WEBVTT

00:00:00.000 --> 00:00:02.826 Funding for Yale Cancer Answers is

NOTE Confidence: 0.791343434545454

00:00:02.826 --> 00:00:05.500 provided by Smilow Cancer Hospital.

NOTE Confidence: 0.791343434545454

00:00:05.500 --> 00:00:07.342 Welcome to Yale Cancer answers with

NOTE Confidence: 0.791343434545454

00:00:07.342 --> 00:00:09.241 your host, Doctor Anees Chagpar.

NOTE Confidence: 0.791343434545454

00:00:09.241 --> 00:00:11.376 Yale Cancer Answers features the

NOTE Confidence: 0.791343434545454

00:00:11.376 --> 00:00:13.017 latest information on cancer

NOTE Confidence: 0.791343434545454

00:00:13.017 --> 00:00:14.832 care by welcoming oncologists and

NOTE Confidence: 0.791343434545454

00:00:14.832 --> 00:00:16.889 specialists who are on the forefront

NOTE Confidence: 0.791343434545454

00:00:16.889 --> 00:00:18.695 of the battle to fight cancer.

NOTE Confidence: 0.791343434545454

00:00:18.700 --> 00:00:20.665 This week, it's a conversation

NOTE Confidence: 0.791343434545454

00:00:20.665 --> 00:00:22.237 about radiation oncology with

NOTE Confidence: 0.791343434545454

00:00:22.237 --> 00:00:23.580 Doctor Vikram Jairam.

NOTE Confidence: 0.791343434545454

00:00:23.580 --> 00:00:25.914 Dr Jairam is an assistant professor

NOTE Confidence: 0.791343434545454

00:00:25.914 --> 00:00:27.470 of clinical therapeutic radiology

NOTE Confidence: 0.791343434545454

00:00:27.530 --> 00:00:29.276 at the Yale School of Medicine,

NOTE Confidence: 0.791343434545454

00:00:29.280 --> 00:00:31.356 where Doctor Chagpar is a professor

NOTE Confidence: 0.791343434545454

00:00:31.356 --> 00:00:32.394 of surgical oncology.

NOTE Confidence: 0.862323593130435

00:00:33.680 --> 00:00:35.248 Maybe we can start it off

NOTE Confidence: 0.862323593130435

00:00:35.248 --> 00:00:37.096 by you telling us a little bit more

NOTE Confidence: 0.862323593130435

00:00:37.096 --> 00:00:38.749 about yourself and what it is you do.

NOTE Confidence: 0.814498018181818

00:00:39.180 --> 00:00:41.478 I have a somewhat generalist practice

NOTE Confidence: 0.814498018181818

00:00:41.478 --> 00:00:43.660 treating a variety of diseases,

NOTE Confidence: 0.814498018181818

00:00:43.660 --> 00:00:48.076 including genitourinary, CNS,

NOTE Confidence: 0.814498018181818

00:00:48.076 --> 00:00:49.846 gastrointestinal, skin, lymphoma,

NOTE Confidence: 0.814498018181818

00:00:49.846 --> 00:00:52.177 the occasional head and neck, and lung.

NOTE Confidence: 0.814498018181818

00:00:52.180 --> 00:00:54.772 And I do see a fair number of

NOTE Confidence: 0.814498018181818

00:00:54.772 --> 00:00:56.020 palliative patients as well.

NOTE Confidence: 0.814498018181818

NOTE Confidence: 0.814498018181818

00:00:59.542 --> 00:01:01.808 And research wise or academically,

NOTE Confidence: 0.814498018181818

00:01:01.808 --> 00:01:04.193 I do have an interest

NOTE Confidence: 0.814498018181818

00:01:04.200 --> 00:01:06.520 in exploring

NOTE Confidence: 0.814498018181818

00:01:06.520 --> 00:01:08.840 opioid use and opioid

NOTE Confidence: 0.814498018181818

00:01:08.840 --> 00:01:10.890 prescribing in cancer survivors.

NOTE Confidence: 0.878250401428571

00:01:11.630 --> 00:01:14.206 And just for our audience,

NOTE Confidence: 0.878250401428571

00:01:14.210 --> 00:01:15.605 sometimes the terminology

NOTE Confidence: 0.878250401428571

00:01:15.605 --> 00:01:17.465 gets kind of confusing.

NOTE Confidence: 0.878250401428571

00:01:17.470 --> 00:01:19.385 Is therapeutic radiology the same

NOTE Confidence: 0.878250401428571

00:01:19.385 --> 00:01:20.917 thing as radiation oncology?

NOTE Confidence: 0.889334169

00:01:21.510 --> 00:01:24.410 Yeah, you know, more or less it is the same.

NOTE Confidence: 0.889334169

00:01:24.410 --> 00:01:27.092 I'd say those terms tend

NOTE Confidence: 0.889334169

00:01:27.092 --> 00:01:30.068 to be interchangeable with some departments

NOTE Confidence: 0.889334169

00:01:30.070 --> 00:01:32.068 being called radiation oncology.

NOTE Confidence: 0.889334169

00:01:32.070 --> 00:01:34.578 And our department you know historically

NOTE Confidence: 0.889334169

00:01:34.578 --> 00:01:36.662 has been called therapeutic radiology

NOTE Confidence: 0.889334169

00:01:36.662 --> 00:01:39.112 because we do actually treat a number

NOTE Confidence: 0.889334169

00:01:39.112 --> 00:01:41.598 of benign or non cancerous conditions

NOTE Confidence: 0.889334169

00:01:41.600 --> 00:01:44.144 as well, they comprise the

NOTE Confidence: 0.889334169

00:01:44.144 --> 00:01:45.840 minority of our practice,

NOTE Confidence: 0.889334169

00:01:45.840 --> 00:01:48.388 but we do treat some non cancerous

NOTE Confidence: 0.889334169

00:01:48.388 --> 00:01:50.090 conditions with radiation.

00:01:51.616 --> 00:01:53.380 One of the questions that

NOTE Confidence: 0.837335071875

00:01:53.445 --> 00:01:55.257 I have is you mentioned that

NOTE Confidence: 0.837335071875

00:01:55.260 --> 00:01:56.335 you finished your

NOTE Confidence: 0.837335071875

00:01:56.335 --> 00:01:57.620 training a couple of years ago.

NOTE Confidence: 0.837335071875

00:01:57.620 --> 00:01:59.252 That would have been right in

NOTE Confidence: 0.837335071875

00:01:59.252 --> 00:02:00.940 the thick of the pandemic.

NOTE Confidence: 0.837335071875

00:02:00.940 --> 00:02:03.978 So what was training like during the

NOTE Confidence: 0.837335071875

00:02:03.978 --> 00:02:07.040 pandemic and did that affect the care

NOTE Confidence: 0.837335071875

00:02:07.040 --> 00:02:10.165 of patients who were coming to see

NOTE Confidence: 0.837335071875

00:02:10.165 --> 00:02:12.830 a therapeutic radiologist for care?

NOTE Confidence: 0.730298664285714

00:02:13.380 --> 00:02:15.816 Yeah, that's a great question.

NOTE Confidence: 0.730298664285714

00:02:15.820 --> 00:02:19.756 You know, the pandemic occurred actually

NOTE Confidence: 0.730298664285714

00:02:19.760 --> 00:02:22.560 during my last couple years of training

NOTE Confidence: 0.730298664285714

00:02:22.560 --> 00:02:26.554 and I'd say it

NOTE Confidence: 0.730298664285714

00:02:26.554 --> 00:02:28.920 changed things in many different ways.

NOTE Confidence: 0.730298664285714

00:02:28.920 --> 00:02:31.656 We tried to figure out ways

NOTE Confidence: 0.730298664285714

00:02:31.660 --> 00:02:33.739 that we could stagger our

NOTE Confidence: 0.730298664285714

00:02:33.739 --> 00:02:36.125 presence in the department in order to

NOTE Confidence: 0.730298664285714

00:02:36.125 --> 00:02:38.267 minimize exposure or contact.

NOTE Confidence: 0.730298664285714

00:02:38.270 --> 00:02:41.105 We would kind of limit our

NOTE Confidence: 0.730298664285714

00:02:41.105 --> 00:02:43.547 presence to mostly clinical days and on

NOTE Confidence: 0.730298664285714

00:02:43.547 --> 00:02:46.397 non clinical days we would work from home.

NOTE Confidence: 0.730298664285714

00:02:46.400 --> 00:02:50.866 So I guess from a interaction standpoint,

NOTE Confidence: 0.730298664285714

00:02:50.870 --> 00:02:52.580 the interactions with

NOTE Confidence: 0.730298664285714

00:02:52.580 --> 00:02:54.290 our colleagues and

NOTE Confidence: 0.730298664285714

00:02:54.290 --> 00:02:56.744 with other people in the department

NOTE Confidence: 0.730298664285714

00:02:56.744 --> 00:02:59.110 kind of decreased in frequency.

NOTE Confidence: 0.730298664285714

00:02:59.110 --> 00:03:01.550 From a patient care standpoint,

NOTE Confidence: 0.730298664285714

00:03:01.550 --> 00:03:04.970 we we did see a lot of

NOTE Confidence: 0.730298664285714

00:03:04.970 --> 00:03:08.130 patients whose care ended up getting

NOTE Confidence: 0.730298664285714

00:03:08.130 --> 00:03:11.189 delayed or who may have been lost to

NOTE Confidence: 0.730298664285714

00:03:11.189 --> 00:03:13.970 follow up just because of the pandemic.

NOTE Confidence: 0.730298664285714

00:03:13.970 --> 00:03:14.867 And you know,

NOTE Confidence: 0.730298664285714

00:03:14.867 --> 00:03:16.960 there were some patients who did come

NOTE Confidence: 0.730298664285714

00:03:17.018 --> 00:03:18.986 in with perhaps more advanced cancers

NOTE Confidence: 0.730298664285714

00:03:18.986 --> 00:03:21.179 than we would have normally seen.

NOTE Confidence: 0.730298664285714

00:03:21.180 --> 00:03:24.996 Maybe because they had missed screening,

00:03:25.511 --> 00:03:28.577 imaging or other things that happened.

NOTE Confidence: 0.730298664285714

00:03:28.580 --> 00:03:30.700 So I would say those are the main

NOTE Confidence: 0.730298664285714

00:03:30.700 --> 00:03:32.990 ways that we would kind of see

NOTE Confidence: 0.730298664285714

00:03:32.990 --> 00:03:34.935 differences and challenges that we had

NOTE Confidence: 0.730298664285714

00:03:34.935 --> 00:03:36.610 to get through during the pandemic.

NOTE Confidence: 0.815356578571429

00:03:37.270 --> 00:03:39.916 And did you find that

NOTE Confidence: 0.815356578571429

00:03:39.916 --> 00:03:42.457 you know in terms of the

NOTE Confidence: 0.815356578571429

00:03:42.460 --> 00:03:44.710 pandemic's impact on your practice,

NOTE Confidence: 0.815356578571429

00:03:44.710 --> 00:03:47.209 did it change kind of the way

NOTE Confidence: 0.815356578571429

00:03:47.209 --> 00:03:49.650 in which you delivered care?

NOTE Confidence: 0.815356578571429

00:03:49.650 --> 00:03:52.122 So I know for example for us

NOTE Confidence: 0.815356578571429

00:03:52.122 --> 00:03:54.868 in breast surgical oncology,

NOTE Confidence: 0.815356578571429

00:03:54.870 --> 00:03:56.620 we started to think more

NOTE Confidence: 0.815356578571429

00:03:56.620 --> 00:03:58.370 innovatively about well can we

NOTE Confidence: 0.815356578571429

00:03:58.442 --> 00:04:00.610 use neoadjuvant endocrine therapy.

00:04:02.062 --> 00:04:04.966 Can we think about ways of

NOTE Confidence: 0.815356578571429

00:04:04.970 --> 00:04:08.435 getting people through their care

NOTE Confidence: 0.815356578571429

00:04:08.440 --> 00:04:11.833 but keeping them out of the hospital as

NOTE Confidence: 0.815356578571429

00:04:11.833 --> 00:04:14.315 much as possible. With radiation oncology,

NOTE Confidence: 0.815356578571429

00:04:14.315 --> 00:04:16.240 did that play a role?

NOTE Confidence: 0.815356578571429

00:04:16.240 --> 00:04:18.262 Did you start thinking about how

NOTE Confidence: 0.815356578571429

00:04:18.262 --> 00:04:20.656 you could deliver the dose that you

NOTE Confidence: 0.815356578571429

00:04:20.656 --> 00:04:22.931 needed to deliver perhaps in a shorter

NOTE Confidence: 0.815356578571429

00:04:22.997 --> 00:04:25.221 period of time or using more of

NOTE Confidence: 0.815356578571429

00:04:25.221 --> 00:04:28.085 those resources outside of the

NOTE Confidence: 0.815356578571429

00:04:28.085 --> 00:04:30.670 main hospital where people might

NOTE Confidence: 0.815356578571429

00:04:30.760 --> 00:04:33.388 have had less exposure to COVID?

NOTE Confidence: 0.6532234646

00:04:33.880 --> 00:04:36.135 Yes. So that's a great

NOTE Confidence: 0.6532234646

00:04:36.135 --> 00:04:38.390 question and that is exactly

NOTE Confidence: 0.6532234646

00:04:38.390 --> 00:04:39.894 what happened.

NOTE Confidence: 0.6532234646

00:04:39.894 --> 00:04:42.040 As a correlate to

NOTE Confidence: 0.6532234646

00:04:42.040 --> 00:04:44.138 some of the breast experience that

NOTE Confidence: 0.6532234646

00:04:44.138 --> 00:04:46.330 you had been mentioning,

NOTE Confidence: 0.6532234646

00:04:46.330 --> 00:04:48.170 just as an example,

NOTE Confidence: 0.6532234646

00:04:48.170 --> 00:04:50.370 some of our prostate patients

NOTE Confidence: 0.6532234646

00:04:50.370 --> 00:04:52.752 might have gotten started

NOTE Confidence: 0.6532234646

00:04:52.752 --> 00:04:54.524 on hormone therapy

NOTE Confidence: 0.6532234646

00:04:54.524 --> 00:04:57.204 for a period of time and then

NOTE Confidence: 0.6532234646

00:04:57.204 --> 00:04:59.716 they would come in a little bit

NOTE Confidence: 0.6532234646

00:04:59.716 --> 00:05:02.368 later probably to start their radiation.

NOTE Confidence: 0.6532234646

00:05:02.370 --> 00:05:05.135 And then in terms of the radiation

NOTE Confidence: 0.6532234646

00:05:05.135 --> 00:05:06.558 component itself,

NOTE Confidence: 0.6532234646

00:05:06.558 --> 00:05:08.128 there were many different publications

NOTE Confidence: 0.6532234646

00:05:08.128 --> 00:05:09.880 and there was kind of a push to seek

00:05:10.873 --> 00:05:13.190 ways that we could

NOTE Confidence: 0.6532234646

00:05:13.274 --> 00:05:15.739 deliver radiation in fewer number

NOTE Confidence: 0.6532234646

00:05:15.739 --> 00:05:18.480 of fractions and perhaps

NOTE Confidence: 0.6532234646

00:05:18.480 --> 00:05:21.000 more single fraction or

NOTE Confidence: 0.6532234646

00:05:21.000 --> 00:05:23.416 minimal number of fractions for

NOTE Confidence: 0.6532234646

00:05:23.416 --> 00:05:25.811 patients who are being palliative

NOTE Confidence: 0.6532234646

00:05:25.811 --> 00:05:28.461 treated with bone metastases as an

NOTE Confidence: 0.6532234646

00:05:28.461 --> 00:05:31.850 example or ways that even in the

NOTE Confidence: 0.6532234646

00:05:31.850 --> 00:05:33.951 more definitive setting increasing

NOTE Confidence: 0.6532234646

00:05:33.951 --> 00:05:36.395 our utilization of techniques

NOTE Confidence: 0.6532234646

00:05:36.395 --> 00:05:38.839 like stereotactic body radiation

NOTE Confidence: 0.6532234646

00:05:38.839 --> 00:05:41.040 therapy or hypofractionated

NOTE Confidence: 0.6532234646

00:05:41.040 --> 00:05:42.204 radiation therapy,

NOTE Confidence: 0.6532234646

00:05:42.204 --> 00:05:45.696 which are both terms to indicate

NOTE Confidence: 0.6532234646

00:05:45.696 --> 00:05:49.704 a lower number of fractions and a

NOTE Confidence: 0.6532234646

00:05:49.704 --> 00:05:53.016 higher dose per fraction in order to

00:05:53.760 --> 00:05:55.900 effectively treat the patient

NOTE Confidence: 0.6532234646

00:05:55.900 --> 00:05:58.040 and also increase convenience

NOTE Confidence: 0.6532234646

00:05:58.040 --> 00:06:00.471 and minimize the number of trips

NOTE Confidence: 0.6532234646

00:06:00.471 --> 00:06:02.026 and hospital exposure that these

NOTE Confidence: 0.6532234646

00:06:02.026 --> 00:06:03.740 patients have to come through.

NOTE Confidence: 0.860552482666666

00:06:05.120 --> 00:06:07.672 And one of the things

NOTE Confidence: 0.860552482666666

00:06:07.672 --> 00:06:10.335 that you mentioned is that you work

NOTE Confidence: 0.860552482666666

00:06:10.335 --> 00:06:13.336 at a couple of locations that are

NOTE Confidence: 0.860552482666666

00:06:13.336 --> 00:06:15.947 not at the main campus at Yale.

NOTE Confidence: 0.860552482666666

00:06:15.947 --> 00:06:18.800 So you work more in a community kind of

NOTE Confidence: 0.860552482666666

00:06:18.875 --> 00:06:21.591 setting for our listeners who

NOTE Confidence: 0.860552482666666

00:06:21.591 --> 00:06:24.058 are listening to this, t

NOTE Confidence: 0.860552482666666

00:06:24.058 --> 00:06:27.213 when is it OK to get your

NOTE Confidence: 0.860552482666666

00:06:27.213 --> 00:06:29.213 radiation therapy closer to home

NOTE Confidence: 0.860552482666666

00:06:29.213 --> 00:06:32.704 at a location that may

NOTE Confidence: 0.860552482666666

00:06:32.704 --> 00:06:34.957 not be at a large academic center.

NOTE Confidence: 0.860552482666666

00:06:34.957 --> 00:06:37.980 In in themiddle of a city,

NOTE Confidence: 0.860552482666666

00:06:37.980 --> 00:06:40.262 but maybe on the outskirts or

NOTE Confidence: 0.860552482666666

00:06:40.262 --> 00:06:41.240 in a community.

NOTE Confidence: 0.860552482666666

00:06:41.240 --> 00:06:43.136 Is there a difference in the

NOTE Confidence: 0.860552482666666

00:06:43.136 --> 00:06:45.229 radiation that you can receive in

NOTE Confidence: 0.860552482666666

00:06:45.229 --> 00:06:46.757 the different settings?

NOTE Confidence: 0.860552482666666

00:06:46.760 --> 00:06:49.320 And are there reasons why you might

NOTE Confidence: 0.860552482666666

00:06:49.320 --> 00:06:52.163 want to be at the main center versus

NOTE Confidence: 0.860552482666666

00:06:52.163 --> 00:06:54.630 at a peripheral center or vice versa?

NOTE Confidence: 0.725791096

00:06:55.380 --> 00:06:57.200 Yeah. Also a great question.

NOTE Confidence: 0.725791096

00:06:57.200 --> 00:07:00.304 I'd say the vast majority

NOTE Confidence: 0.725791096

00:07:00.304 --> 00:07:02.738 of indications for radiation therapy,

NOTE Confidence: 0.725791096

00:07:02.740 --> 00:07:04.830 can be delivered

NOTE Confidence: 0.725791096

00:07:04.830 --> 00:07:06.920 effectively in a community setting.

NOTE Confidence: 0.725791096

00:07:06.920 --> 00:07:10.420 And one of the benefits of

NOTE Confidence: 0.725791096

00:07:10.420 --> 00:07:13.150 being part of a community practice that's

NOTE Confidence: 0.725791096

00:07:13.150 --> 00:07:16.194 also connected to the main campus is that,

NOTE Confidence: 0.725791096

00:07:16.200 --> 00:07:19.680 you know, I can determine and have a

NOTE Confidence: 0.725791096

00:07:19.680 --> 00:07:22.810 discussion with the patient as to

NOTE Confidence: 0.725791096

00:07:22.810 --> 00:07:25.490 if there are more nuanced or more complex

NOTE Confidence: 0.725791096

00:07:25.560 --> 00:07:28.060 treatments that may require treatment.

NOTE Confidence: 0.725791096

00:07:28.060 --> 00:07:29.160 In the main campus,

NOTE Confidence: 0.725791096

00:07:29.160 --> 00:07:31.519 I can have that discussion with the patient.

NOTE Confidence: 0.725791096

00:07:31.520 --> 00:07:35.055 But for the vast majority of indications,

NOTE Confidence: 0.725791096

00:07:35.060 --> 00:07:37.699 patients can have care easily NOTE Confidence: 0.725791096

00:07:37.699 --> 00:07:39.789 and effectively in the community.

NOTE Confidence: 0.725791096

00:07:39.790 --> 00:07:42.400 And that's something that is truly

NOTE Confidence: 0.725791096

00:07:42.400 --> 00:07:45.673 a joy to see because

NOTE Confidence: 0.725791096

00:07:45.673 --> 00:07:48.739 for the vast majority of people,

NOTE Confidence: 0.725791096

00:07:48.740 --> 00:07:52.420 radiation ends up being weeks

NOTE Confidence: 0.725791096

00:07:52.420 --> 00:07:55.412 of their lives and the

NOTE Confidence: 0.725791096

00:07:55.412 --> 00:07:57.220 convenience and

NOTE Confidence: 0.725791096

00:07:57.220 --> 00:07:58.748 even finances

NOTE Confidence: 0.725791096

00:07:58.748 --> 00:08:01.491 of having to come down to New

NOTE Confidence: 0.725791096

00:08:01.491 --> 00:08:03.336 Haven or the main campus,

NOTE Confidence: 0.725791096

00:08:03.340 --> 00:08:06.112 it can be sometimes difficult

NOTE Confidence: 0.725791096

00:08:06.112 --> 00:08:07.960 or challenging for patients.

NOTE Confidence: 0.725791096

00:08:07.960 --> 00:08:11.383 So I'd say the vast majority of

NOTE Confidence: 0.725791096

00:08:11.383 --> 00:08:14.553 indications we can treat in the Community.

NOTE Confidence: 0.725791096

00:08:14.553 --> 00:08:16.779 There may be certain more nuanced

NOTE Confidence: 0.725791096

00:08:16.779 --> 00:08:18.794 or complex indications that we

NOTE Confidence: 0.725791096

00:08:18.794 --> 00:08:21.146 can treat in the main campus,

NOTE Confidence: 0.725791096

00:08:21.150 --> 00:08:24.054 but we have an active open line with

NOTE Confidence: 0.725791096

00:08:24.054 --> 00:08:26.493 the main campus, which is phenomenal.

NOTE Confidence: 0.725791096

00:08:26.493 --> 00:08:28.950 And so I can always get patients

NOTE Confidence: 0.725791096

00:08:29.020 --> 00:08:30.280 in there if needed.

NOTE Confidence: 0.936149715

00:08:31.430 --> 00:08:33.446 Great. So tell us a little bit

NOTE Confidence: 0.936149715

00:08:33.446 --> 00:08:35.369 more about what drew you to

NOTE Confidence: 0.936149715

00:08:35.369 --> 00:08:37.014 radiation oncology as a field.

NOTE Confidence: 0.936149715

00:08:37.020 --> 00:08:40.310 I mean why, why do people get

NOTE Confidence: 0.936149715

00:08:40.310 --> 00:08:42.660 drawn into radiation oncology?

NOTE Confidence: 0.936149715

00:08:42.660 --> 00:08:44.235 It seems like it's quite

NOTE Confidence: 0.936149715

00:08:44.235 --> 00:08:46.270 a niche kind of area.

NOTE Confidence: 0.862268847142857

00:08:47.470 --> 00:08:50.654 So I'd say radiation oncology has a lot

NOTE Confidence: 0.862268847142857

00:08:50.654 --> 00:08:53.817 of unique features associated with it.

NOTE Confidence: 0.862268847142857

00:08:53.820 --> 00:08:57.404 One thing that I

NOTE Confidence: 0.862268847142857

00:08:57.404 --> 00:09:00.768 really enjoyed was you really got the

NOTE Confidence: 0.862268847142857

00:09:00.768 --> 00:09:04.300 opportunity to treat patients in a variety

NOTE Confidence: 0.862268847142857

00:09:04.300 --> 00:09:08.020 of different disease sites from head to toe,

NOTE Confidence: 0.862268847142857

00:09:08.020 --> 00:09:09.775 which is something you can

NOTE Confidence: 0.862268847142857

00:09:09.775 --> 00:09:11.960 get in other fields as well,

NOTE Confidence: 0.862268847142857

00:09:11.960 --> 00:09:14.880 but I really liked just the variation in

NOTE Confidence: 0.862268847142857

00:09:14.880 --> 00:09:17.859 what you can do in radiation oncology.

NOTE Confidence: 0.862268847142857

00:09:17.860 --> 00:09:20.387 So you have a lot of different

NOTE Confidence: 0.862268847142857

00:09:20.387 --> 00:09:22.290 tools at your disposal.

NOTE Confidence: 0.862268847142857

00:09:22.290 --> 00:09:24.590 You can treat patients with

NOTE Confidence: 0.862268847142857

00:09:24.590 --> 00:09:25.970 external beam radiation.

NOTE Confidence: 0.862268847142857

00:09:25.970 --> 00:09:28.286 You can treat patients with brachytherapy.

NOTE Confidence: 0.862268847142857

00:09:28.290 --> 00:09:30.894 You can treat patients with a

NOTE Confidence: 0.862268847142857

00:09:30.894 --> 00:09:32.916 combination of both. And there,

NOTE Confidence: 0.862268847142857

00:09:32.916 --> 00:09:35.780 as we kind of alluded to earlier on,

NOTE Confidence: 0.862268847142857

00:09:35.780 --> 00:09:37.380 there are various different

NOTE Confidence: 0.862268847142857

00:09:37.380 --> 00:09:38.180 fractionation regimens.

NOTE Confidence: 0.862268847142857

00:09:38.180 --> 00:09:40.436 You can treat patients,

NOTE Confidence: 0.862268847142857

00:09:40.440 --> 00:09:43.302 you know conventionally fractionated or you

NOTE Confidence: 0.862268847142857

00:09:43.302 --> 00:09:46.500 can treat patients with hypofractionated.

NOTE Confidence: 0.862268847142857

00:09:46.500 --> 00:09:50.084 And I think the coolest thing for me

NOTE Confidence: 0.862268847142857

00:09:50.084 --> 00:09:54.287 is that you can carve and shape the

NOTE Confidence: 0.862268847142857

00:09:54.287 --> 00:09:57.960 radiation dose as best as you can.

NOTE Confidence: 0.862268847142857

00:09:57.960 --> 00:10:00.592 And in order to avoid normal tissues

NOTE Confidence: 0.862268847142857

00:10:00.592 --> 00:10:04.190 and you can kind of construct a really

NOTE Confidence: 0.862268847142857

00:10:04.190 --> 00:10:06.580 neat radiation plan that maximizes

NOTE Confidence: 0.862268847142857

00:10:06.580 --> 00:10:09.730 dose to the tumor and minimizes

NOTE Confidence: 0.862268847142857

00:10:09.730 --> 00:10:12.079 dose to the surrounding tissues.

NOTE Confidence: 0.862268847142857

00:10:12.079 --> 00:10:15.836 And I find the process of that treatment

NOTE Confidence: 0.862268847142857

00:10:15.836 --> 00:10:18.416 planning just very fascinating.

NOTE Confidence: 0.862268847142857

00:10:18.420 --> 00:10:21.548 As an aside, from a patient care standpoint,

NOTE Confidence: 0.862268847142857

00:10:21.550 --> 00:10:23.674 you develop really,

NOTE Confidence: 0.862268847142857

00:10:23.674 --> 00:10:26.860 really solid connections with your patients.

NOTE Confidence: 0.862268847142857

00:10:26.860 --> 00:10:29.264 We tend to book

NOTE Confidence: 0.862268847142857

00:10:29.264 --> 00:10:31.526 hour long consults in order to

00:10:32.406 --> 00:10:34.596 discuss the nuances and different

NOTE Confidence: 0.862268847142857

00:10:34.596 --> 00:10:37.289 aspects of radiation treatment planning.

NOTE Confidence: 0.862268847142857

00:10:37.290 --> 00:10:38.568 And you know,

NOTE Confidence: 0.862268847142857

00:10:38.568 --> 00:10:41.550 a lot of patients really enjoy the

NOTE Confidence: 0.862268847142857

00:10:41.550 --> 00:10:43.601 amount of time they get to spend

NOTE Confidence: 0.862268847142857

00:10:43.601 --> 00:10:44.859 with their radiation oncologist

NOTE Confidence: 0.862268847142857

00:10:44.859 --> 00:10:46.429 and vice versa as well.

NOTE Confidence: 0.862268847142857

00:10:46.430 --> 00:10:49.534 And you get to follow them for

NOTE Confidence: 0.862268847142857

00:10:49.534 --> 00:10:52.418 long periods of time and establish really,

NOTE Confidence: 0.862268847142857

00:10:52.420 --> 00:10:54.070 really great relationships.

NOTE Confidence: 0.862268847142857

00:10:54.070 --> 00:10:56.820 So from a technical standpoint,

NOTE Confidence: 0.862268847142857

00:10:56.820 --> 00:10:58.160 I think it's fascinating.

NOTE Confidence: 0.862268847142857

00:10:58.160 --> 00:11:00.920 And then from a patient care standpoint,

NOTE Confidence: 0.862268847142857

00:11:00.920 --> 00:11:02.000 it's really rewarding.

NOTE Confidence: 0.909968479666667

00:11:02.750 --> 00:11:05.011 You know, one of the things

NOTE Confidence: 0.909968479666667

00:11:05.011 --> 00:11:07.238 that you mentioned in terms of the

NOTE Confidence: 0.909968479666667

00:11:07.238 --> 00:11:09.026 technical aspect is this idea of

NOTE Confidence: 0.909968479666667

00:11:09.093 --> 00:11:11.613 targeting the dose to the tumor and

NOTE Confidence: 0.909968479666667

00:11:11.613 --> 00:11:13.336 minimizing exposure to normal tissues.

NOTE Confidence: 0.909968479666667

00:11:13.336 --> 00:11:16.290 And so that brings up the idea of it

NOTE Confidence: 0.909968479666667

00:11:16.290 --> 00:11:18.994 sounds like that's really how you try to

NOTE Confidence: 0.909968479666667

00:11:18.994 --> 00:11:21.349 minimize the side effects of radiation.

NOTE Confidence: 0.909968479666667

00:11:21.350 --> 00:11:23.918 So can you talk a little bit more

NOTE Confidence: 0.909968479666667

00:11:23.918 --> 00:11:26.493 about what side effects of radiation

NOTE Confidence: 0.909968479666667

00:11:26.493 --> 00:11:29.175 therapy people might expect and how

NOTE Confidence: 0.909968479666667

00:11:29.175 --> 00:11:31.000 prevalent those side effects are?

NOTE Confidence: 0.806908700833333

00:11:31.800 --> 00:11:35.512 Yeah. So you know the side effects from

NOTE Confidence: 0.806908700833333

00:11:35.512 --> 00:11:37.848 radiation therapy are varied

NOTE Confidence: 0.806908700833333

00:11:37.848 --> 00:11:39.318 because it's a local treatment,

NOTE Confidence: 0.806908700833333

00:11:39.320 --> 00:11:41.819 the side effects are very dependent on

NOTE Confidence: 0.806908700833333

00:11:41.819 --> 00:11:44.300 where the patient is getting radiation.

NOTE Confidence: 0.806908700833333

00:11:44.300 --> 00:11:47.100 I'd say the most

NOTE Confidence: 0.806908700833333

00:11:47.100 --> 00:11:49.995 common thing that we see across all

NOTE Confidence: 0.806908700833333

00:11:49.995 --> 00:11:52.115 disease sites is probably fatigue.

NOTE Confidence: 0.806908700833333

00:11:52.120 --> 00:11:53.860 And you know, these side effects

NOTE Confidence: 0.806908700833333

00:11:53.860 --> 00:11:55.404 tend to be cumulative during

NOTE Confidence: 0.806908700833333

00:11:55.404 --> 00:11:57.059 the course of their radiation.

NOTE Confidence: 0.806908700833333

00:11:57.060 --> 00:11:59.430 So patients during the

NOTE Confidence: 0.806908700833333

00:11:59.430 --> 00:12:02.170 first couple of weeks may not notice

NOTE Confidence: 0.806908700833333

00:12:02.170 --> 00:12:03.738 much, but you know,

NOTE Confidence: 0.806908700833333

00:12:03.738 --> 00:12:06.680 towards the end of their radiation course,

NOTE Confidence: 0.806908700833333

00:12:06.680 --> 00:12:08.836 that's when some of

NOTE Confidence: 0.806908700833333

00:12:08.836 --> 00:12:10.958 these peak side effects may occur.

NOTE Confidence: 0.806908700833333

00:12:10.960 --> 00:12:13.494 And you know, I'd say for some

NOTE Confidence: 0.806908700833333

00:12:13.494 --> 00:12:15.640 patients they may peak

NOTE Confidence: 0.806908700833333

00:12:15.640 --> 00:12:18.040 one to two weeks after radiation is done.

NOTE Confidence: 0.806908700833333

00:12:18.040 --> 00:12:21.155 And that's something that I do like

NOTE Confidence: 0.806908700833333

00:12:21.155 --> 00:12:23.900 to counsel patients about,

NOTE Confidence: 0.806908700833333

00:12:23.900 --> 00:12:26.420 to expect that sometimes these side

NOTE Confidence: 0.806908700833333

00:12:26.420 --> 00:12:29.400 effects may be kind of delayed

NOTE Confidence: 0.806908700833333

00:12:29.400 --> 00:12:32.000 once their radiation is finished.

NOTE Confidence: 0.806908700833333

00:12:32.000 --> 00:12:34.440 So you know, just to give an example,

00:12:35.637 --> 00:12:38.940 I treat a lot of prostate cancer and

NOTE Confidence: 0.806908700833333

00:12:38.940 --> 00:12:41.852 so you know the hallmark of side

NOTE Confidence: 0.806908700833333

00:12:41.852 --> 00:12:44.478 effects from prostate tend to be,

NOTE Confidence: 0.806908700833333

00:12:44.480 --> 00:12:46.532 you know genitourinary,

00:12:47.560 --> 00:12:50.590 bowel side effects or rectal side

NOTE Confidence: 0.806908700833333

00:12:50.590 --> 00:12:53.359 effects and sexual function as well.

00:12:54.350 --> 00:12:56.660 I'd say it's it's one of those

NOTE Confidence: 0.806908700833333

00:12:56.737 --> 00:12:59.474 things where a lot of it depends

NOTE Confidence: 0.806908700833333

00:12:59.474 --> 00:13:01.878 on the surrounding organs at risk.

NOTE Confidence: 0.806908700833333

00:13:01.880 --> 00:13:03.260 Or the tissues that are around

NOTE Confidence: 0.806908700833333

00:13:03.260 --> 00:13:04.640 the area that you're treating.

NOTE Confidence: 0.91009503125

00:13:06.280 --> 00:13:08.107 So we're going to pick up the

NOTE Confidence: 0.91009503125

00:13:08.107 --> 00:13:09.333 conversation, talking about how

NOTE Confidence: 0.91009503125

00:13:09.333 --> 00:13:10.938 we manage those side effects,

NOTE Confidence: 0.91009503125

00:13:10.940 --> 00:13:12.944 maybe prevent them and certainly treat

NOTE Confidence: 0.91009503125

00:13:12.944 --> 00:13:15.148 them in terms of improving people's

NOTE Confidence: 0.91009503125

00:13:15.148 --> 00:13:17.955 quality of life as they go through

NOTE Confidence: 0.91009503125

00:13:17.955 --> 00:13:19.878 survivorship after radiation therapy,

NOTE Confidence: 0.91009503125

00:13:19.880 --> 00:13:21.248 right after we take a short

NOTE Confidence: 0.91009503125

00:13:21.248 --> 00:13:22.550 break for a medical minute.

NOTE Confidence: 0.91009503125

00:13:22.550 --> 00:13:23.740 Please stay tuned to learn

NOTE Confidence: 0.91009503125

00:13:23.740 --> 00:13:24.692 more with my guest,

NOTE Confidence: 0.91009503125

00:13:24.700 --> 00:13:26.089 Doctor Vikram Jairam.

NOTE Confidence: 0.780725253

00:13:26.220 --> 00:13:28.200 Funding for Yale Cancer Answers

NOTE Confidence: 0.780725253

00:13:28.200 --> 00:13:30.180 comes from Smilow Cancer Hospital,

NOTE Confidence: 0.780725253

00:13:30.180 --> 00:13:31.940 where the gynecologic oncology program

NOTE Confidence: 0.780725253

00:13:31.940 --> 00:13:34.067 brings together a team of clinicians

NOTE Confidence: 0.780725253

00:13:34.067 --> 00:13:36.188 whose focus is to care for women

NOTE Confidence: 0.780725253

00:13:36.190 --> 00:13:38.344 with gynecologic cancers.

NOTE Confidence: 0.780725253

00:13:38.344 --> 00:13:43.760 Learn more at yalecancercenter.org.

NOTE Confidence: 0.780725253

00:13:43.760 --> 00:13:47.195 It's estimated that over 240,000

NOTE Confidence: 0.780725253

00:13:47.195 --> 00:13:49.963 men in the US will be diagnosed

NOTE Confidence: 0.780725253

00:13:49.963 --> 00:13:52.188 with prostate cancer this year,

NOTE Confidence: 0.780725253

00:13:52.190 --> 00:13:54.662 with over 3000 new cases being

NOTE Confidence: 0.780725253

00:13:54.662 --> 00:13:56.310 identified here in Connecticut

NOTE Confidence: 0.780725253

00:13:56.310 --> 00:13:58.338 one in eight American men will

NOTE Confidence: 0.780725253

00:13:58.338 --> 00:13:59.690 develop prostate cancer in

NOTE Confidence: 0.780725253

00:13:59.749 --> 00:14:01.349 the course of his lifetime.

NOTE Confidence: 0.780725253

00:14:01.350 --> 00:14:03.414 Major advances in the detection and

NOTE Confidence: 0.780725253

00:14:03.414 --> 00:14:05.161 treatment of prostate cancer have

NOTE Confidence: 0.780725253

00:14:05.161 --> 00:14:06.409 dramatically decreased the number

NOTE Confidence: 0.780725253

00:14:06.409 --> 00:14:08.670 of men who die from the disease.

NOTE Confidence: 0.780725253

00:14:08.670 --> 00:14:10.440 Screening can be performed quickly

NOTE Confidence: 0.780725253

00:14:10.440 --> 00:14:12.238 and easily in a physician's

NOTE Confidence: 0.780725253

00:14:12.238 --> 00:14:14.128 office using two simple tests,

NOTE Confidence: 0.780725253

00:14:14.130 --> 00:14:16.615 a physical exam, and a blood test.

NOTE Confidence: 0.780725253

00:14:16.620 --> 00:14:18.416 Clinical trials are currently

NOTE Confidence: 0.780725253

00:14:18.416 --> 00:14:20.212 underway at federally designated

NOTE Confidence: 0.780725253

00:14:20.212 --> 00:14:21.600 Comprehensive cancer centers,

NOTE Confidence: 0.780725253

00:14:21.600 --> 00:14:23.440 such as Yale Cancer Center

NOTE Confidence: 0.780725253

00:14:23.440 --> 00:14:25.280 and Smilow Cancer Hospital,

NOTE Confidence: 0.780725253

00:14:25.280 --> 00:14:26.860 where doctors are also

NOTE Confidence: 0.780725253

00:14:26.860 --> 00:14:28.440 using the Artemis machine,

NOTE Confidence: 0.780725253

00:14:28.440 --> 00:14:29.862 which enables targeted

NOTE Confidence: 0.780725253

00:14:29.862 --> 00:14:31.758 biopsies to be performed.

NOTE Confidence: 0.780725253

00:14:31.760 --> 00:14:34.048 More information is available

NOTE Confidence: 0.780725253

00:14:34.048 --> 00:14:35.048 at yalecancercenter.org.

NOTE Confidence: 0.780725253

00:14:35.048 --> 00:14:37.616 You're listening to Connecticut public radio.

NOTE Confidence: 0.830631346666667

00:14:38.970 --> 00:14:41.148 Welcome back to Yale Cancer Answers.

NOTE Confidence: 0.830631346666667

00:14:41.150 --> 00:14:42.990 This is doctor Anees Chagpar,

NOTE Confidence: 0.830631346666667

00:14:42.990 --> 00:14:44.698 and I'm joined tonight by my guest,

NOTE Confidence: 0.830631346666667

00:14:44.700 --> 00:14:46.353 Doctor Vikram Jairam.

NOTE Confidence: 0.830631346666667

00:14:46.353 --> 00:14:48.557 We're talking about radiation

NOTE Confidence: 0.830631346666667

00:14:48.557 --> 00:14:50.210 therapy for patients.

NOTE Confidence: 0.830631346666667

00:14:50.210 --> 00:14:52.245 And right before the break, Vikram,

NOTE Confidence: 0.830631346666667

00:14:52.245 --> 00:14:54.125 you were telling us about some of the

NOTE Confidence: 0.830631346666667

00:14:54.125 --> 00:14:55.767 side effects of radiation therapy.

NOTE Confidence: 0.830631346666667

00:14:55.770 --> 00:14:58.154 And one of the things that really drew

NOTE Confidence: 0.830631346666667

00:14:58.154 --> 00:15:01.133 you to the field was the fact that you

NOTE Confidence: 0.830631346666667

00:15:01.133 --> 00:15:03.649 can minimize those those side effects by,

NOTE Confidence: 0.830631346666667

00:15:03.650 --> 00:15:05.815 you know, the technical aspects

NOTE Confidence: 0.830631346666667

00:15:05.815 --> 00:15:07.547 of planning the radiation.

NOTE Confidence: 0.830631346666667

00:15:07.550 --> 00:15:10.088 You mentioned that a lot of the side effects

NOTE Confidence: 0.830631346666667

00:15:10.090 --> 00:15:11.626 tend to be local,

NOTE Confidence: 0.830631346666667

00:15:11.626 --> 00:15:13.930 so in terms of prostate cancer

NOTE Confidence: 0.830631346666667

00:15:14.016 --> 00:15:16.656 that there might be side effects for

NOTE Confidence: 0.830631346666667

00:15:16.660 --> 00:15:18.660 bowel function,

NOTE Confidence: 0.830631346666667

00:15:18.660 --> 00:15:20.388 sexual function, genitourinary

NOTE Confidence: 0.830631346666667

00:15:20.388 --> 00:15:22.476 function, simply because of

NOTE Confidence: 0.830631346666667

00:15:22.476 --> 00:15:24.660 the structures that are in that area,

NOTE Confidence: 0.830631346666667

00:15:24.660 --> 00:15:26.850 regardless of how much you really

NOTE Confidence: 0.830631346666667

00:15:26.850 --> 00:15:29.320 try to target the tumor itself.

NOTE Confidence: 0.830631346666667

00:15:29.320 --> 00:15:31.378 So can you talk a little bit

NOTE Confidence: 0.830631346666667

00:15:31.378 --> 00:15:33.320 more about that and

NOTE Confidence: 0.830631346666667

00:15:33.320 --> 00:15:35.840 when people should expect those side effects,

NOTE Confidence: 0.830631346666667

00:15:35.840 --> 00:15:37.676 what side effects they should expect,

NOTE Confidence: 0.830631346666667

00:15:37.680 --> 00:15:39.654 and what do you do about that?

00:15:40.192 --> 00:15:42.892 It seems to me that if the side effects

NOTE Confidence: 0.830631346666667

00:15:42.892 --> 00:15:45.880 were really ubiquitous and really terrible,

NOTE Confidence: 0.830631346666667

00:15:45.880 --> 00:15:46.945 the risk might

NOTE Confidence: 0.830631346666667

00:15:46.945 --> 00:15:48.365 outweigh the benefit,

NOTE Confidence: 0.830631346666667

00:15:48.370 --> 00:15:50.130 but it sounds to me that you have

NOTE Confidence: 0.830631346666667

00:15:50.130 --> 00:15:51.967 ways of dealing with all of that.

NOTE Confidence: 0.830631346666667

00:15:51.970 --> 00:15:52.579 Is that right?

00:15:55.183 --> 00:15:57.855 One of the most important aspects of

NOTE Confidence: 0.795313042444444

00:15:57.855 --> 00:16:00.590 managing side effects actually starts,

NOTE Confidence: 0.795313042444444

00:16:00.590 --> 00:16:03.140 you know, before the patient actually

NOTE Confidence: 0.795313042444444

00:16:03.140 --> 00:16:05.334 undergoes treatment and it's in

NOTE Confidence: 0.795313042444444

00:16:05.334 --> 00:16:07.126 the treatment planning phase.

NOTE Confidence: 0.795313042444444

00:16:07.130 --> 00:16:10.127 Much of that is in the

NOTE Confidence: 0.795313042444444

00:16:10.127 --> 00:16:12.128 designing of the radiation plan.

NOTE Confidence: 0.795313042444444

00:16:12.130 --> 00:16:14.552 When we design a

NOTE Confidence: 0.795313042444444

00:16:14.552 --> 00:16:16.372 radiation plan, we're

NOTE Confidence: 0.795313042444444

00:16:16.372 --> 00:16:18.990 looking at ways that we can maximize

NOTE Confidence: 0.795313042444444

00:16:18.990 --> 00:16:22.512 dose to the prescription or target

NOTE Confidence: 0.795313042444444

00:16:22.512 --> 00:16:25.375 volume that is designated by the

NOTE Confidence: 0.795313042444444

00:16:25.375 --> 00:16:27.650 radiation oncologist and we're trying

NOTE Confidence: 0.795313042444444

00:16:27.727 --> 00:16:30.415 to minimize ways or minimize radiation

NOTE Confidence: 0.795313042444444

00:16:30.415 --> 00:16:32.860 dose to the surrounding tissues.

NOTE Confidence: 0.795313042444444

00:16:32.860 --> 00:16:36.388 And we work with dosimetrists and

NOTE Confidence: 0.795313042444444

00:16:36.388 --> 00:16:39.953 physicists in our department who are

NOTE Confidence: 0.795313042444444

00:16:39.953 --> 00:16:43.307 trained and really expert at making

NOTE Confidence: 0.795313042444444

00:16:43.307 --> 00:16:46.527 these radiation plans in order to

NOTE Confidence: 0.795313042444444

00:16:46.527 --> 00:16:50.090 achieve the goals that we set forth.

NOTE Confidence: 0.795313042444444

00:16:50.090 --> 00:16:52.736 You know some of the radiation

NOTE Confidence: 0.795313042444444

00:16:52.736 --> 00:16:55.970 dose that goes to normal tissues,

NOTE Confidence: 0.795313042444444

00:16:55.970 --> 00:16:58.694 that's been studied and

NOTE Confidence: 0.795313042444444

00:16:58.694 --> 00:17:00.510 validated in multiple clinical

NOTE Confidence: 0.795313042444444

00:17:00.586 --> 00:17:03.094 studies as to what dose correlates

NOTE Confidence: 0.795313042444444

00:17:03.094 --> 00:17:04.766 with what side effects.

NOTE Confidence: 0.795313042444444

00:17:04.770 --> 00:17:07.255 And you know based on these studies

NOTE Confidence: 0.795313042444444

00:17:07.255 --> 00:17:10.587 we have certain thresholds that we try

NOTE Confidence: 0.795313042444444

00:17:10.587 --> 00:17:14.080 not to exceed during our radiation planning.

NOTE Confidence: 0.795313042444444

00:17:14.080 --> 00:17:17.672 And so with the help of our dosimetrist

NOTE Confidence: 0.795313042444444

00:17:17.672 --> 00:17:20.220 and physicists, we can usually

NOTE Confidence: 0.795313042444444

00:17:20.220 --> 00:17:22.970 achieve a radiation plan that's

NOTE Confidence: 0.795313042444444

00:17:22.970 --> 00:17:25.230 acceptable and that really

00:17:25.710 --> 00:17:27.150 achieves the overall goal of what

NOTE Confidence: 0.795313042444444

00:17:27.150 --> 00:17:27.940 we're trying to do.

NOTE Confidence: 0.827933143333333

00:17:30.050 --> 00:17:32.930 And so despite your best efforts,

NOTE Confidence: 0.827933143333333

00:17:32.930 --> 00:17:34.706 my presumption is that some people

NOTE Confidence: 0.827933143333333

00:17:34.706 --> 00:17:36.619 still get side effects. Is that right?

NOTE Confidence: 0.814554993344828

00:17:36.870 --> 00:17:39.000 Absolutely. And you know side effects

NOTE Confidence: 0.814554993344828

00:17:39.000 --> 00:17:41.753 are to be expected and you know this

NOTE Confidence: 0.814554993344828

00:17:41.753 --> 00:17:44.071 is part of the conversation that we

NOTE Confidence: 0.814554993344828

00:17:44.071 --> 00:17:46.183 have during our patients or during

NOTE Confidence: 0.814554993344828

00:17:46.183 --> 00:17:48.154 our consults with patients that you

NOTE Confidence: 0.814554993344828

00:17:48.154 --> 00:17:50.690 know side effects are to be expected.

NOTE Confidence: 0.814554993344828

00:17:50.690 --> 00:17:53.954 And you know we try and manage that

NOTE Confidence: 0.814554993344828

00:17:53.954 --> 00:17:56.524 depending on the severity

NOTE Confidence: 0.814554993344828

00:17:56.524 --> 00:17:59.540 of side effects and much of that

NOTE Confidence: 0.814554993344828

00:17:59.540 --> 00:18:01.636 is very patient dependent.

NOTE Confidence: 0.814554993344828

00:18:01.636 --> 00:18:04.780 So let's take prostate for example.

NOTE Confidence: 0.814554993344828

00:18:04.780 --> 00:18:07.671 Much of a patient's baseline

NOTE Confidence: 0.814554993344828

00:18:07.671 --> 00:18:09.895 urinary function or bowel function

NOTE Confidence: 0.814554993344828

00:18:09.895 --> 00:18:12.631 or sexual function may determine the

NOTE Confidence: 0.814554993344828

00:18:12.631 --> 00:18:15.684 severity of side effects that they

NOTE Confidence: 0.814554993344828

00:18:15.684 --> 00:18:17.748 received during radiation therapy.

NOTE Confidence: 0.814554993344828

00:18:17.750 --> 00:18:22.538 And so being able to manage expectations

NOTE Confidence: 0.814554993344828

00:18:22.540 --> 00:18:25.550 as well as manage the side effects

NOTE Confidence: 0.814554993344828

00:18:25.550 --> 00:18:27.548 is really important in order to

NOTE Confidence: 0.814554993344828

00:18:27.548 --> 00:18:29.331 get patients through

NOTE Confidence: 0.814554993344828

00:18:29.331 --> 00:18:31.516 their course of radiation.

NOTE Confidence: 0.887625690666667

00:18:31.600 --> 00:18:33.730 What kinds of things would you

NOTE Confidence: 0.887625690666667

00:18:33.730 --> 00:18:35.625 suggest for patients who have

NOTE Confidence: 0.887625690666667

00:18:35.625 --> 00:18:37.229 either local side effects,

NOTE Confidence: 0.887625690666667

00:18:37.230 --> 00:18:39.570 like you mentioned, or fatigue,

NOTE Confidence: 0.887625690666667

00:18:39.570 --> 00:18:40.570 which was another side

NOTE Confidence: 0.887625690666667

00:18:40.570 --> 00:18:41.570 effect that you mentioned,

NOTE Confidence: 0.887625690666667

00:18:41.570 --> 00:18:43.558 was nearly ubiquitous among

NOTE Confidence: 0.887625690666667

00:18:43.558 --> 00:18:46.043 patients who have radiation therapy

NOTE Confidence: 0.8799879225

00:18:46.160 --> 00:18:47.066 during treatment.

NOTE Confidence: 0.8799879225

00:18:47.066 --> 00:18:49.331 Patients meet with their radiation

NOTE Confidence: 0.8799879225

00:18:49.331 --> 00:18:52.310 oncologist once a week just as a check in.

NOTE Confidence: 0.8799879225

00:18:52.310 --> 00:18:54.608 We call them on treatment visits.

NOTE Confidence: 0.8799879225

00:18:54.610 --> 00:18:56.570 And you know, I definitely

NOTE Confidence: 0.8799879225

00:18:56.570 --> 00:18:58.530 encourage patients to discuss any

NOTE Confidence: 0.8799879225

00:18:58.597 --> 00:19:00.817 side effects that they experience

NOTE Confidence: 0.8799879225

00:19:00.820 --> 00:19:03.004 with their physician during

NOTE Confidence: 0.8799879225

00:19:03.004 --> 00:19:05.188 these on treatment visits.

NOTE Confidence: 0.8799879225

00:19:05.190 --> 00:19:06.446 So as an example,

NOTE Confidence: 0.8799879225

00:19:06.446 --> 00:19:09.140 you know one of the most common side

NOTE Confidence: 0.8799879225

00:19:09.140 --> 00:19:11.974 effects that I tend to hear is,

NOTE Confidence: 0.8799879225

00:19:11.974 --> 00:19:15.194 you know urinary frequency or

NOTE Confidence: 0.8799879225

00:19:15.194 --> 00:19:17.126 irritable urination symptoms.

00:19:18.330 --> 00:19:20.130 That's important for me to hear

NOTE Confidence: 0.8799879225

00:19:20.194 --> 00:19:22.119 because that is something that

NOTE Confidence: 0.8799879225

00:19:22.119 --> 00:19:23.998 is manageable with medication,

NOTE Confidence: 0.8799879225

00:19:23.998 --> 00:19:26.768 a variety of different medications.

NOTE Confidence: 0.8799879225

00:19:26.770 --> 00:19:29.520 From a more systemic standpoint.

NOTE Confidence: 0.8799879225

00:19:29.520 --> 00:19:31.800 I know you also mentioned fatigue.

NOTE Confidence: 0.8799879225

00:19:31.800 --> 00:19:34.260 Fatigue can be challenging.

NOTE Confidence: 0.8799879225

00:19:34.260 --> 00:19:35.360 I'm not going to lie.

NOTE Confidence: 0.8799879225

00:19:35.360 --> 00:19:38.060 And, you know, during radiation,

NOTE Confidence: 0.8799879225

00:19:38.060 --> 00:19:41.138 what I say is to try and

00:19:42.436 --> 00:19:45.180 not overexert oneself to listen

NOTE Confidence: 0.8799879225

00:19:45.180 --> 00:19:47.980 to your body as much as possible

NOTE Confidence: 0.8799879225

00:19:47.980 --> 00:19:50.140 because fatigue is cumulative.

NOTE Confidence: 0.8799879225

00:19:50.140 --> 00:19:53.572 And I don't like

NOTE Confidence: 0.8799879225

00:19:53.572 --> 00:19:56.752 having people kind of overexert

NOTE Confidence: 0.8799879225

00:19:56.752 --> 00:19:58.660 themselves during treatment.

NOTE Confidence: 0.8799879225

00:19:58.660 --> 00:20:00.756 Once radiation is completed,

00:20:02.006 --> 00:20:04.547 I think there is good data that

NOTE Confidence: 0.8799879225

00:20:04.547 --> 00:20:06.768 shows that exercise can help

00:20:07.666 --> 00:20:09.458 overcome fatigue and especially

NOTE Confidence: 0.8799879225

00:20:09.458 --> 00:20:12.077 in prostate patients who may be

NOTE Confidence: 0.8799879225

00:20:12.077 --> 00:20:13.967 getting hormone therapy as well,

NOTE Confidence: 0.8799879225

00:20:13.970 --> 00:20:18.107 which may also add to the fatigue,

NOTE Confidence: 0.8799879225

00:20:18.110 --> 00:20:20.860 exercise is something that has

NOTE Confidence: 0.8799879225

00:20:20.860 --> 00:20:23.610 been shown to actually increase

NOTE Confidence: 0.8799879225

00:20:23.701 --> 00:20:26.806 the metabolic rate and improve

NOTE Confidence: 0.8799879225

00:20:26.806 --> 00:20:28.669 overall general function

NOTE Confidence: 0.8799879225

00:20:28.670 --> 00:20:29.650 for a lot of patients.

NOTE Confidence: 0.8799879225

00:20:29.650 --> 00:20:32.332 So it is something that I discuss with them,

NOTE Confidence: 0.8799879225

00:20:32.340 --> 00:20:34.160 but you know we kind of save

NOTE Confidence: 0.8799879225

00:20:34.160 --> 00:20:35.900 that till after they're finished

NOTE Confidence: 0.8799879225

00:20:35.900 --> 00:20:37.247 with their radiation.

NOTE Confidence: 0.8276802925

00:20:37.360 --> 00:20:39.712 Now one thing that you mentioned at

NOTE Confidence: 0.8276802925

00:20:39.712 --> 00:20:42.949 the top of the show was that your

NOTE Confidence: 0.8276802925

00:20:42.949 --> 00:20:45.104 research interests really revolve at

NOTE Confidence: 0.8276802925

00:20:45.178 --> 00:20:48.098 least in part around the use of opioids.

NOTE Confidence: 0.8276802925

00:20:48.100 --> 00:20:50.332 We didn't really mention too much

NOTE Confidence: 0.8276802925

00:20:50.332 --> 00:20:51.820 about radiation induced pain.

NOTE Confidence: 0.8276802925

00:20:51.820 --> 00:20:54.996 Can you talk about pain as a factor

NOTE Confidence: 0.8276802925

00:20:54.996 --> 00:20:57.860 that happens after radiation therapy?

NOTE Confidence: 0.8276802925

00:20:57.860 --> 00:20:58.560 How frequently

NOTE Confidence: 0.8276802925

00:20:58.560 --> 00:21:00.660 that happens and how often you

NOTE Confidence: 0.8276802925

00:21:00.660 --> 00:21:02.209 need to use opioids

NOTE Confidence: 0.8276802925

00:21:02.210 --> 00:21:03.119 in that setting?

NOTE Confidence: 0.778695645

00:21:03.190 --> 00:21:05.660 I'd say radiation induced pain

NOTE Confidence: 0.778695645

00:21:05.660 --> 00:21:08.130 is something that can happen.

NOTE Confidence: 0.778695645

00:21:08.130 --> 00:21:10.570 It's not a common side effect, but it

NOTE Confidence: 0.778695645

00:21:10.570 --> 00:21:12.850 really depends on what you're treating.

NOTE Confidence: 0.778695645

00:21:12.850 --> 00:21:16.802 So you know, if you're treating an area

NOTE Confidence: 0.778695645

00:21:16.802 --> 00:21:20.309 where there's bone or rib or chest wall,

NOTE Confidence: 0.778695645

00:21:20.310 --> 00:21:22.558 you know, generally with

NOTE Confidence: 0.778695645

00:21:22.558 --> 00:21:24.244 conventionally fractionated radiation,

NOTE Confidence: 0.778695645

00:21:24.250 --> 00:21:27.826 rib pain is not a common side effect,

NOTE Confidence: 0.778695645

00:21:27.830 --> 00:21:29.530 however, when you're going to

NOTE Confidence: 0.778695645

00:21:29.530 --> 00:21:33.460 higher doses or more stereotactic body

NOTE Confidence: 0.778695645

00:21:33.460 --> 00:21:36.005 radiation, rib pain is something that

NOTE Confidence: 0.778695645

00:21:36.005 --> 00:21:38.820 can happen. If there is chest wall,

NOTE Confidence: 0.778695645

00:21:38.820 --> 00:21:42.607 for example, if you're treating a lung cancer

NOTE Confidence: 0.778695645

00:21:42.607 --> 00:21:45.596 and there's chest wall around that area,

NOTE Confidence: 0.778695645

00:21:45.600 --> 00:21:48.792 or if you're treating cancer that has spread

NOTE Confidence: 0.778695645

00:21:48.792 --> 00:21:52.251 to the bone and you're actually treating

NOTE Confidence: 0.778695645

00:21:52.251 --> 00:21:55.700 that bone itself with palliative radiation.

NOTE Confidence: 0.778695645

00:21:55.700 --> 00:21:58.940 Sometimes patients can experience what

NOTE Confidence: 0.778695645

00:21:58.940 --> 00:22:02.180 we call an inflammatory reaction.

NOTE Confidence: 0.778695645

00:22:02.180 --> 00:22:04.220 And you know

NOTE Confidence: 0.778695645

00:22:04.220 --> 00:22:06.315 most of these inflammatory reactions

NOTE Confidence: 0.778695645

00:22:06.315 --> 00:22:09.169 when patients have rib pain or you

NOTE Confidence: 0.778695645

00:22:09.169 --> 00:22:10.899 know bone pain from radiation,

NOTE Confidence: 0.778695645

00:22:10.900 --> 00:22:13.396 they tend to be self limiting.

NOTE Confidence: 0.778695645

00:22:13.400 --> 00:22:16.487 And so you know because of that nature we

NOTE Confidence: 0.778695645

00:22:16.487 --> 00:22:19.799 do talk about treatment conservatively with

NOTE Confidence: 0.778695645

00:22:19.799 --> 00:22:23.240 over the counter pain medications first,

NOTE Confidence: 0.778695645

00:22:23.240 --> 00:22:24.740 sometimes more topical,

NOTE Confidence: 0.778695645

00:22:24.740 --> 00:22:27.240 you know lidocaine patches or

NOTE Confidence: 0.778695645

00:22:27.240 --> 00:22:30.117 creams and if you know these pain,

NOTE Confidence: 0.778695645

00:22:30.120 --> 00:22:31.920 if this pain kind of persists

NOTE Confidence: 0.778695645

00:22:31.920 --> 00:22:33.999 over a longer period of time then

NOTE Confidence: 0.778695645

00:22:33.999 --> 00:22:36.175 you know there's a discussion about

NOTE Confidence: 0.778695645

00:22:36.175 --> 00:22:38.215 opioids or narcotics for management.

NOTE Confidence: 0.799275416117647

00:22:39.210 --> 00:22:41.650 And so it sounds like opioids are really

NOTE Confidence: 0.799275416117647

00:22:41.650 --> 00:22:44.496 kind of the the last resort is that right?

NOTE Confidence: 0.78130584625

00:22:45.230 --> 00:22:48.270 So I would say

NOTE Confidence: 0.78130584625

00:22:48.270 --> 00:22:51.819 if we've exhausted all other

NOTE Confidence: 0.78130584625

00:22:51.819 --> 00:22:54.130 measures then certainly, however,

NOTE Confidence: 0.78130584625

00:22:54.130 --> 00:22:57.434 if a patient is having pretty

NOTE Confidence: 0.78130584625

00:22:57.434 --> 00:22:59.808 excruciating pain for whatever reason,

NOTE Confidence: 0.78130584625

00:22:59.810 --> 00:23:02.126 if it's from the cancer itself

NOTE Confidence: 0.78130584625

00:23:02.130 --> 00:23:05.413 or from another cause you know the

NOTE Confidence: 0.78130584625

00:23:05.413 --> 00:23:08.265 NCCN does mention that for moderate

NOTE Confidence: 0.78130584625

00:23:08.265 --> 00:23:11.422 to severe pain that's on a scale

NOTE Confidence: 0.78130584625

00:23:11.513 --> 00:23:14.489 that's a four out of 10 at least,

NOTE Confidence: 0.78130584625

00:23:14.490 --> 00:23:17.148 opioids are the mainstay of treatment.

NOTE Confidence: 0.78130584625

00:23:17.150 --> 00:23:19.870 So you know while I would start with

NOTE Confidence: 0.78130584625

00:23:19.870 --> 00:23:21.939 conservative over the counter measures,

NOTE Confidence: 0.78130584625

00:23:21.940 --> 00:23:24.761 I would have a lower threshold for

NOTE Confidence: 0.78130584625

00:23:24.761 --> 00:23:27.871 starting patients on opioids if they are

NOTE Confidence: 0.78130584625

00:23:27.871 --> 00:23:30.493 experiencing more moderate to severe pain.

NOTE Confidence: 0.757644432

00:23:31.940 --> 00:23:34.570 Let's ask you about

NOTE Confidence: 0.757644432

00:23:34.570 --> 00:23:36.910 concern over getting addicted to opioids,

NOTE Confidence: 0.757644432

00:23:36.910 --> 00:23:39.145 especially given all of the

NOTE Confidence: 0.757644432

00:23:39.145 --> 00:23:41.380 hype about the opioid epidemic.

NOTE Confidence: 0.89004454

00:23:42.770 --> 00:23:45.404 So that's one more common

NOTE Confidence: 0.89004454

00:23:45.404 --> 00:23:47.114 concern that patients bring up,

NOTE Confidence: 0.89004454

00:23:47.120 --> 00:23:49.780 either you know patients

NOTE Confidence: 0.89004454

00:23:49.780 --> 00:23:52.429 may not like the feeling of being

NOTE Confidence: 0.89004454

00:23:52.429 --> 00:23:55.549 on an opioid which is one thing and

NOTE Confidence: 0.89004454

00:23:55.549 --> 00:23:58.184 certainly very fair or just the

NOTE Confidence: 0.89004454

00:23:58.184 --> 00:24:00.752 concerns about being addicted

NOTE Confidence: 0.89004454

00:24:00.760 --> 00:24:02.680 because you know many patients are

NOTE Confidence: 0.89004454

00:24:02.680 --> 00:24:04.734 opioid naive and have never taken

NOTE Confidence: 0.89004454

00:24:04.734 --> 00:24:06.876 pain medications that are this strong.

NOTE Confidence: 0.89004454

00:24:06.880 --> 00:24:11.020 And our group has

NOTE Confidence: 0.89004454

00:24:11.020 --> 00:24:13.910 actually published data and has looked into

NOTE Confidence: 0.89004454

00:24:13.910 --> 00:24:17.734 this and we've found that while

NOTE Confidence: 0.89004454

00:24:17.734 --> 00:24:20.842 most patients with cancer may actually

NOTE Confidence: 0.89004454

00:24:20.842 --> 00:24:24.562 use or be prescribed higher doses of

NOTE Confidence: 0.89004454

00:24:24.562 --> 00:24:27.826 opioids compared to non cancer patients,

NOTE Confidence: 0.89004454

00:24:27.830 --> 00:24:30.896 the rates of misuse or addiction

NOTE Confidence: 0.89004454

00:24:30.896 --> 00:24:34.780 are actually fairly low and not too

NOTE Confidence: 0.89004454

00:24:34.780 --> 00:24:37.690 dissimilar from the general population.

NOTE Confidence: 0.89004454

00:24:37.690 --> 00:24:40.338 And so I do try and reassure patients

NOTE Confidence: 0.89004454

00:24:40.338 --> 00:24:42.586 that you know if they do have

NOTE Confidence: 0.89004454

00:24:42.586 --> 00:24:44.750 pain that we do want

NOTE Confidence: 0.89004454

00:24:44.750 --> 00:24:48.062 them to be treated for that

NOTE Confidence: 0.89004454

00:24:48.062 --> 00:24:51.805 pain and to not worry both for physicians

NOTE Confidence: 0.89004454

00:24:51.805 --> 00:24:55.187 and patients about the idea of addiction,

00:24:56.120 --> 00:24:58.290 that's not to say that we

NOTE Confidence: 0.89004454

00:24:58.290 --> 00:24:59.946 should forget about it,

NOTE Confidence: 0.89004454

00:24:59.950 --> 00:25:02.290 but more that

NOTE Confidence: 0.89004454

00:25:02.290 --> 00:25:04.738 cancer related pain is something that

NOTE Confidence: 0.89004454

00:25:04.738 --> 00:25:07.263 should be treated and we shouldn't

NOTE Confidence: 0.89004454

00:25:07.263 --> 00:25:10.119 under treat patients due to worry of

NOTE Confidence: 0.89004454

00:25:10.119 --> 00:25:12.511 addiction as the data has not quite

NOTE Confidence: 0.89004454

00:25:12.511 --> 00:25:14.598 shown that there are higher rates

NOTE Confidence: 0.89004454

00:25:14.598 --> 00:25:16.618 compared to the normal population.

NOTE Confidence: 0.789460175454546

00:25:17.340 --> 00:25:19.938 Yeah. One of the other questions

NOTE Confidence: 0.789460175454546

00:25:19.938 --> 00:25:22.615 speaking about cancer related pain is

NOTE Confidence: 0.789460175454546

00:25:22.615 --> 00:25:26.780 that for some patients we actually treat

NOTE Confidence: 0.789460175454546

00:25:26.780 --> 00:25:30.129 cancer related pain with radiation.

NOTE Confidence: 0.789460175454546

00:25:30.130 --> 00:25:31.706 And in other circumstances,

NOTE Confidence: 0.789460175454546

00:25:31.706 --> 00:25:34.537 we talk about radiation as we

NOTE Confidence: 0.789460175454546

00:25:34.537 --> 00:25:36.507 talked about just now potentially

NOTE Confidence: 0.789460175454546

00:25:36.507 --> 00:25:38.710 having a side effect of pain.

NOTE Confidence: 0.789460175454546

00:25:38.710 --> 00:25:40.294 So can you talk about

NOTE Confidence: 0.789460175454546

00:25:40.294 --> 00:25:41.350 that kind of dichotomy?

NOTE Confidence: 0.798681330777778

00:25:42.390 --> 00:25:45.988 Yes, so you know these are two

NOTE Confidence: 0.798681330777778

00:25:45.988 --> 00:25:48.678 separate processes and two different

NOTE Confidence: 0.798681330777778

00:25:48.678 --> 00:25:51.810 indications as as the

NOTE Confidence: 0.798681330777778

00:25:51.810 --> 00:25:54.430 radiation induced pain,

NOTE Confidence: 0.798681330777778

00:25:54.430 --> 00:25:56.638 you know we think of that as more

NOTE Confidence: 0.798681330777778

00:25:56.638 --> 00:25:59.228 of a acute inflammatory reaction

NOTE Confidence: 0.798681330777778

00:25:59.230 --> 00:26:01.690 that tends to be self limiting.

NOTE Confidence: 0.798681330777778

00:26:01.690 --> 00:26:04.231 So when we're treating patients with you

NOTE Confidence: 0.798681330777778

00:26:04.231 --> 00:26:06.549 know cancer that's spread to the bone,

NOTE Confidence: 0.798681330777778

00:26:06.550 --> 00:26:09.394 usually I'd say about 1/3 of

NOTE Confidence: 0.798681330777778

00:26:09.394 --> 00:26:11.980 patients may experience some kind

NOTE Confidence: 0.798681330777778

00:26:11.980 --> 00:26:14.376 of acute inflammatory reaction.

NOTE Confidence: 0.798681330777778

00:26:14.380 --> 00:26:18.574 And it's what we call a pain crisis

NOTE Confidence: 0.798681330777778

00:26:18.574 --> 00:26:20.978 and you know generally these tend to

NOTE Confidence: 0.798681330777778

00:26:20.978 --> 00:26:23.265 resolve within a couple weeks now for

NOTE Confidence: 0.798681330777778

00:26:23.265 --> 00:26:25.442 the 2nd aspect or cancer that's actually

NOTE Confidence: 0.798681330777778

00:26:25.508 --> 00:26:27.755 spread to the bone that's causing pain,

NOTE Confidence: 0.798681330777778

00:26:27.760 --> 00:26:31.239 radiation can actually be used to shrink

NOTE Confidence: 0.798681330777778

00:26:31.239 --> 00:26:34.986 the spots or the spot that's in the

NOTE Confidence: 0.798681330777778

00:26:34.986 --> 00:26:38.259 bone and reduce some of that effect

NOTE Confidence: 0.798681330777778

00:26:38.260 --> 00:26:41.592 or compression on the bone that the

NOTE Confidence: 0.798681330777778

00:26:41.592 --> 00:26:45.088 cancer is causing and so more long term

NOTE Confidence: 0.798681330777778

00:26:45.680 --> 00:26:47.450 we can expect patients to be

NOTE Confidence: 0.798681330777778

00:26:47.450 --> 00:26:50.138 more pain free or have

NOTE Confidence: 0.798681330777778

00:26:50.138 --> 00:26:51.930 reduced amounts of pain.

NOTE Confidence: 0.798681330777778

00:26:51.930 --> 00:26:54.548 And one of the nicest things that

NOTE Confidence: 0.798681330777778

00:26:54.548 --> 00:26:56.958 I love about radiation is that

NOTE Confidence: 0.798681330777778

00:26:56.958 --> 00:26:59.751 patients may come in who are on

NOTE Confidence: 0.798681330777778

00:26:59.836 --> 00:27:02.230 opioids or pain medications and we

NOTE Confidence: 0.798681330777778

00:27:02.230 --> 00:27:05.642 may be able to treat them with a

NOTE Confidence: 0.798681330777778

00:27:05.642 --> 00:27:07.907 metastatic bone lesion using radiation.

NOTE Confidence: 0.798681330777778

00:27:07.910 --> 00:27:10.025 And a month or two months later,

NOTE Confidence: 0.798681330777778

00:27:10.030 --> 00:27:12.263 they may not need opioids anymore or

NOTE Confidence: 0.798681330777778

00:27:12.263 --> 00:27:15.018 they may need significantly less opioids.

NOTE Confidence: 0.798681330777778

00:27:15.020 --> 00:27:16.604 And that's always satisfying.

NOTE Confidence: 0.911671154166667

00:27:18.420 --> 00:27:20.418 Certainly when we think

NOTE Confidence: 0.911671154166667

00:27:20.418 --> 00:27:22.559 about quality of life of patients,

NOTE Confidence: 0.911671154166667

00:27:22.560 --> 00:27:24.196 it sounds like radiation

NOTE Confidence: 0.911671154166667

00:27:24.196 --> 00:27:26.241 therapy can certainly play a

NOTE Confidence: 0.911671154166667

00:27:26.241 --> 00:27:28.418 role in ameliorating that.

NOTE Confidence: 0.911671154166667

00:27:28.420 --> 00:27:30.625 Talk a little bit more about kind

NOTE Confidence: 0.911671154166667

00:27:30.625 --> 00:27:32.730 of where you see radiation therapy

NOTE Confidence: 0.911671154166667

00:27:32.730 --> 00:27:35.271 going long term in terms of the

NOTE Confidence: 0.911671154166667

00:27:35.342 --> 00:27:37.327 care of patients with cancer.

NOTE Confidence: 0.836794200833333

00:27:37.780 --> 00:27:41.080 I think one of the more

NOTE Confidence: 0.836794200833333

00:27:41.169 --> 00:27:44.445 exciting aspects that we have

NOTE Confidence: 0.836794200833333

00:27:44.445 --> 00:27:46.950 people in our department working on is

NOTE Confidence: 0.836794200833333

00:27:46.950 --> 00:27:49.430 combination of radiation

NOTE Confidence: 0.836794200833333

00:27:49.430 --> 00:27:51.910 and other systemic therapy agents.

NOTE Confidence: 0.836794200833333

00:27:51.910 --> 00:27:54.479 One thing that we're

NOTE Confidence: 0.836794200833333

00:27:54.479 --> 00:27:56.941 trying to explore the interaction with

NOTE Confidence: 0.836794200833333

00:27:56.941 --> 00:27:59.951 is radiation and immunotherapy to see if

NOTE Confidence: 0.836794200833333

00:28:00.028 --> 00:28:02.788 radiation can kind of energize the immune

NOTE Confidence: 0.836794200833333

00:28:02.788 --> 00:28:05.344 response to better attack cancer cells.

NOTE Confidence: 0.836794200833333

00:28:05.350 --> 00:28:07.072 And that's currently

NOTE Confidence: 0.836794200833333

00:28:07.072 --> 00:28:09.368 being explored in trials.

NOTE Confidence: 0.836794200833333

00:28:09.370 --> 00:28:10.540 And, you know,

NOTE Confidence: 0.836794200833333

00:28:10.540 --> 00:28:12.880 other aspects like DNA damaging agents

NOTE Confidence: 0.836794200833333

00:28:12.880 --> 00:28:15.977 are kind of being seen whether they can

NOTE Confidence: 0.836794200833333

00:28:15.977 --> 00:28:18.210 work in conjunction with radiation.

NOTE Confidence: 0.836794200833333

00:28:18.210 --> 00:28:19.590 In a synergistic manner.

00:28:20.630 --> 00:28:23.255 I think the future really is kind

NOTE Confidence: 0.836794200833333

00:28:23.255 --> 00:28:26.219 of looking at radiation with some of

NOTE Confidence: 0.836794200833333

00:28:26.219 --> 00:28:29.253 these novel agents and seeing if we

NOTE Confidence: 0.836794200833333

00:28:29.253 --> 00:28:32.080 can combine them in a more synergistic way.

NOTE Confidence: 0.907676742352941

00:28:32.980 --> 00:28:35.422 Doctor Vikram Jairam is an assistant

NOTE Confidence: 0.907676742352941

00:28:35.422 --> 00:28:37.050 professor of clinical therapeutic

NOTE Confidence: 0.907676742352941

00:28:37.109 --> 00:28:39.454 radiology at the Yale School of Medicine.

NOTE Confidence: 0.907676742352941

00:28:39.460 --> 00:28:41.468 If you have questions,

NOTE Confidence: 0.907676742352941

00:28:41.468 --> 00:28:43.431 the address is canceranswers@yale.edu,

NOTE Confidence: 0.907676742352941

00:28:43.431 --> 00:28:46.137 and past editions of the program

NOTE Confidence: 0.907676742352941

00:28:46.137 --> 00:28:48.482 are available in audio and written

NOTE Confidence: 0.907676742352941

00:28:48.482 --> 00:28:49.395 form at yalecancercenter.org.

NOTE Confidence: 0.907676742352941

00:28:49.395 --> 00:28:51.755 We hope you'll join us next week to

NOTE Confidence: 0.907676742352941

00:28:51.755 --> 00:28:53.553 learn more about the fight against

NOTE Confidence: 0.907676742352941

00:28:53.553 --> 00:28:55.340 cancer here on Connecticut Public Radio.

NOTE Confidence: 0.907676742352941

00:28:55.340 --> 00:28:57.734 Funding for Yale Cancer Answers is

NOTE Confidence: 0.907676742352941

00:28:57.734 --> 00:29:00.000 provided by Smilow Cancer Hospital.