WNPR Radio Voice 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 Today, we're going to be talking about exercise, and maybe a little bit about diet and about cancer survivorship. I'm joined tonight by Scott Capozza, who is a very experienced physical therapist who works at Smilow Cancer Hospital and in our Smilow Survivorship Clinic. Scott's a cancer survivor himself and has come to this work at least partially because of his own experience. And tonight, I hope more than anything to talk about the benefits of exercise, the benefits of rehabilitation, and very specifically about physical therapy. Welcome to our show tonight. It's really great to have you.

Scott Capozza Thank you, Dr. Winer. It's a pleasure to be here.

Dr. Eric Winer Feel free to call me Eric, since most of our guests do. So, maybe you could tell us a little bit about your own experience with cancer and what that was like since it was, I think, more than a few years ago.

Scott Capozza I was diagnosed with stage two testicular cancer when I was in my last year of physical therapy school. So, I was in my graduate year at Ithaca College. I was 22 years old. I was a marathoner, I had run competitively in cross-country and track, and I didn't have a family history of cancer. So, the cancer diagnosis really kind of came out of the blue for me. And at that time, I was diagnosed in 1988, so I am definitely a long-term survivor at this point. But at no point during my hospitalizations after surgery, or during chemotherapy, or post-chemotherapy was I ever offered rehab. I never had anybody talk to me about that. And Eric, I think you can appreciate this. You've been in the field a long time. I've been in the field a long time. I distinctly remember having a conversation with my medical oncologist right before I was about to start the BEP chemotherapy: bleomycin, etoposide, and cisplatin. He told me all the side effects that I could expect—the nausea, the hair loss, and that sort of thing. And then he asked, "Do you have any questions?" And I said, "Yeah, can I run while on my chemo?"

Dr. Eric Winer And what did he say?

Scott Capozza He said, "I don't know. Nobody's ever asked me that before."

Dr. Eric Winer Oh my gosh.

Scott Capozza Yeah, not really the best answer. I'm sure he meant very well.

Dr. Eric Winer It is probably worth saying that young men are among those who do get testicular cancer. That's, you know, in the early peak. There's another peak later in life. But the testicular cancer in 18-year-olds and 20-year-olds and 25-year-olds is certainly not common, but not so very uncommon. And I assume you felt something yourself, which is how this was detected?

Scott Capozza Yeah, I mean, I had symptoms. I had swelling and, you know, as a typical 22-year-old, I kind of let it slide until I finally buckled down and went to the doctor. Then I went to the hospital, got all the imaging, and everything. So, yeah, that is one thing that I always counsel students that I teach—the importance of self-exams. We talk about self-exams being so important for women to do breast self-exams, but also for men to do testicular self-exams.

Dr. Eric Winer And I assume you had what's often called a germ cell tumor, given the fact that you had chemotherapy?

Scott Capozza Yes, I had a germ cell tumor.

Dr. Eric Winer Yeah, because testicular cancer comes in two varieties—or actually more than that—but broadly divided into seminomas, where oftentimes we don't need to give chemotherapy, and then these germ cell tumors where we do. Although the good news about testicular cancer—and it's been that way for now really three decades—is that it's a very highly curable cancer. But you had chemotherapy, that sort of knock-you-on-your-back kind of chemotherapy. It could not have been easy.

Scott Capozza You know, and that's an interesting point that you just brought up there, Eric, that you said the cure rate is very, very high. It can be as high as 98, 99%, which is amazing. But in the middle of chemotherapy, that's definitely not easy. And then I definitely have struggled with some of these late effects.

Scott Capozza Because of the cisplatin, I've experienced hearing loss, and I didn't realize how much I was cheating by reading lips for years into the pandemic. And now, I couldn't read lips anymore. I couldn't hear my patients, and so that's when I finally said, "Boy, yeah, this is real. I need to get hearing aids." So that's a late effect that I've had to deal with. I've also had to deal with some pulmonary issues because of the bleomycin. Especially as a young adult survivor—which we see both with our young males but also our young women who are diagnosed with cancer—I had to deal with fertility issues. So I had to deal with a lot of that. And so I think, when I am working with my patients, especially my younger patients, you know, my patients who are in their twenties or thirties, I want to make sure that I am counseling them not just on the physiotherapy and the exercise, but also to make sure, "Okay, well, you know, did you do fertility preservation?" and kind of educate them on what are the immediate effects of treatment as well as the late effects.

Dr. Eric Winer So, Scott, let me just—before we get too far into this—let me just ask you that question that you asked your medical oncologist. So is it okay when I'm getting chemotherapy to exercise?

Scott Capozza The answer is yes. And thankfully, now in 2023, 2024, we have the evidence to show that exercise actually helps with not just tolerance to treatment but also the efficacy of cancer treatment. You and I were both at ASCO in 2025 when the Challenge Trial was announced. And so that was—I consider that kind of the "holy grail"—that showed the benefits of exercise and

how it can improve, again, exercise's impact on cancer treatment tolerance as well as overall survival.

Dr. Eric Winer Okay. So I think it is important to note, though, that, you know, for people who especially were really active going into treatment, they may not be able to exercise at the same level. People may not necessarily be able to go back to doing CrossFit or training for a triathlon or something like that.

Scott Capozza That's where it's important to, you know, work with a physical therapist or a rehab professional to kind of guide them. And—

Dr. Eric Winer Sorry to cut you off, Scott, but you cut out there. You may not have realized that. So I think we should pick up. Michael will figure out what to do with that part. You had just started talking about 2025 and the presentation of the colon cancer study—the Challenge Trial—that you were talking about. So you had just said, "We now have evidence that exercise might improve the efficacy of therapy." You can pick it up from there.

Scott Capozza Right. So yeah, Eric, you and I were at ASCO in 2025 when the Challenge Trial was released and presented, which again, I consider the "holy grail"—the thing we've been looking for—to show definitively that not only does exercise and rehab help with treatment tolerance, but it also improves overall survival rates. And so now that we have that evidence, that's great. But again, when I was diagnosed back in '88, '89, that evidence didn't exist. I had to figure it out on my own.

Dr. Eric Winer And that was in patients with colon cancer. I think it's going to be important to see that that exists in other cancers as well. But I think, as you very clearly made the point, exercise—even if it doesn't change the effectiveness of treatment—gets somebody through treatment so much better. And I would actually argue that it not only helps people from a physical standpoint, but that exercise in general is what I'll call a natural antidepressant. And so it allows people, from a mental health standpoint, to get through treatment more easily.

Scott Capozza I couldn't agree more. And I always tell patients that it's an opportunity for them to have some autonomy back. You know, when someone is newly diagnosed with cancer, they feel like they can't figure out left from right, up from down, and they don't feel like they have control over anything anymore. I can help counsel them on how to move their bodies safely through treatment. And to be able to help them with that, to educate them, and get them moving, especially if they've never been someone who's a consistent exerciser before, is really, really important.

Dr. Eric Winer And how do you advise people who tell you that they're just really tired, really fatigued from chemotherapy? How do you counsel people about balancing getting some exercise but not so much as to worsen their fatigue? And when should they do that exercise?

Scott Capozza That's a great question. So one of the things I need to know

is, what is their chemo cycle? Are they getting chemotherapy every two weeks, or are they getting chemotherapy every three weeks? Because I can adjust the intensity of their exercise based on where they are in their chemo cycles. Especially for people who are getting chemotherapy every three weeks, we have essentially an extra week where we can ramp up their intensity. But in the short term, I say, "Yes, if you're feeling increased fatigue in that 48 to 72 hours after you first get your chemotherapy, you don't need to do too much. Even doing some gentle stretching or going for a short walk around the neighborhood is a great start." I try to make a joke all the time with my patients that I was not a math major; I was a physical therapy major. I say, "Instead of trying to do a 30-minute walk in one go, can you break that up? Can you do a ten-minute walk after breakfast, another ten-minute walk after lunch, and maybe a third ten-minute walk after dinner?" That adds up to 30 minutes, and people often say, "Oh, well, I can probably handle a ten-minute walk." So, again, knowing where those patients are in their chemotherapy cycles allows me to modulate the intensity of the exercise. On that third week, if they are on a three-week cycle, I have my patients do strength training, and I have them lifting kettlebells because I know they're probably feeling better in that particular week, and we can really do some good workouts.

Dr. Eric Winer And of course, one of the side effects of getting therapy and being more sedentary is that you lose muscle mass. So I think one of the things you're trying to do in encouraging people to exercise and even use weights at times is to help reverse some of that loss in muscle mass.

Scott Capozza Yeah, and I would say that if we can start working with people before they start therapy, preventing muscle loss first and foremost would be ideal. And then, as they go through treatment, we work to try to prevent any further muscle loss, because that's only going to help with treatment efficacy as well as tolerance.

Dr. Eric Winer Well, I will confess that I am someone who has been an exerciser my whole life. I can't imagine functioning without exercising on a basically daily basis. I do it as much for my mental health as for my physical health. On days when I don't exercise, I just don't feel very good. And I think that's true of a lot of people who exercise regularly. Well, listen, we're going to have to take a very brief break now. We'll be back in a minute.

WNPR Radio Voice Funding for Yale Cancer Answers comes from Smilow Cancer Hospital, where a team of clinicians in the gynecologic oncology program provides comprehensive and compassionate care for women with gynecologic cancers, including cervical cancer. Visit SmilowCancerHospital.org. Over 230,000 Americans will be diagnosed with lung cancer this year, and in Connecticut alone, there will be over 2,700 new cases. More than 85% of lung cancer diagnoses are related to smoking, and quitting—even after decades of use—can significantly reduce your risk of developing lung cancer. Each day, patients with lung cancer are surviving, thanks to increased access to advanced therapies and specialized care. New treatment options and surgical techniques are giving lung

cancer survivors more hope than they have ever had before. Clinical trials are currently underway at federally designated comprehensive cancer centers, such as the Battelle Trial at Yale Cancer Center and Smilow Cancer Hospital, to learn if a drug or combination of drugs based on personal biomarkers can help to control non-small cell lung cancer. More information is available at YaleCancerCenter.org. You're listening to Connecticut Public Radio.

Dr. Eric Winer Welcome back to the second half of Yale Cancer Answers. I'm Eric Winer, and if you're just tuning in, I'm here tonight with Scott Capozza, a physical therapist at Smilow Cancer Hospital. Scott works in both our survivorship clinic and in general, working with patients and providing physical therapy. In the first half, we talked about some of the physical and psychological benefits associated with exercise, and we're going to move on.

Dr. Eric Winer So, Scott, I want to ask you about some of the effects of exercise on problems like lymphedema or neuropathy. Let's start with lymphedema, where for many, many years it was thought that exercise would just worsen lymphedema. And then there were studies that came out that suggested that wasn't the case. So, what are your thoughts about lymphedema and the role of exercise in either preventing it or even treating it?

Scott Capozza Yeah, there is definitely a role now for exercise in helping with the prevention of lymphedema. We actually have clinical practice guidelines through the American Physical Therapy Association that show that exercise can help prevent lymphedema and also manage active cases of it. There was a great study that came out all the way back in 2009 that showed that supervised exercise—I want to emphasize supervised exercise—helps not only prevent lymphedema but also can help control lymphedema when it's already present. Exercise is one component of what I would consider complete decongestive therapy, which would also include compression therapy and manual lymph drainage. But there's definitely a role for the exercise piece when it comes to edema management.

Dr. Eric Winer I think one of the things I just want to emphasize is your use of the word "supervised." And I think for someone who has established lymphedema, as opposed to someone who might be trying to prevent it, that exercise really does need to be supervised and involve a physical therapist, right?

Scott Capozza I agree. You want to start your lymphedema therapy with either a physical therapist or an occupational therapist, because both of those professionals can be lymphedema-certified. It's important to do it under their supervision and guidance to get a routine started. This includes not just the exercise component but also having the rehab professionals teach the patient how to do their own manual lymph drainage to try to control any kind of lymphedema. Then, as the patient becomes more proficient and confident in doing their exercises and their own lymphatic drainage, they can start to space out their visits. Ultimately, we want to get to what we would call a prospective surveillance model, where we are checking on our patients every so often—maybe every three months, maybe every six months—just to see how things

are going. But ultimately, we want patients to take over that responsibility so they are doing their exercises and lymphatic drainage on a daily basis, basically like daily maintenance—just like you brush your teeth every day.

Dr. Eric Winer Yeah, no, and I think that as a general rule, most of the people we take care of, of course, want to be independent. They don't want to have to be coming in all the time. Whether it's seeing a doctor or seeing a physical therapist, they don't want to be doing these things on a weekly basis or more often. They want to lead their lives. And I think very much what we try to do is get people back to their normal lives. What about neuropathy? Is there a role for exercise in the management of neuropathy?

Scott Capozza That's a great question. I have a very honest conversation with my patients up front when it comes to neuropathy, and I tell them there's no perfect cure for neuropathy. None of us have a perfect cure for it. I don't have a magic wand that can just make it go away.

However, from a rehab perspective, what I can do is assess their risk of falling. Because if you have neuropathy in your feet and you can't feel your feet—especially in the wintertime in New England when it's snowy and icy—you become a fall risk. And I can't have you falling, especially if you're in the middle of cancer treatment or really at any time. So, a lot of what I do with individuals who have neuropathy is balance training. We work on getting stronger, working on balance reactions, challenging their balance reactions by having them stand on different pieces of foam, doing obstacle courses, and performing very specific exercises. I also do some manual techniques on their feet to try to help get some sensation back. Ultimately, I'm assessing their risk of falling. If I can help prevent a fall because of the neuropathy, then that's my ultimate goal.

Dr. Eric Winer That makes sense. Now, I realize you're not a registered dietitian, but I'm sure patients talk to you about problems related to weight gain. Weight gain after cancer treatment is pretty common, and in fact, chemotherapy, if anything, tends to cause more weight gain than weight loss. What do you and your colleagues on the survivorship team tell patients about weight and how to avoid weight gain?

Scott Capozza Yeah, the concept of weight gain because of cancer treatments is very, very common. We see that often in survivorship. Through the Smilow Survivorship Clinic, patients are able to connect with a registered dietitian who is also board-certified in oncology nutrition to talk about healthy choices. It's never about fad diets or supplements. It's about healthy choices, portion control, and timing of eating. Often, our dietitians find that people don't eat during the day because they're busy or trying to take care of their children, or whatever it might be. So they end up backloading all of their calories at the end of the day, maybe an hour or two before they go to bed. Our dietitians work with patients on the timing of eating and try to help them disperse their meals or their calories throughout the day, rather than backloading everything at the end of the day. Now, from a physical therapy perspective, when patients come to

me with concerns about weight gain, I try to find ways to engage that person in exercise. Especially in long-term survivorship, when they're done with active treatment, like chemotherapy and radiation therapy, it's often a timing issue. I really listen to the patient and try to find out what their time constraints are. Are they back to work full-time? Do they have kids they need to drive to soccer or hockey practice? And then I work with them to figure out when and how to sneak in exercise. For example, my kids play soccer, so during their after-school practice, I'll go for a hike while they're on the field. I recommend that to other parents too—use your kids' practices as an opportunity to get a walk or a hike in.

Dr. Eric Winer Exercise for the kid and exercise for the parent at the same time.

Scott Capozza Exactly.

Dr. Eric Winer And in terms of supplements, patients talk to me and my colleagues about this all the time. I generally tell people that there's nothing that substitutes for a well-balanced diet. The most important thing in terms of maintaining one's nutrition is to eat healthful foods. One of the fears I hear, especially when people are trying to lose weight and do so quickly, is that they sometimes skimp on the foods that actually make us healthier and stronger.

Scott Capozza I just had this conversation this morning with someone in our survivorship clinic. They told me they were concerned about sugar, and they said, "Well, I've been limiting the amount of fruit I eat because of the sugar." I told them, "First of all, you're going to talk to our dietitian in just a few minutes. But fruits and vegetables have antioxidants, and they're high in fiber. Those are things your body needs. Can you have some blueberries or strawberries with your low-fat yogurt so you're getting protein and fiber?" These are opportunities to educate patients that they do need those "good sugars," so to speak, to make sure they're living a healthy lifestyle.

Dr. Eric Winer Yeah, no, I think that's a really important point.

Dr. Eric Winer So, for somebody who has gone past cancer treatment and they're now in that space after cancer—they're trying to get back to their normal life, and they're thinking about how to get stronger—how do you counsel someone who's just never exercised, is a little fearful of exercising, and you really just want them to begin to move a little bit more? How do you get somebody motivated if they're not that motivated themselves to do this?

Scott Capozza Well, I really listen to the patient and find out what's important to them. For example, if somebody has never exercised before, but they're watching their grandchild and they say to me, "I have a hard time getting up and down from the floor with my grandchild to play with them, or to pick them up and get them onto the changing table," then that's what we can work on. We can work on strengthening exercises so that it's easier for them to get up and down from the floor, and easier for them to pick up their two-year-old

grandchild and get them onto the changing table. When I frame exercise into something that is functional and important to the patient, I get more buy-in that way. Rather than saying, "You just have to go to the gym and lift a whole bunch of weights," I make it practical and applicable to the person sitting in front of me.

WNPR Radio Voice Scott Capozza is a physical therapist at Smilow Cancer Hospital. 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'll join us next time to learn more about the fight against cancer. Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital.