Introduction and Immunology Origins

Well, this is such a pleasure to chat with you. You're one of the the leading experts in regards to, beta glucan and, its impact on the immune system.

And you've been kind of digging into immunology for a long, long, long, long time. That's that's right. Brag about having gone to the University of South Carolina School of Pharmacy, because while I was there, I was able to, master the metric system.

And it is. Serve me well. I love it. I love it. So. So tell me why. I mean, we'll we'll get into beta glucan, you know, and just a little bit. Why did you jump into immunology?

I mean, because obviously there's so many different, different direction to go. You know, this goes back, a long, long way when when I was a little kid.

You know, we're talking 4 or 5 years old. My most favorite guy in the world was my mother's father. I referred to him as his granddaddy. And, cut to the chase, he ended up with, prostate cancer.

Swept through his body and back then, there were there wasn't too many cards in the deck. They they burn him up with, with radiation. And I can remember, like it was yesterday where, the doctor was handing my mom, hypodermic needles.

There was no plastic back then. They were, glass showing how to draw Demerol and blood and so forth. Just keep him comfortable. And so that that kind of thing is, has been indelibly, seared in my brain for so many years.

And so I've always had this keen interest, not just in the sciences, but particularly in the area of, of cancer, as I called older. Of all my relatives, if something happened and they ended up in the hospital, good things didn't usually happen in the hospital.

They might go in with eggs and then come out with with why the A, B and C, and and no extra charge. I learned a new word. I a true genic disease. So, just, again, at an early age, stay out of the hospital.

So that's that's my primary advice. So how do you do that? Well, the epiphany that I had so many years ago was, was that, hey, how has mankind survived here on this planet for.

For eons? With all the things coming in, in action around you trying to get you all the time. Well, you get past the saber tooth tigers and mastodons trying to stomp on you.

It's really inside. I don't know. It was H. G. Wells. One of the one of the authors that you were required to read when you were in school, but, absolutely.

The time machine and, Yeah, absolutely. You go and War of the worlds, which, of course, the first one was on, radio. And people who came in late actually thought that the Earth was under attack.

Tom cruise came along, you know, with a lot better stunts, but what we learned from there, you know, in the area in which I peddle today is that regardless of how powerful, you know, the technology that these aliens had, they could not overcome the microbes.

And after just a few days here on this planet, you know, they literally just turned to soup because these mighty and they had no ability. And so that's a real I think, testimony that we don't have to worry about, you know, being taken over by some aliens.

We just gotta stay out of our own way. Right? So say so and so instead of doing that, biotics, we want to make sure we feed those little suckers so that when we act robotic.

Exactly. So. So that's kind of the short story. And every day, I see, evidence that that, and I've been blessed in a way in which, sometimes I'm able to see over the horizon.

The Immune System as the Bodyu2019s Defense Army

And I can tell you that the future, in regards to cancer and and many other things, if there ever is a cure, the immune system is going to be right in the middle of it.

It might not be the only thing you might have. You might have, the genome involved many, many other things. You just can't convince people to to live clean and eat right.

So again, we gotta get out of our own way. There. And so, I mean, and the immune system is such an intricate system. Would you mind just kind of giving and, kind of a brief like a few minutes synopsis of people understand kind of the beauty of the immune system.

It really is. The tissues, the organs, the chemicals. Anybody that that has a paper and pen. If not, get it later. I want you to write down a trillion in, you know, three zeros, three more zeros, three more zeros.

A lot of commas in there. Our immune system is made up literally of trillions of white blood cells. Think of it as an army. And, again, back when I was in school, they only had a few dozen of these immune cells identified.

Now, I got a chart in the wall in there that has literally hundreds of these different types of immune cells. You've got macrophages, neutrophils, natural killer cells, dendritic cells B cells.

In fact we were talking earlier about how new the immune system is. We didn't even know what B cells were. These are the cells that make the antibodies that that are so popular, you know with with with vaccines and and they're very important in helping you to, have memory in regards of if the bad guy comes back.

So all of these, these things are beautifully self regulated. Yes. We've got a brain and central nervous system. We've got a metabolic system. These systems, work beautifully and coincide and and communicate back and forth.

But if you just take one of the cells, the macrophage, your macrophage, depending on which side of the Atlantic you're, you're educated. That cell has more wisdom than all the libraries that have ever been, are now or ever will be.

And when a when, when when birth takes place, the immune system learns even more. An absolute amazing thing again, that which protects us against all those things in us, on us and around us.

Trying to get us all the time without it. Well, just like in the movie, the flesh starts sleep in the bowels in 2 or 3 days. Not. Not a pretty sight. And and, you know, to your point here, you have that, you know, one of those cells have more information than all the books in the world.

And here you have a trillion of them. So now you have a trillion of them, each one having more information than all the books and how they all interact and how they coordinate activities.

It's just beyond imagination. And they they take you know, we don't fight fair. You know, they fight it. We don't want to fight for you or when you when a book comes along, you know, we want to we want to stamp it out in a hurry.

When when a cancer cell starts to develop, we don't want it to become a cancer cell. You've got cells that literally are constantly inspecting. And as I like to say, it looks smiley face.

It looks smiley face. It looks at a smiley face. Bada bing, bada boom. It's out of here. That's how you prevent

cancer. Don't let these things fire off sideways and develop into benign or, pre neoplasm or whatever.

Let's let's just, let's just keep healthy cells in place. Keep eating. Right. Get the rest. Deal with the stress and just, you know, maintain a good, good, healthy immune system.

But again and just in case something snuggles up to you, that's not friendly. You need that immune response. Hitting on all eight. Yeah I love it. And so then you took kind of a knife because with the immune system, there's so many things that you can do to support it and to build it.

And here with all your training and knowledge and you went in the direction of, of yeast glucan, you know why? Why is that? Out of everything. One of my colleagues out west, his father came down with with cancer, with prostate cancer.

And he ended up traveling to Japan. Well, glue cans have been in their cornucopia for for decades. And actually, a drug called PSA Creston derived from, a mushroom source, was approved as a drug over 30 years ago.

And if you go on to Pub Med, you'll find countless articles on PSA. Creston. Now. It comes in a little small sachet. I don't know if you've ever been to Japan, but they're not a big people.

I mean, I look like Godzilla when I'm over there. If you see a big person in Japan, they're visiting. Okay. They're not from there. And, wonderful people.

But the dose is anywhere from 3 to 6g daily. Now the stuff again. It's a prescription drug over there. Approved for years is $10 a gram. So you're looking at 30 to $60 a day for the use of that material.

Now, many years ago, I had the choice of, you know, going down the street and renting a house and have some, some people to make up stories.

Why Beta Glucan and Yeast Sources Matter

Kind of like airborne dead. They frolic and, But no, I said, look, let me put this material in the hands of major universities and teaching hospitals.

And if there's something really there, then they'll, you know, they'll work on it. They'll publish. And that's where I've really been blessed. You know, they've knocked down a lot of a lot of doors, a lot of walls.

And being able to define things like mechanism of action. Exactly how does it work? Do we have to worry about the liver, being, gummed up when it when, you know.

Well, no, we don't have to worry about it because we don't need the liver to process it. So all of these things that have been published over the last two and a half plus decades now are old pub med.

There's been multiple books written about the ingredient. And we continue to research, you know, we're not resting on our laurels. We continue to say, how can we improve it?

Can we marry, the ingredient, let's say, with vitamin C, can we marry the ingredient with resveratrol? Can we marry the ingredient with selenium and make it even better?

Now, if you compare beta glucan as a stand alone to any of the aforementioned, well, it's not even close. Now again, we're measuring for immune response, including how it responds in the face of cancer.

But for for a lot more money, you can find out that by, marrying these products together in the appropriate dose. And there's more than one type of selenium.

There's more than one type of it. Trial. You get those things worked out. You get a little bit more of a bump from,

from the, the ingredient. So and you know, obviously beta glucan or you know, the yeast globe cancer.

There are a lot of I mean since then because I remember back in the in the 90s in the health food store. Yeah. And suggesting beta glucan to to patients.

Since and there are a lot of different products out there, you know, that has come out because of all this research and because of its impact on the immune system and and so forth.

How do we know as a consumer what what would be a good product, not a good product? Are there there there's certain qualities that that you need to look at in order to be able to know that this is going to have the impact that the research says it should have.

I will tell you, the food supplement industry, it's it's an interesting it is an interesting group. One of the things that that they consume, we need to understand is they don't have a chance.

Okay. I mean, I hate to say that, but when you walk into a health food store, when you walk into a grocery store, you surf the internet. There is so much information and so much of it is misinformation.

I tell people, if you spend a lot of time on websites, you know, you just you just confusing yourself and probably getting further away from the truth.

That's why I keep hammering. Pub med, pub med puppet. And that's not the most fun place to go. Read. There aren't a lot of pictures there. Okay. So you have to stick close to the Wikipedia to look up a lot of words and fight through it.

Now, I've been fortunate. And being able to convince, some of these university professors to to write some, some books and and kind of I won't use the term dumb it down, but try to encapsulate it, so that you can, you know, chew it up a little.

You know, you don't have to eat the whole elephant today, but, you know, a little bite at a time. But, getting away from all the confusion in the marketplace.

Ask this question. Is there peer reviewed data published on Pub Med on what's actually in your bottle? Because out of all those hundreds and thousands of studies, they may be on many, many different topics and subjects and sources.

You've got grains, you've got seaweed, you've got mushroom, you've got yeast, glue. Cancer, widely spread in nature, but but fungal forms. Now we're getting into the narrowing a little bit.

The mushroom, the yeast. That's where most of the studies tend to point to. Amy. The logical activity would be interesting. And versus cancer. Now, if you've got cholesterol issues.

Yeah. You want the little cheerio girl running out there with a roll of, you know, bone, bone and rolled oats and, and, you know, eating bowls for their and not eat quite as many, bacon, egg and cheese sandwiches every day to, to help.

But, then we ask the question again, work done by some of the most prestigious, researchers and universities around. Let's do side by side evaluations.

And this is not my idea. The the tire companies did this years ago. You know, you want to know how many how many feet it took to stop the car when you slammed on the brakes and they pointed fingers and name names?

I like that. So that is one of the ways you can look and see. And we we were able to determine that the yeast glue. Now what what kind of vehicle do you drive?

Right now it's a Buick. Used to be a BMW. Okay. I drive a tundra. Now, both vehicles both require a key. But my key will not crank your Buick, and your Buick will not crank my tundra.

So, on the surface of many of your white blood cells, you have what's called a glucan receptor. We we've identified that is complement receptor number three.

And our molecule binds to that. So think of the key into the key switch. And there are many keys that we could try to force in there again from the grains from the seaweeds and so forth.

But the one that amplifies the one that, activates the best is the 1316 glucan from baker's yeast. And so we've got our own proprietary, genus species of Saccharomyces cerevisiae, so that we consistently get the highest purity and potency.

So those are the questions you want to make sure that that peer reviewed data is available on what's actually in the bottle, because so many companies like to borrow other folks research.

And then again, the, the when I started, there wasn't any such thing as a scientific thicket of analysis. Now it's required, of course, by by the, by the FDA.

And I'm glad, because it's caused, a lot of shenanigans to be shaken out and, and the more restriction people, the FDA.

Choosing Quality Products and Proper Dosing

But the there is a purpose, you know, if they can focus on what they need to be doing, like stand in and, and and keep all that chatty stuff, over a channel, that'd be a great task for them.

But but that's that's what they need to do is spend more time on, on, pub med making sure that what you're getting has good peer review data supporting it and that that way.

I mentioned this word insulin. Okay. And your measurement of insulin has to be very, very precise. Not enough to little bad things are going to happen.

Well, it doesn't have to be quite that exact, exact thing. But we like the idea that when you pick up a 100mg or a 500 milligram capsule, you're going to get a consistent result.

And we know that by having that consistent result, we can tell you the proper dose. We just say, hey, how much do you weigh? And from that we can calculate an approximate dose for you.

And and talking about dose, you know of course we a lot of times the consumer is a little bit nervous about taking enough of a dose. You know they they would take an herb or a vitamin and, and then they feel that they're not getting the effect that the, the therapeutic effect that they're looking for.

That's talked about in studies or talked about, you know, by other, you know, providers or testimonials or whatever, anecdotal, wherever they got it. So in regards to beta glucan, what what is what is kind of a normal therapeutic those that an individual is looking for in regards to somebody that, let's say preventative, you know, for normal size 160 pounds, and then, you know, and then they need a therapeutic hit.

They're dealing with something serious like cancer. You know what, how much is required to really kind of turn that immune system on? Well, we have done literally hundreds, if not thousands of dose studies.

And and for, an individual. And this can be a human being. It could be your dog, it could be your horse, it could be your parakeet. Tim Miller, grams per kilo of body weight.

Now, I know your patients. When you say that they get they it's going to be like the deer in the headlights. Okay, so

100mg per 110 pounds of body weight if they consider themselves healthy.

So a 220 pounder would take to you 165 pounder. And I'm sensitive to to to cost. Maybe they'll take two one day, one the next two won't even days, one on odd days.

And that way their dose now here's how the response to dose is day zero. You give the recommended amount okay. The 220 pounder taking two. If they're a healthy individual, it takes about 72 hours for that single dose to peak.

And then at the end of about two weeks, they will be back to baseline. Okay. Now let's say a person is faced with a challenge. It is you aware and probably listeners would would be aware.

I can't be talking about curing, preventing or mitigating disease or condition. So safe to say, if a person considers himself not healthy, some sort of a challenge.

That's why we make a 500 milligram. Does. You take one of those for every 55 pounds of body weight. So the 110 pound person would take two of those. Now a I can't afford, you know, a bottle's got 60 in it.

You know, I need to stretch my money. You know, my my gasoline. I can't get this. You know all that. I'm sensitive on this. Take the dose that we recommend every other day again, because in that 72 hour period, if you're taking it every other day, you're going to get to that had high mark and you come and you don't just bounce a little bit, don't cut the dose in half. Why?

Because you only get about halfway up the effectiveness that you would want. Now, how long does it take people? People call me up all the time and give me these incredible stories about how quickly, you know, whatever, you know, hey, I had he doses and, you know, I didn't even get halfway to the bottle and all all of this.

I said, really? You already better, man, I, I must put too much in those pills now. But seriously, you know, in your practice, not everybody responds.

It's not a cookie cutter thing. We know that the product is going to work, and it it's not what I say, but one one of the top researchers thought of it because it works and it works every time.

However, to what degree is that person being challenged? How much damage has been done? Are they committing to a total program? Are they sticking their hand back in the fire?

You know, after you've begun to heal it is. My daddy says, used to say all the time, a hard head makes for a solid behind. And so you I know that you're all about a total program.

And ideally a person would listen, but, it's not always going to work. So we don't. We're not offering silver bullets here. We're offering a piece to the puzzle, which is include credibly important.

They still have to deal with the proper diet. They still have to get appropriate exercise. They still have to get appropriate rest. Dealing with stress, saying their prayers.

Cover all your bases. It's not. It's not going to hurt anything. I think W. C. fields, it was said in his latter latter days, one of his friends snuck into the hospital room and C fields, who was not known as a religious man, was up in his bed reading his Bible.

And his friend walked in and he he looked at him and he says, it's trying to cover all the bases for and looking for a loophole. So total program. But this is an integral piece for sure.

And is there? It is. There's something else. Too much. Again, we we've asked that question. We've run out studies, those kinds of studies and long term, people could eat a bottle a day, and it's not going to hurt them.

In fact, we've done studies where they have multiple bottles. You're going to get probably a little bit more solid bowel movement because it it is like a fiber.

In fact, that's one of the great things. But, you know, the gut likes fiber. And so what's not taken up the that good gut bacteria loves it. And it's going to help your immune system even more.

You know, that gut contains a huge amount of your immune system in regards to production of antibodies. The B cells, the gut associated lymphoid tissue and all all of that extra ordinarily important.

So there are a lot of fringe benefits to the ingredient. But the the the hero is the immune system. And you want that immune system having a 24 carat response.

The best way to deal with cancer don't get it. And so start start with your children. Start when they're young. A person who has cancer. Look, you're going to have to maybe quit what you're doing and fight the cancer may very well be a full time job, but I've seen too many people do it.

The the the ones that throw up their hand and say, here I am, doc, hear me? Sometimes that didn't work out real well. They've got to be. They're the ones with the skin in the game.

They've got the ones being. I was down on the field doing the work. So. So you talk a little bit about mechanisms of action. I mean and we yeah. We you told you know, I've talked about how the debate I Glueck and how it kind of locks in on the receptor sites of the, the white blood cells and cannot turn them on and, and really kind of activate them and get them going.

So how you tell me a little bit more, I mean, what what do they do, what are the, the impacts that it has on the immune system. What what can we see? I mean, are we increasing the fact and then if we have what if we have autoimmune condition is that, you know, just increasing.

And then we are concerned that is going to be too much. I mean, what what do they do? I like to use the term activate as you do.

How Beta Glucan Activates Immune Cells

One might use the term stimulate, but a lot of people have a negative connotation to, stimulation because they need to worry about over stimulation. No, the the the product activates immune cells.

Okay. And then the immune system's own wisdom takes care of that. You can take ten times, 100 times a dose. You're not going to amp up and catch the freight train of fire and run it over a cliff.

Never have to worry about that. We know, though, that at a certain level of dose, that immune response is going to peak out and there's really no advantage to you piling on more product.

So use the dose is recommended. And then again do those other things. Now let's get into the tall weeds just a little bit. Again macrophages neutrophils and neutrophils being the most abundant of your white blood cells.

They only have a half life though of around 6 to 8 hours. They're not going to be around long. So they may be 50 to 70% of your total white blood count on any given day.

So 24 hours from now all those cells are gone. And here's a brand new crop. Okay. So a constant, you know, revisiting, of the glucagon is necessary to keep those.

You've got your dendritic cells. These are cells that have these long tentacles, and they're critically important in antigen presentation. The front line defenders run into could be a virus, could be a bacteria, could be a fungal form.

Could be a cancer cell. And when they gobble it up, they're they're kind of messy eaters. You know, they drop in

little pieces and parts. And those dendritic cells will grab those little pieces and crumbs and run down the, the, lymph system to the left nose, where you got a bunch of T cells hanging out, you know, T cells, the thinking cells, you don't see them out there with bayonets and knives and guns.

They're the thinking cells. And and the dendritic cells go running along showing this information, this this antigen. And, if you've got enough activity going on there, T cells.

Oh, wait a minute. Show me that. Show me that a little bit. And so now you have this transfer of information. And now the T cell becomes the four star general.

Gets up there on the hill shouting instructions. You got the T helper cells. You got a subset one and a subset two. And now you've got somebody overrunning running B-cells and producing a specific antibody.

But wait a minute. It takes a few days, maybe a week or two to get them amped up. So you got stuff going on all these different directions, but the immune system knows and understands.

Okay. We've been able to measure these things. We've been able to, observe and document every one of these things and say, okay, here's baseline for antibodies, here's baseline for natural killer cell activity, here's baseline for neutrophil phagocytosis of target.

All of these things. Then we say okay, we give a dose. We see the change. We give a higher dose. You see a higher change. We give a higher dose. You see a higher change.

And this didn't happen over a couple of weeks. We're talking about many years a couple of decades. And that work never stops. We continue to to hammer away trying to see can we do something even better.

Is there some other angle? And so this is how we found out all this peripheral information about, the good side effects of the material. So, I mean, we could go on for days on mechanism of action.

They are scientists that maybe spend their career looking at CR three. You know, it's got like 19 or 21 regions and they're constantly looking at these regions and the proteins involved and so forth.

So we're we're talking about going together to make a sandwich and coming back before we get to date. But but the the people need to understand 30 or 40 years ago we didn't have the technology that we have today to make these observations.

So as technology improves and then you get people smart enough to run that technology and make the observations and document and then repeat, repeat, repeat, repeat.

Then it ends up in a peer reviewed medical journal, pub med as opposed to something that, again, was thrown together in the middle of the night and thrown out on the on the local news.

Not so smart. So, talk to me a little bit in regards to cancer. You you mentioned, you know, here you have, you know, part of the immune system, messy eaters, you know, crimes are left, you know, so and and then these, dendritic cells, they're presenting it the T cells, they kind of figure out, this is immune attack that we're going to get. So how did beta glucan fit into that do that.

Do they just make that whole process better and that that's the short sentence that that's the answer. Again, what is the immune system's job to surveil, identify, attack and eliminate things that don't belong there?

So any one of those that gets improved okay. Surveillance important thing. There are dozens and dozens of studies show that with beta glucan, immune surveillance is greatly increased.

Making a clear identification. Should I leave it alone? Do yourself no harm or should I attack it again in a degree of increase of that is going to be better?

That that attack process, that elimination process. The simple thing is you use the product you find and kill more cancer cells. Again, not my words, but one of the the all time great researchers who's not a clinician.

He's a true researcher, peer researcher, and a lot of people contact him asking for advice and so forth. And he's, you know, in the back of his head and he's saying, you're not smart enough.

Maybe explain it to you. But so let me fix it. Do you want more cancer cells destroyed? Use this so that that's you got it right out of the gate. But the beautiful thing is that we now are truly understanding the why of it.

And we we we're able to repeat it over and over again. Now we put it into the population where you got all sizes and shapes and the comings and goings.

That's where the variability comes in. You know, it's one thing to have a control population. It's another thing to throw it out there. You, you got you got people fighting over, politics.

You got people who don't even know what politics are and everything. Yeah, you're going to get different results over different periods of time, but we're looking at what's going to give you the best chance of a positive outcome.

And that's by and by really, really helping that immune system and that to be in response. Yeah. Like you mentioned those those four areas you know of of immune system activity are so crucial.

I mean the identification component to be able to recognize is is this me or not me. You know, so I you know, because nobody wants any kind of autoimmune conditions colitis, Hashimoto's or diabetes, one or whatever it may be.

Yeah. So now if we're then able to increase that, that identification, if there's me or not me, then we're able then to identify, you know, the virus or the cancer cell and, and also leave the healthy tissue alone, so that, you know, and then we can consider energy because, you know, an immune system that's attacking the cells is going to be wasting energy on the wrong enemy.

And and here we want to want to focus on who is really, you know, the one that we need to address. And, you know, the cancer cell or whatever it may be that's floating around.

And and as you know, inflammation is a, is a major problem. Now, you know, if you if you get injured, you know, you run across a field, you sprain your ankle, okay, you're going to have acute inflammation.

It's necessary for proper healing. If you need that healing to happen quickly. Inflammation part of that. But you don't need long term never ending chronic inflammation.

Big, big, big problem with cancer. So being able to pull off the things that the immune system needs to do and also deal with, with, with all that pro-inflammatory stuff, and we can talk about do or not do chemotherapy.

I don't get involved in those decision making process.

Beta Glucan, Cancer Support, and Standard Care

If somebody wants to do what we refer to as standard of care, great. But don't do that and ignore supporting the immune system. So many studies showing that chemo and radiation and surgery all do better when you're supporting the immune system.

Being able to, know getting back to the, to the, identification metastasis, that that's something that that people don't think about right out of the gate.

Oh, I've been diagnosed with cancer. Then somewhere down the road, I wonder if it spread, if they found a lump. You bet your bippy it has begun to metastasize.

They just can't spot it because there's not enough sales for the Pet scan or whatever to pick it up. So, again, this is important that the immune system be able to deal with everything within its orbit.

And so it doesn't care whether or not it shows up on the scan or not. It's a lot smarter. You just you've got to give it, though, that that little crank, you know, you don't want to push that Buick down the road.

You want to be able to crank it up, put in gear, get it to where where you're going. And that's kind of where we are with the beta glucan. So nobody wants to do chemotherapy.

Gosh, they need to look out for what, the killing off of immune cells. In fact, a lot of a lot of physicians using chemotherapy, the white blood cell count crashes and they go back to their patients, so.

Well, we've got to discontinue the therapy. Well, guess what's going to be the first thing to come back raging. It ain't going to be the immune system.

It's going to be the cancer cells. And now even less of your immune army is standing in its way. So extraordinarily important that you support that immune system.

Day zero don't don't wait until, you know, 26 weeks into and into that. And again, this this is medical advice. This is just good sense. People call quite a bit, hey, my sister's got breast cancer.

Will you talk to her? Hey, my dad's got prostate cancer, and and almost every call starts off with me saying, look, I hate we we have to meet this way, but I want you to understand the reason you've got cancer is because your immune system has failed. You.

Pregnant. Pause. I let I let that soak in a little bit. And if you're going to overcome cancer, regardless of what you choose standard of care. I'll try to do whatever you choose it.

It only makes sense that you don't continue to make the mistake of not supporting your immune system. And so get getting that focus is very, very important.

And, it's not going to interfere with with whether it's chemo, radiation. When I started, if you use the term immunotherapy, they'd look at you like you from another planet, immunotherapy.

Now, I mean, you you watch any TV show for an over an hour and they're advertising Keytruda. They advertise and obtain you know, you got PD one, you got PDL one, you know, our peanut farmer down in Georgia, President Carter made Keytruda famous because they got him out of the gate.

He lived so many more years. It doesn't matter if it's if it's chemo or or controlled or any any immunotherapy. It's going to do better with you supporting immune.

So the thing with immunotherapies, they're trying to target they're trying to thread the needle. We're going to we're going to go after angiogenesis factor with this.

And and and geojit is this factor material we're going to go after. We we're going to seed, your cancer cells. We're going to grow them and dump some of your white blood cells and train those white blood cells to go after your brand of cancer.

Good luck with all of that. I applaud the fact that that modern medicine is now breaking into the area of immunotherapy. But guess what? We've had immune systems.

So before the recording of, you know, the first, the first thing some guy by the name of through Sidney's, back in the pan-Asian wars established that when the plague came, they actually had to call a time out for the war.

He took note that people that recovered from that plague and got healthy again could go back down and administer

care to those that were sick and they didn't get sick.

Again, this is some of the first documentation of natural immunity, maybe. And I failed as yet because here we still are. And and if we're to remain, we're going to have to wake up and understand that we everybody, everybody should be you.

You smiled up. Smile. I was saying to you, you got nice teeth. You floss, you brush right. What happens if you don't floss it? Brush your teeth, fall out.

You can eat well, you can get rest. Say your prayers. But if you don't floss, brush. You going to lose. You lose your pretty teeth. Same thing with the immune system.

You've got to do something extra. And we we have a strong suggestion of what you should be doing. Yeah. And like you're talking about the standard of care model and then exactly what you're saying and that that's, you know, patients come to me and say, should I do it or should I not do it?

And I tell them, well, I mean, I'm not in your shoes, you know, I, I can, I can project what I would want to do and, and, but you know, I don't know until I'm in your shoes so I can tell you what, what you should or should not do.

But the key is, you know exactly what you're saying. I mean, chemo cannot kill all cancer cells. It's just not impossible. It will never kill all cancer cells.

So it does ravage the immune system, you know? So here you have, you know, something that that's that's killed a lot of cancer cells, but now you have a bunch left, a lot of cancer stem cells and other factors, you know, inflammatory factors that that drive, you know, that that whole process.

So now you really need to really amp that immune system up. Or if you do surgery, you know, surgery in itself, yes, you remove that little lump. But like you said, you know, things have altered is spread and the surgery in itself is going to suppress the immune system, you know, because that's a trauma to the body.

And it doesn't matter if you radiate the the borders or whatever, you know, you're not able to radiate every part of the body. You have no idea where it's gone.

Yeah. So it becomes so important, you know, to make sure that you implement these type of strategies alongside if you choose to do traditional care or not, traditional or choose not to, you know, so everybody's choice.

But you do need no matter what, you know, you need to bring that in. And like you said it, it is not interfering with the therapy that that the traditional oncologist is choosing to to implement.

That's it. And, again, it makes him or her look more like a hero, so many times, here, the individual coming back and say, you know, my ecologist is absolutely amazed.

My white blood cell count has remained up. And, you know, all these things that he is other. He wants to hold me up like the poster child. I said, well, go for it.

Don't hurt his feelings. And tell him that you're doing a little something on the side. No, I, I always encourage people to make sure that their pharmacist.

And that's when one person, I think people don't get on their team, that their pharmacist is aware of all the medications, all the food supplements and so forth.

I can tell you, pharmacists make really good Trivial Pursuit partners. And, and the medical doctor, you know, with their ability to diagnose, you know, prognosis.

But it's that first part, it seems to be a big stumbling block. So many people come to me and, and said, well, the first

thing they said was, I had this, and they gave me an antibiotic and they gave it, you know, this.

And they gave me a sterile I didn't know about a third or fourth trip. Somebody says, oh, you got cancer or. You know, the old joke, what do you call the the doctor who graduated last?

The class doctor says, still a doctor. Be your own best advocate. I'm a I'm a big believer in getting all the cards face up and understanding all the choices.

Informed consent. You can be informed and not understand what the guy gal is telling you. So make sure because emotions get into this. Take somebody in the room with you who is not known to be emotionally, basket case to take notes again. Pub med.

You know, there's some great sites where you can dig in and ask questions. And then when you go back for the follow up visit, make sure all the cards are face up and that you fully understand informed consent, not, curious consent.

Wonder consent. Then make your choice. As you say, I'm not in your shoes. You're playing this hand. I'm not. But you're there to support them regardless.

And I'm the same way. We, you know, we really believe in first do no harm. So. Yeah, I love it, I love it. Well, AJ, this has been amazing. And thank you so much for driving, driving this research forward and and offering, products that give hope to so many people.

And, yeah. Thank you so much. Thank you so much. It's been a pleasure. Be safe.