“Designing the Right Exercise Program for Your Cancer Situation” (Kathryn Schmitz, PhD, MPH) [#157]

Brad Power
August 20, 2025

“The most important message is for all of you to sit less and move more, whatever that looks like for you. If sitting is what you've got, then move more while you're sitting.” – Kathryn Schmitz, PhD, MPH

“We need to recognize that cancer patients and survivors are not a monolith. They're not all the same age. They're not all coming into the story with the same comorbidities. They're not all coming in with the same knee injuries. They're coming in with a broad variety of backgrounds. There has to be a triage process. One of the reasons medical oncologists don't want to say anything to their patients about exercise is because once they say, ‘I want you to exercise.’ Then the question is, ‘What's appropriate for this particular patient?’ And that's really complicated. There are validated triage tools that have been developed. One is called EXCEEDS, that I use heavily, that we can use in order to discern, ‘This person needs physical therapy.’ ‘This person would benefit from a home program that I can titrate and design directly.’ ‘This person over here can go to the Live Strong program.’ ‘This person over here can exercise on their own, because they're really doing quite well.’ We have to triage, and until we triage, until we recognize the importance of triage, we have lost validity in the eyes of the clinical oncology community. Because if you say, ‘I want everybody to exercise’, they think you have lobsters growing out of your ears. Because they're like, ‘Have you met my patients? Have you met the 87-year-old who is dealing with spine mets and terrible pain, and is not going to be able to get out of the chair?’ Then they're going to think, ‘I guess that would be okay for the person who started chemotherapy last week, who's 35 and was playing tennis the day before they started chemo.’ We have to underscore our advice by recognizing that not everybody is going to do the same program.” – Kathryn Schmitz, PhD, MPH

“I would ask that all of you find opportunities to talk to oncology clinicians and say, ‘I'm hearing a lot about the importance of exercise. What are you saying to your patients?’ I think that patients are the reason why we're going to make forward progress in this field.” – Kathryn Schmitz, PhD, MPH

Meeting Summary

Exercise is an intervention you can use to control or offset your cancer and the side effects of therapies. You may wonder which exercise and other lifestyle approaches you should adopt after your cancer diagnosis that are grounded in scientific research.

Kathryn Schmitz, PhD, MPH, UPMC Hillman Cancer Center is the interim director, associate director of population sciences, and founding director of the UPMC Moving Through Cancer Program. She is an exercise oncology researcher. Her work focuses on large clinical trials related to physical activity and cancer, across the cancer control continuum, from primary prevention to addressing the needs of advanced cancer patients. The central mission of her work is to make exercise the standard of care in oncology. Therefore, in addition to the efficacy

trials her lab conducts, she is also actively involved in national and international efforts related to implementation of exercise for people living with and beyond cancer. She currently leads three large NIH-funded trials ranging from primary prevention to advanced cancer patients, all with an exercise oncology focus.

What are the benefits of exercise for cancer patients?

- Reducing cancer-related fatigue (the #1 non-pharmacologic intervention)
- Improving sleep quality
- Reducing anxiety and depression
- Positively affecting body composition
- Enhancing physical function
- Improving bone health
- Managing breast cancer-related lymphedema (a chronic condition caused by a blockage in the lymphatic system, leading to a buildup of lymph fluid and swelling)

What is the scientific data evaluating the link between exercise and disease outcomes in patients with cancer, including potential benefits?

- Over 3,000 randomized controlled trials in PubMed validate these benefits.
- Organizations like the American Society of Clinical Oncology (ASCO), The American College of Sports Medicine (ACSM), and the American Cancer Society (ACS) recommend exercise during active cancer treatment.
- There has been an exponential increase in randomized controlled trials since the 1980s, showing exercise's positive effects.
- Ongoing clinical trials include "THRIVE-65," which explores the impact of exercise on chemotherapy completion in older breast cancer patients.
- The CHALLENGE trial demonstrated a significant improvement in disease-free and overall survival for Stage 2 and 3 colon cancer patients who engaged in exercise after treatment.
- The Moving Through Cancer Task Force's goal is to make exercise a standard of care in oncology by 2029. While exercise is beneficial for cancer patients, only 15% report being referred to exercise programs by their oncologists.
- Brisk walking is associated with improved physical quality of life in women with ovarian cancer (Women's Activity and Lifestyle Study in Connecticut (WALC)).

What is the general advice on exercise for cancer patients?

- Sit less and move more; any movement is beneficial - even small amounts of activity can help, even moving while sitting – the goal is to avoid being completely sedentary and to gradually increase activity as tolerated. The biggest benefit comes from going from doing nothing to doing something, so even small steps are valuable.
- Tailor exercise to your individual capabilities, including your condition, treatment stage, energy level, and health goals

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- Aim for up to 90 minutes per week of moderate-intensity aerobic exercise during treatment
- Do resistance training twice weekly
- For general wellness and reducing recurrence, increase to 115 minutes of aerobic exercise weekly
- Complement exercise with adequate protein intake

How can you personalize your exercise based on currently available scientific evidence?

- **Triage**: Use validated tools (like EXCEEDS) to assess your individual needs, considering factors like age, comorbidities, and current physical condition
- **Goal-setting**: Tailor your exercise program to your specific goals, such as managing fatigue, maintaining muscle mass, and improving overall wellness
- **Progression**: Start with small amounts of movement (even seated exercises), gradually increase intensity and duration
- **Professional advice**: Consult with an exercise professional who can create a personalized program based on your specific health condition and goals

What are some specific recommendations to optimize your exercise?

- If you are experiencing muscle loss, e.g., from hormone deprivation therapy, consider intensive resistance (weight) training 2-3 times per week with progressive weight increases with adequate protein intake (1.2 grams per kilogram of body weight daily).
- If you are doing extreme amounts of exercise, it might negatively affect your immune system, leading to increased cancer risk.
- If you are struggling to find time for exercise during your cancer treatment, do whatever minimal movement is possible, then titrate up as your energy increases.

What software tools or medical devices can help with your exercise program?

- To monitor your heart rate, consider devices like Fitbit, Garmin, Apple Watch, or Polar
- To monitor your body composition/muscle mass, consider tools like InBody
- To monitor your energy levels and fatigue and titrate exercise, consider the "Cancer Exercise app”

How can you learn more about exercise and cancer?

- Contact Katie Schmitz at schmitzk@upmc.edu.
- Review previous Cancer Patient Lab conversations on exercise and cancer, including:
    - “Exercise to Boost Your Immune System to Fight Cancer” (Dr. Tom Incledon) [#49]
    - Adding Exercise for Everyday Life and Developing a Medical Device to Personalize Cancer Treatment (Cathy Skinner) [#47]

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- “Exercise as a Countermeasure to Hormone Deprivation Therapy Side Effects and for Bone and Mental Health” (Kerri Winters-Stone) [#48]
- “Exercise and Cancer Development and Progression" (Lee Jones, PhD) [#143]

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Meeting Notes

KEYWORDS

Exercise oncology, cancer patients, physical therapy, American College of Sports Medicine, moving through cancer, randomized controlled trials, exercise benefits, fatigue, sleep quality, muscle mass, resistance training, clinical trials, patient support, exercise guidelines.

SPEAKERS

Kathryn Schmitz (74%), Rick Davis (7%), Brad Power (5%), Matthew DeAngellis (4%), Cindy Ness (3%), Helen Connelly (3%), Roger Royse (2%), Alexander Lalov (1%)

CHAT CONTRIBUTORS

Allen Morris, Siva, Helen Connelly, Roger Royse, Kathryn Schmitz, David Young, Rick Davis, Russ Hollyer, Vic Paglisotti, Jeff Dwyer, Robb Owen, Shailesh Chavan, Heather Mikels (Messerly)

SUMMARY

Kathryn Schmitz, a leader in exercise oncology, discussed the benefits of exercise for cancer patients, citing a 281% increase in randomized controlled trials since 2010. The ACSM guidelines recommend 90 minutes of moderate aerobic exercise and twice-weekly resistance training for symptom management. The Challenge trial showed a 28% improvement in disease-free survival and a 37% improvement in overall survival for stage II and III colon cancer patients. Only 15% of cancer patients are referred to exercise programs. Schmitz emphasized the need for personalized exercise programs and the development of AI and tech solutions to support patients.

OUTLINE

Kathryn Schmitz's Background and Initiatives

- Katie Schmitz is Interim Director of the UPMC Hillman Cancer Center and past president of the American College of Sports Medicine.
- The "Moving Through Cancer" initiative aims to make exercise a standard of care in oncology.
- A historical overview of exercise oncology includes early clinical trials and reviews from the 1980s and 1990s.
- There is a significant increase in randomized controlled trials in the field since the first ACSM guidelines in 2010.

Benefits and Outcomes of Exercise in Cancer

- The American College of Sports Medicine guidelines concluded that exercise benefits cancer-related fatigue, sleep quality, anxiety, depression, body composition, physical function, and bone health.

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- Research is ongoing in areas like cardiotoxicity, chemotherapy-induced peripheral neuropathy, cognitive function, and treatment tolerance.
- The National Cancer Institute's Exercise and Nutrition Interventions to Improve Cancer Treatment-Related Outcomes (ENICTO) consortium aims to improve cancer treatment outcomes through exercise and nutrition interventions. (The consortium funds clinical trials that examine how exercise and nutrition can help patients complete treatment, manage side effects, and improve their physical function and overall well-being.)
- The THRIVE-65 trial examines the impact of exercise on older breast cancer patients' ability to complete chemotherapy.

Guidelines and Recommendations

- The 2018 American College of Sports Medicine guidelines and the 2022 American Cancer Society guidelines recommend exercise during active cancer treatment.
- ASCO guidelines suggest that medical oncologists refer patients to exercise programming to address symptoms and side effects.
- There is a lack of evidence for dietary interventions during active cancer treatment, except for specific cases like a method of drug or nutrient administration that bypasses the digestive system, typically by injection or infusion into the bloodstream, muscle, or under the skin.

Challenges and Opportunities in Exercise Oncology

- The Challenge trial showed significant improvements in disease-free and overall survival for stage II and III colon cancer patients.
- Only 15% of cancer patients are referred to exercise programs by their oncologists, despite the evidence supporting exercise.
- The Moving Through Cancer Task Force aims to make exercise standard of care by 2029, with a focus on stakeholder awareness and policy changes.
- A multicolored brochure and a Spanish translation promote the benefits of movement for cancer patients.

Patient Experiences and Questions

- Roger Royse raised concerns about a study linking long-distance running to colon cancer, which Katie discussed in terms of the immune system's response to exercise.
- Matthew DeAngelis asked about the opportunity cost of exercising during cancer treatment, and Katie recommended the "Cancer Exercise" app for monitoring fatigue and energy levels.
- Helen asked about maintaining muscle mass during treatment, and Katie suggested focusing on resistance training and rebalancing body composition.

Technology and Future Directions

- There is ongoing research into using tech to support exercise programs.
- Cindy Ness asked about measuring zone two training, and Katie recommends Polar heart rate monitors for accurate tracking.
- Katie emphasized the importance of triage in exercise programs to tailor recommendations to individual patients' needs and goals.

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- She concluded by encouraging participants to advocate for exercise programs with their oncology clinicians and to move more throughout their day.

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TRANSCRIPT

Brad Power 0:04
Hi, I'm Brad power, and this is the cancer patient lab, and we're honored to have with us Katie Schmitz today. Katie is a leader in physical therapy, exercise and cancer. I ran into Katie actually, she was mentioned, recommended to me by a number of people over the years, but I ran into her at ASCO in Chicago. One of the highlights for me was sitting in on a session she was having, and she graciously, quickly agreed to lead a discussion with this group. So I'm looking forward to hearing what she has to say today. Just a quick few housekeeping things before we get started. This is for information purposes only. We try to arm our patients and caregivers in our community with information they can take to their medical team. This is not medical advice. Secondly, everything today will be made public. We're going to post a video recording. So if you're concerned about your image or your name or anything being publicized, please feel free to change your name, hide your image and don't say anything. And then finally, we are a 501, c3, nonprofit, and we depend on the kindness of people who make donations so that we can bring you useful information, like what Katie will be sharing with us today. So with that, I'll turn you over to Dr Schmitz.

Kathryn Schmitz 1:27
Hey, hi everybody. Thank you so much for allowing me to come and spend some time with you. I'm going to go through some slides, and I'm hoping that they'll be provocative and stir up some questions and maybe a controversy or two, so that we can discuss in the remainder of the time.

Just to level set, so you know who I am and where I am. I'm in Pittsburgh, Pennsylvania. I currently serve as the Interim Director of the UPMC Hillman Cancer Center, and I have been president of the American College of Sports Medicine. I started an initiative through the American College of Sports Medicine called “Moving through Cancer”, which has a bold goal of making exercise standard of care and setting oncology. And so I'm going to talk to you about that just a little bit as part of my slides, and hopefully you'll ask me some questions about it. So I want to make sure, as a level set again, that you understand that when I come to talk to you about exercise oncology, I am not the only person who has thought of this idea. This is not something that I cooked up in my garage this past weekend. The first human clinical trials that happened in the area of exercise oncology were in the late 1980s run by two nursing researchers at The Ohio State University, Winningham and Vicker. The first review paper in this area was published in 1996 I published the first meta analysis in the field in 2005 and the first set of guidelines that were published that recommended exercise for people living with and beyond cancer were published by the American College of Sports Medicine in 2010 I was the lead author of those guidelines. That set of guidelines was a join point and a change in the trajectory of the field of exercise oncology. There was a 281% increase in the number of randomized controlled trials in humans who have cancer between that first round table and when we held the second round table in 2018 and I, you know, senior author on that, on that publication as well, that exponential growth in the field of exercise oncology has continued unabated. If you were to search PubMed, which is where scientists go to look for peer reviewed articles, and you were to search for exercise and cross it with cancer and isolate it to randomized controlled trials in the English language, you would get over 3000 hits. So this is a

field that has grown truly exponentially in the time that I have been working in the field, which is since 2000 so not surprisingly, we think we can conclude a few things. So the second ACSM roundtable brought together about 40 experts from around the globe in order to review 16 cancer, health related outcomes and to see whether there was sufficient evidence to conclude that exercise had a benefit. And we chose as our rubric for deciding yes, no, something that had been previously developed in the Netherlands, which was a requirement that to say that there was an effect, there needed to be five randomized control trials, that those trials had to have 50 people in them, each or more, and that the effects that were seen had to be consistent across those five trials. So we're not talking about the fact that exercise helps fatigue in one study, it turns out that's been proven in hundreds of studies. It is, in fact, the number one non pharmacologic intervention that is recommended for cancer related fatigue. Exercise. We also know that exercise has a substantive and clinically meaningful effect on sleep, quality of life, anxiety and depression, body composition, physical function, breast cancer related lymphedema and bone health. There are, however, a number of outcomes that we think we still need some research on, including cardio toxicity, chemotherapy induced peripheral neuropathy. There's been some nice progress on that, but we're not quite there yet. Cognitive function falls, nausea, pain, sexual function, though, there are some exciting new evidence in prostate cancer and sexual function and exercise just this year out of Australia. And importantly, treatment tolerance. This treatment tolerance outcome is particularly important, because if we are able to document then doing an exercise program while you are going through chemotherapy improves your ability to withstand that chemotherapy that would have a survival benefit. And so the National Cancer Institute has funded an initiative called enicto, exercise and nutrition interventions to improve cancer treatment outcomes. And they have funded within that initiative, four large clinical trials, one called Thrive, 65 that I lead that invites older breast cancer patients into a randomized trial to do an exercise intervention versus not, to see whether we can improve the capacity of those patients to complete their chemotherapy fully with every bit of the dose that was originally recommended. There's also a similar trial in ovarian cancer and two in GI cancers as well, two trials in GI cancers. So I have had my hand in the American College of Sports Medicine guidelines since the outset of any efforts to try to put together these guidelines. But I want to make sure that you're aware of the fact that ACSM is not the only organization that has spoken on this issue. So the most recent ACSM guideline was from 2018 the American Cancer Society has spoken on this issue in 2022 and importantly, the American Society of Clinical Oncology, which is our professional organization in the US that is pretty unarguably the most important clinical oncology organization in the US has also spoken on this issue. And what ASCO said, and I quote, is medical oncologists should refer patients receiving chemotherapy to exercise programming to address common symptoms and side effects. One of the other things that I'll note before I go off of this slide is that if you were to backtrack through the three papers that I just put up here today, you would notice that there's hardly any overlap of authors between these three sets of guidelines, which means it's not the same 10 people going in a room saying that they think exercise is good and writing three separate papers, this is actually three distinct sets of experts from different organizations sitting in separate rooms and coming to the exact same conclusion that exercise is ready for prime time, so that ASCO guideline is worth unpacking just a little bit. So what they did with the ASCO guidelines to answer the question for adult patients with cancer undergoing active treatment, would exercise, diet and or

weight control compared to no intervention lead to meaningful improvements and outcomes related to treatment, toxicity, quality of life or cancer control? And what they conclude for exercise is what I stated before, oncology providers should recommend aerobic and resistance exercise during active treatment with curative intent. And they conclude that the reason why this should happen is very much the same as the outcomes that we reviewed earlier from the ACSM guidelines, but for diet and weight, very importantly, the current there's currently insufficient evidence to recommend for or against dietary interventions during treatment. Now I'm not talking about people who need parenteral. Alcohol nutrition during head and neck cancer treatment, or people who have extreme situations of nutrition. I'm talking about somebody who's receiving some kind of active treatment for their cancer. And do we have evidence that as they're getting active treatment for their cancer, that eating diet a versus diet B makes a difference in symptoms or in outcomes? And the answer is, we don't have the evidence to say that it does or it doesn't. Further neutropenic diets, which is to say diets that emit raw fruits and vegetables for the purpose of decreasing infection, are not recommended during active treatment. And finally, there is currently insufficient evidence to recommend for or against weight loss or prevention of weight gain interventions during cancer treatment as well.

Kathryn Schmitz 10:50
Sure, I'm going to have questions about this when I'm done with my talk. So what do these guidelines say? They say that for symptoms and side effects, the recommendation is to try to accumulate up to 90 minutes a week of moderate intensity aerobic exercise and to do twice weekly resistance exercise, but for general wellness or for reduction of recurrence and mortality, the recommendation is more exercise, 115 minutes a week of aerobic exercise and also the twice weekly resistance exercise. There is also extremely exciting news coming out of Canada. The Challenge trial was published in the New England Journal of Medicine in June of this year and was presented at the ASCO conference. And this is the first randomized, controlled trial evidence of a 28% improvement in disease free survival and a 37% improvement in overall survival for stage two and three colon cancer patients who were done with their treatment. So prior to this trial, all of our evidence about exercise and survival after cancer was observational, and we do have extremely strong data, observational data for breast, colon and prostate cancers, that exercise is associated with improved overall survival and disease free survival. So we are getting people to exercise. How is it happening? Is it actually happening out there? We have all this evidence. We've published all these papers. We have this brand new evidence from the challenge, challenge trial. It turns out we're not doing that well. So somewhere between 30 and 47% of cancer patients are adequately active, but only 15% of patients report being referred to an exercise program by their oncologist, based on an ASCO survey that was done in 2022 this is why we started the moving through cancer Task Force. Our idea with moving through cancer was to answer the question, what needs to happen for exercise to be the standard of care in the setting of oncology. By 2029 we had this retreat and started thinking about this in 2019 that's where the 2029 came from. We decided it was a 10 year goal for us to try to make exercise the standard of care. And what this group of experts, which included a medical oncologist, rehabilitation physician, a physical therapist, a behavioral scientist and nursing expert and exercise physiologist, and, of course, my dog, which was very important, all came together to come up with these agenda areas that we think are important. And I'm just

going to show you a few slides about each of these areas, just so that you know the kinds of activities that we're trying to do in the moving through cancer Task Force, and I'm hoping to activate all of you to be part of the stakeholder awareness campaign. This is my secret agenda for coming and talking to you today. So we have developed a beautiful, multicolored brochure with fifth grade reading level. We've translated it into Spanish. The idea is to introduce the concept, because most people, when they're diagnosed with cancer, are told to rest. And what we want is to translate that. Now I have a great story for you, just to give this sort of to ground this back in the 1950s Dwight Eisenhower, while he was sitting president, had a heart attack. He was treated up at what was then the piston naval and his cardiologist was sharply criticized for getting him out of bed so soon, three weeks after he had his heart attack, that's today. That's crazy. We get people up the next day, and we all understand the average person on the street, if you were to walk out into your city and say, Hey, is exercise good for your heart? Everybody would answer, yes. Everybody knows that. But that wasn't always the case. We used to think that rest was best after somebody had a heart attack. Well, we need that kind of paradigm shift in cancer so we had it. Somehow. In heart disease, we need it. In cancer, we need people to understand that movement is actually going to be very good for them, regardless of whatever it is that they're dealing with. If there is any chance that they can move more, even if it's by one limit of time, then it's going to have benefits. So our message throughout the entire document that we have developed is that movement is good. Any movement is good, whatever you can do, sitting in a chair, whether you can stand or not, movement matters. I've also written a popular press book on this topic. My spouse is a head neck cancer survivor. I wrote this book because of the experience of being a caregiver and because of the strong experience of realizing that I really needed somehow to translate the scientific evidence based into something that was easily understood by the lay audience. And so that's that book is out there now and available. In addition, we have been trying to change policies to try to get exercise to become standard of care. We've made some really nice progress in breast cancer with the national accreditation program for breast centers, which now requires that when women are being treated by a medical oncologist that there must be a recording of an exercise recommendation in the electronic medical record, so that you know there's, there's some documentation that there was a conversation about exercise with the patient. We are hoping to set up a policy agenda and to we are actively participating in efforts to change the physician sorry, typo there not physical fee schedule, but the physician fee schedule to include supervised exercise training, including for patients who have had a diagnosis of cancer. We are working on that, specifically with CMS. We also have documented where all of the oncology rehabilitation and exercise programs are across the United States. What you see are black dots. Those are where the oncology rehab and exercise programs exist. You can see they're largely concentrated on the Mid Atlantic region. And you can see that there's a lot of red areas, those are the rural areas that have no oncology rehabilitation or exercise programming, and the blue areas are the urban areas without that programming. Good news is that there are over 2100 programs across the United States. The less good news is that when we do geospatial analysis, we find that there are differences in the availability of this program according to race and ethnicity, socioeconomic status, rural, urban status, cancer incidence and cancer mortality, and further that there are 162 cities with 50,000 residents or more that have no programming available whatsoever. We're hoping to develop a lot of telehealth programming. To try to address this, we have developed a

registry of all of those programs. It is available at moving through cancer.org, it is updated with a triage tool, so if you go there, now, there's a validated triage tool that you can fill out that will then tell you what kind of programming is most appropriate for you, and then will guide you towards programming in your geographic area or online, if you prefer something to do online. I just want to finish by saying this is not something that I've been doing all by my lonesome. There is a task force that includes a medical oncologist, a pmnr Doc, a behavioral scientist, implementation scientists, physical therapists, you know, etc, etc, and representatives from the American Cancer Society as well, that help to move this agenda forward. And I'll just say that a lot of this work happens because of funding from the National Cancer Institute in the American Cancer Society. So I'm immensely grateful for that, and now I'm going to stop sharing so I can see all of you, and I see one hand up, Alexander. Oh, you're on mute.

Alexander Lalov 19:21
Thank you, Dr Schmitz for your presentation. I know I have asked this question before, but I'm going to ask again. I am currently on androgen deprivation therapy for prostate cancer, yes, and also on Manjaro for type two diabetes, both therapies have side effects of muscle. I'm losing muscle tissue, and in order to compensate, I'm doing. In resistance training four times a week. Great intensive. My question is, how can I build muscle tissue in a complete absence of testosterone?

Kathryn Schmitz 20:14
We have more recent data since I was last asked this question that shows that you actually can build muscle in the setting of antigen deprivation. The data comes out of Australia, from Rob Newton's lab. And I would also state that if you are going to be trying to build muscle, you need to make sure that you're taking in plenty of protein as well. So it can't be just that you're doing the exercise, but you have to be taking in the protein as well. But we do have evidence now out of Rob's lab, he is showing that doing intensive weight training in ATT patients can result in muscle building muscle. So, so we do, we do see some evidence that that's possible. Rick

Rick Davis 21:11
I have been working along this path with you since 2008 where you probably don't know I work. I worked hard back then with Regan Fredericks, who was the very first person to be certified by ACSM. And I had a vision back then, because I was diagnosed with stage three prostate cancer, and I was an endurance athlete, and I was partly treated at UCSF, and there was great diet support, but there was no support for exercise. And I thought, This is crazy. Why can't we have some exercise support, just like we get referred to it to a dietitian. And I started working with with macro and Peter Carroll, UCSF. You may not know this, but UCSF created a booklet called Movie through cancer around 2009 or 2010 but I just noticed it's not in print anymore, unfortunately. And it was always my vision to create an exercise counselor that was clinic based, and I found money, and UCSF created that program, which still goes on. It's really successful. I created a nonprofit called medefit, which is still around medefit.org, but we've never gotten any traction. I would love to work with you so that we can get this, this exercise based clinician. It was at the time, it was Jane and Regan that were doing it at UCSF. And it was a, it was so successful, it was adopted into their general budget. And it continues today. So,

and, you know, back then, in 2008 was really, well, largely, it was Melinda Irwin and her limb and her lymph, a lymph node for breast cancer work that was being

Kathryn Schmitz 23:31
that was me. Wasn't Melinda, that was me. I did the shoe.

Rick Davis 23:35
Well, I don't know why we thought it was, but Melinda was doing stuff as well at Yale, wasn't she? Yeah, so, so we really go back a long time, so I'll send you my email. Will connect, if there's any way. At AnCan we strongly promote, we strongly promote exercise. I mean, I just had a guy last yesterday that we were talking to who's going through chemo, and we're trying to get him to exercise during chemo. I'd love to work with you. It's so great to meet you in person.

Kathryn Schmitz 24:11
well, and Reagan is one of my dearest friends in the world. So I worked, I was on the board for sunflower wellness.

Rick Davis 24:20
And, oh, really, so was I. But they threw, they threw me off. Unfortunately, that's another story. But yes, Reagan and I was on, I was on sunflowers, sunflowers board, Bill and I didn't see eye to eye. So and then we and then we went off. And we've, we've done our own thing. So,

Kathryn Schmitz 24:40
yes, all right. Very nice to see you Rick, and please be in touch with me.

Rick Davis 24:45
Yes, I will, I will. I'll put my email address in the in the chat window for you. All

Kathryn Schmitz 24:51
right, fantastic. Thank you so Roger,

Roger Royse 24:55
yeah, hi, good morning. Thank you for the presentation. I wonder if you're aware. I mean. Just yesterday. In fact, it was reported in the New York Times and several other outlets, a study from Virginia showing a link between long distance running, meaning ultra marathons, and high incidence of colon cancer. And in that study, these findings are kind of incredible. It says that of the study, there's only 100 participants, but 15% of them had advanced cancers, compared to one to 2% or, you know, with risk in non runners. And I did. I saw this quite a while ago, before it hit the public, and I know the doctor that did the study is theorizing that there's a link between the running and the cancer, but I kind of wonder, what else is going on there? There must be something else going on. It just doesn't make sense to me. I mean, maybe it's because I used to do distance running, and still do, and I know that when I was doing that, the diet changed completely. I mean, all we ate was junk food, because that's the only way you could get enough calories. I remember stopping and calling for a pizza out in the middle of nowhere, in the road,

because you just had to be constantly eating high calorie food. I think that's what it is. But wonder if you have a thought on that?

Kathryn Schmitz 26:22
Yeah. So I haven't seen the study, and that's, that's fascinating. So I'll go, I'll go take a look. But what I can tell you is that there is a, you know, an upside down U shaped relationship between the immune system and amount of physical activity. So, so think about an upside down view. It's not quite, it's sort of an upside down J so, you know, the the immune system is not as healthy when you're sedentary as when you're doing activity, but then when you get past a certain point of activity, the effect on the immune system is actually quite negative. And so, you know, we are increasingly sensitive to how the immune system is playing into cancer risk and risk of you know, and our ability to treat cancer as well. So, so if, if the piece that you're talking about focuses on people who are ultra marathoners, people who are like Uber distance runners, I would I, I would hypothesize that it could have something to do with the negative effect of that extreme amount of exercise on on the system. I think what's really a shame is that a report like that can then be used by couch couch surfers as a reason not to exercise, which I Oh, such a headache. So thank you for telling me about this study. I'm going to go look for it, and I very much agree with you, by the way, that there are a lot of other effects happening along with the ultra running, including the diet, including, but not limited to the diet. So thank you. Thanks for the link, Matthew, thank

Matthew DeAngelis 28:16
you. First of all, thank you for your presentation. Really appreciate that you're doing this. I hope I can articulate this question. Well, I'm a colorectal cancer survivor. I just finished treatment. I had surgery seven, eight months ago, you know, followed by azureb bin treatment. And so I was exercising by as a matter of course, because I was in physical therapy for the surgery. I had open surgery. My experience was that, you know, as I got into treatment, through a couple of rounds of, you know, one or two months of treatment, that the energy cost of just going to physical therapy was noticeable, right? You know, like I was useless for the rest of the day. And, you know, exercising, not because it was going to improve my cancer outcomes, but for another reason. So, can you comment on like the the like the opportunity cost of exercising, and I had the luxury of being able to be on medical leave, and I was telling medical leave now, but for talk to a lot of other patients that are working to keep their health insurance while on treatment and, like, managing energy and just barely getting by. And, you know, being a spouse, being a parent, for the, you know, younger and younger diagnosis is for colorectal cancer. You know, where do you get the how do you budget in the energy to exercise? And, you know, is the is our employers, you know, and healthcare system supportive of giving you the opportunity to exercise, you know, giving you the space to exercise if you're managing your energy and just getting by, you know, working or doing the other things you need to do to support yourself. Yeah,

Kathryn Schmitz 29:45
I, you know, so, so I'm gonna, I'm gonna answer by, by stating that there is an app out there called cancer exercise. It's available on the Android as well as the you. A Apple platform, and

one of the things that it does exceptionally well it was developed by Anna Schwartz, who is kind of one of the grandmothers of the field. She's a nursing scientist. And one of the things that does exceptionally well is it helps you to monitor your changes in fatigue, so that you can start to figure out what time of day is a better time for you to be physically active, and also to figure out the opportunity cost exactly of you know. So what is the cost? So you do 15 minutes of exercise and now you have to be on the couch for six hours. Well, that's not a good bargain, right? So you're not going to do 15 minutes, you're going to do five minutes, and then maybe you're only on the couch for an hour, you know, so you have to, you have to titrate and, and the, the the challenge is that, you know, figuring out how to do that titration requires some coaching, and Anna has done her level best to figure this out within an app and and I think it's, I think it's a good app. I think it's, you know, I think it's worth, worth investigating. But I think that people do need to be coached about, you know, time of day that makes sense for you to exercise. Generally, people do better with their energy at the earlier part of the day. The opportunity cost and not overdoing it. So that, if you, if you hear 90 minutes a week of aerobic activity, and, you know, and you're like, oh my god, you know the idea of 30 minutes of activity, the opportunity cost for that just may be too high. So it could be that during certain segments of your treatment, exercise is 10 minutes. You know, exercise is five minutes. Could be that you need to focus on the resistance training and do the resistance training twice a week during the time that you're going through the active, really tough portions. And there's less opportunity cost for the resistance training than the aerobic activity, generally speaking. So you know. So there's titration up and down, and we absolutely understand there's the way that I talked about it actually, in my book, is a way that I think could be quite helpful, and that is that we absolutely understand that there are days when you cannot get off the couch. And you know that that the opportunity cost is just too great. You just can't like there is no there is no opportunity. There's there's just no energy. There's nothing there, you know? But I will also tell you that no one, including people who are in the ICU, benefit from lying still all day long, every day, no, no one benefits from that. Our bodies are meant to be in motion again. If it's a single limb, that's that's what it gets to be. If it's in a chair, that's what it meant to be. So so we, we do benefit from more movement. What more movement means may be titrated quite heavily, Matthew, depending on where you are in your treatment. And I would submit that the people who are trying to maintain work while they're going through chemotherapy for colon cancer, which is very difficult chemotherapy to go through. Are exercising because they are getting out of bed and moving and going to their offices and doing what they need to do. So So I think that that's a form of of activity, if you will. So am I? Am I making sense? Does that help? That is

Matthew DeAngelis 33:39
helpful, I appreciate it, and I will check out the app. And I think you know the it, if you're in the middle of treatment and you're trying to, you know, spend your energy wisely, you know the having the space to be able to do that and say, All right, well, I'm going to work out for five minutes me on the couch for an hour that you can afford. You can afford to spend that hour of your day for the benefit of the five minutes that exercise, you know, getting, having your oncologist say, by the way, here's an exercise program, and then, you know, it's a pamphlet, versus what you're talking about, which is, you know, active coaching, or, you know, being given apps that can really explain, like, here's how to do it and titrate up. You know, is something that

would be really helpful. And, you know, I appreciate the information you shared, and I'll definitely check it out. And thank you again.

Kathryn Schmitz 34:24
Most welcome. And I am putting my email address in the chat and so that you guys can find me. I saw that there were two questions from Russ, how much protein do you recommend per pound of body weight. It's an annoying answer, because the way, the way that it's done is, is with kilograms, but it's generally one to 1.2 grams per kilogram of body weight. So go, just get online and figure out, you know, trans. Translate that into actual food. But, you know, generally speaking, we don't eat enough protein in the American diet. That's changing. We are eating more protein over time, but, but I think that if you can translate that into the amount that you need to be taking in on a daily basis. That would be, I think, quite useful for all of you. And do I believe one challenge is the lack of exercise education among medical oncologists? Yes, it is actually a focus of the moving through cancer initiative. I didn't want to put up too many slides, but I will say that one of the things we're doing is developing continuing medical education credit courses for medical oncologists through an organization called Haymarket, which offers CME credits to physicians. And what we're thinking is that if we can do one hour things that just teach them about exercise oncology, that will help us move move the gender agenda forward. I did see that there was a longer comment. I didn't read the whole thing about how helpful it would be to get medical oncologists, Clinical Oncologists to to talk about this. And while I absolutely, wholeheartedly agree, I also want to be very clear that I don't ever want to make a medical oncologist wrong not spending the time to bring this up because they are so busy. And I don't know if you all are aware of this, but we actually have a mismatch of the number of people that are going to be diagnosed with cancer and the number of medical oncologists in this country, and so they're moving faster and faster and faster. And so we need to figure out an infrastructure around them that allows them to do a good job of talking about exercise. If they can say, I want you to exercise. Talk to Katie, you know, and then there can be somebody in the clinic who can take them through a triage process and help them to understand what kind of exercise and how to titrate it according to their energy level, and all of the other things that we need to be able to do as people go through their treatment. I think that would be really useful. Brad,

Brad Power 37:11
yeah, just building on what you're just saying. What are you seeing in the development of apps or AI to help, because I use something called Med bridge, and I've got some exercises with my rehabbing, my knee replacement, and I'm I'm very diligent, but it reminds me every day to do my exercises and tease them up. And it has demos, and I do those exercises, and then an AI could do all of the things you were talking about, about reminding people and giving advice and titrating all of those things could be built into an AI. What are you seeing in that space?

Kathryn Schmitz 37:45
Yeah, so really, really, excellent question. This is some of the grants that I'm writing right now. Are asking the question, you know, for example, with the challenge trial, which was so exciting, you know, that was very heavy in terms of personnel and space and equipment and things that

were needed. So, you know, one of the questions that my colleagues and I have is, would it be possible to do the entire challenge trial with tech? Is it possible to get colon cancer patients or survivors to be able to do the amount of exercise that they were asked to do in the challenge trial entirely through AI and tech and devices. And, you know, can we, can we make it inexpensive to be able to do that? So the answer is, you know, stay tuned. What I would also say is that one of the things that we really don't know, and I think is a is an important question for us at this point, is we, I can tell you the amount of exercise you need to do in order to address your fatigue, right? What I can't tell you is, how many touch points do you need with a human being to support you in order to get you to do that? I don't know the answer to that question that's unknown in the field of exercise oncology, the industry standard is to do supervised sessions three times a week for 12 weeks. Insurance companies are never going to pay for that. That's 36 sessions while people are going through their chemotherapy for an exercise program way too expensive. So could we talk to people six times and they would do it, I don't know. How about three? How about some AI mixed in? I think the behavioral side of supporting people in doing this is less well developed than the physiologic effects. Cindy,

Cindy Ness 39:37
yes, hi, our paths have crossed before. I'm familiar with your work, and I'm very appreciative of it, and it makes me very happy to see the random control trial studies that are now producing evidence that shows us what we really, I think intuitively know, but we need the proof for I get that I actually work with people. Who can't wait three years, five years, eight years before all of the evidence comes, you know, through in terms of random control trial, which we need. And so observational studies sometimes they get a bad rap because they're only observational studies. It's a practical question. You know, what do you tell patients right now? Even though you know the hardcore evidence is out, I think we have enough to know that if you do these things that are good for you metabolically, chances are they're going to pay off in some good way. How do you handle that?

Kathryn Schmitz 40:46
Part of the answer to your question is something you're not going to expect me to say, but which I think is crucial to this conversation, and that is: We need to recognize that cancer patients and survivors are not a monolith. They're not all the same age. They're not all coming into the story with the same comorbidities. They're not all coming in with the same knee injuries. They're coming in with a broad variety of backgrounds. There has to be a triage process. One of the reasons medical oncologists don't want to say anything to their patients about exercise is because once they say, “I want you to exercise.” Then the question is, “What's appropriate for this particular patient?” And that's really complicated. There are validated triage tools that have been developed. One is called EXCEEDS, that I use heavily, that we can use in order to discern,”This person needs physical therapy.” “This person would benefit from a home program that I can titrate and design directly.” “And this person over here can go to the Live Strong program.” “This person over here can exercise on their own, because they're really doing quite well.” We have to triage, and I think that until we triage, until we recognize the importance of triage, we have lost the validity in the eyes of the clinical oncology community. Because if you say, “I want everybody to exercise”, they think you have lobsters growing out of your ears.

Because they're like, “Have you met my patients? Have you met the 87-year-old who is dealing with spine mets and terrible pain, and is not going to be able to get out of the chair?” Then they're going to think, “I guess that would be okay for the person who started chemotherapy last week, who's 35 and was playing tennis the day before they started chemo.” We have to underscore our advice by recognizing that not everybody is going to do the same program.

The next thing is, then the question becomes a titrating program for the patient, for the outcome that they're interested in. That's why we need to have structured programs, because if you have somebody who's really interested in conserving their energy and dealing with their fatigue, that's going to be a particular kind of program. If you have somebody who is interested in muscle mass and maintaining their muscle mass, that's a completely different kind of program. So we have to develop the kind of clinical programs that exist at my shop that we do at UPMC Holman Cancer Center, that allow somebody to push in and actually talk to every single patient as they're starting their chemotherapy, does triage, refers them to the appropriate programming and talk to them about what their goals are, so that we can make the program appropriate for what their particular goals are. It's a big lift.

Rick Davis 44:07
so, so this is exactly why we felt that if you could put an exercise counselor in a clinical setting where the medical oncologist could write a prescription and send you down the corridor to meet with the exercise counselor who was not going to be a trainer, but they were going to evaluate you and refer you to the right program, whether you were 85 and chair bound or or 30 and active. That it would work. And of course, one of the things that one of the experiences, is that compliance was much higher, and we still think this is a really relatively economical way to to do what, what you're proposing. Katie,

Kathryn Schmitz 44:55
yeah, I am, I am very interested in that, and right now the prime. Thing that I'm interested in trying to figure out is return on investment. And, you know, trying to work with health economists to help us to figure out, you know, the number of sessions that we can offer to people that will make programs not too expensive, but on the other hand, make them effective. And you know, that's the big question right now. And you know, the organization I work for is interested in that return on investment.

Brad Power 45:34
There are a few more questions in the chat. Katie, if you could skim over those, you're doing so well. I normally I moderate but you're covering it all

Kathryn Schmitz 45:43
protein sources for vegans. Oh, I love the fact that Russ already answered the question. Thank you. So Jeffrey asked question about protein sources for vegans and beans? Absolutely. Legumes is an excellent source. Seitan, tofu, all of those are outstanding sources. So I also, I think that there was a question about, are there any direct patient voices on the moving through cancer Task Force, yes. Yes, we, we are interested in direct patient voices. We are interested in

having advocates. We have, you know, we've, you know, we write grants and meet patients to be advocates on, on our grants. So anybody who would be interested in that, I would love to get an email from you. So I think that we answered the question about this, but let me just state it Anyway, time spent in physical activity and its effects on overall health and immunity. So we talked about the upside down J for that, what is the estimated average met level that maximizes benefit before reaching diminishing or negative returns. Excellent. Excellent question. Okay, so the largest benefit, the largest sort of, most vertical line benefit that we can get from exercise, occurs when somebody goes from doing nothing to doing a small amount of activity. That's the best news. Okay, so for the sedentary person, the person who's reluctant, just simply getting up and doing a little bit, is actually the thing that is most helpful. We continue to have increases in the benefits of exercise for you know, the salutatory effects of exercise on cardiovascular system, the respiratory system, the GI system, the immune system, you know the endocrine system, you know the the muscular skeletal system, all of these systems are positively affected by being more physically active. So why wouldn't it help with with all of these things, with with the things that cancer patients and survivors are dealing with, but the point at which we stop seeing increased benefit is somewhere between 150 and 300 minutes a week of aerobic activity, somewhere north of 300 minutes a week, we stop seeing Any improvements, and you start to get to the asymptote, basically, where you know the increasing number of minutes that you have doesn't really translate into a lot more physical benefit, but the sharpest increase, again, is going from nothing to something. Am I missing anything else? Brad

Brad Power 48:41
Helen had some sort of personal questions. She was trying to put on weight in her having gone through some treatment for chemo, with chemo and other things.

Kathryn Schmitz 48:50
Okay, yes, so I think resistance training is what I'm seeing, and that you've begun doing more resistance training, and I think that's fantastic. I think that one of the things that's very upsetting and puzzling to a lot of people as they gain weight, many of the hormonally related cancers are associated with weight gain as you go through treatment, as opposed to some of the cancers where you have a weight loss going through treatment. So what I really like to recommend is rebalancing body composition as much as possible in that setting, so that you don't end up with what's called sarcopenic obesity, or a situation where you have just too little muscle mass for your your total body weight, and the best way to do that is to focus on resistance training. So, you know, it's very difficult to lose in the setting of the kinds of treatments that are are being taken by Helen. So, you know, I want to, I want to acknowledge. Knowledge that. And I want to, like, not, not say that, you know, you know, but you should be losing weight. It's, it's, you know, it's, it's, it's difficult. I just want to, want to validate that. And as a result, I think a healthier reframing is to reframe getting much stronger and getting much more muscle mass, so making sure, taking in plenty of protein, 1.2 grams per kilogram of body weight, and also doing at least twice a week, if not three times a week, of resistance training. And that resistance training needs to be progressive, so it can't be the same five pound dumbbells every single time. You have to actually increase the amount that you're lifting over time.

Helen 50:40
I was concerned about the Metformin question as well, because I've even heard, or I've read studies posted by my colleagues here that there have been studies that people who are taking Metformin as off label metabolic treatment, it could be putting muscle mass, you know, whether it's exercise like cardio or exercise resistance training that people have had that this could be one of the reasons why it's it's hard to, you know, see the results like, that's what it means. I don't see the results of weight even when I'm doing weight lifting now,

Kathryn Schmitz 51:17
right? And are you? Are you are taking Metformin, or you are now, yeah, take

Helen 51:20
metformin and Berber, among other off labels and supplements as part of our metabolic treatment. I'm done with.

Kathryn Schmitz 51:30
Yeah, I know I saw that. I just saw that. I just scrolled down and saw the chemo ended last year. So So Helen, you may be in a situation where success is the absence of failure, in that you may success for you may be maintaining muscle mass, making sure that you're not losing muscle mass, that could end up being a reframing for you, I, you know, I, I, I am just really eager for you to get the message that and to validate that, you know, your situation is very real and very physiologic. And so your frustration with your weight is something that is, is not something that you are, you know, it's a lack of willpower. This is, this is a physiologic effect that we see in ovarian cancer patients here. Ovarian Correct?

Helen 52:29
Yes, right, yeah. I'm not sure if anybody mentioned Rob Newton's name. I saw a program with him where he was featured on ABC Australia, and that's what Gabby working right after my chemo last year, because I think he may have collaborated with you, and I know that when he works with patients, he does have them do something. It does many things, but he has them do a DEXA imaging, which I guess looks at your muscle mass and all of that stuff. And maybe that's also a place where that I something I can do to see if anything is changing or not in

Kathryn Schmitz 53:05
Helen, I will tell you that if you go ask for a DEXA scan for muscle mass at a site, they're not going to know what you're talking about. Most clinical places know of DEXA for bone health, they don't how to do the version of DEXA that uses that looks at muscle mass. Researchers use DEXA for muscle mass all the time, but clinicians don't. So so what I would what I would recommend, is that there are a number of you know at at your site, they may have something called the Sosa, which is a machine that does body composition. They may have in body

Helen 53:43
I did embody, they do have they have that in my in my gym. I wasn't sure how accurate it was, but it's good that you mentioned it okay. You

Kathryn Schmitz 53:49
know what I find? What I find is that it's, it's it's reliable, that it's valid, if that makes sense. And what I meant by that, if you get on the in body and it says that you've gained muscle mass. You've gained muscle mass, okay, it says you're maintaining muscle mass. You've maintained it is, is the, you know, is, is it actually 35 pounds? I don't know,

Helen 54:14
right? Okay, okay, but that movement means something.

Kathryn Schmitz 54:18
Yes, the movement means something. The movement absolutely means something so, so I think, I think that, you know, and again, for everyone on this call, I just want to, you know, sort of, you know, level set, a little bit that, you know, if you are dealing with a challenge that is as large as the challenges that some of you have have dealt with physiologically, success might in terms of exercise and weight and body composition, may be the absence of failure, the absence of loss of the ability to do things, the absence of the loss of muscle mass. And so that may be the best we can do. That is an aging model. And is anyone on this call not aging? Right? I hope raging is better than the alternative. So, you know, so, so we're all in an aging model and an aging model at some point. You know, when you are in your night, in your 80s and in your 90s, the ability to gain muscle mass with resistance strain is really small, but the ability to maintain muscle mass is quite good. So do you see where I'm going there? I do. Yes,

Helen 55:27
yeah. And I missed quite a bit of what you said before, so I wasn't sure if, when you were talking about prostate cancer, if there were also studies about ovarian cancer and resistance training, like cancer specific type of thing. But I'll look through your presentation after

Kathryn Schmitz 55:40
and my favorite, my favorite papers coming out of ovarian cancer were from Melinda Irwin and the walk study, W, A, L, C study. So let me, let me put that in the chat for

Helen 55:53
you. So, Linda Irvin, okay. Linda

Helen 55:56
Irwin, wall,

Brad Power 56:01
so, yeah, yeah. Katie just picking up on something you were talking about a little bit, but just to focus on for a moment, what biomarkers do you use for exercise, exercise health? What medical devices might you recommend for people to monitor? Because Helen was touching on that, but, you know, I have an hour ring for my sleep tracking. I, you know, I can weigh myself.

Do you recommend anything like the Fitbits or other things to measure how, if you want to put sensors on people's physical health, what things do you use as a scientist? Yeah,

Kathryn Schmitz 56:41
so we use, we use Fitbits a lot in my research. I personally own an aura ring. The aura ring was originally developed to monitor sleep more than anything, and it does that really, really well. A number of other features in the oura ring I find to be really annoying. It It monitors stress. And, you know, the stress is is done by body temperature. And so hilariously, the most stressed I am all day is in the shower, because that's right, warm. So I find that annoying. So I'm not, I'm not an enormous fan of the aura ring. I own an Apple Watch. I find it exceptionally useful to monitor and know kind of you know, how much activity I'm getting, so I prefer that over but, but, you know, it doesn't have to be Apple oriented. There can be Garmin watches and whatnot as well. I know people that really do like whoop I see that in the in the chat as well. Strava seems to be very oriented towards athletes, and so that's a great place to go brag about. You know, your, your, you know, 50 mile bike ride. You right. Okay. Then there's question here about take is taking a sauna back two to three times a week for 15 minutes, all right? With exercise 150 more, it is. It is okay, as long as they're not happening all at the same time, obviously. But in addition to that, saunas should be avoided for people who have lymphedema after cancer. So So see, but that would be something that I would be watching for, and somebody with lymphedema, I would, I would avoid saunas.

Brad Power 58:37
Hey, we're at the top of the hour. Cindy, do you have a quick question?

Cindy Ness 58:41
Very quick actually, it's on the heels of the question you asked. Brad, so I'm doing a pilot study that, among other lifestyle interventions, looks at exercise, and we want to measure zone two training, and it's really hard to find the right wearable to do that. We're looking mostly at the Garmin watch. I guess I just wanted to know if you had a favorite for zone two minutes that you had people wear in research studies.

Kathryn Schmitz 59:13
Not that I wear in research studies recently, but when I have tried to do research that has included particular zones of of heart rate response. Polar heart rate monitors is the go to in the industry for that so,

Cindy Ness 59:31
and I would still use the polar. I would go to a polar. The issue with the polar is it doesn't do other things that we need, like steps or heart rate heart rate recovery. So that's where we're getting stuck. But yes, of course, polar,

Kathryn Schmitz 59:44
yeah, we've been, we've been debating, you know, in our, in our efforts to try to, you know, make challenge, go tech. You know, the challenge trial. Can we do it with tech is, you know, do

we throw it our rate monitor in in addition to everything else we're doing? Yeah, it's a big question, questions, a lot to wear. Yeah, I know. Thank you. Yeah, absolutely.

Brad Power 1:00:06
To wrap up, I like to give before I stop the recording, give you an opportunity to sort of summarize any kind of key takeaway messages or final thoughts.

Kathryn Schmitz 1:00:16
The most important message is for all of you to sit less and move more, whatever that looks like for you. If sitting is what you've got, then move more while you're sitting.

I would ask that all of you find opportunities to talk to oncology clinicians and say, “I'm hearing a lot about the importance of exercise. What are you saying to your patients?” I think that patients are the reason why we're going to make forward progress in this field.

“Designing the Right Exercise Program for Your Cancer Situation” (Kathryn Schmitz, PhD, MPH) [#157]

CHAT DISCUSSION

00:33:26 Allen Morris: One actionable point is that HCP should recommend exercise to cancer patients. But you also show that uptake of this recommendation is lower than desirable. ---- But on some level we all know that exercise is beneficial - This suggests our (patient navigation and patient compliance) system should be improved. ---- I suggest that there needs to be a more institutionalized role for an allied health professional -- title might be "overall navigator" to be able to shunt patients to a physical therapist or exercise coach or other structured program. Does this make sense? I say this in part because the recommendations always suggest that the physician (medical oncologist) has to carry the responsibility when they have so many other things to do in the 15-30 minute appointment. Indeed, Russ' 2nd question speaks to this belief, that physicians need more education.
00:34:54 Siva (^_^): Reacted to One actionable point... with "💯"
00:37:12 Russ: 1. How much protein do you recommend per pound of bodyweight? 2. Do you believe one challenge is the lack of exercise education among medical oncologists?
00:38:11 Rick Davis: Let's talk, Dr. K..... rick davis rd@ancan.org
00:39:14 Robb Owen: Kathryn, could you please share your email address. We are in the pre-launch phase of a pilot program with a cancer center on the west coast and we utilize exercise/physical activity as a component our complementary care protocols. I believe there are signficant synergies between our platforms.
00:40:00 Roger Royse: https://www.inovanewsroom.org/press-release/2025/08/groundbreaking-inova-study-finds-potential-link-between-long-distance-running-and-colon-cancer/#:~:text=Fairfax%2C%20VA%20%E2%80%93%20A%20groundbreaking%20new%20study%20led,raising%20new%20questions%20about%20screening%20for%20high-performance%20athletes.
00:41:42 Russ: Time spent in physical activity and its effects on overall health and immunity: What is the estimated average METs level that maximizes benefit before reaching diminishing or negative returns?
00:43:57 Roger Royse: Reacted to "Time spent in physic..." with 👍
00:44:03 Rick Davis: Are there any direct patient voices on your MTC workforce... need volunteers? AnCan can help find them.
00:46:23 Kathryn Schmitz: schmitzk@upmc.edu
00:48:22 Jeffrey Dwyer: Can you discuss protein sources for vegans
00:48:42 Russ: Reacted to "Can you discuss prot..." with 👍
00:48:48 Jeffrey Dwyer: Reacted to "Can you discuss prot…" with 👍
00:50:57 Shailesh Chavan: There are dietary restrictions during chemoRx and protein supplementation to allow excercise and energy management. We need better biomarkers.
00:52:57 Rick Davis: The UCSF experience with a clinical exercise counselor has shown very high compliance.
00:55:07 Siva (^_^): Reacted to Can you discuss prot... with "👍"
00:56:06 Helen: Sorry, had to drop out and missed parts of the meeting. I have a rare ovarian cancer. I did standard of care, (chemo and avastin.) I’m also doing complementary therapy using off label drugs and supplements. I understand that medications like metformin

impede muscle mass development. I seem to be having issues putting on weight even though I eat well and exercise since last year, and have also begun resistance training more seriously for the past three months. (I also take berberine…)
00:56:32 Russ: Replying to "Can you discuss prot..."

Rice and Beans (legumes - I prefer Lentils) make a complete protein. In college I was bodybuilding and pretty much survived on raw sugar and huge pots of rice and lentils.
00:57:24 Heather Mikels (Messerly): I have to leave, but thank you so much for this presentation. It has been very informative and helpful.
00:58:56 Russ: Replying to "Sorry, had to drop o..."

Metformin has a very small and mostly theoretical effect on hypertrophy. Data I have seen is pre-clinical. I take metformin and haven't noticed much impediment.
01:00:15 Helen: Replying to "Sorry, had to drop o..."

(My chemo ended April 2024, Avastin ended June 2025)
01:06:01 vic: Putting in a “plug” for my in-home PT provider “LUNA”. Therapists are independent contractors and for those who struggle with the accountability side of the equation this is a great provider in many ways. Is covered by Medicare with an Rx , and you do not need to be house bound. Not available everywhere but in many major metropolitan areas.
01:07:39 David Young: I got put on Metformin a few months ahead of my pc diagnosis. I give it some credit for not putting on any weight in the past 4 months of Lupron.
01:07:56 Kathryn Schmitz: Melinda Irwin WALC study
01:09:01 Roger Royse: Apple Watch, Whoop, Strava, MyFitnessPal
01:09:54 Siva (^_^): taking a Sauna bath two or three times a week 10 - 15 min is alright with exercise 150 mins or more is okay?!
01:12:44 Helen: Thanks so much for this wonderful presentation!