How Integrative Oncology Is Changing The Game In Cancer Treatment Outcomes Transcript

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Introduction and Nasha Winters' Background

Well. I am so pleased to have my dear friend Nasha Winters with me. I mean, you don't need an introduction. You are. You you are, you know, when it comes to metabolic theory, when it comes to cancer, when it comes to, I mean, you are out there educating the masses and really moving this, this big boulder forward just to help people, you know, find, hair that's outside of just that, that traditional oncology realm.

So thank you so much for taking this time. I know your schedule. This is insane. Hey, my friend takes one to know one. And I'm really happy that we get to have these conversations.

I feel like this is the only time I get to speak with you. We're always so busy at conferences. Our paths barely cross. So this is a real, a real joy to be here.

Thank you. I mean, I think some people, they they tend to forget. I mean, they see you out there speaking, you're on conferences, you're written books, you're.

I mean, you do all these. I sometimes I think they kind of forget that you've gone through your own personal journey. I mean, you battled something that really is a death sentence.

I mean, it's not one of these kind, cute little cancers. It's one of the ones, you know, that really takes people down. Do you do you mind? Just. Can I give a cliff note as to what? What?

I mean, what that journey looked like? Yeah. Well, gosh, you know, this was back in 1991. So there's some context right there. I mean, I was 19 years old.

I was just a few months shy or a few weeks shy of my 20th birthday. I'd been in and out of the emergency room throughout the whole summer, leading up to my sophomore year in college.

And I just kept explain to the doctors like, something's different. And they kept telling you just more of the same. I'd been diagnosed previously with IBS or irritable bowel syndrome.

I'd been diagnosed previous with endometriosis, with polycystic ovarian syndrome, with, thyroid dysfunction, with cystic acne, which was part of the PCOS.

Like a collection of disease processes that could any one of them could have, overshadowed or taken you down the path of never in a million years guessing this was a cancerous process, especially back in 1991.

Now, unfortunately, Doctor Michael, you and I today see more and more young people with cancer. It's still not normal, right? But it's definitely more common, which is unfortunate.

But by the time my roommate came home and found me unconscious, rush me to the emergency room, a different doctor, was on staff that night, and instead of just sort of assuming that it was more of the same, he saw me through fresh eyes and did a whole different set of, labs and imaging and unfortunately came back and told me, you know, we don't have the we don't have the differential yet or the final diagnosis yet, but we do see a mouse on your right ovary.

We see it lesions all throughout your whole abdomen, all over your liver. I had a belly full of fluid which is known as a series, which is malignant, a series.

I had a 100% bowel blockage. I had fluid buildup in my lungs and around my heart. I had a very low oxygen levels and I was very, very, very malnourished with something known as kcpw.

And so not a good place to be. I mean, Doctor Michael and I can tell you that when a patient shows up in our practices, which unfortunately we see a lot of this, that's typically the beginning of the end.

Like that is very, very, very end stage. And the clinicians explained to me, the doctors on staff that night told me that I was too sick to even have a single dose of chemotherapy because my the tumor on my right ovary was pushing against my ureters, which shut down my kidneys, the lesions in my liver, it shut down my liver function.

I had biliary stasis. So backup of all my bile, I had a a bowel blockage so nothing could go in. Right. Like that's the reality of it. So wasn't exactly the CliffsNotes that I just gave you, but they sent me home to die.

And that was in 1991, just shy of my 20th birthday. And instead of thinking I was going to fight it or somehow win against it or survive it, I honestly just wanted to understand it.

I was already a pre-med student. I was already thinking of those terms, and I just got really curious as to why. And I feel like that has been the rest of the story to date.

Advances in Imaging and Tumor Testing

Is trying to understand that why, for myself as well as for the, you know, tens of thousands of patients have had the direct, you know, impact in their lives or the hundreds of thousands indirect impact on their lives of trying to collect the data and the information that explains the why, which is very personal for each and every one of us. Yeah.

And that's why I mean, that, that that question at that time has driven you to a place now where your, your teaching teachers, your, you know, I've, I've taken your, your course.

I know many people that take your, your year long intensive training to really understand, you know, what cancer is and also metabolically how we can shift that process that that is going on within cancer tissue and how important that is versus, you know, you know, looking at it as a genetic disease.

So in in this journey, I mean their cancer is continual. The research is continually evolving. And, and and we are learning more and more and more. And I, I love just because you are so on the cusp of the cutting edge.

You you're communicating with leaders, you know, all over the world in this field. Do you mind just kind of sharing where are we now? You know, what are some of the things that have really come out that you see making an impact?

And what are some kind of curious things that we were feeling that, integrative oncology is moving in that what direction it's moving. And what are we going to look at, you know, a few years down the line.

So I know that that's a lot to unpack, but, yeah, but but but I know you have it all in your head, and I'm excited to see what that is. Well, I think, you know, you and I have tried to think, like, how long have you been in this industry?

Just out of curiosity, just just just a little bit less than four decades now. Exactly. So just your brand spanking new. And that's just it is like what we have seen.

And tell me if I'm wrong here, but I've seen more changes in the last five, six years than I have in the 30 years leading up to these last 5 or 6 years.

Would you not agree? I mean, I totally agree. I mean, the the acceleration of what we're seeing in integrative oncology to me is just phenomenal. I mean, just looking back, you know, let's say two decades ago, I mean, we were excited if we found somebody that did vitamin C, IV, I mean, that that was like that was amazing.

And and now, I mean, the tools that are coming out and the understanding that's coming out to me, it is just incredible, the personalization, the I mean, it's it's phenomenal.

Exactly. And, you know, back in the day when we were both curiosities in this, you know, like we were exploring, we were so limited in our resources to evaluate.

So we had to use a lot of intuition. We had to use a lot of physical examination, and we had to depend on the tests where they were at that time. So to me, some of the biggest exciting things that have happened is just this new access to things like imaging.

Now, I know we've probably brought on a few experts in this area, so one of these was always tricky is we love imaging, but it often came with a price.

And so as someone sitting before you right now who is still 34 years later struggling with gadolinium poisoning, my my kidneys have never bounced back from all the amount of contrast dye that was given early on in my diagnosis.

We needed that data. We needed to look under the hood, but it caused me a lot of harm. We've learned now that I mean, my gosh, there's even a couple papers that have come out this year that said, just the ionizing radiation alone of CT or Pet scans in and of itself is the cause of cancer.

I mean, that is really concerning. And so I'm super excited. Back in 2019, when I heard an interview with Doctor Peter Attia, a medical doctor who brought on this unknown doctor.

He was an MD, PhD from Canada who basically was a, radiation, oncologist who repurposed MRI as to make them more sensitive and more specific to evaluate without the toxicity.

And that is pre nouveau that many people have heard of today. And since then we have a few others on the market. Ezra and Simon, one I believe is the name of the other that was super exciting.

Like to me that has been a game changer in the last five, six years, which now we can really evaluate people visually without causing more harm. And then our friend Gene Simmons has come up with, you know, the imaging, which is a very specific breast imaging, similar kind of a repurposed MRI that's more sensitive and specific.

Our colleague, a medical doctor out of California created a company called Sonus Scena, which is basically a a high intensity, high resolution ultrasound device.

Also to look at the breast tissue through more like very thin slices. So to me, that was one of the biggest changes. So now we can look under the hood at things more, specifically without the toxicity.

So that's a huge win. In the last few years. We also have companies that have come to the forefront. I mean, my gosh, you and I were like, remember back in the day when we were running?

I can, can't even remember the name of the tests back in the day. But we used to be able to get tests that were so considered alternative when we were trying to look at circulating tumor cells, and we were trying to look at tissue blood biopsies.

Doctor Negaunee, for instance, was considered a total quack in the day. And now he's kind of considered the godfather of some of these more modern technologies.

And he has some new, testing getting ready to come out in the latter part of 2025. But we have all of these third party validated, even insurance covered, which blows my mind tests that are available to us today where you and I asking for these tests.

Ten years ago, we were looked at like we were aliens. Yeah, but I remember I mean, yeah, I think it was like five years ago even. I mean, at the limit as to what existed.

And and now and like you're saying, talking to a medical doctor or talking to oncologist about running a test that, you know, check circulating tumor cells, I mean, that their heads would start spinning and then, you know, fire coming out of the eyes and all of that.

And and now you have them actually. Yeah. Now, like a signatera test or something like that. I'm having oncologists that actually order these and follow them.

I mean, to me, I mean, what a, what a shift in, in that field. Yeah. It's huge. And so tests like that that can look at the personality of the tumor, you know, either in a micro RNA test to show what's expressing in real time, or a ctDNA test showing what the potential of expression is from blood biopsies to tissue biopsies to circulating tumor cells.

It wasn't that long ago, I mean, doctor, from Michigan State was started talking about stem cells, cancer stem cells back in 2012, 2013. And everyone Pooh poohed it.

This is, you know, 12 years ago saying they didn't even exist. Now we are looking at pharmaceuticals to target those. And yet you and I have had tools to target the stem cells, cancer stem cells for 30 years, you know, 30, 40 years.

And so these are the exciting things. So the imaging and the new testing that have come available to us, and then the treatments, I mean, this is where you and I meet up in a lot of these environments.

So from mistletoe, which is one of my favorite tools, 1917 folks, we've been using it in the exact same way that we still use it today, picking up momentum around the globe as one of our most profound and original immune therapies from the light therapies, which is the last conference I believe I got to hang out with you, which is utilizing like harnessing the power of of photosynthesis, using agents with oxygen, with light frequencies that match that photo sensitizing agent to create basically a bomb, a smart bomb in the tissues to directly go after the cancer while not impacting the healthy cells.

These are technologies photodynamic therapy and so no dynamic therapy. So wavelengths of sound and wavelengths of light have actually been approved for cancer since the 1960s.

And yet it's virtually unheard of. And now you and I get to see it's sort of making a renaissance, you know, throughout even standard of care, academic institutions where it's now being approved for more and more utility.

And so that and then things like cryotherapy for breast lesions, and prostate lesions.

Integrative Therapies with Surgery, Chemo, and Radiation

So for your listeners, that's just literally kind of like freeze drying, coming in and injecting and basically freezing from the inside out tumors that are, you know, small enough to engulf in this cold, frame that also creates this really powerful, what they call ab scopo effect or immune effect.

And so when I think about it, we've come so far in testing, so far in imaging so far, and sort of dusting off therapies that were perceived as alternative and yet have actually been utilized in standard of care around the world.

To me, these are the places that are really, really exciting of where we've come to. But I also feel like we are only scratching the surface about their utility, about where we can take them.

Yeah, I love it. And you're talking about, kind of alluding, you know, tests like, you know, data, for instance. We're able to kind of test and see, you know, what are the genetic dysfunctions and also see what are some of the natural substances that can then, address these, you know, circulating tumor cells.

I mean, that way we are stepping into that personalization. You know, instead of just, you know, saying you have lung cancer. These are the supplements.

These are the medications that we tend to do for lung cancer. But now we can then look at the individual and see what's specifically going on with that individual.

In addition to obviously what we've done all along, you know, looking at root causes, looking at why is this taking place in this individual? Absolutely.

And, you know, with the data, are they just released just in the last couple of weeks, a kind of a next generation called Neutra, Neutrogena AI, which looks very specifically historically, we would have to order that, off label drug or that, natural therapeutic intervention along with chemo sensitivity.

They've now been able to offer this as a standalone test, which is actually really unique. For our clients who are either a standard of care, has unfortunately not panned out the way they'd hoped, or B, you do have some of those clients who come to us saying, that's not a direction I'm interested in.

I want to target more in this and in more of an alternative or integrative arena. And this test is now looking at really specific, as you said, alternative therapies that have been vetted against those cells in, in testing.

This is to me like I'm trying to get my head around the fact that you and I've watched this take what seemingly is seemingly forever now, is becoming almost just a given or a household name that even large academic institutions and even big institutions like Asco, which is sort of the Super Bowl of oncology, bringing together it's people like Datar and people like pre Nuvo and Ezra that are showing up on the stages of these big academic institutions, encouraging the standard of care to make these types of tools that you and I have been applying for decades.

The new standard, because they're about enhancing the outcomes of standard of care therapies, are about making standard of care work better. When we do use those, where it's about making us able to use less of the toxic dose when we stack it with other interventions simultaneously, and it becomes a win win win across the board.

And the the biggest winner, of course, the only one that really matters is the patient. Yeah. And that's you know, we're starting to recognize more and more and I feel oncologists and medical doctors are recognized more and more, you know, the impact of bringing in nutraceutical is that it's not an either or that now we can then, you know, enhance the effect.

If a person chooses to do chemo and and being able to bring in strategies, like you're saying, where we can lower the dose and just make it that much more effective, by bringing in other tools.

So do you mind chatting a little bit more about that? Because I know, obviously nobody wants to lose their hair. Nobody wants to be puking, nobody want I mean, all the things that are neuropathy, you know, things that happen with chemo.

So anything we can do to mitigate and reduce those, those risks, or those adverse reactions. Can you talk a little bit more about what's out there so people can, can know what they should be looking for?

I love it. Well, let me give you a couple examples, because this is really this is exactly where the two worlds come together elegantly. So let's start with the most common approach and standard of care in colleghi, which is surgery.

You and I can prepare somebody's body to be more, to be ready for the surgery. Number one, to be ready to lower any side effects and issues. We are the ones who are reviewing all their medications and their dietary and their supplemental things to make sure there's nothing that's going to cause any bleeding or any, pharmacogenomics impact.

So basically, we want to make sure there's nothing on board that's going to just, you know, like throw out the anesthesia, for instance, or have any problems with pain medication.

We can also look at someone's, single nucleotide polymorphisms and say, hey, you know, you're really not a candidate for opiates. So let's look for some non opiate pain management for you.

And because we've learned things like opiates can actually lower the immune system and can actually perpetuate cell proliferation. We really try to avoid that even if they don't have the nature that genomics around it.

So those are some examples. And then you and I have tools in our toolbox that actually make those cells thicker and stickier. So they don't want to migrate around the building if there's any potential to seeding, which again, a few years ago, everyone Pooh poohed that idea.

But in the last three years we've had, I think, at least three papers, if not for suggesting that that is in fact a that's something to be concerned of.

That's especially prostate and breast cancer. The biopsy alone could actually, spread some of those cells into the lymphatics. You and I have tools in our toolbox to help mitigate that.

So that's an example that even surgery is something that we can help prevent side effects, and we can help prevent proliferation of cancer cells and even migration of cancer cells.

So that's one example where they really marry together. Well, another big example as you mentioned chemotherapy. We can actually get through the type of testing we were just talking about.

We can know precisely what the target is for that patient and to know precisely what they're going to be sensitive to. Unfortunately, there's still a lot of institutions that will move through the algorithm first, which is this is considered a Nccn guideline standard of care starting point.

And we don't move to the next option until the patient fails that. And then we don't move to the next option. The patient fails that. Notice my finger quotes saying that first of all the patient never fails those treatments. The treatments fail. The patient.

But wouldn't it be cool if we actually started with what the patient's body requested from the get go, which we're moving into that direction? But then people like Doctor Vulture long ago, you know, whose book Fasting Cancer just hit the, you know, hit the bookshelves this year showing the years and years of research.

He's done that. If we have a patient in a fasted state when they take on their chemotherapy, no matter how that chemotherapy was chosen, these patients have better outcomes, right?

Less side effects. They recover quicker. They don't lose as much weight. They might lose it, but they bounce back faster. They're bone marrow stronger so they can get through the treatments in a more timely fashion.

They're not needing to delay so that their marrow comes back. They're not needing to take all of the preload drugs like steroids or new Langston's and new pigeons, because that act of fasting alone is so, so powerful in the overall terrain, so that the chemo is more tolerated and is actually harnessed and used more appropriately.

And then the final well, actually, not even the final. Another one, radiation. Oh my gosh, this is where I think we really shine, right? If our patients are in a fasted state or have any amount of ketone bodies on board that sensitize the cancer cells to the radiation, the other thing that sensitizing the cancer cells to the radiation is things like high dose melatonin or high dose astragalus, and these are things that drive the radiation to the cancer cell but protect the healthy cells simultaneously.

Why is that not standard of care like just remarkable. And it's even more remarkable when you get to go to somebody like Doctor Michael's first and get a little burst of oxygen before you go in.

So whether it's hyperbaric or isolation or even blow by oxygen, what happens with a lot of cancers is they become impenetrable to radiation or other therapies, targeted therapies, chemotherapy and the oxygen almost like opens it up like makes it more porous so that whatever therapy you're delivering gets to your target.

And then things like aromatase inhibitors, like hormone blockade therapies, we can now even test if a patient's

even going to have a good response to that drug or not.

So ESR one or ESR two snips can lead to a lack of response to things like aromatase inhibitors, but there are other drugs that can overcome that to consider instead.

Or the same thing like Cyp2D6 pathways in the pharmacogenomics may not make that patient a good candidate for tamoxifen, but we can maybe use in Dox often instead, like a different drug that is going to bypass some of the roadblocks at that person's genetic genetics may be offering up.

And so when we look at that and then we look at today's most common therapy. Now, you and I have seen this in our lifetime. It went from surgery, chemo, radiation to now.

Immune therapies are all the rage. Despite how many decades were you and I thrown under the bus when we said the immune system matters? Well, here we are.

But here's what we've learned now that basically, if you had an antibiotic within six months of utilizing an immune therapy, that immune therapy is going to kind of fall flat, right?

We can potentiate that by doing some microbiome testing and re inoculating the microbiome so that it's more responsive to immune therapies. And we might do that orally.

Or we might do that through fecal transplantation. These are the things that to me are so exciting that hopefully your listener realizes that any step along the way of whatever's offered by standard of care, what we bring to the table enhances its effect, lowers its toxicity profile, creates a better quality of life for the patient and better outcomes, and often requires far less of the dose or far less number of treatments to get to the sort of finish line of stability, or even no evidence of disease.

Yeah, I love that. And and that's the thing is that, you know, I've, you know, we're looking at immunotherapy and, and here, you know, fragments of what I was seeing.

You know you they blast that patient with with chemo destroys their immune system. And they're thinking well let's try immunotherapy after. Well what immune system are we going to use in order to be able to have an impact?

You know, with that immunotherapy. So that doesn't make any sense to me at all. I mean, they're starting to kind of bring that a little bit more, you know, from at the front end.

Yeah. Which, which I like, but that's, that's fairly recently. But then also then looking like you're saying, you know, we have our gut and our gut, you know, 70 to 80% of our immune systems along there.

The importance of, of correcting that dysfunction. Like if you're saying like you're saying if you have done antibiotic or you've done anything that has been disrupting that, that gut flora, the importance of not leaning in on that and correcting that, and then, you know, all the other tools that your tone like mistletoe and yeah, there's so many other tools that we have to really enhance that effect of the immunotherapy.

And, you know, looking at radiation and chemo, these are oxidative therapies. You know, you need oxygen to oxidize. And so in order to be able to have that impact that you're needing, you need to then consider the tools that that you know, these integrative doctors like you, you, myself and so many out there are utilizing.

So the marriage between the two, whether you're oncologists agree with it or not. Yeah. The only reason they don't agree is because they don't know. You know, they are still stuck in their paradigm.

And and you need to take you know, you need to be your own advocate to make sure that you bring in knowledge to the table that the oncologist are they're still stuck in in a lot of the Newtonian type of medicine that, that, you know, we we move beyond that.

You know, we, we, we want to treat the person. We don't want to drug you. We don't want to, you know, we want to heal you. Exactly. And it's, you know, it's interesting, one of the things that you and I do with virtually, I can't even imagine us not doing this with every patient is we get some baseline labs that gives us an idea of how, how ready is that person's body to receive whatever therapies we're going to offer up right.

So whether they're coming at you to say, I just want to come in for mistletoe or I just want to do chemo and you help me with the side effects, there is still needs to be a a foundation in there to land in.

And so for example, from a basic CBC blood, complete blood count that every conventional oncologist runs on every patient to make sure their white blood cells are at a level that they can take on another dose of chemotherapy.

You and I look a little bit deeper. We look at a relation between the various blood cells.

Ketones, Metabolic Flexibility, and Cancer Terrain

So wanting to look at the function of the marrow, we want to see what the oxidative stress is. We want to see which part of the immune system is being activated or suppressed.

So we can tell a lot if those monocytes are starting to creep up, for instance, that tells us we're moving into what's known as a macrophage shift, which says this is starting to lead to drug resistance.

Right. Not a good idea. Or if we're looking, for instance, at a immune therapy, and we see that the neutrophils start to rise rapidly whilst the lymphocytes drop rapidly, that means that basically the immune system's going off off the grid like it's it's not behaving as it should.

The other is true that suddenly if you see more lymphocytes and neutrophils, you know you've overstressed the marrow. Now you've made that patient even more likely to have what's known as myelodysplastic syndrome or even precursors, where the literature has shown that there's a lot of women, for instance, who've gone through very aggressive breast cancer therapy, have a much higher incidence of things like leukemia because they've been over treated and it's flipped the switch on those immune cells.

You and I can see that early on, and we can bring in our tools to support those cells, to moderate and modulate so that they can continue to handle whatever treatments are coming on board, or to be able to go back and educate both the patient and the clinician to say, we might want to pull off, you know, the pressure right now, like this might be too much of a good thing.

Let's take a pause or lower the dose. Use patients listening to this. You can actually request lower doses of your chemotherapy. Nothing out there prevents you from requesting that.

And most doctors will be willing to take a 50% dose reduction. We wish they were. Don't go lower, but most will feel comfortable taking it down is 50 to 50%, which that means gives you 50% more chance of resilience and maintaining the therapy.

So I get really excited when we can use tool like labs like that. Very simple. Even if your doctors want order and they cost you about ten bucks out of pocket to run.

And then the other one that you and I always run is things like a C-reactive protein. And most patients, you know have heard of that. And they know it's a marker of inflammation.

But what they don't know and what their conventional oncology team needs to know is your CRP at the time of diagnosis is prognostic. And so if that's here P is elevated at the time of your diagnosis, that means you have less of an opportunity to respond to your whatever treatment you're bringing on board.

So that means for somebody like Doctor Michael and I, we get really assertive to go after, find the cause that

inflammation and drive it down as quickly as possible so that you become more responsive to whatever therapy you bring on board.

And then also that number. The higher that CRP, the more side effects as well as the higher the drug resistance in general. And so these are the tools like why are we not playing more well together.

Right. You know like you and I really aren't the enemy as we may be perceived by so many, I see myself as a bridge between the best of both worlds, and I love the tools and technologies we have today to create a common language between us.

That is what I think is helping change the the narrative and that we are starting to show up at the table together versus this sort of perceived us versus them, dance that you and I have experienced for decades of our careers.

And I think the a lot of oncologists I'm seeing that in my community is that they, they are recognizing more and more that we're not the enemy. They they do see more and more the better outcome when their patients are utilizing the type of support that that we offer.

And, you know, because we we are essentially not communicating, saying that whatever you do, you know, traditional oncologist, the devil, we're not saying that we are here to support them whichever way that's needed.

Yeah. Because, you know, these type of tools, they are sometimes needed. And when you use them, we want to really optimize the effect of these tools because you're going through all the pain and suffering of, of, you know, radiation or the chemo or surgery you're going through all of that.

And so we want to really optimize that effect. And that's what the beauty of, of the tools that we're having, to, to be able to do that, you know, because there's so much that's available and that's what's so exciting.

Yeah. To really kind of bring these tools together. One thing that you're, you're talking about in regards to radiation and ketones, and I know that this is a, this is a favorite subject of, of of of your son's favorite subject of mine.

Because ketones are so much more than ketones. I mean, they, they are the that the what they do in the body, the signaling mechanisms and the impact on the immune system, all that.

Do you mind just so people really have an appreciation that is more than just like a ketogenic diet or exogenous ketones. We're just doing that to lose weight or to kind of.

It's so much more. Do you do you mind? Absolutely. You know, up until I mean, cuz just so everyone knows, we're literally all born in a state of ketosis, right?

So that is how we survived. Like, that's how we survived. And that it sometimes takes a little bit for our mothers not to fully come in. And so we have to be able to be a dual engine, you know, a hybrid to be able to switch into other fuel sources when our resources are limited.

That's how we've evolved as humanity. So, we're either fat burners or sugar burners and we can often go when we're really healthy, we can go in and out of both as needed and seasonally and situationally as needed, where the word quita genetic diet came from was in the 1920s of a group of clinicians at Hopkins started to utilize like, kind of stumbled upon a particular ratio of fat to carbohydrates.

My dog, you see, the papa just got home, fats to carbohydrates to say when we put someone in, in four times the fat amount to one time of carbohydrates, we can switch inside production of ketones so we can dietary push this.

And we started to use this in pediatric populations in the 1920s to control epilepsy. And in fact, it was the best treatment for epilepsy. Even once. Depakote, a drug for epilepsy, came to market in the 1940s, the diet still worked better than the drug.

But everyone kind of pushed the diet aside because it was cumbersome, right? Kind of got buried for the last few decades until people like Don D'Agostino and Angela Poff and Thomas Siegfried and Adrian Schack and other researchers kind of brought it back to light.

But it got also kind of a bad name, because a ketogenic diet is not a ketogenic diet, is not a ketogenic diet. So it can be clean keto, it can be internet keto.

A lot of people thought about it during the weight loss era of the, oh gosh, I just lost his name. Looked like it was pretty much like burgers and cheese diet.

Golly, I can't believe I just it's terrible, but I need some ketone bodies, like the basically the that was where we realized, yes, you can definitely lose weight on this.

But to Doctor Michael's point here is we've learned so much more about their other reasoning and their other abilities to impact the system, specifically in these signaling agents.

So what I want the listeners to hear is that getting ketone bodies up in your bloodstream is not just about a high fat, low carbohydrate diet that was originated in the 1920s to treat epilepsy, and then it's evolved into other things over the over the decades.

That's one way to achieve ketosis, but another way is just to simply carb restrict without even altering your, your, fat intake. Right. So it could be normal or low fat still.

But carb restriction will also produce some ketone bodies. So while fasting. Right. Even intermittent. So if someone's really metabolically flexible they could be showing trace ketones after a 13 hour overnight fast.

Right. So that's when we're really in a good metabolically flexible state. And then we can even use things like exogenous ketone supplementation, which is sometimes used in our world to potentiate things like hypothermia, hyperbaric oxygen, you know, other oxidative therapies because ketone bodies at a high level in the bloodstream are actually pro oxidant, which is also interesting to people.

So we even have to be careful of not overdoing it in some, in some situations. Right. And so what I want people to know is that ketones are a physiologic state.

Ketone bodies are physiologic state, not a diet or a fad. Although you can achieve it through a diet or a fad. Right. And so to your point, we can potentiate any of our other therapies when ketone bodies are on board, even at a low level, we can potentiate therapies like chemo, like radiation, like IV, vitamin C, like hyperbaric oxygen, like photodynamic therapy.

And what some people don't understand is that it's the ketone bodies can change your epigenetic expression. They can lower inflammation. They have a direct impact on what's known as the inflammation.

They can change the mic, the microbiome. They definitely calm the brain. They definitely change the brain chemistry. There's a whole field of metabolic psychiatry.

If people want to go down that rabbit hole, there's so much research happening there. It does change the brain. People like Doctor Terry Walz change the brain in Ms.

patients and autoimmune conditions. So it seems to have utility and a lot of disease process. You know, the disease process is not just cancer. And so to me I look at it as a leveraging agent and that it's not itself the treatment.

It's to be stacked. Right. And I think a lot of therapies that you and I offer were never meant to be standalone, like hyperbaric by itself can change a few things, but it will not alone kill the cancer or ketone bodies themselves will not alone kill the cancer, or even mistletoe alone may or may not kill the cancer.

It's how we stack them, you know how. And that takes some finesse. And that takes just some life experience. When you got a few decades under your belt, you start to learn patterns and you start to learn the right timing, the right dose, the right duration, the right combination.

And you even know when to push really hard on oxidative therapies or when to pause and basically rebuild or recalibrate the system before you come in and push again.

And that's the elegance that I think that the integrative oncology community is still in its infancy around, and that it takes like a Paul Anderson or someone who's had decades under their belt to kind of recognize that there are certain times to push and pull and that there are certain stacks that work better than others, and there are certain cancer types that respond to certain therapeutic interventions. Better than others.

And there's even certain personality types that respond to certain interventions over others. And I think having these types of summits helps people realize that what we're talking about here is actually not even a protocol.

I don't think you and I talked a single protocol in this conversation today, and that what you and I get to do is we get to have an end of one experience of the patient before, as their data informs, the best path forward.

Yeah. And, exactly. And that's the thing I'm like, you're talking about that flexibility, the you know, there's nothing in the body that is static. And it's important for us as individuals that, you know, you're talking about the metabolic flexibility.

You're talking about the the redox, you know, reduction opposite, you know, oxidizing. Yeah. All these things are, are, processes that are continually, you know, accelerating or pulling back and being able to have that flexibility, you know, within the body and the body.

It's not like it's going to be oxidizing throughout the whole body all the time, you know, or reduction, you know, where we removing or antioxidants are kind of removing the oxidizing and oxidize and oxidizing stress.

All of that happens with intelligence. And then by bringing increasing the intelligence in the body and supporting, then the, the, the tools that the body need in order to be able to kind of do these, able to shift gears back and forth, is so important.

And that's why when we are then stuck in these, where we're just burning sugar, you know, for energy how important it is and to start to retrain the body again so that it's able to, to do these shifts appropriately when it's needed.

And that's that metabolic flexibility like you're talking about. And, but it's the same flexibility in so many different areas. It's funny, you know, I'm glad you brought up that concept of flexibility, because what happens when we're in health, when we're in vitality, our cells and our tissues and organs and the structure around all of that is very flexible.

It's very adaptable to whatever's coming at it. We get a cold plunge and we have one reaction.

Future of Metabolic Oncology and Closing Remarks

We get a sauna, we have another, we get a, you know, a fasted state. We have another. But when we move into a metabolic shift that puts us into a cancer state.

What's very interesting to me is that the cancer is actually we think of it as being very flexible. We think of it as being very, changeable and that it can continually morph.

But what actually happens is it's actually kind of a wimp, right? It it is. So if we strengthen the rest of the environment around that tumor and we create some sort of hermetic stress within that.

So ketone bodies are a level of hermetic stress breathwork, fasting, meditation session. These are things that create resilience in the healthy cells but create vulnerability in the cancer cells so that in, for instance, a cancer, a cancerous process when we're in a fasted state, the chemo has even a bigger impact on those cancer cells, or the radiation does, or the photodynamic therapy or the hyperbaric oxygen or the hot therapy, like hyperthermia or the cold therapy.

Those cells, those cancer cells cannot adapt as well as our healthy cells. And I think what's happened in standard of care we used last, you know, 100 plus years, is we have given more power, thinking that those cells are far more squirrely, and we go after them so aggressively that we neglect or even cause harm to the very cells that can create the environment that makes the cancer cell not take up residence or not proliferate in the way that it could.

So what you and I get to offer is we get to sort of leverage the inflexibility of that cancer cell by increasing the flexibility of the healthy cells simultaneously.

And it creates this beautiful, like you said, there's times when there's certain tissues in the body that need push and certain tissues in the body that need, pores.

And the beauty of that is when we're often going after, the tumor, we can simultaneously support the terrain. That's where true, beautiful metabolic flexibility takes root and the cancer cells become just sort of, I don't know, disarmed, if you will.

They they become vulnerable. They go into back into you know, they go back into balance with the environment or they leave the building altogether, or they just stop having any fuel sources to perpetuate them any further.

It's just I, I'm hopeful that these are the way, this is the way we'll start thinking about cancer from here on out. And I feel like it's happening. I mean, just, gosh, a couple months ago, there was a really interesting article in nature that says, is it time to basically put the somatic mutation theory completely to rest?

And I mean, I can't believe it only took us 110, 211 years to have that conversation. But we're having it right. And now we really can look back at the metabolic theory of cancer is stepping into the limelight.

And even on top of that, our friend Mark Linton in his book Cancer Solution, looking at even fungal components of the cancerous process, which might help us explain why certain off label drugs in those, you know, those drug types that treat funguses seem to have such utility.

I think we're finally just asking different questions. And that alone changes everything. Yeah, I love that. It's so exciting. I think we're I mean, where we're at right now and we're we're going to be in a couple of years.

I mean, to me, I'm so excited to see the impact of, you know, all of us bringing these tools together and finding, you know, the the right stats, like you're saying.

Yeah. And how to combine them. Well and and I I'll, I mean one phrase that stuck in my mind, you know, but you know, I've mentioned Doctor Paul Anderson, I, my radio show that I interviewed him this was many, many years ago, but he reminded me so, well, you know, we have more healthy cells than cancerous cells, and, we gotta support those healthy cells.

And then the cancer cells are outnumbered. And you said, yes, they are wimpy. You know, their metabolic flexibility is is like nil to nothing almost, you know, so if you start to push them in all different ways, they can't handle it.

And so it's just using these different tools and understanding them. I think we're beginning to see, much better outcomes, you know, and and it's so exciting.

Well, doctor Natia Winters, this is phenomenal. You are phenomenal. All the work you're doing is incredible. And thank you for being such a solid voice.

You know, through, through what, you know, one of the greatest pandemics, I would say that we're dealing with, you know, cancer. And we we need to find a quick solution, because we we are seeing the acceleration of this, you know, throughout the world.

And, so, you know, we need to meet the challenge. And you're a big voice, big part of that. So thank you. Oh, doc, it's so good to be here. I'm so glad these summits continue on to keep sharing this important information with the masses so everyone thrive on.

Thank you.