## WEBVTT

00:00:00.000 --> 00:00:02.490 Support for Yale Cancer Answers

NOTE Confidence: 0.85464054

 $00{:}00{:}02.490 \dashrightarrow 00{:}00{:}04.980$  comes from AstraZeneca, dedicated

NOTE Confidence: 0.85464054

 $00:00:05.057 \longrightarrow 00:00:07.432$  to advancing options and providing

NOTE Confidence: 0.85464054

 $00:00:07.432 \longrightarrow 00:00:10.420$  hope for people living with cancer.

NOTE Confidence: 0.85464054

 $00:00:10.420 \longrightarrow 00:00:14.048$  More information at astrazeneca-us.com.

NOTE Confidence: 0.85464054

 $00:00:14.050 \longrightarrow 00:00:16.168$  Welcome to Yale Cancer Answers with

NOTE Confidence: 0.85464054

00:00:16.168 --> 00:00:18.479 your host doctor Anees Chappar.

NOTE Confidence: 0.85464054

 $00:00:18.480 \longrightarrow 00:00:20.300$  Yale Cancer Answers features the

NOTE Confidence: 0.85464054

 $00:00:20.300 \longrightarrow 00:00:22.537$  latest information on cancer care by

NOTE Confidence: 0.85464054

 $00{:}00{:}22.537 \dashrightarrow 00{:}00{:}23.969$  welcoming on cologists and specialists

NOTE Confidence: 0.85464054

 $00:00:23.969 \longrightarrow 00:00:26.374$  who are on the forefront of the

NOTE Confidence: 0.85464054

 $00:00:26.374 \longrightarrow 00:00:28.030$  battle to fight cancer. This week,

NOTE Confidence: 0.85464054

 $00:00:28.030 \longrightarrow 00:00:29.974$  it's a conversation about outcomes research

NOTE Confidence: 0.85464054

 $00:00:29.974 \dashrightarrow 00:00:32.120$  in kidney cancer with Doctor Michaela Dinan.

NOTE Confidence: 0.85464054

 $00:00:32.120 \longrightarrow 00:00:34.290$  Doctor Dinan is an

 $00:00:34.290 \longrightarrow 00:00:36.027$  associate professor in chronic disease

NOTE Confidence: 0.85464054

 $00{:}00{:}36.027 \dashrightarrow 00{:}00{:}38.271$  Epidemiology at the Yale School of

NOTE Confidence: 0.85464054

 $00:00:38.271 \longrightarrow 00:00:40.310$  Public Health and Doctor Chagpar

NOTE Confidence: 0.85464054

 $00:00:40.310 \longrightarrow 00:00:42.848$  is a professor of surgical oncology

NOTE Confidence: 0.85464054

 $00:00:42.848 \longrightarrow 00:00:45.570$  at the Yale School of Medicine.

00:00:45.920 --> 00:00:47.615 Michaela, maybe we can start

NOTE Confidence: 0.8466049

 $00:00:47.615 \longrightarrow 00:00:50.082$  off by you telling us a little

NOTE Confidence: 0.8466049

 $00:00:50.082 \longrightarrow 00:00:51.827$  bit more about yourself and

NOTE Confidence: 0.8466049

 $00:00:51.830 \longrightarrow 00:00:52.970$  what exactly you do.

NOTE Confidence: 0.8466049

 $00{:}00{:}52.970 \dashrightarrow 00{:}00{:}55.104$  I call myself a cancer outcomes or

NOTE Confidence: 0.8466049

 $00:00:55.104 \longrightarrow 00:00:56.939$  health services researcher so people

NOTE Confidence: 0.8466049

 $00:00:56.939 \longrightarrow 00:00:58.869$  aren't always familiar with cancer

NOTE Confidence: 0.8466049

 $00{:}00{:}58.869 \dashrightarrow 00{:}01{:}00.879$  outcomes or health services research.

NOTE Confidence: 0.8466049

 $00:01:00.880 \longrightarrow 00:01:03.085$  They tend to be more familiar with

NOTE Confidence: 0.8466049

 $00:01:03.085 \longrightarrow 00:01:05.059$  basic or clinical Cancer Research.

NOTE Confidence: 0.8466049

 $00:01:05.060 \longrightarrow 00:01:06.730$  Basic Cancer Research relates to

00:01:06.730 --> 00:01:09.578 studies done in a lab with cancer cells,

NOTE Confidence: 0.8466049

 $00{:}01{:}09.580 \dashrightarrow 00{:}01{:}12.236$  either in a Petri dish or in animals

NOTE Confidence: 0.8466049

 $00:01:12.236 \longrightarrow 00:01:14.074$  where researchers can directly manipulate

NOTE Confidence: 0.8466049

 $00{:}01{:}14.074 \dashrightarrow 00{:}01{:}16.288$  and study cancer cells to learn

NOTE Confidence: 0.8466049

 $00:01:16.288 \longrightarrow 00:01:18.568$  more about basic biology of cancer.

NOTE Confidence: 0.8466049

00:01:18.570 --> 00:01:20.814 And then, clinical Cancer Research refers

NOTE Confidence: 0.8466049

 $00{:}01{:}20.814 \dashrightarrow 00{:}01{:}23.533$  to when advances in basic science are

NOTE Confidence: 0.8466049

00:01:23.533 --> 00:01:25.463 being translated into actual medical

NOTE Confidence: 0.8466049

00:01:25.463 --> 00:01:27.526 tests or treatments and are then

NOTE Confidence: 0.8466049

 $00:01:27.526 \longrightarrow 00:01:30.128$  tested in humans to see if they work.

NOTE Confidence: 0.8466049

 $00{:}01{:}30.128 \dashrightarrow 00{:}01{:}32.402$  My focus of research health services

NOTE Confidence: 0.8466049

 $00:01:32.402 \longrightarrow 00:01:34.511$  is the part that comes

NOTE Confidence: 0.8466049

 $00:01:34.511 \longrightarrow 00:01:36.437$  after this, after a new medical

NOTE Confidence: 0.8466049

00:01:36.506 --> 00:01:38.336 treatment or diagnostic tool is

NOTE Confidence: 0.8466049

00:01:38.336 --> 00:01:40.515 found to work in clinical trials,

NOTE Confidence: 0.8466049

00:01:40.515 --> 00:01:42.585 I study how it actually gets

 $00:01:42.585 \longrightarrow 00:01:44.490$  used in the real world.

NOTE Confidence: 0.8466049

00:01:44.490 --> 00:01:47.740 You have to remember that only around 3% of

NOTE Confidence: 0.8466049

00:01:47.740 --> 00:01:50.330 patients are treated on a clinical trial.

NOTE Confidence: 0.8466049

 $00:01:50.330 \longrightarrow 00:01:52.100$  And other people who take part

NOTE Confidence: 0.8466049

 $00:01:52.100 \longrightarrow 00:01:54.062$  in clinical trials are not like

NOTE Confidence: 0.8466049

00:01:54.062 --> 00:01:55.510 the general cancer population.

NOTE Confidence: 0.8466049

00:01:55.510 --> 00:01:58.426 In order to be enrolled in a clinical trial,

NOTE Confidence: 0.8466049

 $00:01:58.430 \longrightarrow 00:02:00.649$  you have to be healthy enough to

NOTE Confidence: 0.8466049

 $00:02:00.649 \longrightarrow 00:02:02.199$  qualify for participation and every

NOTE Confidence: 0.8466049

 $00:02:02.199 \dashrightarrow 00:02:04.343$  clinical trial has a set of very strict

NOTE Confidence: 0.8466049

 $00:02:04.402 \longrightarrow 00:02:06.210$  inclusion and exclusion criteria.

NOTE Confidence: 0.8466049

00:02:06.210 --> 00:02:08.794 And if you don't meet every single one,

NOTE Confidence: 0.8466049

00:02:08.800 --> 00:02:11.068 you can't participate as you can imagine,

NOTE Confidence: 0.8466049

00:02:11.070 --> 00:02:13.429 the vast majority of patients who receive

NOTE Confidence: 0.8466049

00:02:13.429 --> 00:02:15.926 treatment are not part of a clinical trial,

00:02:15.930 --> 00:02:17.685 so trial participants don't look

NOTE Confidence: 0.8466049

00:02:17.685 --> 00:02:19.833 like everyone else who gets treatment

NOTE Confidence: 0.8466049

 $00{:}02{:}19.833 \dashrightarrow 00{:}02{:}22.136$  for their cancer in the real world.

NOTE Confidence: 0.8466049

 $00:02:22.140 \longrightarrow 00:02:24.192$  Many people that are not included

NOTE Confidence: 0.8466049

 $00:02:24.192 \longrightarrow 00:02:26.470$  in trials are often older adults.

NOTE Confidence: 0.8466049

 $00:02:26.470 \longrightarrow 00:02:28.350$  People who have other medical

NOTE Confidence: 0.8466049

 $00{:}02{:}28.350 \dashrightarrow 00{:}02{:}30.639$  conditions or people who don't live

NOTE Confidence: 0.8466049

 $00{:}02{:}30.639 \dashrightarrow 00{:}02{:}32.673$ near an academic Medical Center or

NOTE Confidence: 0.8466049

 $00:02:32.673 \longrightarrow 00:02:35.166$  who can't make all the extra visits

NOTE Confidence: 0.8466049

 $00:02:35.166 \longrightarrow 00:02:36.578$  that are often required,

NOTE Confidence: 0.8466049

 $00:02:36.580 \longrightarrow 00:02:39.135$  or people that don't otherwise want to

NOTE Confidence: 0.8466049

 $00:02:39.135 \longrightarrow 00:02:41.270$  participate in trials for some reason.

NOTE Confidence: 0.8466049

00:02:41.270 --> 00:02:42.353 Health Services Research,

NOTE Confidence: 0.8466049

 $00:02:42.353 \longrightarrow 00:02:44.158$  which is what I do,

NOTE Confidence: 0.8466049

 $00:02:44.160 \longrightarrow 00:02:45.920$  looks at how cancer treatments

NOTE Confidence: 0.8466049

 $00{:}02{:}45.920 \dashrightarrow 00{:}02{:}48.130$  happen quote in the real world.

 $00:02:48.130 \longrightarrow 00:02:49.129$  So for example,

NOTE Confidence: 0.8466049

 $00{:}02{:}49.129 \dashrightarrow 00{:}02{:}51.925$  we get to ask questions like how is

NOTE Confidence: 0.8466049

 $00:02:51.925 \longrightarrow 00:02:53.900$  cancer treated within the entire

NOTE Confidence: 0.8466049

 $00:02:53.900 \longrightarrow 00:02:56.179$  country as opposed to just one center?

00:02:56.482 --> 00:02:58.898 Who has access to new treatments?

NOTE Confidence: 0.8466049

00:03:01.160 --> 00:03:02.820 What are the outcomes associated

NOTE Confidence: 0.8466049

 $00:03:02.820 \longrightarrow 00:03:04.148$  with these new treatments?

NOTE Confidence: 0.8466049

 $00:03:04.150 \longrightarrow 00:03:06.142$  How much does it cost to

NOTE Confidence: 0.8466049

00:03:06.142 --> 00:03:07.138 get these treatments?

NOTE Confidence: 0.8466049

 $00:03:07.140 \longrightarrow 00:03:09.331$  And are there racial or economic or

NOTE Confidence: 0.8466049

 $00{:}03{:}09.331 \dashrightarrow 00{:}03{:}11.207$  other disparities in access to cancer care?

NOTE Confidence: 0.8925702

 $00:03:16.570 \longrightarrow 00:03:19.160$  Wow, I mean that sounds so relevant

NOTE Confidence: 0.8925702

 $00:03:19.160 \longrightarrow 00:03:21.738$  because when you think

NOTE Confidence: 0.8925702

 $00{:}03{:}21.738 \dashrightarrow 00{:}03{:}24.276$  about the subpopulation, as you say,

NOTE Confidence: 0.8925702

 $00:03:24.276 \longrightarrow 00:03:26.568$  who get treated on clinical trials

NOTE Confidence: 0.8925702

 $00:03:26.568 \longrightarrow 00:03:29.408$  being so small and yet the outcomes

 $00{:}03{:}29.408 \dashrightarrow 00{:}03{:}31.523$  of those clinical trials are

NOTE Confidence: 0.8925702

 $00{:}03{:}31.523 \dashrightarrow 00{:}03{:}33.788$  applied to the entire population,

NOTE Confidence: 0.8925702

 $00:03:33.790 \longrightarrow 00:03:36.466$  it seems to be particularly important

NOTE Confidence: 0.8925702

 $00:03:36.466 \longrightarrow 00:03:39.438$  to see what happens out there in

NOTE Confidence: 0.8925702

 $00:03:39.438 \longrightarrow 00:03:41.646$  the real world on patients who

NOTE Confidence: 0.8925702

00:03:41.646 --> 00:03:44.089 may not have looked exactly like

NOTE Confidence: 0.8925702

 $00:03:44.089 \longrightarrow 00:03:46.910$  the people who were in the trials.

NOTE Confidence: 0.87600183

00:03:47.670 --> 00:03:48.938 Yes, that's exactly right.

NOTE Confidence: 0.87600183

 $00:03:48.938 \longrightarrow 00:03:50.840$  And the other point about clinical

NOTE Confidence: 0.87600183

 $00:03:50.894 \longrightarrow 00:03:53.001$  trials is that they tend to be

NOTE Confidence: 0.87600183

00:03:53.001 --> 00:03:54.206 highly controlled settings, right?

NOTE Confidence: 0.87600183

 $00:03:54.206 \longrightarrow 00:03:55.686$  So patients who are participating

NOTE Confidence: 0.87600183

 $00{:}03{:}55.686 \dashrightarrow 00{:}03{:}57.740$  in a clinical trial not only have

NOTE Confidence: 0.87600183

00:03:57.740 --> 00:03:59.095 they gone through the litany

NOTE Confidence: 0.87600183

 $00:03:59.095 \longrightarrow 00:04:00.470$  of inclusion exclusion criteria

00:04:00.470 --> 00:04:02.018 that I've already mentioned,

NOTE Confidence: 0.87600183

 $00:04:02.020 \longrightarrow 00:04:03.252$  just to be enrolled,

NOTE Confidence: 0.87600183

 $00:04:03.252 \longrightarrow 00:04:05.450$  but once they are enrolled they are very

NOTE Confidence: 0.87600183

 $00{:}04{:}05.450 \dashrightarrow 00{:}04{:}07.120$  closely monitored and followed in

NOTE Confidence: 0.87600183

 $00:04:07.120 \longrightarrow 00:04:09.136$  terms of their treatment and their

NOTE Confidence: 0.87600183

 $00:04:09.136 \longrightarrow 00:04:10.882$  outcomes that someone is

NOTE Confidence: 0.87600183

 $00:04:10.882 \longrightarrow 00:04:12.940$  keeping a very watchful eye on them.

NOTE Confidence: 0.87600183

 $00:04:12.940 \longrightarrow 00:04:15.131$  This is very different from a patient

NOTE Confidence: 0.87600183

 $00:04:15.131 \longrightarrow 00:04:17.420$  in the real world who's kind of

NOTE Confidence: 0.87600183

 $00:04:17.420 \longrightarrow 00:04:19.317$  coming into and going out of the

NOTE Confidence: 0.87600183

 $00{:}04{:}19.317 \dashrightarrow 00{:}04{:}20.711$  healthcare system on a regular

NOTE Confidence: 0.87600183

 $00:04:20.711 \longrightarrow 00:04:22.277$  basis and may not be being followed

NOTE Confidence: 0.87600183

 $00:04:22.277 \longrightarrow 00:04:23.878$  as closely.

NOTE Confidence: 0.84978104

00:04:25.030 --> 00:04:27.158 So tell us a little bit more about

NOTE Confidence: 0.84978104

 $00:04:27.158 \longrightarrow 00:04:29.136$  your more recent research and what

NOTE Confidence: 0.84978104

 $00:04:29.136 \longrightarrow 00:04:31.206$  you've been doing in this realm.

 $00:04:32.460 \longrightarrow 00:04:34.620$  Sure, right now

NOTE Confidence: 0.8173699

00:04:34.620 --> 00:04:37.371 I currently have a study funded by

NOTE Confidence: 0.8173699

 $00:04:37.371 \longrightarrow 00:04:39.891$  the National Cancer Institute to look

NOTE Confidence: 0.8173699

00:04:39.891 --> 00:04:42.423 at oral Anti cancer agent utilization

NOTE Confidence: 0.8173699

00:04:42.423 --> 00:04:44.957 in patients with kidney cancer.

NOTE Confidence: 0.8173699

00:04:44.960 --> 00:04:47.546 So kidney cancer, like most cancers,

NOTE Confidence: 0.8173699

 $00:04:47.550 \longrightarrow 00:04:50.040$  can either be early stage or

NOTE Confidence: 0.8173699

 $00:04:50.040 \longrightarrow 00:04:52.290$  more advanced stage.

NOTE Confidence: 0.8173699

 $00:04:52.290 \longrightarrow 00:04:55.690$  Stage refers to how far a cancer has

NOTE Confidence: 0.8173699

 $00:04:55.690 \longrightarrow 00:04:57.888$  spread throughout a person's body.

NOTE Confidence: 0.8173699

 $00:04:57.890 \longrightarrow 00:05:00.482$  So for kidney cancer, early stage

NOTE Confidence: 0.8173699

 $00:05:00.482 \longrightarrow 00:05:03.139$  disease is confined to the kidney.

NOTE Confidence: 0.8173699

 $00{:}05{:}03.140 \dashrightarrow 00{:}05{:}05.168$  Whereas for advanced or metastatic disease,

NOTE Confidence: 0.8173699

 $00:05:05.170 \longrightarrow 00:05:07.390$  the disease has learned to travel

NOTE Confidence: 0.8173699

 $00:05:07.390 \longrightarrow 00:05:09.228$  through the bloodstream and has

00:05:09.228 --> 00:05:11.244 spread to other parts of the body,

NOTE Confidence: 0.8173699

 $00{:}05{:}11.250 \dashrightarrow 00{:}05{:}15.044$  such as the lungs, bones or brain.

NOTE Confidence: 0.8173699

 $00:05:15.050 \longrightarrow 00:05:17.808$  So early stage disease is typically treated

NOTE Confidence: 0.8173699

 $00{:}05{:}17.808 \dashrightarrow 00{:}05{:}20.689$  with a surgery or if it's small enough,

00:05:22.946 --> 00:05:24.450 or in an elderly or unhealthy person,

NOTE Confidence: 0.8173699

 $00{:}05{:}24.450 \dashrightarrow 00{:}05{:}26.330$  it is sometimes just observed.

NOTE Confidence: 0.8173699

00:05:26.330 --> 00:05:28.590 Advanced kidney cancer for most

NOTE Confidence: 0.8173699

 $00:05:28.590 \longrightarrow 00:05:30.840$  patients is not curable.

NOTE Confidence: 0.8173699

 $00:05:30.840 \longrightarrow 00:05:31.240$  However,

NOTE Confidence: 0.8173699

 $00:05:31.240 \longrightarrow 00:05:33.640$  the treatments for advanced kidney cancer

NOTE Confidence: 0.8173699

 $00:05:33.640 \longrightarrow 00:05:35.729$  have improved dramatically in recent years.

NOTE Confidence: 0.8173699

 $00:05:35.730 \longrightarrow 00:05:37.842$  One of the biggest changes has

NOTE Confidence: 0.8173699

 $00:05:37.842 \longrightarrow 00:05:40.137$  been the development of these oral

NOTE Confidence: 0.8173699

 $00{:}05{:}40.137 \dashrightarrow 00{:}05{:}42.187$  cancer treatments or pills that

NOTE Confidence: 0.8173699

 $00:05:42.187 \longrightarrow 00:05:44.470$  target kidney cancer to help shrink

NOTE Confidence: 0.8173699

 $00:05:44.470 \longrightarrow 00:05:46.166$  or delay its growth.

 $00:05:46.166 \longrightarrow 00:05:48.710$  These oral cancer treatments have been

NOTE Confidence: 0.8173699

 $00:05:48.788 \longrightarrow 00:05:51.446$  allowing people to live years longer,

NOTE Confidence: 0.8173699

00:05:51.450 --> 00:05:53.718 even for people who have what

NOTE Confidence: 0.8173699

 $00:05:53.718 \longrightarrow 00:05:55.230$  traditionally would have been

NOTE Confidence: 0.8173699

 $00:05:55.303 \longrightarrow 00:05:57.547$  considered incurable kidney cancer.

NOTE Confidence: 0.8173699

 $00:05:57.550 \longrightarrow 00:05:57.986$  However,

NOTE Confidence: 0.8173699

 $00:05:57.986 \longrightarrow 00:06:00.166$  these oral treatments are relatively

NOTE Confidence: 0.8173699

 $00:06:00.166 \longrightarrow 00:06:01.910$  new to kidney cancer.

NOTE Confidence: 0.8173699

 $00{:}06{:}01.910 \dashrightarrow 00{:}06{:}04.778$  The first oral agents for kidney

NOTE Confidence: 0.8173699

 $00{:}06{:}04.778 \dashrightarrow 00{:}06{:}07.159$  cancer became available or were

NOTE Confidence: 0.8173699

00:06:07.159 --> 00:06:10.183 approved by the FDA in 2005 and 2006,

NOTE Confidence: 0.8173699

 $00:06:10.190 \longrightarrow 00:06:12.445$  but with many similar treatments

NOTE Confidence: 0.8173699

 $00:06:12.445 \longrightarrow 00:06:14.700$  having been discovered since then.

NOTE Confidence: 0.8173699

 $00:06:14.700 \longrightarrow 00:06:17.199$  In fact now

NOTE Confidence: 0.8173699

 $00:06:17.200 \longrightarrow 00:06:19.222$  the 10 first new drugs approved

NOTE Confidence: 0.8173699

 $00:06:19.222 \longrightarrow 00:06:21.479$  for kidney cancer in recent years,

 $00:06:21.480 \longrightarrow 00:06:24.595$  7 out of 10 were oral agents.

NOTE Confidence: 0.8173699

 $00:06:24.600 \longrightarrow 00:06:26.590$  The interesting thing about oral

NOTE Confidence: 0.8173699

 $00:06:26.590 \longrightarrow 00:06:29.030$  anti cancer agents is that they

NOTE Confidence: 0.8173699

 $00:06:29.030 \longrightarrow 00:06:31.298$  represent a shift from how cancer

NOTE Confidence: 0.8173699

 $00:06:31.298 \longrightarrow 00:06:33.380$  treatment used to be delivered.

NOTE Confidence: 0.8173699

 $00:06:33.380 \longrightarrow 00:06:36.159$  So as most folks know, cancer treatment

NOTE Confidence: 0.8173699

 $00:06:36.159 \longrightarrow 00:06:39.029$  used to be almost always intravenous

NOTE Confidence: 0.8173699

 $00:06:39.029 \longrightarrow 00:06:42.739$  or given by injection at the hospital.

NOTE Confidence: 0.8173699

 $00:06:42.740 \longrightarrow 00:06:44.672$  So you know it required patients to

NOTE Confidence: 0.8173699

 $00{:}06{:}44.672 \dashrightarrow 00{:}06{:}47.096$  come to a cancer hospital or clinic

NOTE Confidence: 0.8173699

 $00:06:47.096 \longrightarrow 00:06:49.006$  in order to receive treatment.

NOTE Confidence: 0.8173699

00:06:49.010 --> 00:06:49.332 However,

NOTE Confidence: 0.8173699

 $00{:}06{:}49.332 \dashrightarrow 00{:}06{:}51.586$  or al agents are picked up by the

NOTE Confidence: 0.8173699

00:06:51.586 --> 00:06:53.960 patient from the pharmacy and taken home,

NOTE Confidence: 0.8173699

 $00:06:53.960 \longrightarrow 00:06:55.424$  and unlike intravenous treatments,

 $00:06:55.424 \longrightarrow 00:06:57.620$  these oral agents are not taken

NOTE Confidence: 0.8173699

 $00:06:57.684 \longrightarrow 00:06:59.238$  in front of a medical staff.

NOTE Confidence: 0.8173699

 $00:06:59.240 \longrightarrow 00:06:59.526$  Instead,

NOTE Confidence: 0.8173699

 $00:06:59.526 \longrightarrow 00:07:01.814$  they are taken at home by the patients

NOTE Confidence: 0.8173699

 $00:07:01.814 \longrightarrow 00:07:04.099$  when patients come to a cancer clinic

NOTE Confidence: 0.8173699

 $00:07:04.099 \longrightarrow 00:07:06.170$  and receive an intravenous chemotherapy,

NOTE Confidence: 0.8173699

 $00{:}07{:}06.170 \dashrightarrow 00{:}07{:}07.820$  obviously, the doctors know that

NOTE Confidence: 0.8173699

 $00:07:07.820 \longrightarrow 00:07:09.470$  they're getting the treatment there.

NOTE Confidence: 0.8173699

 $00{:}07{:}09.800 \dashrightarrow 00{:}07{:}11.450$  The same is not necessarily

NOTE Confidence: 0.8173699

 $00:07:11.450 \longrightarrow 00:07:12.770$  true for oral agents,

NOTE Confidence: 0.8173699

 $00:07:12.770 \longrightarrow 00:07:13.135$  however.

NOTE Confidence: 0.8173699

00:07:13.135 --> 00:07:14.960 Patients can forget to take

NOTE Confidence: 0.8173699

 $00:07:14.960 \longrightarrow 00:07:15.690$  their medications.

NOTE Confidence: 0.8173699

 $00:07:15.690 \longrightarrow 00:07:17.325$  They can forget or delay

NOTE Confidence: 0.8173699

 $00:07:17.325 \longrightarrow 00:07:18.306$  refilling their prescriptions.

NOTE Confidence: 0.8173699

 $00:07:18.310 \longrightarrow 00:07:19.795$  They may not follow the

 $00{:}07{:}19.795 \dashrightarrow 00{:}07{:}21.712$  instructions as to when and how

NOTE Confidence: 0.8173699

 $00{:}07{:}21.712 \dashrightarrow 00{:}07{:}23.557$  to take their medications exactly,

NOTE Confidence: 0.8173699

 $00:07:23.560 \longrightarrow 00:07:25.856$  or they may choose to stop taking

NOTE Confidence: 0.8173699

 $00:07:25.856 \longrightarrow 00:07:26.840$  their medication altogether,

NOTE Confidence: 0.8173699

 $00:07:26.840 \longrightarrow 00:07:28.850$  particularly if they are concerned that

NOTE Confidence: 0.8173699

00:07:28.850 --> 00:07:31.427 they might be having side effects from it,

NOTE Confidence: 0.8173699

 $00:07:31.430 \longrightarrow 00:07:33.677$  or if the cost of filling the

NOTE Confidence: 0.8173699

 $00:07:33.677 \longrightarrow 00:07:35.040$  prescription is too high.

NOTE Confidence: 0.8173699

 $00{:}07{:}35.040 \dashrightarrow 00{:}07{:}36.870$  So my current research has been

NOTE Confidence: 0.8173699

 $00:07:36.870 \longrightarrow 00:07:39.539$  looking at the use of these oral anti

NOTE Confidence: 0.8173699

 $00{:}07{:}39.539 \dashrightarrow 00{:}07{:}41.269$  cancer agents and kidney cancer.

NOTE Confidence: 0.8173699

00:07:41.270 --> 00:07:43.298 I'm looking at things like

NOTE Confidence: 0.8173699

00:07:43.298 --> 00:07:44.650 who are receiving them.

NOTE Confidence: 0.8585052

 $00:07:44.650 \longrightarrow 00:07:46.384$  Are there any racial or economic

NOTE Confidence: 0.8585052

 $00:07:46.384 \longrightarrow 00:07:48.199$  disparities in access to these drugs?

 $00:07:48.200 \longrightarrow 00:07:50.630$  Are patients doing as well as they did in

NOTE Confidence: 0.8585052

 $00:07:50.630 \longrightarrow 00:07:52.636$  clinical trials when taking these drugs?

NOTE Confidence: 0.8585052

 $00:07:52.640 \longrightarrow 00:07:54.705$  Because like we were just talking about,

NOTE Confidence: 0.8585052

 $00:07:54.710 \longrightarrow 00:07:57.239$  when a patient when these drugs were

NOTE Confidence: 0.8585052

00:07:57.239 --> 00:07:59.448 being first studied in a clinical trial,

NOTE Confidence: 0.8585052

 $00:07:59.450 \longrightarrow 00:08:01.220$  they were being studied in a

NOTE Confidence: 0.8585052

00:08:01.220 --> 00:08:02.105 highly controlled setting,

NOTE Confidence: 0.8585052

 $00:08:02.110 \longrightarrow 00:08:04.478$  whereas now in the real world,

NOTE Confidence: 0.8585052

00:08:04.480 --> 00:08:05.960 patients are on their own,

NOTE Confidence: 0.8585052

 $00:08:05.960 \longrightarrow 00:08:07.140$  taking them at home,

NOTE Confidence: 0.8585052

 $00:08:07.140 \longrightarrow 00:08:08.636$  and then finally,

NOTE Confidence: 0.8585052

 $00:08:08.636 \longrightarrow 00:08:09.848$  I'm interested in questions

NOTE Confidence: 0.8585052

 $00:08:09.848 \longrightarrow 00:08:11.589$  like can patients

NOTE Confidence: 0.8585052

 $00{:}08{:}11.590 \dashrightarrow 00{:}08{:}13.070$  afford to continue taking these

NOTE Confidence: 0.8585052

 $00:08:13.070 \longrightarrow 00:08:14.550$  drugs based on the cost?

NOTE Confidence: 0.90837944

 $00:08:15.380 \longrightarrow 00:08:17.030$  Those all sound like really

00:08:17.030 --> 00:08:17.690 interesting questions.

NOTE Confidence: 0.90837944

 $00:08:17.690 \longrightarrow 00:08:22.450$  What have you found?

NOTE Confidence: 0.85992414

 $00:08:22.450 \longrightarrow 00:08:24.700$  What's interesting is that we have

NOTE Confidence: 0.85992414

 $00:08:24.700 \longrightarrow 00:08:27.502$  found that by 2015 a little over 1/3

NOTE Confidence: 0.85992414

 $00:08:27.502 \longrightarrow 00:08:29.962$  of patients with kidney cancer with

NOTE Confidence: 0.85992414

00:08:29.962 --> 00:08:32.428 renal cell carcinoma specifically,

NOTE Confidence: 0.85992414

 $00:08:32.430 \longrightarrow 00:08:35.468$  which is a subset of kidney cancer,

NOTE Confidence: 0.85992414

 $00{:}08{:}35.470 \dashrightarrow 00{:}08{:}37.960$  were receiving an oral anti cancer

NOTE Confidence: 0.85992414

00:08:37.960 --> 00:08:40.680 agent for their advanced kidney cancer.

NOTE Confidence: 0.85992414

 $00{:}08{:}40.680 \dashrightarrow 00{:}08{:}43.572$  We know that previous studies have

NOTE Confidence: 0.85992414

 $00{:}08{:}43.572 \dashrightarrow 00{:}08{:}45.904$  shown that black patients have

NOTE Confidence: 0.85992414

 $00:08:45.904 \longrightarrow 00:08:48.056$  had about a 10% worse mortality

NOTE Confidence: 0.85992414

 $00{:}08{:}48.056 \dashrightarrow 00{:}08{:}49.788$  associated with kidney cancer,

NOTE Confidence: 0.85992414

 $00:08:49.790 \longrightarrow 00:08:52.175$  and we know that this

NOTE Confidence: 0.85992414

00:08:52.175 --> 00:08:54.083 difference is not improved with

 $00:08:54.090 \longrightarrow 00:08:55.230$  the introduction of these

NOTE Confidence: 0.85992414

00:08:55.230 --> 00:08:56.750 oral anti cancer agents.

NOTE Confidence: 0.85992414

 $00:08:56.750 \longrightarrow 00:08:59.612$  We wanted to see if access to these drugs

NOTE Confidence: 0.85992414

 $00{:}08{:}59.612 \dashrightarrow 00{:}09{:}02.828$  was a potential driver of these disparities.

NOTE Confidence: 0.85992414

00:09:02.830 --> 00:09:03.230 Surprisingly,

NOTE Confidence: 0.85992414

 $00:09:03.230 \longrightarrow 00:09:06.430$  when we looked we didn't see any difference

NOTE Confidence: 0.85992414

 $00:09:06.430 \longrightarrow 00:09:08.910$  in access to these drugs by race,

NOTE Confidence: 0.85992414

 $00:09:08.910 \longrightarrow 00:09:10.810$  ethnicity or any other indicators

NOTE Confidence: 0.85992414

 $00:09:10.810 \longrightarrow 00:09:11.950$  of socioeconomic status.

NOTE Confidence: 0.85992414

00:09:11.950 --> 00:09:12.323 However,

NOTE Confidence: 0.85992414

 $00:09:12.323 \longrightarrow 00:09:14.934$  we did see decreased use in these

NOTE Confidence: 0.85992414

 $00:09:14.934 \longrightarrow 00:09:17.350$  oral agents in patients who were

NOTE Confidence: 0.85992414

00:09:17.350 --> 00:09:19.350 unmarried, patients who were living

NOTE Confidence: 0.85992414

00:09:19.350 --> 00:09:21.586 in the South, and patients who

NOTE Confidence: 0.85992414

 $00:09:21.586 \longrightarrow 00:09:24.110$  were in older age groups and in

NOTE Confidence: 0.85992414

00:09:24.110 --> 00:09:25.630 this specific patient population

 $00:09:25.630 \longrightarrow 00:09:28.998$  that means patients who

NOTE Confidence: 0.85992414

00:09:29.000 --> 00:09:32.006 were in the age group 80 plus. 00:09:32.326 --> 00:09:34.222 We were surprised to see that

NOTE Confidence: 0.85992414

 $00:09:34.222 \longrightarrow 00:09:36.276$  access to these drugs was not

NOTE Confidence: 0.85992414

00:09:36.276 --> 00:09:38.016 different by race or ethnicity,

NOTE Confidence: 0.85992414

 $00:09:38.020 \longrightarrow 00:09:40.316$  so we next wanted to see if something

NOTE Confidence: 0.85992414

 $00:09:40.316 \longrightarrow 00:09:42.416$  else could be driving disparities in

NOTE Confidence: 0.85992414

 $00:09:42.416 \longrightarrow 00:09:45.030$  kidney cancer outcomes that we know exist.

NOTE Confidence: 0.85992414

 $00:09:45.030 \longrightarrow 00:09:47.312$  So we looked at adherence to these

NOTE Confidence: 0.85992414

00:09:47.312 --> 00:09:48.942 medications and what we observed

NOTE Confidence: 0.85992414

 $00{:}09{:}48.942 \dashrightarrow 00{:}09{:}51.014$  was that about half of the patients

NOTE Confidence: 0.85992414

 $00:09:51.014 \longrightarrow 00:09:53.209$  we studied were adhering to the

NOTE Confidence: 0.85992414

00:09:53.209 --> 00:09:54.677 medication during the first

NOTE Confidence: 0.85992414

00:09:54.677 --> 00:09:56.582 three months of their treatment.

NOTE Confidence: 0.85992414

 $00:09:56.582 \longrightarrow 00:09:58.497$  So we were interested in the patients

NOTE Confidence: 0.85992414

 $00:09:58.497 \longrightarrow 00:10:00.158$  who live in areas with

 $00:10:00.160 \longrightarrow 00:10:02.372$  high levels of poverty were much less

NOTE Confidence: 0.85992414

 $00:10:02.372 \longrightarrow 00:10:04.385$  likely to take their medication almost

NOTE Confidence: 0.85992414

00:10:04.385 --> 00:10:07.183 half as likely as those who did not

NOTE Confidence: 0.85992414

00:10:07.183 --> 00:10:09.158 live in high poverty neighborhoods.

NOTE Confidence: 0.85992414 00:10:09.160 --> 00:10:09.478 Also, NOTE Confidence: 0.85992414

 $00:10:09.478 \longrightarrow 00:10:12.022$  we found that patients that had to pay more

NOTE Confidence: 0.85992414

00:10:12.022 --> 00:10:14.687 than \$200 a month for their medications

NOTE Confidence: 0.85992414

 $00:10:14.690 \longrightarrow 00:10:16.520$  they were about 30% less likely

NOTE Confidence: 0.85992414

 $00:10:16.520 \longrightarrow 00:10:18.481$  to be adherent as compared to

NOTE Confidence: 0.85992414

00:10:18.481 --> 00:10:20.161 patients paying less than \$200

NOTE Confidence: 0.85992414

 $00{:}10{:}20.161 \dashrightarrow 00{:}10{:}22.300$  a month for their medication.

NOTE Confidence: 0.85992414

00:10:22.300 --> 00:10:25.760 So when we take a step back from all this,

NOTE Confidence: 0.85992414

 $00{:}10{:}25.760 \dashrightarrow 00{:}10{:}27.836$  what we think we're seeing is

NOTE Confidence: 0.85992414

 $00:10:27.836 \longrightarrow 00:10:29.608$  that although poor patients are

NOTE Confidence: 0.85992414

00:10:29.608 --> 00:10:31.570 able to start these drugs because

00:10:31.570 --> 00:10:33.529 we're not seeing any difference

NOTE Confidence: 0.85992414

 $00:10:33.530 \longrightarrow 00:10:34.811$  in their initiation,

NOTE Confidence: 0.85992414

 $00:10:34.811 \longrightarrow 00:10:38.235$  they may not be able to continue to

NOTE Confidence: 0.85992414

 $00:10:38.235 \longrightarrow 00:10:41.011$  take them or to continue to take them

NOTE Confidence: 0.85992414

 $00:10:41.011 \longrightarrow 00:10:43.779$  as often as they are prescribed,

NOTE Confidence: 0.85992414

00:10:43.780 --> 00:10:45.895 because we're seeing decreases in

NOTE Confidence: 0.85992414

 $00{:}10{:}45.895 \dashrightarrow 00{:}10{:}48.515$  the adherence to these drugs and

NOTE Confidence: 0.85992414

 $00:10:48.515 \longrightarrow 00:10:51.095$  that could be affecting the

NOTE Confidence: 0.85992414

 $00:10:51.095 \longrightarrow 00:10:52.799$  differential outcomes that

NOTE Confidence: 0.85992414

 $00:10:52.799 \longrightarrow 00:10:54.845$  we know exist in patients with kidney cancer.

NOTE Confidence: 0.8784148

 $00:10:54.850 \longrightarrow 00:10:58.126$  So when you control

NOTE Confidence: 0.8784148

00:10:58.126 --> 00:11:00.796 for socioeconomic status and

NOTE Confidence: 0.8784148

 $00:11:00.796 \longrightarrow 00:11:03.540$  you look at the impact on race

NOTE Confidence: 0.8784148

 $00:11:03.540 \longrightarrow 00:11:07.306$  did you find that that was a

NOTE Confidence: 0.8784148

 $00:11:07.306 \longrightarrow 00:11:09.959$  driver that

NOTE Confidence: 0.8784148

 $00{:}11{:}09.960 \dashrightarrow 00{:}11{:}11.403$  mediated the relationship

00:11:11.403 --> 00:11:13.327 between race and outcomes?

 $00:11:15.260 \longrightarrow 00:11:20.630$  I think that

NOTE Confidence: 0.7912994

00:11:20.630 --> 00:11:21.966 is a good interpretation of

NOTE Confidence: 0.7912994

 $00:11:21.966 \longrightarrow 00:11:23.303$  what we're seeing, right?

NOTE Confidence: 0.7912994

00:11:23.303 --> 00:11:25.634 So I think what you're asking is,

NOTE Confidence: 0.7912994

00:11:25.640 --> 00:11:27.985 when you look at everything

NOTE Confidence: 0.7912994

 $00:11:27.985 \longrightarrow 00:11:30.319$  in the same model,

NOTE Confidence: 0.7912994

 $00:11:30.320 \longrightarrow 00:11:32.323$  we're seeing that yes,

NOTE Confidence: 0.7912994

 $00{:}11{:}32.323 \to 00{:}11{:}34.321$  poverty is driving this measure

NOTE Confidence: 0.7912994

 $00:11:34.321 \longrightarrow 00:11:36.326$  of adherence, but we're not

NOTE Confidence: 0.7912994

 $00{:}11{:}36.326 \dashrightarrow 00{:}11{:}37.996$  seeing an association with race,

NOTE Confidence: 0.7912994

 $00:11:38.000 \longrightarrow 00:11:40.331$  but I think what you're

NOTE Confidence: 0.7912994

 $00:11:40.331 \longrightarrow 00:11:41.855$  getting at, which is correct,

NOTE Confidence: 0.7912994

 $00:11:41.855 \longrightarrow 00:11:44.323$  is that the kind of

NOTE Confidence: 0.7912994

00:11:44.323 --> 00:11:46.348 interaction between race and poverty,

NOTE Confidence: 0.7912994

 $00:11:46.350 \longrightarrow 00:11:49.370$  those are two very closely

 $00:11:49.370 \longrightarrow 00:11:52.597$  related.

NOTE Confidence: 0.7912994

00:11:52.600 --> 00:11:54.890 So yes, seeing an association

NOTE Confidence: 0.7912994

 $00:11:54.890 \longrightarrow 00:11:57.180$  in one might be attenuating

NOTE Confidence: 0.7912994

 $00:11:57.258 \longrightarrow 00:11:59.508$  the association in the other.

NOTE Confidence: 0.84369004

 $00:12:00.120 \longrightarrow 00:12:03.298$  Did you look at that?

NOTE Confidence: 0.84369004

 $00:12:03.300 \longrightarrow 00:12:06.716$  The reason I ask is

NOTE Confidence: 0.84369004

00:12:06.716 --> 00:12:09.549 because we've seen a similar thing

NOTE Confidence: 0.84369004

 $00:12:09.549 \longrightarrow 00:12:12.375$  across a number of disease sites.

NOTE Confidence: 0.84369004

 $00:12:12.380 \longrightarrow 00:12:15.068$  I did a study just recently

NOTE Confidence: 0.84369004

 $00{:}12{:}15.068 \dashrightarrow 00{:}12{:}17.364$  looking at breast cancer survivors

NOTE Confidence: 0.84369004

 $00:12:17.364 \longrightarrow 00:12:20.550$  and their use of endocrine therapy,

NOTE Confidence: 0.84369004

 $00{:}12{:}20.550 \dashrightarrow 00{:}12{:}23.665$  which is also an oral agent that

NOTE Confidence: 0.84369004

 $00{:}12{:}23.665 \dashrightarrow 00{:}12{:}27.140$  women take for at least five years

NOTE Confidence: 0.84369004

00:12:27.140 --> 00:12:30.206 and very similar to your findings,

NOTE Confidence: 0.84369004

 $00:12:30.210 \longrightarrow 00:12:32.640$  did not find that there was

 $00:12:32.640 \longrightarrow 00:12:34.710$  necessarily a difference by race,

NOTE Confidence: 0.84369004

 $00:12:34.710 \longrightarrow 00:12:37.139$  which we had thought might have been

NOTE Confidence: 0.84369004

 $00:12:37.139 \longrightarrow 00:12:39.712$  a factor when looking at whether

NOTE Confidence: 0.84369004

00:12:39.712 --> 00:12:41.656 people took these medications,

NOTE Confidence: 0.84369004

00:12:41.660 --> 00:12:44.660 but we we were looking at the question

NOTE Confidence: 0.84369004

 $00{:}12{:}44.660 \dashrightarrow 00{:}12{:}47.750$  of did you not take this medication

NOTE Confidence: 0.84369004

 $00:12:47.750 \longrightarrow 00:12:50.858$  as prescribed due to cost and we

NOTE Confidence: 0.84369004

 $00:12:50.858 \longrightarrow 00:12:53.546$  thought there may be a

NOTE Confidence: 0.84369004

 $00{:}12{:}53.546 \dashrightarrow 00{:}12{:}55.980$  racial disparity in terms of that.

NOTE Confidence: 0.84369004

 $00:12:55.980 \longrightarrow 00:12:58.428$  But when we looked at it,

NOTE Confidence: 0.84369004

 $00:12:58.430 \longrightarrow 00:13:01.046$  we didn't find a racial disparity

NOTE Confidence: 0.84369004

 $00:13:01.046 \longrightarrow 00:13:02.354$  but really found a

NOTE Confidence: 0.84369004

 $00:13:02.360 \longrightarrow 00:13:04.922$  difference very much as you say

NOTE Confidence: 0.84369004

 $00{:}13{:}04.922 \dashrightarrow 00{:}13{:}08.095$  in terms of poverty and in terms of

NOTE Confidence: 0.84369004

 $00:13:08.095 \longrightarrow 00:13:10.990$  whether or not people had insurance.

NOTE Confidence: 0.84369004

 $00:13:10.990 \longrightarrow 00:13:14.362$  I'm wondering if

00:13:14.362 --> 00:13:16.610 you controlled for poverty

NOTE Confidence: 0.84369004

 $00{:}13{:}16.610 \dashrightarrow 00{:}13{:}18.818$  and whether we still see a

NOTE Confidence: 0.84369004

 $00:13:18.818 \longrightarrow 00:13:20.846$  difference in outcomes between black

NOTE Confidence: 0.84369004

 $00:13:20.846 \longrightarrow 00:13:22.806$  patients and Caucasian patients.

NOTE Confidence: 0.84369004

 $00:13:22.810 \longrightarrow 00:13:25.694$  So in our city we did not

NOTE Confidence: 0.84505254

 $00:13:25.700 \longrightarrow 00:13:27.760$  see a difference by race,

NOTE Confidence: 0.84505254

 $00:13:27.760 \longrightarrow 00:13:31.064$  but we did see a difference by poverty.

NOTE Confidence: 0.84505254

 $00{:}13{:}31.070 \dashrightarrow 00{:}13{:}34.470$  So by both indicators of poverty and

NOTE Confidence: 0.84505254

 $00:13:34.470 \longrightarrow 00:13:37.668$  race were in the model and the

NOTE Confidence: 0.84505254

 $00:13:37.670 \longrightarrow 00:13:40.554$  association by race, as you said,

NOTE Confidence: 0.84505254

 $00{:}13{:}40.560 \dashrightarrow 00{:}13{:}43.912$  for your city was not significant where it

NOTE Confidence: 0.84505254

 $00:13:43.912 \longrightarrow 00:13:47.517$  was for the indicators of poverty level.

NOTE Confidence: 0.84505254

 $00:13:47.520 \longrightarrow 00:13:48.652$  Does that make sense?

NOTE Confidence: 0.84505254

00:13:48.652 --> 00:13:50.067 So even though they were

NOTE Confidence: 0.84505254

 $00:13:50.067 \longrightarrow 00:13:51.410$  both in the model race,

 $00:13:51.410 \longrightarrow 00:13:53.634$  we did not find an association with race,

NOTE Confidence: 0.84505254

 $00:13:53.640 \longrightarrow 00:13:55.030$  but we did with poverty,

NOTE Confidence: 0.84505254

 $00:13:55.030 \longrightarrow 00:13:57.342$  and I guess the point that I was

NOTE Confidence: 0.84505254

 $00:13:57.342 \longrightarrow 00:13:59.311$  trying to make earlier is that

NOTE Confidence: 0.84505254

 $00:13:59.311 \longrightarrow 00:14:00.956$  we know you that

NOTE Confidence: 0.84505254

00:14:00.960 --> 00:14:03.860 unfortunately, in this country,

NOTE Confidence: 0.84505254

 $00:14:03.860 \longrightarrow 00:14:07.485$  poverty differentially impacts folks

 $00:14:11.500 \longrightarrow 00:14:13.768$  by race and ethnicity.

NOTE Confidence: 0.84936315

 $00:14:13.770 \longrightarrow 00:14:16.050$  This is such an

NOTE Confidence: 0.84936315

00:14:16.050 --> 00:14:16.810 interesting conversation,

NOTE Confidence: 0.84936315

 $00:14:16.810 \longrightarrow 00:14:19.057$  but we need to take a short

NOTE Confidence: 0.84936315

 $00:14:19.057 \longrightarrow 00:14:21.350$  break for a medical minute.

NOTE Confidence: 0.84936315

 $00{:}14{:}21.350 \dashrightarrow 00{:}14{:}23.624$  Please stay tuned to learn more

NOTE Confidence: 0.84936315

 $00{:}14{:}23.624 \dashrightarrow 00{:}14{:}25.140$  about cancer prevention with

NOTE Confidence: 0.84936315

 $00{:}14{:}25.140 \dashrightarrow 00{:}14{:}26.656$ my guest Doctor Michaela Dinan.

NOTE Confidence: 0.84936315

 $00:14:26.656 \longrightarrow 00:14:28.930$  Support for Yale Cancer Answers

00:14:28.930 --> 00:14:31.396 comes from AstraZeneca, working

NOTE Confidence: 0.84936315

 $00{:}14{:}31.396 \dashrightarrow 00{:}14{:}34.240$  to eliminate cancer as a cause of death.

NOTE Confidence: 0.84936315

 $00{:}14{:}34.240 \dashrightarrow 00{:}14{:}37.528$  Learn more at a strazeneca-us.com.

NOTE Confidence: 0.84936315

 $00:14:37.530 \longrightarrow 00:14:39.590$  This is a medical minute

NOTE Confidence: 0.84936315

 $00:14:39.590 \longrightarrow 00:14:40.826$  about colorectal cancer.

NOTE Confidence: 0.84936315

 $00:14:40.830 \longrightarrow 00:14:42.231$  When detected early,

NOTE Confidence: 0.84936315

 $00:14:42.231 \longrightarrow 00:14:44.566$  colorectal cancer is easily treated

NOTE Confidence: 0.84936315

 $00:14:44.566 \longrightarrow 00:14:47.449$  on highly curable and as a result

NOTE Confidence: 0.84936315

 $00:14:47.449 \longrightarrow 00:14:49.779$  it's recommended that men and women

NOTE Confidence: 0.84936315

 $00:14:49.779 \longrightarrow 00:14:52.453$  over the age of 50 have regular

NOTE Confidence: 0.84936315

 $00:14:52.453 \longrightarrow 00:14:54.728$  colonoscopies to screen for the disease.

NOTE Confidence: 0.84936315

00:14:54.728 --> 00:14:56.613 Tumor gene analysis has helped

NOTE Confidence: 0.84936315

 $00:14:56.613 \longrightarrow 00:14:58.352$  improve management of colorectal

NOTE Confidence: 0.84936315

 $00{:}14{:}58.352 \dashrightarrow 00{:}15{:}00.512$  cancer by identifying the patients

NOTE Confidence: 0.84936315

 $00:15:00.512 \longrightarrow 00:15:02.695$  most likely to benefit from

NOTE Confidence: 0.84936315

 $00:15:02.695 \longrightarrow 00:15:04.785$  chemotherapy and newer targeted agents,

 $00{:}15{:}04.790 \dashrightarrow 00{:}15{:}06.690$  resulting in more patient

NOTE Confidence: 0.84936315

 $00:15:06.690 \longrightarrow 00:15:07.640$  specific treatments.

NOTE Confidence: 0.84936315

00:15:07.640 --> 00:15:09.672 More information is available

NOTE Confidence: 0.84936315

 $00:15:09.672 \longrightarrow 00:15:10.688$  at yalecancercenter.org.

NOTE Confidence: 0.84936315

 $00:15:10.690 \longrightarrow 00:15:14.866$  You're listening to Connecticut Public Radio.

NOTE Confidence: 0.84936315

 $00:15:14.870 \longrightarrow 00:15:15.310$  Welcome

NOTE Confidence: 0.8455588

 $00:15:15.310 \longrightarrow 00:15:17.500$  back to Yale Cancer Answers.

NOTE Confidence: 0.8455588

 $00{:}15{:}17.500 \dashrightarrow 00{:}15{:}20.212$  This is doctor Anees Chagpar and

NOTE Confidence: 0.8455588

00:15:20.212 --> 00:15:23.164 I'm joined tonight by my guest Doctor

NOTE Confidence: 0.8455588

 $00:15:23.164 \longrightarrow 00:15:25.354$  Michaela Dinan and we're talking

NOTE Confidence: 0.8455588

00:15:25.429 --> 00:15:28.034 about cancer prevention and more,

NOTE Confidence: 0.8455588

 $00:15:28.034 \longrightarrow 00:15:30.639$  specifically, right before the break

NOTE Confidence: 0.8455588

 $00{:}15{:}30.640 \dashrightarrow 00{:}15{:}32.388$  Michaela you were telling

NOTE Confidence: 0.8455588

00:15:32.388 --> 00:15:34.136 us about your research

NOTE Confidence: 0.8455588

 $00:15:34.140 \longrightarrow 00:15:36.255$  looking at disparities that we

 $00:15:36.255 \longrightarrow 00:15:38.370$  see in outcomes between African

NOTE Confidence: 0.8455588

 $00{:}15{:}38.444 \dashrightarrow 00{:}15{:}40.384$  American patients and Caucasian

NOTE Confidence: 0.8455588

 $00:15:40.384 \longrightarrow 00:15:42.809$  patients with regards to kidney

NOTE Confidence: 0.8455588

 $00:15:42.809 \longrightarrow 00:15:44.897$  cancer and renal cell cancer.

NOTE Confidence: 0.8455588

00:15:44.900 --> 00:15:46.361 In particular,

NOTE Confidence: 0.8455588

00:15:46.361 --> 00:15:48.796 you were looking specifically

NOTE Confidence: 0.8455588

 $00{:}15{:}48.800 \dashrightarrow 00{:}15{:}52.592$  then at oral agents and found that really

NOTE Confidence: 0.8455588

00:15:52.592 --> 00:15:56.100 race was not a driver of adherence,

NOTE Confidence: 0.8455588

 $00{:}15{:}56.100 {\:{\circ}{\circ}{\circ}}>00{:}15{:}59.016$  but really poverty was, so a

NOTE Confidence: 0.8455588

 $00:15:59.016 \longrightarrow 00:16:00.474$  couple of questions.

NOTE Confidence: 0.8455588

00:16:00.480 --> 00:16:04.312 Has anybody gone back and looked at the

NOTE Confidence: 0.8455588

 $00:16:04.312 \longrightarrow 00:16:06.818$  correlation between race and outcomes?

NOTE Confidence: 0.8455588

 $00:16:06.820 \longrightarrow 00:16:10.502$  That kind of drove your research to

NOTE Confidence: 0.8455588

 $00{:}16{:}10.502 \dashrightarrow 00{:}16{:}14.928$  begin with and took a step back and said

NOTE Confidence: 0.8455588

 $00:16:14.930 \longrightarrow 00:16:17.918$  uncoupling that from poverty is

NOTE Confidence: 0.8455588

00:16:17.918 --> 00:16:19.412 it really poverty

 $00:16:19.420 \longrightarrow 00:16:22.906$  that is the driver of those outcomes,

NOTE Confidence: 0.8455588

 $00{:}16{:}22.910 \dashrightarrow 00{:}16{:}26.558$  or is it really race and the poverty

NOTE Confidence: 0.8455588

 $00:16:26.558 \longrightarrow 00:16:28.676$  by association with nonadherence

NOTE Confidence: 0.8455588

 $00:16:28.676 \longrightarrow 00:16:30.900$  is a separate issue?

 $00:16:33.305 \longrightarrow 00:16:36.476$  Yeah, so the overall question of

NOTE Confidence: 0.8818295

 $00:16:36.476 \longrightarrow 00:16:39.248$  why is there differential outcomes for

NOTE Confidence: 0.8818295

00:16:39.248 --> 00:16:42.019 patients of black race with kidney cancer?

NOTE Confidence: 0.8818295

00:16:42.020 --> 00:16:44.757 That's a bigger question and the studies

NOTE Confidence: 0.8818295

 $00{:}16{:}44.757 \dashrightarrow 00{:}16{:}47.170$  that have looked at that question

NOTE Confidence: 0.8818295

 $00:16:47.170 \longrightarrow 00:16:49.802$  some of them have certainly

NOTE Confidence: 0.8818295

 $00{:}16{:}49.802 \dashrightarrow 00{:}16{:}52.668$  included measures of poverty in them and

NOTE Confidence: 0.8818295

 $00:16:52.668 \longrightarrow 00:16:55.164$  have still found a significant association

NOTE Confidence: 0.8818295

 $00{:}16{:}55.241 \dashrightarrow 00{:}16{:}57.455$  between race and outcomes as well.

NOTE Confidence: 0.8818295

 $00:16:57.460 \longrightarrow 00:16:59.044$  You're right and

NOTE Confidence: 0.8818295

 $00:16:59.044 \longrightarrow 00:17:00.628$  our study was specifically a

 $00:17:02.710 \longrightarrow 00:17:05.210$  subset of that question.

 $00:17:05.210 \longrightarrow 00:17:07.210$  Because we were specifically

NOTE Confidence: 0.8818295

 $00:17:07.210 \longrightarrow 00:17:08.710$  interested in

NOTE Confidence: 0.8818295

 $00:17:08.710 \longrightarrow 00:17:12.021$  how are oral anti cancer agents either

NOTE Confidence: 0.8818295

 $00:17:12.021 \longrightarrow 00:17:15.048$  contributing or not contributing to this

NOTE Confidence: 0.8818295

 $00:17:15.048 \longrightarrow 00:17:18.084$  kind of pre observed disparity that

NOTE Confidence: 0.8818295

00:17:18.084 --> 00:17:21.207 we've seen in kidney cancer patients?

NOTE Confidence: 0.8818295

 $00:17:21.210 \longrightarrow 00:17:24.060$  So because oral anti cancer agents

NOTE Confidence: 0.8818295

 $00:17:24.060 \longrightarrow 00:17:26.570$  were a relatively knew technology

NOTE Confidence: 0.8818295

 $00{:}17{:}26.570 \dashrightarrow 00{:}17{:}29.205$  in the kidney cancer space,

NOTE Confidence: 0.8818295

 $00:17:29.210 \longrightarrow 00:17:32.857$  we wanted to see whether or not

NOTE Confidence: 0.8818295

00:17:32.860 --> 00:17:35.075 they were contributing

NOTE Confidence: 0.8818295

 $00:17:35.075 \longrightarrow 00:17:37.290$  to an attenuation of

NOTE Confidence: 0.8818295

 $00:17:37.373 \longrightarrow 00:17:39.369$  this disparity in outcomes,

NOTE Confidence: 0.8818295

 $00{:}17{:}39.370 \dashrightarrow 00{:}17{:}41.475$  or whether it was contributing

NOTE Confidence: 0.8818295

 $00:17:41.475 \longrightarrow 00:17:43.580$  to a potential widening of

NOTE Confidence: 0.8818295

 $00{:}17{:}43.661 \dashrightarrow 00{:}17{:}45.877$  these disparities in outcomes.

 $00:17:45.880 \longrightarrow 00:17:46.345$  Because

NOTE Confidence: 0.8818295

 $00:17:47.275 \longrightarrow 00:17:49.600$  previous research of both mine

NOTE Confidence: 0.8818295

 $00:17:49.600 \longrightarrow 00:17:52.689$  and other folks looking at the

NOTE Confidence: 0.8818295

 $00:17:52.689 \longrightarrow 00:17:54.769$  emergence of medical technologies

NOTE Confidence: 0.8818295

 $00:17:54.769 \longrightarrow 00:17:57.465$  and cancers has shown that

NOTE Confidence: 0.8818295

00:17:57.465 --> 00:18:00.305 sometimes it can go either way.

NOTE Confidence: 0.8818295

 $00:18:00.305 \longrightarrow 00:18:03.155$  It can either help mitigate disparities

NOTE Confidence: 0.8818295

 $00:18:03.160 \longrightarrow 00:18:06.065$  or sometimes it can help widen disparities

NOTE Confidence: 0.8818295

 $00:18:06.070 \longrightarrow 00:18:07.180$  if there's

NOTE Confidence: 0.8818295

 $00{:}18{:}07.180 \dashrightarrow 00{:}18{:}09.030$  an additional element of decreased

NOTE Confidence: 0.8818295

00:18:09.030 --> 00:18:11.049 access for certain populations.

 $00:18:12.295 \longrightarrow 00:18:14.370$  The other question that

NOTE Confidence: 0.865242

 $00:18:14.370 \longrightarrow 00:18:17.226$  I had was when we were talking earlier

NOTE Confidence: 0.865242

 $00{:}18{:}17.226 \dashrightarrow 00{:}18{:}19.898$  before the break about the whole

NOTE Confidence: 0.865242

00:18:19.898 --> 00:18:22.248 concept of health services research,

NOTE Confidence: 0.865242

 $00:18:22.250 \longrightarrow 00:18:24.840$  one of the really important points you

 $00:18:24.840 \longrightarrow 00:18:27.763$  made is that health services

NOTE Confidence: 0.865242

00:18:27.763 --> 00:18:30.373 research really looks at real world

NOTE Confidence: 0.865242

 $00:18:30.448 \longrightarrow 00:18:33.346$  outcomes as opposed to trials.

NOTE Confidence: 0.865242

 $00:18:33.350 \longrightarrow 00:18:37.900$  And clinical trials sadly do not necessarily

NOTE Confidence: 0.865242

 $00:18:37.900 \longrightarrow 00:18:40.830$  include the population at large,

NOTE Confidence: 0.865242

 $00:18:40.830 \longrightarrow 00:18:45.806$  and so when we think about clinical trials,

NOTE Confidence: 0.865242

00:18:45.810 --> 00:18:48.298 particularly with oral agents

NOTE Confidence: 0.865242

 $00:18:48.298 \longrightarrow 00:18:50.164$  for kidney cancer,

NOTE Confidence: 0.865242

 $00:18:50.170 \longrightarrow 00:18:53.908$  did those include African American patients,

NOTE Confidence: 0.865242

 $00{:}18{:}53.910 \dashrightarrow 00{:}18{:}58.278$  and were the outcomes in those

NOTE Confidence: 0.865242

 $00:18:58.278 \longrightarrow 00:19:01.190$  African American patients equivalent

NOTE Confidence: 0.865242

 $00:19:01.299 \longrightarrow 00:19:03.690$  to Caucasian patients?

NOTE Confidence: 0.865242

 $00{:}19{:}03.690 \dashrightarrow 00{:}19{:}06.678$  I mean, could that partly explain

NOTE Confidence: 0.865242

00:19:06.678 --> 00:19:08.930 some of these disparities as well?

NOTE Confidence: 0.88480127

00:19:08.930 --> 00:19:11.780 That's a great question,

00:19:11.780 --> 00:19:14.594 and again, it points to a broader

NOTE Confidence: 0.88480127

 $00{:}19{:}14.594 \dashrightarrow 00{:}19{:}17.983$  issue where clinical trials in

NOTE Confidence: 0.88480127

 $00:19:17.983 \longrightarrow 00:19:20.608$  general struggle to be representative

NOTE Confidence: 0.88480127

 $00:19:20.608 \longrightarrow 00:19:23.678$  of the general population,

NOTE Confidence: 0.88480127

 $00:19:23.680 \longrightarrow 00:19:25.830$  and there are certainly efforts

NOTE Confidence: 0.88480127

 $00:19:25.830 \longrightarrow 00:19:28.595$  to make those clinical trials more

NOTE Confidence: 0.88480127

 $00:19:28.595 \longrightarrow 00:19:31.300$  representative of the general population.

NOTE Confidence: 0.88480127

 $00:19:31.300 \longrightarrow 00:19:34.975$  But that's something that continues to be

 $00:19:38.074 \longrightarrow 00:19:40.576$  addressed and certainly race is 1

NOTE Confidence: 0.88480127

 $00:19:40.576 \longrightarrow 00:19:42.760$  area where there have been efforts

NOTE Confidence: 0.88480127

 $00:19:42.760 \dashrightarrow 00:19:45.539$  to make them more representative.

NOTE Confidence: 0.88480127

 $00:19:45.540 \longrightarrow 00:19:48.380$  I think 1 area where trials continue to

NOTE Confidence: 0.88480127

 $00:19:48.380 \longrightarrow 00:19:50.299$  struggle with their representativeness

NOTE Confidence: 0.88480127

 $00:19:50.299 \longrightarrow 00:19:52.575$  is with older populations,

NOTE Confidence: 0.88480127

00:19:52.580 --> 00:19:55.442 and I think that's something that's

NOTE Confidence: 0.88480127

00:19:55.442 --> 00:19:57.350 particularly relevant to cancer

 $00:19:57.429 \longrightarrow 00:20:00.208$  patients because a lot of cancers tend

NOTE Confidence: 0.88480127

 $00{:}20{:}00.210 \dashrightarrow 00{:}20{:}02.664$  to have median age of diagnosis

NOTE Confidence: 0.88480127

 $00:20:02.664 \longrightarrow 00:20:06.050$  for the 65 plus patient population,

NOTE Confidence: 0.88480127

 $00:20:06.050 \longrightarrow 00:20:10.082$  and yet those people tend to be very

NOTE Confidence: 0.88480127

00:20:10.082 --> 00:20:12.868 under represented in trials.

NOTE Confidence: 0.88480127

00:20:12.870 --> 00:20:13.844 For instance,

NOTE Confidence: 0.88480127

 $00:20:13.844 \longrightarrow 00:20:17.740$  I think one great example of this is

 $00:20:18.690 \longrightarrow 00:20:21.065$  with an you emerging medical

NOTE Confidence: 0.88480127

00:20:21.065 --> 00:20:23.558 technology which is relevant to

NOTE Confidence: 0.88480127

 $00:20:23.558 \longrightarrow 00:20:26.504$  kidney cancer but also other

NOTE Confidence: 0.88480127

 $00{:}20{:}26.510 \dashrightarrow 00{:}20{:}29.125$  cancers are immunotherapies

NOTE Confidence: 0.88480127

 $00:20:29.125 \longrightarrow 00:20:31.217$  or immune checkpoint inhibitors.

NOTE Confidence: 0.88480127

00:20:31.220 --> 00:20:32.152 And again,

NOTE Confidence: 0.88480127

 $00:20:32.152 \longrightarrow 00:20:34.482$  older folks in those clinical

NOTE Confidence: 0.88480127

 $00{:}20{:}34.482 \dashrightarrow 00{:}20{:}37.199$  trials are under represented and

NOTE Confidence: 0.88480127

 $00:20:37.200 \longrightarrow 00:20:40.182$  yet there's this kind of assumption

 $00:20:40.182 \longrightarrow 00:20:42.646$  that these immune checkpoint inhibitors

NOTE Confidence: 0.88480127

 $00:20:42.646 \longrightarrow 00:20:45.418$  are going to be less toxic than

NOTE Confidence: 0.88480127

00:20:45.418 --> 00:20:48.773 the standard or previously

NOTE Confidence: 0.88480127

 $00:20:48.773 \longrightarrow 00:20:50.636$  used cytotoxic chemotherapies.

NOTE Confidence: 0.88480127

 $00:20:50.640 \longrightarrow 00:20:52.212$  And so you know,

NOTE Confidence: 0.88480127

00:20:52.212 --> 00:20:55.229 a lot of physicians have been operating

NOTE Confidence: 0.88480127

 $00:20:55.229 \longrightarrow 00:20:58.619$  under the assumption that the toxicity

NOTE Confidence: 0.88480127

00:20:58.619 --> 00:21:01.770 profiles of these immune oncology

NOTE Confidence: 0.88480127

 $00{:}21{:}01.770 \dashrightarrow 00{:}21{:}04.212$  agents is less than traditional

NOTE Confidence: 0.88480127

 $00:21:04.212 \longrightarrow 00:21:06.778$  therapies and so have been more

NOTE Confidence: 0.88480127

 $00{:}21{:}06.778 \dashrightarrow 00{:}21{:}08.923$  willing to give these the rapies

NOTE Confidence: 0.88480127

 $00:21:08.923 \longrightarrow 00:21:11.467$  to older patients and yet it's

NOTE Confidence: 0.88480127

 $00:21:11.467 \longrightarrow 00:21:13.825$  not really based on clinical trial

NOTE Confidence: 0.88480127

 $00:21:13.825 \longrightarrow 00:21:15.880$  data because that clinical trial

NOTE Confidence: 0.88480127

00:21:15.880 --> 00:21:17.540 data doesn't readily exist,

NOTE Confidence: 0.88480127

 $00{:}21{:}17.540 \dashrightarrow 00{:}21{:}20.340$  and so one of the things I'm interested

 $00:21:20.340 \longrightarrow 00:21:23.529$  in potentially looking at in the

NOTE Confidence: 0.88480127

00:21:23.529 --> 00:21:26.418 future is real world utilization of

NOTE Confidence: 0.88480127

00:21:26.418 --> 00:21:29.190 these drugs in patients who were again

NOTE Confidence: 0.88480127

 $00:21:29.190 \longrightarrow 00:21:32.105$  not going to be represented and in

NOTE Confidence: 0.88480127

 $00:21:32.105 \longrightarrow 00:21:34.220$  standard trials and whose outcomes,

NOTE Confidence: 0.88480127

00:21:34.220 --> 00:21:36.728 whose toxicity profiles may look very

NOTE Confidence: 0.88480127

 $00:21:36.728 \longrightarrow 00:21:38.838$  different than what is typically

NOTE Confidence: 0.88480127

 $00:21:38.838 \longrightarrow 00:21:40.286$  seen in a trial.

 $00:21:40.710 \longrightarrow 00:21:43.242$  I think that

NOTE Confidence: 0.8477308

 $00:21:43.242 \longrightarrow 00:21:44.930$  it's so important,

NOTE Confidence: 0.8477308

 $00{:}21{:}44.930 \dashrightarrow 00{:}21{:}47.120$  especially when we think about the

NOTE Confidence: 0.8477308

 $00:21:47.120 \longrightarrow 00:21:49.694$  fact that these drugs may affect

NOTE Confidence: 0.8477308

00:21:49.694 --> 00:21:51.648 different people differently, right?

NOTE Confidence: 0.8477308

00:21:51.648 --> 00:21:54.752 I mean, I think we've seen this even

NOTE Confidence: 0.8477308

 $00:21:54.752 \longrightarrow 00:21:57.759$  in the cardiology world back in the

NOTE Confidence: 0.8477308

 $00{:}21{:}57.759 \dashrightarrow 00{:}22{:}00.845$  day when only men were included in

 $00{:}22{:}00.845 \dashrightarrow 00{:}22{:}03.911$  some of the the heart attack trials

NOTE Confidence: 0.8477308

 $00:22:03.920 \longrightarrow 00:22:06.797$  and we realized that women's

NOTE Confidence: 0.8477308

 $00:22:06.797 \longrightarrow 00:22:08.551$  heart attacks present differently

NOTE Confidence: 0.8477308

 $00:22:08.551 \longrightarrow 00:22:11.239$  than men's heart attacks and

NOTE Confidence: 0.8477308

00:22:11.240 --> 00:22:12.912 drugs may affect different

NOTE Confidence: 0.8477308

 $00:22:12.912 \longrightarrow 00:22:13.748$  genders differently,

NOTE Confidence: 0.8477308

 $00:22:13.750 \longrightarrow 00:22:16.342$  and similarly we may find that

NOTE Confidence: 0.8477308

 $00:22:16.342 \longrightarrow 00:22:18.070$  there are differences based

NOTE Confidence: 0.8477308

 $00:22:18.154 \longrightarrow 00:22:20.019$  on race and other things,

NOTE Confidence: 0.8477308

 $00:22:20.020 \longrightarrow 00:22:23.684$  and so trying to tease out what really

NOTE Confidence: 0.8477308

 $00:22:23.684 \longrightarrow 00:22:27.826$  is at the root of these disparities,

NOTE Confidence: 0.8477308

 $00:22:27.830 \longrightarrow 00:22:31.174$  it really does require some as you call

NOTE Confidence: 0.8477308

 $00{:}22{:}31.174 \dashrightarrow 00{:}22{:}34.587$  it real world kind of investigation.

NOTE Confidence: 0.8569479

 $00:22:34.590 \longrightarrow 00:22:39.420$  Yes, and this is all

NOTE Confidence: 0.8569479

 $00:22:39.420 \longrightarrow 00:22:42.878$  so relevant right now in the times

00:22:42.878 --> 00:22:45.699 of COVID-19 where we have this very big need

 $00:22:48.876 \longrightarrow 00:22:51.500$  to get vaccines approved and treatments

NOTE Confidence: 0.8569479

 $00{:}22{:}51.500 \dashrightarrow 00{:}22{:}54.400$  approved as quickly as possible.

NOTE Confidence: 0.8569479

00:22:54.400 --> 00:22:57.858 But again, we already know that COVID-19

NOTE Confidence: 0.8569479

 $00:22:57.860 \longrightarrow 00:22:58.990$  is affecting

NOTE Confidence: 0.7350321

 $00:23:01.530 \longrightarrow 00:23:04.375$  minority racial and ethnic patients

NOTE Confidence: 0.7350321

 $00:23:04.375 \longrightarrow 00:23:08.120$  differently than it is white patients.

NOTE Confidence: 0.7350321

 $00:23:08.120 \longrightarrow 00:23:11.110$  We know that there's differential

NOTE Confidence: 0.7350321

 $00:23:11.110 \longrightarrow 00:23:15.460$  outcomes.

NOTE Confidence: 0.7350321

 $00:23:15.460 \longrightarrow 00:23:18.785$  we know that there are differential outcomes.

 $00:23:27.808 \longrightarrow 00:23:31.232$  Covid is affecting

NOTE Confidence: 0.8349881

 $00{:}23{:}31.232 \dashrightarrow 00{:}23{:}33.867$  minority patients much more severely

NOTE Confidence: 0.8349881

 $00:23:33.952 \longrightarrow 00:23:36.347$  than it is Caucasian patients.

NOTE Confidence: 0.8349881

00:23:36.350 --> 00:23:39.068 What I think is really important,

NOTE Confidence: 0.8349881

 $00:23:39.070 \longrightarrow 00:23:41.230$  thinking about COVID-19 is that

NOTE Confidence: 0.8349881

 $00:23:41.230 \longrightarrow 00:23:43.898$  you know the clinical trials

NOTE Confidence: 0.8349881

 $00:23:43.898 \longrightarrow 00:23:46.922$  that were done really did have a

 $00:23:46.922 \longrightarrow 00:23:48.867$  reasonably robust representation of

NOTE Confidence: 0.8349881

 $00:23:48.867 \longrightarrow 00:23:51.879$  minority patients

NOTE Confidence: 0.8349881

 $00:23:51.880 \longrightarrow 00:23:54.840$  and so it's led us to believe

NOTE Confidence: 0.8349881

 $00:23:54.840 \longrightarrow 00:23:58.336$  that the vaccines should work equally

NOTE Confidence: 0.8349881

 $00:23:58.336 \longrightarrow 00:24:01.008$  efficaciously for minority patients.

NOTE Confidence: 0.8349881

00:24:01.010 --> 00:24:03.038 For African American patients,

NOTE Confidence: 0.8349881

00:24:03.038 --> 00:24:06.080 as it should for Caucasian patients.

NOTE Confidence: 0.8349881

00:24:06.080 --> 00:24:09.116 But bringing it back to kind

NOTE Confidence: 0.8349881

 $00:24:09.116 \longrightarrow 00:24:10.634$  of health services

NOTE Confidence: 0.8349881

 $00{:}24{:}10.640 \dashrightarrow 00{:}24{:}14.189$  research and real world science is

NOTE Confidence: 0.8349881

 $00:24:14.190 \longrightarrow 00:24:16.600$  this vaccine hesitancy

NOTE Confidence: 0.8349881

00:24:16.600 --> 00:24:20.270 and the fact that we're seeing,

NOTE Confidence: 0.8349881

 $00:24:20.270 \longrightarrow 00:24:22.970$  at least by anecdote, that

NOTE Confidence: 0.8349881

 $00{:}24{:}22.970 \dashrightarrow 00{:}24{:}25.320$  there may be more reluctance

NOTE Confidence: 0.8349881

 $00:24:25.320 \longrightarrow 00:24:27.670$  to really embrace the vaccine

00:24:27.759 --> 00:24:29.868 amongst African Americans,

NOTE Confidence: 0.8349881

 $00{:}24{:}29.870 \dashrightarrow 00{:}24{:}34.622$  who sadly are the most affected and who

NOTE Confidence: 0.8349881

 $00:24:34.622 \longrightarrow 00:24:38.998$  probably could use the vaccine the most.

 $00:24:40.500 \longrightarrow 00:24:42.000$  So how do you

NOTE Confidence: 0.8349881

 $00:24:42.000 \longrightarrow 00:24:45.829$  address that in terms

NOTE Confidence: 0.8349881

 $00:24:45.829 \longrightarrow 00:24:49.540$  of trying to understand

NOTE Confidence: 0.8349881

 $00:24:49.540 \longrightarrow 00:24:51.670$  data from clinical trials

NOTE Confidence: 0.8349881

 $00:24:51.670 \longrightarrow 00:24:53.800$  are applied in the real

NOTE Confidence: 0.8662269

 $00:24:53.800 \longrightarrow 00:24:55.930$  world?

NOTE Confidence: 0.8662269

00:24:55.930 --> 00:24:57.205 Yeah, it's an interesting

NOTE Confidence: 0.8662269

00:24:57.205 --> 00:24:58.905 conundrum.

NOTE Confidence: 0.8662269

 $00:24:58.910 \longrightarrow 00:25:02.969$  I think that in terms of people's

NOTE Confidence: 0.8662269

 $00:25:02.969 \longrightarrow 00:25:05.296$  willingness to take a vaccine,

NOTE Confidence: 0.8662269

 $00{:}25{:}05.300 \dashrightarrow 00{:}25{:}08.408$  their willingness to kind of accept data

NOTE Confidence: 0.8662269

 $00:25:08.408 \longrightarrow 00:25:11.270$  from clinical trials as relevant to them

NOTE Confidence: 0.8662269

 $00:25:11.270 \longrightarrow 00:25:14.214$  I think that that largely depends on the

 $00:25:14.214 \longrightarrow 00:25:16.798$  messaging and inconsistent messaging.

NOTE Confidence: 0.8662269

 $00:25:16.800 \longrightarrow 00:25:20.724$  I think that part of the problem is that

NOTE Confidence: 0.8662269

 $00:25:20.730 \longrightarrow 00:25:23.502$  some of these issues

NOTE Confidence: 0.8662269

 $00:25:23.502 \longrightarrow 00:25:26.253$  are incredibly entrenched and

NOTE Confidence: 0.8662269

 $00:25:26.253 \longrightarrow 00:25:28.628$  systemic issues that are longstanding

NOTE Confidence: 0.8662269

00:25:28.701 --> 00:25:31.108 for some of these populations, right?

NOTE Confidence: 0.8662269

 $00:25:31.108 \longrightarrow 00:25:33.508$  And so

NOTE Confidence: 0.8662269

 $00:25:33.508 \longrightarrow 00:25:35.528$  they're not specific to necessarily

NOTE Confidence: 0.8662269

 $00:25:35.528 \longrightarrow 00:25:37.489$  one vaccine or one trial,

NOTE Confidence: 0.8662269

 $00:25:37.490 \longrightarrow 00:25:40.354$  but generations of a health care

NOTE Confidence: 0.8662269

 $00:25:40.354 \longrightarrow 00:25:42.870$  system that hasn't necessarily always acted

NOTE Confidence: 0.8662269

 $00:25:42.870 \longrightarrow 00:25:45.860$  in their best interest, right?

NOTE Confidence: 0.8662269

00:25:45.860 --> 00:25:48.590 So I think just going forward

NOTE Confidence: 0.8662269

 $00:25:48.590 \longrightarrow 00:25:51.176$  a consistent message of

NOTE Confidence: 0.8662269

 $00:25:51.176 \longrightarrow 00:25:52.550$  representation for everyone

NOTE Confidence: 0.8662269

 $00:25:52.550 \longrightarrow 00:25:53.924$  concerned for everyone,

00:25:53.930 --> 00:25:57.323 I think is going to be really important

NOTE Confidence: 0.8662269

 $00:25:57.323 \longrightarrow 00:26:00.569$  and I think that that's true of Covid.

NOTE Confidence: 0.8662269

00:26:00.570 --> 00:26:02.916 I think that's true of cancer,

 $00:26:03.656 \longrightarrow 00:26:06.232$  because one of the issues that we're

NOTE Confidence: 0.8662269

00:26:06.232 --> 00:26:08.406 talking about today is cancer

NOTE Confidence: 0.8662269

00:26:08.406 --> 00:26:11.103 prevention and some of the most important

NOTE Confidence: 0.8662269

 $00:26:11.103 \longrightarrow 00:26:13.761$  factors for cancer prevention are things

NOTE Confidence: 0.8662269

00:26:13.761 --> 00:26:16.615 that have been long known as perhaps

NOTE Confidence: 0.8662269

 $00:26:16.615 \longrightarrow 00:26:19.420$  one area where there's not been a

NOTE Confidence: 0.8662269

00:26:19.420 --> 00:26:22.607 ton of really large steps and advances, but

NOTE Confidence: 0.8662269

 $00{:}26{:}23.661 \rightarrow 00{:}26{:}26.823$  things like not smoking things like

NOTE Confidence: 0.8662269

00:26:27.646 --> 00:26:29.278 maintaining a healthy weight,

NOTE Confidence: 0.8662269

 $00:26:29.280 \longrightarrow 00:26:30.800$  eating a healthy diet

NOTE Confidence: 0.8662269

 $00:26:30.800 \longrightarrow 00:26:33$ . these are kind of the standards of

NOTE Confidence: 0.8662269

 $00:26:33.600 \longrightarrow 00:26:35.830$  cancer prevention across the board,

NOTE Confidence: 0.8662269

 $00:26:35.830 \longrightarrow 00:26:38.278$  and again, it's certain

 $00:26:38.280 \longrightarrow 00:26:40.280$  messaging to different

NOTE Confidence: 0.8662269

 $00{:}26{:}40.280 \mathrel{--}{>} 00{:}26{:}42.280$  populations to make sure that

NOTE Confidence: 0.8662269

 $00{:}26{:}42.351 \dashrightarrow 00{:}26{:}44.416$  they are receiving the message.

NOTE Confidence: 0.8662269

 $00:26:44.420 \longrightarrow 00:26:46.460$  Make sure that they understand

NOTE Confidence: 0.8662269

 $00:26:46.460 \longrightarrow 00:26:48.092$  how important it is.

NOTE Confidence: 0.8662269

 $00:26:48.100 \longrightarrow 00:26:50.956$  It is something that needs to be considered.

00:26:53.002 --> 00:26:55.900 I think your point about

NOTE Confidence: 0.8566167

 $00:26:55.900 \longrightarrow 00:26:57.980$  systemic racism and the

NOTE Confidence: 0.8566167

 $00{:}26{:}57.980 \dashrightarrow 00{:}26{:}59.832$  absolutely important tragedies that

NOTE Confidence: 0.8566167

 $00{:}26{:}59.832 \dashrightarrow 00{:}27{:}02.610$  have happened in the US health

NOTE Confidence: 0.8566167

 $00{:}27{:}02.684 \to 00{:}27{:}04.929$  care system over centuries really,

NOTE Confidence: 0.8566167

 $00{:}27{:}04.930 \dashrightarrow 00{:}27{:}07.774$  that has propagated the lack

NOTE Confidence: 0.8566167

 $00:27:07.774 \longrightarrow 00:27:10.184$  of trust for minority populations

NOTE Confidence: 0.8566167

 $00:27:10.184 \longrightarrow 00:27:12.734$  in clinical trials is going to

NOTE Confidence: 0.8566167

00:27:12.734 --> 00:27:15.570 be a hard mountain to climb,

NOTE Confidence: 0.8566167

00:27:15.570 --> 00:27:18.818 but I think it is so important,

00:27:18.820 --> 00:27:21.838 particularly when we think about not

NOTE Confidence: 0.8566167

 $00{:}27{:}21.838 \to 00{:}27{:}24.828$  only the rapeutics and but as you say,

NOTE Confidence: 0.8566167

 $00:27:24.830 \longrightarrow 00:27:25.778$  about prevention.

NOTE Confidence: 0.8566167

00:27:25.778 --> 00:27:28.148 Whether we're talking about Covid

NOTE Confidence: 0.8566167

00:27:28.148 --> 00:27:30.619 or whether we're talking about

NOTE Confidence: 0.8566167

 $00:27:30.620 \longrightarrow 00:27:33.777$  cancer and so really thinking about all

NOTE Confidence: 0.8566167

 $00:27:33.777 \longrightarrow 00:27:37.606$  of the ways that we can prevent cancer,

NOTE Confidence: 0.8566167

00:27:37.610 --> 00:27:39.940 February being Cancer Prevention Month,

NOTE Confidence: 0.8566167

 $00:27:39.940 \longrightarrow 00:27:42.978$  have we seen any impact in terms

NOTE Confidence: 0.8566167

 $00:27:42.978 \longrightarrow 00:27:45.070$  of really driving forward

NOTE Confidence: 0.8566167

 $00:27:45.070 \longrightarrow 00:27:47.274$  some of those behaviors?

NOTE Confidence: 0.8566167

 $00:27:47.274 \longrightarrow 00:27:50.029$  Some of those primary prevention

NOTE Confidence: 0.8566167

 $00{:}27{:}50.029 \dashrightarrow 00{:}27{:}52.810$  techniques that all of us know about

NOTE Confidence: 0.8566167

 $00{:}27{:}52.810 \dashrightarrow 00{:}27{:}55.778$  in terms of cancer prevention.

NOTE Confidence: 0.8566167

 $00:27:55.780 \longrightarrow 00:27:58.110$  Are we making a dent?

 $00:27:59.300 \longrightarrow 00:28:01.316$  I think so.

 $00:28:03.040 \longrightarrow 00:28:05.049$  There's a long way

NOTE Confidence: 0.8594165

 $00{:}28{:}05.049 \dashrightarrow 00{:}28{:}07.580$  to go and I think there's a lot more

NOTE Confidence: 0.8594165

 $00:28:07.580 \longrightarrow 00:28:09.960$  to be done in those

NOTE Confidence: 0.8594165

00:28:09.960 --> 00:28:11.676 primary areas that you mentioned.

NOTE Confidence: 0.8594165

 $00:28:11.680 \longrightarrow 00:28:14.558$  But for a lot of cancers we do see

NOTE Confidence: 0.8594165

00:28:14.558 --> 00:28:17.158 that the incidence of cancer is going down,

NOTE Confidence: 0.8594165

 $00:28:17.160 \longrightarrow 00:28:19.552$  not for all of them, but

NOTE Confidence: 0.8594165

00:28:19.552 --> 00:28:21.399 for some of them. Smoking

NOTE Confidence: 0.8594165

 $00:28:21.399 \longrightarrow 00:28:23.199$  related cancers to some extent

NOTE Confidence: 0.8594165

 $00:28:23.200 \longrightarrow 00:28:25.792$  it kind of fluctuates a little bit,

NOTE Confidence: 0.8594165

 $00:28:25.800 \longrightarrow 00:28:27.235$  but for sure we're seeing

NOTE Confidence: 0.8594165

 $00:28:27.235 \longrightarrow 00:28:28.096$  some improvements there.

 $00:28:30.500 \longrightarrow 00:28:32.474$  One of the easiest things to do

NOTE Confidence: 0.8594165

 $00{:}28{:}32.474 \dashrightarrow 00{:}28{:}34.269$  for younger boys and girls is

NOTE Confidence: 0.8594165

 $00:28:34.269 \longrightarrow 00:28:36.033$  to make sure that they received

NOTE Confidence: 0.8594165

 $00:28:36.033 \longrightarrow 00:28:37.884$  their HPV vaccinations in

 $00:28:37.884 \longrightarrow 00:28:39.749$  the terms of cancer prevention,

NOTE Confidence: 0.8594165

 $00:28:39.750 \longrightarrow 00:28:42.165$  and certainly since

NOTE Confidence: 0.8594165

 $00{:}28{:}42.165 \to 00{:}28{:}44.528$  the HPV vaccination has come on the scene,

NOTE Confidence: 0.8594165

 $00:28:44.530 \longrightarrow 00:28:46.210$  we've certainly seen decreases

NOTE Confidence: 0.8594165

 $00{:}28{:}46.210 \dashrightarrow 00{:}28{:}48.310$  in HPV related cancers associated

NOTE Confidence: 0.8594165

 $00:28:48.310 \longrightarrow 00:28:50.530$  with utilization of that vaccine.

NOTE Confidence: 0.8594165

 $00:28:50.530 \longrightarrow 00:28:52.778$  And then the other area is that

NOTE Confidence: 0.8594165

 $00:28:52.780 \longrightarrow 00:28:56.204$  we're seeing this kind of

NOTE Confidence: 0.8594165

 $00:28:56.210 \longrightarrow 00:28:58.800$  increase in the number of cancer survivors,

NOTE Confidence: 0.8594165

 $00:28:58.800 \longrightarrow 00:29:01.576$  so even folks who are unfortunate to

NOTE Confidence: 0.8594165

00:29:01.576 --> 00:29:03.932 receive a diagnosis, cancer survival

NOTE Confidence: 0.8594165

00:29:03.932 --> 00:29:06.939 for many cancers is going up as well,

NOTE Confidence: 0.8594165

 $00:29:06.940 \longrightarrow 00:29:09.460$  and I think some of that you

NOTE Confidence: 0.8594165

 $00{:}29{:}09.460 \dashrightarrow 00{:}29{:}11.380$  know a lot of that,

NOTE Confidence: 0.8594165

 $00:29:11.380 \longrightarrow 00:29:13.585$  is attributable to these advances

 $00:29:13.585 \longrightarrow 00:29:15.820$  in diagnostic or treatment technologies.

NOTE Confidence: 0.8594165

 $00:29:15.820 \longrightarrow 00:29:18.040$  But to some extent as well

NOTE Confidence: 0.8594165

00:29:18.040 --> 00:29:19.890 people trying to,

NOTE Confidence: 0.8594165

00:29:19.890 --> 00:29:22.110 you know, reduce or quit smoking,

NOTE Confidence: 0.8594165

 $00:29:22.110 \longrightarrow 00:29:23.220$  eat healthier diets,

NOTE Confidence: 0.8594165

00:29:23.220 --> 00:29:25.070 maintaining a healthy body weight.

NOTE Confidence: 0.8594165

 $00:29:25.070 \longrightarrow 00:29:27.050$  All of these things are

NOTE Confidence: 0.8594165

 $00:29:27.050 \longrightarrow 00:29:28.390$  only going to help.

NOTE Confidence: 0.8795682

 $00{:}29{:}29.110 \dashrightarrow 00{:}29{:}31.474$  Doctor Michaela Dinan is an associate

NOTE Confidence: 0.8795682

00:29:31.474 --> 00:29:33.465 professor of chronic disease Epidemiology

NOTE Confidence: 0.8795682

 $00{:}29{:}33.465 \dashrightarrow 00{:}29{:}35.950$  at the Yale School of Public Health.

NOTE Confidence: 0.8795682

 $00:29:35.950 \longrightarrow 00:29:37.474$  If you have questions,

NOTE Confidence: 0.8795682

 $00{:}29{:}37.474 \dashrightarrow 00{:}29{:}38.998$  the address is canceranswers@yale.edu

NOTE Confidence: 0.8795682

00:29:38.998 --> 00:29:41.102 and past editions of the program

NOTE Confidence: 0.8795682

 $00:29:41.102 \longrightarrow 00:29:43.022$  are available in audio and written

NOTE Confidence: 0.8795682

 $00{:}29{:}43.086 \dashrightarrow 00{:}29{:}44.688$  form at yale cancercenter.org.

00:29:44.690 --> 00:29:47.242 We hope you'll join us next week to

NOTE Confidence: 0.8795682

 $00{:}29{:}47.242 \dashrightarrow 00{:}29{:}49.709$  learn more about the fight against

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 $00{:}29{:}49.709 \dashrightarrow 00{:}29{:}52.728$  cancer here on Connecticut Public Radio.