890899602

 $00:06:23.373 \longrightarrow 00:06:26.099$ major risk factors for pancreas cancer.

NOTE Confidence: 0.890899602

 $00:06:26.100 \longrightarrow 00:06:27.630$ There are some minor risk

NOTE Confidence: 0.890899602

 $00:06:27.630 \longrightarrow 00:06:29.160$ factors that we can affect

NOTE Confidence: 0.890899602

00:06:29.160 --> 00:06:31.086 with our own lives, for instance,

NOTE Confidence: 0.890899602

 $00:06:31.090 \longrightarrow 00:06:33.180$ cigarette smoking or exposure to

NOTE Confidence: 0.890899602

 $00{:}06{:}33.180 \dashrightarrow 00{:}06{:}34.852$ certain chemicals like as bestos

NOTE Confidence: 0.890899602

 $00:06:34.852 \longrightarrow 00:06:37.147$ do have a correlation with a

NOTE Confidence: 0.890899602

00:06:37.147 --> 00:06:38.957 higher risk for pancreas cancer.

 $00:06:38.960 \longrightarrow 00:06:41.235$ But that increase in risk

NOTE Confidence: 0.890899602

00:06:41.235 --> 00:06:43.055 is actually rather small.

NOTE Confidence: 0.890899602

00:06:43.060 --> 00:06:45.496 However, family history is a very

NOTE Confidence: 0.890899602

00:06:45.496 --> 00:06:48.360 strong risk factor for pancreas cancer,

NOTE Confidence: 0.890899602

 $00:06:48.360 \longrightarrow 00:06:50.716$ and it's thought that about 10% or maybe

NOTE Confidence: 0.890899602

00:06:50.716 --> 00:06:53.284 even a little more than that cases of

NOTE Confidence: 0.890899602

 $00:06:53.284 \longrightarrow 00:06:55.966$ pancreas cancer are hereditary in nature.

NOTE Confidence: 0.890899602

00:06:55.970 --> 00:06:58.208 If you have a primary relative,

NOTE Confidence: 0.890899602

 $00:06:58.210 \longrightarrow 00:06:59.323$ in other words,

NOTE Confidence: 0.890899602

 $00:06:59.323 \longrightarrow 00:07:02.480$ a sibling or parent that has pancreas cancer,

NOTE Confidence: 0.890899602

 $00{:}07{:}02.480 \dashrightarrow 00{:}07{:}04.556$ your risk of getting pancreas cancer

NOTE Confidence: 0.890899602

 $00:07:04.556 \longrightarrow 00:07:07.238$ yourself is about four or five times higher.

NOTE Confidence: 0.890899602

00:07:07.240 --> 00:07:09.824 And if you have two first degree relatives,

NOTE Confidence: 0.890899602

00:07:09.830 --> 00:07:11.420 that risk goes up to six

NOTE Confidence: 0.890899602

 $00:07:11.420 \longrightarrow 00:07:12.480$ to seven times higher,

NOTE Confidence: 0.890899602

 $00:07:12.480 \longrightarrow 00:07:13.956$ so it is something that we

 $00:07:13.956 \longrightarrow 00:07:14.940$ should be aware of.

NOTE Confidence: 0.890899602

 $00:07:14.940 \longrightarrow 00:07:16.844$ And that we should be thinking about

NOTE Confidence: 0.890899602

 $00:07:16.844 \longrightarrow 00:07:18.969$ in terms of what our family knows.

NOTE Confidence: 0.890899602

 $00:07:18.970 \longrightarrow 00:07:21.090$ The other thing I just want to mention

NOTE Confidence: 0.890899602

 $00:07:21.090 \longrightarrow 00:07:23.705$ is that we talked about screening briefly

NOTE Confidence: 0.890899602

 $00:07:23.705 \longrightarrow 00:07:25.725$ before and for asymptomatic patients

NOTE Confidence: 0.890899602

00:07:25.785 --> 00:07:27.975 or patients with those vague symptoms,

NOTE Confidence: 0.890899602

 $00:07:27.980 \longrightarrow 00:07:30.661$ there's really no role with our current

NOTE Confidence: 0.890899602

 $00{:}07{:}30.661 \dashrightarrow 00{:}07{:}33.179$ tools for screening for pancreas cancer.

NOTE Confidence: 0.890899602

00:07:33.180 --> 00:07:33.669 However,

NOTE Confidence: 0.890899602

00:07:33.669 --> 00:07:36.114 those patients that do have

NOTE Confidence: 0.890899602

 $00:07:36.114 \longrightarrow 00:07:38.070$ a strong family history,

NOTE Confidence: 0.890899602

 $00{:}07{:}38.070 \dashrightarrow 00{:}07{:}40.700$ there are screening programs available,

NOTE Confidence: 0.890899602

 $00:07:40.700 \longrightarrow 00:07:42.485$ and it appears even in these early

NOTE Confidence: 0.890899602

 $00:07:42.485 \longrightarrow 00:07:44.000$ stages of those screening programs

 $00:07:44.000 \longrightarrow 00:07:45.745$ that they might be effective

NOTE Confidence: 0.890899602

 $00{:}07{:}45.750 \dashrightarrow 00{:}07{:}47.810$ at improving outcomes for patients.

NOTE Confidence: 0.890899602

 $00:07:47.810 \longrightarrow 00:07:49.230$ What do they screen with?

NOTE Confidence: 0.890899602

 $00:07:49.230 \longrightarrow 00:07:53.280$ So that's a little bit of a debate right now.

NOTE Confidence: 0.890899602

 $00:07:53.280 \longrightarrow 00:07:55.025$ When we started screening for

NOTE Confidence: 0.890899602

 $00{:}07{:}55.025 \dashrightarrow 00{:}07{:}57.206$ pancreas cancer and by we I

NOTE Confidence: 0.890899602

 $00:07:57.206 \longrightarrow 00:07:58.678$ mean the medical community,

NOTE Confidence: 0.890899602

 $00:07:58.680 \longrightarrow 00:08:00.528$ there was a very big debate

NOTE Confidence: 0.890899602

 $00{:}08{:}00.528 --> 00{:}08{:}02.439$ about the best way to do it,

NOTE Confidence: 0.890899602

 $00:08:02.440 \longrightarrow 00:08:04.040$ and there's a few modalities

NOTE Confidence: 0.890899602

 $00:08:04.040 \longrightarrow 00:08:05.000$ that are available.

NOTE Confidence: 0.890899602

 $00:08:05.000 \longrightarrow 00:08:07.338$ Most of them are centered on imaging,

NOTE Confidence: 0.890899602

 $00:08:07.340 \longrightarrow 00:08:09.760$ such as CT or MRI,

NOTE Confidence: 0.890899602

 $00{:}08{:}09.760 \dashrightarrow 00{:}08{:}12.192$ and right now we think that MRI is

NOTE Confidence: 0.890899602

 $00:08:12.192 \longrightarrow 00:08:14.596$ probably the better way to screen

NOTE Confidence: 0.890899602

 $00{:}08{:}14.596 \dashrightarrow 00{:}08{:}16.761$ simply because there's less radiation

00:08:16.761 --> 00:08:18.618 exposure compared to CT scans.

NOTE Confidence: 0.890899602 00:08:18.620 --> 00:08:19.243 Also, NOTE Confidence: 0.890899602

 $00:08:19.243 \longrightarrow 00:08:22.358$ endoscopy using a particular technique

NOTE Confidence: 0.890899602

00:08:22.358 --> 00:08:24.227 called endoscopic ultrasound,

NOTE Confidence: 0.890899602

 $00{:}08{:}24.230 \to 00{:}08{:}26.310$ where a gastroenter ologist uses a

NOTE Confidence: 0.890899602

 $00:08:26.310 \longrightarrow 00:08:28.845$ tiny ultrasound probe at the end

NOTE Confidence: 0.890899602

 $00:08:28.845 \longrightarrow 00:08:30.755$ of their endoscope to actually

NOTE Confidence: 0.890899602

 $00:08:30.755 \longrightarrow 00:08:33.108$ look through the walls of your

NOTE Confidence: 0.890899602

00:08:33.108 -> 00:08:34.978 stomach at the pancreas itself.

NOTE Confidence: 0.890899602

00:08:34.980 --> 00:08:36.558 Now, of course, that's a procedure,

NOTE Confidence: 0.890899602

 $00:08:36.560 \longrightarrow 00:08:38.504$ but it's a day procedure and most people

NOTE Confidence: 0.890899602

 $00:08:38.504 \longrightarrow 00:08:40.488$ can go home immediately thereafter,

NOTE Confidence: 0.890899602

 $00:08:40.490 \longrightarrow 00:08:42.626$ not unlike a colonoscopy.

NOTE Confidence: 0.890899602

 $00:08:42.626 \longrightarrow 00:08:45.296$ Those screening programs right now

NOTE Confidence: 0.890899602

 $00:08:45.296 \longrightarrow 00:08:47.890$ generally use a combination of those

 $00:08:47.890 \longrightarrow 00:08:50.935$ two techniques and imaging

NOTE Confidence: 0.890899602

 $00{:}08{:}50.935 \dashrightarrow 00{:}08{:}53.385$ and some programs alternate them.

NOTE Confidence: 0.856444024444444

 $00:08:54.970 \longrightarrow 00:08:58.048$ And so John, a couple of questions on that.

NOTE Confidence: 0.856444024444444

 $00:08:58.050 \longrightarrow 00:09:00.785$ First, how often are these

NOTE Confidence: 0.856444024444444

 $00:09:00.785 \longrightarrow 00:09:03.520$ done in the screening programs?

NOTE Confidence: 0.856444024444444

 $00:09:03.520 \longrightarrow 00:09:05.172$ Like is this an annual thing or

NOTE Confidence: 0.856444024444444

 $00:09:05.172 \longrightarrow 00:09:06.761$ is it more like a colonoscopy

NOTE Confidence: 0.856444024444444

 $00:09:06.761 \longrightarrow 00:09:08.686$ where you can go for 10 years?

NOTE Confidence: 0.897957551

00:09:09.110 --> 00:09:11.408 So right now it's an annual

NOTE Confidence: 0.897957551

 $00:09:11.408 \longrightarrow 00:09:12.940$ thing or even semiannual,

NOTE Confidence: 0.897957551

 $00:09:12.940 \longrightarrow 00:09:14.176$ depending on the risk,

NOTE Confidence: 0.897957551

00:09:14.176 --> 00:09:17.153 and I just want to point out that this

NOTE Confidence: 0.897957551

 $00:09:17.153 \longrightarrow 00:09:19.259$ is an area of active investigation right now.

 $00{:}09{:}21.216 \dashrightarrow 00{:}09{:}23.661$ There are several trials ongoing

NOTE Confidence: 0.897957551

 $00:09:23.661 \longrightarrow 00:09:26.792$ at major centers that do these

NOTE Confidence: 0.897957551

00:09:26.792 --> 00:09:28.328 screening programs investigating

 $00:09:28.328 \longrightarrow 00:09:30.999$ what the best modality is for

NOTE Confidence: 0.897957551

 $00:09:30.999 \longrightarrow 00:09:32.964$ not only detecting the cancer

NOTE Confidence: 0.897957551

 $00:09:32.964 \longrightarrow 00:09:35.064$ but using the information that's

NOTE Confidence: 0.897957551

 $00:09:35.064 \longrightarrow 00:09:36.768$ generated from that screening.

00:09:38.270 --> 00:09:39.750 And so that brings up

NOTE Confidence: 0.903971318

 $00:09:39.750 \mathrel{--}{>} 00:09:42.498$ another question which is that many screening

tests,

00:09:45.360 --> 00:09:46.990 mammograms, colonoscopies,

NOTE Confidence: 0.903971318

00:09:46.990 --> 00:09:51.880 PAP tests, are covered by insurance.

NOTE Confidence: 0.903971318

 $00:09:51.880 \longrightarrow 00:09:55.394$ It sounds like this MRI and endoscopic

NOTE Confidence: 0.903971318

 $00:09:55.394 \longrightarrow 00:09:58.978$ ultrasound might be really expensive tests.

NOTE Confidence: 0.903971318

 $00:09:58.980 \longrightarrow 00:10:01.452$ Are they covered by insurance or is this

NOTE Confidence: 0.903971318

 $00:10:01.452 \longrightarrow 00:10:03.430$ all considered experimental right now?

NOTE Confidence: 0.853918214

 $00{:}10{:}04.480 \dashrightarrow 00{:}10{:}05.680$ That's a great question too.

NOTE Confidence: 0.853918214

 $00:10:05.680 \longrightarrow 00:10:08.160$ In general they are covered.

NOTE Confidence: 0.853918214

 $00:10:08.160 \longrightarrow 00:10:12.276$ There are some active research protocols.

NOTE Confidence: 0.853918214

 $00:10:12.280 \longrightarrow 00:10:14.692$ If you are included in those

00:10:14.692 --> 00:10:15.898 active research protocols,

NOTE Confidence: 0.853918214

00:10:15.900 --> 00:10:17.031 generally the research

NOTE Confidence: 0.853918214

 $00:10:17.031 \longrightarrow 00:10:18.916$ study pays for the test,

NOTE Confidence: 0.853918214

 $00:10:18.920 \longrightarrow 00:10:21.302$ but most patients will find that

NOTE Confidence: 0.853918214

00:10:21.302 --> 00:10:23.949 it's covered one way or the other.

NOTE Confidence: 0.81532689

 $00:10:24.130 \longrightarrow 00:10:26.510$ My other question is,

NOTE Confidence: 0.81532689

 $00:10:26.510 \longrightarrow 00:10:29.048$ are there any blood tests for

NOTE Confidence: 0.81532689

00:10:29.048 --> 00:10:30.740 screening of pancreatic cancer?

NOTE Confidence: 0.81532689

 $00{:}10{:}30.740 \dashrightarrow 00{:}10{:}32.465$ Many people are interested

NOTE Confidence: 0.81532689

 $00:10:32.465 \longrightarrow 00:10:34.549$ in the least invasive way to

NOTE Confidence: 0.81532689

 $00{:}10{:}34.549 \dashrightarrow 00{:}10{:}35.989$ screen for cancer and are

NOTE Confidence: 0.81532689

 $00:10:35.990 \longrightarrow 00:10:37.342$ always thinking about tumor

NOTE Confidence: 0.81532689

00:10:37.342 --> 00:10:39.370 markers that might show up that

NOTE Confidence: 0.81532689

 $00:10:39.434 \longrightarrow 00:10:41.186$ might tell them that they are

NOTE Confidence: 0.81532689

 $00{:}10{:}41.186 \longrightarrow 00{:}10{:}42.820$ at increased risk for cancer.

NOTE Confidence: 0.81532689

 $00:10:42.820 \longrightarrow 00:10:45.328$ Anything like that in pancreatic cancer?

00:10:48.397 --> 00:10:51.893 There are some tumor markers that are fairly

NOTE Confidence: 0.887916506

 $00{:}10{:}51.893 \dashrightarrow 00{:}10{:}55.016$ specific and sensitive for pancreas cancer,

NOTE Confidence: 0.887916506

 $00:10:55.020 \longrightarrow 00:10:57.714$ but those markers can also be

NOTE Confidence: 0.887916506

00:10:57.714 --> 00:11:00.130 elevated in patients without cancer,

NOTE Confidence: 0.887916506

 $00:11:00.130 \longrightarrow 00:11:02.188$ just as part of their day-to-day life.

NOTE Confidence: 0.887916506

 $00:11:02.190 \longrightarrow 00:11:04.422$ So for that reason, in asymptomatic

NOTE Confidence: 0.887916506

00:11:04.422 --> 00:11:06.799 patients or patients at average risk,

NOTE Confidence: 0.887916506

 $00:11:06.800 \longrightarrow 00:11:10.104$ we don't recommend any blood tests right now.

NOTE Confidence: 0.887916506

 $00{:}11{:}10.110 \dashrightarrow 00{:}11{:}12.900$ That may sound a little bit strange to have

NOTE Confidence: 0.887916506

00:11:12.900 --> 00:11:16.179 a marker that we don't use in routine tests,

NOTE Confidence: 0.887916506

 $00{:}11{:}16.180 \dashrightarrow 00{:}11{:}18.220$ but I'll give you an example.

NOTE Confidence: 0.887916506

00:11:18.220 --> 00:11:21.388 One of those markers is called CA 19-9,

NOTE Confidence: 0.887916506

 $00:11:21.390 \longrightarrow 00:11:23.450$ which is a blood marker,

NOTE Confidence: 0.887916506

 $00:11:23.450 \longrightarrow 00:11:25.851$ and that marker is elevated in most

NOTE Confidence: 0.887916506

00:11:25.851 --> 00:11:27.793 patients with pancreas cancer. However,

NOTE Confidence: 0.887916506

 $00:11:27.793 \longrightarrow 00:11:30.824$ that marker is secreted by the Biome.

00:11:30.830 --> 00:11:33.119 That's how it's metabolised in the body.

NOTE Confidence: 0.887916506

 $00:11:33.120 \longrightarrow 00:11:35.088$ So that means somebody that may

NOTE Confidence: 0.887916506

 $00:11:35.088 \longrightarrow 00:11:37.452$ have a little bit of sludge in

NOTE Confidence: 0.887916506

 $00:11:37.452 \longrightarrow 00:11:39.414$ their bile or even a gallstone

NOTE Confidence: 0.887916506

 $00:11:39.420 \longrightarrow 00:11:41.652$ which has nothing to do at all with pancreas

NOTE Confidence: 0.887916506

 $00:11:41.660 \longrightarrow 00:11:43.494$ cancer could have a very high C 19-9.

 $00:11:44.385 \longrightarrow 00:11:46.450$ So we don't want to have patients

NOTE Confidence: 0.887916506

 $00:11:46.520 \longrightarrow 00:11:48.345$ get screened and go through

NOTE Confidence: 0.887916506

00:11:48.345 --> 00:11:50.170 an enormous amount of testing,

NOTE Confidence: 0.887916506

 $00:11:50.170 \longrightarrow 00:11:52.277$ some of which might be invasive for

NOTE Confidence: 0.887916506

 $00{:}11{:}52.277 \dashrightarrow 00{:}11{:}53.980$ something that's just a red herring.

NOTE Confidence: 0.912066776666667

00:11:54.440 --> 00:11:56.896 The other question that I have is you

NOTE Confidence: 0.912066776666667

00:11:56.896 --> 00:11:59.046 talked about people having a family

NOTE Confidence: 0.912066776666667

 $00{:}11{:}59.046 \dashrightarrow 00{:}12{:}01.254$ history of pancreatic cancer being at

NOTE Confidence: 0.912066776666667

 $00:12:01.323 \longrightarrow 00:12:03.899$ four or five times the average population

NOTE Confidence: 0.912066776666667

 $00:12:03.899 \longrightarrow 00:12:05.798$ risk of developing pancreatic cancer.

 $00:12:05.798 \longrightarrow 00:12:08.556$ What if you don't have a family

NOTE Confidence: 0.912066776666667

 $00{:}12{:}08.556 \rightarrow 00{:}12{:}10.450$ history of pancreatic cancer,

NOTE Confidence: 0.912066776666667

 $00:12:10.450 \longrightarrow 00:12:12.430$ but you might have a family

NOTE Confidence: 0.912066776666667

 $00:12:12.430 \longrightarrow 00:12:13.750$ history of other cancers,

NOTE Confidence: 0.912066776666667

 $00{:}12{:}13.750 \dashrightarrow 00{:}12{:}16.110$ say more common cancers like

NOTE Confidence: 0.912066776666667

00:12:16.110 --> 00:12:18.740 breast cancer or prostate cancer?

NOTE Confidence: 0.912066776666667

 $00:12:18.740 \longrightarrow 00:12:20.032$ Does that increase your

NOTE Confidence: 0.912066776666667

00:12:20.032 --> 00:12:21.324 risk of pancreatic cancer?

NOTE Confidence: 0.885056257666667

00:12:22.470 --> 00:12:24.672 Sometimes it does,

NOTE Confidence: 0.885056257666667

00:12:24.672 --> 00:12:27.845 and the two genes that are most closely

NOTE Confidence: 0.885056257666667

 $00:12:27.845 \longrightarrow 00:12:30.293$ correlated that people know about with

NOTE Confidence: 0.885056257666667

 $00:12:30.365 \longrightarrow 00:12:32.934$ breast cancer or ovarian cancer and some

NOTE Confidence: 0.885056257666667

 $00:12:32.934 \longrightarrow 00:12:36.230$ others is the BRCA one and two genes,

NOTE Confidence: 0.885056257666667

 $00:12:36.230 \longrightarrow 00:12:37.760$ and those do convey a risk,

NOTE Confidence: 0.885056257666667

00:12:37.760 --> 00:12:41.420 particularly BRCA 2 for pancreas cancer.

00:12:41.420 --> 00:12:43.844 For patients that have family that

NOTE Confidence: 0.885056257666667

 $00:12:43.844 \longrightarrow 00:12:46.319$ have those other types of cancers,

NOTE Confidence: 0.885056257666667

00:12:46.320 --> 00:12:48.240 especially multiple family members.

NOTE Confidence: 0.885056257666667

 $00:12:48.240 \longrightarrow 00:12:50.640$ And I'm talking about again

NOTE Confidence: 0.885056257666667

 $00:12:50.640 \longrightarrow 00:12:52.430$ breast or ovarian cancer.

NOTE Confidence: 0.885056257666667

00:12:52.430 --> 00:12:54.776 It's worth talking to your doctor

NOTE Confidence: 0.885056257666667

 $00:12:54.776 \longrightarrow 00:12:56.980$ about considering a genetics referral.

NOTE Confidence: 0.885056257666667

 $00{:}12{:}56.980 \dashrightarrow 00{:}12{:}58.710$ The medical genetics services at

NOTE Confidence: 0.885056257666667

00:12:58.710 --> 00:13:01.170 most centers now are well aware of

NOTE Confidence: 0.885056257666667

 $00:13:01.170 \longrightarrow 00:13:02.840$ these associations and can very

NOTE Confidence: 0.885056257666667

 $00{:}13{:}02.840 \dashrightarrow 00{:}13{:}04.817$ easily with the blood test determine

NOTE Confidence: 0.885056257666667

 $00:13:04.817 \longrightarrow 00:13:07.301$ whether or not you have one of those

NOTE Confidence: 0.885056257666667

 $00:13:07.301 \longrightarrow 00:13:09.407$ mutations that you might be carrying

NOTE Confidence: 0.885056257666667

 $00:13:09.410 \longrightarrow 00:13:10.710$ that could increase your risk.

NOTE Confidence: 0.894710152631579

00:13:10.800 --> 00:13:13.068 Well, we're going to pick up this

NOTE Confidence: 0.894710152631579

 $00{:}13{:}13.068 \dashrightarrow 00{:}13{:}14.904$ conversation right after we take a

 $00:13:14.904 \longrightarrow 00:13:16.506$ short break for a medical minute.

NOTE Confidence: 0.894710152631579

00:13:16.510 --> 00:13:18.358 Please stay tuned to learn more

NOTE Confidence: 0.894710152631579

 $00:13:18.358 \longrightarrow 00:13:19.982$ about the surgical care of

NOTE Confidence: 0.894710152631579

00:13:19.982 --> 00:13:21.617 pancreatic cancer with my guest

NOTE Confidence: 0.894710152631579

00:13:21.620 --> 00:13:22.850 Doctor John Kunstman.

NOTE Confidence: 0.838804856666667

 $00:13:23.240 \longrightarrow 00:13:25.532$ Support for Yale Cancer Answers comes

NOTE Confidence: 0.838804856666667

 $00:13:25.532 \longrightarrow 00:13:27.729$ from AstraZeneca, working to eliminate

NOTE Confidence: 0.838804856666667

 $00{:}13{:}27.729 \dashrightarrow 00{:}13{:}30.729$ cancer as a cause of death. Learn more at

NOTE Confidence: 0.8919685

 $00:13:32.950 \longrightarrow 00:13:35.180$ astrazeneca-us.com.

NOTE Confidence: 0.8919685

 $00{:}13{:}35.180 \dashrightarrow 00{:}13{:}37.420$ This is a medical minute about genetic

NOTE Confidence: 0.8919685

 $00:13:37.420 \longrightarrow 00:13:39.363$ testing which can be useful for

NOTE Confidence: 0.8919685

 $00:13:39.363 \longrightarrow 00:13:41.211$ people with certain types of cancer

NOTE Confidence: 0.8919685

00:13:41.211 --> 00:13:43.295 that seem to run in their families.

NOTE Confidence: 0.8919685

 $00:13:43.300 \longrightarrow 00:13:45.670$ Patients that are considered at risk

NOTE Confidence: 0.8919685

 $00:13:45.670 \longrightarrow 00:13:48.007$ receive genetic counseling and testing so

 $00:13:48.007 \longrightarrow 00:13:50.095$ informed medical decisions can be based

NOTE Confidence: 0.8919685

 $00{:}13{:}50.095 \to 00{:}13{:}52.558$ on their own personal risk assessment.

NOTE Confidence: 0.8919685

 $00:13:52.560 \longrightarrow 00:13:54.660$ Resources for genetic counseling and

NOTE Confidence: 0.8919685

 $00:13:54.660 \longrightarrow 00:13:56.760$ testing are available at federally

NOTE Confidence: 0.8919685

 $00:13:56.829 \longrightarrow 00:13:59.197$ designated comprehensive Cancer centers.

NOTE Confidence: 0.8919685

00:13:59.200 --> 00:14:02.112 Interdisciplinary teams include geneticists,

NOTE Confidence: 0.8919685

 $00:14:02.112 \longrightarrow 00:14:03.568$ genetic counselors,

NOTE Confidence: 0.8919685

00:14:03.570 --> 00:14:04.887 physicians, and nurses

NOTE Confidence: 0.8919685

 $00:14:04.887 \longrightarrow 00:14:07.082$ who work together to provide

NOTE Confidence: 0.8919685

 $00:14:07.082 \longrightarrow 00:14:09.104$ risk assessment and steps to

NOTE Confidence: 0.8919685

 $00{:}14{:}09.104 \dashrightarrow 00{:}14{:}10.904$ prevent the development of cancer.

NOTE Confidence: 0.8919685

 $00:14:10.910 \longrightarrow 00:14:13.406$ More information is available

NOTE Confidence: 0.8919685

00:14:13.406 --> 00:14:14.730 at yalecancercenter.org.

NOTE Confidence: 0.8919685

 $00:14:14.730 \longrightarrow 00:14:18.930$ You're listening to Connecticut public radio.

NOTE Confidence: 0.8919685

 $00:14:18.930 \longrightarrow 00:14:19.400$ Welcome

NOTE Confidence: 0.797900458

 $00:14:19.410 \longrightarrow 00:14:21.110$ back to Yale Cancer Answers.

00:14:21.110 --> 00:14:23.286 This is doctor Anees Chappar and

NOTE Confidence: 0.797900458

 $00{:}14{:}23.286 \dashrightarrow 00{:}14{:}25.522$ I'm joined to night by my guest Doctor

NOTE Confidence: 0.797900458

 $00:14:25.522 \longrightarrow 00:14:27.554$ John Kunstman and we are talking about the

NOTE Confidence: 0.797900458

00:14:27.554 --> 00:14:29.294 surgical care of pancreatic cancer

NOTE Confidence: 0.797900458

 $00:14:29.294 \longrightarrow 00:14:31.428$ and John right before the break

NOTE Confidence: 0.797900458

 $00{:}14{:}31.428 \dashrightarrow 00{:}14{:}33.273$ you were mentioning that patients

NOTE Confidence: 0.797900458

 $00:14:33.273 \longrightarrow 00:14:35.899$ who might not have a family history

NOTE Confidence: 0.797900458

 $00{:}14{:}35.899 \dashrightarrow 00{:}14{:}37.714$ of pancreatic cancer but might

NOTE Confidence: 0.797900458

 $00:14:37.714 \longrightarrow 00:14:39.955$ have a family history of other

NOTE Confidence: 0.797900458

 $00{:}14{:}39.955 \dashrightarrow 00{:}14{:}41.770$ cancers like breast and ovarian

NOTE Confidence: 0.797900458

 $00{:}14{:}41.770 \dashrightarrow 00{:}14{:}45.472$ cancer should probably go and seek

NOTE Confidence: 0.797900458

 $00:14:45.472 \longrightarrow 00:14:47.940$ genetic counseling because those

NOTE Confidence: 0.797900458

 $00{:}14{:}48.033 \dashrightarrow 00{:}14{:}50.979$ BRCA one and two gene mutations

NOTE Confidence: 0.797900458

00:14:50.980 --> 00:14:53.005 may increase their risk of

NOTE Confidence: 0.797900458

 $00:14:53.005 \longrightarrow 00:14:54.625$ pancreatic cancer as well,

 $00:14:54.630 \longrightarrow 00:14:56.855$ so are there other genetic

NOTE Confidence: 0.797900458

 $00:14:56.855 \longrightarrow 00:14:59.080$ syndromes that might also have

NOTE Confidence: 0.797900458

 $00:14:59.158 \longrightarrow 00:15:01.890$ implications for pancreatic cancer?

NOTE Confidence: 0.808959692307692

 $00:15:02.790 \longrightarrow 00:15:04.806$ Yeah, there are a few and some

NOTE Confidence: 0.808959692307692

 $00:15:04.806 \longrightarrow 00:15:07.205$ of them are quite rare, but one that

NOTE Confidence: 0.808959692307692

00:15:07.205 --> 00:15:09.095 also comes up not too infrequently

NOTE Confidence: 0.808959692307692

 $00:15:09.095 \longrightarrow 00:15:12.007$ is something called Lynch syndrome or

NOTE Confidence: 0.808959692307692

 $00:15:12.007 \longrightarrow 00:15:14.027$ hereditary nonpolyposis colon cancer.

NOTE Confidence: 0.808959692307692

 $00:15:14.030 \longrightarrow 00:15:16.520$ Now this disease is actually a

NOTE Confidence: 0.808959692307692

 $00:15:16.520 \longrightarrow 00:15:19.331$ constellation of genes that may or may

NOTE Confidence: 0.808959692307692

 $00:15:19.331 \longrightarrow 00:15:21.837$ not be mutated in a particular patient.

NOTE Confidence: 0.808959692307692

 $00:15:21.840 \longrightarrow 00:15:23.875$ And they are typically associated

NOTE Confidence: 0.808959692307692

 $00:15:23.875 \longrightarrow 00:15:26.417$ with colon cancer, hence the name.

NOTE Confidence: 0.808959692307692

 $00:15:26.417 \longrightarrow 00:15:28.612$ However, those screening programs we

NOTE Confidence: 0.808959692307692

 $00:15:28.612 \longrightarrow 00:15:30.971$ were talking about before for patients

NOTE Confidence: 0.808959692307692

 $00:15:30.971 \longrightarrow 00:15:33.830$ that do carry one of those mutations,

00:15:33.830 --> 00:15:36.250 again, screening programs would include

NOTE Confidence: 0.808959692307692

 $00{:}15{:}36.250 {\:{\circ}{\circ}{\circ}}>00{:}15{:}39.519$ them looking for pancreas cancer too,

NOTE Confidence: 0.808959692307692

 $00:15:39.520 \longrightarrow 00:15:42.586$ so I think it just underscores

NOTE Confidence: 0.808959692307692

 $00:15:42.590 \longrightarrow 00:15:43.578$ as you mentioned before,

NOTE Confidence: 0.808959692307692

 $00:15:43.578 \longrightarrow 00:15:45.675$ the need to really be in touch with

NOTE Confidence: 0.808959692307692

 $00:15:45.675 \longrightarrow 00:15:47.635$ your family medical history if you can,

NOTE Confidence: 0.808959692307692

00:15:47.640 --> 00:15:50.160 and if there is a strong family history,

 $00:15:50.752 \longrightarrow 00:15:52.528$ consider talking about it with your

NOTE Confidence: 0.808959692307692

 $00:15:52.528 \longrightarrow 00:15:54.507$ doctor and whether or not a genetics

NOTE Confidence: 0.808959692307692

 $00{:}15{:}54.507 \dashrightarrow 00{:}15{:}56.150$ referral would be a good idea.

NOTE Confidence: 0.888430238461538

00:15:57.170 --> 00:15:59.305 John, I was

NOTE Confidence: 0.888430238461538

 $00:15:59.305 \longrightarrow 00:16:01.160$ wondering before the break

NOTE Confidence: 0.888430238461538

 $00:16:01.160 \longrightarrow 00:16:03.716$ you had mentioned the fact that

NOTE Confidence: 0.888430238461538

 $00:16:03.716 \longrightarrow 00:16:05.929$ pancreatic cancer can be increased

NOTE Confidence: 0.888430238461538

 $00:16:05.929 \longrightarrow 00:16:08.485$ in smokers and people who

NOTE Confidence: 0.888430238461538

 $00:16:08.485 \longrightarrow 00:16:10.760$ have been exposed to as bestos.

 $00:16:10.760 \longrightarrow 00:16:13.052$ We often think of those factors

NOTE Confidence: 0.888430238461538

 $00:16:13.052 \longrightarrow 00:16:15.099$ really playing into lung cancer

NOTE Confidence: 0.888430238461538

 $00:16:15.099 \longrightarrow 00:16:17.319$ as opposed to pancreatic cancer.

NOTE Confidence: 0.888430238461538

00:16:17.320 --> 00:16:21.184 But you also mentioned that one of the

NOTE Confidence: 0.888430238461538

 $00:16:21.184 \longrightarrow 00:16:23.590$ tumor markers for pancreatic cancer

NOTE Confidence: 0.888430238461538

 $00:16:23.590 \longrightarrow 00:16:27.650$ that CA 19-9 was one that was

NOTE Confidence: 0.888430238461538

 $00:16:27.650 \longrightarrow 00:16:30.670$ involved with the bile,

NOTE Confidence: 0.888430238461538

 $00:16:30.670 \longrightarrow 00:16:33.750$ and so I wonder whether things that

NOTE Confidence: 0.888430238461538

 $00:16:33.750 \longrightarrow 00:16:36.858$ affect the liver and the biliary

NOTE Confidence: 0.888430238461538

 $00:16:36.858 \longrightarrow 00:16:39.628$ system also affect pancreatic cancer?

NOTE Confidence: 0.888430238461538

 $00:16:39.630 \longrightarrow 00:16:41.430$ So are you at increased risk

NOTE Confidence: 0.888430238461538

00:16:41.430 --> 00:16:47.750 for example, if you are heavy on alcohol,

NOTE Confidence: 0.888430238461538

 $00:16:47.750 \longrightarrow 00:16:50.690$ or if you are obese,

NOTE Confidence: 0.888430238461538

 $00:16:50.690 \longrightarrow 00:16:53.120$ or if you have diabetes,

NOTE Confidence: 0.888430238461538

 $00:16:53.120 \longrightarrow 00:16:55.264$ any of those things that we think of

 $00:16:55.264 \longrightarrow 00:16:57.698$ that go along with liver disease also?

NOTE Confidence: 0.888430238461538

 $00{:}16{:}57.700 \dashrightarrow 00{:}16{:}59.395$ affect the pancreas and increase

NOTE Confidence: 0.888430238461538

 $00{:}16{:}59.395 \dashrightarrow 00{:}17{:}01.090$ your risk of pancreatic cancer.

NOTE Confidence: 0.87414772

 $00:17:01.910 \longrightarrow 00:17:04.198$ So let's take those one at a time.

NOTE Confidence: 0.87414772

 $00:17:04.200 \longrightarrow 00:17:06.100$ In terms of lifestyle risk,

NOTE Confidence: 0.87414772

 $00{:}17{:}06.100 \dashrightarrow 00{:}17{:}08.125$ there's been a tremendous amount

NOTE Confidence: 0.87414772

00:17:08.125 --> 00:17:10.815 of study on pancreas cancer and

NOTE Confidence: 0.87414772

 $00:17:10.815 \longrightarrow 00:17:12.588$ those lifestyle considerations,

NOTE Confidence: 0.87414772

 $00{:}17{:}12.590 \dashrightarrow 00{:}17{:}14.907$ and some have really not played out

NOTE Confidence: 0.87414772

 $00:17:14.907 \longrightarrow 00:17:17.460$ or have shown contradictory results.

NOTE Confidence: 0.87414772

 $00{:}17{:}17.460 \dashrightarrow 00{:}17{:}18.738$ Depending on which study you read.

NOTE Confidence: 0.87414772

 $00{:}17{:}18.740 \dashrightarrow 00{:}17{:}20.618$ And these are things like certain

NOTE Confidence: 0.87414772

 $00:17:20.618 \longrightarrow 00:17:25.770$ kinds of tea, red meat, vitamin D, etc.

NOTE Confidence: 0.87414772

00:17:25.770 --> 00:17:28.230 However, alcohol, the chief risk comes

NOTE Confidence: 0.87414772

 $00:17:28.230 \longrightarrow 00:17:30.460$ from those patients that develop

NOTE Confidence: 0.87414772

 $00{:}17{:}30.460 \dashrightarrow 00{:}17{:}32.535$ pancreatitis as a result

 $00:17:32.535 \longrightarrow 00:17:34.195$ of their alcohol use,

NOTE Confidence: 0.87414772

00:17:34.200 --> 00:17:35.957 as many of your listeners may know,

NOTE Confidence: 0.87414772

 $00:17:35.960 \longrightarrow 00:17:37.864$ folks can get pancreatitis

NOTE Confidence: 0.87414772

00:17:37.864 --> 00:17:39.768 from heavy alcohol use,

NOTE Confidence: 0.87414772

 $00:17:39.770 \longrightarrow 00:17:41.516$ or some patients can get it

NOTE Confidence: 0.87414772

 $00:17:41.516 \longrightarrow 00:17:42.980$ even with mild alcohol use.

NOTE Confidence: 0.87414772

 $00:17:42.980 \longrightarrow 00:17:44.576$ Now it's not a subtle thing

NOTE Confidence: 0.87414772

00:17:44.576 --> 00:17:45.640 when you get pancreatitis,

NOTE Confidence: 0.87414772

 $00:17:45.640 \longrightarrow 00:17:47.370$ but for folks that have

NOTE Confidence: 0.87414772

00:17:47.370 --> 00:17:48.408 had multiple episodes,

NOTE Confidence: 0.87414772

 $00{:}17{:}48.410 \dashrightarrow 00{:}17{:}51.080$ chronic pancreatitis if you will,

NOTE Confidence: 0.87414772

00:17:51.080 --> 00:17:53.439 the risk for pancreas cancer is much,

NOTE Confidence: 0.87414772

 $00{:}17{:}53.440 \dashrightarrow 00{:}17{:}54.952$ much higher, extremely elevated.

NOTE Confidence: 0.87414772

 $00{:}17{:}54.952 \dashrightarrow 00{:}17{:}57.220$ That can also happen to patients

NOTE Confidence: 0.87414772

 $00:17:57.282 \longrightarrow 00:17:59.112$ that have problems with recurrent

 $00:17:59.112 \longrightarrow 00:18:00.942$ gallstones that can create a

NOTE Confidence: 0.87414772

 $00{:}18{:}00.950 \dashrightarrow 00{:}18{:}02.534$ phenomenon called gallstone

NOTE Confidence: 0.87414772

 $00:18:02.534 \longrightarrow 00:18:04.514$ pancreatitis quite different than the

NOTE Confidence: 0.87414772

 $00:18:04.514 \longrightarrow 00:18:06.315$ typical benign gallstones that lead

NOTE Confidence: 0.87414772

 $00:18:06.315 \longrightarrow 00:18:08.343$ to the discomfort people think about

NOTE Confidence: 0.87414772

 $00:18:08.396 \longrightarrow 00:18:10.346$ when they consider their gallbladder.

NOTE Confidence: 0.87414772

 $00:18:10.350 \longrightarrow 00:18:12.306$ But when any of those risk

NOTE Confidence: 0.87414772

00:18:12.306 --> 00:18:13.610 factors leads to pancreatitis,

NOTE Confidence: 0.87414772

 $00{:}18{:}13.610 \dashrightarrow 00{:}18{:}16.125$ the risk for pancreas cancer

NOTE Confidence: 0.87414772

 $00:18:16.125 \longrightarrow 00:18:17.634$ goes up considerably.

NOTE Confidence: 0.87414772

00:18:17.640 --> 00:18:19.500 With regards to obesity,

NOTE Confidence: 0.87414772

 $00:18:19.500 \longrightarrow 00:18:22.790$ there is an association with a higher

NOTE Confidence: 0.87414772

00:18:22.790 --> 00:18:26.102 body mass index or risk of obesity

NOTE Confidence: 0.87414772

 $00{:}18{:}26.102 \to 00{:}18{:}29.309$ that goes along with pancreas cancer.

NOTE Confidence: 0.87414772

 $00:18:29.310 \longrightarrow 00:18:30.570$ It's not as strong as,

NOTE Confidence: 0.87414772 00:18:30.570 --> 00:18:31.017 say,

00:18:31.017 --> 00:18:33.699 family history or history of pancreatitis,

NOTE Confidence: 0.87414772

 $00{:}18{:}33.700 \dashrightarrow 00{:}18{:}36.675$ but it is there and it's particularly

NOTE Confidence: 0.87414772

00:18:36.675 --> 00:18:39.102 notable in patients that have a

NOTE Confidence: 0.87414772

00:18:39.102 --> 00:18:41.608 high BMI or obesity younger in life.

NOTE Confidence: 0.87414772

00:18:41.610 --> 00:18:42.834 And then I believe,

NOTE Confidence: 0.87414772

 $00:18:42.834 \longrightarrow 00:18:45.270$ the other one you mentioned was diabetes,

NOTE Confidence: 0.87414772

 $00:18:45.270 \longrightarrow 00:18:47.256$ and this is actually a bit

NOTE Confidence: 0.87414772

 $00:18:47.256 \longrightarrow 00:18:48.580$ of a confusing area.

NOTE Confidence: 0.87414772

 $00:18:48.580 \longrightarrow 00:18:51.748$ There is a very strong link with new

NOTE Confidence: 0.87414772

 $00{:}18{:}51.748 \dashrightarrow 00{:}18{:}54.168$ onset diabetes and pancreas cancer,

NOTE Confidence: 0.87414772

 $00:18:54.170 \longrightarrow 00:18:56.970$ but all is not as it seems.

NOTE Confidence: 0.87414772

 $00:18:56.970 \longrightarrow 00:18:59.960$ Certainly that link is there,

NOTE Confidence: 0.87414772

 $00{:}18{:}59.960 \dashrightarrow 00{:}19{:}02.914$ but most people that have newly diagnosed

NOTE Confidence: 0.87414772

 $00:19:02.914 \dashrightarrow 00:19:05.809$ diabetes do not have pancreas cancer.

NOTE Confidence: 0.87414772

00:19:05.810 --> 00:19:06.272 However,

00:19:06.272 --> 00:19:09.044 for patients with the pancreas cancer,

NOTE Confidence: 0.87414772

 $00:19:09.050 \longrightarrow 00:19:11.186$ many of them will develop diabetes,

NOTE Confidence: 0.87414772

 $00:19:11.190 \longrightarrow 00:19:12.249$ hence the link.

NOTE Confidence: 0.87414772

00:19:12.249 --> 00:19:14.720 It turns out that it probably is

NOTE Confidence: 0.87414772

 $00:19:14.798 \longrightarrow 00:19:17.492$ not the diabetes itself that is

NOTE Confidence: 0.87414772

 $00:19:17.492 \longrightarrow 00:19:19.288$ creating the pancreas cancer,

NOTE Confidence: 0.87414772

 $00:19:19.290 \longrightarrow 00:19:20.457$ but the effect

NOTE Confidence: 0.87414772

 $00:19:20.457 \longrightarrow 00:19:22.791$ the cancer that's growing in the

NOTE Confidence: 0.87414772

 $00{:}19{:}22.791 \mathrel{--}{>} 00{:}19{:}25.511$ pancreas has on our ability to

NOTE Confidence: 0.87414772

00:19:25.511 --> 00:19:26.867 metabolize glucose effectively.

NOTE Confidence: 0.87414772

 $00:19:26.870 \longrightarrow 00:19:28.082$ So in other words,

NOTE Confidence: 0.87414772

 $00:19:28.082 \longrightarrow 00:19:29.900$ it's not the diabetes that seems

NOTE Confidence: 0.87414772

 $00:19:29.965 \longrightarrow 00:19:31.807$ to lead to the pancreas cancer.

NOTE Confidence: 0.87414772

 $00:19:31.810 \longrightarrow 00:19:32.275$ Rather,

NOTE Confidence: 0.87414772

 $00:19:32.275 \longrightarrow 00:19:34.600$ it's the pancreas cancer leading

NOTE Confidence: 0.87414772

 $00:19:34.600 \longrightarrow 00:19:36.460$ to the new diabetes.

00:19:36.460 --> 00:19:36.814 However,

NOTE Confidence: 0.87414772

 $00{:}19{:}36.814 \dashrightarrow 00{:}19{:}39.646$ that link is not completely clear.

NOTE Confidence: 0.87414772

 $00:19:39.650 \longrightarrow 00:19:41.516$ It's still again an area of

NOTE Confidence: 0.87414772

 $00:19:41.516 \longrightarrow 00:19:42.449$ pretty active research.

NOTE Confidence: 0.895158571666667

 $00:19:42.840 \longrightarrow 00:19:45.678$ The other thing that is interesting,

NOTE Confidence: 0.895158571666667

 $00:19:45.680 \longrightarrow 00:19:49.604$ I had a friend who not long ago

NOTE Confidence: 0.895158571666667

00:19:49.610 --> 00:19:52.320 was diagnosed with pancreatic cancer,

NOTE Confidence: 0.895158571666667

 $00:19:52.320 \longrightarrow 00:19:55.064$ and she had been a diabetic all her

NOTE Confidence: 0.895158571666667

 $00:19:55.064 \dashrightarrow 00:19:58.037$ life and one of the things that tipped

NOTE Confidence: 0.895158571666667

00:19:58.037 --> 00:20:00.599 off her doctor to the diagnosis

NOTE Confidence: 0.895158571666667

 $00:20:00.600 \longrightarrow 00:20:02.700$ was the fact that her diabetes

NOTE Confidence: 0.895158571666667

 $00{:}20{:}02.700 \dashrightarrow 00{:}20{:}04.680$ became more difficult to control.

NOTE Confidence: 0.895158571666667

 $00{:}20{:}04.680 \dashrightarrow 00{:}20{:}07.410$ Is that something that people who are

NOTE Confidence: 0.895158571666667

 $00:20:07.410 \longrightarrow 00:20:09.014$ diabetics should be paying

NOTE Confidence: 0.895158571666667

 $00:20:09.014 \longrightarrow 00:20:10.618$ attention to as well?

 $00:20:11.280 \longrightarrow 00:20:13.200$ Yes, and I think that

NOTE Confidence: 0.88807377555556

 $00{:}20{:}13.200 \dashrightarrow 00{:}20{:}14.736$ illustrates the point perfectly.

NOTE Confidence: 0.88807377555556

 $00:20:14.740 \longrightarrow 00:20:17.710$ It's not so much that the diabetes was there,

NOTE Confidence: 0.88807377555556

 $00:20:17.710 \longrightarrow 00:20:19.330$ but it's a sudden change.

NOTE Confidence: 0.88807377555556

 $00:20:19.330 \longrightarrow 00:20:21.772$ In other words, somebody that wasn't

NOTE Confidence: 0.88807377555556

 $00{:}20{:}21.772 \dashrightarrow 00{:}20{:}24.668$ diabetic may be in very good shape.

NOTE Confidence: 0.88807377555556

00:20:24.670 --> 00:20:27.148 No other risk factors for diabetes

NOTE Confidence: 0.88807377555556

00:20:27.148 --> 00:20:29.221 suddenly becomes diabetic or somebody

NOTE Confidence: 0.888073775555556

 $00:20:29.221 \longrightarrow 00:20:31.699$ that had a longtime case of diabetes

NOTE Confidence: 0.88807377555556

 $00:20:31.699 \longrightarrow 00:20:34.310$ with the medication management being

NOTE Confidence: 0.888073775555556 00:20:34.310 --> 00:20:36.490 very stable,

NOTE Confidence: 0.88807377555556

 $00:20:36.490 \longrightarrow 00:20:37.580$ suddenly worsening.

NOTE Confidence: 0.918350587894737

 $00:20:37.720 \longrightarrow 00:20:40.270$ And so all of these are good things to be

NOTE Confidence: 0.918350587894737

 $00{:}20{:}40.339 \dashrightarrow 00{:}20{:}43.012$ looking for when you go to see your doctor.

NOTE Confidence: 0.918350587894737

00:20:43.020 --> 00:20:45.696 If you're concerned about a potential

NOTE Confidence: 0.918350587894737

 $00{:}20{:}45.696 \dashrightarrow 00{:}20{:}47.480$ diagnosis of pancreatic cancer,

00:20:47.480 --> 00:20:50.021 which otherwise is a pretty sneaky cancer

NOTE Confidence: 0.918350587894737

 $00:20:50.021 \longrightarrow 00:20:53.097$ in terms of not really revealing itself.

NOTE Confidence: 0.918350587894737

 $00:20:53.100 \longrightarrow 00:20:55.450$ How is the diagnosis made?

NOTE Confidence: 0.845137746428572

00:20:55.480 --> 00:20:56.686 Well, generally speaking,

NOTE Confidence: 0.845137746428572

00:20:56.686 --> 00:20:59.098 the diagnosis is made in patients

NOTE Confidence: 0.845137746428572

00:20:59.098 --> 00:21:01.198 that have only subtle symptoms,

NOTE Confidence: 0.845137746428572

 $00:21:01.200 \longrightarrow 00:21:03.320$ with imaging many times those

NOTE Confidence: 0.845137746428572

 $00:21:03.320 \longrightarrow 00:21:05.890$ findings that we talked about, say,

NOTE Confidence: 0.845137746428572

 $00:21:05.890 \longrightarrow 00:21:08.590$ worsening diabetes coupled with weight loss.

NOTE Confidence: 0.845137746428572

 $00:21:08.590 \longrightarrow 00:21:10.505$ Or new abdominal complaints coupled

NOTE Confidence: 0.845137746428572

00:21:10.505 --> 00:21:13.109 with weight loss will lead to a scan,

NOTE Confidence: 0.845137746428572

00:21:13.110 --> 00:21:16.358 typically a CAT scan or sometimes an MRI,

NOTE Confidence: 0.845137746428572

 $00{:}21{:}16.360 \dashrightarrow 00{:}21{:}18.439$ and that's usually the first hint that

NOTE Confidence: 0.845137746428572

 $00:21:18.439 \longrightarrow 00:21:20.674$ there could be something wrong now in

NOTE Confidence: 0.845137746428572

 $00:21:20.674 \longrightarrow 00:21:22.594$ patients that have new jaundice or

00:21:22.654 --> 00:21:25.069 something that's a little bit more obvious,

NOTE Confidence: 0.845137746428572

 $00{:}21{:}25.070 \dashrightarrow 00{:}21{:}26.130$ sometimes the diagnosis is

NOTE Confidence: 0.845137746428572

 $00:21:26.130 \longrightarrow 00:21:27.190$ made in other ways,

NOTE Confidence: 0.845137746428572

00:21:27.190 --> 00:21:28.918 but typically it's imaging.

NOTE Confidence: 0.864161513

 $00:21:28.950 \longrightarrow 00:21:30.174$ And then what happens?

NOTE Confidence: 0.864161513

00:21:30.174 --> 00:21:32.010 Do these patients get a biopsy?

NOTE Confidence: 0.854587460476191

00:21:32.040 --> 00:21:33.380 Nowadays they typically do,

NOTE Confidence: 0.854587460476191

 $00:21:33.380 \longrightarrow 00:21:35.390$ and one thing I think that's

NOTE Confidence: 0.854587460476191

 $00:21:35.451 \longrightarrow 00:21:37.216$ important to highlight here and

NOTE Confidence: 0.854587460476191

 $00:21:37.216 \longrightarrow 00:21:39.340$ we're sort of segueing into this

NOTE Confidence: 0.854587460476191

 $00{:}21{:}39.340 \dashrightarrow 00{:}21{:}42.036$ is that this is a cancer that really

NOTE Confidence: 0.854587460476191

 $00{:}21{:}42.036 \to 00{:}21{:}44.798$ requires a large expert team to manage.

NOTE Confidence: 0.854587460476191

 $00:21:44.800 \longrightarrow 00:21:46.762$ Now we're talking about radiology here

NOTE Confidence: 0.854587460476191

 $00:21:46.762 \longrightarrow 00:21:48.979$ with regards to CAT scans and MRIs

NOTE Confidence: 0.854587460476191

 $00:21:48.980 \longrightarrow 00:21:50.036$ but ultimately when you

NOTE Confidence: 0.854587460476191

00:21:50.036 --> 00:21:51.356 do get a new diagnosis,

00:21:51.360 --> 00:21:54.748 it needs special cat scans and Mris,

NOTE Confidence: 0.854587460476191

 $00:21:54.750 \longrightarrow 00:21:56.785$ an expert radiologist to interpret

NOTE Confidence: 0.854587460476191

 $00:21:56.785 \longrightarrow 00:21:58.820$ them with regards to biopsy.

NOTE Confidence: 0.854587460476191

 $00:21:58.820 \longrightarrow 00:22:00.956$ It's typically done by a gastroenterologist

NOTE Confidence: 0.854587460476191

 $00:22:00.956 \longrightarrow 00:22:02.995$ and the techniques that they use

NOTE Confidence: 0.854587460476191

 $00:22:02.995 \longrightarrow 00:22:04.681$ are not the typical techniques they

NOTE Confidence: 0.854587460476191

 $00:22:04.681 \longrightarrow 00:22:06.364$ use that and discovered ultrasound

NOTE Confidence: 0.854587460476191

 $00:22:06.364 \longrightarrow 00:22:08.488$ that we were talking about before,

NOTE Confidence: 0.854587460476191

 $00{:}22{:}08.490 \dashrightarrow 00{:}22{:}10.434$ or they may even need to do a procedure

NOTE Confidence: 0.854587460476191

 $00:22:10.434 \longrightarrow 00:22:12.086$ on the bile duct or pancreas.

NOTE Confidence: 0.854587460476191

 $00:22:12.090 \longrightarrow 00:22:14.040$ So these are all expert procedures

NOTE Confidence: 0.854587460476191

 $00:22:14.040 \longrightarrow 00:22:16.231$ and they really do require a big

NOTE Confidence: 0.854587460476191

00:22:16.231 --> 00:22:18.163 team even before you get to the

NOTE Confidence: 0.854587460476191

 $00:22:18.226 \longrightarrow 00:22:20.680$ involvement of an oncologist or surgeon.

NOTE Confidence: 0.889085458461539

 $00:22:20.710 \longrightarrow 00:22:23.092$ And presumably you know these days

 $00:22:23.092 \longrightarrow 00:22:26.697$ we talk on this show so much about

NOTE Confidence: 0.889085458461539

 $00{:}22{:}26.697 {\:{\circ}{\circ}{\circ}}>00{:}22{:}28.633$ personalized medicine and genomics

NOTE Confidence: 0.889085458461539

 $00:22:28.633 \longrightarrow 00:22:32.069$ and all of the fancy tests and assays.

NOTE Confidence: 0.889085458461539

00:22:32.070 --> 00:22:34.870 Is pancreatic cancer in that realm as well?

NOTE Confidence: 0.889085458461539 $00:22:34.870 \longrightarrow 00:22:36.122$ Where

NOTE Confidence: 0.889085458461539

 $00:22:36.122 \longrightarrow 00:22:39.193$ we've moved so far in terms of the medical

NOTE Confidence: 0.889085458461539

00:22:39.193 --> 00:22:41.443 and surgical management of this disease,

NOTE Confidence: 0.889085458461539

 $00:22:41.450 \longrightarrow 00:22:43.220$ that there are nuances in

NOTE Confidence: 0.889085458461539

 $00:22:43.220 \longrightarrow 00:22:44.636$ terms of the pathology?

NOTE Confidence: 0.913988056

 $00:22:45.430 \longrightarrow 00:22:46.920$ That's a great point,

NOTE Confidence: 0.913988056

 $00:22:46.920 \longrightarrow 00:22:50.665$ and it certainly applies for pancreas cancer.

NOTE Confidence: 0.913988056

 $00:22:50.670 \longrightarrow 00:22:52.210$ Just in the last year,

NOTE Confidence: 0.913988056

00:22:52.210 --> 00:22:53.764 I guess a little over a year,

NOTE Confidence: 0.913988056

 $00:22:53.770 \longrightarrow 00:22:55.530$ the recommendation has come down

NOTE Confidence: 0.913988056

 $00{:}22{:}55.530 \dashrightarrow 00{:}22{:}58.001$ from the NCI and the National

NOTE Confidence: 0.913988056

00:22:58.001 --> 00:22:59.930 Comprehensive Cancer Network,

 $00:22:59.930 \longrightarrow 00:23:02.120$ that every patient with a

00:23:04.212 --> 00:23:06.304 diagnosis of pancreas cancer,

NOTE Confidence: 0.913988056

 $00:23:06.310 \longrightarrow 00:23:07.830$ should have a genetics referral

NOTE Confidence: 0.913988056

 $00:23:07.830 \longrightarrow 00:23:10.131$ so that they can see whether any

NOTE Confidence: 0.913988056

00:23:10.131 --> 00:23:11.926 of those mutations are present.

NOTE Confidence: 0.913988056

 $00:23:11.930 \longrightarrow 00:23:13.080$ Why are we doing that?

NOTE Confidence: 0.913988056

 $00:23:13.080 \longrightarrow 00:23:15.194$ Well, we have all these new advances,

NOTE Confidence: 0.913988056

 $00:23:15.200 \longrightarrow 00:23:16.392$ including immunotherapy

NOTE Confidence: 0.913988056

00:23:16.392 --> 00:23:18.180 and targeted the rapies.

NOTE Confidence: 0.913988056

 $00:23:18.180 \longrightarrow 00:23:20.268$ And we're finding that more and

NOTE Confidence: 0.913988056

00:23:20.268 --> 00:23:22.172 more patients may have something

NOTE Confidence: 0.913988056

 $00:23:22.172 \longrightarrow 00:23:24.288$ particular to their case that

NOTE Confidence: 0.913988056

00:23:24.288 --> 00:23:25.720 will ultimately direct the

NOTE Confidence: 0.913988056

 $00:23:25.720 \longrightarrow 00:23:27.510$ treatment in a specific way.

 $00{:}23{:}31.334 \dashrightarrow 00{:}23{:}33.723$ And I think the other thing that's

NOTE Confidence: 0.91969168

 $00:23:33.723 \longrightarrow 00:23:35.818$ important to point out here,

 $00:23:35.820 \longrightarrow 00:23:38.442$ and certainly was the case with

NOTE Confidence: 0.91969168

 $00{:}23{:}38.442 \dashrightarrow 00{:}23{:}41.256$ my friend was she was actually

NOTE Confidence: 0.91969168

 $00{:}23{:}41.256 \dashrightarrow 00{:}23{:}43.676$ diagnosed in a smaller center.

NOTE Confidence: 0.91969168

00:23:43.680 --> 00:23:46.947 But I encouraged her to get a second opinion,

NOTE Confidence: 0.91969168

 $00:23:46.950 \longrightarrow 00:23:50.899$ and it changed the diagnosis from

NOTE Confidence: 0.91969168

 $00{:}23{:}50.899 \dashrightarrow 00{:}23{:}54.392$ the perception that this may be

NOTE Confidence: 0.91969168

 $00:23:54.392 \longrightarrow 00:23:57.411$ metastatic to the perception that

NOTE Confidence: 0.91969168

 $00:23:57.411 \longrightarrow 00:24:00.646$ this might not be metastatic and

NOTE Confidence: 0.91969168

 $00:24:00.646 \longrightarrow 00:24:02.711$ could potentially be resectable with

NOTE Confidence: 0.91969168

 $00:24:02.711 \longrightarrow 00:24:05.911$ a bit of chemotherapy 1st to see if

NOTE Confidence: 0.91969168

 $00:24:05.911 \longrightarrow 00:24:08.450$ we could could shrink the disease.

NOTE Confidence: 0.91969168

00:24:08.450 --> 00:24:10.928 So can you talk about kind of

NOTE Confidence: 0.91969168

 $00:24:10.928 \longrightarrow 00:24:13.362$ getting a second opinion and how

NOTE Confidence: 0.91969168

00:24:13.362 --> 00:24:15.948 important that is and whether it

NOTE Confidence: 0.91969168

00:24:15.948 --> 00:24:18.458 changes things and how frequently?

NOTE Confidence: 0.907034577931034

 $00:24:19.590 \longrightarrow 00:24:22.222$ It's important for a couple of reasons

 $00{:}24{:}22.222 \dashrightarrow 00{:}24{:}25.574$ and I don't want to minimize the role

NOTE Confidence: 0.907034577931034

 $00:24:25.574 \longrightarrow 00:24:28.632$ that every health care provider in system

NOTE Confidence: 0.907034577931034

 $00:24:28.632 \longrightarrow 00:24:31.558$ has in regards to battling this disease.

NOTE Confidence: 0.907034577931034

 $00:24:31.560 \longrightarrow 00:24:34.878$ Certainly the diagnosis can be made anywhere,

NOTE Confidence: 0.907034577931034

00:24:34.880 --> 00:24:36.932 but I think the important thing

NOTE Confidence: 0.907034577931034

 $00:24:36.932 \longrightarrow 00:24:39.199$ is you want to be managed,

NOTE Confidence: 0.907034577931034

 $00:24:39.200 \longrightarrow 00:24:41.648$ or at least have an opinion from a group

NOTE Confidence: 0.907034577931034

 $00{:}24{:}41.648 \dashrightarrow 00{:}24{:}43.870$ that treats this disease frequently.

NOTE Confidence: 0.907034577931034

 $00:24:43.870 \longrightarrow 00:24:45.683$ Because there are a lot of nuances

NOTE Confidence: 0.907034577931034

 $00{:}24{:}45.683 \dashrightarrow 00{:}24{:}48.109$ and one of them that you mentioned is

NOTE Confidence: 0.907034577931034

00:24:48.109 --> 00:24:50.088 determining whether or not a cancer

NOTE Confidence: 0.907034577931034

 $00{:}24{:}50.088 \dashrightarrow 00{:}24{:}52.092$ of pancreas cancer can be removed

NOTE Confidence: 0.907034577931034

 $00{:}24{:}52.092 \dashrightarrow 00{:}24{:}54.620$ with an operation we know with utter

NOTE Confidence: 0.907034577931034

 $00:24:54.620 \longrightarrow 00:24:56.900$ certainty that the patients that do

NOTE Confidence: 0.907034577931034

 $00:24:56.974 \longrightarrow 00:24:59.438$ the best are those that can have

00:24:59.438 --> 00:25:01.270 surgery to remove the tumor,

NOTE Confidence: 0.907034577931034

 $00:25:01.270 \longrightarrow 00:25:02.470$ and sometimes that

NOTE Confidence: 0.907034577931034

 $00:25:02.470 \longrightarrow 00:25:04.470$ opinion may change depending on

NOTE Confidence: 0.907034577931034

 $00:25:04.470 \longrightarrow 00:25:06.449$ whether you're at an experienced

NOTE Confidence: 0.907034577931034

 $00:25:06.449 \longrightarrow 00:25:07.937$ center and quite honestly,

NOTE Confidence: 0.907034577931034

 $00:25:07.940 \longrightarrow 00:25:10.550$ it might change from one

NOTE Confidence: 0.907034577931034

 $00:25:10.550 \longrightarrow 00:25:12.638$ experienced center to another.

NOTE Confidence: 0.907034577931034

 $00:25:12.640 \longrightarrow 00:25:15.556$ The other thing too is that

NOTE Confidence: 0.907034577931034

 $00{:}25{:}15.556 \dashrightarrow 00{:}25{:}16.528 \ \mathrm{multidisciplinary \ management},$

NOTE Confidence: 0.907034577931034

00:25:16.530 --> 00:25:19.380 even if a cancer cannot necessarily

NOTE Confidence: 0.907034577931034

 $00{:}25{:}19.380 \dashrightarrow 00{:}25{:}21.605$ be removed in pancreas cancer.

NOTE Confidence: 0.907034577931034

 $00:25:21.605 \longrightarrow 00:25:23.207$ There are many, many,

NOTE Confidence: 0.907034577931034

 $00{:}25{:}23.207 \dashrightarrow 00{:}25{:}24.842$ many clinical trials with some

NOTE Confidence: 0.907034577931034

 $00:25:24.842 \longrightarrow 00:25:26.819$ of the newest agents that could

NOTE Confidence: 0.907034577931034

 $00:25:26.819 \longrightarrow 00:25:28.334$ be available to a patient,

NOTE Confidence: 0.907034577931034

 $00:25:28.340 \longrightarrow 00:25:30.905$ especially if they're treated at

 $00:25:30.905 \longrightarrow 00:25:32.957$ a comprehensive Cancer Center.

NOTE Confidence: 0.907034577931034

 $00:25:32.960 \longrightarrow 00:25:35.327$ I think that's a great point.

NOTE Confidence: 0.907034577931034

 $00:25:35.330 \longrightarrow 00:25:38.130$ And also we know in particular with

NOTE Confidence: 0.907034577931034

 $00:25:38.130 \longrightarrow 00:25:40.420$ the surgical outcomes folks do better

NOTE Confidence: 0.907034577931034

 $00:25:40.420 \longrightarrow 00:25:43.234$ if they're at not just a surgeon that

NOTE Confidence: 0.907034577931034

00:25:43.234 --> 00:25:45.880 does a lot of pancreas cancer surgery,

NOTE Confidence: 0.907034577931034

00:25:45.880 --> 00:25:48.390 but at a center that does a lot of surgery

NOTE Confidence: 0.907034577931034

 $00:25:48.455 \longrightarrow 00:25:51.149$ because of that multi disciplinary component,

NOTE Confidence: 0.907034577931034

 $00:25:51.150 \longrightarrow 00:25:52.940$ it's the intensive care units,

NOTE Confidence: 0.907034577931034

 $00:25:52.940 \longrightarrow 00:25:53.648$ the radiologist,

NOTE Confidence: 0.907034577931034

00:25:53.648 --> 00:25:55.418 the gastro neurologist that are

NOTE Confidence: 0.907034577931034

 $00:25:55.418 \longrightarrow 00:25:57.610$ at a big center that does,

NOTE Confidence: 0.907034577931034

 $00{:}25{:}57.610 --> 00{:}25{:}59.776$ you know 20-30 ,
forty,

NOTE Confidence: 0.907034577931034

00:25:59.780 --> 00:26:03.008 sometimes 100 plus cases a year.

NOTE Confidence: 0.907034577931034

00:26:03.010 --> 00:26:05.404 Those resources will be available

 $00:26:05.404 \longrightarrow 00:26:07.428$ at those centers and the outcomes

NOTE Confidence: 0.907034577931034

 $00:26:07.428 \longrightarrow 00:26:09.619$ are better in a commensurate way.

NOTE Confidence: 0.932564912

 $00:26:10.760 \longrightarrow 00:26:11.820$ And the other thing is,

NOTE Confidence: 0.932564912

00:26:11.820 --> 00:26:14.136 are all pancreatic cancers the same?

NOTE Confidence: 0.932564912

00:26:14.140 --> 00:26:16.513 I mean is this a homogeneous kind

NOTE Confidence: 0.932564912

 $00{:}26{:}16.513 \dashrightarrow 00{:}26{:}19.077$ of disease or are there nuances

NOTE Confidence: 0.932564912

 $00:26:19.077 \longrightarrow 00:26:21.285$ and subtleties in terms of the

NOTE Confidence: 0.932564912

 $00:26:21.359 \longrightarrow 00:26:24.029$ different types of pancreatic cancer?

NOTE Confidence: 0.883512227857143

 $00:26:25.370 \longrightarrow 00:26:28.358$ There are and I think we talked a little

NOTE Confidence: 0.883512227857143

00:26:28.358 --> 00:26:31.196 bit about how some of the genetics of

NOTE Confidence: 0.883512227857143

00:26:31.196 --> 00:26:33.488 an individual tumor may actually change

NOTE Confidence: 0.883512227857143

 $00:26:33.488 \longrightarrow 00:26:35.329$ management from patient to patient.

NOTE Confidence: 0.883512227857143

 $00{:}26{:}35.330 \dashrightarrow 00{:}26{:}38.053$ One thing I would like to mention

NOTE Confidence: 0.883512227857143

 $00:26:38.053 \longrightarrow 00:26:40.557$ really quickly is that about 75

NOTE Confidence: 0.883512227857143

00:26:40.557 --> 00:26:43.966 to 85% of cancers in the pancreas

NOTE Confidence: 0.883512227857143

 $00:26:43.966 \longrightarrow 00:26:46.410$ arise with association with a small

 $00:26:46.410 \longrightarrow 00:26:49.090$ polyp like lesion in the pancreas.

NOTE Confidence: 0.883512227857143

 $00:26:49.090 \longrightarrow 00:26:53.568$ But about 15 to 20% arise in coordination

NOTE Confidence: 0.883512227857143

 $00:26:53.568 \longrightarrow 00:26:56.698$ with something called intraductal

NOTE Confidence: 0.883512227857143

00:26:56.698 --> 00:26:58.800 papillary mucinous neoplasms.

NOTE Confidence: 0.883512227857143

 $00:26:58.800 \longrightarrow 00:27:01.146$ And these pancreas cysts are unique

NOTE Confidence: 0.883512227857143

00:27:01.146 --> 00:27:03.270 because unlike most pancreas cancers,

NOTE Confidence: 0.883512227857143

 $00:27:03.270 \longrightarrow 00:27:05.610$ we can't detect them prior to

NOTE Confidence: 0.883512227857143

00:27:05.610 --> 00:27:07.800 the emergence of the cancer.

NOTE Confidence: 0.883512227857143

 $00:27:07.800 \longrightarrow 00:27:09.600$ But these lesions,

NOTE Confidence: 0.883512227857143

 $00{:}27{:}09.600 \dashrightarrow 00{:}27{:}12.570$ these precancerous cysts can be

NOTE Confidence: 0.883512227857143

 $00{:}27{:}12.570 \dashrightarrow 00{:}27{:}16.649$ detected on endoscopy or on CAT scans,

NOTE Confidence: 0.883512227857143

 $00{:}27{:}16.650 \dashrightarrow 00{:}27{:}18.442$ and we really think this might be a

NOTE Confidence: 0.883512227857143

 $00{:}27{:}18.442 \to 00{:}27{:}20.821$ way to start making a dent in a certain

NOTE Confidence: 0.883512227857143

 $00:27:20.821 \longrightarrow 00:27:22.700$ fraction of these patients that have

NOTE Confidence: 0.883512227857143 00:27:22.700 --> 00:27:23.230 I PMNS, NOTE Confidence: 0.883512227857143 $00:27:23.230 \longrightarrow 00:27:25.350$ where we might be able to treat them

NOTE Confidence: 0.883512227857143

 $00:27:25.411 \longrightarrow 00:27:27.637$ prior to the emergence of the cancer.

NOTE Confidence: 0.9002744

00:27:28.930 --> 00:27:30.718 So how would that work John?

NOTE Confidence: 0.9002744

 $00:27:30.720 \longrightarrow 00:27:32.960$ Is that like you go for

NOTE Confidence: 0.9002744

00:27:32.960 --> 00:27:34.856 your yearly MRI because you're at

NOTE Confidence: 0.9002744

 $00{:}27{:}34.856 \dashrightarrow 00{:}27{:}37.161$ high risk and they find this cystic

NOTE Confidence: 0.9002744

 $00:27:37.161 \longrightarrow 00:27:39.147$ lesion and you're able to remove

NOTE Confidence: 0.9002744

00:27:39.147 --> 00:27:41.199 it before it becomes a cancer.

NOTE Confidence: 0.867450647916667

 $00:27:42.410 \longrightarrow 00:27:43.457$ That's one scenario,

NOTE Confidence: 0.867450647916667

 $00:27:43.457 \longrightarrow 00:27:45.202$ another scenario that we're seeing

NOTE Confidence: 0.867450647916667

 $00{:}27{:}45.202 \dashrightarrow 00{:}27{:}47.139$ very commonly as a patient might get a

NOTE Confidence: 0.867450647916667

 $00{:}27{:}47.139 \dashrightarrow 00{:}27{:}49.148$ CAT scan or an MRI for something else.

NOTE Confidence: 0.867450647916667

 $00{:}27{:}49.150 \dashrightarrow 00{:}27{:}50.770$ Whether it's back pain or they're

NOTE Confidence: 0.867450647916667

 $00:27:50.770 \longrightarrow 00:27:52.753$ in a car accident, or any reason.

NOTE Confidence: 0.867450647916667

00:27:52.753 --> 00:27:55.530 And there's a cyst seen in the pancreas,

NOTE Confidence: 0.867450647916667

 $00{:}27{:}55.530 \dashrightarrow 00{:}27{:}57.933$ and one thing I just want to make sure

00:27:57.933 --> 00:28:00.113 your listeners understand is most

NOTE Confidence: 0.867450647916667

00:28:00.113 --> 00:28:02.423 pancreatic cysts are not precancerous, 00:28:04.460 --> 00:28:06.596 and these precancerous lesions won't

NOTE Confidence: 0.867450647916667

00:28:06.596 --> 00:28:09.266 actually turn into a cancer,

NOTE Confidence: 0.867450647916667

00:28:09.270 --> 00:28:12.498 but some will, so risk stratification,

NOTE Confidence: 0.867450647916667

00:28:12.500 --> 00:28:14.138 and careful decision-making,

NOTE Confidence: 0.867450647916667

00:28:14.138 --> 00:28:16.868 which again takes an experienced,

NOTE Confidence: 0.867450647916667

00:28:16.870 --> 00:28:17.760 multidisciplinary group,

NOTE Confidence: 0.867450647916667

 $00{:}28{:}17.760 \dashrightarrow 00{:}28{:}20.875$ is really the key to managing them.

NOTE Confidence: 0.867450647916667

 $00:28:20.880 \longrightarrow 00:28:23.528$ And when we do see one of these

NOTE Confidence: 0.867450647916667

 $00{:}28{:}23.528 \dashrightarrow 00{:}28{:}25.129$ precancerous cysts, or I PMNS,

NOTE Confidence: 0.867450647916667

 $00:28:25.129 \longrightarrow 00:28:27.007$ that looks like it might be

NOTE Confidence: 0.867450647916667

 $00:28:27.007 \longrightarrow 00:28:28.349$ turning into a cancer,

NOTE Confidence: 0.867450647916667

 $00{:}28{:}28.350 \dashrightarrow 00{:}28{:}31.054$ or perhaps even have a small cancer present,

NOTE Confidence: 0.867450647916667

 $00:28:31.060 \longrightarrow 00:28:33.260$ we can act on it to remove it

NOTE Confidence: 0.867450647916667

 $00:28:33.260 \longrightarrow 00:28:35.915$ prior to the emergence of an

 $00:28:35.915 \longrightarrow 00:28:37.436$ aggressive metastatic cancer.

NOTE Confidence: 0.85299776

 $00:28:38.110 \longrightarrow 00:28:40.420$ Doctor John Kuntsman is an assistant

NOTE Confidence: 0.85299776

 $00:28:40.420 \longrightarrow 00:28:41.960$ professor of surgical oncology

NOTE Confidence: 0.85299776

 $00:28:42.025 \longrightarrow 00:28:43.807$ at the Yale School of Medicine.

NOTE Confidence: 0.85299776

 $00:28:43.810 \longrightarrow 00:28:45.934$ If you have questions,

NOTE Confidence: 0.85299776

 $00{:}28{:}45.934 \dashrightarrow 00{:}28{:}47.984$ the address is canceranswers@yale.edu

NOTE Confidence: 0.85299776

 $00:28:47.984 \longrightarrow 00:28:50.708$ and past editions of the program

NOTE Confidence: 0.85299776

 $00:28:50.708 \longrightarrow 00:28:53.078$ are available in audio and written

NOTE Confidence: 0.85299776

00:28:53.078 --> 00:28:54.102 form at yalecancercenter.org.

NOTE Confidence: 0.85299776

00:28:54.102 --> 00:28:57.238 We hope you'll join us next week to

NOTE Confidence: 0.85299776

 $00:28:57.238 \longrightarrow 00:28:59.629$ learn more about the fight against

NOTE Confidence: 0.85299776

 $00{:}28{:}59.629 \dashrightarrow 00{:}29{:}02.000$ cancer here on Connecticut Public Radio.