WEBVTT

 $00:00:00.000 \longrightarrow 00:00:03.384$ Support for Yale Cancer Answers comes

NOTE Confidence: 0.83079993724823

 $00:00:03.384 \longrightarrow 00:00:05.640$ from AstraZeneca, a pharmaceutical

NOTE Confidence: 0.83079993724823

 $00:00:05.720 \longrightarrow 00:00:08.975$ business that is pushing the boundaries of

NOTE Confidence: 0.83079993724823

 $00:00:08.975 \longrightarrow 00:00:12.050$ science to deliver new cancer medicines.

NOTE Confidence: 0.83079993724823

 $00{:}00{:}12.050 \dashrightarrow 00{:}00{:}15.818$ More information at a strazeneca-us.com.

NOTE Confidence: 0.83079993724823

 $00:00:15.820 \longrightarrow 00:00:18.034$ Welcome to Yale Cancer Answers with

NOTE Confidence: 0.83079993724823

 $00:00:18.034 \longrightarrow 00:00:20.459$ your host doctor Anees Chappar.

NOTE Confidence: 0.83079993724823

 $00{:}00{:}20.460 \dashrightarrow 00{:}00{:}22.365$ Yale Cancer Answers features the

NOTE Confidence: 0.83079993724823

 $00:00:22.365 \longrightarrow 00:00:24.708$ latest information on cancer care by

NOTE Confidence: 0.83079993724823

 $00:00:24.708 \longrightarrow 00:00:26.208$ welcoming oncologists and specialists

NOTE Confidence: 0.83079993724823

 $00:00:26.208 \longrightarrow 00:00:28.726$ who are on the forefront of the

NOTE Confidence: 0.83079993724823

 $00:00:28.726 \dashrightarrow 00:00:30.460$ battle to fight cancer. This week

NOTE Confidence: 0.83079993724823

 $00{:}00{:}30.460 \dashrightarrow 00{:}00{:}32.260$ it's a conversation about gastroesophageal

NOTE Confidence: 0.83079993724823

 $00{:}00{:}32.260 \dashrightarrow 00{:}00{:}34.380$ cancer with Doctor Jill Lacy.

NOTE Confidence: 0.83079993724823

00:00:34.380 --> 00:00:37.201 Doctor Lacy is a professor of medicine

 $00:00:37.201 \longrightarrow 00:00:39.908$ and medical oncology at the Yale School

NOTE Confidence: 0.83079993724823

 $00:00:39.908 \longrightarrow 00:00:42.521$ of Medicine where Doctor Chappar is

NOTE Confidence: 0.83079993724823

00:00:42.521 --> 00:00:44.990 a professor of surgical oncology.

NOTE Confidence: 0.825379490852356

 $00:00:44.990 \longrightarrow 00:00:48.007$ Jill, we don't often talk

NOTE Confidence: 0.825379490852356

 $00:00:48.007 \longrightarrow 00:00:50.329$ about gastroesophageal cancers much.

NOTE Confidence: 0.825379490852356

 $00:00:50.330 \longrightarrow 00:00:53.890$ Tell us a little bit more about them.

NOTE Confidence: 0.825379490852356

 $00:00:53.890 \longrightarrow 00:00:55.670$ How common are they?

NOTE Confidence: 0.825379490852356

 $00:00:55.670 \longrightarrow 00:00:57.450$ Who do they affect?

NOTE Confidence: 0.825379490852356

 $00:00:57.450 \longrightarrow 00:00:59.230$ What do they encompass?

NOTE Confidence: 0.825379490852356

 $00:00:59.230 \longrightarrow 00:01:02.751$ It is somewhat of a heterogeneous group of cancers

NOTE Confidence: 0.825379490852356

 $00:01:02.751 \longrightarrow 00:01:05.937$ and I will elaborate on that as we go along.

NOTE Confidence: 0.825379490852356

 $00:01:05.940 \longrightarrow 00:01:08.868$ And it is not a

NOTE Confidence: 0.825379490852356

 $00:01:08.868 \longrightarrow 00:01:10.820$ common group of cancers

NOTE Confidence: 0.825379490852356

 $00{:}01{:}10.820 --> 00{:}01{:}12.768 \ {\rm certainly, \ compared \ to, \ say,}$

NOTE Confidence: 0.825379490852356

00:01:12.768 --> 00:01:15.203 breast cancer or lung cancer.

NOTE Confidence: 0.825379490852356

00:01:15.210 --> 00:01:17.946 So if you combine esophagus and

00:01:17.946 --> 00:01:21.070 gastric cancer in the United States,

NOTE Confidence: 0.825379490852356

 $00:01:21.070 \longrightarrow 00:01:23.998$ there's about 46,000 cases a year,

NOTE Confidence: 0.825379490852356

 $00:01:24.000 \longrightarrow 00:01:25.464$ about 27,000 deaths.

NOTE Confidence: 0.825379490852356

 $00:01:25.464 \longrightarrow 00:01:28.880$ So it is quite a lethal cancer.

NOTE Confidence: 0.825379490852356

 $00:01:28.880 \longrightarrow 00:01:30.341$ And by contrast,

NOTE Confidence: 0.825379490852356

 $00:01:30.341 \longrightarrow 00:01:32.776$ lung cancer over 200,000 cases.

NOTE Confidence: 0.825379490852356

00:01:32.780 --> 00:01:33.828 Breast cancer,

NOTE Confidence: 0.825379490852356

 $00:01:33.828 \longrightarrow 00:01:36.448$ I believe over 270,000 cases.

NOTE Confidence: 0.825379490852356

00:01:36.450 --> 00:01:37.290 But interestingly,

NOTE Confidence: 0.825379490852356

 $00:01:37.290 \longrightarrow 00:01:39.810$ the death rate as I indicated,

NOTE Confidence: 0.825379490852356

 $00:01:39.810 \longrightarrow 00:01:41.490$ still is quite high.

NOTE Confidence: 0.825379490852356

00:01:41.490 --> 00:01:44.470 You compare this, say with breast cancer,

NOTE Confidence: 0.825379490852356

 $00{:}01{:}44.470 \dashrightarrow 00{:}01{:}47.536$ where I believe we're down to in

NOTE Confidence: 0.825379490852356

 $00:01:47.536 \longrightarrow 00:01:50.308$ the range of 40,000 deaths per year.

NOTE Confidence: 0.825379490852356

 $00:01:50.310 \longrightarrow 00:01:53.670$ So even though it's not a common cancer,

 $00:01:53.670 \longrightarrow 00:01:55.932$ it is still a significant problem

NOTE Confidence: 0.825379490852356

 $00:01:55.932 \longrightarrow 00:01:58.290$ in terms of its lethality.

 $00:02:00.810 \longrightarrow 00:02:02.486$ What's interesting about these

NOTE Confidence: 0.825379490852356

 $00:02:02.486 \longrightarrow 00:02:04.581$ cancers is that there's quite

NOTE Confidence: 0.825379490852356

 $00:02:04.581 \longrightarrow 00:02:06.967$ a bit of geographic variation in incidence

NOTE Confidence: 0.825379490852356

 $00:02:06.970 \longrightarrow 00:02:09.105$ and gastric cancer actually

NOTE Confidence: 0.825379490852356

00:02:09.105 --> 00:02:11.797 is quite common worldwide and a

NOTE Confidence: 0.825379490852356

 $00:02:11.797 \longrightarrow 00:02:13.749$ significant public health problem.

NOTE Confidence: 0.825379490852356

 $00:02:13.750 \longrightarrow 00:02:16.318$ It's actually the third leading cause

NOTE Confidence: 0.825379490852356

00:02:16.318 --> 00:02:18.720 of cancer related deaths globally.

NOTE Confidence: 0.825379490852356

 $00:02:18.720 \longrightarrow 00:02:21.884$ Over 1,000,000 cases and over 800,000 deaths.

NOTE Confidence: 0.825379490852356

00:02:21.890 --> 00:02:24.596 So it does remain, I think,

NOTE Confidence: 0.825379490852356

 $00{:}02{:}24.600 \dashrightarrow 00{:}02{:}27.210$ a huge issue globally and still

NOTE Confidence: 0.825379490852356

 $00{:}02{:}27.210 \dashrightarrow 00{:}02{:}29.570$ problematic in the United States.

NOTE Confidence: 0.836929976940155

00:02:30.570 --> 00:02:32.620 And on top of that,

NOTE Confidence: 0.836929976940155

 $00:02:32.620 \longrightarrow 00:02:34.670$ gastroesophageal cancers not only are

00:02:34.670 --> 00:02:37.519 gastric cancers or cancers of the stomach,

NOTE Confidence: 0.836929976940155

 $00:02:37.520 \longrightarrow 00:02:39.570$ but also of the esophagus.

NOTE Confidence: 0.836929976940155

 $00:02:39.570 \longrightarrow 00:02:42.554$ But the esophagus is a long tube that

NOTE Confidence: 0.836929976940155

 $00:02:42.554 \longrightarrow 00:02:45.488$ goes all the way from essentially your

NOTE Confidence: 0.836929976940155

 $00:02:45.488 \longrightarrow 00:02:48.978$ mouth all the way down to your stomach.

NOTE Confidence: 0.836929976940155

00:02:48.980 --> 00:02:51.428 So talk a little bit about

NOTE Confidence: 0.836929976940155

 $00:02:51.428 \longrightarrow 00:02:52.652$ whether those cancers,

NOTE Confidence: 0.836929976940155

00:02:52.660 --> 00:02:54.495 the cancers of the esophagus

NOTE Confidence: 0.836929976940155

 $00:02:54.495 \longrightarrow 00:02:56.886$ and the cancers of the stomach

NOTE Confidence: 0.836929976940155

 $00:02:56.886 \longrightarrow 00:02:58.790$ are similar or different,

NOTE Confidence: 0.836929976940155

 $00:02:58.790 \longrightarrow 00:03:00.835$ and whether there are different

NOTE Confidence: 0.836929976940155

 $00:03:00.835 \longrightarrow 00:03:02.880$ types of cancers even within that.

NOTE Confidence: 0.85228789349397

 $00:03:02.880 \longrightarrow 00:03:06.240$ Sure, so we often divide these

NOTE Confidence: 0.85228789349397

 $00{:}03{:}06.240 \dashrightarrow 00{:}03{:}09.229$ cancers into two anatomic groups.

NOTE Confidence: 0.85228789349397

00:03:09.230 --> 00:03:12.380 Esophagus cancer, as you alluded to,

NOTE Confidence: 0.85228789349397

 $00{:}03{:}12.380 \to 00{:}03{:}16.588$ and gastric, or what we call stomach cancer.

 $00:03:16.590 \longrightarrow 00:03:20.078$ And esophageal cancer we now know really

NOTE Confidence: 0.85228789349397

00:03:20.078 --> 00:03:23.210 is comprised of two very distinct types,

NOTE Confidence: 0.85228789349397

 $00:03:23.210 \longrightarrow 00:03:24.970$ really essentially different diseases.

 $00{:}03{:}26.290 \dashrightarrow 00{:}03{:}29.118$ One type is called squamous cell cancer

NOTE Confidence: 0.85228789349397

 $00:03:29.118 \longrightarrow 00:03:32.629$ an under the microscope and in terms of

NOTE Confidence: 0.85228789349397

 $00:03:32.629 \longrightarrow 00:03:35.550$ its molecular biology and risk factors,

NOTE Confidence: 0.85228789349397

 $00:03:35.550 \longrightarrow 00:03:38.714$ it's actually quite similar to cancers of

NOTE Confidence: 0.85228789349397

 $00:03:38.714 \longrightarrow 00:03:42.167$ the throat and the head and neck region.

NOTE Confidence: 0.85228789349397

00:03:42.170 --> 00:03:44.828 The risk factor there is to bacco

NOTE Confidence: 0.85228789349397

 $00:03:44.828 \longrightarrow 00:03:46.600$ and alcohol in poverty.

NOTE Confidence: 0.85228789349397

 $00:03:46.600 \longrightarrow 00:03:47.382$ And Interestingly,

NOTE Confidence: 0.85228789349397

 $00:03:47.382 \longrightarrow 00:03:49.337$ the incidence of squamous cell

NOTE Confidence: 0.85228789349397

 $00:03:49.337 \longrightarrow 00:03:51.573$ carcinoma of the esophagus has

NOTE Confidence: 0.85228789349397

 $00{:}03{:}51.573 \dashrightarrow 00{:}03{:}53.067$ really dropped dramatically,

NOTE Confidence: 0.85228789349397

 $00:03:53.070 \longrightarrow 00:03:55.220$ particularly in the Western world,

NOTE Confidence: 0.85228789349397

 $00:03:55.220 \longrightarrow 00:03:57.380$ so that's the good news.

 $00:03:57.380 \longrightarrow 00:03:59.530$ The other type of esophagus

NOTE Confidence: 0.85228789349397

00:03:59.530 --> 00:04:01.250 cancer is called adenocarcinoma,

NOTE Confidence: 0.85228789349397

 $00:04:01.250 \longrightarrow 00:04:03.818$ and then actually arises at the

NOTE Confidence: 0.85228789349397

 $00:04:03.818 \longrightarrow 00:04:06.463$ bottom of the esophagus where it

NOTE Confidence: 0.85228789349397

 $00:04:06.463 \longrightarrow 00:04:08.578$ connects in with the stomach,

NOTE Confidence: 0.85228789349397

 $00:04:08.580 \longrightarrow 00:04:10.304$ often referred to as

NOTE Confidence: 0.85228789349397

00:04:10.304 --> 00:04:11.597 gastroesophageal junction cancer,

NOTE Confidence: 0.85228789349397

 $00:04:11.600 \longrightarrow 00:04:14.808$ and that looks much more like a typical

NOTE Confidence: 0.85228789349397

00:04:14.808 --> 00:04:17.249 gastric cancer under the microscope.

NOTE Confidence: 0.85228789349397

 $00:04:17.250 \longrightarrow 00:04:19.966$ And actually is much more similar to

NOTE Confidence: 0.85228789349397

00:04:19.966 --> 00:04:22.678 gastric cancer than it is to squamous

NOTE Confidence: 0.85228789349397

 $00{:}04{:}22.678 \dashrightarrow 00{:}04{:}24.523$ cell cancers of the esophagus.

NOTE Confidence: 0.85228789349397

 $00:04:24.530 \longrightarrow 00:04:25.676$ And they are.

NOTE Confidence: 0.85228789349397

00:04:25.676 --> 00:04:27.586 They have different risk factors,

NOTE Confidence: 0.85228789349397 00:04:27.590 --> 00:04:28.214 so I,

 $00:04:28.214 \longrightarrow 00:04:30.710$ for I alluded to the risk factors for

NOTE Confidence: 0.85228789349397

 $00:04:30.785 \longrightarrow 00:04:34.033$ squamous cell of these saw fickas it's

NOTE Confidence: 0.85228789349397

00:04:34.033 --> 00:04:35.860 predominantly tobacco and alcohol

NOTE Confidence: 0.85228789349397

 $00:04:35.860 \longrightarrow 00:04:38.700$ as we see with head and neck cancer.

NOTE Confidence: 0.85228789349397

 $00:04:38.700 \longrightarrow 00:04:41.736$ For the adenocarcinomas of the esophagus

NOTE Confidence: 0.85228789349397

 $00:04:41.736 \longrightarrow 00:04:45.950$ that arise at the bottom of the esophagus.

NOTE Confidence: 0.85228789349397

 $00:04:45.950 \longrightarrow 00:04:47.974$ What's interesting about that

NOTE Confidence: 0.85228789349397

 $00:04:47.974 \longrightarrow 00:04:51.010$ is that there actually has been

NOTE Confidence: 0.85228789349397

 $00{:}04{:}51.099 \dashrightarrow 00{:}04{:}54.135$ quite a dramatic increase in the

NOTE Confidence: 0.85228789349397

 $00:04:54.135 \longrightarrow 00:04:56.830$ incidence of this particular entity.

NOTE Confidence: 0.85228789349397

00:04:56.830 --> 00:04:58.384 Gastroesophageal junction adenocarcinoma,

NOTE Confidence: 0.85228789349397

00:04:58.384 --> 00:05:00.456 particularly in Caucasian males,

NOTE Confidence: 0.85228789349397

 $00:05:00.460 \longrightarrow 00:05:03.838$ a great male predominant we don't

NOTE Confidence: 0.85228789349397

 $00:05:03.838 \longrightarrow 00:05:06.632$ fully understand that increase some

NOTE Confidence: 0.85228789349397

 $00:05:06.632 \longrightarrow 00:05:09.789$ of the risk factors that are linked.

NOTE Confidence: 0.85228789349397

 $00:05:09.790 \longrightarrow 00:05:13.085$ Two adenocarcinoma of the esophagus

 $00:05:13.085 \longrightarrow 00:05:16.380$ are high BMI or obesity.

NOTE Confidence: 0.85228789349397

 $00{:}05{:}16.380 \dashrightarrow 00{:}05{:}18.920$ Possibly Dyett gastro oesophageal

NOTE Confidence: 0.85228789349397

 $00{:}05{:}18.920 \dashrightarrow 00{:}05{:}22.095$ reflux disease is certainly risk

NOTE Confidence: 0.85228789349397

 $00:05:22.095 \longrightarrow 00:05:24.039$ factor in some cases,

NOTE Confidence: 0.85228789349397

 $00{:}05{:}24.040 \dashrightarrow 00{:}05{:}27.302$ but smoking and alcohol do not seem

NOTE Confidence: 0.85228789349397

00:05:27.302 --> 00:05:32.376 to play a predominant role in risk

NOTE Confidence: 0.85228789349397

00:05:32.376 --> 00:05:35.948 factor the gastroesophageal adenocarcinomas.

NOTE Confidence: 0.85228789349397

00:05:35.950 --> 00:05:39.558 Then you get into the stomach an we're

NOTE Confidence: 0.85228789349397

 $00:05:39.558 \longrightarrow 00:05:42.548$ talking about classic gastric cancer.

NOTE Confidence: 0.85228789349397

 $00:05:42.550 \longrightarrow 00:05:45.940$ And there what's very interesting is

NOTE Confidence: 0.85228789349397

 $00:05:45.940 \longrightarrow 00:05:50.320$ that there's been a progressive decline.

NOTE Confidence: 0.85228789349397

 $00:05:50.320 \longrightarrow 00:05:53.208$ Across the globe and in the United States.

NOTE Confidence: 0.85228789349397

 $00{:}05{:}53.210 \dashrightarrow 00{:}05{:}55.082$ In the incidence of gastric cancer

NOTE Confidence: 0.85228789349397

 $00:05:55.082 \longrightarrow 00:05:57.608$ as it was the number one cause

NOTE Confidence: 0.85228789349397

 $00:05:57.608 \longrightarrow 00:05:59.623$ of cancer related deaths globally

 $00:05:59.623 \longrightarrow 00:06:01.149$ until about the 1980s,

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 $00:06:01.150 \longrightarrow 00:06:03.572$ when it was surpassed by lung cancer

NOTE Confidence: 0.85228789349397

 $00:06:03.572 \longrightarrow 00:06:06.160$ and there are a lot of interesting

NOTE Confidence: 0.85228789349397

 $00:06:06.160 \longrightarrow 00:06:08.005$ theories about why that is.

NOTE Confidence: 0.85228789349397

 $00{:}06{:}08.010 \dashrightarrow 00{:}06{:}11.601$ And we do know that there are some risk

NOTE Confidence: 0.85228789349397

00:06:11.601 --> 00:06:14.640 factors for stomach or gastric cancer,

NOTE Confidence: 0.85228789349397

 $00{:}06{:}14.640 \dashrightarrow 00{:}06{:}16.850$ and these include some environmental

NOTE Confidence: 0.85228789349397

 $00:06:16.850 \longrightarrow 00:06:18.618$ and lifestyle risk factors.

NOTE Confidence: 0.85228789349397

 $00{:}06{:}18.620 \dashrightarrow 00{:}06{:}21.616$ One of the most prominent is a

NOTE Confidence: 0.85228789349397

00:06:21.616 --> 00:06:23.480 bacteria called Helicobacter pylori,

NOTE Confidence: 0.85228789349397

 $00:06:23.480 \longrightarrow 00:06:26.240$ which is quite prevalent and some

NOTE Confidence: 0.85228789349397

00:06:26.240 --> 00:06:29.021 strains of that bacteria are cancer

NOTE Confidence: 0.85228789349397

 $00:06:29.021 \longrightarrow 00:06:32.017$ causing and do increase the risk of

NOTE Confidence: 0.85228789349397

 $00{:}06{:}32.017 \dashrightarrow 00{:}06{:}35.052$ gastric cancer through been a lot of

NOTE Confidence: 0.85228789349397

 $00:06:35.052 \longrightarrow 00:06:37.642$ studies over the decades about diet.

NOTE Confidence: 0.85228789349397

 $00:06:37.642 \longrightarrow 00:06:39.897$ So it does seem that.

 $00{:}06{:}39.900 \dashrightarrow 00{:}06{:}42.456$ Salt preserved and smoked foods increase

NOTE Confidence: 0.85228789349397

 $00{:}06{:}42.456 \dashrightarrow 00{:}06{:}45.856$ the risk as well as dietze that are

NOTE Confidence: 0.85228789349397

 $00:06:45.856 \longrightarrow 00:06:48.280$ low in fresh fruits and vegetables.

NOTE Confidence: 0.85228789349397

00:06:48.280 --> 00:06:50.536 Modest risks risk factors would be

NOTE Confidence: 0.85228789349397

 $00:06:50.536 \longrightarrow 00:06:52.598$ smoking and obesity and probably

NOTE Confidence: 0.85228789349397

 $00:06:52.598 \longrightarrow 00:06:54.566$ lower social economic status.

NOTE Confidence: 0.826479136943817

 $00:06:54.570 \longrightarrow 00:06:57.496$ So there are a lot of differences,

NOTE Confidence: 0.826479136943817

 $00:06:57.500 \longrightarrow 00:06:59.912$ not only anatomically and in terms

NOTE Confidence: 0.826479136943817

 $00{:}06{:}59.912 \dashrightarrow 00{:}07{:}02.459$ of the pathology under the microscope

NOTE Confidence: 0.826479136943817

 $00:07:02.459 \longrightarrow 00:07:05.040$ but also risk factors, and it's

NOTE Confidence: 0.826479136943817

 $00:07:05.040 \longrightarrow 00:07:07.250$ interesting deals that you mentioned

NOTE Confidence: 0.826479136943817

 $00{:}07{:}07.250 \dashrightarrow 00{:}07{:}09.460$ that the oesophageal cancer rate

NOTE Confidence: 0.826479136943817

 $00{:}07{:}09.533 \dashrightarrow 00{:}07{:}11.328$ and the gastric cancer rate.

NOTE Confidence: 0.826479136943817

 $00:07:11.330 \longrightarrow 00:07:14.540$ Both seems to have dropped,

NOTE Confidence: 0.826479136943817

00:07:14.540 --> 00:07:16.466 but gastroesophageal cancers,

00:07:16.466 --> 00:07:20.960 those cancers that occur at that junction,

NOTE Confidence: 0.826479136943817

 $00:07:20.960 \longrightarrow 00:07:23.320$ the add node cancers.

NOTE Confidence: 0.826479136943817

 $00:07:23.320 \longrightarrow 00:07:25.090$ Have increased Ann.

NOTE Confidence: 0.826479136943817

 $00:07:25.090 \longrightarrow 00:07:28.415$ You mentioned that we we don't know

NOTE Confidence: 0.826479136943817

00:07:28.415 --> 00:07:31.280 why exactly those have increased,

NOTE Confidence: 0.826479136943817

00:07:31.280 --> 00:07:34.220 but do we have any insight into

NOTE Confidence: 0.826479136943817

 $00:07:34.220 \longrightarrow 00:07:38.017$ what played a role in decreasing the

NOTE Confidence: 0.826479136943817

 $00:07:38.017 \longrightarrow 00:07:41.072$ incidence of oesophageal cancers and

NOTE Confidence: 0.819761395454407

 $00:07:41.080 \longrightarrow 00:07:42.649$ of gastric cancers?

NOTE Confidence: 0.819761395454407

 $00:07:42.649 \longrightarrow 00:07:45.264$ So for squamous cell carcinoma

NOTE Confidence: 0.819761395454407

 $00{:}07{:}45.264 \dashrightarrow 00{:}07{:}48.399$ of the esophagus it is related

NOTE Confidence: 0.819761395454407

 $00:07:48.399 \longrightarrow 00:07:50.894$ to a decrease in smoking.

NOTE Confidence: 0.819761395454407

00:07:50.900 --> 00:07:52.920 And improvements in social

NOTE Confidence: 0.819761395454407

 $00:07:52.920 \longrightarrow 00:07:54.940$ economic status and nutrition.

NOTE Confidence: 0.819761395454407

 $00:07:54.940 \longrightarrow 00:07:58.484$ Those seem to be quite linked to squamous

NOTE Confidence: 0.819761395454407

00:07:58.484 --> 00:08:02.520 of the esophagus and for gastric cancer,

 $00:08:02.520 \longrightarrow 00:08:06.342$ we do think that it does relate

NOTE Confidence: 0.819761395454407

 $00:08:06.342 \longrightarrow 00:08:08.579$ to decreasing incidence of

NOTE Confidence: 0.819761395454407

00:08:08.580 --> 00:08:11.100 H. Pylori colonization or infection related,

NOTE Confidence: 0.819761395454407

00:08:11.100 --> 00:08:12.615 likely due to refrigeration

NOTE Confidence: 0.819761395454407

 $00:08:12.615 \longrightarrow 00:08:15.645$ over the last century or so.

NOTE Confidence: 0.819761395454407

 $00:08:15.650 \longrightarrow 00:08:19.906$ So in areas of the world that are

NOTE Confidence: 0.819761395454407

 $00:08:19.906 \longrightarrow 00:08:21.729$ underdeveloped we see

NOTE Confidence: 0.819761395454407

 $00:08:21.730 \longrightarrow 00:08:24.946$ a drop in the incidence of gastric cancer,

NOTE Confidence: 0.819761395454407

 $00:08:24.950 \longrightarrow 00:08:26.960$ so that's the prevailing theory.

00:08:27.360 --> 00:08:29.370 But you know, it's interesting

NOTE Confidence: 0.870746791362762

 $00{:}08{:}29.370 \dashrightarrow 00{:}08{:}30.978$ that despite these advances,

NOTE Confidence: 0.870746791362762

 $00{:}08{:}30.980 \dashrightarrow 00{:}08{:}34.188$ and certainly there's a long way to go,

NOTE Confidence: 0.870746791362762

 $00:08:34.190 \longrightarrow 00:08:36.596$ this is still, as you mentioned,

NOTE Confidence: 0.870746791362762

 $00:08:36.600 \longrightarrow 00:08:38.376$ a fairly lethal cancer

NOTE Confidence: 0.870746791362762

 $00:08:38.376 \longrightarrow 00:08:40.596$ when we think about gastroesophageal

NOTE Confidence: 0.870746791362762

 $00:08:40.596 \longrightarrow 00:08:41.828$ cancers as a whole,

 $00:08:41.830 \longrightarrow 00:08:44.170$ is that because they tend to

NOTE Confidence: 0.870746791362762

00:08:44.170 --> 00:08:46.650 present at late stages in general?

NOTE Confidence: 0.874626100063324

 $00:08:47.260 \longrightarrow 00:08:51.013$ I think it's a combination of factors.

NOTE Confidence: 0.874626100063324

 $00:08:51.020 \longrightarrow 00:08:53.946$ Yes they are lethal cancers,

NOTE Confidence: 0.874626100063324

00:08:53.950 --> 00:08:56.356 and that's why even though they're

NOTE Confidence: 0.874626100063324

 $00:08:56.356 \longrightarrow 00:08:58.550$ not so common in the United States,

NOTE Confidence: 0.874626100063324

 $00:08:58.550 \longrightarrow 00:09:00.310$ they're still very problematic.

NOTE Confidence: 0.874626100063324

 $00:09:00.310 \longrightarrow 00:09:03.411$ So the five year cure rate for

NOTE Confidence: 0.874626100063324

 $00:09:03.411 \dashrightarrow 00:09:06.064$ esophaeal cancer was only about 20%.

NOTE Confidence: 0.874626100063324

 $00{:}09{:}06.070 \dashrightarrow 00{:}09{:}09.406$ It's a little bit higher for gastric cancer,

NOTE Confidence: 0.874626100063324

00:09:09.410 --> 00:09:12.522 about 30%, and I think the reasons for

NOTE Confidence: 0.874626100063324

 $00:09:12.522 \longrightarrow 00:09:15.709$ this are multi factorial if you will.

NOTE Confidence: 0.874626100063324

 $00{:}09{:}15.710 \dashrightarrow 00{:}09{:}19.634$ In some cases, due to a delay in diagnosis,

NOTE Confidence: 0.874626100063324

 $00:09:19.640 \longrightarrow 00:09:23.136$ but I don't think that's the major reason.

NOTE Confidence: 0.874626100063324

 $00:09:23.140 \longrightarrow 00:09:26.623$ I think it has much to do with the

00:09:26.623 --> 00:09:29.260 inherent biology of these tumors.

NOTE Confidence: 0.874626100063324

00:09:29.260 --> 00:09:31.004 A propensity to disseminate

NOTE Confidence: 0.874626100063324

 $00:09:31.004 \longrightarrow 00:09:32.748$ or spread early on,

NOTE Confidence: 0.874626100063324

 $00:09:32.750 \longrightarrow 00:09:35.186$ and then the need for better

NOTE Confidence: 0.874626100063324

 $00:09:35.186 \longrightarrow 00:09:37.370$ and more effective the rapies to

NOTE Confidence: 0.874626100063324

 $00{:}09{:}37.370 \dashrightarrow 00{:}09{:}39.306$ deal with disseminated disease.

NOTE Confidence: 0.874626100063324

 $00:09:39.310 \longrightarrow 00:09:42.635$ I would add that in contrast to

NOTE Confidence: 0.874626100063324

 $00:09:42.635 \longrightarrow 00:09:45.580$ the common cancers such as breast,

NOTE Confidence: 0.874626100063324

 $00:09:45.580 \longrightarrow 00:09:46.918$ colorectal, lung, and cervical

NOTE Confidence: 0.874626100063324

00:09:46.918 --> 00:09:49.148 there is no widespread screening

NOTE Confidence: 0.874626100063324

00:09:49.148 --> 00:09:50.630 for these cancers,

NOTE Confidence: 0.874626100063324

 $00:09:50.630 \longrightarrow 00:09:53.378$ at least in the Western world.

 $00:09:54.972 \longrightarrow 00:09:56.962$ But it is a little bit different in Asia

NOTE Confidence: 0.874626100063324

 $00{:}09{:}56.962 \dashrightarrow 00{:}09{:}59.348$ and therefore early detection

NOTE Confidence: 0.874626100063324

 $00:09:59.350 \longrightarrow 00:10:02.170$ is less likely to happen with

NOTE Confidence: 0.874626100063324

 $00:10:02.170 \longrightarrow 00:10:04.400$ these cancers as opposed to

 $00:10:04.859 \longrightarrow 00:10:05.777$ breast cancer,

 $00:10:05.777 \longrightarrow 00:10:08.990$ so that certainly would be a contributing

NOTE Confidence: 0.830530166625977 00:10:08.990 --> 00:10:12.343 factor. NOTE Confidence: 0.830530166625977

 $00:10:12.343 \longrightarrow 00:10:14.499$ Talk a little bit about the differences in screening

in Asia.

00:10:15.964 --> 00:10:18.160 How do people in Asia get screened for

NOTE Confidence: 0.830530166625977

00:10:18.245 --> 00:10:20.475 esophageal cancers and why

NOTE Confidence: 0.830530166625977

 $00:10:20.475 \longrightarrow 00:10:24.218$ hasn't that been adopted in the US?

NOTE Confidence: 0.830530166625977

 $00:10:24.220 \longrightarrow 00:10:26.973$ Usually we find screening to be more

NOTE Confidence: 0.830530166625977

 $00:10:26.973 \longrightarrow 00:10:29.332$ prevalent in the Western world than

NOTE Confidence: 0.830530166625977

 $00:10:29.332 \longrightarrow 00:10:31.690$ we do in less developed countries.

NOTE Confidence: 0.869833290576935 00:10:32.460 --> 00:10:34.570 In terms of NOTE Confidence: 0.869833290576935

00:10:34.570 --> 00:10:37.280 screening in Asia for gastric cancer

NOTE Confidence: 0.869833290576935

00:10:37.280 --> 00:10:39.088 they do pretty sophisticated

NOTE Confidence: 0.869833290576935

00:10:39.088 --> 00:10:41.800 radiographic studies to look at

NOTE Confidence: 0.869833290576935

 $00:10:41.880 \longrightarrow 00:10:43.926$ the surface of the stomach to

NOTE Confidence: 0.869833290576935

 $00:10:43.926 \longrightarrow 00:10:46.480$ see if there are irregularities,

 $00:10:46.480 \longrightarrow 00:10:49.080$ and then for esophagus cancer

NOTE Confidence: 0.869833290576935

 $00{:}10{:}49.080 \dashrightarrow 00{:}10{:}51.160$ screening modalities is to have

NOTE Confidence: 0.869833290576935

 $00:10:51.160 \longrightarrow 00:10:53.632$ patients swallow a balloon and sort

NOTE Confidence: 0.869833290576935

00:10:53.632 --> 00:10:56.385 of pull it up through the esophagus

NOTE Confidence: 0.869833290576935

00:10:56.385 --> 00:10:58.809 and you pull off abnormal cells

NOTE Confidence: 0.869833290576935

 $00:10:58.809 \longrightarrow 00:11:01.400$ in the lining of the esophagus.

NOTE Confidence: 0.869833290576935

 $00:11:01.400 \longrightarrow 00:11:04.070$ And those are two screening modalities.

NOTE Confidence: 0.869833290576935

00:11:04.070 --> 00:11:08.182 That can be applied widely in the United

NOTE Confidence: 0.869833290576935

 $00:11:08.182 \longrightarrow 00:11:11.650$ States because it is an uncommon cancer.

NOTE Confidence: 0.869833290576935

00:11:11.650 --> 00:11:15.154 I think there's just not been a lot

NOTE Confidence: 0.869833290576935

 $00{:}11{:}15.154 \dashrightarrow 00{:}11{:}18.719$ of focus on wide spread screening

NOTE Confidence: 0.850119761058262

 $00:11:18.720 \longrightarrow 00:11:20.226$ for these cancers.

NOTE Confidence: 0.850119761058262

 $00:11:20.226 \longrightarrow 00:11:23.238$ So you mentioned that these cancers

NOTE Confidence: 0.850119761058262

00:11:23.238 --> 00:11:25.959 tend to, because of their biology,

NOTE Confidence: 0.850119761058262

 $00:11:25.960 \longrightarrow 00:11:27.836$ be more advanced

NOTE Confidence: 0.850119761058262

 $00:11:27.836 \longrightarrow 00:11:30.181$ at the time of presentation

 $00:11:30.181 \longrightarrow 00:11:33.667$ and more rapidly get to a more

NOTE Confidence: 0.850119761058262

 $00{:}11{:}33.667 \dashrightarrow 00{:}11{:}35.615$ advanced or metastatic stage,

NOTE Confidence: 0.850119761058262

 $00:11:35.620 \longrightarrow 00:11:37.755$ what proportion of

NOTE Confidence: 0.850119761058262

 $00:11:37.755 \longrightarrow 00:11:39.463$ these patients present with

NOTE Confidence: 0.850119761058262

00:11:39.463 --> 00:11:41.378 advanced or metastatic disease,

NOTE Confidence: 0.850119761058262 00:11:41.380 --> 00:11:43.590 out of all NOTE Confidence: 0.850119761058262

 $00:11:43.590 \longrightarrow 00:11:46.248$ the gastroesophageal cancers that you see?

NOTE Confidence: 0.844509780406952

 $00:11:46.780 \longrightarrow 00:11:50.188$ Still the majority of the

NOTE Confidence: 0.844509780406952

 $00{:}11{:}50.188 \operatorname{--}{>} 00{:}11{:}53.406$ patients are presenting with non

NOTE Confidence: 0.844509780406952

 $00{:}11{:}53.406 \dashrightarrow 00{:}11{:}56.758$ disseminated or nonmetastatic disease,

NOTE Confidence: 0.844509780406952

 $00:11:56.760 \longrightarrow 00:12:00.080$ so that's the good news.

NOTE Confidence: 0.844509780406952

 $00:12:00.080 \longrightarrow 00:12:03.104$ But despite that, again

NOTE Confidence: 0.844509780406952

00:12:03.104 --> 00:12:04.616 of tentimes particularly

NOTE Confidence: 0.844509780406952

 $00:12:04.620 \longrightarrow 00:12:06.705$ with the more advanced but

NOTE Confidence: 0.844509780406952

00:12:06.705 --> 00:12:07.956 still nonmetastatic cases,

00:12:07.960 --> 00:12:11.288 there is what we call a cult dissemination,

NOTE Confidence: 0.844509780406952

 $00{:}12{:}11.290 \dashrightarrow 00{:}12{:}14.378$ and that is where we look to additional

NOTE Confidence: 0.844509780406952

00:12:14.378 --> 00:12:16.129 therapies such as chemotherapy

NOTE Confidence: 0.844509780406952

 $00:12:16.129 \longrightarrow 00:12:18.379$ to try to increase security.

NOTE Confidence: 0.844509780406952

 $00:12:18.380 \longrightarrow 00:12:20.435$ You know, it's something that

NOTE Confidence: 0.844509780406952

 $00:12:20.435 \longrightarrow 00:12:22.490$ we've been doing for several

NOTE Confidence: 0.844509780406952

 $00:12:22.566 \longrightarrow 00:12:25.050$ decades in the breast cancer world,

NOTE Confidence: 0.844509780406952

 $00:12:25.050 \longrightarrow 00:12:27.135$ and certainly has a role

NOTE Confidence: 0.844509780406952

 $00:12:27.135 \longrightarrow 00:12:29.220$ in these cancers as well.

NOTE Confidence: 0.844509780406952

 $00:12:29.220 \longrightarrow 00:12:30.990$ Even in those patients who

NOTE Confidence: 0.844509780406952

 $00{:}12{:}30.990 \dashrightarrow 00{:}12{:}32.760$ appear to have localized and

NOTE Confidence: 0.844509780406952

 $00:12:32.833 \longrightarrow 00:12:34.639$ potentially curable disease.

NOTE Confidence: 0.859931170940399

 $00:12:34.790 \longrightarrow 00:12:38.130$ And I want to kind of get

NOTE Confidence: 0.859931170940399

00:12:38.219 --> 00:12:41.558 into how exactly we treat patients,

NOTE Confidence: 0.859931170940399

 $00:12:41.560 \longrightarrow 00:12:43.942$ and so with those patients with

NOTE Confidence: 0.859931170940399

 $00{:}12{:}43.942 \dashrightarrow 00{:}12{:}45.931$ localized disease, can we treat

00:12:45.931 --> 00:12:47.916 these patients for curative intent?

NOTE Confidence: 0.859931170940399

 $00:12:47.920 \longrightarrow 00:12:50.308$ And how do we do that?

NOTE Confidence: 0.842579483985901

 $00:12:50.940 \longrightarrow 00:12:53.415$ Absolutely, patients who

NOTE Confidence: 0.842579483985901

00:12:53.415 --> 00:12:55.395 present with nonmetastatic disease,

NOTE Confidence: 0.842579483985901

 $00:12:55.400 \longrightarrow 00:12:57.840$ so no evidence of dissemination

NOTE Confidence: 0.842579483985901

 $00:12:57.840 \longrightarrow 00:13:00.840$ to other sites in the body,

NOTE Confidence: 0.842579483985901

 $00:13:00.840 \longrightarrow 00:13:02.820$ and that we determined

NOTE Confidence: 0.842579483985901

 $00:13:02.820 \longrightarrow 00:13:04.800$ simply by getting imaging,

NOTE Confidence: 0.842579483985901

 $00:13:04.800 \longrightarrow 00:13:07.656$ usually a CAT scan or in

NOTE Confidence: 0.842579483985901

00:13:07.656 --> 00:13:10.250 some cases a PET scan.

NOTE Confidence: 0.842579483985901

 $00:13:10.250 \longrightarrow 00:13:13.906$ And for those patients there is a path

NOTE Confidence: 0.842579483985901

 $00:13:13.906 \longrightarrow 00:13:17.666$ to cure for many of those patients,

NOTE Confidence: 0.842579483985901

 $00{:}13{:}17.670 \dashrightarrow 00{:}13{:}19.662$ and that often involves

NOTE Confidence: 0.842579483985901

00:13:19.662 --> 00:13:21.654 surgery as the centerpiece

NOTE Confidence: 0.842579483985901

00:13:21.660 --> 00:13:24.945 of the cure and then in many cases where

 $00:13:24.945 \longrightarrow 00:13:28.128$ the disease is more locally advanced,

NOTE Confidence: 0.842579483985901

 $00{:}13{:}28.130 \dashrightarrow 00{:}13{:}30.220$ we will need adjunctive the rapies

NOTE Confidence: 0.842579483985901

 $00:13:30.220 \longrightarrow 00:13:32.310$ in addition to surgery to

NOTE Confidence: 0.842579483985901

 $00:13:32.389 \longrightarrow 00:13:34.589$ further increase the cure rate.

NOTE Confidence: 0.842579483985901

 $00:13:34.590 \longrightarrow 00:13:36.745$ And that's true both for

NOTE Confidence: 0.842579483985901

00:13:36.745 --> 00:13:38.900 esophagus cancer and for gastric

NOTE Confidence: 0.853434478243192 00:13:38.900 --> 00:13:41.996 cancer. NOTE Confidence: 0.853434478243192

 $00:13:41.996 \longrightarrow 00:13:45.619$ When the disease has spread or is more advanced,

NOTE Confidence: 0.853434478243192

 $00:13:45.620 \longrightarrow 00:13:49.604$ I would imagine that the rapies can be a

NOTE Confidence: 0.853434478243192

 $00:13:49.604 \longrightarrow 00:13:53.900$ little bit more challenging or problematic

NOTE Confidence: 0.853434478243192

 $00:13:53.900 \longrightarrow 00:13:55.730$ but I do understand that

NOTE Confidence: 0.853434478243192

 $00:13:55.730 \longrightarrow 00:13:57.775$ there are some new advances that

NOTE Confidence: 0.853434478243192

00:13:57.775 --> 00:14:00.043 may help patients who have more

NOTE Confidence: 0.853434478243192

 $00:14:00.043 \longrightarrow 00:14:02.129$ advanced or metastatic disease.

NOTE Confidence: 0.853434478243192

 $00:14:02.130 \longrightarrow 00:14:05.487$ So I want to get into all of that,

NOTE Confidence: 0.853434478243192

 $00:14:05.490 \longrightarrow 00:14:08.234$ but first we need to take a short

 $00:14:08.234 \longrightarrow 00:14:10.359$ break for a medical minute,

NOTE Confidence: 0.853434478243192

 $00:14:10.360 \longrightarrow 00:14:12.929$ so please stay tuned to learn more

NOTE Confidence: 0.853434478243192

00:14:12.929 --> 00:14:14.470 about gastroesophageal cancer

NOTE Confidence: 0.870499312877655

00:14:14.470 --> 00:14:17.254 with my guest Doctor Jill Lacy.

NOTE Confidence: 0.870499312877655

 $00{:}14{:}17.254 \dashrightarrow 00{:}14{:}20.077$ Support or Yale Cancer Answers comes from As-

traZeneca,

NOTE Confidence: 0.870499312877655

00:14:20.080 --> 00:14:22.005 a science LED biopharmaceutical company

NOTE Confidence: 0.870499312877655

00:14:22.005 --> 00:14:23.930 dedicated to partnering across the

NOTE Confidence: 0.870499312877655

 $00{:}14{:}23.984 \dashrightarrow 00{:}14{:}25.829$ on cology community to improve outcomes

NOTE Confidence: 0.870499312877655

 $00:14:25.829 \longrightarrow 00:14:27.674$ across various stages of cancer.

NOTE Confidence: 0.870499312877655

 $00:14:27.680 \longrightarrow 00:14:34.151$ More at a strazeneca-us.com. This is a

NOTE Confidence: 0.870499312877655

 $00:14:34.151 \longrightarrow 00:14:36.186$ medical minute about breast cancer,

NOTE Confidence: 0.870499312877655

 $00:14:36.190 \longrightarrow 00:14:38.220$ the most common cancer in

NOTE Confidence: 0.870499312877655

00:14:38.220 --> 00:14:39.844 women. In Connecticut alone,

NOTE Confidence: 0.870499312877655

 $00:14:39.850 \longrightarrow 00:14:41.900$ approximately 3000 women will be

NOTE Confidence: 0.870499312877655

 $00:14:41.900 \longrightarrow 00:14:44.330$ diagnosed with breast cancer this year,

 $00:14:44.330 \longrightarrow 00:14:46.360$ but thanks to earlier detection,

NOTE Confidence: 0.870499312877655

 $00:14:46.360 \longrightarrow 00:14:47.578$ non invasive treatments,

NOTE Confidence: 0.870499312877655

 $00:14:47.578 \longrightarrow 00:14:48.796$ and novel therapies,

NOTE Confidence: 0.870499312877655

 $00:14:48.800 \longrightarrow 00:14:51.621$ there are more options for patients to

NOTE Confidence: 0.870499312877655

 $00:14:51.621 \longrightarrow 00:14:54.089$ fight breast cancer then ever before.

NOTE Confidence: 0.870499312877655

 $00:14:54.090 \longrightarrow 00:14:56.125$ Women should schedule a baseline

NOTE Confidence: 0.870499312877655

00:14:56.125 --> 00:14:58.621 mammogram beginning at age 40 or

NOTE Confidence: 0.870499312877655

00:14:58.621 --> 00:15:00.949 earlier if they have risk factors

NOTE Confidence: 0.870499312877655

 $00:15:00.949 \longrightarrow 00:15:02.640$ associated with breast cancer.

NOTE Confidence: 0.870499312877655

 $00{:}15{:}02.640 \dashrightarrow 00{:}15{:}04.530$ Digital breast tomosynthesis or

NOTE Confidence: 0.870499312877655

00:15:04.530 --> 00:15:06.042 3D mammography is transforming

NOTE Confidence: 0.870499312877655

 $00:15:06.042 \longrightarrow 00:15:07.938$ breast screening by significantly

NOTE Confidence: 0.870499312877655

 $00{:}15{:}07.940 \dashrightarrow 00{:}15{:}09.539$ reducing unnecessary procedures

NOTE Confidence: 0.870499312877655

 $00{:}15{:}09.539 \dashrightarrow 00{:}15{:}12.737$ while picking up more cancers and

NOTE Confidence: 0.870499312877655

00:15:12.737 --> 00:15:15.302 eliminating some of the fear

 $00:15:15.302 \longrightarrow 00:15:17.257$ and anxiety many women experience.

NOTE Confidence: 0.870499312877655

00:15:17.260 --> 00:15:19.124 More information is available

NOTE Confidence: 0.870499312877655

 $00:15:19.124 \longrightarrow 00:15:20.056$ at yalecancercenter.org.

NOTE Confidence: 0.870499312877655

 $00:15:20.060 \longrightarrow 00:15:23.978$ You're listening to Connecticut Public Radio.

NOTE Confidence: 0.870499312877655 00:15:23.980 --> 00:15:24.410 Welcome NOTE Confidence: 0.852033913135529

00:15:24.410 --> 00:15:26.560 back to Yale Cancer Answers.

NOTE Confidence: 0.852033913135529

00:15:26.560 --> 00:15:28.960 This is doctor Anees Chagpar

NOTE Confidence: 0.852033913135529

 $00:15:28.960 \longrightarrow 00:15:31.570$ and I'm joined tonight by

NOTE Confidence: 0.852033913135529

00:15:31.570 --> 00:15:33.870 my guest doctor Jill Lacy.

NOTE Confidence: 0.852033913135529

 $00:15:33.870 \longrightarrow 00:15:36.005$ We're talking about gastroesophageal

NOTE Confidence: 0.852033913135529

 $00{:}15{:}36.005 \dashrightarrow 00{:}15{:}38.600$ cancer and right before the break

NOTE Confidence: 0.852033913135529

 $00:15:38.600 \longrightarrow 00:15:40.600$ Jill was telling us about

NOTE Confidence: 0.852033913135529

 $00:15:40.600 \longrightarrow 00:15:43.330$ how this is a rare cancer,

NOTE Confidence: 0.852033913135529

 $00:15:43.330 \longrightarrow 00:15:45.238$ but one that really is fatal

NOTE Confidence: 0.852033913135529

 $00:15:45.238 \longrightarrow 00:15:47.599$ for some patients and

NOTE Confidence: 0.852033913135529

00:15:47.599 --> 00:15:49.623 especially difficult or perhaps

00:15:49.623 --> 00:15:52.667 more challenging to treat in the

NOTE Confidence: 0.852033913135529

 $00:15:52.667 \longrightarrow 00:15:54.547$ advanced and metastatic setting.

NOTE Confidence: 0.852033913135529

 $00{:}15{:}54.550 \dashrightarrow 00{:}15{:}57.846$ So Jill tell us a little bit more

NOTE Confidence: 0.852033913135529

 $00:15:57.846 \longrightarrow 00:16:00.414$ about historically the options that

NOTE Confidence: 0.852033913135529

 $00:16:00.414 \longrightarrow 00:16:03.738$ we've had for advanced metastatic

NOTE Confidence: 0.852033913135529

 $00:16:03.738 \longrightarrow 00:16:05.252$ gastroesophageal cancers and

NOTE Confidence: 0.852033913135529

 $00:16:05.252 \longrightarrow 00:16:07.868$ some of the new developments that

NOTE Confidence: 0.852033913135529

 $00:16:07.868 \longrightarrow 00:16:10.628$ maybe can give patients more hope.

NOTE Confidence: 0.851593136787415

00:16:11.220 --> 00:16:15.385 For most of my career,

NOTE Confidence: 0.851593136787415

 $00:16:15.390 \longrightarrow 00:16:17.726$ when patients develop

NOTE Confidence: 0.851593136787415

00:16:17.726 --> 00:16:19.478 metastatic or disseminated

NOTE Confidence: 0.851593136787415

00:16:19.478 --> 00:16:21.950 esophageal or gastric cancers,

NOTE Confidence: 0.851593136787415

 $00{:}16{:}21.950 \dashrightarrow 00{:}16{:}26.115$ we were able to offer some treatments,

NOTE Confidence: 0.851593136787415

00:16:26.120 --> 00:16:29.886 but the prognosis was poor and the

NOTE Confidence: 0.851593136787415

 $00:16:29.886 \longrightarrow 00:16:33.549$ survival was relatively short and those

00:16:33.549 --> 00:16:36.799 treatments up until relatively recently

NOTE Confidence: 0.851593136787415

00:16:36.799 --> 00:16:40.419 were basically the use of chemotherapy,

NOTE Confidence: 0.851593136787415

 $00:16:40.420 \longrightarrow 00:16:42.238$ or cytotoxic drugs.

NOTE Confidence: 0.851593136787415

 $00:16:42.238 \longrightarrow 00:16:44.056$ Traditional chemotherapy drugs.

NOTE Confidence: 0.851593136787415

00:16:44.060 --> 00:16:46.236 And those drugs,

NOTE Confidence: 0.851593136787415

00:16:46.236 --> 00:16:48.412 often provided some palliation

NOTE Confidence: 0.851593136787415

00:16:48.412 --> 00:16:51.080 and mostly prolong survival,

NOTE Confidence: 0.851593136787415

 $00:16:51.080 \longrightarrow 00:16:54.005$ but it was unusual to

NOTE Confidence: 0.851593136787415

 $00:16:54.005 \longrightarrow 00:16:55.760$ see long-term survivors,

NOTE Confidence: 0.851593136787415

00:16:55.760 --> 00:17:00.308 and we were not curing patients

NOTE Confidence: 0.851593136787415

 $00:17:00.308 \longrightarrow 00:17:02.582$ with those treatments.

 $00:17:03.120 \longrightarrow 00:17:06.270$ What changed more recently?

NOTE Confidence: 0.857162296772003

 $00:17:07.010 \longrightarrow 00:17:11.322$ There have been some very exciting advances in

NOTE Confidence: 0.857162296772003

 $00{:}17{:}11.322 \dashrightarrow 00{:}17{:}14.930$ the treatment of metastatic, or disseminated,

NOTE Confidence: 0.857162296772003

 $00{:}17{:}14.930 \dashrightarrow 00{:}17{:}17.755$ both esophageal and gastric cancers.

NOTE Confidence: 0.857162296772003

 $00:17:17.760 \longrightarrow 00:17:21.440$ The first advance came about a decade

 $00:17:21.440 \longrightarrow 00:17:27.088$ ago and this was in the area of gastric

NOTE Confidence: 0.857162296772003

 $00{:}17{:}27.088 {\:\raisebox{--}{\text{--}}}{\:\raisebox{--}{\text{--}}}{\:\raisebox{--}{\text{--}}} 00{:}17{:}29.071$ and gastroesophageal adenocarcinomas.

NOTE Confidence: 0.857162296772003

 $00:17:29.080 \longrightarrow 00:17:34.030$ And what we had learned was that these are

NOTE Confidence: 0.857162296772003

 $00:17:34.030 \longrightarrow 00:17:37.529$ heterogeneous from a molecular perspective.

NOTE Confidence: 0.857162296772003

 $00:17:37.530 \longrightarrow 00:17:42.176$ And about 20 to 30% of these tumors carried

NOTE Confidence: 0.857162296772003

00:17:42.176 --> 00:17:46.180 high levels of a protein called Her 2,

NOTE Confidence: 0.857162296772003

 $00:17:46.180 \longrightarrow 00:17:48.982$ and we knew that this protein

NOTE Confidence: 0.857162296772003

 $00{:}17{:}48.982 \dashrightarrow 00{:}17{:}52.289$ also was present in breast cancer.

NOTE Confidence: 0.857162296772003

 $00:17:54.630 \longrightarrow 00:17:57.890$ And a drug had been developed

NOTE Confidence: 0.857162296772003

 $00:17:57.890 \longrightarrow 00:18:00.265$ called an antibody that

NOTE Confidence: 0.857162296772003

 $00:18:00.265 \longrightarrow 00:18:03.284$ targeted her 2 in breast cancer and

NOTE Confidence: 0.857162296772003

 $00:18:03.284 \longrightarrow 00:18:05.528$ it was extraordinarily effective.

NOTE Confidence: 0.857162296772003

 $00:18:05.530 \longrightarrow 00:18:08.120$ That drug is trastuzumab, or Herceptin.

NOTE Confidence: 0.857162296772003

 $00:18:08.120 \longrightarrow 00:18:09.876$ And so it was

NOTE Confidence: 0.857162296772003

 $00:18:09.876 \longrightarrow 00:18:12.071$ theorized that perhaps

NOTE Confidence: 0.857162296772003

00:18:12.071 --> 00:18:14.027 Herceptin would have

 $00:18:14.027 \longrightarrow 00:18:16.895$ activity in the her 2 positive

NOTE Confidence: 0.857162296772003

 $00:18:16.895 \longrightarrow 00:18:19.970$ gastric and esophageal adenocarcinomas.

NOTE Confidence: 0.857162296772003

 $00{:}18{:}19.970 \dashrightarrow 00{:}18{:}23.260$ So there was a large global effort

NOTE Confidence: 0.857162296772003

 $00:18:23.260 \longrightarrow 00:18:25.630$ to answer that question.

NOTE Confidence: 0.857162296772003

 $00:18:25.630 \longrightarrow 00:18:28.670$ Patients with advanced disease, metastatic

NOTE Confidence: 0.857162296772003

00:18:28.670 --> 00:18:32.606 or stage four were assigned to get

NOTE Confidence: 0.857162296772003

00:18:32.606 --> 00:18:35.413 the standard of care at that time,

NOTE Confidence: 0.857162296772003

 $00{:}18{:}35.420 \dashrightarrow 00{:}18{:}37.504$ chemotherapy with two drugs

NOTE Confidence: 0.857162296772003

 $00:18:37.504 \longrightarrow 00:18:39.067$ or chemotherapy plus

NOTE Confidence: 0.857162296772003

 $00:18:39.070 \longrightarrow 00:18:41.385$ Herceptin and the results

NOTE Confidence: 0.857162296772003

00:18:41.385 --> 00:18:44.773 of that study were really quite stunning

NOTE Confidence: 0.857162296772003

 $00:18:44.773 \longrightarrow 00:18:47.268$ in that survival was significantly

NOTE Confidence: 0.857162296772003

 $00{:}18{:}47.268 \dashrightarrow 00{:}18{:}49.695$ improved for those patients who

NOTE Confidence: 0.857162296772003

 $00:18:49.695 \longrightarrow 00:18:52.663$ received Herceptin.

NOTE Confidence: 0.857162296772003

 $00:18:52.670 \longrightarrow 00:18:55.870$ So I would say that was the first

 $00:18:55.870 \longrightarrow 00:18:58.722$ big advance and changed the paradigm

NOTE Confidence: 0.857162296772003

 $00:18:58.722 \longrightarrow 00:19:01.656$ about how we think about these

NOTE Confidence: 0.857162296772003

 $00{:}19{:}01.753 \dashrightarrow 00{:}19{:}05.239$ cancers in terms of looking at the

NOTE Confidence: 0.857162296772003

00:19:05.239 --> 00:19:07.212 molecular profile and thinking

NOTE Confidence: 0.857162296772003

00:19:07.212 --> 00:19:09.100 about using targeted therapies.

NOTE Confidence: 0.857162296772003

 $00:19:09.100 \longrightarrow 00:19:12.570$ So that was very exciting.

NOTE Confidence: 0.857162296772003

 $00:19:12.570 \longrightarrow 00:19:14.225$ And then what happened?

NOTE Confidence: 0.857162296772003

 $00:19:14.225 \longrightarrow 00:19:16.286$ It sounds like there's

NOTE Confidence: 0.857162296772003

 $00:19:16.286 \longrightarrow 00:19:18.770$ another shoe that's about to drop.

NOTE Confidence: 0.857162296772003

 $00:19:18.770 \longrightarrow 00:19:22.066$ There is, so in the breast cancer world

NOTE Confidence: 0.857162296772003

 $00:19:22.070 \longrightarrow 00:19:24.338$ what followed on after the discovery

NOTE Confidence: 0.857162296772003

00:19:24.338 --> 00:19:26.812 of Herceptin was the development of

NOTE Confidence: 0.857162296772003

 $00:19:26.812 \longrightarrow 00:19:29.494$ other drugs that targeted this protein

NOTE Confidence: 0.857162296772003

 $00:19:29.500 \longrightarrow 00:19:31.912$ Her 2 and there were additional

NOTE Confidence: 0.857162296772003

 $00:19:31.912 \longrightarrow 00:19:34.009$ drugs that were developed and

NOTE Confidence: 0.857162296772003

 $00{:}19{:}34.009 \dashrightarrow 00{:}19{:}36.109$ approved and that were effective.

00:19:36.110 --> 00:19:38.355 But unfortunately when those drugs

NOTE Confidence: 0.857162296772003

 $00:19:38.355 \longrightarrow 00:19:40.600$ were tested in gastroesophageal

NOTE Confidence: 0.857162296772003

 $00:19:40.672 \longrightarrow 00:19:43.248$ cancers that were positive for her 2,

NOTE Confidence: 0.857162296772003

 $00:19:43.250 \longrightarrow 00:19:46.442$ They were not effective and that was

NOTE Confidence: 0.857162296772003

 $00:19:46.442 \longrightarrow 00:19:49.434$ disappointing and so we were learning

NOTE Confidence: 0.857162296772003

 $00:19:49.434 \longrightarrow 00:19:52.506$ that her 2 positive gastroesophageal

NOTE Confidence: 0.857162296772003

 $00:19:52.506 \longrightarrow 00:19:55.027$ cancer is not the same thing as

NOTE Confidence: 0.820176362991333

 $00{:}19{:}55.030 \rightarrow 00{:}19{:}57.290$ her 2 positive breast cancer.

NOTE Confidence: 0.820176362991333

00:19:57.290 --> 00:20:00.008 That's interesting. So wait a second,

NOTE Confidence: 0.820176362991333

 $00:20:00.010 \longrightarrow 00:20:02.880$ what you're saying is that

NOTE Confidence: 0.820176362991333

 $00:20:02.880 \longrightarrow 00:20:05.701$ trust Herceptin worked in her

NOTE Confidence: 0.820176362991333

00:20:05.701 --> 00:20:07.709 2 positive gastric cancer,

NOTE Confidence: 0.820176362991333

 $00{:}20{:}07.710 \dashrightarrow 00{:}20{:}09.522$ but Pertuzumab, I'm assuming

NOTE Confidence: 0.820176362991333

 $00:20:09.522 \longrightarrow 00:20:12.240$ that you meant pertuzumab,

NOTE Confidence: 0.820176362991333

 $00:20:12.240 \longrightarrow 00:20:15.320$ which also targets her 2, did not work.

00:20:18.568 --> 00:20:21.457 It did not in the studies that were conducted as well as the antibody

NOTE Confidence: 0.818768918514252

 $00{:}20{:}21.457 \dashrightarrow 00{:}20{:}24.568$ drug conjugate TDM one and lapatinib.

NOTE Confidence: 0.818768918514252

00:20:26.178 --> 00:20:27.786 Any why was that?

NOTE Confidence: 0.818768918514252

 $00:20:27.790 \longrightarrow 00:20:30.614$ I mean do they think that

NOTE Confidence: 0.818768918514252

 $00{:}20{:}30.614 \dashrightarrow 00{:}20{:}32.686$ there was something particular about

NOTE Confidence: 0.818768918514252

 $00:20:32.686 \longrightarrow 00:20:36.570$ her 2 or was it or about Herceptin

NOTE Confidence: 0.818768918514252

 $00:20:36.570 \longrightarrow 00:20:39.440$ versus the other drugs in terms

NOTE Confidence: 0.818768918514252

 $00:20:39.440 \longrightarrow 00:20:42.256$ of what particular subunit of her 2

NOTE Confidence: 0.818768918514252

 $00:20:42.260 \longrightarrow 00:20:43.490$ that we're targeting?

NOTE Confidence: 0.818768918514252

 $00:20:43.490 \longrightarrow 00:20:45.950$ Or what was the

NOTE Confidence: 0.818768918514252

 $00:20:45.950 \longrightarrow 00:20:47.615$ hypothesis behind why

NOTE Confidence: 0.818768918514252

 $00:20:47.615 \longrightarrow 00:20:50.950$ one drug would work, but the

NOTE Confidence: 0.869497895240784

 $00:20:50.950 \longrightarrow 00:20:51.754$ others didn't?

NOTE Confidence: 0.869497895240784

00:20:51.754 --> 00:20:54.970 That is a great question and I don't

NOTE Confidence: 0.869497895240784

 $00{:}20{:}55.056 \dashrightarrow 00{:}20{:}57.737$ know that we have all the answers.

 $00:20:57.740 \longrightarrow 00:21:00.170$ We do know that gastroesophageal cancers

NOTE Confidence: 0.869497895240784

 $00{:}21{:}00.170 \dashrightarrow 00{:}21{:}02.501$ are much more heterogeneous in terms

NOTE Confidence: 0.869497895240784

 $00:21:02.501 \longrightarrow 00:21:04.433$ of their levels of expression are

NOTE Confidence: 0.869497895240784

00:21:04.433 --> 00:21:06.807 more likely to lose expression overtime,

NOTE Confidence: 0.869497895240784

 $00:21:06.810 \longrightarrow 00:21:08.086$ so that's one issue.

NOTE Confidence: 0.869497895240784

00:21:08.086 --> 00:21:11.382 Some of it may have been related to how

NOTE Confidence: 0.869497895240784

00:21:11.382 --> 00:21:13.986 the studies were designed and conducted,

NOTE Confidence: 0.869497895240784

00:21:13.990 --> 00:21:16.524 but I don't think we fully understand

NOTE Confidence: 0.869497895240784

00:21:16.524 --> 00:21:19.529 why we don't see the exact same activity

NOTE Confidence: 0.869497895240784

 $00:21:19.529 \longrightarrow 00:21:22.319$ of some of these agents in gastric

NOTE Confidence: 0.869497895240784

 $00:21:22.320 \longrightarrow 00:21:24.405$ and esophageal adenocarcinomas that we're

NOTE Confidence: 0.869497895240784

 $00:21:24.405 \longrightarrow 00:21:26.910$ seeing in breast cancer.

NOTE Confidence: 0.85562664270401

00:21:26.910 --> 00:21:29.346 Sorry to interrupt, but it still

NOTE Confidence: 0.85562664270401

 $00:21:29.346 \longrightarrow 00:21:32.328$ sounds like there was another shoe that

NOTE Confidence: 0.85562664270401

 $00:21:32.330 \longrightarrow 00:21:33.994$ was going to drop.

NOTE Confidence: 0.85562664270401

 $00:21:33.994 \longrightarrow 00:21:36.780$ Well, I think we're very excited in

 $00:21:36.780 \longrightarrow 00:21:39.654$ that it does appear that there is

NOTE Confidence: 0.85562664270401

 $00:21:39.654 \longrightarrow 00:21:42.475$ going to be newer generations of her

NOTE Confidence: 0.85562664270401

 $00:21:42.562 \longrightarrow 00:21:45.172$ 2 targeting agents that are going

NOTE Confidence: 0.85562664270401

00:21:45.172 --> 00:21:47.778 to be effective in gastric cancer.

NOTE Confidence: 0.85562664270401

 $00:21:47.778 \longrightarrow 00:21:50.781$ So one of them is a very

NOTE Confidence: 0.85562664270401

00:21:50.781 --> 00:21:52.368 interesting drug that is

NOTE Confidence: 0.85562664270401

00:21:52.370 --> 00:21:55.946 also used in breast cancer now very recently

NOTE Confidence: 0.85562664270401

00:21:55.946 --> 00:21:58.998 where you take Herceptin and you

NOTE Confidence: 0.85562664270401

 $00:21:59.000 \longrightarrow 00:22:01.394$ link it up biochemically to a

NOTE Confidence: 0.85562664270401

00:22:01.394 --> 00:22:02.990 chemotherapeutic drug.

NOTE Confidence: 0.85562664270401

 $00:22:09.073 \longrightarrow 00:22:13.137$ And that has been approved in breast cancer.

NOTE Confidence: 0.85562664270401

 $00{:}22{:}13.140 \dashrightarrow 00{:}22{:}15.625$ That's her 2 positive and has been

NOTE Confidence: 0.85562664270401

 $00{:}22{:}15.625 \dashrightarrow 00{:}22{:}18.767$ tested now and her 2 positive gastroesophageal

NOTE Confidence: 0.85562664270401

 $00:22:18.767 \longrightarrow 00:22:20.771$ adenocarcinomas in patients

NOTE Confidence: 0.85562664270401

00:22:20.771 --> 00:22:23.797 who have already been on trastuzumab

 $00:22:23.800 \longrightarrow 00:22:25.954$ and have failed treatment and the

NOTE Confidence: 0.85562664270401

 $00{:}22{:}25.954 \dashrightarrow 00{:}22{:}27.390$ results really were stunning.

NOTE Confidence: 0.85562664270401

 $00:22:27.390 \longrightarrow 00:22:29.185$ With major shrinkage in more

NOTE Confidence: 0.85562664270401

 $00:22:29.185 \longrightarrow 00:22:30.980$ than half of the patients,

NOTE Confidence: 0.85562664270401

 $00:22:30.980 \longrightarrow 00:22:32.996$ which is not something that we

NOTE Confidence: 0.85562664270401

 $00:22:32.996 \longrightarrow 00:22:34.930$ typically see in this disease.

NOTE Confidence: 0.85562664270401

 $00:22:34.930 \longrightarrow 00:22:37.084$ Really with any line of therapy

NOTE Confidence: 0.85562664270401

 $00:22:37.084 \longrightarrow 00:22:38.520$ and very impressive survival.

NOTE Confidence: 0.85562664270401

 $00:22:38.520 \longrightarrow 00:22:40.310$ So this is very exciting.

NOTE Confidence: 0.85562664270401

 $00:22:40.310 \longrightarrow 00:22:42.476$ There was a New England Journal

NOTE Confidence: 0.85562664270401

00:22:42.476 --> 00:22:44.328 of Medicine paper regarding this

NOTE Confidence: 0.85562664270401

 $00:22:44.328 \longrightarrow 00:22:45.700$ data earlier this year,

NOTE Confidence: 0.85562664270401

 $00:22:45.700 \longrightarrow 00:22:47.490$ and I do believe this

NOTE Confidence: 0.85562664270401

 $00{:}22{:}47.490 \dashrightarrow 00{:}22{:}49.709$ new drug will be approved not

NOTE Confidence: 0.85562664270401

 $00:22:49.709 \longrightarrow 00:22:52.736$ only in breast cancer but also in her

NOTE Confidence: 0.85562664270401

 $00{:}22{:}52.736 \dashrightarrow 00{:}22{:}54.741$ 2 positive gastroesophageal cancer.

 $00:22:54.750 \longrightarrow 00:22:57.696$ So we're very excited about that.

NOTE Confidence: 0.85562664270401 00:22:57.700 --> 00:22:58.598 And again, NOTE Confidence: 0.85562664270401

 $00{:}22{:}58.598 \dashrightarrow 00{:}23{:}01.741$ this is for our patients who

NOTE Confidence: 0.85562664270401

 $00:23:01.741 \longrightarrow 00:23:05.058$ have her two positive tumors.

NOTE Confidence: 0.85562664270401

 $00:23:05.060 \longrightarrow 00:23:08.006$ So it's not for all comers.

NOTE Confidence: 0.85562664270401

 $00:23:08.010 \longrightarrow 00:23:09.698$ So that's one development.

NOTE Confidence: 0.85562664270401

00:23:09.698 --> 00:23:13.321 And then I think we will also see

NOTE Confidence: 0.85562664270401

 $00:23:13.321 \longrightarrow 00:23:15.337$ some newer generation antibodies

NOTE Confidence: 0.85562664270401

 $00{:}23{:}15.337 \dashrightarrow 00{:}23{:}18.502$ that are similar to trastuzumab but

NOTE Confidence: 0.85562664270401

 $00:23:18.502 \longrightarrow 00:23:21.676$ more potent in recruiting the immune

NOTE Confidence: 0.85562664270401

 $00:23:21.676 \longrightarrow 00:23:25.200$ system into action to kill the cancer.

NOTE Confidence: 0.85562664270401

 $00:23:25.200 \longrightarrow 00:23:29.384$ And so one of those is called margetuximab,

NOTE Confidence: 0.85562664270401

 $00{:}23{:}29.390 \dashrightarrow 00{:}23{:}32.010$ so quite similar to trastuzumab,

NOTE Confidence: 0.85562664270401

 $00:23:32.010 \longrightarrow 00:23:34.614$ but it enhances the immune response

NOTE Confidence: 0.85562664270401

 $00:23:34.614 \longrightarrow 00:23:37.549$ and we've already seen really positive

 $00:23:37.549 \longrightarrow 00:23:40.354$ and exciting preliminary data when

NOTE Confidence: 0.85562664270401

 $00:23:40.354 \longrightarrow 00:23:43.539$ it is combined with immunotherapy.

NOTE Confidence: 0.85562664270401

 $00:23:43.540 \longrightarrow 00:23:46.684$ And there's a very exciting on

NOTE Confidence: 0.85562664270401

 $00:23:46.684 \longrightarrow 00:23:48.256$ going clinical trial

NOTE Confidence: 0.85562664270401

 $00:23:48.260 \longrightarrow 00:23:50.930$ looking at this combination of

NOTE Confidence: 0.85562664270401

 $00:23:50.930 \longrightarrow 00:23:53.066$ margetuximab in immunotherapy with

NOTE Confidence: 0.85562664270401

 $00:23:53.066 \longrightarrow 00:23:55.588$ chemotherapy in newly diagnosed patients.

NOTE Confidence: 0.85562664270401

 $00:23:55.590 \longrightarrow 00:23:57.458$ So we're very excited

NOTE Confidence: 0.85562664270401

 $00{:}23{:}57.458 \dashrightarrow 00{:}24{:}00.260$ about the second and third generation

NOTE Confidence: 0.85562664270401 00:24:00.344 --> 00:24:02.756 iterations

NOTE Confidence: 0.85562664270401

 $00{:}24{:}02.760 \longrightarrow 00{:}24{:}05.581$ and then there are other novel antibodies

NOTE Confidence: 0.85562664270401

00:24:05.581 --> 00:24:08.569 targeting her 2 that are being developed,

NOTE Confidence: 0.85562664270401

 $00{:}24{:}08.570 \dashrightarrow 00{:}24{:}11.242$ so I do think that the field is

NOTE Confidence: 0.85562664270401

 $00{:}24{:}11.242 \dashrightarrow 00{:}24{:}13.945$ really going to open up in terms of

NOTE Confidence: 0.85562664270401

00:24:13.945 --> 00:24:16.675 treatment of her 2 positive stage

NOTE Confidence: 0.85562664270401

 $00{:}24{:}16.675 \dashrightarrow 00{:}24{:}19.359$ for gastroesophageal adenocarcinoma.

 $00:24:19.725 \longrightarrow 00:24:21.915$ I'm very hopeful that the prognosis

NOTE Confidence: 0.85562664270401

 $00{:}24{:}21.915 \dashrightarrow 00{:}24{:}24.050$ for these patients will improve

NOTE Confidence: 0.85562664270401

 $00:24:24.050 \longrightarrow 00:24:25.998$ significantly with these therapies.

NOTE Confidence: 0.854938805103302

 $00:24:26.000 \longrightarrow 00:24:28.954$ But there's still a large fraction of

NOTE Confidence: 0.854938805103302

 $00:24:28.960 \longrightarrow 00:24:31.996$ patients who are her 2 negative,

NOTE Confidence: 0.854938805103302

 $00:24:32.000 \longrightarrow 00:24:34.020$ So what about them?

NOTE Confidence: 0.854938805103302

00:24:34.020 --> 00:24:35.535 Does standard immunotherapy,

NOTE Confidence: 0.854938805103302

00:24:35.540 --> 00:24:38.070 for example with checkpoint inhibitors,

NOTE Confidence: 0.829631650447846 00:24:38.070 --> 00:24:41.000 help them? NOTE Confidence: 0.829631650447846

 $00:24:41.000 \longrightarrow 00:24:44.255$ This is where there's some excitement really

NOTE Confidence: 0.829631650447846

 $00:24:44.260 \longrightarrow 00:24:47.056$ just in the past few months.

NOTE Confidence: 0.829631650447846

 $00:24:47.060 \longrightarrow 00:24:49.850$ So we hear a lot about

NOTE Confidence: 0.829631650447846

 $00:24:49.850 \longrightarrow 00:24:51.245$ immune checkpoint inhibitors.

NOTE Confidence: 0.829631650447846

00:24:51.250 --> 00:24:54.512 Drugs like KEYTRUDA

NOTE Confidence: 0.829631650447846

 $00:24:54.512 \longrightarrow 00:24:57.309$ or Opdivo in colon cancer,

NOTE Confidence: 0.829631650447846

00:24:57.310 --> 00:24:58.780 lung cancer, Melanoma,

 $00:24:58.780 \longrightarrow 00:25:01.230$ and many other cancers where

NOTE Confidence: 0.829631650447846

 $00:25:01.230 \longrightarrow 00:25:02.690$ these immunotherapeutic agents

NOTE Confidence: 0.829631650447846

 $00:25:02.690 \longrightarrow 00:25:04.755$ have really been game changers.

NOTE Confidence: 0.829631650447846

 $00:25:04.760 \longrightarrow 00:25:08.141$ These agents in the way the studies

NOTE Confidence: 0.829631650447846

 $00:25:08.141 \longrightarrow 00:25:11.327$ have been done to date have not

NOTE Confidence: 0.829631650447846

 $00:25:11.330 \longrightarrow 00:25:14.420$ appeared to have a significant

NOTE Confidence: 0.829631650447846

 $00:25:14.420 \longrightarrow 00:25:17.510$ impact in gastroesophageal cancer.

NOTE Confidence: 0.829631650447846

 $00{:}25{:}17.510 \dashrightarrow 00{:}25{:}20.884$ But there is some activity and we're

NOTE Confidence: 0.829631650447846

00:25:20.884 --> 00:25:23.374 learning more about who should

NOTE Confidence: 0.829631650447846

 $00{:}25{:}23.374 \longrightarrow 00{:}25{:}26.218$ get these agents who will benefit

NOTE Confidence: 0.829631650447846

 $00:25:26.218 \longrightarrow 00:25:29.009$ most when and how to use them.

NOTE Confidence: 0.829631650447846

 $00{:}25{:}29.010 \dashrightarrow 00{:}25{:}32.786$ And I think that's where the field is

NOTE Confidence: 0.829631650447846

 $00{:}25{:}32.786 \dashrightarrow 00{:}25{:}35.907$ moving forward in a very positive way.

NOTE Confidence: 0.829631650447846

 $00:25:35.910 \longrightarrow 00:25:38.658$ So there are already FDA approvals

NOTE Confidence: 0.829631650447846

 $00:25:41.430 \longrightarrow 00:25:43.270$ for classical immune checkpoint inhibitors,

 $00{:}25{:}43.270 \dashrightarrow 00{:}25{:}44.650$ and gastroesophageal cancer,

NOTE Confidence: 0.829631650447846

00:25:44.650 --> 00:25:47.352 so we can use KEYTRUDA

NOTE Confidence: 0.829631650447846

00:25:47.352 --> 00:25:49.799 in patients who failed standard

NOTE Confidence: 0.829631650447846

 $00:25:49.799 \longrightarrow 00:25:52.799$ several lines of standard therapy

NOTE Confidence: 0.829631650447846

 $00:25:52.800 \longrightarrow 00:25:56.349$ if their tumor expresses the target PDL1

NOTE Confidence: 0.829631650447846

 $00:25:56.870 \longrightarrow 00:25:59.470$ that's for gastric and gastroesophageal

NOTE Confidence: 0.829631650447846

 $00:25:59.470 \longrightarrow 00:26:01.550$ adenocarcinomas and it

NOTE Confidence: 0.829631650447846

 $00:26:01.624 \longrightarrow 00:26:04.258$ is also approved in esophageal

NOTE Confidence: 0.829631650447846

 $00{:}26{:}04.258 {\:{\mbox{--}}}{\:{\mbox{-}}} 00{:}26{:}06.014$ squamous cell carcinoma after

NOTE Confidence: 0.829631650447846

 $00:26:06.086 \longrightarrow 00:26:08.518$ standard initial chemotherapy works.

NOTE Confidence: 0.829631650447846

 $00:26:08.520 \longrightarrow 00:26:11.817$ And the results are very

NOTE Confidence: 0.829631650447846

 $00:26:11.817 \longrightarrow 00:26:14.577$ impressive there and it's also active

NOTE Confidence: 0.829631650447846

 $00:26:14.577 \longrightarrow 00:26:17.524$ in a very small subset of patients

NOTE Confidence: 0.829631650447846

00:26:17.613 --> 00:26:21.279 whose tumors are characterized by what

NOTE Confidence: 0.829631650447846

 $00:26:21.279 \longrightarrow 00:26:23.723$ we call microsatellite instability.

NOTE Confidence: 0.829631650447846

 $00{:}26{:}23.730 \dashrightarrow 00{:}26{:}26.796$ Or loss of a DNA repair mechanism.

 $00:26:26.800 \longrightarrow 00:26:29.290$ These tumors are characterized by lots

NOTE Confidence: 0.829631650447846

 $00:26:29.290 \longrightarrow 00:26:31.610$ of mutations in abnormal proteins.

NOTE Confidence: 0.829631650447846

 $00:26:31.610 \longrightarrow 00:26:34.238$ And respond very well to

NOTE Confidence: 0.829631650447846

 $00:26:34.238 \longrightarrow 00:26:35.552$ checkpoint inhibitors,

NOTE Confidence: 0.829631650447846

 $00:26:35.560 \longrightarrow 00:26:38.843$ but that's a small percentage in the

NOTE Confidence: 0.829631650447846

 $00:26:38.843 \longrightarrow 00:26:41.702$ range of three to 5%.

NOTE Confidence: 0.829631650447846

 $00:26:41.702 \longrightarrow 00:26:44.824$ So what's most exciting is data that

NOTE Confidence: 0.829631650447846

 $00:26:44.824 \longrightarrow 00:26:48.294$ we heard really just a few months ago

NOTE Confidence: 0.829631650447846

 $00:26:48.300 \longrightarrow 00:26:50.492$ regarding the incorporation of

NOTE Confidence: 0.829631650447846

 $00:26:50.492 \longrightarrow 00:26:52.684$ immune checkpoint inhibitors into

NOTE Confidence: 0.829631650447846

00:26:52.684 --> 00:26:55.590 the initial treatment of stage four,

NOTE Confidence: 0.829631650447846

 $00:26:55.590 \longrightarrow 00:26:57.156$ gastric and esophageal cancers.

NOTE Confidence: 0.829631650447846

 $00{:}26{:}58.200 \mathrel{--}{>} 00{:}27{:}01.497$ And so there were a couple of

NOTE Confidence: 0.829631650447846

 $00{:}27{:}01.497 \dashrightarrow 00{:}27{:}04.185$ studies that were presented at

NOTE Confidence: 0.829631650447846

 $00:27:04.185 \longrightarrow 00:27:07.120$ the major meeting in Europe.

 $00:27:07.120 \longrightarrow 00:27:08.948$ Both had similar designs.

NOTE Confidence: 0.829631650447846

 $00{:}27{:}08.948 \dashrightarrow 00{:}27{:}11.690$ One was focused on gastroesophageal

NOTE Confidence: 0.829631650447846

 $00:27:11.768 \longrightarrow 00:27:14.053$ adenocarcinoma and in this study

NOTE Confidence: 0.829631650447846

 $00:27:14.053 \longrightarrow 00:27:16.338$ patients were given either the

NOTE Confidence: 0.829631650447846

00:27:16.416 --> 00:27:18.740 standard two drug chemotherapy,

NOTE Confidence: 0.829631650447846

 $00:27:18.740 \longrightarrow 00:27:21.350$ standard of care, or those same

NOTE Confidence: 0.829631650447846

 $00:27:21.350 \longrightarrow 00:27:23.632$ two chemotherapy drugs with no

NOTE Confidence: 0.829631650447846

 $00:27:23.632 \longrightarrow 00:27:25.922$ OPDIVO and again

NOTE Confidence: 0.829631650447846

 $00{:}27{:}25.922 \to 00{:}27{:}28.435$ really exciting results with the

NOTE Confidence: 0.829631650447846

 $00:27:28.435 \longrightarrow 00:27:30.839$ significant improvement in survival.

NOTE Confidence: 0.829631650447846

 $00:27:30.840 \longrightarrow 00:27:33.255$ A higher response rate and

NOTE Confidence: 0.829631650447846

 $00:27:33.255 \longrightarrow 00:27:34.704$ excellent tolerability.

NOTE Confidence: 0.829631650447846

 $00{:}27{:}34.710 \dashrightarrow 00{:}27{:}37.626$ So lots of excitement about that.

NOTE Confidence: 0.829631650447846

 $00{:}27{:}37.630 \dashrightarrow 00{:}27{:}41.582$ And then a second study with a very

NOTE Confidence: 0.829631650447846

00:27:41.582 --> 00:27:44.458 similar design of chemo or chemo,

NOTE Confidence: 0.829631650447846

 $00{:}27{:}44.460 \dashrightarrow 00{:}27{:}47.876$ with in this case KEYTRUDA

 $00{:}27{:}47.880 \dashrightarrow 00{:}27{:}52.263$ and here the focus was an again on esophageal

cancer,

NOTE Confidence: 0.829631650447846

 $00:27:52.270 \longrightarrow 00:27:54.126$ both squamous and adenocarcinoma,

NOTE Confidence: 0.829631650447846

 $00:27:54.126 \longrightarrow 00:27:57.499$ and again a similar exciting result showing

NOTE Confidence: 0.829631650447846

 $00{:}27{:}57.499 \dashrightarrow 00{:}28{:}00.079$ a significant improvement in survival.

NOTE Confidence: 0.829631650447846

 $00{:}28{:}00.080 \dashrightarrow 00{:}28{:}03.976$ Actually a doubling of survival at two years.

NOTE Confidence: 0.829631650447846

 $00:28:03.980 \longrightarrow 00:28:07.924$ So this is really great news

 $00:28:08.406 \longrightarrow 00:28:10.786$ for patients with these diseases,

NOTE Confidence: 0.829631650447846

 $00{:}28{:}10.790 \dashrightarrow 00{:}28{:}13.919$ and I do think that these studies

NOTE Confidence: 0.829631650447846

 $00:28:13.919 \longrightarrow 00:28:16.373$ will ultimately lead to new

NOTE Confidence: 0.829631650447846

 $00:28:16.373 \longrightarrow 00:28:18.417$ indications and FDA approvals.

NOTE Confidence: 0.829631650447846

 $00:28:18.420 \longrightarrow 00:28:20.328$ We're not there yet,

NOTE Confidence: 0.829631650447846

 $00:28:20.328 \longrightarrow 00:28:22.236$ but I think we're

NOTE Confidence: 0.837908208370209

 $00:28:22.240 \longrightarrow 00:28:24.625$ getting close.

NOTE Confidence: 0.837908208370209

 $00:28:24.625 \longrightarrow 00:28:27.010$ What about in terms of other targeted therapies?

NOTE Confidence: 0.837908208370209

 $00:28:27.010 \longrightarrow 00:28:29.810$ You know we have talked on this

00:28:29.810 --> 00:28:32.656 show with other people from other

NOTE Confidence: 0.837908208370209

 $00{:}28{:}32.656 \dashrightarrow 00{:}28{:}35.251$ disease groups and other cancer

NOTE Confidence: 0.837908208370209

00:28:35.251 --> 00:28:37.998 types about looking at cancers

NOTE Confidence: 0.837908208370209

 $00:28:38.000 \longrightarrow 00:28:40.860$ and seeing what genes are turned on

NOTE Confidence: 0.837908208370209

 $00:28:40.860 \longrightarrow 00:28:44.116$ and turned off to try to target these?

NOTE Confidence: 0.837908208370209

00:28:44.120 --> 00:28:46.969 How much of that goes on in

NOTE Confidence: 0.837908208370209

00:28:46.969 --> 00:28:47.783 gastroesophageal cancers?

NOTE Confidence: 0.837908208370209

 $00:28:47.790 \longrightarrow 00:28:50.450$ Are we getting there in terms of

NOTE Confidence: 0.837908208370209

 $00{:}28{:}50.450 \dashrightarrow 00{:}28{:}52.690$ genomic analysis of these cancers

NOTE Confidence: 0.837908208370209

 $00:28:52.690 \longrightarrow 00:28:55.138$ and being able to target them

NOTE Confidence: 0.837908208370209

00:28:55.138 --> 00:28:56.770 aside from her 2?

NOTE Confidence: 0.854126632213593

 $00:28:57.540 \longrightarrow 00:29:00.140$ Yes, absolutely, so we routinely

NOTE Confidence: 0.854126632213593

 $00:29:00.140 \longrightarrow 00:29:03.510$ recommend that all patients with advanced

NOTE Confidence: 0.854126632213593

 $00:29:03.510 \longrightarrow 00:29:05.553$ gastroesophageal adenocarcinomas

NOTE Confidence: 0.854126632213593

 $00:29:05.553 \longrightarrow 00:29:08.958$ and squamous cell carcinomas

NOTE Confidence: 0.854126632213593

 $00:29:08.958 \longrightarrow 00:29:12.649$ undergo what is referred to as tumor

 $00:29:12.649 \longrightarrow 00:29:15.746$ profiling or molecular profiling to look

NOTE Confidence: 0.854126632213593

 $00:29:15.746 \longrightarrow 00:29:19.722$ at the genetic makeup of the tumor

NOTE Confidence: 0.854126632213593

 $00:29:19.730 \longrightarrow 00:29:23.150$ to see what makes it tick.

NOTE Confidence: 0.854126632213593

00:29:23.150 --> 00:29:26.948 Now we haven't identified a high

NOTE Confidence: 0.854126632213593

00:29:26.948 --> 00:29:29.480 frequency of recurring targets.

NOTE Confidence: 0.854126632213593

 $00:29:29.480 \longrightarrow 00:29:31.958$ To date, other than her 2,

NOTE Confidence: 0.854126632213593

 $00:29:31.960 \longrightarrow 00:29:34.810$ but there are targets that are

NOTE Confidence: 0.854126632213593

 $00:29:34.810 \longrightarrow 00:29:36.710$ expressed with reasonable frequency

NOTE Confidence: 0.854126632213593

 $00:29:36.786 \longrightarrow 00:29:39.509$ that are what we call actionable or

NOTE Confidence: 0.854126632213593

 $00{:}29{:}39.509 \dashrightarrow 00{:}29{:}41.828$ druggable where we can develop a

NOTE Confidence: 0.854126632213593

00:29:41.828 --> 00:29:44.348 drug or have a drug that potentially

NOTE Confidence: 0.854126632213593

 $00:29:44.350 \longrightarrow 00:29:46.034$ could target that abnormality.

NOTE Confidence: 0.854126632213593

 $00{:}29{:}46.034 \dashrightarrow 00{:}29{:}48.560$ So we've talked at length today

NOTE Confidence: 0.854126632213593

 $00:29:48.634 \longrightarrow 00:29:50.130$ already about her 2,

NOTE Confidence: 0.854126632213593

 $00:29:50.130 \longrightarrow 00:29:52.788$ and that's a critically important

 $00:29:52.788 \longrightarrow 00:29:55.501$ target in those 25 to 30% patients

NOTE Confidence: 0.854126632213593

 $00:29:55.501 \longrightarrow 00:29:57.556$ and again another exciting development

NOTE Confidence: 0.854126632213593

00:30:00.930 --> 00:30:03.026 that I think we are on the cusp of is another

targeted therapy.

NOTE Confidence: 0.854126632213593

00:30:03.026 --> 00:30:05.646 This again is an antibody

 $00:30:08.038 \longrightarrow 00:30:10.364$ that is targeting another

NOTE Confidence: 0.854126632213593

 $00:30:10.364 \longrightarrow 00:30:12.980$ protein called fibroblast growth

NOTE Confidence: 0.854126632213593

 $00:30:12.980 \longrightarrow 00:30:15.596$ factor receptor and

NOTE Confidence: 0.854126632213593 00:30:15.600 --> 00:30:17.211 like her 2, NOTE Confidence: 0.854126632213593

 $00{:}30{:}17.211 \dashrightarrow 00{:}30{:}20.433$ is expressed on the surface and

NOTE Confidence: 0.854126632213593

00:30:20.433 --> 00:30:24.552 again in about probably 20 to 30\% of

NOTE Confidence: 0.854126632213593

 $00{:}30{:}24.552 \dashrightarrow 00{:}30{:}27.924$ patients is expressed at very high

NOTE Confidence: 0.854126632213593

 $00:30:27.924 \longrightarrow 00:30:31.339$ levels or overexpressed and this has been

NOTE Confidence: 0.854126632213593

 $00:30:31.340 \longrightarrow 00:30:34.996$ a target for the development of an antibody,

NOTE Confidence: 0.854126632213593

 $00:30:35.000 \longrightarrow 00:30:37.526$ and we heard really just this

NOTE Confidence: 0.854126632213593

 $00:30:37.526 \longrightarrow 00:30:40.020$ week from a press release,

NOTE Confidence: 0.854126632213593

 $00:30:40.020 \longrightarrow 00:30:42.768$ so we haven't seen the data,

 $00:30:42.770 \longrightarrow 00:30:45.930$ so we have to stay tuned, that a

NOTE Confidence: 0.854126632213593

00:30:45.930 --> 00:30:48.569 study looking at patients who have

NOTE Confidence: 0.854126632213593

 $00:30:48.569 \longrightarrow 00:30:51.813$ this target looking at

NOTE Confidence: 0.854126632213593

00:30:51.813 --> 00:30:54.403 these patients and combining the

NOTE Confidence: 0.854126632213593

 $00:30:54.403 \longrightarrow 00:30:57.342$ antibody that targets FG FR2 with

NOTE Confidence: 0.854126632213593

 $00:30:57.342 \longrightarrow 00:30:59.497$ chemotherapy and comparing that to

NOTE Confidence: 0.854126632213593

 $00:30:59.497 \longrightarrow 00:31:02.230$ standard of care chemotherapy alone.

NOTE Confidence: 0.854126632213593

 $00{:}31{:}02.230 \dashrightarrow 00{:}31{:}05.278$ And at least based on the press release,

NOTE Confidence: 0.854126632213593

00:31:05.280 --> 00:31:08.709 this looks like it will be a positive study.

NOTE Confidence: 0.854126632213593 00:31:08.710 --> 00:31:09.450 So again, NOTE Confidence: 0.854126632213593

00:31:09.450 --> 00:31:11.670 quite a bit of excitement and

NOTE Confidence: 0.854126632213593

 $00:31:11.670 \longrightarrow 00:31:13.280$ buzz in the field.

 $00:31:21.660 \longrightarrow 00:31:23.160$ So there's one example,

NOTE Confidence: 0.854126632213593

00:31:23.160 --> 00:31:25.862 there are several others and drugs in

NOTE Confidence: 0.854126632213593

 $00:31:25.862 \longrightarrow 00:31:28.136$ the pipeline looking at other targets.

NOTE Confidence: 0.854126632213593

 $00:31:28.140 \longrightarrow 00:31:28.520$ Doctor Jill Lacy

 $00:31:28.520 \longrightarrow 00:31:30.932$ is a professor of

NOTE Confidence: 0.867128193378448

 $00:31:30.932 \longrightarrow 00:31:32.540$ medicine and medical oncology

NOTE Confidence: 0.867128193378448

 $00:31:32.617 \longrightarrow 00:31:34.765$ at the Yale School of Medicine.

NOTE Confidence: 0.867128193378448

 $00:31:34.770 \longrightarrow 00:31:36.330$ If you have questions,

NOTE Confidence: 0.867128193378448

 $00{:}31{:}36.330 \dashrightarrow 00{:}31{:}37.890$ the address is canceranswers@yale.edu

NOTE Confidence: 0.867128193378448

 $00:31:37.890 \longrightarrow 00:31:40.047$ and past editions of the program

NOTE Confidence: 0.867128193378448

 $00{:}31{:}40.047 \dashrightarrow 00{:}31{:}42.015$ are available in audio and written

NOTE Confidence: 0.867128193378448

 $00{:}31{:}42.077 \dashrightarrow 00{:}31{:}43.718$ form at yale cancercenter.org.

NOTE Confidence: 0.867128193378448

00:31:43.720 --> 00:31:46.328 We hope you'll join us next week to

NOTE Confidence: 0.867128193378448

 $00:31:46.328 \longrightarrow 00:31:48.860$ learn more about the fight against

NOTE Confidence: 0.867128193378448

 $00:31:48.860 \longrightarrow 00:31:51.504$ cancer here on Connecticut Public Radio.