# Probiotics, Supplements & Myths: What Really Works In Cancer Treatment Transcript

(Transcripts are generated by AI and may contain errors)

## Introduction and guest background

Hi, everybody. Welcome. Glad, you're joining us today. We have a great interview scheduled. And you're listening to the Plant Based Anti-Cancer summit.

And we hope to give people a lot of encouragement, motivation and solutions to prevent and even help people who have cancer. And today, we're lucky to have with us Doctor Rekha Chaudhary.

She's an oncologist and professor of medicine at University of Cincinnati. She's a medical oncologist who cares for patients with advanced diseases, including melanoma and primary brain tumors like Leo Blast.

And she's been an investigator on over 50 clinical cancer trials, including integrative medicine. So we can get a lot of information from her today. Are clinical and research interests include, of course, the effect of diet and exercise and stress on tumor genesis.

And this is going to be a good, very important topic for us to go over today. Hey, welcome. Thanks for joining us. Thanks for having me. So I know that you like, been involved with this for years.

And then you started to take up your interest in nutrition in the last decade and really felt that it has tremendously contributed to your tools and your toolbox and your ability to help patients.

Right. Yeah, yeah. So, you know, for the first ten years of my practice, I was kind of your traditional oncologist. You know, it's not going to make a difference.

Have ice cream anyway. What does it matter? You know, and and then as we were talking before the call, I started treating glioblastoma when I moved to the University of Cincinnati, which is a very difficult tumor to treat because median survival is about to 14 months and 3% five year survival.

And there's no known etiology like lung cancer, which was smoking and things like that. And I actually got kind of anxious.

## How nutrition entered oncology practice

And then I found about, you know, how plant based diets and other diets can actually impact cancer cells, which I had never seen, that I saw the movie Forks Over Knives. And I was like, what?

I don't know if I believe that. And then I started looking into it and I found the data fascinating. But it's just really interesting that I was an oncologist for ten years before ever coming on this data.

And, you know, a lot of integrative medicine, integrative oncology is used to treat symptoms of chemotherapy and treat, you know, make it easier for you to go to chemotherapy.

But I think there is some data that can really help us in improving your outcome, cancer outcomes and not just making helping you tolerate the chemotherapy better.

And as we were talking before the call, you know, the cardiologists have done a great job of, you know, for you to stay, don't exercise. You're going to have higher risk of heart disease and endocrinology if you eat too much sugar, diabetes, everybody on the street knows that.

But I don't think anybody knows that. You know, flax seed can decrease your cancer cells and your breast, you know. Right. Nobody knows that. Nobody. And I think it's just because it's not intuitive.

It's not intuitive that what you eat here can affect cancer cells. Whereas like, you know, eating a fatty steak, you can envision that clogging your heart.

But I think cancer is not an intuitive for physicians as well as for patients. Right? It's a tremendous learning curve for them. And my position and my I think that research backs this up.

Is that the same dietary portfolio loaded with the particular foods, foods that are that lengthen lifespan and prevent cancer, also lengthen lifespan and reduce chance of recurrence.

And people who have cancer. So it's like the same preventative program that we should have taken up when we were younger. You didn't take it up. Now you better take it up, you know, take it up as soon as you can.

And certainly if you have cancer to extend your lifespan and prevent recurrence, whether you have chemo or not, do these things really add a huge difference, make a huge difference.

And not even that, not even prevent recurrence when you have cancer, prevent progression of that cancer. Like we can see real, real changes with fecal transplants and things like that, where people are fecal transplanted from somebody who is on maybe a very has a very good microbiome for that, you know.

So there was a very interesting, very, very, very, very I think this is the pinnacle study that changed it. You know, as well I do melanoma as well, published in nature.

And what they did is they took patients and gave the stool, gave their stool. These are patients with melanoma under growing treatment. And they gave their stool and fed it to mice because mice will eat anything.

And they implanted melanoma into the mice's rump. And then they gave the mice immunotherapy. If you got stool from a human, if you were a mouse and you got stool from a human that was responding, you responded as a mouse.

If you got stool from a human that was not responding to their cancer treatment, then as a mouse, you didn't respond and died. So the only difference in the mice, these were genetically identical mice, these were genetically identical tumors.

And they were getting the same treatment. The only and they were germ free mice. So they had no microbiome of their own, no bacteria, viruses, fungi of their own.

## Microbiome, fiber, and immunotherapy

They responded so in a reverse translational manner. I mean, this is a very, very, very important study. And then the people at MD Anderson under Jen McQuaid and Jennifer Wargo actually carried this further and did a similar study with mice and actually get fed them a high fiber diet, super high fiber diet for mice, the mice that got the high fiber diet, plant based fiber, this is unprocessed plant based fiber, had immense responses to immunotherapy, which is was shocking to everybody because these are, again, genetically identical mice, genetically identical cancers.

And the only difference in the mice was that they were getting a high fiber diet. They did the same study with probiotics when they feeding them all the healthy foods that have the fiber, like green vegetables.

And no, this was just a high fiber. This was just a high fiber diet. Just added the fiber without the phytochemicals that are present. And that's right, that's right.

And then they actually retrospectively looked at their patients and the patients that were on a high fiber diet greater

than, I want to say, 25g. It might be 20g, but I think it was greater than 25g of fiber a day.

Now, these are patients who are not taking these are patients who are on plant based fiber. They had a really significant about a 20% survival benefit compared to patients who were on a low fiber diet.

So, you know, now there's an ongoing study where they're actually giving these patients high fiber diets and prospectively studying them going forward, which will be very helpful.

But it is I mean, pretty much I prescribe to all my patients to be on a high fiber diet, especially if they're getting immunotherapy, because I think they're immunotherapy.

It has been proven scientifically in mice and in humans that your immunotherapy works better if your microbiome has this diverse. These bacteria are eating a diverse amount of fiber.

You know, I don't even I don't I probably disagree with the with this kind of language by calling it a high fiber diet. It makes it seem like the fiber is the important part and not and not part of all the the full phytochemical symphony that you're getting with these high fiber foods like, you know, onions and mushrooms and vegetables and sprouts and flax seeds and all these different foods that are all high in fiber, it seems like you're so the person almost gets the impression they're going to be adding fiber to their diet, or they're adding and it's not.

It's you know what I mean? Yeah. I mean, but the problem is, I think to prove to the scientific community, especially oncologists, you need a randomized double blind control trial.

You know, I mean, oncologists are very into that. In fact, a the Preti med study was published and they did a they did a, a branch out from that study where they looked at breast cancer incidence and the breast cancer incidence.

New cases of breast cancer were much, much lower in the Mediterranean diet than the other diet. And I presented this case when it first came out to an oncology board, right.

Like my at Grand rounds at the University of Cincinnati. And they were like, well, what was the number needed to treat? And I don't believe this study and blah, blah blah.

And I was like, guys, it's a diet. It's not like we're not giving toxic chemotherapy to these patients, right? Where we need to know how much time we're causing.

If there's a benefit and it's a diet, then why not use that? So what we're really trying to do in oncology, because to convince other oncologists and the scientific community, oncology is very, very difficult.

Right. So what we're really trying to do in oncology in the integrative world is really running these like phase one studies, running these like phase two studies running these base three studies, running them, very rigorous studies.

So if you put it down to one phytochemical, I agree with you. You can't really. Right. You can't really do that. But I don't think you'll ever convince an oncologist to give, you know, to do a plant based diet.

So what the reason the high fiber diet is basically obviously plant based, right? I mean, there's the only place you get fiber from is plants. And if you eat a high fiber diet, it's very hard to eat anything else.

Right? 25g of fiber. I eat about 40 to 50g of fiber a day. I was going to say mice. My diet usually over 50g of fiber, right? Right. But if you are, if you're eating a standard American diet, 25g of fiber is a lot of fiber, right?

Yeah, less than ten grams. So we know. Right. So that that is and I find it an easier way since to actually tell people like, you know, there's a lot of people who come into my clinic, even though they have cancer, they're not willing to make that change where they let go of animal protein or anything like that.

So I say, you know, if you're not willing to make the shift, consider making shift to a whole food plant based, high fiber diet with the focus on fiber.

When you focus on fiber, it's really hard to focus on anything else, right? As you know, right? Getting a 50g fiber diet is difficult if you're not eating lots and lots and lots of plants.

So and then people ask me, can I just do Metamucil? No, you can't just do Metamucil. You can't do this. You can't do this high fiber cereal. You know what I mean? Have to do.

You have to do plants. You have because the bacteria have to eat that and then learn. And you know that bacteria are really the quarterback of the immune system.

## Specific foods and breast cancer evidence

So and we are actually finding there's a study out of NIH where patients with refractory melanoma dying, patients with melanoma were given fecal transplants.

And two of the patients that had fecal transplants from patients that were responding actually had a complete response, which is miraculous. They didn't change their treatment.

They just gave them a transplant of microbiome. So we know for melanoma specifically or any of the cancers were were using immunotherapy or trying to turn on your own immune system to attack the cancer cells that plants are very, very, very, very, very, very important for bacteria to consume and grow.

So do you. So like me, you know, I do very specific dietary dietary portfolio for people with cancer. Tell me, you know, this is like precision precision nutrition.

Right. And so I'm saying, you know, a big salad every day with sprouts with, with certain seeds and addressing to absorption. And the seeds have many cancer effects, very specific, designed for people who want to.

Because I say, do you want to maximize your results? So you just want to you know, they say, no, I want to maximize the results. I want to do everything I can.

So this is exactly what you have to do. So do you give them certain foods that you feel are more have powerful benefits? Like I'm saying, mushrooms and flax seeds and, you know, and lentils and green vegetables and broccoli.

And so do you do specific foods that you advise them to eat as well. Yeah. So specifically I will say for breast cancer patients, I don't treat breast cancer.

So I don't see a lot. I used to do integrative medicine consults. I don't do it anymore. It just got too busy. But for breast cancer patients, there is a lot of data in vitro showing flaxseed flaxseed is big.

So they did a study where they randomized patients. They had a biopsy. They showed they had breast cancer. They randomized them to a flaxseed muffin with all the sugar and bad stuff for you in it, but it had flaxseed in it versus a regular muffin.

It was covered in silver foil. So purple blinded study, right? Yeah. Nobody knew what was happening. And then they when they did the lumpectomy, they looked at the breast cancer cells.

So you can't fake your histology, right. There's no placebo effect in your histology. Right. And so the patients that receive flaxseed actually had significant decreases in Chi 67 which is the turnover of the tumor cells in Herb two which is the aggressiveness of the tumor cells.

And this was, you know, again, everyone was blinded. The physicians were blinded, the patients were blinded, and

the pathologists were blinded to what the patients received.

So that we know that flax seed and the lignin there are very powerful in breast cancer. Now in melanoma. I don't do that. I tell them and I'm again, I mainly see melanoma.

So I do a very diverse, varied as diverse as you can high fiber diet for that microbiome stimulation. Because we know that the diversity, alpha diversity of the microbiome is what causes the immunotherapy to work better.

So that's what I do. And then I send them to Doctor Who was at Cleveland Clinic and now is the head of our Our Lifestyle wellness program. He's a big plant based person.

And he does he like sends them to nutrition. And he goes over it with them. And he does all the kind of finer tune things. Right. So you just having to have a wide assortment of different natural, whole plant foods in your diet as possible.

Yeah. That's right, that's right. Because I know in recent years we're now we used to think people have to take, you know, fermented foods and probiotics.

But now we know the best and the healthiest microbiome is developed by people who have the the widest nutritional diversity of natural foods. And they chew it really well and mix it with saliva and the bacteria between the mouth and all those things.

Quite. Yeah. And, you know, it's so interesting. The probiotic thing is really interesting for us because we thought everybody gets probiotics right in oncology until probably the last three, five, 3 to 5 years.

Everybody got probiotics because your guts all messed up from the chemotherapy and your gut is all messed up.

## Supplements, radiation, and what to avoid

But what we found is interesting. If the most important thing in your response to immunotherapy to make your immune system the strongest against your melanoma or whatever, cancer getting immunotherapy for if the strongest thing is diversity of your microbiome, probiotics decrease the microbiome diversity markedly.

So I used to I said they're like the lionfish of the coral reef. Right. They just take over the black squirrels. They they're so strong because they have to be the strongest bacteria that lasts from California to your Whole Foods in Ohio.

Right. And so they're not the best bacteria for you. They're just the strongest. And so they really dominate the diversity. And your diversity goes markedly down.

And that's not what we want. We want all different kinds of bacteria. So ash the ash meeting is going on right now, which is the American Society of Hematology meeting.

And they just published some stuff I just saw this last night looking at multiple myeloma and the microbiome, and it's diversity of the microbiome on multiple myeloma progression as well as graft versus host.

When you get a bone marrow transplant the graph versus host seems to be lower if you have a diverse microbiome. So again you know we don't understand it.

The microbiome is like the wild wild west right. You know and the immune system is literally like the wild wild West we don't understand. We're just on the brink of understanding what these foods do in terms of even phytochemicals.

You know, we don't understand what we need. And so I'm always just like, try to have a whole food, what it looks like when it came out of the ground, plant based diet, you know, and then you always get the question, well,

bananas. But Anna's are fine.

You know, they're fine. Right? And it's you know, it's it's been a journey. But patients are very educated today and they want to know and they want they see the data and they're like, I want to be that person that has a complete response.

When I don't respond, you know, they want to know why, you know, in this field of so many people into integrative and alternative cancer therapies, because you've been about a lot of research.

Can you highlight a few examples besides probiotics, where maybe people are promote these things are being heavily promoted and they don't really work like for example, like apricot pits or, you know, anything else that could come to mind where you think there that somebody alternative cancer clinics are heavily promoting a certain type of therapy.

That's probably a waste of your time. So for instance, so, you know, alternative medicine used to be the old term. Now we call it integrative oncology because I prescribe immunotherapy I believe that immunotherapy works.

You know I believe that surgery works. I believe that radiation works. I believe all those things work. But I like to integrate things that can help it work better.

So, you know, in integrative oncology we used to use a lot of supplements. So selenium, you know, all these kind of supplements that we thought were antioxidants, the ones that are aren't the antioxidants.

And it's been shown time and time again specifically in lung cancer. That and had a net cancer that those supplements decreased the efficacy of radiation.

So that was one thing that we were really actually very surprised by, because radiation relies on oxidation. So if you're giving very potent antioxidants then it doesn't work.

So, you know, that's one of the things that I'm very strict about. No, I intravenous vitamin C is very heavily promoted in that community. What do you think? Do you think that is an event?

No, I don't think so. I mean, and there's so much data to look at this. MD Anderson, there was a randomized control trial looking at that. I mean, there's so so during radiation, I say no supplements because we want the radiation to work as best as we can after radiation.

There are some supplements that I do use Boswell acid as one of them, because there was a randomized study looking at cerebral edema or swelling in the brain and Boswell like acid, which is frankincense.

That is one supplement that I approved because it's less dangerous than steroids. High dose steroids are terrible, right? Particularly with regard to brain tumors. Right?

Right. Yeah. With particular in particular in regard to brain tumors. I'm a pretty holistic person. Like I don't I mean, you know, I've seen and this is no data.

There's no data with this. But I have seen biotin patients start taking biotin six months later. This is anecdotal, totally anecdotal. Okay. So I'm not like, you know, and then they have bilateral breast cancers.

You know, because it makes sense to me. Right. Biotin is there to help your epithelial cells grow, right. Your hair and your nails and yeah. And I've been to take it.

I've been tempted to take it before. You know, my nails are not growing as fast as you know I want them to. Or you. I've been a very strong vocal advocate of that folic acid, which is not the same thing as fully.

## Stress, exercise, and the mind-body role

You get a real food vitamin A, little carotenoids. And I read all your books. Yeah. Okay. That these things people should not be taking these synthetic supplements and, you know, thinking because they could have the same.

Right. They're not the same. The same as the people talk about vitamin C with me. I'm like, well, you know, you could eat an orange, but, you know, or not even an orange, a banana, you know, there's like blueberries, blueberries, you know, and then I think what we don't know, and it's very intriguing to me, and I think we need to really look at this as a scientific community in oncology is we don't know.

Is there something to be said with chewing the blueberry, what it releases in our mouth, what it releases in our stomach with the gastric acid, what it releases in our colon?

Or is it truly just those phytochemicals in there? I think it's a little bit of both. Right. I think it's like weight loss. I mean, it's not all exercise, it's not all diets.

It's a combination of both. But it's just really interesting because people it's abundant, that people think that they can just not eat blueberries and take juice.

Plus is a big thing. Yeah. You know, juice. Plus I had to so many patients I said no supplements during radiation. They're taking juice. Plus at that particular one that he was taking had a lot of grapefruit in it, interacted with his chemotherapy and his blood counts went down and we weren't able to give him the chemotherapy.

And so now I'm very particular to ask about Juice Plus, which are just juice gummies, you know. Yeah, sure. You know, so I mean, like, can you just were, you know, juicing.

I'm a big fan of smoothies rather than juicing, if you're going to have to, if that's how you could get it in, you know, just the green, like a blended salad.

Yeah. Right, right. Just do the salad if you can. I mean, some people don't have the time to do it, you know what I mean I get that. So to wrap up, what do you think is the besides this wide diversity of nutrients in the diet, anything new that sparked your interest that you think has great potential for certain types of cancers that people should that might be interesting to people to know.

I think the the new thing is this fecal transplant stuff, which you don't need to get a fecal transplant to have a fecal transplant, you just have to eat the right kind of diet for it.

You're making me nervous. See what I don't know? You know what? It's so funny. I have a friend, one of my mentors, who used to work in children's oncology and now works at local company, and he's talking about all these venture capital people that are doing, you know, fecal transplants and fecal things and like this.

And I think it's too new. I think it's too we just don't know enough about the microbiome. But I think, you know, in bone marrow transplant, we used to have this very clean world, no gloves and no salads and no nothing.

And now we're throwing around poop like, you know, so the world is, like, flipped on its side. And so I think the new age is the oncology world accepting that a whole food plant based, high fiber diet, which by by definition, a whole food plant based diet, is a high fiber diet, right?

As not only protection for recurrence, but it can actually help your immunotherapy work better to treat your cancer. It is part of the treatment now part of the treatment.

If you're on immunotherapy, you need to be on a whole food plant based diet, right? How much is this? Just, you know, we're in agreement. Except for rare cases. That's absolutely the most effective thing.

And what about people who think that, like the mind body, that the stress and the positive thinking, we all know stress and negative thinking being bad, but what about like, some people think like that's like like the main thing or it's so incredibly important.

What? How do you feel like the mind plays a role here? I mean, I think it's I just gave a lecture on stress and diets. I researched the but I will tell you, there is a lot of data, lots of data, animal data with like mice where they're restrained and they can't get around for two hours.

They keep them restrained for two hours, and they inject breast cancer cells into their bellies. And the in the stressed out mice, their breast cancer cells triple.

Right. So we do know there is a cortisol component. There's you know with especially insulin growth factor with breast cancer certain cancers breast ovarian prostate are very associated with stress.

We know that hormonal cancers. However again you know we were talking earlier I think it's not I mean you have to manage your stress. You have to eat a whole food plant based diet, and you have to exercise at least ten minutes a day to get your natural killer cells up, your T cells, your immune system going up.

This is not for weight loss. This is not for this. This is to turn on your immune system. So I do I think stress is a big important part of it. Yes. Do I think it's important in recurrence of cancer? Yes.

Once you have cancer I don't I don't know I don't know if managing your stress at that point is going to have as much of an impact. I don't know that, you know, because it's kind of like, of course, a little bit outside the barn at that point.

## Closing thoughts on integrative cancer care

You know, it's certainly part of your whole, the whole integrative part that you do. Yeah. For sure. I mean, and, you know, it's very hard, these poor patients, you know, you're telling them to manage their stress.

And then one of the most stressful moments of their life. Right. Yeah. It's very, very difficult. And which is why diet is an exercise is such an important part, because it is easier for them to accept that they have some control.

Yeah. When you have cancer control over your outcomes, is feels better and is less stressful than when you don't have control. Absolutely. Well, thank you so much for your contribution here.

It was I was a honor to meet you. I've read your stuff when I'm, you know, in the beginning. So you're a pioneer in this field. Thank you so much. And thanks for great work you're doing to appreciate you.

Okay. Bye bye. Bye bye. All right. Good luck everybody. See you in the next session. Don't miss