00;00;00;02 - 00;00;28;23 Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital. Welcome to Yale Cancer Answers with the director of the Yale Cancer Center, Dr. Eric Winer. Yale Cancer Answers features conversations with oncologists and specialists who are on the forefront of the battle to fight cancer. Here's Dr. Winer.

Dr. Eric Winer. In tonight's show, we're going to talk about artificial intelligence and its role in the fight against cancer.

00;00;29;11 - 00;01;07;20 We might also talk about how artificial intelligence is used in the clinical setting as well, meaning how clinicians use A.I. to reduce some of the administrative tasks that they're often asked to do. A.I. is rapidly changing our world, and it's quickly becoming a truly revolutionary tool in medicine and in cancer care and in diagnostics. And I think those of us in the medical profession who were initially frightened of AI and intimidated are feeling just a little bit more comfortable these days.

00;01;08;11 - 00;01;44;06 Joining us to talk about research and maybe beyond research that touches on AI and cancer is my colleague, Dr. Sanjay Aneja. Sanjay is an assistant professor in the Department of Therapeutic Radiology at Yale School of Medicine and a member of the cancer center. As a physician scientist, he is focused on the applications of AI to cancer care, from using machine learning to predicting cancer outcomes, to developing AI tools for analyzing symptoms.

00;01;44;06 - 00;02;15;07 Sanjay's research is paving the way for smarter, more personalized cancer care. Sanjay, welcome to Yale Cancer Answers. It's really a pleasure to have you here.

Dr. Aneja Thanks so much for having me, Eric.

Dr. Winer Maybe as we start, you could just talk a little bit about exactly what is meant by AI. It's a pretty broad area. It has evolved a great deal. 00;02;15;17 - 00;02;43;07 And as someone who is intimately involved in this area and recognizing that many of our listeners have some or quite a bit of understanding around AI and others don't, maybe you could just provide a little bit of background.

Dr. Aneja Yeah, that's a great question. I think that, you know, as we recently have sort of seen a little bit of a renaissance in the field of AI, there's a lot of words that are kind of thrown around that are synonyms, AI and machine learning, deep learning.

00;02;43;07 - 00;03;04;02 And it's always good to provide a framework for how people should sort of think through that. So yeah, has been around for a very long time since the 1940s, and it's simply any computer program which is designed to mimic human intelligence or decision making. And so arguably you can think about a lot of things that we take for granted as being sort of AI systems like traffic lights, because they mimic crossing guards.

00;03;04;02 - 00;03;24;04 They're essentially an AI system. But I think that more recently we started thinking about AI in the context of machine learning and some machine learning is essentially a technique which allows us to analyze the increasing amounts of data that we're collecting and develop AI systems that are a little bit more automated and a little bit smarter then than we previously thought.

00;03;24;12 - 00;03;55;26 And so I think that now, most recently when we talk about AI in the context of our everyday lives, it's typically driven by a machine learning techniques. And so then the last thing I'll touch upon just to provide people a little bit of a background is deep learning, which is sort of a type of machine learning technique, which is specifically very, you know, very in vogue right now and very exciting in part because it is essentially allowed us to analyze data that we never thought was possible, data that is extremely complex, extremely vast, and it previously wasn't able to be analyzed.

00;03;55;27 - 00;04;22;27 And so deep learning is what we think of as being sort of the forefront of machine learning techniques and is the engine for almost all of our modern AI applications. And just to be clear a little bit about the terminology, when people use the term machine learning is the machine, the computer answering a question. So machine learning is essentially the computer is sort of, you know, the thing that's driving, I guess, the machine learning algorithm.

00;04;22;27 - 00;04;44;10 But the machine learning algorithm is actually really the code base and all of the code and the instructions that we're providing for it. And you know, the term machine learning, it really comes from the fact that machine learning algorithms can essentially learn, you know, rules and and sort of logic from data. And that is really when people think about that, I think that's sort of the most important piece of machine learning is really the code.

00;04;45;12 - 00;05;20;07 Dr. Winer And before we get to talking about research, first, I just want people to know that you are actually a clinician as well as a researcher, and you spend your time focused on prostate cancer, correct?

Dr. Aneja Yeah, I'm a physician scientist, so in my undergrad my background was in applied mathematics, and I think a lot of machine learning researchers are kind of from that field because we studied machine learning algorithms and AI systems in our in our training as a applied mathematician.

00;05;20;07 - 00;05;37;25 But then I went to medical school here at Yale and I trained as a radiation oncologist. I primarily take care of prostate cancer patients here at Yale. And and I think increasingly I represent a phenotype that's needed in medicine of people who both have expertise, as well as sort of the understanding of how that can potentially play a role in our clinical practice.

00;05;38;02 - 00;05;57;21 You know, we don't necessarily we don't necessarily think about it, but health care is a very unique space. It's not like, you know, technology, you know, Google and Facebook and stuff like that. It's a little bit

more nuanced. And I think having both my feet in clinical medicine as well as in the machine learning world, allows me to sort of navigate some of the nuances a lot well, a lot better than maybe maybe I could have otherwise.

00;05;58;01 - 00;06;27;21 And interestingly, radiation oncology is a field that tends to attract sort of tech savvy people because planning radiation and delivering radiation in involves physics and math and is pretty complicated. Yeah, I certainly was attracted to the field in part because the technology was very, very interesting. I mean, you know, working with these very advanced machines and and sort of to care for patients is always something that's really attractive to me.

00;06;27;25 - 00;06;42;07 I think part of it was I wasn't really scared of all the quantitative pieces of physics, which I think unfortunately detract some people from joining the field. I don't think it's a reason to not become radiation oncologist for the medical students or listening out there. But I do think that it's something that certainly is a field, but I'm really interested.

00;06;42;13 - 00;07;12;17 But more so, oncology in general was really exciting to me because the amount of data that we generate in a current oncology practice is so vast. And so anyone who's interested in machine learning or artificial intelligence in clinical medicine, I think that cancer is among the best areas to be looking at.

Dr. Winer Well, when we do various types of genomic profiling, there's just so much data that, you know, we need something like machine learning to analyze all of the data.

00;07;13;02 - 00;07;29;20 Dr. Aneja Yeah, I think that that's exactly one of the biggest areas is in the preclinical space where we have genomic molecular data that is is extremely vast. And so I think that there's a lot of opportunity and a lot of people who are very interested in analyzing machine learning in that regard and developing systems that help us better sort of organize that data.

00;07;29;26 - 00;08;00;10 Secondly, you know, the amount of imaging that we get for cancer patients and the types of imaging both, you know, PET scans, CAT scans, mammograms, etc., I think that's a really amazing data resource that we don't even think about sometimes because we just see one picture. But all of those pixels are data points. And similarly, you know, we see cancer patients so frequently in our clinical practice, we generate data within the electronic medical record and all of those areas are things that are very, very fruitful for potential applications of AI because the number one thing that people think about is really the data.

00;08;00;10 - 00;08;27;07 As long as you have a large amount of data, that is really a great, great opportunity. And in just a little bit, whether it's in the next few minutes or in the second half of the show, we're going to talk about all the data that is available on a simple mammogram or in a prostate MRI. That shockingly gives us a tremendous amount of information about the patient, the

patient's cancer and the clinical course.

00;08;27;07 - 00;09;06;18 Dr. Winer Before we get into research, I'm wondering if you could just comment on the common uses of AI in cancer medicine. And in particular, I'm thinking about two areas. One is the use of AI to reduce administrative burdens. So for example, helping with generating notes in clinic and keeping track of information. And then also the use of AI in areas like radiology and pathology gap.

00;09;06;18 - 00;09;28;04 Dr. Aneja It's great. I think that you kind of hit on some of the big areas. So I like to think about AI in cancer as being in three essentially three buckets. The first bucket is in, you know, preclinical, which is essentially a lot of people are interested in using the AI algorithms to help us in drug development, analyzing genomic data, better understanding cancer pathways, and and cancer mechanisms.

00;09;28;14 - 00;09;57;05 The second is what you kind of mentioned, which is the clinical bucket, which is really analyzing sort of radiology pathology images, electronic medical record data to better personalize our cancer treatments and help maybe earlier diagnosed cancer types for patients. And I think that's one area that's pretty advanced. I would say that the most mature versions of it are primarily in the field of diagnosing cancer, in part because we think of that as being sort of one of the best ways in which we can sort of effectively treat and eradicate cancers by catching it early.

00;09;57;17 - 00;10;37;10 And the last thing you talked about, which is something that's pretty exciting in my view, is the administrative piece, partially because I'm a clinician and I understand how, you know, clinic is is increasingly burdened from administrative tasks. The use of AI scribes has been something that has really advanced over the last maybe 2 to 3 years, in part because in within natural language processing, there's been this advancement of what we call large language models that many people have probably heard about, chat, TCP, etc. and those models have allowed us to basically take and and digest both text as well as audio images, audio signals and allow us to sort of develop more conversational pieces around AI

00;10;37;13 - 00;11;01;23 And so right now in my clinical practice, I oftentimes use an AI scribe who essentially is just sitting there on my desk with running in the background, and then I can just focus my efforts on talking to patients. And then that AI Scribe takes that audio, transcribes it, and then makes it into a conversational, probably more intelligent than even when I was actually talking to the patient version of a note for me to sort of not have to worry about that myself.

00;11;02;00 - 00;11;34;09 And this is something that I can tell you not, is very, very cutting edge. And we're very fortunate at Yale to have that resource available to us because it certainly reduces the administrative burden. When I was a resident, I would be spending hours writing notes and it would be taking me, you know, honestly away from patient care. In some ways, You know, this

is what people have referred to as pajama time, because a lot of people end up writing their notes late in the evening and spending truly hours documenting what happened during the day.

00;11;34;09 - 00;12;04;10 And with these tools, it's sort of incredible because it doesn't just record what you say. It filters what you say and what the patient says. And out of this conversation comes a very coherent clinical note that doesn't have all the extraneous information that comes up in the course of a conversation. That's important. As part of that conversation with the patient but doesn't really belong in a note.

00;12;05;02 - 00;12;23;06 Yeah, I think you're 100% right. So the initial iterations of sort of these scribe softwares were basically that they would transcribe every little piece of information that you talked about. And so then even, you know, your nonclinical conversations with the patient who've known about, you know, family or vacations that would show up in the note. And so then understandably, physicians weren't as interested.

00;12;23;16 - 00;12;50;24 But I think that now it's amazing how impressive that they are able to sort of understand what parts of the conversation are just not necessary in terms of making your clinical decision. And I think that from a clinician standpoint, if I put my clinical hat on, it's one of the most impactful things in our clinical practice because the worst thing and I've been in this situation is, is that, you know, when you're sitting in a doctor's office and the doctor's just looking at the computer and asking you a checklist of questions and trying to write their note because they're trying to make sure they don't lose track of, you know, all the other things that

00;12;50;24 - 00;13;07;18 they have to be dealing with. And so with these Scribe Technologies, I'm able to basically not even worry about the computer. And I just, you know, make sure that I can just focus my efforts on the patients. I really do feel like patients respond better in that regard. And I think that that's one of the real big advantages, and that's why I was a real early adopter of the sort of technology.

00;13;08;05 - 00;13;31;26 And then afterwards, you just briefly may read over the note to make sure that it's accurate and and you can sign your name. And it's really a very good, very solid reflection of what took place in that in that room. Yeah. And I think that that's the one thing that's important to note is that, you know, although these systems are very, very advanced, they aren't perfect.

00;13;31;26 - 00;13;53;11 And so it still does require a clinician to review, you know, whether or not it's analyzing an image or generating a note within your clinical practice. It does require a physician to make sure it's accurate. But I can certainly tell you that the efficiencies they're looking over a quick note, making sure that, you know, all the accurate details are in there is really a lot easier than you having to laboriously type it out yourself and remember what your conversation was like.

00;13;53;11 - 00;14;21;21 If you maybe are writing at the end of the day when you're kind of in your pajamas, as said, well, many years ago, I realized that even with what was then the standard, which was transcription, so somebody would listen to what you dictated, that there was plenty of room for errors. And once I happened upon a note that I had dictated and there's a drag called reception, and I was trying to say that I was giving the patient Herceptin two milligrams per kilogram.

00;14;22;00 - 00;14;59;19 And what was transcribed on paper is that I was giving her heroin two milligrams per kilogram, which was not quite what I had, is exactly what you don't want to have in a note.

Dr. Winer Exactly. Well, we're going to just take a very brief break. And when we get back, we're going to talk about all sorts of research applications of AI in cancer medicine.

Funding for Yale Cancer Answers comes from Smilow Cancer Hospital, where their survivorship clinic serves as a resource to support cancer survivors, providing patients and families with information on cancer prevention.

00;14;59;19 - 00;15;36;17 Wellness research on survivorship. Smilow Cancer Hospital.org. The American Cancer Society estimates that more than 65,000 Americans will be diagnosed with head and neck cancer this year, making up about 4% of all cancers diagnosed when detected early. However, head and neck cancers are easily treated and highly curable. Clinical trials are currently underway at federally designated comprehensive cancer centers such as Yale Cancer Center and at Smilow Cancer Hospital to test innovative new treatments for head and neck cancers.

00;15;37;04 - 00;16;01;20 Yale Cancer Center was recently awarded grants from the National Institutes of Health to fund the Yale Head and Neck Cancer Specialized Program of research Excellence or SPORE to address critical barriers to treatment of head and neck squamous cell carcinoma due to resistance to immune DNA damaging and targeted therapy. More information is available at YaleCancerCenter.org. You're listening to Connecticut Public Radio.

Dr. Winer Good evening again. This is Eric Winer with Yale cancer answers. I'm very pleased to be here tonight with our guest, Dr. Sanjay Aneja, a physician scientist here at Yale. Sanjay is a prostate cancer radiation oncologist and a researcher who focuses on artificial intelligence and its applications in cancer research. So maybe you could just start off telling us a little bit about what's going on in your lab and let's start with the area of prostate cancer and the kinds of questions that you've been able to ask. By using AI as it applies to prostate cancer. 00;16;52;08 - 00;17;12;00

Dr. Aneja Yeah, that's a great question, Eric. So a lot of the work and I up to this point in cancer care has really been focused on the diagnosis question, essentially looking at a healthy population of patients, looking at their images and trying to see if we can automate finding tumors.

00;17;12;10 - 00;17;38;28 But as an oncologist myself was really primarily focused in the arena of treating cancer patients. I really wanted to make sure that we could leverage AI to help us better personalize cancer treatment. So a lot of the work that we do is still analyzing cancer images, but really trying to focus our AI methods to better personalize our treatments, identifying what we call imaging biomarkers on, for example, prostate, MRI, MRI's to best personalized treatments for cancer patients.

00;17;39;09 - 00;18;03;11 The one thing that I think is oftentimes not appreciated by, you know, non physicians is the range of of sort of treatment aggressiveness that we can have for different cancer types. Certainly prostate cancer, there's a variety of different ways in which we can, you know, provide treatment. We can do things like surveillance where we don't treat them at all or very aggressively take out someone's prostate and then add radiation afterwards with hormone therapy.

00;18;03;19 - 00;18;31;25 And so within that spectrum of sort of treatments, the difficulty that we have is trying to figure out exactly where everyone should be placed. And there's certain techniques that we've had for a number of years, like looking at the pathology slides and lab values, which we think are somewhat effective, but they're not perfect. And so our lab, our hypothesis is that when we analyze the images, the personalized images of some of the individual tumors, we can essentially identify exactly what's the perfect treatment for that person, Which one would be the best treatment for them?

00;18;32;06 - 00;18;47;01 Because a lot of the data that we have right now in which we sort of make our decisions is based on a population level. We look at everybody. We see, you know, what treatment would be best for most people in that situation. But what we really ideally want to go to is a situation in which we say, you know, this is your tumor.

00;18;47;07 - 00;19;09;17 We looked at your tumor compared to everybody else we've ever treated here at Yale. And, you know, we think that this is the best treatment for you because you look the most like these are the people.

Dr. Winer And when you are doing this, you're looking at MRI, eyes of the prostate, or you're looking at pathology slides or you're looking at both and maybe more than that.

00;19;09;27 - 00;19;27;21 Dr. Aneja Yep. So our initial work was interested in MRI, where we are initially looking at MRI to identify sort of that high risk group. And now we've recently moved into pathology where we're actually analyzing the pathology slides. And so as I mentioned earlier, you know, there are so many different types of pictures that we have in cancer. And part of the fun is analyzing each of those individually.

00;19;27;21 - 00;19;59;12 But the more interesting thing for us is also combining all of those together, you know, and trying to figure out exactly how we can piece of the puzzle together in order to make sure we make a personalized choice

based off of someone's individual MRI, their pathology as well as their PET scan. And from that MRI alone. And the MRI, of course, is a picture you can glean information about how aggressive the cancer is and what some of the most promising treatments might be for that specific individual.

00;19;59;20 - 00;20;27;10 Yep. And so we've looked at MRI's for all the patients who are treated at Yale since we started our prostate MRI program. And we looked at their outcomes and we found that MRI was extremely predictive at telling, you know, which patients would respond to more aggressive treatments and which patients probably didn't need very aggressive treatment at all. And similarly, we found that when we add that MRI to our current risk for things, which is typically a blood test known as a PSA, as well as looking at the cancer cells underneath the microscope, we actually have even better predictive values.

00;20;27;18 - 00;20;58;01 And I think that's the other thing that people don't oftentimes appreciate about AI is that it can it doesn't mean that we're throwing away all of our old techniques that worked fairly well. We're only adding to them and adding and improving our way in which we can sort of personalize treatment for cancer patients.

Dr. Winer And do you think there's something special about prostate cancer, or do you think that analyzing various kinds of images, whether it's MRI or mammography or CT scans, could be equally useful in a whole range of malignancies?

00;20;58;09 - 00;21;18;27 Dr. Aneja So our group is very interested. Although my clinical practice is focused on prostate cancer, we look at a variety of cancer types we've looked at in collaboration with you and your research team. We've looked at breast cancer and we see that the mammograms provide very, very useful information. We work with Dr. Herbst and his team and looked at lung cancer CAT scans and figured out ways in which we identify high risk lung cancer phenotypes.

00;21;19;04 - 00;21;35;09 And then also we've worked with our neuro-oncology colleagues to look at CNS lymphomas, which is a very rare type of tumor that, you know, is not very frequently seen. And we've been able to gain information from MRI's in those patients as well. And so we think it's very, very much something that can work across a variety of different cancer types.

00;21;35;15 - 00;21;52;20 And the interesting thing is that a lot of the foundation that we can develop in order to analyze those images is very much the same. And so we essentially feel, I envision in the future that we have this platform in which all of the images are being analyzed and we can just kind of tell you, okay, you have a prostate cancer, you're going to look at this and then the the algorithm will look at that.

00;21;52;20 - 00;22;13;24 But then it also can look at you have a mammogram and it can look at of both images to some patients of both to.

Dr. Winer: And this kind of work has been going on for how long?

Dr. Aneja So I would say that in the area of, you know, computer vision, it's basically, you know, been around since 2015 was when we 2015 was when it initially started on just non-medical images.

00;22;14;01 - 00;22;30;08 And then in 2017 was when some of the first, you know, initial work that was done on medical images was done. And then now more recently, I would say that, you know, there was not much work that was done in the area of actual cancer imaging biomarkers. A lot of it, again, was in the in the realm of diagnosis.

00;22;30;08 - 00;22;42;22 And so I think that we're kind of in the forefront in that regard where we're really trying to personalize treatments for patients in the future. And I think that partly is because, you know, I'm a clinician at heart and so I want to make sure that I can, you know, in for my own clinical practice when I see patients in the clinic.

00;22;43;06 - 00;23;11;05 And I guess ultimately the proof will be in doing a study where you use this kind of image analysis for some patients and you don't for others, and you determine that that patients for whom you can do this analysis have a better outcome. Yeah, it's just one part of it. Probably the last step. I think the step would be sort of, you know, externally validating it on a broad, diverse patient population.

00;23;11;10 - 00;23;34;11 And then secondly, probably analyzing it in the context of an ongoing completed clinical trial. And then lastly, a randomized controlled trial to show that, you know, using this algorithm does actually truly provide benefit in terms of outcome for patients. We've been really fortunate. We were funded both by the U. 70 Foundation and American Society to look at this in breast cancer and then more recently for prostate cancer, the American Cancer Society funded our MRI algorithm for prostate cancer as well.

00;23;34;17 - 00;23;49;21 And so we're actually moving this into clinical trials over the next 2 to 3 years.

Dr. Winer And what's your gut sense? Do you think that this is going to add to the way in which we take care of patients?

Dr. Aneja Well, I wouldn't be doing it if I didn't think that I you know, if it wasn't going to be okay, It wasn't a fair question.

00;23;49;22 - 00;24;06;15 I probably the most biased person that you're going to have on the show in regard to that. But I would say that, you know, if I had to be as effective as possible, you know, the preclinical evidence and and all of our you know, all of our data up to this point shows that there's a lot of promise in the use of AI in in cancer treatment.

00;24;06;19 - 00;24;22;02 And I think that, you know, it's more so just trying to make sure that we analyze the right questions and find the right areas in which to do it. I don't think that I would say that it's definitively been shown that

AI is going to improve cancer treatment. The question is just how we can sort of find the right place for it in the future.

00;24;22;13 - 00;24;49;01 Dr. Winer Well, I have to tell you, I think you're right. And I would also say that if you had asked me 20 years ago if I thought that a mammogram could have enough information on it to provide anything other than information about whether someone has cancer or not, I probably would have said no way. And we've just come so long away in such a short period of time.

00;24;49;25 - 00;25;38;14 So I'm wondering if we can spend the last 5 minutes or so talking about breast cancer again in an area that you don't treat clinically but you have an interest in and talk a little bit about some of the work you've done there and preface it by saying that one of the major challenges in breast cancer is that there are some number of women who have breast cancer, and this is more common in older women where we identify a cancer on a mammogram and it's probably a cancer that would never, ever, ever bother someone during the course of their life because it's either slow growing or in some cases might just go away on its own.

00;25;38;14 - 00;26;08;11 Unknown Dr. Aneja We've been very interested in trying to understand if there were some way we could figure out which women fit that pattern versus women who very clearly need treatment and of course, at the moment we would recommend that everybody get treatment. So what's what's what are you doing with mammograms there? Yeah, that's a good question. So it's just sort of an interesting, you know, piece that I you know, when I thought about oncology as a medical student, I never thought we'd be here.

00;26;08;11 - 00;26;25;13 But our treatments are so good sometimes. And our ability to diagnose cancers is so good that now we're realizing that there's some cancers that probably aren't really worth us worrying too much about. Certainly prostate cancer and breast cancer. We feel like there probably is something like that where you know that it's not everyone, of course. It's just a subset of the population.

00;26;25;13 - 00;26;42;08 Yeah, just a small group of patients where we think that the side effects of treatment are probably not worth it because really, you know, if we just watched it closely, it probably won't cause any problems. And so, you know, we feel like there is there is that group of patients. And the difficulty is that there's no test currently right now that can help us identify those patients.

00;26;42;16 - 00;26;57;28 And so the first place to look is actually the mammogram. And, you know, this is a really cool project from my perspective because, you know, this is a project that our breast oncology team here at Yale Cancer Center brought to me and and said, you know, do we think that the mammograms will have that information that can identify what we call indolent breast cancers?

00;26;57;28 - 00;27;20;20 And so, you know, Eric and Dr. Richman and Dr. Berger, who are both, you know, breast cancer specialists here at Yale Cancer Center, member of our cancer center, have sort of collaboratively been working on sort of identifying sort of the best group of patients to analyze this question on. What we found is that when we analyze mammograms, we can identify these low risk breast cancers with almost about a 90% chance of catching them.

00;27;20;29 - 00;27;42;07 And that's really, really remarkable. Essentially, we're thinking that we could save a lot of patients from having aggressive treatment side effects and potentially, you know, the health care system from having to sort of, you know, worry about sort of the the ramifications of overtreatment. And I think that that's something that we're particularly interested in the grant that we have from the AARP Foundation, their cancer society is twofold.

00;27;42;09 - 00;28;05;12 The first is, as I mentioned, developing the algorithm that can identify those lower risk breast cancers. And we've been really fortunate over the last year to have a lot of success in that regard. For 90% of the breast cancers that are low risk, we can identify on mammogram alone, which is great. The second part was this is actually a really important piece, but it's something that is not my expertise, but certainly the expertise of Dr. Berger and Dr. Richman, which is the implementation of these sorts of things.

00;28;05;12 - 00;28;26;25 Like, you know, as someone who's a computer guy, I know I love making the algorithms, but, you know, the implantation piece is actually a really important component. The worst thing that would happen is that no one uses something that I build. And so we're doing a large survey study of folks here in our Yale community and our Connecticut community asking them sort of what are their thoughts on I, you know, would you be comfortable if an algorithm told us that we shouldn't treat your cancer?

00;28;27;05 - 00;28;50;14 What's the best way that we should sort of, you know, provide this information to you in a in a personalized way? Dr. Sanjay, anyhow, is an assistant professor and the Department of Therapeutic Radiology at the Yale School of Medicine. If you have questions, the address has cancer answers at Yale Dot edu and past editions of the program are available in audio and written form at Yale Cancer Center Talk.

00;28;51;01 - 00;28;59;06 Unknown We hope you'll join us next time to learn more about the fight against cancer funding for Yale cancer. Answers is provided by Smilow Cancer Hospital.