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00:00.000 --> 00:15.800 Support for Yale Cancer Answers comes from AstraZeneca. The Beyond Pink Campaign aims to empower metastatic breast cancer patients and their loved ones to learn more about their diagnosis and make informed decisions. Learn more at lifebeyondpink.com.

00:15.800 --> 00:52.300 Welcome to Yale Cancer Answers with doctors Anees Chagpar and Steven Gore. Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week, it is a conversation about reconstructive surgery during breast cancer treatment with Dr. Tomer Avraham. Dr. Avraham is Assistant Professor of Plastic and Reconstructive Surgery at Yale School of Medicine. Dr. Gore is a Professor of Internal Medicine and Hematology and Director of Hematologic Malignancies at the Yale Cancer Center.

00:52.300 --> 01:03.300 <vGore>Plastic surgery, I always go back to the 1960s and Joan Rivers and Phyllis Diller talking about their face lifts.

01:03.300 --> 01:32.800 <vAvraham>So, that's not me. We can do it all, but that is not what gets us out of bed in the morning, gets us excited. My focus is on breast reconstruction, particularly complex breast reconstruction, so microvascular tissue transfer. In layman's terms -- using tissue from other parts of the body to reconstruct the breast. We also do implant reconstruction, but really my passion is tissue-based reconstruction.

01:32.800 --> 02:00.400 <vGore> That's a lot for somebody who thinks about plastics as being, like I said, this cosmetic stuff that we used to make fun off and just on a total side note, my mom was always convinced that she was going to have her face worked on and it was our mission to prevent that from happening. So, anyway, I know this is not very interesting, but this is what it was like growing up in the 60s, for those of us who are old enough to know that.

02:00.400 --> 02:01.400 <vAvraham>Sorry, I don't know.

02:01.400 --> 02:07.600 <vGore>Yeah, you don't know that, that's good. Well, I am glad we have moved beyond that, although I think at certain communities, it is probably still the perception.

02:07.600 --> 02:32.800 <vAvraham>Cosmetic surgery plays a role and whatever people feel that they need to do to make themselves feel better about themselves is fine. I get more excited about dealing with patients that have a reconstructive issue, patients that have serious medical issues, I take care of almost exclusively women with breast cancer and I find that very satisfying.

02:32.800 --> 03:15.800 <vGore> Right. I totally get that and I really appreciate it and as a non-solid tumor oncologist and a non-breast oncologist, I am familiar with the increasing utilization of breast surgery for people who are at high risk of breast cancer, people who have genetic abnormalities and so on, and so much work has been done to enable cosmetic reconstruction even at the time

of mastectomy, but it sounds like the kind of things that you are talking about, may include that, but that is not really the main thing?

03:15.800 --> 03:48.600 <vAvraham>It is. We advocate for immediate reconstruction for pretty much all women. There are very few circumstances where we would not recommend a woman to undergo a reconstruction at the time for a mastectomy, and you know, you said cosmetic reconstruction, certainly the appearance of the breast is important because that is part of the function of the breast, but that is really not the end, and it has actually been a big lesson for me, particularly as a male surgeon dealing with a disease process that primarily affects women.

03:48.600 --> 03:53.800 <vGore>Yeah, I feel like I was about to be called out on my white maleness, which is okay, I am good with that.

03:53.800 --> 05:02.500 <vAvraham>We all have room to grow and room to learn, and I have learned a lot from the women that I have taken care of, and one of the first things I learned is that it does not matter what I think a breast looks like or should look like, it matters what the patient thinks. So, when I talk to patients about the goals of reconstruction, I talk to them about 3 basics and the 2 goals I tell them that we should be able to achieve right off the bat are that: #1, nobody that does not know them and meets them in their clothing should know anything that happened. So, they want to look normal in clothing and they want to look like themselves in clothing and not have this be a conversation starter. I think that is completely reasonable. And the second goal is that they should be comfortable looking at themselves. They should not have to avoid looking in the mirror on the way to the shower because they are horrified looking at themselves because for the past 40 years they have had breasts and now all of a sudden they don't. And the third goal takes some work and that takes work on my part to make things look as good as possible and also on their part because some of it psychological and that is being comfortable with somebody else seeing their breasts and maybe somebody else touching their breasts and things like intimacy and sex and lifestyle issues.

05:02.500 --> 05:46.900 <vGore>Gotcha. And not to go off topic, but in the last year or two, there was a thing on the internet about this woman who had a double mastectomy and who tattooed this magnificent bikini that you may have seen as a way to sort of celebrate her body and I am not a tattoo guy really, I do not tend to like tattoos, I am old whatever, but I have to say that it was very moving and beautiful, her approach and I am not judging anybody, but have you run into this? It is different kind of perspective right?

05:46.900 --> 06:13.600 <vAvraham>So again, we are going back to a little bit of what we go through when I talk to patients about breast reconstruction. The first option in breast reconstruction for mastectomy is no reconstruction. Nobody needs a breast to live and if it is not important to the patient, then it is fine to live without a breast and there are different ways that people can adorn themselves and cover the scars and sort of take ownership of being survivors,

and we are just there to support them with whatever they are comfortable with.

06:13.600 --> 06:32.700 <vGore>Gotcha. So, you had mentioned, this microvascular stuff and everything and I am thinking, I thought we were making a pocket and putting in an inflatable thing, I feel so ignorant here. Educate me.

06:32.700 --> 07:52.100 <vAvraham>I am a plastic surgeon, so I am used to oncologists, but what we do is actually a lot more technically complex than that. Again, without getting into minutiae that is going to bore your audience, it involves taking tissue with its blood supply because you cannot just take a large chunk tissue and move it around, it is going to die. So, you take the tissue with its blood supply, you find blood vessels in the chest and you hook them up under a microscope. It is a pretty tedious surgery, it is pretty technically demanding surgery, it is not something that is offered everywhere or by every plastic surgeon. And as a matter of fact, of the breast reconstructions that are done nationwide, 70-80% involve implants and only 20-30% involve using tissues, probably because of the complexity and the fact that not every plastic surgeon is willing to offer this. So, this involved additional training. You know, we were joking around before that it is a 10-year program and that is how long it took me, but it is my preferred method of reconstruction for most women, and when I see women, I tell them I have a bias towards tissue reconstruction, but it does not have to be their bias. There can be perfectly good reconstructions that involves implants as well.

07:52.100 --> 08:00.200 <vGore>I see. So, you are actually replacing the implant with the patient's own tissue grafted from somewhere else?

08:00.200 --> 08:19.700 <vAvraham>Well, the majority of the women that we see, by the nature of breast cancer are in their 40s, 50s, 60s, the majority of them have had children. So, that means that the majority of them have some excess tissue in their lower abdomen, in the lower belly, it is just the nature of the game. So, we take that off and we utilize it just like you would for a tummy tuck or very similar.

08:19.7000--> 08:22.500 <vGore>I was going to say you get a tummy tuck at the same time.

08:22.500 --> 08:55.100 <vAvraham>Yeah, it is very similar and then we use the fat and skin to replace the filling of the breast and any skin that has been removed. So, it is your own tissue, it does involve an implant which some women are really uncomfortable with the idea of a foreign body, it does not require upkeep, you know implants are devices and there is no such thing as a device that is going to last a lifetime and it ages with you. It is your own tissue, it ages with you, it moves with you and I think it is the state-of-the-art in breast reconstruction.

08:55.100 --> 08:57.600 <vGore>Wow! Is there ever a risk of tissue not engrafting?

08:57.600 --> 09:45.100 <vAvraham>Yeah absolutely. Anytime you do a technically complicated operation and you are hooking up blood vessels for any number of reasons, that could not work. Now, luckily, it is not common and I am going to knock on wood for audiences, I have not had a lot of that, certainly not in the past year, but it can happen and based on literature, it is going to happen about 1.5% of the time. So, I tell women that that is a risk of 1 in 70. So, not terribly common, but it can be devastating if it happens. We have done a big surgery, it did not work, we made an incision somewhere in the part of your body where you did not need surgery and now we are going to come up with a plan B, so it is devastating for both the surgeon and the patient, but again luckily I think we have gotten pretty good at it and it does not come up too often.

09:45.100 --> 09:46.900 <vGore>And is plan B then go to an implant or it is another graft, either way?

09:46.900 --> 10:06.000 <vAvraham>So, part of plastic surgery is having plan B, C and D in your pocket. So, I have a lot of options in the back pocket. We still can go to implants, there are tissues from other parts of the body or going without a reconstruction. It is a pretty complex algorithm as you can imagine, it took me 10 years to learn it.

10:06.000 --> 10:08.700 <vGore>I cannot learn in 10 minutes.

10:08.700 --> 10:16.500 <vAvraham>No, sorry. I know you are a big time medical oncologist, but even you guys, it is too much for 10 minutes.

10:16.500 --> 10:25.900 <vGore>I got it. It is fascinating. And you can do this kind of what sounds to me, I would call tissue grafting I guess it is probably appropriate right.

10:25.900 --> 10:30.000 <vAvraham>Yeah, it is tissue transplant basically, yeah.

10:30.000--> 10:34.900 <vGore>At the time of the mastectomy, you do not do the mastectomy right, that is a cancer surgeon?

10:34.900 --> 10:51.500 <vAvraham>No there is a breast surgical oncologist, a cancer surgeon who usually is specifically trained in that and we do it at the same time. It does make the operation longer, but again, like I said, we have gotten a lot of reps under your belt and we have gotten pretty good.

10:51.500 --> 10:56.800 <vGore>What kind of a time are we talking about for standard mastectomy versus with this.

10:56.800 --> 10:59.300 <vAvraham>One side 4-5 hours for the total operation.

10:59.300 --> 10:59.500 <vGore>It is a lot.

10:59.500 --> 11:21.300 <vAvraham>It is not actually, because a mastectomy with an implant reconstruction is probably going 3 hours. And with 2 sides, we

are looking at 6-8 hours. So, it is a long operation, it is a long day, but it is actually not long enough to have any significant impact on the patient.

11:21.300--> 11:23.000 <vGore>Sounds like a lot of time to be under anesthesia right?

11:23.000 --> 12:03.700 <vAvraham>Yeah, but it does not actually make a difference. Anesthesia is very safe and it does not actually impact anything in terms of the outcome at those lengths. If you are starting to get to 10-12 hours, you are looking at some potential problems, but even those are low. I tell patients not to really worry about how long an operation takes because it does not impact their outcome for the most part. What really impacts things is how long are they going to be out of work, how long are they going to be in the hospital and the length of the operation that is a more of a big deal for the family members and loved ones that are outside, stressed out about what is going on, but in terms of the safety of a longer operation, there is no concern.

12:03.700 --> 12:30.100 <vGore>I also remember, now we are going back to my surgical rotations as a medical student, and get this 1980, and people would come out of mastectomies and they would have all these sorts of drains and stuff and as medical students we would have to tend to, is this the same nowadays, is it different with your kind of surgery?

12:30.100 --> 12:41.100 <vAvraham>Yeah. So, mastectomies, all mastectomies whether reconstructed or otherwise require drains, and drains, we will do a little surgical pun here, they suck. They are uncomfortable.

12:41.100 --> 12:44.400 <vGore>We might get edited on that one by the way.

12:44.400 --> 13:14.500 <vAvraham>They are uncomfortable. Patients do not like them, but unfortunately you need them. The body does not do empty space So, empty spaces that develop over a long time such as when we develop as embryos - fill up with fat and empty spaces that develop as a result of injury and surgery is a type of injury, tend to fill up with fluid and if you leave fluid somewhere in a cavity, it is very likely to get infected. So, we have to put drains unfortunately. And I would say that that is the most uncomfortable part of the operation for the patient.

13:14.500 --> 13:18.300 <vGore>But that is not different with your grafting versus, so it is going to be the same.

13:18.300 --> 13:33.600 <vAvraham>No they have drains regardless. I will say we have deescalated things a little bit since you were a medical student. I suspect when a patient had a bilateral mastectomy, when you were a medical student, they would be in the hospital for 3, 4 or 5 days.

13:33.600 --> 13:36.800 <vGore>There were not many double mastectomies by the way in those days.

13:36.800 --> 13:51.000 <vAvraham>This week I did 2 double mastectomies with reconstruction for tissue of the belly and they both went home at day 3.

So, I think we have realized we can deescalate things for patients.

13:51.000--> 14:09.700 <vGore>That's great. I was going to make a comment, we do not know how much suffering they are doing at home, they used to do in the hospital, but we can talk about that afterwards. Right now, we are going to take a short break for a medical minute. Please stay tuned to learn more about the safety of breast reconstruction and different kinds of breast reconstruction with Dr. Tomer Avraham.

14:09.700 --> 14:25.600 Medical Minute Support for Yale Cancer Answers comes from AstraZeneca, providing important treatment options for patient with different types of lung, bladder, ovarian, breast, and blood cancers. More information at astrazeneca-us.com.

14:25.600 --> 15:17.600 This is a medical minute about pancreatic cancer, which represents about 3% of all cancers in the US and about 7% of cancer deaths. Clinical trials are currently being offered at federally designated comprehensive cancer centers for the treatment of advanced stage and metastatic pancreatic cancer using chemotherapy and other novel therapies. FOLFIRINOX, a combination of 5 different chemotherapies is the latest advance in the treatment of metastatic pancreatic cancer and research continues at centers around the world looking into targeted therapies and a recently discovered marker HENT1. This has been a medical minute brought to you as a public service by Yale Cancer Center. More information is available at yalecancercenter.org. You are listening to Connecticut Public Radio.

15:17.600 --> 15:52.100 <vGore>Welcome back to Yale Cancer Answers. This is Dr. Steven Gore, and I am joined tonight by my guest Dr. Tomer Avraham. We have been discussing breast reconstruction, particularly after cancer therapy or cancer surgery. Tomer, I made a little bit of a flippant comment right before the break, which was not really fair. I was just saying that we as physicians and hospital systems are really proud that we can now get people out of the hospital every 3 days, but what do we know about the patient experience at home with such an early discharge, you know with drains and pain medicine, do we know...I mean it is great that they are home, but are they home comfortably?

15:52.100 --> 17:44.700 <vAvraham>So, there are a couple of waste address. I think it is a valid point. So, the biggest barrier to discharging patients earlier is pain control. Okay, so patient cannot go home if they are in so much pain that you need to give them narcotics you know through the vein. They have to be able to be home and take pills and be reasonably comfortable and some of the things that we have done to improve the patient experience are as follows: #1, When we do our tissue transfer now, we very rarely take muscle with us and that was a big contributor to the pain. Now, we dissect tiny little blood vessels through the muscle, and 95% of the time we are leaving the entire muscle behind. So, that takes away a lot of the pain. Second of all, there is a medication that has been developed that is, again the technical term, liposomal bupivacaine, which is a long-lasting local anesthetic. So, it can last up to 72 hours. So, we

inject that using an ultrasound during the surgery right on top of the nerves that supply the belly. Basically the belly, it is a nerve block and the belly is largely numb for 72 hours, which gets you through the worst of it and the patients are really not complaining about a lot of pain. Second of all, the drains, yeah the drains can be intimidating. I am a plastic surgeon, so I am not scared of drains, but most of our patients are not doctors and they can be. So, we arrange a nurse that can come to the home once a day, take a look, reassure that everything is fine and then our patients have done really, really well and generally speaking, patients are more comfortable at home, it is their environment, it is their food, it is their bed and I have not had any complaints.

17:44.700 --> 18:00.600 <vGore>You sold me on that one. And I wanted to ask you about whether there is different cosmetic outcomes based on the tissue transfer versus implants?

18:00.600 --> 19:07.000 <vAvraham>Really the cosmetic outcome is very multifactorial and I really caution patients about that a lot when they talk about looking at before and after pictures, which are a big thing in plastic surgery. The problem is, when you are looking at before and after pictures, #1 - somebody is showing you their best results. #2, those people you are being shown are not you, they may not have your body type, they may not have your disease, they may not require the treatment that you can, so it is really multifactorial. Again, in my opinion, I think tissue reconstruction is more natural looking and natural feeling. When you look at implants for breast reconstruction, it is not the same as implants for cosmetic surgery for breast augmentation. When somebody wants their breasts larger and they have breast implants placed, that is placed under the breast and it really just presents the breast, it pushes it forward, and so the first thing that the eye or the hand encounters is the breast. Here, the implant is essentially sitting under skin, so it is fairly obvious that it is more of a breast mound than a breast per se, so it not always the most natural looking or feeling reconstruction.

19:07.000 --> 19:08.600 <vGore>What about nipple reconstruction?

19:08.600 --> 20:16.300 <vAvraham>There are a couple of things. #1, a lot of patients are now candidates for nipple-sparing mastectomy or nipple-conserving mastectomy where they do not need a nipple reconstruction and they can keep their nipple. The patients that are not going to have nipple reconstruction, there are a couple of ways to approach that. One of them is surgical. We do a small operation under local anesthesia which is again for lack of a better term, like skin origami and you make a little bump and then you get a tattoo around it, which gives you the areola and the areola is the colored portion around the nipple. The other option is to just get tattoos that really can fool the eye into looking like a nipple and there are many tattoo artists that do this and there is actually a few out there that specialize in this. And again, not to promote anybody, but there has been one that had a write up in the New York Times and now has like an 8-month waiting list to get that done. Now, the downside to that is that if you are going to a tattoo artist, it is not going to be covered

by insurance, you pay out of pocket. But for many patients, it is not an overly onerous expense and it is a very good option.

20:16.300 --> 20:23.700 <vGore> And the surgical approach, I assume that this is done at a different date.

20:23.700 --> 20:41.300 <vAvraham>Yeah. So usually, you want things a few months apart. You really want things to settle and be where they are going to be. From an aesthetic point of view, the nipple sort of centers the breast when you are looking at the breast. So, you do not want things moving around once you place a nipple. So, you really want things to show you where they are going to end up before you do a nipple reconstruction.

20:41.300--> 20:49.700 <vGore>Do you take pictures of the patients presurgical breasts to know what she looks like and what you are going to try to recreate.

20:49.700 --> 21:39.800 <vAvraham>Yeah, we definitely take pictures. We take anonymous pictures of all of our patients. There is no face in it and there is no identifying marks, even if they have a unique tattoo, I black that out and things like that. And that is for a couple of reasons. #1, it is for planning. So, we can sort of plan the operation in our head. Second of all, is for academic purposes. You know, I work in an academic institution and we try to publish our results periodically and it is good to have the photos as a form of data. And the third reason is that it is sort of an internal quality control because I go back and I look and I say to myself how am I doing, what would I do different, is this turning out the way it should be, and I think that is important also.

21:39.800 --> 22:37.900 <vGore>I had some surgery done for a breathing issue in my nose and this is now going on 8-10 years ago, I am guessing, and I have an area of numbness still under my nose and it is kind of curious to me and kind of interesting because one does not go around touching one's bottom of the nose too often right. And now, speaking of the breast as an erogenous zone for many people, I am wondering, and of course, there has got to be so much psychological complexity since it has been the site of disease and how one might feel about that as a sexual part of her body or part of her sexual expression. So, I mean, I am sure there is no one size fits all here at all, but what do you hear from women for whom the breasts have been important to their partner and to themselves as part of their sexual play.

22:37.900 --> 24:00.200 <vAvraham>So, I think that is an excellent question. The sensation specifically is an excellent issue and it is under-addressed. And that is why I make a point of addressing it with every single patient and really the breast oncologist and the breast surgical oncologist should be addressing it as well, and I think there is more awareness and we are doing a better job. So, here is the deal. The majority of the nerves that give sensation to the nipple and to the skin of the breast run through the breast. So, that means by definition they are removed during a mastectomy. So, initially there is no sensation, erogenous or otherwise the breast skin or to the nipple. Some sensation can come back with time. It is really highly unpredictable and I do not think it is reasonable

to expect it to be an erogenous sensation. There are some people out there that are looking at some things to try to improve it, but the reality is that at this point it is not truly modifiable, there is really not much that I can do about it, but I do think it is a bad hit to find out about it without knowing about it. I think that is unreasonable. And the other part of it is, for women who are debating between breast conservation, so a lumpectomy or a mastectomy, if their nipple sensation is important to them in their lifestyle, then when they are making that decision, certainly that would push towards a lumpectomy.

24:00.200 --> 24:04.400 <vGore>So, with a lumpectomy, depending on again where the cancer is?

24:04.400 --> 24:06.500 <vAvraham>There is a much higher chance that nipple sensation will be preserved.

24:06.500 --> 24:09.800 <vGore>Do you ever need to do reconstruction in the context of a lumpectomy?

24:09.800 --> 24:12.500 <vAvraham>Often. We do it a lot.

24:12.500 --> 24:15.400 <vGore> Some of them are big lumps right?

24:15.400 --> 24:45.800 <vAvraham> Right. So, again, the body does not do empty spaces very well and particularly because women that have lumpectomy will almost invariably require radiation, it can really deform the breast and there is a bunch of things that we can do either with implants or with transferring tissue or what we do for very large breasted women or women that have sagging after child birth, we make the same incisions that we would for breast reduction or breast lift and we do the lumpectomy through that and then we do a breast reduction or lift on the other side to make them symmetrical and it is in many ways a win-win for them.

24:45.800--> 24:48.900 <vGore>And is this also a tag team with the breast oncologist.

24:48.900 --> 24:55.600 <vAvraham>Yeah, a breast oncologist does the lumpectomy through incisions and we design incisions for them. When they are done, I can just turn it into a breast reduction.

24:55.600 --> 25:02.200 <vGore>Are there certain surgeons that you tend to work with, like as a team. I am sure there are only so many that go around in the place that you work.

25:02.200 --> 25:08.300 <vAvraham>Yeah. I work with several of our breast surgeons,

25:08.300 --> 25:09.800 <vGore> You got a working relationship with each other.

25:09.800 --> 25:24.000 <vAvraham>Yeah. And that is important too. When people work as a team, they can communicate better, set expectations better and come up with a multidisciplinary plan for you.

25:24.000--> 25:37.000 <vGore>Could you fill us in on sort of what the recent recall is about. I know a few years ago, there were concerns about silicone implants that were recalled. People thought they were causing a lot of immune disease and I remember the thing was kind of questionable.

25:37.000 --> 25:58.200 <vAvraham>So, the silicone implant thing, I forgot what year it started. It was either 1990 or 1992 and it started with 3 women that came on a show with Connie Chung and complained. It lead to a lot of hysteria and FDA banned silicone implants and the company went out of business and billions of dollars were lost.

25:58.200 --> 26:09.200 <vGore>It was not really ever shown medically as I recall that there was any association between the silicone and either a lymphoma, I think was one of the accusations and lupus and things like that.

26:09.200 --> 28:23.700 <vAvraham>Yeah. All that turned out to be false. And there was unnecessary hysteria. The issue that we are dealing with here is different. There are multiple types of implants. But the 2 types we are talking about are either smooth or textured. So, they are rough on the outside and for reasons that are not 100% clear, it is the textured implants are associated with a type of lymphoma. Now, this lymphoma is rare, but not as rare as we thought. When I was training, I was taught that it was 1 in a half million patients and not to really worry about it. And then, it was 1 in 100,000 patients, and then it was 1 in 50,000 patients, and now we are hearing that it may be 1 in 10,000 patients. So, that is concerning to me because that shows the time course to me and I think it is just a matter of time as more and more patients are diagnosed, your incidence is going to increase. So, I personally became worried about this before the FDA did and I stopped using these implants 3-4 years ago. And where I work, we have banned these implants several months before the FDA issue came up. Now, the FDA recalled implants from one specific manufacturer, now the other manufacturers are sort of touting, saying it is only from this one manufacturer, but I cannot really see a scientifically feasible way whether textured implants would be any less dangerous. And so, I think really we should be avoiding this implant at this time. Now, the question is what do women that already have these implants do. And it is a tough question because I do not think that we have an absolute reason to take them out and the FDA is not recommending that they absolutely take them out. Again, this is my personal feeling and this is not necessarily data based. If this was my loved one, I would probably want that implant out sooner rather than later. It is not an emergency, it does not have to be done tomorrow, but I would not want them living with that risk. And women that have breast cancer, just the idea of them having to worry about another cancer, I am here to take care of women that are getting cured of cancer and not to cause cancer. That is my feeling about it.

28:23.700 --> 28:33.400 <vGore>I mean, I guess the counter argument would be that you do not know whether the damage which is going to lead to lymphoma might have already been done and taking it out may have nothing to do with that.

28:33.400 --> 29:14.800 <vAvraham>And to a degree, the damage has been done and we know that women that have had textured implants have a persistent risk going forward, but you are remediating that risk, you are mitigating that risk by removing the implant. Now, the good news about this lymphoma is that it is eminently treatable for the most part, most patients are treated just by removal of their implants and do not even require chemotherapy. Having said that, I am not going to pontificate to you about lymphoma because you are a lymphoma expert, but having said that, there are patients that have to have chemotherapy and there have been patients that have died of their disease. So, it is a real thing.

29:14.800 --> 29:37.700 Dr. Tomer Avraham is Assistant Professor of Plastic and Reconstructive Surgery at Yale School of Medicine. If you have questions, the address is canceranswers@yale.edu and past editions of the program are available in audio and written form at YaleCancerCenter.org. We hope you will join us next week to learn more about the fight against cancer here on Connecticut Public Radio.