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00:00.000 --> 00:12.500 Support for Yale Cancer Answers comes from AstraZeneca, working side by side with leading scientists to better understand how complex data can be converted into innovative treatments. More information at [astrazeneca-us.com](http://astrazeneca-us.com).

00:12.500 --> 00:44.600 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 rehabilitation for cancer patients with Occupational Therapist, Linda Grenus, and Physical Therapist, Scott Capozza. Dr. Gore is a Professor of Internal Medicine and Hematology and Director of Hematologic Malignancies at Yale Cancer Center.

00:44.600 --> 01:03.500 <vGore>Why don't we start by talking about why cancer patients need physical and occupational therapy, like giving them chemotherapy or radiation, is the focus really on their cancer, where do you guys play a role?

01:03.500 --> 02:05.300 <vCapozza>So, we can play a role anywhere in the trajectory of cancer care. We understand that cancer trajectory starts from the moment of diagnosis, and so, we as a rehab team want to be able to start working with patients even before they have surgery to try to get them stronger going into surgery. And then, after chemotherapy and after radiation therapy, the body is trying to heal and there may be scar tissue that needs to be addressed, there might be cancer-related fatigue which is actually the #1 complaint of cancer patients that we see, there could be neuropathy which is caused by the chemotherapy, there could be late term effects from the radiation therapy, there could be lymphedema that develops 6 months after surgery and radiation or may develop 6 years later. And so, to have the rehab team in place to have these check lines along the way to make sure that our patients are recovering to their full potential.

02:05.300 --> 02:10.400 <vGore>And what about occupational therapy? We will talk about lymphedema specifically in a little while.

02:10.400 --> 03:17.300 <vLinda>Occupational therapy and physical therapy in this aspect of working with cancer patients is very similar. As a matter of fact, the program that we are working with at Yale is a program to try to get the rehab started as soon as possible so that the patients can be followed and we can pick up whatever problems they may be having. We basically want to assess. As an occupational therapist, when I see a patient, I am usually seeing them with a diagnosis of something, like for a breast cancer patient with a diagnosis of shoulder stiffness or lymphedema or axillary cording, and I will evaluate them for that first and then I will go from there and assess any other problems that they may have. So, there are so many various areas that you work on to deal with occupational and physical therapy. And in this area, we do a lot of very similar approaches.

03:17.300 --> 03:26.000 <vGore>And for our listening audience, could you explain what axillary cording is? What is axillary?

03:26.000 --> 03:34.000 <vLinda>Axillary is in the armpit area, and it occurs sometimes after breast cancer surgery.

03:34.000 --> 03:36.000 <vGore> This cording thing?

03:36.000 --> 04:07.800 <vLinda>The cording after mastectomy. No one is exactly sure why it occurs, but it seems to be what the latest I have heard is that the tissue is related to the lymphedema system, the lymphatics, and that a very, very hard cord forms sometimes from the breast area up through the armpit and sometimes down the length of the arm.

04:07.800 --> 04:11.400 <vGore>And does that lead to stiffness or discomfort?

04:11.400 --> 04:33.200 <vLinda>Both. It can make for a lot of problems with range of motion of the shoulder and the lateral trunk, the sidebending of a person. And it also can cause a lot of pain. It can cause some sensory problems as well if it is pushing on a nerve.

04:33.200 --> 04:36.800 <vGore>And, while we are at it, could you explain what lymphedema is?

04:36.800 --> 05:06.700 <vLinda>I can. Lymphedema is a collection of fluid that is not your regular fluid throughout your body. The lymphatic system has fluids that run through it, but it has protein-rich fluid which is difficult to move. So, normally our fluid just flows and our lymphatic system has a built-in system that helps to move the fluid.

05:06.700 --> 05:13.300 <vGore>It is basically like special blood vessels if you will, to carry the lymph right?

05:13.300 --> 05:13.700 <vLinda>Correct.

05:13.700 --> 05:14.900 <vGore>And they are not blood they are lymph vessels.

05:14.900 --> 06:37.600 <vLinda>And if lymphedema occurs in an arm or a leg after a breast surgery or after say uterine surgery where it effects the inguinal or the groin area lymph nodes, there can be swelling in the legs as well. We all think about breast cancer and the arms that become swollen, but it can happen in the legs as well. And that kind of fluid is difficult to move. So, lymphedema therapy includes a manual hands-on type of therapy, and you have to rewrap the fluid so it needs to have the manual treatment to re-route it. So, it is kind of like if you are stuck in a traffic jam on a highway and you cannot move, so they have to re-route you off of the highway. So, with the lymphatic system, if there is congested area either from surgery or from a problem with vascular flow, then you have to find a way to re-route it. So, you move it different areas. So, there is a very specific way that you move the lymphedema and it has to be followed that way. And then, after that you want to try to maintain moving

the fluid by doing compression wrapping and wearing compression stockings or a sleeve for the arm.

06:37.600 --> 06:44.900 <vGore>Gotcha. It reminds me of the inspector gadget kids show that used to be on, I do not know if you are familiar with that?

06:44.900 --> 06:45.000 <vLinda>I remember that.

06:45.000 --> 07:05.700 <vGore>And if you are in a traffic jam, you could say go go gadget tall or something right and then drive through and you like your lymph to do that too, but it is not that easy. And you cannot just give water pills, diuretics like they do for swelling in heart failure, we give Lasix and things like that, that is what patients always want.

07:05.700 --> 07:14.400 <vLinda>No, it can actually interfere because you are actually getting rid of the fluid, but you still have the protein stuck in there, so the lymphatic system will draw in more fluid.

07:14.400 --> 07:19.500 <vGore>Yeah, it is a terrible problem I have to say from patients I have known.

07:19.500 --> 07:26.200 <vLinda>Yeah it is. And so many people do not know that there is actually treatment for it.

07:26.200 --> 07:41.400 <vGore>And Scott, you recently achieved something very special, it sounds special to me anyway, which is a specific board certification in oncology physical therapy, is that right? Is there a specific board for oncology physical therapy?

07:41.400 --> 08:32.300 <vCapozza> That is correct. Yes. The American Physical Therapy Association has had board certification, it is like a specialization for other areas including orthopedics, pediatrics, neurology, but in March of 2019 was the first time that the American Physical Therapy Association had a board certification for oncology. This has actually been in the works since the mid to late 80s to try to get this program to try to get the certification launched. And it was pretty amazing to be a part of this group, the first group in the country to take this exam and to actually pass this exam and to also prove that oncology needs to be on the same playing field as orthopedics and pediatrics and neurology.

08:32.300 --> 08:33.900 <vGore>And did you have to do special course work or how does that work?

08:33.900 --> 09:19.400 <vCapozza>I studied a lot, not going to lie. I have to say that I spent most of my snow days studying, but it was good. We had a good group of people around the country. We used each other as resources and I would like to say that when it comes to oncology rehab research, I would not say that it is in its infancy, but it is definitely still in the toddler phase. So, we as physical therapists are realizing that we need to continue to move oncology rehab research forward so that we can come up with better standardization of care for all of our cancer patients.

09:19.400 --> 09:21.600 <vGore> That's fantastic. So, you are really in the inaugural class, if you will.

09:21.600 --> 09:21.900 <vCapozza>Yes.

09:21.900 --> 09:22.500 <vGore>How many others are there?

09:22.500 --> 09:25.500 <vCapozza>68.

09:25.500 --> 09:25.100 <vGore>68 in the first class nationally?

09:25.100 --> 09:25.600 <vCapozza>Correct.

09:25.600 --> 09:29.100 <vGore>Wow! That is just like one and a quarter per state.

09:29.100 --> 09:47.200 <vCapozza>It is humbling and it is amazing and it is a little scary, all at the same time. Still a little bit in shock, but it is exciting and I am excited to have that certification, that board certification to be able to bring that to Yale New Haven Hospital and to Smilow.

09:47.200 --> 10:21.900 <vGore>That is great. Now, what is your experience with patients, not necessarily in the pre and postoperative period, that have some physical or occupational therapy needs as assessed by their physician, do you find that patients are eager to participate or are they so focused on their cancer, that is all they can think about and they do not have time for that, they don't want to do exercise, just give me chemo, I am really exhausted, I mean I am sure patients are all over the board there is no one size fits all?

10:21.900 --> 11:14.200 <vCapozza>Yeah, that is very true. Patients are all over. I think some patients realize though that in a time when they do not feel like they have a whole lot of control that being able to exercise and be able to go to rehab is actually one of the few things that you can have control over. And if there is a way for a cancer patient to try to get themselves stronger, whether it is before surgery, whether it is during the cancer treatments themselves, whether it is after the cancer treatments, that is something that the patient can take ownership of and that is where it falls on the rehab staff, the rehab specialist to be able to identify those patients and be able to educate those patients to empower them so that they can move forward with their lives really.

11:14.200 --> 11:15.000 <vGore>Yeah.

11:15.000 --> 12:27.900 <vLinda>I agree with Scott and also I have found with the patients that I have seen in general that people are happy to be there and have another place that they can talk to an objective person and share their concerns and it is besides what we do physically. They may come in and may say, oh I am just coming for this one assessment that is it, and then you evaluate them and you talk to them and you educate them and different things that we can work together on. And I think a lot of times, they find not just what we can work with them on physically but a lot of our job is counseling as well, although I have no degree in counseling and also I have just cried with many patients

and laughed with many patients and I think to have another person they can just talk to that is not their family, that they can be able to feel better about themselves again and feel better about what is happening in their life and move on and just find small successes.

12:27.900 --> 12:43.200 <vGore>Yeah. And they may, I imagine, feel more comfortable sharing some of their concerns with you that they may not feel comfortable discussing with their physician or their care team, I imagine sometimes.

12:43.200 --> 13:14.000 <vLinda>Well, I think we are fortunate in having a long period of time to work with them. For instance, for myself, if I am evaluating someone, we have an hour to evaluate, at least currently, and if I am treating them, if they are an oncology or lymphedema patient, we have 45 minutes to an hour. So, if you see someone 2 or 3 times a week, you really develop a rapport. And I think there is a lot of education that goes on as well as what we can do physically.

13:14.000 --> 13:25.100 <vGore>That's fantastic. This is really a fascinating subject that I think we do not pay enough attention to and we are going to want to pick up some of this in the second half. Right now, we are going to take a short break for a medical minute.

13:25.100 --> 13:38.700 Medical Minute Support for Yale Cancer Answers comes from AstraZeneca, dedicated to advancing options and providing hope for people living with cancer. More information at [astrazeneca-us.com](http://astrazeneca-us.com).

13:38.700 --> 14:23.700 This is a medical minute about head and neck cancers. Although the percentage of oral and head and neck cancer patients in the United States is only about 5% of all diagnosed cancers, there are challenging side effects associated with these types of cancer and their treatment. Clinical trials are currently underway to test innovative new treatments for head and neck cancers and in many cases, less radical surgeries are able to preserve nerves, arteries and muscles in the neck, enabling patients to move, speak, breathe and eat normally after surgery. More information is available at [YaleCancerCenter.org](http://YaleCancerCenter.org). You are listening to Connecticut Public Radio.

14:23.700 --> 14:35.700 <vGore> Welcome back to Yale Cancer Answers. This is Dr. Steven Gore. We have been discussing rehabilitation after cancer. Scott corrects me that in fact he is not a doctor of physical therapy, but you might as well be.

14:35.700 --> 14:38.800 <vCapozza> I appreciate the promotion.

14:38.800 --> 15:00.200 <vGore> Sure. That and a cup of coffee will cost you 25 cents or something like that right? Lets look at lymphedema. I think many of us in practice and probably many of our listeners know people or may have known people with really bad lymphedema even of the arms and of the legs and it can be so disabling and how effective is the treatment?

15:00.200 --> 16:50.400 <vLinda> The treatment is very effective if there is good follow through. I have seen many cancer patients with lymphedema either in their arm or their leg who have followed through after the manual lymphs. So, the treatment includes manual lymphatic drainage, which is the hands-on gentle massage that is done in the appropriate fashion moving everything in the right direction. After that part is done, then I always tell the patient they should actually urinate a lot that day and the next day probably and that is how the fluid leaves the body because sometimes people have no idea how or where does the fluid go. And so that is the first part, the second part of the lymphedema therapy is to then try to maintain that loss of fluid through compression wrapping, which we do either at the leg or the arm and that involves a lot of commitment on the patient's part because you are wrapping or you are putting about 5 layers of wrap on the body, but you do it in a specific fashion and then remove it 24-48 hours later depending on when they can get back in the clinic. Not everyone can come back the next day or so then we remove it 2 days later. And then, that will have maintained their fluid loss from the treatment, and then what you are gearing to is get them fitted with the right compression stocking for their leg or sleeve for their arm.

16:50.400 --> 16:53.300 <vGore> These are not over-the-counter things?

16:53.300 --> 19:09.600 <vLinda>No. And they need to be fitted by a professional who does that. Some therapists do, I personally do not, I refer to other people who have been doing it 20 or 30 years. And so, then we make the recommendation to the fitter and then the fitter will take care of that and then the patient will get their garment. Now, also part of what we do is teach the patient how to self-manually control their own fluid. So, if a patient is very good about follow through with the self-manual treatment and exercises which are also important to perform, we do not bombard them with exercise but at least to have a few that they follow through on every day. It can greatly help maintain the loss of fluid. But it has to be a team approach between the therapist and patient and they have to really want to do it and really have the means to do it because not all people have the ability to perform the manual drainage on themselves and it is obviously not as involved as when the therapist does it, but we give them a handout and we teach them how to do it. And we also will teach people how to wrap if they can do it. But a lot of times, people cannot do that. So, with the follow through, people do tremendously well. I had a woman who had lymphedema in her legs, one leg specifically and she had lost 700 mL of fluid in her leg, which is about 3 cups of fluids. And she had come in and she was wearing oversized slippers or a cast shoe because that is the only thing that fit on her feet, and when she left, she was wearing regular sneakers. So, those kind of successes are awesome. And many people do not have that severe fluid, they have some and it gets removed and then they wear their garments and they are very successful, but it does have to be team work.

19:09.600 --> 19:16.200 <vGore> And is it important to get this started very early or can you be successful even with the people with very advanced lym-

phedema?

19:16.200 --> 19:21.400 <vLinda>You can be successful with the advanced lymphedema, but it does take longer.

19:21.400--> 19:35.800 <vGore> Yeah, I can imagine. I also can imagine particularly if you have lymphedema of the arm on your dominant side, if you are right handed, it must be hard to do the massage by yourself one handed in the first place, but especially if it is your weaker arm.

19:35.800 --> 20:48.900 <vLinda>It is very difficult plus if people also have any chemo-induced peripheral neuropathy, they could have problems with their pinch and their grip strength and not being able to feel as well, so that is another whole component. So, we do actually do some treatments for that as well, which is basically desensitizing. There is not a whole lot of evidence out there about it, but there are some things like desensitizing using a big bin full of rice which people can do at home and they can just work through it with their hand and just sit there with it for 10 minutes watching TV or something at home or they could put it for their feet because a lot of people have the problem in their feet as well, and I actually have a patient who told me that if she does it 10 minutes every night, she does not have as much pain and tingling in her feet. I have not had a lot of people tell me that. So, I have not done a study on it, but it is a pretty easy thing for someone to carry over at home.

20:48.900 --> 20:53.300 <vGore>Do you ever involve family members or support members to do the massage?

20:53.300 --> 21:11.500 <vLinda>Often. Yes, and some people have wonderful families who can come in, some people have no family and some people have family who are kind of afraid, yes we definitely try to involve family.

21:11.500 --> 21:58.400 <vGore>Great. Scott, one of the things that I see, I treat leukemia patients and you know many of them are cured, which is really wonderful, and either during their chemotherapy or they have been in the hospital for couple of months of intensive chemotherapy and now they are still getting chemo but it is less or maybe they finished everything or they have had a stem cell transplant, they finished everything and then they have this, which a lot of people talk about, chemo brain, which I am sure you guys hear a lot, but also this fatigue that they cannot shake and they are motivated people and we worry about their psychological state, could there be an underlying depression, they have been through this hugely traumatic thing, and I think sometimes there is, but is there anything physical therapy can do for, I just cannot get off the couch?

21:58.400 --> 23:19.100 <vCapozza>Absolutely. And as I was referring to earlier, this cancer-related fatigue is probably the #1 physical complaint that just about all cancer survivors will experience at some point during their cancer treatments or into long-term survivorship and younger patient population is the perfect example of that, and for us as rehab professionals, we can work with

those patients and really as part of the evaluation, we need to take a detailed history as to what that patient was doing prior to their treatment and then we need to meet them where they are at that moment and then we can come up with a comprehensive plan to get them stronger and to move them forward. I will tell patients that Rome was not built in a day and so, as the body is trying to heal and trying to recover from the stresses of cancer treatment, it has to be a progressive buildup and that is where you need a rehab professional to supervise that and make sure that the patient is not doing too little and also not doing too much to kind of trigger that fatigue because then they are short for the next 2 or 3 days and that is not what you want; you want something that is going to be kind of a low dose and more consistency in kind of building on that to get that patient stronger.

23:19.100 --> 23:57.300 <vGore>It reminds me of the joke, doctor will I play the piano again, I never played the piano before. One thing that I also see along those lines, more often in male people but not exclusively, people who were gym rats and feel very confident in the gym, weightlifters and they want to just jump in and do it themselves, they know their way around the gym, so part of you says well, take it slow and take it light but, should those patients really be supervised do you think?

23:57.300 --> 25:02.400 <vCapozza>I think so because again if they are experiencing something like peripheral neuropathy, like Linda was talking about, if they have it in their feet, that becomes a balance issue and so to take the strategies from the occupational therapist is the desensitization and then combine it with balance training that a physical therapist can do, you put all that together, then it is going to be safer for that person to go back to the gym again if they have the peripheral neuropathy in their hands, are they going to be able to lift the weights? And so, that is where the rehab professional comes in to make sure that we are addressing all of those concerns and then, yes I feel that these patients need to be followed kind of systematically, at least in the short term. And then, once they have built up their strength and they are kind of getting their confidence back, then we can say okay you can go back out in the community, but we should always be available at various checkpoints throughout their long-term survivorship, in case anything does ever change.

25:02.400 --> 25:10.100 <vGore> And we know never to trust a weightlifting lunkhead to take it easy the first time right? No offense to all you lunkheads out there.

25:10.100 --> 25:24.200 <vCapozza> Absolutely. Yes, we definitely do not use the no-pain, no-gain principle, so again we like to do this progressively and building on itself.

25:24.200 --> 25:55.800 <vGore>I would like to turn this subject in the last few minutes to something that we struggle with as providers, which is the role of rehab in later care, sort of getting towards end-of-life care where patients are in the hospital, there is always the question of, even though we are not in a

curative mode, will they benefit from inpatient rehab or outpatient rehab, is it a good use of resources, what is the thinking nowadays in either occupational therapy or physical therapy?

25:55.800 --> 26:39.200 <vCapozza>We can be a part of a cancer patient's trajectory at any point and that can include end-of-life hospice care, even if it is something as simple as doing a home visit for certain OTs or PTs to be able to go to their home and to make sure that that home is accessible for that patient. Something as simple as making sure there is no throw rug so the patient does not trip or to make sure that the bathroom has been adapted with grab bars to make it safer for that patient to transfer in and out of the shower. So, there is always going to be a role for occupational therapy and physical therapy whenever that may be for the cancer patient.

26:39.200 --> 27:00.300 <vLinda> I agree. Also, sometimes you can help them find better positioning for sleep, for sitting. If you go into the home or even if they come to your facility or if they are inpatient - just finding things other adaptive aids that might make things easier for them around the house.

27:00.300 --> 27:11.700 <vGore> And are we able to find ways to help patients maintain more sense of control and independence, I guess it depends on the disabilities.

27:11.700 --> 28:02.100 <vLinda> Yes, it depends on where they are at in their course of their cancer, but if they are at home and they do still want to do certain things around the house, whether it is cooking a meal or just they want to do the laundry, who knows why, but sometimes it just make them feel better that they are participating, so there are different adaptive aids that can help with opening jars and for opening pill containers and things to help with cooking. So, it just depends on the person and what their particular goals are.

28:02.100 --> 29:00.100 Linda Grenus and Scott Capozza are physical therapists specializing in oncology. 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.