

WEBVTT

00:00:00.000 --> 00:00:02.226 Funding for Yale Cancer Answers is

NOTE Confidence: 0.813603879090909

00:00:02.226 --> 00:00:04.330 provided by Smilow Cancer Hospital.

NOTE Confidence: 0.706400723333333

00:00:06.550 --> 00:00:08.770 Welcome to Yale Cancer Answers

NOTE Confidence: 0.706400723333333

00:00:08.770 --> 00:00:10.546 with Doctor Anees Chagpar.

NOTE Confidence: 0.706400723333333

00:00:10.550 --> 00:00:12.380 Yale Cancer Answers features the

NOTE Confidence: 0.706400723333333

00:00:12.380 --> 00:00:14.210 latest information on cancer care

NOTE Confidence: 0.706400723333333

00:00:14.266 --> 00:00:15.706 by welcoming oncologists and

NOTE Confidence: 0.706400723333333

00:00:15.706 --> 00:00:17.866 specialists who are on the forefront

NOTE Confidence: 0.706400723333333

00:00:17.926 --> 00:00:19.588 of the battle to fight cancer.

NOTE Confidence: 0.706400723333333

00:00:19.590 --> 00:00:21.678 This week, it's a conversation about

NOTE Confidence: 0.706400723333333

00:00:21.678 --> 00:00:23.883 advances in the treatment of metastatic

NOTE Confidence: 0.706400723333333

00:00:23.883 --> 00:00:25.768 cancers with Doctor Kiran Turaga.

NOTE Confidence: 0.706400723333333

00:00:25.770 --> 00:00:27.888 Dr Turaga is chief of surgical

NOTE Confidence: 0.706400723333333

00:00:27.888 --> 00:00:29.300 Oncology and assistant medical

NOTE Confidence: 0.706400723333333

00:00:29.358 --> 00:00:31.338 director of the Clinical Trials Office

NOTE Confidence: 0.706400723333333

00:00:31.338 --> 00:00:33.409 at the Yale School of Medicine,
NOTE Confidence: 0.7064007233333333

00:00:33.410 --> 00:00:35.165 where Doctor Chagpar is a
NOTE Confidence: 0.7064007233333333

00:00:35.165 --> 00:00:36.569 professor of surgical oncology.
NOTE Confidence: 0.9122512495

00:00:37.690 --> 00:00:39.804 Kiran, maybe we can start off by
NOTE Confidence: 0.9122512495

00:00:39.804 --> 00:00:42.043 you telling us a little bit more
NOTE Confidence: 0.9122512495

00:00:42.043 --> 00:00:43.933 about yourself and what you do.
NOTE Confidence: 0.7189667866666667

00:00:44.210 --> 00:00:46.646 I'm a surgical oncologist,
NOTE Confidence: 0.7189667866666667

00:00:46.650 --> 00:00:50.205 which means I'm a cancer doctor first
NOTE Confidence: 0.7189667866666667

00:00:50.210 --> 00:00:52.020 and I'm also a surgeon.
NOTE Confidence: 0.7189667866666667

00:00:52.020 --> 00:00:53.400 And I grew up in India,
NOTE Confidence: 0.7189667866666667

00:00:53.400 --> 00:00:55.456 which is where I did my medical training.
NOTE Confidence: 0.7189667866666667

00:00:55.460 --> 00:00:58.542 I spent now half of my life in the
NOTE Confidence: 0.7189667866666667

00:00:58.542 --> 00:01:01.286 United States and half my life in India.
NOTE Confidence: 0.7189667866666667

00:01:01.290 --> 00:01:04.716 My journey in cancer surgery
NOTE Confidence: 0.7189667866666667

00:01:04.716 --> 00:01:08.198 started when I met patients during my
NOTE Confidence: 0.7189667866666667

00:01:08.198 --> 00:01:10.850 training and surgery who had immense

NOTE Confidence: 0.718966786666667
00:01:10.927 --> 00:01:13.551 suffering and the suffering was
NOTE Confidence: 0.718966786666667
00:01:13.551 --> 00:01:15.658 much more than I had ever wanted
NOTE Confidence: 0.718966786666667
00:01:15.658 --> 00:01:18.226 to see any human being go through.
NOTE Confidence: 0.718966786666667
00:01:18.230 --> 00:01:22.104 And I resolved then that I would dedicate
NOTE Confidence: 0.718966786666667
00:01:22.104 --> 00:01:24.718 myself to to working on cancer care and
NOTE Confidence: 0.718966786666667
00:01:24.718 --> 00:01:26.965 and that's where my journey has taken me.
NOTE Confidence: 0.718966786666667
00:01:26.970 --> 00:01:28.608 It's also very personal to me.
NOTE Confidence: 0.718966786666667
00:01:28.610 --> 00:01:31.386 My grandfather died of cancer and my father
NOTE Confidence: 0.718966786666667
00:01:31.390 --> 00:01:32.960 recently expired also of cancer.
00:01:33.352 --> 00:01:36.860 So I think it is something that is very
NOTE Confidence: 0.718966786666667
00:01:36.860 --> 00:01:39.520 personal and motivates me every day.
00:01:42.144 --> 00:01:45.240 Kiran, when we talk about cancer and on
NOTE Confidence: 0.789063786153846
00:01:45.240 --> 00:01:49.650 this show we talk a lot about cancer,
NOTE Confidence: 0.789063786153846
00:01:49.650 --> 00:01:52.710 oftentimes we
NOTE Confidence: 0.789063786153846
00:01:52.710 --> 00:01:55.205 have kind of these two buckets, right.
NOTE Confidence: 0.789063786153846
00:01:55.205 --> 00:01:58.810 We have the buckets of early stage
NOTE Confidence: 0.789063786153846

00:01:58.810 --> 00:02:02.327 cancers that oftentimes we talk about.

NOTE Confidence: 0.789063786153846

00:02:02.330 --> 00:02:05.494 The fact that these can be cured

NOTE Confidence: 0.789063786153846

00:02:05.494 --> 00:02:07.889 essentially many early stage cancers

NOTE Confidence: 0.789063786153846

00:02:07.889 --> 00:02:11.228 when picked up really early like early

NOTE Confidence: 0.789063786153846

00:02:11.228 --> 00:02:14.087 stage breast cancers can be cured.

NOTE Confidence: 0.789063786153846

00:02:14.090 --> 00:02:16.554 And then we talk about the later

NOTE Confidence: 0.789063786153846

00:02:16.554 --> 00:02:19.041 stage cancers and it sounds to me

NOTE Confidence: 0.789063786153846

00:02:19.041 --> 00:02:21.069 when you were talking about your

NOTE Confidence: 0.789063786153846

00:02:21.148 --> 00:02:23.518 story that many of these patients

NOTE Confidence: 0.789063786153846

00:02:23.518 --> 00:02:25.838 who are suffering with cancer

NOTE Confidence: 0.789063786153846

00:02:25.838 --> 00:02:28.790 often have metastatic cancer,

NOTE Confidence: 0.789063786153846

00:02:28.790 --> 00:02:30.438 cancer that has spread,

NOTE Confidence: 0.789063786153846

00:02:30.438 --> 00:02:33.384 but that's not often the kind that

NOTE Confidence: 0.789063786153846

00:02:33.384 --> 00:02:36.107 we think about in terms of surgery.

NOTE Confidence: 0.789063786153846

00:02:36.110 --> 00:02:38.940 So can you tell us the role that

NOTE Confidence: 0.789063786153846

00:02:39.016 --> 00:02:41.776 surgery plays in in metastatic cancers?

NOTE Confidence: 0.70618747

00:02:43.800 --> 00:02:46.352 And I think you

NOTE Confidence: 0.70618747

00:02:46.352 --> 00:02:48.376 framed this question very well.

NOTE Confidence: 0.70618747

00:02:48.380 --> 00:02:51.200 I think both importantly and carefully,

NOTE Confidence: 0.70618747

00:02:51.200 --> 00:02:54.312 which is number one, that there is a

NOTE Confidence: 0.70618747

00:02:54.312 --> 00:02:56.047 common misconception that surgery may

NOTE Confidence: 0.70618747

00:02:56.047 --> 00:02:58.720 not have a role in stage 4 cancers.

NOTE Confidence: 0.70618747

00:02:58.720 --> 00:03:01.860 And so if you think about the history of how

NOTE Confidence: 0.70618747

00:03:01.940 --> 00:03:05.160 cancer therapeutics have evolved in the past,

NOTE Confidence: 0.70618747

00:03:05.160 --> 00:03:07.404 we had no modality for treating

NOTE Confidence: 0.70618747

00:03:07.404 --> 00:03:08.900 cancer other than surgery.

NOTE Confidence: 0.70618747

00:03:08.900 --> 00:03:12.850 So in the early 1900s, all the way

NOTE Confidence: 0.70618747

00:03:12.850 --> 00:03:16.030 up to the discovery of chemotherapy,

NOTE Confidence: 0.70618747

00:03:16.030 --> 00:03:17.590 surgery was the mainstay of

NOTE Confidence: 0.70618747

00:03:17.590 --> 00:03:19.565 treating cancers and it was used

NOTE Confidence: 0.70618747

00:03:19.565 --> 00:03:21.315 for treating cancers which were

NOTE Confidence: 0.70618747

00:03:21.320 --> 00:03:22.326 both localized,
NOTE Confidence: 0.70618747

00:03:22.326 --> 00:03:26.350 which meant they were early stage and late stage.
NOTE Confidence: 0.70618747

00:03:26.350 --> 00:03:28.740 And then once chemotherapy came about
NOTE Confidence: 0.70618747

00:03:28.740 --> 00:03:31.675 and we understood that cancer is a
NOTE Confidence: 0.70618747

00:03:31.675 --> 00:03:33.464 disease that spreads throughout the
NOTE Confidence: 0.70618747

00:03:33.464 --> 00:03:35.726 body and you need treatments
NOTE Confidence: 0.70618747

00:03:35.726 --> 00:03:38.146 that are effective with cancers that
NOTE Confidence: 0.70618747

00:03:38.146 --> 00:03:39.786 are spreading through the body,
NOTE Confidence: 0.70618747

00:03:39.790 --> 00:03:42.660 there was a paradigm shift where
NOTE Confidence: 0.70618747

00:03:42.660 --> 00:03:44.996 more treatments went towards using
NOTE Confidence: 0.70618747

00:03:44.996 --> 00:03:47.561 what we call cytotoxic chemotherapy
NOTE Confidence: 0.70618747

00:03:47.561 --> 00:03:49.959 or chemotherapy that kills
NOTE Confidence: 0.70618747

00:03:49.959 --> 00:03:52.588 cells which are dividing.
NOTE Confidence: 0.70618747

00:03:52.590 --> 00:03:54.828 The understanding that this is not
NOTE Confidence: 0.70618747

00:03:54.828 --> 00:03:57.137 always the case for metastatic or
NOTE Confidence: 0.70618747

00:03:57.137 --> 00:03:59.375 stage four cancer was a concept

NOTE Confidence: 0.70618747

00:03:59.375 --> 00:04:01.820 that was pioneered actually at the

NOTE Confidence: 0.70618747

00:04:01.820 --> 00:04:04.816 University of Chicago in the late 1990s,

NOTE Confidence: 0.70618747

00:04:04.816 --> 00:04:08.092 where a term called oligometastasis

NOTE Confidence: 0.70618747

00:04:08.092 --> 00:04:11.340 was defined, and what this meant was

NOTE Confidence: 0.70618747

00:04:11.340 --> 00:04:13.370 if cancer was truly spreading

NOTE Confidence: 0.70618747

00:04:13.370 --> 00:04:14.994 through the entire body,

NOTE Confidence: 0.70618747

00:04:15.000 --> 00:04:17.254 why isn't every organ and every part

NOTE Confidence: 0.70618747

00:04:17.254 --> 00:04:19.738 of every organ affected by the cancer?

NOTE Confidence: 0.70618747

00:04:19.740 --> 00:04:21.791 Why is it that it selectively goes

NOTE Confidence: 0.70618747

00:04:21.791 --> 00:04:23.929 to some organs and only in some

NOTE Confidence: 0.70618747

00:04:23.929 --> 00:04:25.723 locations in some organs like the

NOTE Confidence: 0.70618747

00:04:25.786 --> 00:04:28.034 liver or the lungs or the lining of

NOTE Confidence: 0.70618747

00:04:28.034 --> 00:04:29.920 the abdomen called the peritoneum?

NOTE Confidence: 0.70618747

00:04:29.920 --> 00:04:32.560 And this brought about this whole

NOTE Confidence: 0.70618747

00:04:32.560 --> 00:04:34.654 concept of where when patients

NOTE Confidence: 0.70618747

00:04:34.654 --> 00:04:36.234 have stage four cancer,
NOTE Confidence: 0.70618747

00:04:36.240 --> 00:04:38.364 there is still the body's immune
NOTE Confidence: 0.70618747

00:04:38.364 --> 00:04:40.176 system that is controlling these
NOTE Confidence: 0.70618747

00:04:40.176 --> 00:04:41.520 sort of metastases or
NOTE Confidence: 0.70618747

00:04:41.520 --> 00:04:44.715 stage 4 spreads in different parts of the body.
NOTE Confidence: 0.70618747

00:04:44.720 --> 00:04:47.835 And in conjunction with other
NOTE Confidence: 0.70618747

00:04:47.835 --> 00:04:50.327 treatments like chemotherapy or
NOTE Confidence: 0.70618747

00:04:50.327 --> 00:04:52.778 immunotherapy or endocrine therapy,
NOTE Confidence: 0.70618747

00:04:52.780 --> 00:04:55.438 you could actually combine it with
NOTE Confidence: 0.70618747

00:04:55.438 --> 00:04:57.614 surgical or ablative treatments like
NOTE Confidence: 0.70618747

00:04:57.614 --> 00:04:59.959 radiation or burning it with a needle
NOTE Confidence: 0.70618747

00:04:59.959 --> 00:05:03.115 to enhance the survival of patients.
NOTE Confidence: 0.70618747

00:05:03.120 --> 00:05:05.619 And so in the early 2000s when
NOTE Confidence: 0.70618747

00:05:05.619 --> 00:05:07.863 people started doing this more
NOTE Confidence: 0.70618747

00:05:07.863 --> 00:05:10.059 predominantly for colorectal cancers,
NOTE Confidence: 0.70618747

00:05:10.060 --> 00:05:11.206 which had spread

NOTE Confidence: 0.70618747

00:05:11.206 --> 00:05:13.498 we found that patients were actually

NOTE Confidence: 0.70618747

00:05:13.498 --> 00:05:15.604 cured with surgery alone and in

NOTE Confidence: 0.70618747

00:05:15.604 --> 00:05:17.672 fact the survival of these patients

NOTE Confidence: 0.70618747

00:05:17.672 --> 00:05:20.080 which was much lower when

NOTE Confidence: 0.70618747

00:05:20.080 --> 00:05:22.138 they just got chemotherapy alone

NOTE Confidence: 0.70618747

00:05:22.138 --> 00:05:24.418 had significantly increased once we

NOTE Confidence: 0.70618747

00:05:24.418 --> 00:05:27.210 were able to fold in treatments like

NOTE Confidence: 0.70618747

00:05:27.210 --> 00:05:30.029 surgery in the treatment of these cancers.

NOTE Confidence: 0.70618747

00:05:30.030 --> 00:05:32.790 And so over the last couple of decades,

NOTE Confidence: 0.70618747

00:05:32.790 --> 00:05:35.120 our understanding of these tumors

NOTE Confidence: 0.70618747

00:05:35.120 --> 00:05:37.450 have evolved significantly where we

NOTE Confidence: 0.70618747

00:05:37.520 --> 00:05:39.908 believe that surgery plays a mainstay

NOTE Confidence: 0.70618747

00:05:39.908 --> 00:05:43.059 role in the treatment of metastatic cancers.

NOTE Confidence: 0.70618747

00:05:43.060 --> 00:05:45.755 And as treatments are evolving even further,

NOTE Confidence: 0.70618747

00:05:45.760 --> 00:05:48.940 like immunotherapy or newer treatments,

NOTE Confidence: 0.70618747

00:05:48.940 --> 00:05:51.080 there is an increased understanding
NOTE Confidence: 0.70618747

00:05:51.080 --> 00:05:52.792 of where surgical therapeutics
NOTE Confidence: 0.70618747

00:05:52.792 --> 00:05:55.029 are important in facilitating some
NOTE Confidence: 0.70618747

00:05:55.029 --> 00:05:57.204 of these immunotherapies as well.
NOTE Confidence: 0.855866362

00:05:58.660 --> 00:06:02.700 So that sounds really hopeful
NOTE Confidence: 0.855866362

00:06:02.700 --> 00:06:05.868 that even in patients who have
NOTE Confidence: 0.855866362

00:06:05.868 --> 00:06:08.800 had cancers that have spread,
NOTE Confidence: 0.855866362

00:06:08.800 --> 00:06:12.190 the combination of using chemotherapy
NOTE Confidence: 0.855866362

00:06:12.190 --> 00:06:16.271 or systemic therapies more broadly and
NOTE Confidence: 0.855866362

00:06:16.271 --> 00:06:19.726 surgery may actually improve survival.
NOTE Confidence: 0.855866362

00:06:19.730 --> 00:06:22.736 But is that only the case in certain cancers?
NOTE Confidence: 0.855866362

00:06:22.740 --> 00:06:25.338 You mentioned that this was
NOTE Confidence: 0.855866362

00:06:25.338 --> 00:06:27.070 pioneered with colorectal cancer.
NOTE Confidence: 0.855866362

00:06:27.070 --> 00:06:29.734 Can this be used for all cancers
NOTE Confidence: 0.855866362

00:06:29.734 --> 00:06:32.995 or is it still limited just to a few?
NOTE Confidence: 0.900964257

00:06:33.590 --> 00:06:36.246 Yeah, I think that's a very

NOTE Confidence: 0.900964257

00:06:36.246 --> 00:06:38.506 good question and the answer lies

NOTE Confidence: 0.900964257

00:06:38.506 --> 00:06:40.786 in understanding the type of cancer.

NOTE Confidence: 0.900964257

00:06:40.790 --> 00:06:43.710 So in the past we would only understand

NOTE Confidence: 0.900964257

00:06:43.710 --> 00:06:45.908 cancers as the site of origin,

NOTE Confidence: 0.900964257

00:06:45.910 --> 00:06:48.028 which means where they started from.

NOTE Confidence: 0.900964257

00:06:48.030 --> 00:06:49.542 So we would think of cancers

NOTE Confidence: 0.900964257

00:06:49.542 --> 00:06:50.550 only as breast cancer,

NOTE Confidence: 0.900964257

00:06:50.550 --> 00:06:52.654 lung cancer, colon cancer,

NOTE Confidence: 0.900964257

00:06:52.654 --> 00:06:53.706 prostate cancer.

NOTE Confidence: 0.900964257

00:06:53.710 --> 00:06:54.790 In the last few years,

NOTE Confidence: 0.900964257

00:06:54.790 --> 00:06:56.470 we've certainly evolved in our

NOTE Confidence: 0.900964257

00:06:56.470 --> 00:06:58.150 understanding of how we think

NOTE Confidence: 0.900964257

00:06:58.213 --> 00:07:00.301 of cancers and we bucket them

NOTE Confidence: 0.900964257

00:07:00.301 --> 00:07:01.693 maybe slightly differently based

NOTE Confidence: 0.900964257

00:07:01.749 --> 00:07:03.317 on their molecular profiles.

NOTE Confidence: 0.900964257

00:07:03.320 --> 00:07:05.474 And so combining the information of
NOTE Confidence: 0.900964257

00:07:05.474 --> 00:07:08.554 what we call the site of disease with
NOTE Confidence: 0.900964257

00:07:08.554 --> 00:07:10.912 the molecular profiles give us this
NOTE Confidence: 0.900964257

00:07:10.920 --> 00:07:14.273 group of cancers that are amenable
NOTE Confidence: 0.900964257

00:07:14.273 --> 00:07:17.620 to treatments with surgical therapeutics.
NOTE Confidence: 0.900964257

00:07:17.620 --> 00:07:19.448 And predominantly right now,
NOTE Confidence: 0.900964257

00:07:19.448 --> 00:07:22.190 most of these applications in the
NOTE Confidence: 0.900964257

00:07:22.268 --> 00:07:24.949 treatment and cure of stage four cancer
NOTE Confidence: 0.900964257

00:07:24.949 --> 00:07:27.580 is limited to colorectal cancers,
NOTE Confidence: 0.900964257

00:07:27.580 --> 00:07:28.950 ovarian cancers,
NOTE Confidence: 0.900964257

00:07:28.950 --> 00:07:32.375 other cancers like appendix cancers,
NOTE Confidence: 0.900964257

00:07:32.380 --> 00:07:33.034 mesotheliomas,
NOTE Confidence: 0.900964257

00:07:33.034 --> 00:07:36.958 some stomach cancers like gastric cancers.
NOTE Confidence: 0.900964257

00:07:36.960 --> 00:07:40.026 But we just started a clinical trial
NOTE Confidence: 0.900964257

00:07:40.030 --> 00:07:42.316 which is challenging the paradigm of
NOTE Confidence: 0.900964257

00:07:42.316 --> 00:07:44.975 how do we treat metastatic cancers

NOTE Confidence: 0.900964257

00:07:44.975 --> 00:07:47.615 from some very rapidly aggressive

NOTE Confidence: 0.900964257

00:07:47.615 --> 00:07:50.450 lethal cancers like pancreas cancer,

NOTE Confidence: 0.900964257

00:07:50.450 --> 00:07:52.042 esophagus cancer,

NOTE Confidence: 0.900964257

00:07:52.042 --> 00:07:56.818 bile duct cancer using this biological

NOTE Confidence: 0.900964257

00:07:56.820 --> 00:07:58.275 information that

NOTE Confidence: 0.900964257

00:07:58.275 --> 00:07:59.730 these tumors have.

NOTE Confidence: 0.900964257

00:07:59.730 --> 00:08:01.326 Understanding that there's always

NOTE Confidence: 0.900964257

00:08:01.326 --> 00:08:03.720 a group of patients that are

NOTE Confidence: 0.900964257

00:08:03.790 --> 00:08:06.045 different than all the conventional

NOTE Confidence: 0.900964257

00:08:06.045 --> 00:08:07.849 stage four cancer patients.

NOTE Confidence: 0.900964257

00:08:07.850 --> 00:08:10.514 And so I think you know there will be

NOTE Confidence: 0.900964257

00:08:10.514 --> 00:08:13.627 a widely applicable role of surgical

NOTE Confidence: 0.900964257

00:08:13.627 --> 00:08:16.362 therapeutics in many oligometastatic

NOTE Confidence: 0.900964257

00:08:16.444 --> 00:08:19.029 cancers including lung cancers and

NOTE Confidence: 0.900964257

00:08:19.030 --> 00:08:22.546 melanomas and other types of cancers.

NOTE Confidence: 0.900964257

00:08:22.550 --> 00:08:24.358 It's just that we are in the process
NOTE Confidence: 0.900964257

00:08:24.358 --> 00:08:26.003 of trying to define who these
NOTE Confidence: 0.900964257

00:08:26.003 --> 00:08:27.423 patients are that would benefit
NOTE Confidence: 0.900964257

00:08:27.430 --> 00:08:29.250 the most from surgical therapeutics.
NOTE Confidence: 0.866728515714286

00:08:29.980 --> 00:08:32.084 And I think you bring up a good
NOTE Confidence: 0.866728515714286

00:08:32.084 --> 00:08:34.320 point in terms of clinical trials.
NOTE Confidence: 0.866728515714286

00:08:34.320 --> 00:08:36.795 I mean when you talked
NOTE Confidence: 0.866728515714286

00:08:36.795 --> 00:08:38.775 about this paradigm shift,
NOTE Confidence: 0.866728515714286

00:08:38.780 --> 00:08:42.116 the 1st shift from essentially cancers
NOTE Confidence: 0.866728515714286

00:08:42.116 --> 00:08:44.897 being treated surgically to then
NOTE Confidence: 0.866728515714286

00:08:44.897 --> 00:08:47.681 the evolution of systemic therapy to
NOTE Confidence: 0.866728515714286

00:08:47.681 --> 00:08:50.757 now adding in surgery to the mix,
NOTE Confidence: 0.866728515714286

00:08:50.760 --> 00:08:53.460 it seems like at each junction
NOTE Confidence: 0.866728515714286

00:08:53.460 --> 00:08:56.800 when we move the needle forward,
NOTE Confidence: 0.866728515714286

00:08:56.800 --> 00:08:59.985 it's always on the basis of science.
NOTE Confidence: 0.866728515714286

00:08:59.990 --> 00:09:03.035 And on the basis of clinical trials,

NOTE Confidence: 0.866728515714286
00:09:03.040 --> 00:09:07.584 so can you talk a little bit about
NOTE Confidence: 0.866728515714286
00:09:07.590 --> 00:09:09.534 the importance of patients
NOTE Confidence: 0.866728515714286
00:09:09.534 --> 00:09:11.478 participating in these clinical
NOTE Confidence: 0.866728515714286
00:09:11.478 --> 00:09:14.189 trials and perhaps some of the
NOTE Confidence: 0.866728515714286
00:09:14.189 --> 00:09:16.269 apprehension that patients face and
NOTE Confidence: 0.866728515714286
00:09:16.269 --> 00:09:18.795 and how you address it with them.
NOTE Confidence: 0.895207408333333
00:09:19.650 --> 00:09:21.228 Yeah, I think
NOTE Confidence: 0.895207408333333
00:09:21.230 --> 00:09:23.390 it's a very important question
NOTE Confidence: 0.895207408333333
00:09:23.390 --> 00:09:26.690 and I think having gone
NOTE Confidence: 0.895207408333333
00:09:26.690 --> 00:09:29.146 through cancer in our own family and
NOTE Confidence: 0.895207408333333
00:09:29.146 --> 00:09:31.540 having seen it from the other side,
NOTE Confidence: 0.895207408333333
00:09:31.540 --> 00:09:34.676 there is no question it is
NOTE Confidence: 0.895207408333333
00:09:34.676 --> 00:09:37.564 very daunting to think about adopting a
NOTE Confidence: 0.895207408333333
00:09:37.564 --> 00:09:40.693 treatment that seems at least
NOTE Confidence: 0.895207408333333
00:09:40.693 --> 00:09:44.044 in sort of the common understanding
NOTE Confidence: 0.895207408333333

00:09:44.044 --> 00:09:48.066 is being experimental and many times I
NOTE Confidence: 0.8952074083333333

00:09:48.066 --> 00:09:51.414 think there is this misunderstanding that
NOTE Confidence: 0.8952074083333333

00:09:51.420 --> 00:09:52.796 just because it's experimental,
NOTE Confidence: 0.8952074083333333

00:09:52.796 --> 00:09:54.860 that we're being treated
NOTE Confidence: 0.8952074083333333

00:09:54.916 --> 00:09:56.732 as Guinea pigs or this is not the
NOTE Confidence: 0.8952074083333333

00:09:56.732 --> 00:09:58.570 right way of thinking about things.
NOTE Confidence: 0.8952074083333333

00:09:58.570 --> 00:10:00.346 But what I will tell you,
NOTE Confidence: 0.8952074083333333

00:10:00.350 --> 00:10:02.806 and I'll tell you a small anecdote and
NOTE Confidence: 0.8952074083333333

00:10:02.806 --> 00:10:04.990 then maybe speak a little bit more
NOTE Confidence: 0.8952074083333333

00:10:04.990 --> 00:10:06.950 specifically about clinical trials,
NOTE Confidence: 0.8952074083333333

00:10:06.950 --> 00:10:08.820 but when I was a trainee,
NOTE Confidence: 0.8952074083333333

00:10:08.820 --> 00:10:11.460 when I was working as a surgical resident,
NOTE Confidence: 0.8952074083333333

00:10:11.460 --> 00:10:13.782 I took care of this young woman who had
NOTE Confidence: 0.8952074083333333

00:10:13.782 --> 00:10:17.450 a young daughter who had metastatic Melanoma.
NOTE Confidence: 0.8952074083333333

00:10:17.450 --> 00:10:20.764 And we did numerous
NOTE Confidence: 0.8952074083333333

00:10:20.764 --> 00:10:21.740 disfiguring surgeries,

NOTE Confidence: 0.895207408333333

00:10:21.740 --> 00:10:23.020 we gave her chemotherapy,

NOTE Confidence: 0.895207408333333

00:10:23.020 --> 00:10:25.888 and I took care of her for a couple

NOTE Confidence: 0.895207408333333

00:10:25.888 --> 00:10:28.344 of years when I was in training and

NOTE Confidence: 0.895207408333333

00:10:28.344 --> 00:10:30.675 she passed away right under my care.

NOTE Confidence: 0.895207408333333

00:10:30.680 --> 00:10:33.020 It was a very sad moment for

NOTE Confidence: 0.895207408333333

00:10:33.020 --> 00:10:35.020 all of us to see this young life

NOTE Confidence: 0.895207408333333

00:10:35.020 --> 00:10:39.830 lost. And in 2016,

NOTE Confidence: 0.895207408333333

00:10:39.830 --> 00:10:41.672 I met almost an identical woman

NOTE Confidence: 0.895207408333333

00:10:41.672 --> 00:10:44.361 who also had a young child who was

NOTE Confidence: 0.895207408333333

00:10:44.361 --> 00:10:46.443 also diagnosed at the same time,

NOTE Confidence: 0.895207408333333

00:10:46.450 --> 00:10:49.054 who had participated in the first

NOTE Confidence: 0.895207408333333

00:10:49.054 --> 00:10:51.290 immunotherapy trial and was alive.

NOTE Confidence: 0.895207408333333

00:10:51.290 --> 00:10:53.698 Had presented to all of us doctors

NOTE Confidence: 0.895207408333333

00:10:53.698 --> 00:10:56.286 at that meeting about how well she

NOTE Confidence: 0.895207408333333

00:10:56.286 --> 00:10:58.640 had overcome her cancer, and had

NOTE Confidence: 0.888322821666667

00:11:00.830 --> 00:11:02.958 essentially come to the other side
NOTE Confidence: 0.888322821666667

00:11:02.958 --> 00:11:05.983 of this and and it's just a very stark
NOTE Confidence: 0.888322821666667

00:11:05.983 --> 00:11:07.800 comparison of where sometimes our
NOTE Confidence: 0.888322821666667

00:11:07.800 --> 00:11:09.750 conventional treatments or treatments that
NOTE Confidence: 0.888322821666667

00:11:09.750 --> 00:11:13.190 we think work don't work as well.
NOTE Confidence: 0.888322821666667

00:11:13.190 --> 00:11:16.366 And so I think clinical trials should be
NOTE Confidence: 0.888322821666667

00:11:16.366 --> 00:11:19.729 thought of more as an opportunity for hope.
NOTE Confidence: 0.888322821666667

00:11:19.730 --> 00:11:24.050 They are not always
NOTE Confidence: 0.888322821666667

00:11:24.050 --> 00:11:26.090 the most appropriate for patients.
NOTE Confidence: 0.888322821666667

00:11:26.090 --> 00:11:28.282 And so it is very important that you
NOTE Confidence: 0.888322821666667

00:11:28.282 --> 00:11:30.824 speak with your treating team to make sure
NOTE Confidence: 0.888322821666667

00:11:30.824 --> 00:11:33.110 that you're getting the right treatment.
NOTE Confidence: 0.888322821666667

00:11:33.110 --> 00:11:35.042 But I do think it's very important
NOTE Confidence: 0.888322821666667

00:11:35.042 --> 00:11:37.438 to keep an open mind to participate
NOTE Confidence: 0.888322821666667

00:11:37.438 --> 00:11:39.688 in these studies because as everyone
NOTE Confidence: 0.888322821666667

00:11:39.749 --> 00:11:41.777 knows we haven't figured out all

NOTE Confidence: 0.888322821666667
00:11:41.777 --> 00:11:43.129 the answers to cancer.
NOTE Confidence: 0.888322821666667
00:11:43.130 --> 00:11:44.985 We need to cure cancer.
NOTE Confidence: 0.888322821666667
00:11:44.990 --> 00:11:46.980 It's not enough to tell a 30
NOTE Confidence: 0.888322821666667
00:11:47.036 --> 00:11:49.061 year old or a 40 year old that you're
NOTE Confidence: 0.888322821666667
00:11:49.061 --> 00:11:50.968 going to live five years or 10 years.
NOTE Confidence: 0.888322821666667
00:11:50.970 --> 00:11:53.091 We have to tell patients
NOTE Confidence: 0.888322821666667
00:11:53.091 --> 00:11:54.848 that we're going to cure this.
00:11:55.095 --> 00:11:57.055 And the only way we're going to do
NOTE Confidence: 0.888322821666667
00:11:57.055 --> 00:11:58.880 it is by advancing our science,
NOTE Confidence: 0.888322821666667
00:11:58.880 --> 00:12:01.598 being bold and trying new treatments.
NOTE Confidence: 0.888322821666667
00:12:01.600 --> 00:12:03.650 Cancer patients are remarkably courageous.
00:12:04.242 --> 00:12:06.018 They're willing to go through
NOTE Confidence: 0.888322821666667
00:12:06.018 --> 00:12:08.109 lots of treatments and they're willing
NOTE Confidence: 0.888322821666667
00:12:08.109 --> 00:12:10.621 to put their bodies through lots of
NOTE Confidence: 0.888322821666667
00:12:10.621 --> 00:12:13.596 suffering and pain if done in the right way.
NOTE Confidence: 0.888322821666667
00:12:13.600 --> 00:12:16.057 And I think clinical trials are also
NOTE Confidence: 0.888322821666667

00:12:16.057 --> 00:12:17.822 protections for patients to make
NOTE Confidence: 0.888322821666667

00:12:17.822 --> 00:12:20.083 sure that these are being done in
NOTE Confidence: 0.888322821666667

00:12:20.083 --> 00:12:21.535 scientifically rigorous and appropriate
NOTE Confidence: 0.888322821666667

00:12:21.535 --> 00:12:24.340 ways that match the courage that they show.
NOTE Confidence: 0.910245727619048

00:12:25.150 --> 00:12:27.544 Yeah. And I think the other point
NOTE Confidence: 0.910245727619048

00:12:27.544 --> 00:12:30.077 that you bring up is that clinical
NOTE Confidence: 0.910245727619048

00:12:30.077 --> 00:12:32.790 trials are not always the last resort.
NOTE Confidence: 0.910245727619048

00:12:32.790 --> 00:12:35.480 Many patients sometimes think that
NOTE Confidence: 0.910245727619048

00:12:35.480 --> 00:12:38.674 they can only participate in the
NOTE Confidence: 0.910245727619048

00:12:38.674 --> 00:12:41.586 clinical trial if all else is lost.
NOTE Confidence: 0.910245727619048

00:12:41.590 --> 00:12:44.006 But the point that I hear you making,
NOTE Confidence: 0.910245727619048

00:12:44.010 --> 00:12:46.722 is that you know for
NOTE Confidence: 0.910245727619048

00:12:46.722 --> 00:12:48.530 many patients clinical trials
NOTE Confidence: 0.910245727619048

00:12:48.612 --> 00:12:51.477 actually offer the opportunity to
NOTE Confidence: 0.910245727619048

00:12:51.477 --> 00:12:53.769 get tomorrow's therapies today,
NOTE Confidence: 0.910245727619048

00:12:53.770 --> 00:12:54.967 the therapies

NOTE Confidence: 0.910245727619048
00:12:54.967 --> 00:12:57.760 that we think are going to revolutionize
NOTE Confidence: 0.910245727619048
00:12:57.830 --> 00:13:00.734 care that are going to advance the science.
NOTE Confidence: 0.910245727619048
00:13:00.740 --> 00:13:02.434 Those are the things that we need
NOTE Confidence: 0.910245727619048
00:13:02.434 --> 00:13:04.099 to test in clinical trials.
NOTE Confidence: 0.910245727619048
00:13:04.100 --> 00:13:06.590 And so sometimes patients can get
NOTE Confidence: 0.910245727619048
00:13:06.590 --> 00:13:09.091 that early on without it being
NOTE Confidence: 0.910245727619048
00:13:09.091 --> 00:13:11.359 quote you know the last resort,
NOTE Confidence: 0.910245727619048
00:13:11.360 --> 00:13:12.008 is that right?
NOTE Confidence: 0.834753571052632
00:13:12.520 --> 00:13:13.278 Completely agree.
NOTE Confidence: 0.834753571052632
00:13:13.278 --> 00:13:15.552 I think that's a very
NOTE Confidence: 0.834753571052632
00:13:15.552 --> 00:13:17.585 important concept and I would just
NOTE Confidence: 0.834753571052632
00:13:17.585 --> 00:13:19.100 highlight again the two very,
NOTE Confidence: 0.834753571052632
00:13:19.100 --> 00:13:20.846 very important points you made which
NOTE Confidence: 0.834753571052632
00:13:20.846 --> 00:13:23.060 is number one, it doesn't and should
NOTE Confidence: 0.834753571052632
00:13:23.060 --> 00:13:25.640 not actually be the last resort.
NOTE Confidence: 0.834753571052632

00:13:25.640 --> 00:13:27.908 It's important to consider it even
NOTE Confidence: 0.834753571052632

00:13:27.908 --> 00:13:30.952 early on and #2 that it does allow
NOTE Confidence: 0.834753571052632

00:13:30.952 --> 00:13:33.130 in a very safe and controlled
NOTE Confidence: 0.834753571052632

00:13:33.210 --> 00:13:35.526 way for patients to have access
NOTE Confidence: 0.834753571052632

00:13:35.526 --> 00:13:37.382 to therapies in the future.
NOTE Confidence: 0.834753571052632

00:13:37.382 --> 00:13:39.254 I would say both fantastic points.
NOTE Confidence: 0.876659408

00:13:39.650 --> 00:13:41.729 Well we are going to take
NOTE Confidence: 0.876659408

00:13:41.729 --> 00:13:43.983 a very short break for a medical
NOTE Confidence: 0.876659408

00:13:43.983 --> 00:13:45.921 minute and when we come back,
NOTE Confidence: 0.876659408

00:13:45.930 --> 00:13:48.102 we'll learn more about surgical oncology
NOTE Confidence: 0.876659408

00:13:48.102 --> 00:13:50.465 and its role in metastatic cancer
NOTE Confidence: 0.876659408

00:13:50.465 --> 00:13:52.930 with my guest Doctor Kiran Turaga.
NOTE Confidence: 0.808592785454545

00:13:53.610 --> 00:13:55.806 Funding for Yale Cancer Answers is
NOTE Confidence: 0.808592785454545

00:13:55.806 --> 00:13:57.890 provided by Smilow Cancer Hospital,
NOTE Confidence: 0.808592785454545

00:13:57.890 --> 00:13:59.326 where their survivorship clinic
NOTE Confidence: 0.808592785454545

00:13:59.326 --> 00:14:01.121 is available to educate survivors

NOTE Confidence: 0.808592785454545

00:14:01.121 --> 00:14:02.816 on the prevention, detection,

NOTE Confidence: 0.808592785454545

00:14:02.816 --> 00:14:04.760 and treatment of complications

NOTE Confidence: 0.808592785454545

00:14:04.760 --> 00:14:06.704 resulting from cancer treatment.

NOTE Confidence: 0.808592785454545

00:14:06.710 --> 00:14:10.680 Smilowcancerhospital.org.

NOTE Confidence: 0.808592785454545

00:14:10.680 --> 00:14:12.792 The American Cancer Society

NOTE Confidence: 0.808592785454545

00:14:12.792 --> 00:14:15.146 estimates that nearly 150,000 people

NOTE Confidence: 0.808592785454545

00:14:15.146 --> 00:14:17.827 in the US will be diagnosed with

NOTE Confidence: 0.808592785454545

00:14:17.827 --> 00:14:19.800 colorectal cancer this year alone.

NOTE Confidence: 0.808592785454545

00:14:19.800 --> 00:14:21.042 When detected early,

NOTE Confidence: 0.808592785454545

00:14:21.042 --> 00:14:22.698 colorectal cancer is easily

NOTE Confidence: 0.808592785454545

00:14:22.698 --> 00:14:24.500 treated and highly curable,

NOTE Confidence: 0.808592785454545

00:14:24.500 --> 00:14:26.876 and men and women over the age of 45

NOTE Confidence: 0.808592785454545

00:14:26.876 --> 00:14:28.425 should have regular colonoscopies

NOTE Confidence: 0.808592785454545

00:14:28.425 --> 00:14:30.460 to screen for the disease.

NOTE Confidence: 0.808592785454545

00:14:30.460 --> 00:14:31.916 Patients with colorectal cancer

NOTE Confidence: 0.808592785454545

00:14:31.916 --> 00:14:34.100 have more hope than ever before,
NOTE Confidence: 0.808592785454545

00:14:34.100 --> 00:14:36.896 thanks to increased access to advanced
NOTE Confidence: 0.808592785454545

00:14:36.896 --> 00:14:38.760 therapies and specialized care.
NOTE Confidence: 0.808592785454545

00:14:38.760 --> 00:14:40.750 Clinical trials are currently underway.
NOTE Confidence: 0.808592785454545

00:14:40.750 --> 00:14:42.229 Federally designated comprehensive
NOTE Confidence: 0.808592785454545

00:14:42.229 --> 00:14:45.187 cancer centers such as Yale Cancer
NOTE Confidence: 0.808592785454545

00:14:45.187 --> 00:14:47.760 Center and at Smilow Cancer Hospital
NOTE Confidence: 0.808592785454545

00:14:47.760 --> 00:14:49.770 to test innovative new treatments.
NOTE Confidence: 0.808592785454545

00:14:49.842 --> 00:14:51.658 For colorectal cancer tumors
NOTE Confidence: 0.808592785454545

00:14:51.660 --> 00:14:53.840 gene analysis has helped improve
NOTE Confidence: 0.808592785454545

00:14:53.840 --> 00:14:56.020 management of colorectal cancer by
NOTE Confidence: 0.808592785454545

00:14:56.092 --> 00:14:58.337 identifying the patients most likely
NOTE Confidence: 0.808592785454545

00:14:58.337 --> 00:15:00.582 to benefit from chemotherapy and
NOTE Confidence: 0.808592785454545

00:15:00.654 --> 00:15:03.079 newer targeted agents resulting in
NOTE Confidence: 0.808592785454545

00:15:03.079 --> 00:15:05.019 more patient specific treatment.
NOTE Confidence: 0.808592785454545

00:15:05.020 --> 00:15:07.396 More information is available

NOTE Confidence: 0.808592785454545
00:15:07.396 --> 00:15:08.418 at yalecancercenter.org.
NOTE Confidence: 0.808592785454545
00:15:08.418 --> 00:15:10.986 You're listening to Connecticut public radio.
NOTE Confidence: 0.831842718333333
00:15:11.650 --> 00:15:13.966 Welcome back to Yale Cancer Answers.
NOTE Confidence: 0.831842718333333
00:15:13.970 --> 00:15:15.890 This is doctor Anees Chagpar
NOTE Confidence: 0.831842718333333
00:15:15.890 --> 00:15:17.647 and I'm joined tonight by my guest,
NOTE Confidence: 0.831842718333333
00:15:17.650 --> 00:15:18.904 Doctor Kiran Turaga.
NOTE Confidence: 0.831842718333333
00:15:18.904 --> 00:15:21.412 We're discussing the role of surgical
NOTE Confidence: 0.831842718333333
00:15:21.412 --> 00:15:23.827 oncology in treating metastatic cancers.
NOTE Confidence: 0.831842718333333
00:15:23.830 --> 00:15:26.190 And Kiran, before the break,
NOTE Confidence: 0.831842718333333
00:15:26.190 --> 00:15:30.069 we were talking about the fact that
NOTE Confidence: 0.831842718333333
00:15:30.070 --> 00:15:32.014 heretofore many people thought
NOTE Confidence: 0.831842718333333
00:15:32.014 --> 00:15:33.958 that metastatic cancer was
NOTE Confidence: 0.831842718333333
00:15:33.958 --> 00:15:35.690 a devastating diagnosis,
NOTE Confidence: 0.831842718333333
00:15:35.690 --> 00:15:38.410 that this was not something
NOTE Confidence: 0.831842718333333
00:15:38.410 --> 00:15:41.130 where surgery had a role.
NOTE Confidence: 0.831842718333333

00:15:41.130 --> 00:15:43.474 It certainly was not
NOTE Confidence: 0.8318427183333333

00:15:43.474 --> 00:15:46.404 curable and sometimes patients even
NOTE Confidence: 0.8318427183333333

00:15:46.404 --> 00:15:49.567 believed that this was not treatable,
NOTE Confidence: 0.8318427183333333

00:15:49.570 --> 00:15:54.703 but we're really changing that paradigm.
NOTE Confidence: 0.8318427183333333

00:15:54.703 --> 00:15:56.718 Just a couple of questions.
NOTE Confidence: 0.8318427183333333

00:15:56.720 --> 00:16:00.402 You had mentioned that you have some
NOTE Confidence: 0.8318427183333333

00:16:00.402 --> 00:16:03.588 ongoing clinical trials looking at the
NOTE Confidence: 0.8318427183333333

00:16:03.588 --> 00:16:06.624 role of surgery in metastatic cancer.
NOTE Confidence: 0.8318427183333333

00:16:06.630 --> 00:16:09.966 And really expanding the indications.
NOTE Confidence: 0.8318427183333333

00:16:09.970 --> 00:16:12.592 So whereas this was originally something
NOTE Confidence: 0.8318427183333333

00:16:12.592 --> 00:16:15.848 that had been pioneered in colorectal cancer,
NOTE Confidence: 0.8318427183333333

00:16:15.850 --> 00:16:18.142 it's now being looked at in
NOTE Confidence: 0.8318427183333333

00:16:18.142 --> 00:16:19.288 more aggressive cancers.
NOTE Confidence: 0.8318427183333333

00:16:19.290 --> 00:16:21.376 One question that perhaps comes to mind
NOTE Confidence: 0.8318427183333333

00:16:21.376 --> 00:16:24.089 for some of our audience members might be,
NOTE Confidence: 0.8318427183333333

00:16:24.090 --> 00:16:26.496 does it matter where the metastasis

NOTE Confidence: 0.831842718333333
00:16:26.496 --> 00:16:29.870 is or how many metastases there are,
NOTE Confidence: 0.831842718333333
00:16:29.870 --> 00:16:32.082 does it make a difference if this is
NOTE Confidence: 0.831842718333333
00:16:32.082 --> 00:16:34.254 just a couple of liver metastases
NOTE Confidence: 0.831842718333333
00:16:34.254 --> 00:16:36.189 versus if this is widespread?
NOTE Confidence: 0.831842718333333
00:16:41.920 --> 00:16:44.552 Yeah, I think, I think that's a good
NOTE Confidence: 0.884565760625
00:16:44.552 --> 00:16:46.757 question and very important to
NOTE Confidence: 0.884565760625
00:16:46.757 --> 00:16:49.756 clarify the we don't fully understand
NOTE Confidence: 0.884565760625
00:16:49.756 --> 00:16:54.400 the concept of what is oligometastasis,
NOTE Confidence: 0.884565760625
00:16:54.400 --> 00:16:57.192 which means what are the cancers that can
NOTE Confidence: 0.884565760625
00:16:57.192 --> 00:16:59.889 be treated by surgical therapeutics or
NOTE Confidence: 0.884565760625
00:16:59.889 --> 00:17:02.787 local treatments like radiation or ablation.
NOTE Confidence: 0.884565760625
00:17:02.790 --> 00:17:05.415 So until we have very good understanding
NOTE Confidence: 0.884565760625
00:17:05.415 --> 00:17:08.062 of that the concept of oligo,
NOTE Confidence: 0.884565760625
00:17:08.062 --> 00:17:10.719 oligo means few, is limited to patients
NOTE Confidence: 0.884565760625
00:17:10.719 --> 00:17:13.645 who have metastases in just a few
NOTE Confidence: 0.884565760625

00:17:13.645 --> 00:17:16.010 locations which could be like the liver,
NOTE Confidence: 0.884565760625

00:17:16.010 --> 00:17:17.852 the lining of the abdomen called
NOTE Confidence: 0.884565760625

00:17:17.852 --> 00:17:19.382 the peritoneum, the lungs,
NOTE Confidence: 0.884565760625

00:17:19.382 --> 00:17:22.118 occasionally the lymph nodes and rarely
NOTE Confidence: 0.884565760625

00:17:22.118 --> 00:17:25.304 the brain or the the spine or the bone.
NOTE Confidence: 0.884565760625

00:17:25.310 --> 00:17:27.374 I think when patients have widely
NOTE Confidence: 0.884565760625

00:17:27.374 --> 00:17:29.038 disseminated disease which means that
NOTE Confidence: 0.884565760625

00:17:29.038 --> 00:17:30.676 there is a large burden of cancer
NOTE Confidence: 0.884565760625

00:17:30.676 --> 00:17:32.610 and it spread widely to different
NOTE Confidence: 0.884565760625

00:17:32.610 --> 00:17:33.938 parts of the body,
NOTE Confidence: 0.884565760625

00:17:33.938 --> 00:17:35.930 those are much harder to treat
NOTE Confidence: 0.884565760625

00:17:36.000 --> 00:17:37.830 with surgical therapeutics.
NOTE Confidence: 0.884565760625

00:17:37.830 --> 00:17:39.850 And those patients are probably
NOTE Confidence: 0.884565760625

00:17:39.850 --> 00:17:41.870 most often better served with
NOTE Confidence: 0.884565760625

00:17:41.938 --> 00:17:43.858 either systemic chemotherapy,
NOTE Confidence: 0.884565760625

00:17:43.860 --> 00:17:45.400 novel therapies such as

NOTE Confidence: 0.884565760625
00:17:45.400 --> 00:17:46.940 those in clinical trials.
NOTE Confidence: 0.951155621111111
00:17:47.900 --> 00:17:50.960 Which kind of brings me to my next question.
NOTE Confidence: 0.951155621111111
00:17:50.960 --> 00:17:53.993 So we know that one of the things that
NOTE Confidence: 0.951155621111111
00:17:53.993 --> 00:17:56.176 really revolutionized cancer care
NOTE Confidence: 0.951155621111111
00:17:56.176 --> 00:17:59.190 was early detection, finding cancers
NOTE Confidence: 0.951155621111111
00:17:59.190 --> 00:18:02.315 at their earliest possible stage.
NOTE Confidence: 0.951155621111111
00:18:02.320 --> 00:18:04.732 So if it makes a difference
NOTE Confidence: 0.951155621111111
00:18:04.732 --> 00:18:06.340 in the metastatic setting,
NOTE Confidence: 0.951155621111111
00:18:06.340 --> 00:18:08.958 the volume of disease, are there ways
NOTE Confidence: 0.951155621111111
00:18:08.958 --> 00:18:11.918 for us to detect that early too?
NOTE Confidence: 0.951155621111111
00:18:11.920 --> 00:18:15.760 I mean, have we made any inroads into
NOTE Confidence: 0.951155621111111
00:18:15.760 --> 00:18:18.539 finding distant metastatic disease?
NOTE Confidence: 0.951155621111111
00:18:18.540 --> 00:18:21.382 Earlier, when it's perhaps more in that
NOTE Confidence: 0.951155621111111
00:18:21.382 --> 00:18:24.200 oligo bucket than the widely disseminated
NOTE Confidence: 0.951155621111111
00:18:24.200 --> 00:18:26.740 bucket where it's more treatable?
NOTE Confidence: 0.886393972

00:18:27.370 --> 00:18:30.956 I think this is a very,
NOTE Confidence: 0.886393972

00:18:30.956 --> 00:18:33.080 very exciting field for science and
NOTE Confidence: 0.886393972

00:18:33.157 --> 00:18:35.929 I think a very important field for
NOTE Confidence: 0.886393972

00:18:35.929 --> 00:18:38.521 patients to understand and certainly
NOTE Confidence: 0.886393972

00:18:38.521 --> 00:18:40.736 ask their healthcare teams about.
NOTE Confidence: 0.886393972

00:18:40.740 --> 00:18:42.648 As I'd said before,
NOTE Confidence: 0.886393972

00:18:42.648 --> 00:18:44.556 metastatic cancers by definition
NOTE Confidence: 0.886393972

00:18:44.556 --> 00:18:46.999 have the ability to spread.
NOTE Confidence: 0.886393972

00:18:47.000 --> 00:18:49.907 And in the past, we would only know of
NOTE Confidence: 0.886393972

00:18:49.907 --> 00:18:52.244 metastatic cancers once we found cancer
NOTE Confidence: 0.886393972

00:18:52.244 --> 00:18:54.747 spots either during surgery or when we
NOTE Confidence: 0.886393972

00:18:54.747 --> 00:18:57.055 got a CT scan or some form of imaging,
NOTE Confidence: 0.886393972

00:18:57.055 --> 00:18:59.185 and that's when we would know
NOTE Confidence: 0.886393972

00:18:59.185 --> 00:19:01.049 that the cancer has spread.
NOTE Confidence: 0.886393972

00:19:01.050 --> 00:19:04.088 The latest advances have been in trying
NOTE Confidence: 0.886393972

00:19:04.088 --> 00:19:07.086 to detect either cancer cells in the

NOTE Confidence: 0.886393972

00:19:07.086 --> 00:19:10.007 blood or even fragments of their DNA

NOTE Confidence: 0.886393972

00:19:10.007 --> 00:19:12.102 and now even further modifications

NOTE Confidence: 0.886393972

00:19:12.102 --> 00:19:15.400 of their DNA in the blood to see

NOTE Confidence: 0.886393972

00:19:15.400 --> 00:19:17.830 if we can identify cancers early.

NOTE Confidence: 0.886393972

00:19:17.830 --> 00:19:20.122 And this has been a remarkable

NOTE Confidence: 0.886393972

00:19:20.122 --> 00:19:21.650 finding because for instance,

NOTE Confidence: 0.886393972

00:19:21.650 --> 00:19:24.773 when we think that a cancer has not spread,

NOTE Confidence: 0.886393972

00:19:24.780 --> 00:19:27.320 but we find a lot of DNA in the blood

NOTE Confidence: 0.886393972

00:19:27.389 --> 00:19:29.930 and it doesn't go away after surgery,

NOTE Confidence: 0.886393972

00:19:29.930 --> 00:19:30.851 we know that

NOTE Confidence: 0.886393972

00:19:30.851 --> 00:19:32.386 these patients will have their

NOTE Confidence: 0.886393972

00:19:32.386 --> 00:19:33.759 cancers come back quickly.

NOTE Confidence: 0.886393972

00:19:33.760 --> 00:19:35.909 We also know that many times when

NOTE Confidence: 0.886393972

00:19:35.909 --> 00:19:37.959 cancers are not visible on scans,

NOTE Confidence: 0.886393972

00:19:37.960 --> 00:19:40.880 you can actually pick up these cancers with

NOTE Confidence: 0.886393972

00:19:40.880 --> 00:19:43.840 the DNA that's floating around in the blood.

NOTE Confidence: 0.886393972

00:19:43.840 --> 00:19:46.174 The other very interesting thing that

NOTE Confidence: 0.886393972

00:19:46.174 --> 00:19:48.867 we're also finding is that these DNA

NOTE Confidence: 0.886393972

00:19:48.867 --> 00:19:51.003 technologies are able to detect what

NOTE Confidence: 0.886393972

00:19:51.003 --> 00:19:53.538 we call mutations in these cancers.

NOTE Confidence: 0.886393972

00:19:53.540 --> 00:19:56.960 And so it's not a perfect analogy,

NOTE Confidence: 0.886393972

00:19:56.960 --> 00:19:58.528 but if you think about, say,

NOTE Confidence: 0.886393972

00:19:58.528 --> 00:20:00.000 an infection and you're

NOTE Confidence: 0.886393972

00:20:00.000 --> 00:20:01.472 treated with an antibiotic,

NOTE Confidence: 0.886393972

00:20:01.480 --> 00:20:03.208 there's two possible outcomes.

NOTE Confidence: 0.886393972

00:20:03.208 --> 00:20:04.890 One, the infection gets better and

NOTE Confidence: 0.886393972

00:20:04.890 --> 00:20:06.880 it goes away and it's gone for good.

NOTE Confidence: 0.886393972

00:20:06.880 --> 00:20:09.020 Or the bacteria develops

NOTE Confidence: 0.886393972

00:20:09.020 --> 00:20:11.695 resistance and it starts mutating,

NOTE Confidence: 0.886393972

00:20:11.700 --> 00:20:13.288 so it actually develops

NOTE Confidence: 0.886393972

00:20:13.288 --> 00:20:14.876 resistance to the antibiotics.

NOTE Confidence: 0.886393972

00:20:14.880 --> 00:20:15.426 In cancer,

NOTE Confidence: 0.886393972

00:20:15.426 --> 00:20:17.337 what ends up happening quite often is

NOTE Confidence: 0.886393972

00:20:17.337 --> 00:20:19.318 when we're treating these cancers with

NOTE Confidence: 0.886393972

00:20:19.318 --> 00:20:21.540 chemotherapies or some form of treatment,

NOTE Confidence: 0.886393972

00:20:21.540 --> 00:20:23.200 the cancer appears to shrink

NOTE Confidence: 0.886393972

00:20:23.200 --> 00:20:24.860 or appears to get better.

NOTE Confidence: 0.886393972

00:20:24.860 --> 00:20:26.414 But then after you stop the

NOTE Confidence: 0.886393972

00:20:26.414 --> 00:20:28.180 chemotherapy or take a little break,

NOTE Confidence: 0.886393972

00:20:28.180 --> 00:20:30.756 the cancer tends to come back or recur.

NOTE Confidence: 0.886393972

00:20:30.760 --> 00:20:32.465 What these technologies are helping

NOTE Confidence: 0.886393972

00:20:32.465 --> 00:20:34.866 us do is actually find out the

NOTE Confidence: 0.886393972

00:20:34.866 --> 00:20:36.768 clones of these cancer cells that

NOTE Confidence: 0.886393972

00:20:36.768 --> 00:20:38.528 are changing and also allowing

NOTE Confidence: 0.886393972

00:20:38.528 --> 00:20:40.293 physicians to start thinking about

NOTE Confidence: 0.886393972

00:20:40.293 --> 00:20:42.700 how can we be much more personalized,

NOTE Confidence: 0.886393972

00:20:42.700 --> 00:20:44.518 how can we be much more
NOTE Confidence: 0.886393972

00:20:44.518 --> 00:20:45.730 directed towards the cancer.
NOTE Confidence: 0.886393972

00:20:45.730 --> 00:20:48.033 So that we're treating it before it
NOTE Confidence: 0.886393972

00:20:48.033 --> 00:20:50.050 develops resistance to our chemotherapy.
NOTE Confidence: 0.886393972

00:20:50.050 --> 00:20:51.294 So it's a very,
NOTE Confidence: 0.886393972

00:20:51.294 --> 00:20:52.227 very exciting field.
NOTE Confidence: 0.886393972

00:20:52.230 --> 00:20:53.982 There's numerous different technologies
NOTE Confidence: 0.886393972

00:20:53.982 --> 00:20:56.610 that are involved and we're utilizing
NOTE Confidence: 0.886393972

00:20:56.676 --> 00:20:58.556 some of these technologies to
NOTE Confidence: 0.886393972

00:20:58.556 --> 00:21:00.436 actually make decisions for patients
NOTE Confidence: 0.886393972

00:21:00.494 --> 00:21:02.090 that undergo cancer surgery,
NOTE Confidence: 0.886393972

00:21:02.090 --> 00:21:04.270 especially for oligometastatic disease.
NOTE Confidence: 0.854748215555556

00:21:05.170 --> 00:21:08.068 So a few questions on that one is
NOTE Confidence: 0.854748215555556

00:21:08.070 --> 00:21:10.872 it certainly does sound really exciting
NOTE Confidence: 0.854748215555556

00:21:10.872 --> 00:21:14.350 and many patients may be wondering
NOTE Confidence: 0.854748215555556

00:21:14.350 --> 00:21:17.356 is this something that is widespread.

NOTE Confidence: 0.887698697777778
00:21:17.430 --> 00:21:20.268 So, first and foremost this
NOTE Confidence: 0.887698697777778
00:21:20.268 --> 00:21:21.687 is incredible technology,
NOTE Confidence: 0.887698697777778
00:21:21.690 --> 00:21:23.760 but the basis of this technology
NOTE Confidence: 0.887698697777778
00:21:23.760 --> 00:21:25.960 which occurred with lots of scientific
NOTE Confidence: 0.887698697777778
00:21:25.960 --> 00:21:27.840 revolutions that happened in the
NOTE Confidence: 0.887698697777778
00:21:27.840 --> 00:21:30.486 early 2000s and lots of patients who
NOTE Confidence: 0.887698697777778
00:21:30.486 --> 00:21:32.306 participated on trials has allowed
NOTE Confidence: 0.887698697777778
00:21:32.306 --> 00:21:34.390 this to become quite widespread.
NOTE Confidence: 0.887698697777778
00:21:34.390 --> 00:21:35.680 So in fact
NOTE Confidence: 0.887698697777778
00:21:35.680 --> 00:21:37.164 these are technologies through
NOTE Confidence: 0.887698697777778
00:21:37.164 --> 00:21:39.019 companies where patients can get
NOTE Confidence: 0.887698697777778
00:21:39.019 --> 00:21:41.060 these labs drawn at their own homes.
NOTE Confidence: 0.887698697777778
00:21:41.060 --> 00:21:42.551 They don't even have to come to
NOTE Confidence: 0.887698697777778
00:21:42.551 --> 00:21:43.910 a large academic Medical Center.
NOTE Confidence: 0.887698697777778
00:21:43.910 --> 00:21:46.100 And these DNA technologies
NOTE Confidence: 0.887698697777778

00:21:46.100 --> 00:21:49.248 can be used to identify the DNA in
NOTE Confidence: 0.887698697777778

00:21:49.248 --> 00:21:51.660 in patients in every cancer that's
NOTE Confidence: 0.887698697777778

00:21:51.743 --> 00:21:54.128 being tested in clinical trials.
NOTE Confidence: 0.887698697777778

00:21:54.130 --> 00:21:57.650 So far most of the studies are positive,
NOTE Confidence: 0.887698697777778

00:21:57.650 --> 00:21:59.670 which means they're informing doctors
NOTE Confidence: 0.887698697777778

00:21:59.670 --> 00:22:02.168 and patients about their cancer
NOTE Confidence: 0.887698697777778

00:22:02.168 --> 00:22:04.248 and cancer characteristics that are
NOTE Confidence: 0.887698697777778

00:22:04.248 --> 00:22:06.879 actually helping make very good decisions.
NOTE Confidence: 0.887698697777778

00:22:06.880 --> 00:22:07.624 So for instance,
NOTE Confidence: 0.887698697777778

00:22:07.624 --> 00:22:09.360 a lot of patients who have treatable
NOTE Confidence: 0.887698697777778

00:22:09.411 --> 00:22:10.861 colon cancer have their cancers
NOTE Confidence: 0.887698697777778

00:22:10.861 --> 00:22:12.740 removed and then they're given a
NOTE Confidence: 0.887698697777778

00:22:12.740 --> 00:22:14.240 standard prescription of chemotherapy,
NOTE Confidence: 0.887698697777778

00:22:14.240 --> 00:22:15.773 which they can get from many months
NOTE Confidence: 0.887698697777778

00:22:15.773 --> 00:22:17.192 and it can cause debilitating
NOTE Confidence: 0.887698697777778

00:22:17.192 --> 00:22:18.620 symptoms and side effects.

NOTE Confidence: 0.887698697777778
00:22:18.620 --> 00:22:20.700 And now using CT DNA,
NOTE Confidence: 0.887698697777778
00:22:20.700 --> 00:22:22.854 you can actually define the patient
NOTE Confidence: 0.887698697777778
00:22:22.854 --> 00:22:24.735 population for who longer courses
NOTE Confidence: 0.887698697777778
00:22:24.735 --> 00:22:26.620 of chemotherapy is important and
NOTE Confidence: 0.887698697777778
00:22:26.620 --> 00:22:28.946 those that can actually do OK
NOTE Confidence: 0.887698697777778
00:22:28.946 --> 00:22:30.077 with shorter chemotherapy,
NOTE Confidence: 0.887698697777778
00:22:30.080 --> 00:22:31.888 so they can get back to their lives
NOTE Confidence: 0.887698697777778
00:22:31.888 --> 00:22:33.520 better and live a longer life.
NOTE Confidence: 0.887698697777778
00:22:33.520 --> 00:22:35.480 So I would say it's a remarkable technology.
NOTE Confidence: 0.887698697777778
00:22:35.480 --> 00:22:37.800 It has slowly become a little bit more
NOTE Confidence: 0.887698697777778
00:22:37.800 --> 00:22:38.401 mainstream,
NOTE Confidence: 0.887698697777778
00:22:38.401 --> 00:22:42.303 but it isn't completely supported by what
NOTE Confidence: 0.887698697777778
00:22:42.303 --> 00:22:44.647 we call level one evidence in all cancers.
NOTE Confidence: 0.887698697777778
00:22:44.650 --> 00:22:46.525 So it's not something that
NOTE Confidence: 0.887698697777778
00:22:46.525 --> 00:22:48.025 is well supported yet.
NOTE Confidence: 0.887698697777778

00:22:48.030 --> 00:22:50.830 I suspect it will be with regards to
NOTE Confidence: 0.887698697777778

00:22:50.830 --> 00:22:52.807 insurance coverage for this right now.
NOTE Confidence: 0.887698697777778

00:22:52.810 --> 00:22:53.304 Fortunately,
NOTE Confidence: 0.887698697777778

00:22:53.304 --> 00:22:55.774 because these are newer technologies
NOTE Confidence: 0.887698697777778

00:22:55.774 --> 00:22:59.882 and there is a lot of interest and
NOTE Confidence: 0.887698697777778

00:22:59.882 --> 00:23:01.930 investment in these technologies,
NOTE Confidence: 0.887698697777778

00:23:01.930 --> 00:23:05.493 many times these technologies are either
NOTE Confidence: 0.887698697777778

00:23:05.493 --> 00:23:08.008 covered by the insurance company
NOTE Confidence: 0.887698697777778

00:23:08.010 --> 00:23:09.750 or they're covered by the company
NOTE Confidence: 0.887698697777778

00:23:09.750 --> 00:23:11.230 that actually runs the test.
00:23:11.730 --> 00:23:14.730 So far the patient portion of
NOTE Confidence: 0.887698697777778

00:23:14.730 --> 00:23:17.560 the expenditure has been minimal.
NOTE Confidence: 0.887698697777778

00:23:17.560 --> 00:23:20.920 However, just like everything else,
NOTE Confidence: 0.887698697777778

00:23:20.920 --> 00:23:22.618 things are expensive and we just
NOTE Confidence: 0.887698697777778

00:23:22.618 --> 00:23:24.699 have to be careful and good stewards
NOTE Confidence: 0.887698697777778

00:23:24.699 --> 00:23:26.475 of the resources that we have.
NOTE Confidence: 0.862403069583333

00:23:26.490 --> 00:23:28.688 The other question that comes to mind
NOTE Confidence: 0.862403069583333

00:23:28.688 --> 00:23:31.282 is you think about the role of CT DNA
NOTE Confidence: 0.862403069583333

00:23:31.282 --> 00:23:33.658 is whether it has a role in screening.
NOTE Confidence: 0.862403069583333

00:23:33.660 --> 00:23:36.174 I mean when you talk about
NOTE Confidence: 0.862403069583333

00:23:36.174 --> 00:23:38.899 CT DNA being able to detect
NOTE Confidence: 0.862403069583333

00:23:38.900 --> 00:23:41.810 cancers before they become evident on
NOTE Confidence: 0.862403069583333

00:23:41.810 --> 00:23:44.450 imaging in the metastatic setting
NOTE Confidence: 0.862403069583333

00:23:44.450 --> 00:23:46.984 one may imagine that this may play
NOTE Confidence: 0.862403069583333

00:23:46.984 --> 00:23:49.374 a role in screening populations
NOTE Confidence: 0.862403069583333

00:23:49.374 --> 00:23:52.429 instead of imaging.
NOTE Confidence: 0.862403069583333

00:23:52.430 --> 00:23:56.287 Do you see that as a potential
NOTE Confidence: 0.862403069583333

00:23:56.290 --> 00:23:59.176 application of CT DNA or is that
NOTE Confidence: 0.862403069583333

00:23:59.176 --> 00:24:02.440 a little bit too far fetched?
NOTE Confidence: 0.895919516666667

00:24:02.510 --> 00:24:05.002 You know, growing up I watched
NOTE Confidence: 0.895919516666667

00:24:05.002 --> 00:24:07.590 Star Trek and it's always
NOTE Confidence: 0.895919516666667

00:24:07.590 --> 00:24:09.870 remarkable when you have a device

NOTE Confidence: 0.895919516666667

00:24:09.870 --> 00:24:12.246 and you can run it over a patient's

NOTE Confidence: 0.895919516666667

00:24:12.246 --> 00:24:14.646 body and you can find all their diseases

NOTE Confidence: 0.895919516666667

00:24:14.646 --> 00:24:16.779 and illnesses and potentially treat it.

NOTE Confidence: 0.895919516666667

00:24:16.780 --> 00:24:18.538 It's always very appealing to think

NOTE Confidence: 0.895919516666667

00:24:18.538 --> 00:24:20.666 of this concept of what we call

NOTE Confidence: 0.895919516666667

00:24:20.666 --> 00:24:22.161 non invasive or minimally invasive

NOTE Confidence: 0.895919516666667

00:24:22.161 --> 00:24:23.899 ways of identifying cancers.

NOTE Confidence: 0.895919516666667

00:24:23.900 --> 00:24:26.436 And you're spot on in saying that the

NOTE Confidence: 0.895919516666667

00:24:26.436 --> 00:24:28.964 the true potential of these treatments

NOTE Confidence: 0.895919516666667

00:24:28.964 --> 00:24:31.694 of these technologies would

NOTE Confidence: 0.895919516666667

00:24:31.768 --> 00:24:34.134 be for us to identify cancers at

NOTE Confidence: 0.895919516666667

00:24:34.134 --> 00:24:36.245 very early stage or even identify

NOTE Confidence: 0.895919516666667

00:24:36.245 --> 00:24:38.070 what we call precancerous lesions,

NOTE Confidence: 0.895919516666667

00:24:38.070 --> 00:24:40.190 so before they become cancerous.

NOTE Confidence: 0.895919516666667

00:24:40.190 --> 00:24:42.538 And identify it in the blood.

NOTE Confidence: 0.895919516666667

00:24:42.538 --> 00:24:45.106 So there's several technologies that are
NOTE Confidence: 0.895919516666667

00:24:45.106 --> 00:24:48.120 being evaluated in this setting and one
NOTE Confidence: 0.895919516666667

00:24:48.120 --> 00:24:50.610 of these technologies actually uses stool.
NOTE Confidence: 0.895919516666667

00:24:50.610 --> 00:24:52.882 So you test this stool to see if
NOTE Confidence: 0.895919516666667

00:24:52.882 --> 00:24:54.630 there's cancer in the colon and
NOTE Confidence: 0.895919516666667

00:24:54.630 --> 00:24:56.550 that's one way of looking at it.
NOTE Confidence: 0.895919516666667

00:24:56.550 --> 00:24:58.692 We have worked with the chemist at
NOTE Confidence: 0.895919516666667

00:24:58.692 --> 00:25:00.449 the University of Chicago and we
NOTE Confidence: 0.895919516666667

00:25:00.449 --> 00:25:02.598 have a test where we can kind of
NOTE Confidence: 0.895919516666667

00:25:02.598 --> 00:25:04.530 look at patients and look at their
NOTE Confidence: 0.895919516666667

00:25:04.530 --> 00:25:08.250 blood and find polyps in the colon,
NOTE Confidence: 0.895919516666667

00:25:08.250 --> 00:25:10.290 but they're not 100% sensitive.
00:25:11.132 --> 00:25:13.658 And so from a population standpoint,
NOTE Confidence: 0.895919516666667

00:25:13.660 --> 00:25:16.522 they're not ready for prime time
NOTE Confidence: 0.895919516666667

00:25:16.522 --> 00:25:18.612 yet because they're expensive and
NOTE Confidence: 0.895919516666667

00:25:18.612 --> 00:25:21.030 they're big tests and they still
NOTE Confidence: 0.895919516666667

00:25:21.104 --> 00:25:23.379 don't give you the results and the
NOTE Confidence: 0.895919516666667

00:25:23.379 --> 00:25:25.807 safety that you want when you have
NOTE Confidence: 0.895919516666667

00:25:25.807 --> 00:25:27.877 these sort of liquid biopsy tests.
NOTE Confidence: 0.895919516666667

00:25:27.880 --> 00:25:29.550 But I wouldn't be surprised
NOTE Confidence: 0.895919516666667

00:25:29.550 --> 00:25:31.740 if in five or ten years,
NOTE Confidence: 0.895919516666667

00:25:31.740 --> 00:25:33.581 just like when you go to your
NOTE Confidence: 0.895919516666667

00:25:33.581 --> 00:25:35.175 doctor and check your cholesterol
NOTE Confidence: 0.895919516666667

00:25:35.175 --> 00:25:37.388 levels or or other health tests,
NOTE Confidence: 0.895919516666667

00:25:37.388 --> 00:25:39.590 you could get a liquid biopsy
NOTE Confidence: 0.895919516666667

00:25:39.661 --> 00:25:40.789 test that would
00:25:41.506 --> 00:25:43.654 either predict cancer risk or would
NOTE Confidence: 0.895919516666667

00:25:43.654 --> 00:25:45.567 predict precancerous lesions and
NOTE Confidence: 0.895919516666667

00:25:45.567 --> 00:25:48.206 then of course if there is cancer,
NOTE Confidence: 0.895919516666667

00:25:48.210 --> 00:25:49.226 detect cancer as well.
NOTE Confidence: 0.895919516666667

00:25:49.226 --> 00:25:50.750 So I suspect it will come
NOTE Confidence: 0.895919516666667

00:25:50.810 --> 00:25:52.189 in the next 5 to 10 years,
NOTE Confidence: 0.895919516666667

00:25:52.190 --> 00:25:53.480 but it's not prime time yet.
NOTE Confidence: 0.8175777825

00:25:55.320 --> 00:25:57.324 Do you think that there's
NOTE Confidence: 0.8175777825

00:25:57.324 --> 00:26:00.226 a role in terms of CT DNA for
NOTE Confidence: 0.8175777825

00:26:00.226 --> 00:26:02.458 identifying the site of the cancer?
NOTE Confidence: 0.8175777825

00:26:02.460 --> 00:26:05.304 So is it that the CT DNA simply says
NOTE Confidence: 0.8175777825

00:26:05.304 --> 00:26:08.433 there is cancer or risk of cancer
NOTE Confidence: 0.8175777825

00:26:08.433 --> 00:26:11.038 somewhere in which case without really
NOTE Confidence: 0.8175777825

00:26:11.038 --> 00:26:13.744 knowing much more about the cancer
NOTE Confidence: 0.8175777825

00:26:13.744 --> 00:26:16.640 might only lead to patient anxiety?
NOTE Confidence: 0.8175777825

00:26:16.640 --> 00:26:19.288 Or do you think that we would be
NOTE Confidence: 0.8175777825

00:26:19.288 --> 00:26:21.984 able to be more specific so that
NOTE Confidence: 0.8175777825

00:26:21.984 --> 00:26:24.930 you know we would have targetable
NOTE Confidence: 0.8175777825

00:26:24.930 --> 00:26:27.540 mutations that we could treat
NOTE Confidence: 0.8175777825

00:26:27.540 --> 00:26:30.526 and know the site of origin
NOTE Confidence: 0.8175777825

00:26:30.526 --> 00:26:33.116 so that we could develop imaging
NOTE Confidence: 0.8175777825

00:26:33.116 --> 00:26:35.731 modalities that could pinpoint where

NOTE Confidence: 0.8175777825

00:26:35.731 --> 00:26:38.315 exactly that malignancy is before

NOTE Confidence: 0.8175777825

00:26:38.315 --> 00:26:40.195 it becomes widely disseminated?

NOTE Confidence: 0.851196058571429

00:26:41.620 --> 00:26:43.396 Other fantastic question and I think

NOTE Confidence: 0.851196058571429

00:26:43.396 --> 00:26:45.868 just for for the sake of the listeners,

NOTE Confidence: 0.851196058571429

00:26:45.870 --> 00:26:48.813 I just wanted to make make sure that I

NOTE Confidence: 0.851196058571429

00:26:48.813 --> 00:26:51.046 elaborate on one point which is that,

NOTE Confidence: 0.851196058571429

00:26:51.050 --> 00:26:52.238 first and foremost,

NOTE Confidence: 0.851196058571429

00:26:52.238 --> 00:26:54.724 all of us have some amount of DNA

NOTE Confidence: 0.851196058571429

00:26:54.724 --> 00:26:56.650 that's floating around in our blood

NOTE Confidence: 0.851196058571429

00:26:56.650 --> 00:26:58.569 and that's from cells dividing,

NOTE Confidence: 0.851196058571429

00:26:58.570 --> 00:26:59.725 cells breaking down.

NOTE Confidence: 0.851196058571429

00:26:59.725 --> 00:27:02.035 And so there's always DNA that's

NOTE Confidence: 0.851196058571429

00:27:02.035 --> 00:27:03.727 floating around in our blood.

NOTE Confidence: 0.851196058571429

00:27:03.730 --> 00:27:06.250 That DNA is called cell free DNA,

NOTE Confidence: 0.851196058571429

00:27:06.250 --> 00:27:09.066 which means it's DNA that's outside of cells,

NOTE Confidence: 0.851196058571429

00:27:09.070 --> 00:27:10.444 it's from dead cells and it's
NOTE Confidence: 0.851196058571429

00:27:10.444 --> 00:27:11.660 just kind of
NOTE Confidence: 0.851196058571429

00:27:11.660 --> 00:27:13.784 in in the bloodstream that doesn't
NOTE Confidence: 0.851196058571429

00:27:13.784 --> 00:27:15.470 necessarily mean it's cancerous DNA,
NOTE Confidence: 0.851196058571429

00:27:15.470 --> 00:27:18.186 but it means that there is DNA.
00:27:19.417 --> 00:27:21.871 There is another concept course circulating
NOTE Confidence: 0.851196058571429

00:27:21.871 --> 00:27:23.946 tumor DNA which we call CT DNA,
NOTE Confidence: 0.851196058571429

00:27:23.950 --> 00:27:25.658 which is where you clearly have a
NOTE Confidence: 0.851196058571429

00:27:25.658 --> 00:27:27.275 cancer and it's the cancer that's
NOTE Confidence: 0.851196058571429

00:27:27.275 --> 00:27:29.221 producing this sort of DNA that's kind
NOTE Confidence: 0.851196058571429

00:27:29.280 --> 00:27:31.163 of floating around in the blood that
NOTE Confidence: 0.851196058571429

00:27:31.163 --> 00:27:33.130 you then identify and call it that.
NOTE Confidence: 0.851196058571429

00:27:33.130 --> 00:27:35.644 So you know in the question of where
NOTE Confidence: 0.851196058571429

00:27:35.644 --> 00:27:37.768 sometimes when you have these cancers
NOTE Confidence: 0.851196058571429

00:27:37.768 --> 00:27:39.899 which we call unknown primary,
NOTE Confidence: 0.851196058571429

00:27:39.900 --> 00:27:41.376 which means you don't really know
NOTE Confidence: 0.851196058571429

00:27:41.376 --> 00:27:43.304 where the cancer is or you don't know
NOTE Confidence: 0.851196058571429

00:27:43.304 --> 00:27:44.830 where the site of the location is,
NOTE Confidence: 0.851196058571429

00:27:44.830 --> 00:27:45.608 CT DNA,
NOTE Confidence: 0.851196058571429

00:27:45.608 --> 00:27:47.942 which is the circulating free DNA,
NOTE Confidence: 0.851196058571429

00:27:47.942 --> 00:27:50.459 can actually identify those cancers.
NOTE Confidence: 0.851196058571429

00:27:50.460 --> 00:27:53.044 And in fact there's a lot of interest
NOTE Confidence: 0.851196058571429

00:27:53.044 --> 00:27:55.508 right now in using what we call
NOTE Confidence: 0.851196058571429

00:27:55.508 --> 00:27:57.744 epigenetic changes as well as tumor
NOTE Confidence: 0.851196058571429

00:27:57.744 --> 00:28:00.628 mutations to identify the site of disease.
NOTE Confidence: 0.851196058571429

00:28:00.630 --> 00:28:03.510 And clearly I know of at least three
NOTE Confidence: 0.851196058571429

00:28:03.510 --> 00:28:05.666 technologies that are very close to
NOTE Confidence: 0.851196058571429

00:28:05.666 --> 00:28:08.116 either getting FDA approval or in the
NOTE Confidence: 0.851196058571429

00:28:08.116 --> 00:28:10.788 process of for use in cancers of unknown origin.
NOTE Confidence: 0.851196058571429

00:28:11.596 --> 00:28:14.417 So I think it's a very exciting
NOTE Confidence: 0.851196058571429

00:28:14.417 --> 00:28:15.509 space.
NOTE Confidence: 0.851196058571429

00:28:15.510 --> 00:28:15.844 Again,

NOTE Confidence: 0.851196058571429

00:28:15.844 --> 00:28:18.850 I would say right now it it can be

NOTE Confidence: 0.851196058571429

00:28:18.939 --> 00:28:21.452 used by doctors such as oncologists

NOTE Confidence: 0.851196058571429

00:28:21.452 --> 00:28:24.056 in sort of very clearly prescribed

NOTE Confidence: 0.851196058571429

00:28:24.056 --> 00:28:25.810 settings to identify these,

NOTE Confidence: 0.851196058571429

00:28:25.810 --> 00:28:28.120 but I would say not quite ready

NOTE Confidence: 0.851196058571429

00:28:28.120 --> 00:28:29.980 for prime time widespread.

NOTE Confidence: 0.892521649130435

00:28:30.700 --> 00:28:32.884 Doctor Kiran Turaga is chief of

NOTE Confidence: 0.892521649130435

00:28:32.884 --> 00:28:34.740 surgical oncology and assistant medical

NOTE Confidence: 0.892521649130435

00:28:34.740 --> 00:28:36.750 director of the Clinical Trials Office

NOTE Confidence: 0.892521649130435

00:28:36.750 --> 00:28:38.918 at the Yale School of Medicine.

NOTE Confidence: 0.892521649130435

00:28:38.920 --> 00:28:40.936 If you have questions,

NOTE Confidence: 0.892521649130435

00:28:40.936 --> 00:28:42.913 the address is canceranswers@yale.edu,

NOTE Confidence: 0.892521649130435

00:28:42.913 --> 00:28:45.691 and past editions of the program

NOTE Confidence: 0.892521649130435

00:28:45.691 --> 00:28:48.103 are available in audio and written

NOTE Confidence: 0.892521649130435

00:28:48.103 --> 00:28:49.046 form at yalecancercenter.org.

NOTE Confidence: 0.892521649130435

00:28:49.046 --> 00:28:51.494 We hope you'll join us next week to

NOTE Confidence: 0.892521649130435

00:28:51.494 --> 00:28:53.368 learn more about the fight against

NOTE Confidence: 0.892521649130435

00:28:53.368 --> 00:28:55.220 cancer here on Connecticut Public Radio.

NOTE Confidence: 0.892521649130435

00:28:55.220 --> 00:28:57.674 Funding for Yale Cancer Answers is

NOTE Confidence: 0.892521649130435

00:28:57.674 --> 00:29:00.000 provided by Smilow Cancer Hospital.