WEBVTT

00:00:00.000 --> 00:00:02.148 Funding for Yale Cancer Answers is

NOTE Confidence: 0.80688991

00:00:02.148 --> 00:00:04.180 provided by Smilow Cancer Hospital.

NOTE Confidence: 0.797877139166667

00:00:06.410 --> 00:00:08.540 Welcome to Yale Cancer Answers with

NOTE Confidence: 0.797877139166667

00:00:08.540 --> 00:00:10.810 your host doctor Anees Chagpar.

NOTE Confidence: 0.797877139166667

00:00:10.810 --> 00:00:12.585 Yale Cancer Answers features the

NOTE Confidence: 0.797877139166667

00:00:12.585 --> 00:00:14.769 latest information on cancer care by

NOTE Confidence: 0.797877139166667

00:00:14.769 --> 00:00:16.169 welcoming oncologists and specialists

NOTE Confidence: 0.797877139166667

00:00:16.169 --> 00:00:18.513 who are on the forefront of the

NOTE Confidence: 0.797877139166667

00:00:18.513 --> 00:00:20.127 battle to fight cancer. This week,

NOTE Confidence: 0.797877139166667

00:00:20.130 --> 00:00:22.104 it's a conversation about the care

NOTE Confidence: 0.797877139166667

00:00:22.104 --> 00:00:24.369 of patients with both HIV and cancer

NOTE Confidence: 0.797877139166667

00:00:24.370 --> 00:00:26.785 with Doctor Brinda Emu. Doctor Emu is

NOTE Confidence: 0.797877139166667

00:00:26.785 --> 00:00:28.560 an associate professor of internal

NOTE Confidence: 0.797877139166667

00:00:28.560 --> 00:00:30.926 medicine at the Yale School of Medicine,

NOTE Confidence: 0.797877139166667

00:00:30.930 --> 00:00:34.074 where Doctor Chagpar is a professor

NOTE Confidence: 0.797877139166667

00:00:34.074 --> 00:00:36.020 of surgical oncology.

NOTE Confidence: 0.935191912380952

00:00:36.030 --> 00:00:37.591 Brinda, maybe we can start off by you

NOTE Confidence: 0.935191912380952

00:00:37.591 --> 00:00:39.359 telling us a little bit more about

NOTE Confidence: 0.935191912380952

00:00:39.359 --> 00:00:41.140 yourself and what it is you do.

NOTE Confidence: 0.827507977272727

00:00:41.610 --> 00:00:44.998 Sure, so I am an infectious diseases

NOTE Confidence: 0.827507977272727

00:00:44.998 --> 00:00:47.570 physician and a researcher.

NOTE Confidence: 0.827507977272727

00:00:47.570 --> 00:00:50.468 I've been an HIV provider for over

NOTE Confidence: 0.827507977272727

00:00:50.468 --> 00:00:53.531 20 years and my research is also

NOTE Confidence: 0.827507977272727

00:00:53.531 --> 00:00:56.715 focused in this area and it's

NOTE Confidence: 0.827507977272727

00:00:56.715 --> 00:00:59.727 largely to trying to understand the

NOTE Confidence: 0.827507977272727

00:00:59.727 --> 00:01:02.464 long term impact of HIV infection on

NOTE Confidence: 0.827507977272727

00:01:02.464 --> 00:01:04.770 the immune system and what it means

NOTE Confidence: 0.827507977272727

00:01:04.770 --> 00:01:06.800 for individuals and their health.

NOTE Confidence: 0.827507977272727

00:01:06.800 --> 00:01:09.068 Even after viral replication

NOTE Confidence: 0.827507977272727

00:01:09.068 --> 00:01:10.769 has been controlled,

NOTE Confidence: 0.827507977272727

00:01:10.770 --> 00:01:12.870 so I would consider myself

NOTE Confidence: 0.827507977272727

00:01:12.870 --> 00:01:14.130 a viral immunologist.

NOTE Confidence: 0.827507977272727

00:01:14.130 --> 00:01:17.217 I've been working in the field of

NOTE Confidence: 0.827507977272727

00:01:17.217 --> 00:01:19.646 HIV immunology for about 20 years

NOTE Confidence: 0.827507977272727

00:01:19.646 --> 00:01:22.737 and have a lab in the the division

NOTE Confidence: 0.827507977272727

00:01:22.737 --> 00:01:25.249 of infectious diseases here,

NOTE Confidence: 0.827507977272727

00:01:25.250 --> 00:01:28.700 trying to understand the question of

NOTE Confidence: 0.827507977272727

00:01:28.700 --> 00:01:32.850 how long term viral infection impacts

NOTE Confidence: 0.827507977272727

00:01:32.850 --> 00:01:35.562 non viral associated conditions,

NOTE Confidence: 0.827507977272727

00:01:35.562 --> 00:01:36.918 including cancer.

NOTE Confidence: 0.73476141

00:01:37.490 --> 00:01:40.350 Yeah, so you know Brenda,

NOTE Confidence: 0.73476141

00:01:40.350 --> 00:01:44.095 it really does bring to mind the

NOTE Confidence: 0.73476141

00:01:44.095 --> 00:01:47.140 intersection of HIV and cancer now that

NOTE Confidence: 0.73476141

00:01:47.140 --> 00:01:50.918 HIV is really become more of a chronic

NOTE Confidence: 0.73476141

00:01:50.918 --> 00:01:54.823 disease right that now that we have

NOTE Confidence: 0.73476141

00:01:54.823 --> 00:01:57.407 reasonably good antiretroviral therapy.

NOTE Confidence: 0.73476141

00:01:57.410 --> 00:02:00.476 People are living with HIV for a

NOTE Confidence: 0.73476141

00:02:00.476 --> 00:02:03.798 good long time and we do know that

NOTE Confidence: 0.73476141

00:02:03.798 --> 00:02:06.510 HIV is a disease that does affect.

NOTE Confidence: 0.73476141

00:02:06.510 --> 00:02:08.820 The immune system and we've talked on

NOTE Confidence: 0.73476141

00:02:08.820 --> 00:02:11.520 this show quite a bit about how the

NOTE Confidence: 0.73476141

00:02:11.520 --> 00:02:13.320 immune system interplays with cancer.

NOTE Confidence: 0.73476141

00:02:13.320 --> 00:02:15.750 So can you kind of give us a lay of

NOTE Confidence: 0.73476141

00:02:15.826 --> 00:02:18.535 the land in terms of that intersection?

NOTE Confidence: 0.73476141

00:02:18.540 --> 00:02:21.528 Are there certain cancers that are

NOTE Confidence: 0.73476141

00:02:21.528 --> 00:02:24.370 more prevalent in people with HIV?

NOTE Confidence: 0.73476141

00:02:24.370 --> 00:02:26.454 And conversely,

NOTE Confidence: 0.73476141

00:02:26.454 --> 00:02:31.552 does HIV impact how people get and

NOTE Confidence: 0.73476141

00:02:31.552 --> 00:02:35.192 respond to other kinds of cancers that

NOTE Confidence: 0.73476141

00:02:35.192 --> 00:02:38.690 may not be classically HIV associated?

NOTE Confidence: 0.73476141

00:02:38.690 --> 00:02:39.260 Yeah

NOTE Confidence: 0.9399768475

00:02:39.310 --> 00:02:42.600 yeah. So those are a lot of

NOTE Confidence: 0.9399768475

00:02:42.600 --> 00:02:44.482 really good questions and and

NOTE Confidence: 0.9399768475

00:02:44.482 --> 00:02:46.247 really important as you say,

NOTE Confidence: 0.9399768475

00:02:46.250 --> 00:02:48.706 as the field of cancer care is sort

NOTE Confidence: 0.9399768475

00:02:48.706 --> 00:02:50.643 of evolving to include therapies

NOTE Confidence: 0.9399768475

00:02:50.643 --> 00:02:52.728 that target the immune system.

NOTE Confidence: 0.9399768475

00:02:52.730 --> 00:02:54.725 So just to take a step back,

NOTE Confidence: 0.9399768475

00:02:54.730 --> 00:02:58.244 you know HIV is a virus that

NOTE Confidence: 0.9399768475

00:02:58.244 --> 00:02:59.842 directly infects CD4T cells,

NOTE Confidence: 0.9399768475

00:02:59.842 --> 00:03:01.452 and we've been, you know,

NOTE Confidence: 0.9399768475

00:03:01.452 --> 00:03:03.618 hearing a lot about the importance

NOTE Confidence: 0.9399768475

00:03:03.618 --> 00:03:06.550 of T cells in fighting infections.

NOTE Confidence: 0.9399768475

00:03:06.550 --> 00:03:08.335 You know, as it's relevant

NOTE Confidence: 0.9399768475

00:03:08.335 --> 00:03:09.406 for many infections.

NOTE Confidence: 0.9399768475

00:03:09.410 --> 00:03:10.390 Including COVID-19,

NOTE Confidence: 0.9399768475

00:03:10.390 --> 00:03:14.949 but HIV is unique in that in this virus

NOTE Confidence: 0.9399768475

00:03:14.949 --> 00:03:18.219 actually infects those cells and kills

NOTE Confidence: 0.9399768475

00:03:18.219 --> 00:03:21.709 them when when it infects them so.

NOTE Confidence: 0.9399768475

00:03:21.710 --> 00:03:22.970 T cells, as you know,

NOTE Confidence: 0.9399768475

00:03:22.970 --> 00:03:26.904 is are a critical defense against infections

NOTE Confidence: 0.9399768475

00:03:26.904 --> 00:03:30.309 and therefore when when HIV infects,

NOTE Confidence: 0.9399768475

00:03:30.309 --> 00:03:33.174 people become immunosuppressed and they

NOTE Confidence: 0.9399768475

00:03:33.174 --> 00:03:35.611 become vulnerable to other infections

NOTE Confidence: 0.9399768475

00:03:35.611 --> 00:03:38.904 as well as some cancers that rely on

NOTE Confidence: 0.9399768475

00:03:38.904 --> 00:03:45.420 the immune system in order to in order to.

NOTE Confidence: 0.9399768475

00:03:45.420 --> 00:03:49.578 Propagate so in fact that's how HIV and AIDS

NOTE Confidence: 0.9399768475

00:03:49.578 --> 00:03:53.717 was initially recognized in the early 1980s.

NOTE Confidence: 0.9399768475

00:03:53.717 --> 00:03:54.908 Is that young.

NOTE Confidence: 0.9399768475

00:03:54.908 --> 00:03:56.496 Previously healthy people were

NOTE Confidence: 0.9399768475

00:03:56.496 --> 00:03:58.956 coming in for medical care with

NOTE Confidence: 0.9399768475

00:03:58.956 --> 00:04:00.556 rare and unusual infections,

NOTE Confidence: 0.9399768475

00:04:00.560 --> 00:04:03.160 and rare and unusual cancers.

NOTE Confidence: 0.9399768475

00:04:03.160 --> 00:04:04.010 And so,

NOTE Confidence: 0.9399768475

00:04:04.010 --> 00:04:05.710 as you alluded to,

NOTE Confidence: 0.9399768475

00:04:05.710 --> 00:04:09.094 there were certain cancers that were

NOTE Confidence: 0.9399768475

00:04:09.094 --> 00:04:12.260 specifically associated with HIV infection,

NOTE Confidence: 0.9399768475

00:04:12.260 --> 00:04:15.920 Kaposi sarcoma non Hodgkin's lymphoma.

NOTE Confidence: 0.9399768475

00:04:15.920 --> 00:04:17.315 And cervical cancer.

NOTE Confidence: 0.9399768475

00:04:17.315 --> 00:04:20.570 And we saw those cancers at increasing

NOTE Confidence: 0.9399768475

00:04:20.653 --> 00:04:23.019 rates back in the 80s and 90s.

NOTE Confidence: 0.9399768475

00:04:23.020 --> 00:04:25.036 And and for some time afterwards.

NOTE Confidence: 0.9399768475

00:04:25.040 --> 00:04:27.938 And it was recognized that it was

NOTE Confidence: 0.9399768475

00:04:27.938 --> 00:04:30.393 because patients with HIV and advanced

NOTE Confidence: 0.9399768475

00:04:30.393 --> 00:04:33.872 HIV were unable to mount the immune

NOTE Confidence: 0.9399768475

00:04:33.872 --> 00:04:35.940 response against those cancers.

NOTE Confidence: 0.9399768475

00:04:35.940 --> 00:04:39.496 The as you as you stated correctly,

NOTE Confidence: 0.9399768475

00:04:39.500 --> 00:04:41.780 over the next 25 years,

NOTE Confidence: 0.9399768475

00:04:41.780 --> 00:04:46.068 30 years we have really good therapy to

NOTE Confidence: 0.9399768475

00:04:46.068 --> 00:04:49.942 treat viral replication and if for the

NOTE Confidence: 0.9399768475

00:04:49.942 --> 00:04:52.749 most part when patients are taking up

NOTE Confidence: 0.9399768475

00:04:52.749 --> 00:04:56.580 a a cocktail of antiretroviral therapies,

NOTE Confidence: 0.9399768475

00:04:56.580 --> 00:04:59.660 we're able to get the HIV viral

NOTE Confidence: 0.9399768475

00:04:59.660 --> 00:05:00.980 replication under control,

NOTE Confidence: 0.9399768475

00:05:00.980 --> 00:05:03.225 with usually an increase in

NOTE Confidence: 0.9399768475

00:05:03.225 --> 00:05:05.470 that CD 4T cell count.

NOTE Confidence: 0.9399768475

00:05:05.470 --> 00:05:08.032 But what we're starting to see is

NOTE Confidence: 0.9399768475

00:05:08.032 --> 00:05:10.615 that even though those initial 3

NOTE Confidence: 0.9399768475

00:05:10.615 --> 00:05:12.960 cancers which redeemed aids defining

NOTE Confidence: 0.9399768475

00:05:12.960 --> 00:05:15.729 cancers are decreasing in incidence,

NOTE Confidence: 0.9399768475

00:05:15.730 --> 00:05:16.921 we're seeing increased

NOTE Confidence: 0.9399768475

00:05:16.921 --> 00:05:18.509 numbers of other cancers,

NOTE Confidence: 0.9399768475

00:05:18.510 --> 00:05:21.430 and particularly those cancers that

NOTE Confidence: 0.9399768475

00:05:21.430 --> 00:05:25.270 we are recognizing as relying on the

NOTE Confidence: 0.9399768475

00:05:25.270 --> 00:05:28.574 immune system to be able to fight them.

NOTE Confidence: 0.9399768475

00:05:28.580 --> 00:05:33.460 So so so that the the cancer cancers

NOTE Confidence: 0.9399768475

00:05:33.460 --> 00:05:37.118 that patients are presenting with

NOTE Confidence: 0.9399768475

00:05:37.120 --> 00:05:39.520 among the HIV population have

NOTE Confidence: 0.9399768475

00:05:39.520 --> 00:05:42.610 changed over over the last decade.

NOTE Confidence: 0.9399768475

00:05:42.610 --> 00:05:44.922 Because we're seeing less

NOTE Confidence: 0.9399768475

00:05:44.922 --> 00:05:46.078 severe immunosuppression,

NOTE Confidence: 0.9399768475

00:05:46.080 --> 00:05:49.027 but patients with HIV do have residual

NOTE Confidence: 0.9399768475

00:05:49.027 --> 00:05:51.131 immune dysfunction that may predispose

NOTE Confidence: 0.9399768475

00:05:51.131 --> 00:05:53.423 them to some of these cancers.

NOTE Confidence: 0.85918354

00:05:54.120 --> 00:05:56.604 So tell us a little bit more about that.

NOTE Confidence: 0.85918354

00:05:56.610 --> 00:05:58.162 What kinds of cancers?

NOTE Confidence: 0.85918354

00:05:58.162 --> 00:06:00.490 Are we now seeing with increased

NOTE Confidence: 0.85918354

00:06:00.562 --> 00:06:02.817 frequency in the HIV population?

NOTE Confidence: 0.50146916

00:06:03.370 --> 00:06:05.590 Yeah, so I. So what?

NOTE Confidence: 0.50146916

00:06:05.590 --> 00:06:08.410 We're starting to see is, well,

NOTE Confidence: 0.50146916

00:06:08.410 --> 00:06:12.632 there's a couple of of cancers that that

NOTE Confidence: 0.50146916

00:06:12.632 --> 00:06:15.726 are increased in risk in patients with

NOTE Confidence: 0.50146916

00:06:15.726 --> 00:06:18.747 HIV compared to the general population.

NOTE Confidence: 0.50146916

00:06:18.750 --> 00:06:22.118 And those include still include a those aids

NOTE Confidence: 0.50146916

00:06:22.118 --> 00:06:24.688 defining cancers that I mentioned before.

NOTE Confidence: 0.50146916

00:06:24.690 --> 00:06:26.271 Non hodgkins, lymphoma,

NOTE Confidence: 0.50146916

00:06:26.271 --> 00:06:28.379 KS and cervical cancer.

NOTE Confidence: 0.50146916

00:06:28.380 --> 00:06:29.580 But in addition to that,

NOTE Confidence: 0.50146916

00:06:29.580 --> 00:06:33.038 we're seeing increased rates of lung cancer,

NOTE Confidence: 0.50146916

00:06:33.040 --> 00:06:35.728 Hodgkin's lymphoma, anal cancer.

NOTE Confidence: 0.50146916

00:06:35.728 --> 00:06:39.760 Liver cancer had a neck cancer,

NOTE Confidence: 0.50146916

00:06:39.760 --> 00:06:42.136 so these cancers are patients with

NOTE Confidence: 0.50146916

00:06:42.136 --> 00:06:44.831 HIV infection are at increased risk

NOTE Confidence: 0.50146916

00:06:44.831 --> 00:06:47.496 for these particular cancers compared

NOTE Confidence: 0.50146916

00:06:47.496 --> 00:06:50.222 to the general population there.

NOTE Confidence: 0.50146916

00:06:50.222 --> 00:06:52.274 There are other cancers as well

NOTE Confidence: 0.50146916

00:06:52.274 --> 00:06:54.280 that fall into that category,

NOTE Confidence: 0.50146916

00:06:54.280 --> 00:06:56.428 but interestingly not all

NOTE Confidence: 0.50146916

00:06:56.428 --> 00:06:58.576 cancers are increased in.

NOTE Confidence: 0.50146916

00:06:58.580 --> 00:07:01.499 In significant rates in patients with HIV,

NOTE Confidence: 0.50146916

00:07:01.500 --> 00:07:02.204 for example,

NOTE Confidence: 0.50146916

00:07:02.204 --> 00:07:05.020 we don't see an increased rate of most

NOTE Confidence: 0.50146916

00:07:05.091 --> 00:07:07.617 breast cancers or colon cancer or

NOTE Confidence: 0.50146916

00:07:07.617 --> 00:07:10.240 prostate cancer in patients with HIV

NOTE Confidence: 0.50146916

00:07:10.240 --> 00:07:12.410 compared to the general population,

NOTE Confidence: 0.854261529411765

00:07:13.040 --> 00:07:16.096 and so do we know why there are

NOTE Confidence: 0.854261529411765

00:07:16.096 --> 00:07:17.944 increased risk with certain

NOTE Confidence: 0.854261529411765

00:07:17.944 --> 00:07:20.434 cancers as opposed to others.

NOTE Confidence: 0.854261529411765

00:07:20.440 --> 00:07:22.380 I mean, just thinking about

NOTE Confidence: 0.854261529411765

00:07:22.380 --> 00:07:24.785 some of the mechanisms by which

NOTE Confidence: 0.854261529411765

00:07:24.785 --> 00:07:27.113 HIV is transmitted and some of

NOTE Confidence: 0.854261529411765

00:07:27.113 --> 00:07:29.380 the cancers that you mentioned.

NOTE Confidence: 0.854261529411765

00:07:29.380 --> 00:07:32.636 It seems to me that there may be

NOTE Confidence: 0.854261529411765

00:07:32.636 --> 00:07:35.319 a correlation between HIV and HPV.

NOTE Confidence: 0.854261529411765

00:07:35.320 --> 00:07:37.312 The human papilloma virus is that

NOTE Confidence: 0.854261529411765

00:07:37.312 --> 00:07:39.964 one of the reasons why we see the

NOTE Confidence: 0.854261529411765

00:07:39.964 --> 00:07:41.529 increased frequency in some of

NOTE Confidence: 0.854261529411765

00:07:41.529 --> 00:07:43.640 the cancers that you mentioned.

NOTE Confidence: 0.854261529411765

00:07:43.640 --> 00:07:43.770 I

NOTE Confidence: 0.919537097142857

00:07:43.780 --> 00:07:45.436 think that's that's correct,

NOTE Confidence: 0.919537097142857

00:07:45.436 --> 00:07:48.270 and in fact some individuals have

NOTE Confidence: 0.919537097142857

00:07:48.270 --> 00:07:51.150 actually broken down the cancers that

NOTE Confidence: 0.919537097142857

00:07:51.150 --> 00:07:53.730 patients with HIV are at increased

NOTE Confidence: 0.919537097142857

00:07:53.730 --> 00:07:56.910 risk for into those that are virally

NOTE Confidence: 0.919537097142857

00:07:56.910 --> 00:07:59.620 associated and non virally associated.

NOTE Confidence: 0.919537097142857

00:07:59.620 --> 00:08:02.112 So HPV is human.

NOTE Confidence: 0.919537097142857

00:08:02.112 --> 00:08:05.227 Papilloma virus is a causative

NOTE Confidence: 0.919537097142857

00:08:05.230 --> 00:08:07.618 agent for cervical cancer.

NOTE Confidence: 0.919537097142857

00:08:07.618 --> 00:08:10.856 For anal cancer, some skin cancers,

NOTE Confidence: 0.919537097142857

00:08:10.856 --> 00:08:13.748 and some head and neck cancers.

NOTE Confidence: 0.919537097142857

00:08:13.750 --> 00:08:16.622 Similarly, other viruses like

NOTE Confidence: 0.919537097142857

00:08:16.622 --> 00:08:20.450 hepatitis B&C can cause liver cancer,

NOTE Confidence: 0.919537097142857

00:08:20.450 --> 00:08:24.804 and the infection EV can cause lymphomas.

NOTE Confidence: 0.919537097142857

00:08:24.810 --> 00:08:27.690 So I I think that coinfection

NOTE Confidence: 0.919537097142857

00:08:27.690 --> 00:08:29.610 with these other viruses.

NOTE Confidence: 0.919537097142857

00:08:29.610 --> 00:08:32.886 That we know cause cancer do seem

NOTE Confidence: 0.919537097142857

00:08:32.886 --> 00:08:35.680 to be increased among patients

NOTE Confidence: 0.919537097142857

00:08:35.680 --> 00:08:38.580 that also have HIV infection.

NOTE Confidence: 0.919537097142857

00:08:38.580 --> 00:08:39.832 But as an immunologist,

NOTE Confidence: 0.919537097142857

00:08:39.832 --> 00:08:42.113 it is interesting to me that there

NOTE Confidence: 0.919537097142857

00:08:42.113 --> 00:08:44.472 are also some cancers that are not

NOTE Confidence: 0.919537097142857

00:08:44.472 --> 00:08:46.278 associated with viruses that are

NOTE Confidence: 0.919537097142857

00:08:46.278 --> 00:08:48.763 increased in risk among patients with HIV,

NOTE Confidence: 0.919537097142857

00:08:48.770 --> 00:08:51.380 and that includes lung cancers,

NOTE Confidence: 0.919537097142857

00:08:51.380 --> 00:08:55.280 some leukemias, renal cell cancer,

NOTE Confidence: 0.919537097142857

00:08:55.280 --> 00:08:57.554 and head and neck cancer that's

NOTE Confidence: 0.919537097142857

00:08:57.554 --> 00:08:59.070 not associated with HPV.

NOTE Confidence: 0.919537097142857

00:08:59.070 --> 00:09:00.798 So I think that.

NOTE Confidence: 0.919537097142857

00:09:00.798 --> 00:09:03.390 The the immune system and the

NOTE Confidence: 0.919537097142857

00:09:03.490 --> 00:09:06.500 immune system responds to cancer

NOTE Confidence: 0.919537097142857

00:09:06.500 --> 00:09:08.170 to viruses that cause cancer.

NOTE Confidence: 0.919537097142857

00:09:08.170 --> 00:09:10.739 It certainly puts patients at increased risk,

NOTE Confidence: 0.919537097142857

00:09:10.740 --> 00:09:12.990 but I think the immune systems

NOTE Confidence: 0.919537097142857

00:09:12.990 --> 00:09:14.996 response to non virally associated

NOTE Confidence: 0.919537097142857

00:09:14.996 --> 00:09:17.012 cancer is also something that

NOTE Confidence: 0.919537097142857

00:09:17.012 --> 00:09:18.436 deserves closer scrutiny because

NOTE Confidence: 0.919537097142857

00:09:18.436 --> 00:09:21.158 not all of the cancers that are at

NOTE Confidence: 0.919537097142857

00:09:21.158 --> 00:09:23.018 increased risk are due to viruses.

NOTE Confidence: 0.910870071428571

00:09:24.560 --> 00:09:26.900 Certainly we know that the

NOTE Confidence: 0.910870071428571

00:09:26.900 --> 00:09:28.948 immune system plays a role in

NOTE Confidence: 0.910870071428571

00:09:28.948 --> 00:09:30.333 fighting some of these cancers,

NOTE Confidence: 0.910870071428571

00:09:30.340 --> 00:09:32.866 and and certainly some cancers have

NOTE Confidence: 0.910870071428571

00:09:32.866 --> 00:09:36.435 developed a kind of what I I I like

NOTE Confidence: 0.910870071428571

00:09:36.435 --> 00:09:38.235 to call the invisibility cloak,

NOTE Confidence: 0.910870071428571

00:09:38.240 --> 00:09:41.120 where we're very much like a Harry Potter.

NOTE Confidence: 0.910870071428571

00:09:41.120 --> 00:09:43.826 They they can kind of evade

NOTE Confidence: 0.910870071428571

00:09:43.826 --> 00:09:45.179 the immune system.

NOTE Confidence: 0.910870071428571

00:09:45.180 --> 00:09:46.964 That can't really fight,

NOTE Confidence: 0.910870071428571

00:09:46.964 --> 00:09:48.748 fight the cancers off.

NOTE Confidence: 0.910870071428571

00:09:48.750 --> 00:09:50.494 And that's where immunotherapy

NOTE Confidence: 0.910870071428571

00:09:50.494 --> 00:09:52.238 kind of comes in.

NOTE Confidence: 0.910870071428571

00:09:52.240 --> 00:09:54.658 Kind of taking away that that.

NOTE Confidence: 0.910870071428571

00:09:54.660 --> 00:09:56.092 Poke if you will.

NOTE Confidence: 0.910870071428571

00:09:56.092 --> 00:09:58.550 So when we think about that,

NOTE Confidence: 0.910870071428571

00:09:58.550 --> 00:10:02.510 you know there are particular cancers

NOTE Confidence: 0.910870071428571

00:10:02.510 --> 00:10:09.030 that have expression of PD 1 PDL 1.

NOTE Confidence: 0.910870071428571

00:10:09.030 --> 00:10:11.856 Do we know whether those cancers

NOTE Confidence: 0.910870071428571

00:10:11.856 --> 00:10:14.415 are more likely to occur

NOTE Confidence: 0.910870071428571

00:10:14.415 --> 00:10:16.707 in HIV infected patients?

NOTE Confidence: 0.910870071428571

00:10:16.710 --> 00:10:18.696 And is there a difference in

NOTE Confidence: 0.910870071428571

00:10:18.696 --> 00:10:20.730 terms of how these patients,

NOTE Confidence: 0.910870071428571

00:10:20.730 --> 00:10:22.786 if they do have one of these cancers,

NOTE Confidence: 0.910870071428571

00:10:22.790 --> 00:10:24.810 how they respond to immunotherapy?

NOTE Confidence: 0.924063113076923

00:10:26.320 --> 00:10:29.029 Yeah, that that's a great question and

NOTE Confidence: 0.924063113076923

00:10:29.029 --> 00:10:31.659 actually is is the hypothesis that

NOTE Confidence: 0.924063113076923

00:10:31.660 --> 00:10:33.718 our lab was sort of operating under?

NOTE Confidence: 0.924063113076923

00:10:33.720 --> 00:10:37.280 Because if you think back to the list

NOTE Confidence: 0.924063113076923

00:10:37.280 --> 00:10:40.140 of cancers that I stated were increased

NOTE Confidence: 0.924063113076923

00:10:40.140 --> 00:10:42.780 at risk among patients with HIV,

NOTE Confidence: 0.924063113076923

00:10:42.780 --> 00:10:46.338 including lung cancer and liver cancer,

NOTE Confidence: 0.924063113076923

00:10:46.340 --> 00:10:48.112 head and neck cancer,

NOTE Confidence: 0.924063113076923

00:10:48.112 --> 00:10:51.407 many of those cancers are the same

NOTE Confidence: 0.924063113076923

00:10:51.407 --> 00:10:54.112 cancers in which that immunotherapy

NOTE Confidence: 0.924063113076923

00:10:54.112 --> 00:10:56.203 is effective in suggesting.

NOTE Confidence: 0.924063113076923

00:10:56.203 --> 00:10:57.592 That in fact,

NOTE Confidence: 0.924063113076923

00:10:57.592 --> 00:11:00.370 it is because patients with HIV

NOTE Confidence: 0.924063113076923

00:11:00.455 --> 00:11:03.300 infection have an impaired immune

NOTE Confidence: 0.924063113076923

00:11:03.300 --> 00:11:06.132 response that these are the same cancers

NOTE Confidence: 0.924063113076923

00:11:06.132 --> 00:11:08.032 that respond to immunotherapy and

NOTE Confidence: 0.924063113076923

00:11:08.032 --> 00:11:10.006 also the same cancers that patients

NOTE Confidence: 0.924063113076923

00:11:10.006 --> 00:11:12.620 with HIV see it increase risk because

NOTE Confidence: 0.924063113076923

00:11:12.620 --> 00:11:14.570 they have impaired immune function.

NOTE Confidence: 0.924063113076923

00:11:14.570 --> 00:11:17.496 So that raises a really the excellent

NOTE Confidence: 0.924063113076923

00:11:17.496 --> 00:11:20.528 and and really critical question is,

NOTE Confidence: 0.924063113076923

00:11:20.530 --> 00:11:24.034 will immunotherapy work as well in

NOTE Confidence: 0.924063113076923

00:11:24.034 --> 00:11:27.970 patients with HIV as those without?

NOTE Confidence: 0.924063113076923

00:11:27.970 --> 00:11:30.778 And you mentioned the the the PD 1

NOTE Confidence: 0.924063113076923

00:11:30.778 --> 00:11:33.905 PDL 1 pathway and drugs that target

NOTE Confidence: 0.924063113076923

00:11:33.905 --> 00:11:37.877 that pathway as well as the CTA for

NOTE Confidence: 0.924063113076923

00:11:37.877 --> 00:11:40.985 pathway are commonly known as immune

NOTE Confidence: 0.924063113076923

00:11:40.985 --> 00:11:43.016 checkpoint inhibitors and they're

NOTE Confidence: 0.924063113076923

00:11:43.016 --> 00:11:45.024 designed to reinvigorate exhausted

NOTE Confidence: 0.924063113076923

00:11:45.024 --> 00:11:48.229 T cells in order to fight cancer.

NOTE Confidence: 0.924063113076923

00:11:48.230 --> 00:11:50.310 Having worked in infectious disease,

NOTE Confidence: 0.924063113076923

00:11:50.310 --> 00:11:53.089 these same pathways that PD one PD

NOTE Confidence: 0.924063113076923

00:11:53.089 --> 00:11:56.111 L1 pathway for example are also

NOTE Confidence: 0.924063113076923

00:11:56.111 --> 00:11:57.277 extremely relevant.

NOTE Confidence: 0.924063113076923

00:11:57.280 --> 00:12:02.216 In chronic viral infection and the PD 1 PDL,

NOTE Confidence: 0.924063113076923

00:12:02.216 --> 00:12:04.592 1 pathways upregulated in the setting

NOTE Confidence: 0.924063113076923

00:12:04.592 --> 00:12:07.989 of HIV as it is in other chronic

NOTE Confidence: 0.924063113076923

00:12:07.989 --> 00:12:11.096 viral infections and so so whether

NOTE Confidence: 0.924063113076923

00:12:11.096 --> 00:12:13.916 treatment with inhibitors to this

NOTE Confidence: 0.924063113076923

00:12:13.916 --> 00:12:16.921 pathway will work better or worse

NOTE Confidence: 0.924063113076923

00:12:16.921 --> 00:12:20.726 in patients with HIV is a bit of

NOTE Confidence: 0.924063113076923

00:12:20.726 --> 00:12:22.996 an of an unanswered question.

NOTE Confidence: 0.924063113076923

00:12:23.000 --> 00:12:25.628 But a really, really important one,

NOTE Confidence: 0.924063113076923

00:12:25.630 --> 00:12:27.600 and I say it's unanswered.

NOTE Confidence: 0.924063113076923

00:12:27.600 --> 00:12:31.102 Because patients with HIV have

NOTE Confidence: 0.924063113076923

00:12:31.102 --> 00:12:33.760 not been regularly studied in the

NOTE Confidence: 0.924063113076923

00:12:33.842 --> 00:12:37.006 clinical trials that looked at immune

NOTE Confidence: 0.924063113076923

00:12:37.006 --> 00:12:38.982 checkpoint inhibitors because of

NOTE Confidence: 0.924063113076923

00:12:38.982 --> 00:12:41.788 initial concerns about potential toxicity,

NOTE Confidence: 0.924063113076923

00:12:41.790 --> 00:12:44.196 and therefore we don't have clinical

NOTE Confidence: 0.924063113076923

00:12:44.196 --> 00:12:46.828 trial data that tell us for sure

NOTE Confidence: 0.924063113076923

00:12:46.828 --> 00:12:49.047 that patients with HIV do as well

NOTE Confidence: 0.924063113076923

00:12:49.118 --> 00:12:50.950 as the general population.

NOTE Confidence: 0.924063113076923

00:12:50.950 --> 00:12:53.578 So these studies are now being

NOTE Confidence: 0.924063113076923

00:12:53.578 --> 00:12:55.330 conducted retrospectively to see

NOTE Confidence: 0.924063113076923

00:12:55.405 --> 00:12:58.044 whether patients with HIV are in fact.

NOTE Confidence: 0.924063113076923

00:12:58.050 --> 00:13:01.235 Getting getting responses at the same level,

NOTE Confidence: 0.924063113076923

00:13:01.240 --> 00:13:03.893 but this is something that is really

NOTE Confidence: 0.924063113076923

00:13:03.893 --> 00:13:05.730 understudied and really important,

NOTE Confidence: 0.924063113076923

00:13:05.730 --> 00:13:07.502 particularly for our patients

NOTE Confidence: 0.924063113076923

00:13:07.502 --> 00:13:09.274 that have immune dysfunction.

NOTE Confidence: 0.924063113076923

00:13:09.280 --> 00:13:10.530 To know the answer to

NOTE Confidence: 0.878777952857143

00:13:11.620 --> 00:13:12.505 so important. Well,

NOTE Confidence: 0.878777952857143

00:13:12.505 --> 00:13:14.275 we're going to take a short

NOTE Confidence: 0.878777952857143

00:13:14.275 --> 00:13:15.798 break for a medical minute,

NOTE Confidence: 0.878777952857143

00:13:15.800 --> 00:13:17.522 but please stay tuned to learn

NOTE Confidence: 0.878777952857143

00:13:17.522 --> 00:13:19.385 more about HIV and cancer with

NOTE Confidence: 0.878777952857143

00:13:19.385 --> 00:13:21.015 my guest doctor Brenda Emu.

NOTE Confidence: 0.787356254

00:13:21.700 --> 00:13:23.700 Funding for Yale Cancer answers

NOTE Confidence: 0.787356254

00:13:23.700 --> 00:13:25.700 comes from Smilow Cancer Hospital,

NOTE Confidence: 0.787356254

00:13:25.700 --> 00:13:27.130 where the bladder cancer team

NOTE Confidence: 0.787356254

00:13:27.130 --> 00:13:29.043 is at the forefront of bladder

NOTE Confidence: 0.787356254

00:13:29.043 --> 00:13:30.719 cancer treatment and research.

NOTE Confidence: 0.787356254

00:13:30.720 --> 00:13:32.770 Learn more at Yale Cancer Center dot org.

NOTE Confidence: 0.916878641428571

00:13:35.280 --> 00:13:37.388 The American Cancer Society

NOTE Confidence: 0.916878641428571

00:13:37.388 --> 00:13:39.736 estimates that nearly 150,000 people

NOTE Confidence: 0.916878641428571

00:13:39.736 --> 00:13:42.417 in the US will be diagnosed with

NOTE Confidence: 0.916878641428571

00:13:42.417 --> 00:13:44.390 colorectal cancer this year alone.

NOTE Confidence: 0.916878641428571

00:13:44.390 --> 00:13:46.460 When detected, early colorectal cancer

NOTE Confidence: 0.916878641428571

00:13:46.460 --> 00:13:49.090 is easily treated and highly curable,

NOTE Confidence: 0.916878641428571

00:13:49.090 --> 00:13:51.202 and men and women over the age of

NOTE Confidence: 0.916878641428571

00:13:51.202 --> 00:13:53.015 45 should have regular colonoscopies

NOTE Confidence: 0.916878641428571

00:13:53.015 --> 00:13:55.050 to screen for the disease.

NOTE Confidence: 0.916878641428571

00:13:55.050 --> 00:13:56.498 Patients with colorectal cancer

NOTE Confidence: 0.916878641428571

00:13:56.498 --> 00:13:58.670 have more hope than ever before,

NOTE Confidence: 0.916878641428571

00:13:58.670 --> 00:14:01.490 thanks to increased access to advanced

NOTE Confidence: 0.916878641428571

00:14:01.490 --> 00:14:03.370 therapies and specialized care.

NOTE Confidence: 0.916878641428571

00:14:03.370 --> 00:14:05.350 Clinical trials are currently underway.

NOTE Confidence: 0.916878641428571

00:14:05.350 --> 00:14:06.808 Federally designated comprehensive

NOTE Confidence: 0.916878641428571

00:14:06.808 --> 00:14:09.724 cancer centers such as Yale Cancer

NOTE Confidence: 0.916878641428571

00:14:09.724 --> 00:14:11.889 Center and at Smilow Cancer

NOTE Confidence: 0.916878641428571

00:14:11.889 --> 00:14:13.904 Hospital to test innovative new

NOTE Confidence: 0.916878641428571

00:14:13.904 --> 00:14:15.779 treatments for colorectal cancer.

NOTE Confidence: 0.916878641428571

00:14:15.780 --> 00:14:18.090 Tumor gene analysis has helped

NOTE Confidence: 0.916878641428571

00:14:18.090 --> 00:14:19.938 improve management of colorectal

NOTE Confidence: 0.916878641428571

00:14:19.938 --> 00:14:22.260 cancer by identifying the patients

NOTE Confidence: 0.916878641428571

00:14:22.260 --> 00:14:24.500 most likely to benefit from

NOTE Confidence: 0.916878641428571

00:14:24.500 --> 00:14:26.739 chemotherapy and newer targeted agents,

NOTE Confidence: 0.916878641428571

00:14:26.740 --> 00:14:29.620 resulting in more patient specific treatment.

NOTE Confidence: 0.916878641428571

00:14:29.620 --> 00:14:32.580 More information is available at

NOTE Confidence: 0.916878641428571

00:14:32.580 --> 00:14:33.861 yalecancercenter.org. You're listening

NOTE Confidence: 0.916878641428571

00:14:33.861 --> 00:14:35.569 to Connecticut Public Radio.

NOTE Confidence: 0.838158323333333

00:14:36.260 --> 00:14:38.468 Welcome back to Yale Cancer Answers.

NOTE Confidence: 0.838158323333333

00:14:38.470 --> 00:14:41.182 This is Doctor Anees Chagpar and I'm joined

NOTE Confidence: 0.838158323333333

00:14:41.182 --> 00:14:43.589 tonight by my guest doctor Brinda Emu.

NOTE Confidence: 0.838158323333333

00:14:43.590 --> 00:14:45.546 We're learning about the care of

NOTE Confidence: 0.838158323333333

00:14:45.546 --> 00:14:47.599 patients with HIV and cancer and

NOTE Confidence: 0.838158323333333

00:14:47.599 --> 00:14:49.527 right before the break, Brinda,

NOTE Confidence: 0.838158323333333

00:14:49.527 --> 00:14:53.426 you had mentioned that patients with HIV,

NOTE Confidence: 0.838158323333333

00:14:53.430 --> 00:14:55.690 you know, really weren't enrolled

NOTE Confidence: 0.838158323333333

00:14:55.690 --> 00:14:57.950 in the early clinical trials.

NOTE Confidence: 0.838158323333333

00:14:57.950 --> 00:14:59.402 Looking at immunotherapy.

NOTE Confidence: 0.838158323333333

00:14:59.402 --> 00:15:02.450 And yet, you know that intersection

NOTE Confidence: 0.838158323333333

00:15:02.450 --> 00:15:04.530 between HIV and immunotherapy

NOTE Confidence: 0.838158323333333

00:15:04.530 --> 00:15:07.308 in the treatment of cancer.

NOTE Confidence: 0.838158323333333

00:15:07.310 --> 00:15:12.357 Is so important and and and so

NOTE Confidence: 0.838158323333333

00:15:12.360 --> 00:15:14.575 something that we really don't

NOTE Confidence: 0.838158323333333

00:15:14.575 --> 00:15:16.790 understand and you had mentioned

NOTE Confidence: 0.838158323333333

00:15:16.864 --> 00:15:19.321 that one of the reasons why patients

NOTE Confidence: 0.838158323333333

00:15:19.321 --> 00:15:21.839 with HIV were not included in

NOTE Confidence: 0.838158323333333

00:15:21.839 --> 00:15:23.687 those initial clinical trials.

NOTE Confidence: 0.838158323333333

00:15:23.690 --> 00:15:27.254 Was for fear of toxicity now that

NOTE Confidence: 0.838158323333333

00:15:27.254 --> 00:15:29.546 patients with HIV are starting to

NOTE Confidence: 0.838158323333333

00:15:29.546 --> 00:15:31.729 be enrolled in clinical trials.

NOTE Confidence: 0.838158323333333

00:15:31.730 --> 00:15:34.090 Looking at immunotherapy for cancer.

NOTE Confidence: 0.838158323333333

00:15:34.090 --> 00:15:36.666 Can you talk a little bit about

NOTE Confidence: 0.838158323333333

00:15:36.666 --> 00:15:38.868 whether they do experience more

NOTE Confidence: 0.838158323333333

00:15:38.868 --> 00:15:41.393 toxicity and whether that initial

NOTE Confidence: 0.838158323333333

00:15:41.393 --> 00:15:43.480 fear was was justified?

NOTE Confidence: 0.862183032

00:15:45.010 --> 00:15:51.130 So so I I I feel like the initial fear

NOTE Confidence: 0.862183032

00:15:51.130 --> 00:15:54.586 you know came out of the the biology

NOTE Confidence: 0.862183032

00:15:54.586 --> 00:15:58.514 that the PD one pathway that we had

NOTE Confidence: 0.862183032

00:15:58.514 --> 00:16:00.762 mentioned is so critical at the level

NOTE Confidence: 0.862183032

00:16:00.762 --> 00:16:03.528 of the tumor for the general population.

NOTE Confidence: 0.862183032

00:16:03.530 --> 00:16:06.754 But in the setting of a global viral

NOTE Confidence: 0.862183032

00:16:06.754 --> 00:16:08.767 infection that pathways upregulated

NOTE Confidence: 0.862183032

00:16:08.767 --> 00:16:11.587 on cells throughout the body.

NOTE Confidence: 0.862183032

00:16:11.590 --> 00:16:14.278 So so I think the concern was.

NOTE Confidence: 0.862183032

00:16:14.280 --> 00:16:17.791 When you sort of unleash those cells that

NOTE Confidence: 0.862183032

00:16:17.791 --> 00:16:20.446 patients with chronic viral infections

NOTE Confidence: 0.862183032

00:16:20.446 --> 00:16:24.049 like HIV and hepatitis C might have

NOTE Confidence: 0.862183032

00:16:24.049 --> 00:16:26.379 worse immune related side effects

NOTE Confidence: 0.862183032

00:16:26.379 --> 00:16:29.250 compared to the general population.

NOTE Confidence: 0.862183032

00:16:29.250 --> 00:16:32.376 Now that we have more experience

NOTE Confidence: 0.862183032

00:16:32.376 --> 00:16:34.460 with using these medications,

NOTE Confidence: 0.862183032

00:16:34.460 --> 00:16:37.676 we know that that is not the case.

NOTE Confidence: 0.862183032

00:16:37.680 --> 00:16:41.046 We there's been two clinical trials

NOTE Confidence: 0.862183032

00:16:41.046 --> 00:16:43.290 specifically focused on patients

NOTE Confidence: 0.862183032

00:16:43.374 --> 00:16:46.179 with HIV in advanced malignancies.

NOTE Confidence: 0.862183032

00:16:46.180 --> 00:16:47.944 That have studied immune

NOTE Confidence: 0.862183032

00:16:47.944 --> 00:16:48.826 checkpoint inhibitors,

NOTE Confidence: 0.862183032

00:16:48.830 --> 00:16:51.205 and though they were not

NOTE Confidence: 0.862183032

00:16:51.205 --> 00:16:53.105 powered to test efficacy,

NOTE Confidence: 0.862183032

00:16:53.110 --> 00:16:55.564 they were able to report that

NOTE Confidence: 0.862183032

00:16:55.564 --> 00:16:58.630 there does not appear to be any

NOTE Confidence: 0.862183032

00:16:58.630 --> 00:17:00.596 increased toxicity from immune

NOTE Confidence: 0.862183032

00:17:00.596 --> 00:17:02.728 checkpoint inhibitors in patients

NOTE Confidence: 0.862183032

00:17:02.730 --> 00:17:05.298 with HIV compared to those without,

NOTE Confidence: 0.862183032

00:17:05.300 --> 00:17:07.208 so that is very reassuring and

NOTE Confidence: 0.862183032

00:17:07.208 --> 00:17:09.890 allows us to move forward both with

NOTE Confidence: 0.862183032

00:17:09.890 --> 00:17:12.115 treatment but also importantly and

NOTE Confidence: 0.862183032

00:17:12.115 --> 00:17:14.333 hopefully more studies to really

NOTE Confidence: 0.862183032

00:17:14.333 --> 00:17:16.853 understand the efficacy of these drugs.

NOTE Confidence: 0.862183032

00:17:16.860 --> 00:17:18.006 In our patients,

NOTE Confidence: 0.862183032

00:17:18.006 --> 00:17:18.388 for

NOTE Confidence: 0.912958446666667

00:17:18.400 --> 00:17:21.292 patients who have HIV who may

NOTE Confidence: 0.912958446666667

00:17:21.292 --> 00:17:24.479 get very much to your point,

NOTE Confidence: 0.912958446666667

00:17:24.480 --> 00:17:27.980 immune related toxicity to immunotherapy.

NOTE Confidence: 0.912958446666667

00:17:27.980 --> 00:17:29.710 Are there special considerations that

NOTE Confidence: 0.912958446666667

00:17:29.710 --> 00:17:32.922 need to be taken in terms of how you

NOTE Confidence: 0.912958446666667

00:17:32.922 --> 00:17:35.040 manipulate the therapy in these patients?

NOTE Confidence: 0.912958446666667

00:17:35.040 --> 00:17:36.668 Because, as you say,

NOTE Confidence: 0.912958446666667

00:17:36.668 --> 00:17:39.560 that pathways so critical to every cell,

NOTE Confidence: 0.912958446666667

00:17:39.560 --> 00:17:42.332 so you know 11 might think that it it's

NOTE Confidence: 0.912958446666667

00:17:42.332 --> 00:17:45.417 a little bit difficult to kind of say.

NOTE Confidence: 0.912958446666667

00:17:45.420 --> 00:17:46.860 OK, well, we'll we'll just.

NOTE Confidence: 0.912958446666667

00:17:46.860 --> 00:17:47.922 Stop the immunotherapy.

NOTE Confidence: 0.912958446666667

00:17:47.922 --> 00:17:50.780 Or we'll we'll kind of reduce the dose.

NOTE Confidence: 0.912958446666667

00:17:50.780 --> 00:17:52.920 Are there other other considerations

NOTE Confidence: 0.912958446666667

00:17:52.920 --> 00:17:55.514 in that population when treating them

NOTE Confidence: 0.912958446666667

00:17:55.514 --> 00:17:57.464 with immunotherapy that patients and

NOTE Confidence: 0.912958446666667

00:17:57.464 --> 00:17:59.839 their doctors need to be aware of?

NOTE Confidence: 0.912958446666667

00:17:59.840 --> 00:18:00.380 The most

NOTE Confidence: 0.764659774166667

00:18:00.390 --> 00:18:01.966 important thing, I think,

NOTE Confidence: 0.764659774166667

00:18:01.966 --> 00:18:05.679 is that there are HIV be well controlled.

NOTE Confidence: 0.764659774166667

00:18:05.680 --> 00:18:11.028 I think that the pathway the the

NOTE Confidence: 0.764659774166667

00:18:11.028 --> 00:18:14.285 immune checkpoint pathways are really

NOTE Confidence: 0.764659774166667

00:18:14.285 --> 00:18:17.160 sort of very highly upregulated.

NOTE Confidence: 0.764659774166667

00:18:17.160 --> 00:18:19.869 In the setting of ongoing viral replication,

NOTE Confidence: 0.764659774166667

00:18:19.870 --> 00:18:23.046 so I think that it would be very

NOTE Confidence: 0.764659774166667

00:18:23.046 --> 00:18:26.043 important for every patient with with

NOTE Confidence: 0.764659774166667

00:18:26.043 --> 00:18:29.205 HIV to be on effective antiretroviral

NOTE Confidence: 0.764659774166667

00:18:29.210 --> 00:18:33.004 therapy at the time of of receiving

NOTE Confidence: 0.764659774166667

00:18:33.004 --> 00:18:35.410 immune checkpoint inhibitor therapy.

NOTE Confidence: 0.764659774166667

00:18:35.410 --> 00:18:38.438 But as I mentioned before and and I think

NOTE Confidence: 0.764659774166667

00:18:38.438 --> 00:18:41.210 this is important for patients and providers,

NOTE Confidence: 0.764659774166667

00:18:41.210 --> 00:18:44.186 and all of the retrospective studies and the

NOTE Confidence: 0.764659774166667

00:18:44.186 --> 00:18:46.670 clinical trials that have looked at safety.

NOTE Confidence: 0.764659774166667

00:18:46.670 --> 00:18:48.630 That initial fear that patients

NOTE Confidence: 0.764659774166667

00:18:48.630 --> 00:18:51.836 with HIV were going to have worse

NOTE Confidence: 0.764659774166667

00:18:51.836 --> 00:18:53.488 immunologic outcomes, in fact,

NOTE Confidence: 0.764659774166667

00:18:53.488 --> 00:18:56.070 is is it does not appear to be the case.

NOTE Confidence: 0.764659774166667

00:18:56.070 --> 00:18:58.437 So I think that is that is very reassuring.

NOTE Confidence: 0.764659774166667

00:18:58.440 --> 00:19:00.946 Every study that has looked looked at

NOTE Confidence: 0.764659774166667

00:19:00.946 --> 00:19:04.809 that has has shown that those classic.

NOTE Confidence: 0.764659774166667

00:19:04.809 --> 00:19:06.605 Immune related adverse events

NOTE Confidence: 0.764659774166667

00:19:06.605 --> 00:19:08.850 are not increased in incidence.

NOTE Confidence: 0.830013551875

00:19:09.380 --> 00:19:12.053 Yeah, but to your point in terms of making

NOTE Confidence: 0.830013551875

00:19:12.053 --> 00:19:14.496 sure that your HIV is well controlled,

NOTE Confidence: 0.830013551875

00:19:14.500 --> 00:19:16.915 one would think you know we talk

NOTE Confidence: 0.830013551875

00:19:16.915 --> 00:19:20.019 on this show a lot about this

NOTE Confidence: 0.830013551875

00:19:20.019 --> 00:19:21.513 multidisciplinary cancer management

NOTE Confidence: 0.830013551875

00:19:21.513 --> 00:19:24.512 and you know many medical oncologists

NOTE Confidence: 0.830013551875

00:19:24.512 --> 00:19:27.837 may not be as comfortable in managing

NOTE Confidence: 0.830013551875

00:19:27.840 --> 00:19:32.551 HIV because they are so focused on

NOTE Confidence: 0.830013551875

00:19:32.551 --> 00:19:35.652 managing cancer in in patients who.

NOTE Confidence: 0.830013551875

00:19:35.652 --> 00:19:38.612 Have HIV, can you talk a little bit

NOTE Confidence: 0.830013551875

00:19:38.612 --> 00:19:41.339 about how critical it is to make sure

NOTE Confidence: 0.830013551875

00:19:41.339 --> 00:19:44.325 that your your HIV doctor is part of

NOTE Confidence: 0.830013551875

00:19:44.325 --> 00:19:46.360 that multidisciplinary team and the

NOTE Confidence: 0.830013551875

00:19:46.435 --> 00:19:48.720 crosstalk that that individual would

NOTE Confidence: 0.830013551875

00:19:48.720 --> 00:19:51.916 have with oncology in terms of the

NOTE Confidence: 0.830013551875

00:19:51.916 --> 00:19:54.006 management of the overall patient?

NOTE Confidence: 0.862403882666667

00:19:55.140 --> 00:19:59.240 Yeah, and so I think this is is so so

NOTE Confidence: 0.862403882666667

00:19:59.356 --> 00:20:03.647 important and I think that you know medical

NOTE Confidence: 0.862403882666667

00:20:03.647 --> 00:20:07.513 care and subspecialty care is is that it's

NOTE Confidence: 0.862403882666667

00:20:07.513 --> 00:20:10.483 it's very specialized and our patients

NOTE Confidence: 0.862403882666667

00:20:10.483 --> 00:20:13.880 with HIV have unique comorbidities.

NOTE Confidence: 0.862403882666667

00:20:13.880 --> 00:20:16.200 They have, you know,

NOTE Confidence: 0.862403882666667

00:20:16.200 --> 00:20:18.520 generally multiple medications that

NOTE Confidence: 0.862403882666667

00:20:18.520 --> 00:20:21.360 have drug drug interactions.

NOTE Confidence: 0.862403882666667

00:20:21.360 --> 00:20:23.142 And as we've been talking about

NOTE Confidence: 0.862403882666667

00:20:23.142 --> 00:20:25.140 quite a bit have very unique.

NOTE Confidence: 0.862403882666667

00:20:25.140 --> 00:20:28.050 Considerations for their immunologic health,

NOTE Confidence: 0.862403882666667

00:20:28.050 --> 00:20:31.416 so I think the key here is that the

NOTE Confidence: 0.862403882666667

00:20:31.416 --> 00:20:34.324 oncology treatment team and the

NOTE Confidence: 0.862403882666667

00:20:34.324 --> 00:20:36.772 infectious disease provider really

NOTE Confidence: 0.862403882666667

00:20:36.772 --> 00:20:39.883 be coordinated and have an integrated

NOTE Confidence: 0.862403882666667

00:20:39.883 --> 00:20:43.230 approach for the care of these patients.

NOTE Confidence: 0.825574305

00:20:44.030 --> 00:20:47.114 And certainly you know having HIV

NOTE Confidence: 0.825574305

00:20:47.114 --> 00:20:50.905 adds a whole other level of complexity

NOTE Confidence: 0.825574305

00:20:50.905 --> 00:20:53.382 to quote routine cancer management.

NOTE Confidence: 0.825574305

00:20:53.382 --> 00:20:56.280 You know one of the things.

NOTE Confidence: 0.825574305

00:20:56.280 --> 00:20:59.560 When you think about patients who are on.

NOTE Confidence: 0.825574305

00:20:59.560 --> 00:21:02.680 Antiretroviral therapy and you know,

NOTE Confidence: 0.825574305

00:21:02.680 --> 00:21:05.420 already we're we're controlling

NOTE Confidence: 0.825574305

00:21:05.420 --> 00:21:07.475 their immune system.

NOTE Confidence: 0.825574305

00:21:07.480 --> 00:21:11.968 Regardless, is is the issue

NOTE Confidence: 0.825574305

00:21:11.968 --> 00:21:14.853 between how patients with HIV,

NOTE Confidence: 0.825574305

00:21:14.860 --> 00:21:17.525 whether or not they are

NOTE Confidence: 0.825574305

00:21:17.525 --> 00:21:19.657 on immunotherapy or not?

NOTE Confidence: 0.825574305

00:21:19.660 --> 00:21:22.600 How they do in terms of their

NOTE Confidence: 0.825574305

00:21:22.600 --> 00:21:24.567 cancer management and prognosis

NOTE Confidence: 0.825574305

00:21:24.567 --> 00:21:27.657 relative to the general population,

NOTE Confidence: 0.825574305

00:21:27.660 --> 00:21:29.630 because in the general population.

NOTE Confidence: 0.825574305

00:21:29.630 --> 00:21:32.402 There may be less concern about how

NOTE Confidence: 0.825574305

00:21:32.402 --> 00:21:35.376 your immune system is going to react to

NOTE Confidence: 0.825574305

00:21:35.376 --> 00:21:38.547 not only the cancer but to therapies,

NOTE Confidence: 0.825574305

00:21:38.550 --> 00:21:39.835 whereas in HIV patients that

NOTE Confidence: 0.825574305

00:21:39.835 --> 00:21:41.710 may be a little bit different.

NOTE Confidence: 0.825574305

00:21:41.710 --> 00:21:43.495 Can you talk about prognosis

NOTE Confidence: 0.825574305

00:21:43.495 --> 00:21:44.566 in these individuals?

NOTE Confidence: 0.889267535833334

00:21:45.780 --> 00:21:48.750 Sure, so so unfortunately this is

NOTE Confidence: 0.889267535833334

00:21:48.750 --> 00:21:52.556 an area where we do see disparities

NOTE Confidence: 0.889267535833334

00:21:52.556 --> 00:21:55.426 in outcome among patients that

NOTE Confidence: 0.889267535833334

00:21:55.426 --> 00:21:58.957 have HIV and a cancer diagnosis,

NOTE Confidence: 0.889267535833334

00:21:58.960 --> 00:22:02.542 and this appears to hold true

NOTE Confidence: 0.889267535833334

00:22:02.542 --> 00:22:05.700 for many different cancer types.

NOTE Confidence: 0.889267535833334

00:22:05.700 --> 00:22:06.864 Whether or not they're

NOTE Confidence: 0.889267535833334

00:22:06.864 --> 00:22:08.319 increased in incidence or not.

NOTE Confidence: 0.889267535833334

00:22:08.320 --> 00:22:11.015 So I stated before that you know,

NOTE Confidence: 0.889267535833334

00:22:11.020 --> 00:22:13.316 most colon cancers and most breast cancers

NOTE Confidence: 0.889267535833334

00:22:13.316 --> 00:22:15.289 are not increased in incidence and.

NOTE Confidence: 0.889267535833334

00:22:15.290 --> 00:22:17.122 Patients with HIV compared

NOTE Confidence: 0.889267535833334

00:22:17.122 --> 00:22:18.954 to the general population,

NOTE Confidence: 0.889267535833334

00:22:18.960 --> 00:22:20.454 however, the prognosis,

NOTE Confidence: 0.889267535833334

00:22:20.454 --> 00:22:24.513 even with with those you know with those

NOTE Confidence: 0.889267535833334

00:22:24.513 --> 00:22:27.880 cancers are worse in patients with HIV

NOTE Confidence: 0.889267535833334

00:22:27.880 --> 00:22:30.910 compared to the general population.

NOTE Confidence: 0.889267535833334

00:22:30.910 --> 00:22:32.359 And there's a.

NOTE Confidence: 0.889267535833334

00:22:32.359 --> 00:22:35.257 You know this is there's probably.

NOTE Confidence: 0.889267535833334

00:22:35.260 --> 00:22:36.838 There's probably reflects

NOTE Confidence: 0.889267535833334

00:22:36.838 --> 00:22:38.416 many different factors.

NOTE Confidence: 0.889267535833334

00:22:38.420 --> 00:22:41.672 Certainly there's a concern that patients

NOTE Confidence: 0.889267535833334

00:22:41.672 --> 00:22:44.665 may have inadequate screening and may

NOTE Confidence: 0.889267535833334

00:22:44.665 --> 00:22:47.276 be present at a more advanced stage,

NOTE Confidence: 0.889267535833334

00:22:47.280 --> 00:22:49.488 and that may partly be responsible

NOTE Confidence: 0.889267535833334

00:22:49.488 --> 00:22:50.960 for these poor outcomes.

NOTE Confidence: 0.889267535833334

00:22:50.960 --> 00:22:51.402 However,

NOTE Confidence: 0.889267535833334

00:22:51.402 --> 00:22:53.612 large studies that have controlled

NOTE Confidence: 0.889267535833334

00:22:53.612 --> 00:22:56.264 for stage as well as insurance

NOTE Confidence: 0.889267535833334

00:22:56.264 --> 00:22:58.694 status and access to care have

NOTE Confidence: 0.889267535833334

00:22:58.694 --> 00:23:00.564 similar have reported similarly

NOTE Confidence: 0.889267535833334

00:23:00.564 --> 00:23:03.498 poor outcomes in patients with HIV.

NOTE Confidence: 0.889267535833334

00:23:03.500 --> 00:23:05.894 Compared to those without and that

NOTE Confidence: 0.889267535833334

00:23:05.894 --> 00:23:08.287 really sort of emphasizes that there

NOTE Confidence: 0.889267535833334

00:23:08.287 --> 00:23:10.477 are unique features of the infection

NOTE Confidence: 0.889267535833334

00:23:10.477 --> 00:23:13.009 that we need to better understand,

NOTE Confidence: 0.889267535833334

00:23:13.010 --> 00:23:15.590 and this includes studying cancer,

NOTE Confidence: 0.889267535833334

00:23:15.590 --> 00:23:16.850 biology, and particularly,

NOTE Confidence: 0.889267535833334

00:23:16.850 --> 00:23:18.110 as you say,

NOTE Confidence: 0.889267535833334

00:23:18.110 --> 00:23:20.855 immune related effects of treatments

NOTE Confidence: 0.889267535833334

00:23:20.855 --> 00:23:24.369 of the treatment on patients with HIV

NOTE Confidence: 0.889267535833334

00:23:24.370 --> 00:23:26.890 as well as ensuring that patients get

NOTE Confidence: 0.889267535833334

00:23:26.890 --> 00:23:29.310 screened and and really importantly,

NOTE Confidence: 0.889267535833334

00:23:29.310 --> 00:23:32.575 that they receive appropriate cancer

NOTE Confidence: 0.889267535833334

00:23:32.575 --> 00:23:35.187 treatment and follow-up surveillance.

NOTE Confidence: 0.889267535833334

00:23:35.190 --> 00:23:38.424 And up until the last couple years

NOTE Confidence: 0.889267535833334

00:23:38.424 --> 00:23:41.736 there have not been specific guidance

NOTE Confidence: 0.889267535833334

00:23:41.736 --> 00:23:44.776 or guidelines for patients with

NOTE Confidence: 0.889267535833334

00:23:44.776 --> 00:23:47.061 HIV receiving cancer treatment,

NOTE Confidence: 0.889267535833334

00:23:47.061 --> 00:23:49.289 and that has changed.

NOTE Confidence: 0.889267535833334

00:23:49.290 --> 00:23:52.888 There are now NCCN guidelines that are

NOTE Confidence: 0.889267535833334

00:23:52.888 --> 00:23:55.189 specifically address patients with HIV,

NOTE Confidence: 0.889267535833334

00:23:55.190 --> 00:23:58.144 so I hope that some of these

NOTE Confidence: 0.889267535833334

00:23:58.144 --> 00:24:00.404 disparities can be will be

NOTE Confidence: 0.889267535833334

00:24:00.404 --> 00:24:03.098 improved as we get more attention

NOTE Confidence: 0.889267535833334

00:24:03.098 --> 00:24:05.889 and more research focused on.

NOTE Confidence: 0.889267535833334

00:24:05.890 --> 00:24:06.778 On our patients.

NOTE Confidence: 0.852727620833333

00:24:07.450 --> 00:24:09.322 Yeah, and one of the one

NOTE Confidence: 0.852727620833333

00:24:09.322 --> 00:24:11.230 of the questions I have is,

NOTE Confidence: 0.852727620833333

00:24:11.230 --> 00:24:13.102 you know you had mentioned earlier

NOTE Confidence: 0.852727620833333

00:24:13.102 --> 00:24:15.115 that it's so important that patients

NOTE Confidence: 0.852727620833333

00:24:15.115 --> 00:24:17.245 with HIV who are undergoing cancer

NOTE Confidence: 0.852727620833333

00:24:17.245 --> 00:24:18.948 treatment should really make sure

NOTE Confidence: 0.852727620833333

00:24:18.948 --> 00:24:20.808 that their HIV is well controlled.

NOTE Confidence: 0.852727620833333

00:24:20.810 --> 00:24:24.570 Has anybody looked at the control of HIV?

NOTE Confidence: 0.852727620833333

00:24:24.570 --> 00:24:25.908 So for example,

NOTE Confidence: 0.852727620833333

00:24:25.908 --> 00:24:28.584 looking at CD4 accounts and seeing

NOTE Confidence: 0.852727620833333

00:24:28.584 --> 00:24:31.373 whether that makes a difference both in

NOTE Confidence: 0.852727620833333

00:24:31.373 --> 00:24:34.467 terms of the risk of developing a cancer

NOTE Confidence: 0.852727620833333

00:24:34.467 --> 00:24:37.158 as well as prognosis of of cancers,

NOTE Confidence: 0.852727620833333

00:24:37.158 --> 00:24:39.726 whether they're. HIV related or not?

NOTE Confidence: 0.852727620833333

00:24:39.730 --> 00:24:40.280 Yeah,

NOTE Confidence: 0.825177381904762

00:24:40.290 --> 00:24:43.786 so so yes. And so people have looked

NOTE Confidence: 0.825177381904762

00:24:43.786 --> 00:24:47.378 at biomarkers of of cancer incidents in

NOTE Confidence: 0.825177381904762

00:24:47.378 --> 00:24:50.790 patients on and off antiretroviral therapy,

NOTE Confidence: 0.825177381904762

00:24:50.790 --> 00:24:53.814 so I'll step back and say for sure.

NOTE Confidence: 0.825177381904762

00:24:53.820 --> 00:24:57.546 You know, being controlled and having

NOTE Confidence: 0.825177381904762

00:24:57.546 --> 00:25:00.706 HIV control on antiretroviral treatment

NOTE Confidence: 0.825177381904762

00:25:00.706 --> 00:25:03.410 significantly decreases overall cancer

NOTE Confidence: 0.825177381904762

00:25:03.410 --> 00:25:08.288 incidence and so that that's the first thing.

NOTE Confidence: 0.825177381904762

00:25:08.290 --> 00:25:10.490 But even with control.

NOTE Confidence: 0.825177381904762

00:25:10.490 --> 00:25:12.140 Of HIV infection,

NOTE Confidence: 0.825177381904762

00:25:12.140 --> 00:25:15.656 there do appear to be some.

NOTE Confidence: 0.825177381904762

00:25:15.660 --> 00:25:18.090 Immunologic factors that that are

NOTE Confidence: 0.825177381904762

00:25:18.090 --> 00:25:20.520 associated with increased cancer incidence,

NOTE Confidence: 0.825177381904762

00:25:20.520 --> 00:25:21.308 and interestingly,

NOTE Confidence: 0.825177381904762

00:25:21.308 --> 00:25:24.460 it's not the CD 4 count itself that

NOTE Confidence: 0.825177381904762

00:25:24.535 --> 00:25:27.015 that increases your incidence of

NOTE Confidence: 0.825177381904762

00:25:27.015 --> 00:25:29.495 malignancy among patients with HIV,

NOTE Confidence: 0.825177381904762

00:25:29.500 --> 00:25:34.140 but the ratio of CD4 cells to CD 8 cells.

NOTE Confidence: 0.825177381904762

00:25:34.140 --> 00:25:37.479 So there does seem to be immunologic

NOTE Confidence: 0.825177381904762

00:25:37.479 --> 00:25:40.712 factors that predispose to risk in terms

NOTE Confidence: 0.825177381904762

00:25:40.712 --> 00:25:43.286 of are there immunologic factors that

NOTE Confidence: 0.825177381904762

00:25:43.375 --> 00:25:46.320 predispose or conserve as biomarkers.

NOTE Confidence: 0.825177381904762

00:25:46.320 --> 00:25:48.456 The prognosis this is an active

NOTE Confidence: 0.825177381904762

00:25:48.456 --> 00:25:49.524 area of study.

NOTE Confidence: 0.825177381904762

00:25:49.530 --> 00:25:51.960 This is something that that we're

NOTE Confidence: 0.825177381904762

00:25:51.960 --> 00:25:54.887 actually looking at in my lab and others

NOTE Confidence: 0.825177381904762

00:25:54.890 --> 00:25:57.866 other labs as well to see whether there

NOTE Confidence: 0.825177381904762

00:25:57.866 --> 00:26:00.618 are differences that can be identified

NOTE Confidence: 0.825177381904762

00:26:00.618 --> 00:26:02.550 within the tumor microenvironment.

NOTE Confidence: 0.825177381904762

00:26:02.550 --> 00:26:07.294 That may portend a better or worse prognosis

NOTE Confidence: 0.825177381904762

00:26:07.294 --> 00:26:10.368 with immunotherapy or or chemotherapy,

NOTE Confidence: 0.825177381904762

00:26:10.370 --> 00:26:12.134 because I think we haven't really

NOTE Confidence: 0.825177381904762

00:26:12.134 --> 00:26:13.740 studied that in depth before.

NOTE Confidence: 0.825177381904762

00:26:13.740 --> 00:26:15.490 We don't know the answer to that,

NOTE Confidence: 0.825177381904762

00:26:15.490 --> 00:26:17.518 but as we've been alluding to.

NOTE Confidence: 0.825177381904762

00:26:17.520 --> 00:26:20.792 And as we have some data to suggest

NOTE Confidence: 0.825177381904762

00:26:20.792 --> 00:26:22.734 the microenvironment of the tumor

NOTE Confidence: 0.825177381904762

00:26:22.734 --> 00:26:25.184 in the setting of HIV is different,

NOTE Confidence: 0.825177381904762

00:26:25.190 --> 00:26:28.550 and what that means for prognosis is

NOTE Confidence: 0.825177381904762

00:26:28.550 --> 00:26:31.980 something that really needs a lot more study,

NOTE Confidence: 0.825177381904762

00:26:31.980 --> 00:26:33.100 and it because it's so.

NOTE Confidence: 0.825177381904762

00:26:33.100 --> 00:26:34.048 It's so important.

NOTE Confidence: 0.842791773333333

00:26:34.760 --> 00:26:37.864 So Brenda. One of the things that you

NOTE Confidence: 0.842791773333333

00:26:37.864 --> 00:26:40.658 just mentioned I just found so intriguing

NOTE Confidence: 0.842791773333333

00:26:40.660 --> 00:26:44.580 was that you found that the the phenotype

NOTE Confidence: 0.842791773333333

00:26:44.580 --> 00:26:48.368 of these CD four cells and CD 8.

NOTE Confidence: 0.842791773333333

00:26:48.368 --> 00:26:50.748 Cells these immune cells actually

NOTE Confidence: 0.842791773333333

00:26:50.748 --> 00:26:53.285 is different and can predict

NOTE Confidence: 0.842791773333333

00:26:53.285 --> 00:26:56.285 malignancy a year prior to diagnosis.

NOTE Confidence: 0.842791773333333

00:26:56.290 --> 00:26:58.390 Did I hear that right?

NOTE Confidence: 0.842791773333333

00:26:58.390 --> 00:27:00.306 So that's incredibly interesting

NOTE Confidence: 0.842791773333333

00:27:00.306 --> 00:27:03.890 my my two follow up questions to

NOTE Confidence: 0.842791773333333

00:27:03.972 --> 00:27:06.780 that are the following number one.

NOTE Confidence: 0.842791773333333

00:27:06.780 --> 00:27:09.894 Is it to any particular type

NOTE Confidence: 0.842791773333333

00:27:09.894 --> 00:27:13.037 of malignancy so that you would

NOTE Confidence: 0.842791773333333

00:27:13.037 --> 00:27:15.917 know what to expect and #2?

NOTE Confidence: 0.842791773333333

00:27:15.920 --> 00:27:18.118 What do you do with that information?

NOTE Confidence: 0.842791773333333

00:27:18.120 --> 00:27:21.004 It's kind of like you've been given

NOTE Confidence: 0.842791773333333

00:27:21.004 --> 00:27:23.677 a ticking time bomb of you will

NOTE Confidence: 0.842791773333333

00:27:23.677 --> 00:27:26.200 you will get cancer in a year.

NOTE Confidence: 0.842791773333333

00:27:26.200 --> 00:27:28.648 Has it been found that this could be

NOTE Confidence: 0.842791773333333

00:27:28.648 --> 00:27:31.397 useful in terms of increasing screening

NOTE Confidence: 0.842791773333333

00:27:31.397 --> 00:27:33.982 or perhaps even prophylactic treatments?

NOTE Confidence: 0.789418583333333

00:27:34.410 --> 00:27:37.616 Yeah, yeah, I, I think that. You know, I?

NOTE Confidence: 0.789418583333333

00:27:37.616 --> 00:27:39.265 I think it's not at a stage that

NOTE Confidence: 0.789418583333333

00:27:39.265 --> 00:27:40.789 I would say it's predictive yet,

NOTE Confidence: 0.789418583333333

00:27:40.790 --> 00:27:43.662 but the meaning that it's clearly a biomarker

NOTE Confidence: 0.789418583333333

00:27:43.662 --> 00:27:46.090 that that can be clinically useful.

NOTE Confidence: 0.789418583333333

00:27:46.090 --> 00:27:49.098 But what it suggests is that there are

NOTE Confidence: 0.789418583333333

00:27:49.098 --> 00:27:51.488 ongoing systemic changes in the immune

NOTE Confidence: 0.789418583333333

00:27:51.488 --> 00:27:53.828 response in a subset of individuals

NOTE Confidence: 0.789418583333333

00:27:53.903 --> 00:27:56.369 that may predispose them to cancers.

NOTE Confidence: 0.789418583333333

00:27:56.370 --> 00:27:57.938 And that's exactly right.

NOTE Confidence: 0.789418583333333

00:27:57.938 --> 00:28:01.661 I think the idea is that if you can

NOTE Confidence: 0.789418583333333

00:28:01.661 --> 00:28:04.247 identify patients at increased risk that

NOTE Confidence: 0.789418583333333

00:28:04.247 --> 00:28:07.578 you may alter screening early diagnosis.

NOTE Confidence: 0.789418583333333

00:28:07.580 --> 00:28:11.032 In order to get patients you know

NOTE Confidence: 0.789418583333333

00:28:11.032 --> 00:28:14.188 diagnosed at earlier stages going forward,

NOTE Confidence: 0.789418583333333

00:28:14.188 --> 00:28:17.791 this is early data and it's but it

NOTE Confidence: 0.789418583333333

00:28:17.791 --> 00:28:20.605 it is different from the general

NOTE Confidence: 0.789418583333333

00:28:20.605 --> 00:28:23.136 population that we're seeing changes

NOTE Confidence: 0.789418583333333

00:28:23.136 --> 00:28:26.512 in the peripheral blood that signify

NOTE Confidence: 0.789418583333333

00:28:26.512 --> 00:28:29.524 sort of immunologic risk potentially

NOTE Confidence: 0.789418583333333

00:28:29.524 --> 00:28:32.068 to to malignancies that could be

NOTE Confidence: 0.789418583333333

00:28:32.068 --> 00:28:33.340 used as biomarkers.

NOTE Confidence: 0.904191040625

00:28:33.980 --> 00:28:36.164 Doctor Brinda Emu is an associate

NOTE Confidence: 0.904191040625

00:28:36.164 --> 00:28:37.620 professor of internal medicine

NOTE Confidence: 0.904191040625

00:28:37.677 --> 00:28:39.435 at the Yale School of Medicine.

NOTE Confidence: 0.904191040625

00:28:39.440 --> 00:28:41.408 If you have questions,

NOTE Confidence: 0.904191040625

00:28:41.408 --> 00:28:43.349 the address is canceranswers@yale.edu

NOTE Confidence: 0.904191040625

00:28:43.349 --> 00:28:46.103 and past editions of the program

NOTE Confidence: 0.904191040625

00:28:46.103 --> 00:28:48.500 are available in audio and written

NOTE Confidence: 0.904191040625

00:28:48.500 --> 00:28:49.451 form at yalecancercenter.org.

NOTE Confidence: 0.904191040625

00:28:49.451 --> 00:28:51.939 We hope you'll join us next week to

NOTE Confidence: 0.904191040625

00:28:51.939 --> 00:28:53.836 learn more about the fight against

NOTE Confidence: 0.904191040625

00:28:53.836 --> 00:28:55.713 cancer here on Connecticut Public radio

NOTE Confidence: 0.904191040625

00:28:55.713 --> 00:28:57.459 funding for Yale Cancer Answers is

NOTE Confidence: 0.904191040625

00:28:57.459 --> 00:29:00.000 provided by Smilow Cancer Hospital.