

MULTIMODAL INTERVENTIONS IN PATIENTS WITH CANCER WITH & WITHOUT CACHEXIA

Featuring:

Martin Chasen, MBChB FCP, MPhil

TRANSCRIPT

Maura Bowen: Hello listeners. Thanks for joining our third episode in this podcast series on oncology and nutrition. Before we close out this series with today's discussion, I would first really like to thank our three expert guests. That's Dr. Anthony Sung, Dr. Chelsia Gillis, and then today's guest Dr. Martin Chasen.

Each of these folks met with us in November 2020 to participate in a round table on oncology. And the insights they shared with us were so rich that we wanted to be sure to share their thinking with you through the Abbott Nutrition Health Institute podcast. So we've published all three episodes. You can find them by visiting a [ANHI.org](https://anhi.org), clicking "Resources" at the top of the page, and then "Podcasts & Videos," where you'll look for and click "Oncology & Nutrition Podcast Series."

I'm Maura Bowen. As I mentioned, Dr. Martin Chasen is here with us today. Dr. Chasen is Associate Professor in the Department of Medicine at the University of Toronto, as well as Medical Director of palliative care at the William Osler Health System in Ontario, Canada.

Dr. Chasen is here to talk about multimodal intervention and why it's beneficial for patients with cancer. He'll also summarize existing clinical practice guidelines that promote and use multimodal intervention. And then he'll describe the role patients can play in their multimodal therapy during cancer care. Dr. Chasen, thank you for joining us today.

Dr. Martin Chasen: Wonderful, wonderful to be here. Thank you for inviting me.

Maura Bowen: Now first, I should note that since we're still in the middle of a pandemic, Dr. Chasen and I are both dialing in from the comfort of our offices, rather than recording together in the studio. And I have to believe we'll be able to do these recordings in person at some point this year—just keeping the hope alive! But in the meantime, today's recording quality may sound a little different from what you're used to hearing.

Maura Bowen: And then secondly, of course, Dr. Chasen, I'd like to properly welcome and introduce you to the podcast today. Would you mind telling us a little bit about yourself, like your name, your current role and your background?

Dr. Martin Chasen: Of course, I would love to. My name is Martin Chasen and I'm a medical oncologist and a palliative care physician. And I came from South Africa and I came to Canada in 2004. And I was in private practice in South Africa as a medical oncologist before I studied further to become a palliative care physician. I then came to Canada and I met up with a mentor of mine, Professor Neil McDonald and Professor Balfour Mount. And this was with Professor McDonald that I first got interested in what we then called the Cancer Nutrition and Rehabilitation Program, which we started at McGill. And after five years, the University of Ottawa really liked the program and then invited me to come and start it there, which we then called Palliative Rehabilitation. And then I came to Toronto to head up the Division of Palliative Medicine and Supportive Care here in Brampton [Ontario].

Maura Bowen: Wonderful background. Thank you for sharing. So to kick off our conversation today, let's start by talking about the multimodal concept for just a moment. Because it seems like the idea behind a multimodal approach is that when therapies address multiple health factors, like physical activity and dietary training and cognitive changes, for example—looking at these types of factors together may improve patient outcomes more successfully than single component interventions. Is that how you would describe the concept?

Dr. Martin Chasen: So I think a multimodal intervention really consists of two or more modalities aimed at improving specific outcomes. Certainly we look at function. We look at nutritional outcomes and also the psychosocial outcomes, which involves the family, as well as the patient. So the multimodal approach says, well, this person needs to have adequate nutrition. What is missing? And so we work out that they should be taking glucose and sugars. How much protein? How do we get that protein into the person? The amino acids? So those are the nutritional components of trying to improve a patient's nutritional status.

Of course there are others. Fish oil and EPA, which is also nutrition, but in that that works on inflammation. Vitamins, minerals. And then look at things like exercise and drugs that may improve appetite. So there are a few components of multimodal interventions.

Maura Bowen: Thank you so much. That was such a helpful explanation. And I noticed you used some key words in there that we might want to define, like weight loss, cancer-related malnutrition, sarcopenia, and cachexia. Those are often used interchangeably. So how do you feel about these terms, and in your mind, what is the right term we should be using?

Dr. Martin Chasen: So, you're right. Each one of those defines and speaks about a specific entity. The (World Health Organization) WHO defines malnutrition, really, as you can either have a deficiency or you can have an excess, or you can have an imbalance related to the intake of energy or nutrients. In Africa, I saw many people who had malnourishment, and they had Kwashiorkor, but that's not quite exactly the same as the same person who's malnourished but has cancer.

So if we talk about now nourishment and malnutrition in patients with cancer, it's really speaking about people who are consuming less energy and protein than what their body actually needs. This then leads to unplanned weight loss and the reduction in the total amount of body fat and muscle.

If we go to the next one, which we spoke about was weight loss, we talk about weight loss as a reduction in the total body mass. And that could be loss of fluid, loss of fat, and then loss of lean body mass, which is muscles and bones and joints and tendons, and all the other connective tissue.

In patients with cancer and with cachexia, we talk more of unexplained weight loss. That means that the person does not really want to lose weight. If it's generally intentional of about four and a half, five kilograms, or 5% of a normal body weight over six months preceding and we don't know the reason.

Let's go into sarcopenia. It's a progressive and generalized loss of muscle. And at the same time you get loss of function. Patients tend to fall. They have functional decline, frailty, mortality, loss of dignity. It's predictive. And we do know as well that in patients with cancer, if they start off the treatment with a low muscle mass and they're already sarcopenic, that the outcomes are so much worse.

Dr. Martin Chasen: And I think the last one that we need to speak about is the cachexia. It's characterized by weight loss because of loss of muscle as well as adipose tissue. You get an accelerated loss of skeletal mass and adipose tissue. And this is brought about as an imbalance of the metabolism, the metabolic regulation, of course, reduced food intake. The other factors, such as catabolism produced by the tumor, which itself is causing breakdown of muscle, breakdown of fat. That goes hand in hand, and I must mention that again, with the inflammatory activation. And this is so important because it's that inflammatory activation that works on the muscles and works on the liver and works on the fat and of course works on the central nervous system.

Maura Bowen: Thank you so much. Those definitions provided some wonderful context, I think, for the rest of this conversation. That brings to mind the next question, which is what multimodal interventions seem to be most effective in patients who are undergoing cancer treatment?

Dr. Martin Chasen: It's to make sure that they really get enough energy in. And what's really suggested is that the energy needs are between 25 and 30 kilocalories per kilogram per day. That there's adequate protein intake, of course, between 1.2 and 1.5 grams per kilogram per day.

From the exercise point of view, today exercise is no more a suggestion. Exercise is a prescription. It's the aerobic exercises, but it's the endurance. It's the resistance exercises at the same time, that provide the anabolic stimulus for the muscles to grow. One of the ways that when we started looking at this, we actually went to watch a few of the Montreal Canadians—hockey games, to speak to the coach and ask him, how did he get his players to build muscle?

And what we discovered is that it's after a good strenuous exercise that probably most of the anabolism takes place. So good proteins taken at the right time after the right exercises will build muscle. So muscle is what gives a person function—it's what keeps a person standing upright or not horizontal. And allows them to hopefully live a bit longer, but certainly improve the quality of their life.

Furthermore, treating pain. Pain kills, not only because it takes away motivation, but the hormonal milieu and those other cytokines and noxious substances that are produced when people experience pain, do have a negative effect as well on anabolism. So they'll rather cause breakdown rather than building.

Dr. Martin Chasen: We've actually got an international study going at the moment. It's called the MENAC study. It's the Multimodal, Exercise, Nutrition, Anti-Inflammatory Treatment for Cachexia. So it's an international trial and we've got almost 200 patients, where the patients are randomized to receive this multimodal intervention along with the standard chemotherapy. So it's bringing it up a lot earlier.

In cachexia, you get pre-cachexia, cachexia, and refractory cachexia. And it's no good starting to treat patients when they have refractory cachexia, because at that stage, the body reserves are depleted. Most of the lean body mass is gone, there's hardly any muscle. It's like closing the stable door once the horse has bolted. So we need to make a difference and get the patients earlier. And the way you get the patients earlier is screening.

And there are a number of good screening tools. The one we use is called the PG-SGA, the Patient Generated Subjective Global Assessment. But there are others which look at the amount of weight they've lost, what they think their performance status is, how much food they're taking in, and of course, do they have any associated symptoms, which is once again, anything that causes secondary cachexia.

Maura Bowen: In your experience, what are some effective ways to implement multimodal interventions in clinical practice? So for instance: What is needed? Are there any gaps? What are some of the challenges in making this the standard of care?

Dr. Martin Chasen: Both at McGill and in Ottawa at the [Élisabeth Bruyère Hospital], we had a team, and the team consisted of the patient and their family who was the center of the team. And they would come and visit us for the first visit. And they would be seen by the physician, the nurse, the occupational therapist,

physiotherapist, dietitian, and social worker. Each assessment was probably between 20 and 30 minutes. And at the end, we'd all get together, and each component of their team, each member of their team would tell us what their opinion was on that patient. We'd be measuring the physical measures, such as the six-minute Walk Test, Stand Up and Go, the grip strength. And then the OT would come in and she would specifically look at the fatigue in the patients. And the dietitian would come in and say, "Well, how much food is this patient eating, and when do they like to eat?" And assess them for all these secondary types of cachexia. Do they have thrush in the mouth, are they constipated? Are they taking their chemotherapy and are they taking the laxatives? And the social worker would come in and say, "What does it actually mean to this patient?" the fact that they've got cancer. "What does it mean for the family?"

When you have cancer, it's really about loss. You can lose your breasts, you can lose your hair, you lose your job, you can lose a spouse, you can lose all of it. You put it all together and you say, "Well, how can I make the best of it?" And that's what it is.

Dr. Martin Chasen: You have cancer, you lose a lot of weight. You lose your appetite. You end up not wanting to sit at the dining room table with your family because they are eating and you're not eating. So that eventually could lead to family breakdown. And that's the time when people mainly talk to one another is at a meal time. So we encourage that.

Everybody has different types of [loss]. You have an emotional aspect. You have a spiritual aspect. You have this psychosocial aspect. Physical. And all of these important domains, not only aspects, but domains in your life.

And addressing all of that—and that particular team is multimodal. So where does it all fall down? It's budget. Today chemotherapy has got lot of money, but that treats the cancer. If you don't treat the host, don't expect the whole tumor to respond. You have to treat both. And the multimodal intervention and the approach to treating that patient so that they do not feel helpless and hopeless and abandoned, so that they can in fact fight back against the cancer, if you don't put that adequately into place, you can't expect the results to be a hundred percent.

Once you start showing the patients why the nutrition is important and they start self-monitoring, then they realize they also have some power. They don't just have to do what the doctor tells them. They can ask questions. So lots of factors about multimodal, not just exercise and nutrition and anti-inflammation and psychosocial. That's whole patient care.

Maura Bowen: So all of that makes me want to ask a question about the role nutrition can play in reversing or stopping cachexia's progression in an oncology patient. Can you talk about that a little bit?

Dr. Martin Chasen: But you know, this is a whole issue, isn't it? Because what are we trying to show? We're trying to show hard-and-fast evidence. If you just give nutrition and you don't give the exercise, is it going to be okay? Or can the nutrition alone, can it offset the lack of exercise and prevent this loss of muscle mass? Because in addition to the nutrition, there is this environment of muscles. So to me, I don't think you can just say, just nutrition alone is going to make a difference.

You know, many of the trials have taken the patients that have got refractory cachexia, where they don't have muscle, so you can't see if they're going to put on weight or not, because they're just finished. You've gone above the line. It gets to a point of no return. So if you give them anabolic foods and nutritional interventions, can you actually reverse it in looking at those patients? I don't think that you can.

The other thing is, what does nutrition do to treatment of symptoms? We've spoken about anorexia, the food. So maybe it can help with that food, but if you're not treating the constipation, then they're not going to eat properly.

Of course, people always wonder, you give them all these foods and proteins, maybe it's feeding the cancer. And many people do still have that idea that you could be giving them food and the cancer is selectively taking the food. I don't think it is. I don't think there's any real evidence that that makes a difference. We do know that malnourished patients, for instance, tolerate surgery much, much worse, and they have a much longer hospital stay, and that the chemotherapy makes them more toxic. So they have a worse quality of life.

So nutrition does make a difference. And if they don't sit and eat a meal with their family, then you've got that family breakdown. So just to take one or two: Do they definitely put on more muscle? Well you have to test that properly. And if they do put on more muscle, is it meaningful? Well you have to look at the function.

Maura Bowen: So let me ask you, a friend of mine just finished a round of cancer treatment, and his largest complaint was how hard it was to eat normally while under care. In what ways can healthcare professionals help patients to manage these gastrointestinal side effects?

Dr. Martin Chasen: Depending what they are. You know, if you think first nausea and vomiting, painful mouth, not able to swallow, constipation, the early satiety, the chronic nausea—there's so many different gastrointestinal side effects and that each and every one do have to be addressed. It's not, "Well, you're not eating. You've got a sore mouth." But to look in that mouth to see why. What is painful about it? Are there ulcers there? Is there thrush there? These are all what I was earlier calling the secondary cachexia. And we usually can make a difference. By treating the secondary cachexia, we make a difference to the primary cachexia. So if a person is constipated, to make sure their bowels move. If they have thrush, to give them the correct medication. The early satiety, smaller meals, more regular meals, and which foods, and when are you hungry?

You know, most patients, even though they don't want to eat, they will have a period of time where they do feel hungry, and it's at that time to get that food in, to make sure it's always available, even if it's just high protein snacks. And the nausea. I have many patients that find ginger tea helps them very much with the nausea. Once their bowels have moved, or their medication, they may be on drugs causing the nausea, other than the chemotherapy, such as opioids. If you're aware of all of that, and you do treat adequately and properly, I do think that we do make a big difference.

Maura Bowen: What evidence do we have that nutritional intervention can help reduce interruptions in treatment?

Dr. Martin Chasen: The biggest cause of a decrease in quality of life is weight loss. So whatever we can do to prevent that weight loss makes a difference. If you can get a nutritional intervention and treat the patient and get them to take more protein and to take more energy, we know that that prolongs the quality of life for patients.

The problem is, though, that as once again, the studies are not always equal, and you can't compare apples and pears. And some of them are not long enough, and others get the patients too early. And I think this is the reason why we're doing this multimodal MENAC. It is to get the patients earlier, to standardize the treatments are going to be getting, to look at the different diseases that are specifically being treated, and then to, once and for all, show in a randomized, controlled study that it makes a difference.

Maura Bowen: Dr. Chasen, thank you so much. This was so helpful. And I really want to thank you for helping us to amplify the scientific research on multimodal interventions for cancer patients with and without cachexia, because it's so important.

Dr. Martin Chasen: Yep. I think it's the way forward. I think this is what people want. I think people want to be involved in their treatments, that they, as I said, don't feel helpless and abandoned, and that this is something that they can certainly improve and that they can themselves do something.

Maura Bowen: Thank you so much. This was so helpful. Now for our listeners, if you're hoping for more podcast episodes on nutrition and oncology, you've come to the right place. Now I've mentioned this recording is the third in a three-episode podcast series on oncology and nutrition, and you can find them all on ANHI.org by clicking Resources, then Podcasts and Videos.

And we have other oncology resources as well, including our oncology and nutrition infographic, which you can find on ANHI.org by clicking Resources and Printable Materials. In addition to that, we also have a Cancer Knowledge Hub on ANHI.org, and you can find that by clicking Resources and Knowledge Hub.

With all of that said, thanks for listening. We hope this content was helpful, in that you can use it to help your patients throughout their cancer journey. Thank you, everyone. Stay healthy and safe.