Introduction and award recognition

Well, I have the absolute pleasure of having doctor Mark Lintern here. Thank you so much for spending some time with me. I mean, you're you're shortlisted at being one of the innovators of the year, and, and in the UK right now.

Yeah. Well, thank you for having me on. It's an absolute pleasure to be here, and have this discussion with you and, Yeah. Thank you. It's it's kind of a whirlwind for me.

But it's nice just to be shortlisted for the award. I don't think I'll win it, but, you know, it's nice to be there anyway, so. Yeah. So. So your story is quite unique, you know?

Yeah. You're not a traditional cancer researcher or, you know, a medical doctor, you know, can can kind of, kind of share. What led you to, as a designer to the world of cancer research and how your personal journey kind of shaped this work?

Yeah, it was a long time ago. So when I was 28, I developed cancer myself. Quite unexpectedly. I thought I was fit. Lucky enough, it was removed by surgery.

It was a soft tissue skin. Fibro sarcoma. And at that time, I just wanted to learn a little bit more about the disease, because it was a shock to me. And I just wanted to try and prevent it from coming back.

So my question to my ecologist, my GP was, what DNA mutations actually caused my particular issue and what are the causes?

Personal cancer diagnosis and research journey

It was. Was it sun exposure? And they couldn't tell me. So I then delved into the research myself. And the more I kind of, like, tried to understand the genetic side of things, the more confusing I realized the whole field was in the sense that, obviously it's extremely complex.

But on the one hand, we're being told that cancer is a genetic disease, as if that's fact. But then there seems to be so much ambiguity. There's there's no no absolute.

There's no you know, the somatic mutation theory essentially suggests that there should be, a sequential, pattern of DNA mutations that should drive the disease.

And that's what you would expect with a disease that's that's consistent. And I know there are hundreds of different variations of cancer in different cells.

So they can be classed as different diseases, but technically they all follow a similar path, which is the ten hallmarks which we can get into. So they all follow the same path, and have similar features, which is the consistency of the disease.

But as I went through, I discovered that, there was this randomness associated with the mutations involved. And we can talk about the mutations and the issues with that a little bit later.

So that that confused me. And, in that process, I stumbled across that there were other theories of cancer. I didn't even know they existed because, you know, I just thought that cancer was a genetic disease, period.

That's what we told. So it did quite a bit of research going down these different routes, looking at different aspects. And I realized through that initial research that there's a big question mark hanging over the origin of the disease.

Okay. It's this scientists are still questioning this and debating it. As I had the tumor removed, I kind of dropped off on the research side of things, and my life carried on until a number of years later when a good friend of mine, Sam, she, she developed cancer.

And in, in that process, it was a cervical cancer. And I thought, well, you know, I've already done enough research. I can probably help, you know, look at all these other alternatives, alternative theories, possibly trying to advise you about metabolic treatments, because I'd come across the metabolic theory.

So I did a deep dive for a year trying to help her. She went down the route primarily of, well, the conventional route and unfortunately passed away after a year.

So I've pretty much done about a year and half's worth of deep dive research into the disease. And I discovered a lot of different things. And after her death, I wanted to carry on my research because I felt like I had enough information to provide to family and friends that if they were to be diagnosed, they could.

I would want them to read this first, because I didn't have a like a finalized version of the research I had for Sam to give her. But at the end of this, I thought, well, I can provide some something to some of your friends so that if they go for the same issue, they've at least got something at hand that they can look at and think, there's more to, just conventional treatment.

We have other potential treatments that can complement, conventional treatment as well that can help. That was the idea, and that grew into a passion for me.

And one thing led to another eight years later, I kind of discovered something that that provides an alternative explanation for one of the key or the key theories, and one of the key mechanisms that that appears to drive cancer.

And from that, I then developed a new theory within that eight years. So that's how I got in into the process. And so, you know, like you mentioned, there are a lot of a lot of different theories out there that you kind of looked at, and now somatic being, you know, that it is a gene mutation, and that gene mutation is what's causing the cancer.

What are some and and you saw it quite quickly that, that was that was a flawed theory, you know, because it's not consistent. What if some of the other theories you mentioned the metabolic.

Well, what are there other theories that you looked at as well that were kind of plausible in your mind? Yeah. So, for one, you got the cancer stem cell theory.

We'll, it's it's very clear to some degree that cancer stem cells are involved in pretty much most cancers. And they are potentially the, the driver of, the unlimited growth of the disease, and even maybe, chemotherapy resistance.

But you've also got tissue organization field theory, which discusses the, the environment of the terrain, of the cells. You've also got the atavistic theory, you've got viral theory of cancer, you've got, various of that.

There are a number of other theories probably around you could, you could argue at least 15 different, different theories. But probably around, I would say 7 to 8 credible ones that, you could argue are quite, quite accurate to the degree that they are worth paying attention to because different theories, or from theory, I should say, treatments are developed.

So it's interesting from a patient perspective to know about these theories because that's where treatments come from. And you have different treatments associated with different theories.

So it's just interesting to then go through these and realize that there's a science backed, way of looking at the disease from a different perspective that also supports potential treatments.

Exploring cancer theories

And so, one, after looking at all of these, I mean, what became your conclusion? What seemed to be the most probable theory that you felt made sense? Looking at the behavior and the research that's out there?

Well, I'd say primarily the metabolic theory, although I wouldn't say that any one particular theory at that point, because, the tissue organization field theory discusses the terrain, and that's all part and parcel of chronic inflammation that drives the disease as well.

So for me, it's a number of theories, including the cancer stem cell theory, but primarily the most accurate theory from looking at from a standpoint of trying to assess the accuracy of a theory.

And that would be through how many hallmarks each theory explains. The metabolic theory came top. So, at that time, I was I was pretty convinced that, the metabolic theory that cancer was a metabolic based disease, because you've got this consistency in the metabolic theory, which highlights the, the fact that you have this energy abnormality, this metabolic shift in energy generation in cancer cells, which is known as the Warburg effect.

And it's a switch to it from a primary energy state to a backup energy state. And it's inefficient energy state, essentially. So, the question is, why would cancer cells choose to use this energy state?

Now, going back to the the issue with the somatic mutation theory and the reason why I, I, I carried on doing my research was because I was searching for consistency with these hallmarks, because cancer followed these consistencies.

And that's why metabolic theory stood out. Because this consistency of the Warburg effect, the shift in energy metabolism, is present in, I would say, all cancers.

There is a caveat to that. They but just sticking with that notion, with the metabolic theory, is that it provides the consistency that kind of explains most of the hallmarks, which is I think is absolutely key to understanding the mechanism that drives cancer and then having the capability of the treatments then target that mechanism.

And the question then becomes, you know, like you mentioned, our first why why does the cell choose to shift towards a more an efficient way of producing energy?

So why why does that take place? I mean, we've we can go kind of the, the benefit of the cancer cell, but kind of the, the initial, you know, why does a healthy cell all of a sudden start to become behave like a cancer cell?

Okay. So that's that's the million dollar question. Why is this, energy system switching in cancer? So the metabolic theory suggests that it's to do with the energy creating organelles called mitochondria.

And what they do is they produce energy, by, oxidizing glucose. So using oxygen and glucose to create energy in a pathway we'll call ox Phos. The metabolic theory suggests that the ox fos pathway is damaged and therefore the mitochondria cannot produce energy in the normal way.

So the cell compensates by reverting to its backup energy, system, which is glycolysis. And that's where oxygen isn't needed. To generate energy, glucose is fermented instead.

So that's the consistency of the disease. But that's the explanation for why that transition occurs in cancer. And because glycolysis or the backup energy system, is a proliferative metabolic state.

It's used for cell repair or what have you. And it's stuck within that paralytic proliferative state. That's the reason. Explain for why, the rest of the hallmarks of cancer develop.

So cancer grows, because it's stuck within this energy state. But why does it move in that direction? I mean, I understand that the yeah, this is what happens.

And I mean, what is causing it to all of a sudden shift into, you know, glycolysis from using ox force, you know, from

using the mitochondria in the way it normally does.

I mean, there has to be some reason why a cell all of a sudden, you know, being healthy.

Metabolic theory and the Warburg effect

Yeah. Doing what it should do. And then all of a sudden, you know, now I'm doing this glycolysis and, you know, shifting my metabolism towards a proliferative state.

Okay. Yeah. So the idea with the metabolic theory would be that it's it's all due to damage to the cell. So all different carcinogens, will damage this energy system.

The primary energy system. And that causes the switch. It's it's literally the inflammation, the chronic inflammation that is produced by unhealthy lifestyles, radiation, whatever.

You're exposed to toxins. You know, toxins in the food and the air pollution and what have you. It damages the, the energy system. Now, that's the metabolic theory that, as I was going through, my research, I found a number of contentions with the metabolic theory, which suggested that it can't quite explain all ten of the hallmarks.

Which that is what led me on to do the rest of my research, which is why it's only eight years to to consumer research. But the key for me was, I had this in mind that the Warburg effect was extremely important.

It's clearly, cancer is clearly related to this abnormal metabolism, the shift in energy that occurs. So I realized that it I allowed the thought to enter my head that just maybe the damage to mitochondria isn't the switch, isn't the cause of this Warburg effect switch.

So I allowed myself to then do a lot of more research. And I stumbled across, a paper which is talking about infection. I wasn't even looking at cancer at this point.

I was I was looking at all aspects of human biology, and how, the microbiome works. And it was talking about pathogens and particularly fungal infection.

And it just happened to mention the phrase, when an infection enters a cell, it it triggers a Warburg like metabolic state. And that was the light bulb moment for me.

So quite long story short, I started investigating this root of pathogen, the microorganisms and particular fungal pathogens interactions with human cells.

And I began to realize that this interaction can explain pretty much all of the hallmarks of cancer. All of the conditions we we arrive at cancer can be explained by this interaction.

So to explain the reason why, from the theory that I've produced, the cell suppression theory is that what you see happening is you'll have a damage damage to the terrain, so the tissue will become weakened.

If you have pathogens or you will have a microbiome present within tissue, we now know that that microorganisms pollinate most of the human body over time.

If you have the particular pathogen I'm suggesting is the driver of the disease, and you have this damage to the the integrity of the cell, the pathogen turns opportunistic and it starts to try and invade.

And upon invasion of the cell, what you have is this response by the cell is a defensive response to eliminate the pathogen, and that this defensive response is this revision of the the metabolic state to a Warburg tribalism.

So the Warburg effect can also be viewed as an anti infection response. So this this you know this is really interesting for me because I realized that for me the key to identify the potential origin of cancer is, as Professor

Siegfried says in the metabolic theories suggest, it lies in trying to understand the underlying mechanism behind the Warburg effect.

And here it is. I have this other explanation for the reason why the Warburg effect might occur in cancer through this mechanism of it being the cell defense mechanism, to infection.

So within this model, Doctor Robert Navios brilliant. He's got a brilliant, model called the Cell Danger Response Model, where he explains how cells generally respond to damage or danger could be a toxin or a pathogen.

And from the pathogen perspective, he explains it like this. When a pathogen invades the cell, the mitochondria intentionally suppress ox force, so they suppress the oxygen energy pathway in order to use the oxygen to target the pathogen.

This intentional suppression of ox bus generates this shift to glycolysis. We call the Warburg effect. This is why the cell increases its level of reactive oxygen species, and why the cell is still absorbing high levels of oxygen, even though you could argue, it doesn't need it because it's no longer using the oxygen based energy pathway to create energy.

So why would it be absorbed, increased levels of oxygen. So this would explain that because the cell is actually the mitochondria isn't damaged to the it is obviously it has been shown to be damaged and it will be because it's in a battle between the pathogen.

But what I'm saying is that, it's an intentional switch to glycolysis. This is the natural progression of the cell danger response, which occurs during infection and the idea of this is you eliminate the pathogen.

And then you have a cell repair process with glycolysis. And then the cell finishes the cycle, which is there's three phases to the cycle. Once it finishes the cycle and repair and proliferation has finished, then the cell goes back to homeostasis.

Go back to normal.

Pathogens, cell danger response, and cancer origin

But the problem I'm suggesting is that the pathogen remains because the cell is the integrity of the cell has been damaged. And there's an issue with the immune system gaining access to the cell at the time to help eliminate and remove the pathogen.

So when the pathogen sustained, you have this sustaining of the Warburg effect, which is what we see in cancer. So Doctor Robert Navios model perfectly explains how this is a suppression based disease in the sense that mitochondria are just trying to eliminate this pathogen.

It's hijacking the cell once it's established itself. That's fascinating as fascinating. So so the solution I mean, it almost sounds like, you know, because the cell isn't using oxygen.

Then in order to be able to try to kill them, whatever pathogen that's in within the cell. And, so it almost sounds like the solution would be then to feed the cells.

I mean, in addition to supporting the integrity of, of the tissue, which is, you know, working on the terrain, cleaning up the toxins, environmental toxins, and, and that, but that to feed the cells, the oxygen so that it can, can complete that kill of whatever that pathogen is.

You mentioned fungi. I, you know, tend to be a common one. Yeah. So horrible, horrible oxygen therapies is one of the therapies that is recommended by the metabolic theory.

Because the idea is to try and invigorate mitochondria, to revert from this lactic acid based metabolism that occurs

through glycolysis. So you've reducing the corrosive ness of the cell.

But hyperbaric oxygen therapy is also anti-microbial. So you're hit into two birds with one stone, so to speak. So yeah, that would be one of the mechanisms. But there's, there's many different, the treatment would be nuanced if we're looking at cancer through, a microbial lens.

So the point of the book that I've written and the theory that I've written is to try and highlight and justify, metabolic treatments, essentially treatments that look to reduce the inflammation.

So looking at the terrain, treatments that target cancer stem cells. But also the additional aspect is, trying to target through the lens of potential fungal pathogens that are present that are possibly driving this entire process.

And this is interesting because when you look at a lot of the off label drugs that are being used, doxycycline, diesel, atorvastatin, these even metformin, they're actually all antifungal as well.

So the on top of that, antifungal drugs, like the alcohol class H recon is all for instance, that's now being studied because it has it has a broad, broad effect against a broad range of cancers.

And it's one of the best performing off label drugs. Now that people could argue that's because it affects particular metabolic pathways. But what I'm trying to say, with all my evidence is, is maybe we should.

Yeah, that's that's also possible. However, all the evidence I'm suggesting is justifying using, these anti antifungal drugs because there's this potential that the fungal pathogen is driving the disease.

And the whole point of the theory in the book is really bringing together all the evidence to show that I can explain all of the, the hallmarks, that all point to this interaction with these fungal pathogens being present.

And this is what we should also be thinking about targeting. So one of the challenges, you know, when you start just killing things, then you have a lot of debris of, of, whatever you killed.

And so if you have a toxic system already that's overburdened, you know, doesn't that then create, more of a toxic, kind of tumor microenvironment, you know, and causing more inflammation, that tissue, which can then complicate the issue.

Absolutely. So in my, in my, paradigm, the damaged in the toxicity of the tissue, the information is what drives the disease. If you can still have the pathogen present in the tissue, in a commensal manner.

But, if the tissues healthy, you won't get cancer. So it's not an infectious disease in the normal sense. It's only a it's an opportunistic infectious disease.

When the train is damaged. So you've got to really address the terrain. You've got to really, bring down inflammation, and make the train, as healthy as possible, which it to enable the immune system to gain access.

Because the other thing that I found is that one of the questions I wanted to answer in my journey was, why do so many different toxins, so many different carcinogens, radiation, you know, food toxins, chemical compounds, they're all different and they cause damage in different ways, yet they seem to develop, generate the same disease. What's the consistency?

It's always when you try to problem solve something as complex as this, it's trying to understand the consistency. And the consistency is that I found is that, first of all, when you have damaged terrain, poor healthy diet lifestyle, the immune system's weak.

So that enables, facilitates fungal infection. Also, chronic inflammation weakens the integrity of the cell. So that facilitates infection. You also get, an increase of lactic acid production because we've got glycolysis occurring or the Warburg effect.

The acidity feeds the fungal pathogen. But at the same time it suppresses the ability of the immune system, immune cells, to access. The lactic acid produced, which is what we're happening, which is what happens with chronic inflammation.

And then you also have iron overload. Iron is like rocket fuel to pathogens, but it suppresses immune cells. So in this damaged environment, this toxic cellular environment where you got this inflammation in this iron overload and lactic acid, you have this environment that actually feeds the pathogens, as they're invading the cell and suppresses the immune cells at the site of damage.

So and there's so many other nuances going on with the pathogen itself suppressing the immune system. Forcing macrophages into an M2 phenotype rather than an M1, pathogen attacking phenotype.

Plus, a t H2 phenotype is being pushed by the pathogen. PDL one is being upregulated, which is, a don't eat me signal essentially for cells. So the immune system thinks this is okay.

That is in fact can be instigate and is instigate by fungal pathogens. So yeah, it's extremely important to to try and bring the tissue back to homeostasis in order to enable the immune system to help the cells eliminate, the pathogen inside that I'm suggesting there's the problem.

So so then we have the questions from regards to like traditional oncology, looking at radiation, looking at, chemo. Obviously neither one of them, you know, strengthens the tissue in itself.

I mean, it, it it triggers more weakness.

Terrain, inflammation, and immune suppression

It suppresses immune system. Yeah. Also research showing that it actually activates cancer stem cells. So how in your mind, you know, from your theory, you know, what impact does chemo and radiation have in regard to cancer?

So, I'm not saying that we shouldn't do chemotherapy because it does work for some people. But how I explain it is that, well, the, the the initial, assertion about how chemotherapy works is that it targets the DNA of rapidly dividing cells.

So it's damaging the DNA for one. That's a contradiction in terms, because if cancer is caused by DNA mutation or DNA damage, then you you've you're using substances which is actually potentially able to cause the disease itself.

How do I explain how it works is that when you have any damaging toxin, enter a cell causing inflammation. You have a generation of reactive oxygen species.

The free radicals that cells and immune cells use to actually kill, break down toxins, and kill pathogens. Right. So you have this huge increase of, free radicals that can eliminate or really, hinder the pathogens.

I mean, that's that's what the cell is trying to do initially, anyway, when the pathogen is entering the cell, what you're doing with chemotherapy is you're technically helping the cell to create more reactive oxygen species.

Essentially, you could look at them like bullets being fired at the pathogen. So you can eliminate a large number of the infection that is present. I mean, there's bacteria in there as well.

So you do that through chemotherapy. And what we do often see is a huge reduction of the tumor. And everyone's like, oh, the chemotherapy is working. But the problem is you have these cancer stem cells that present, and they are very good at eliminating toxins.

Through the efflux pumps so they don't get as much of a hit. And they're not generally, rapidly dividing. So they don't actually take on board so much of the chemotherapy toxin.

So they, they're just present. Then what happens is over time, the immune system's weakened. Cell integrity is weakened further, mitochondria are weakened further, and there are defense mechanism.

All this is actually aiding then the survival of the pathogen. If it's still remains within the cancer stem cells or the tissue. So every time you then start to use chemotherapy again and again, again, you're getting less, free radicals being produced.

Furthermore, the pathogen itself is up regulating its antioxidant levels to combat the reduced free radicals that are now being produced by the chemotherapy.

Not only that, but the cancer stem cells are now being provided with that huge loss of the tumor of regular cells. You could say those regular cells will stimulate in the cancer stem cells, just stem cells to say we're all dying en masse.

So those stem cells and now being given signals en masse, that there's this huge event of cell death occurring. So the stem cells that realize in order this is an extinction level event for that, for the cells in the body.

So they duplicate themselves in order to replace the cells that have now been lost en masse. So the GPUs themselves and then increasing the rate at which they are creating new cells.

So all this is going on. The pathogen still survives. The tissue is still glycolytic, but cells are now being replenished faster and faster. And the chemotherapy now it has less effect because the cells are able to, have learned to remove the toxin more efficiently and there's less mitochondria, effective mitochondria or, what's the word, healthy mitochondria in order to generate the reactive oxygen species that the chemotherapy in chemotherapy initially generated to kill the pathogens.

Now you've got to a certain level where resistance occurs to the chemotherapy because the fungal pathogen remains, its antioxidant defense is really high.

The free radicals that are being produced are too low to actually kill the pathogen. And this cancer stem cells are now ramping up their production of new cells.

You have a tumor that can no longer be treated by chemotherapy in that sense. So that's where it's potentially dangerous. Where chemotherapy is good is you could argue low dose chemotherapy has been shown to be quite effective.

You can augment its use with other treatments. And I'm going to show you, you, your listeners will know and you know that something simple like the ketogenic diet or fasting can help, increase the efficacy of chemotherapy, but also chemotherapy could be used, you could argue, to reduce the tumor initially for it to then be removed by surgery so that there are potential benefits.

But that would be the perspective I would suggest as to why chemotherapy fails long term and potentially drives the disease. And so so you mentioned, I mean, because you also have the, you know, the free radical theory, you know, that the free excessive free radicals then cause cancer.

But here you are going in the direction that the free radicals is what we're using them to kill cancer. And also kill the pathogens and, and so that antioxidants are actually what the cancer or these pathogens use to defend themselves.

So how should a person then navigate. Because a lot of people are thinking, well, I need to bring in a lot of antioxidants. Yeah. To to help my tissue and calm down inflammation and, and, you know, get rid of free radicals.

But it almost sounds like we are meeting these free radicals and we should be cautious in regards to antioxidants in order to effectively go after the cancer.

Yeah, that's a very, very important question. And and this is explained in my book. But, it's it's incredibly nuanced. So it you can't look at cancer as it being black and white.

It's nuanced in the sense that you have pro oxidant therapies. Chemotherapy is one, you can utilize, intravenous vitamin C as a pro oxygen therapy, artemisinin as well, because there's at various points you can utilize the weakness of the tumor, such as the iron overload.

This present iron reacts with, intravenous vitamin C, artemisinin.

Chemotherapy, radiation, and oxidative therapies

And what you're doing in that process is you're using the iron that's present to cause a reaction, using the free radicals to generate free radicals on such a mass scale that you actually cause disruption of the cell, death of the cell through necrosis.

So you're literally bursting the cell open. Really. So that's where it can be used in a, in a positive way. And you don't want to be supplementing with antioxidants if you're choosing at any particular stage, do a pro oxidant therapy because you obviously you're going to be dampening down and reducing the damage that can be caused by those, those free radicals.

But the beauty of really targeting up ptosis, which is the iron, free radical aspect of cell death that occurs, is that iron overload pretty much only only occurs in tumors.

So it's kind of like a targeted approach, where you want to be thinking about using antioxidants would be, I mean, I'm not a clinician, so don't take my advice, as as gospel or medical advice, do your own research on this.

But you want to be using antioxidants for, generally preventing overt damage to your cells anyway and trying to bring your tissue back to homeostasis.

But not when you're doing pro oxygen therapy. So you need to be aside from those oxidant therapies. So in that sense, it's nuance. And you've got to you need to you need both or you can use both, but you've got to use them at the right time.

So the the benefit would be then to when you do oxidative therapies and at that time then stay away from any kind of antioxidants when you do the oxidative therapy.

But then when you are not doing it, you know, let's say you can kind of push hard done with oxidative, and then you can then bring in antioxidants after to help to kind of bring the tissue back into homeostasis and then to repair the impact of the oxidative therapies on the healthy tissue.

Yeah. But again, there's even nuance in that because some studies have shown that if you over the over provide, supplementation of antioxidants, you can actually suppress the immune system.

Now there's controversy in that because it's I think those studies were utilizing, synthetic antioxidants, the idea being that synthetic, anything synthetic generally, doesn't work in synergy with the cell where natural compounds that they do in the cell uses those compounds as, when they need it.

So it's worth supplying antioxidants, natural based on dioxins, if you can. So that you're not overloading the system. Because if you do, you say, like in these studies, synthetic antioxidants and you, you over supplement them in the body, what essentially you're doing is potentially suppressing free radicals in the body that are used by your immune system, in your cells, in a healthy fashion.

And they use this as is, you know, signaling, molecules as well. You have actually then begin to expressing normal cell function. So it's all being aware of utilizing when to utilize them, how much to utilize and what type to utilize.

It's unfortunately a complex in that sense. And in your when you're saying synthetic, you know, antioxidants. What what are you referring to? I think it was a synthetic version of vitamin E that was being used.

So, not taken from plant extracts. It was, you know, I'm not too sure exactly the exact difference between the synthetic version and but I know there's there's different left and right spin of certain molecules, sugars especially.

And that can cause particular issues in the body. So, yeah, I'm not an expert on that side of things like the, the alpha tocopherol that you would, you would get, you know, and yeah, I mean, obviously there are a lot of synthetic, you know, vitamins that that are out there that's made from somebody's chemicals versus, curcumin or.

Yeah, you know, different, flavonoids, you know, from different subjects that you I read troll or Sophia Fein or. Yeah. Okay. Okay. Plant compounds high in anti micro anti oxidants.

And I, and I know that you're not a practitioner but you you've studied this you know tremendously. So if you, you know with your overview understanding kind of the processes that that goes on that you know triggers the the cancers process and also the bodies and if you know, attempt to kill off these pathogens that are within the cell that's, you know, causing this kind of cell suppression.

What what are your in your mind? You know, what would be the strategy, you know, for an individual that's listening to this, to, to be able to navigate, you know, dealing with cancer.

And again, I know this is not medical advice. This is just from from your research and understanding. Okay. So this is something that we're working on.

And again it's very nuanced. So there's no one size fits all. Everyone is different that stage cancer there are different. The health is different in the microbiome is key.

So I'm working with scientists at the moment to establish, testing the theory and to try and generate, a foundational protocol. I cover a lot of a particular type of approach, in my book to advise patients on how to go about understanding this.

But essentially, the metabolic theory would say all you've really got to do is, starve a cancer of glucose and glutamine and use, hyperbaric oxygen therapy, oxygen based therapies to try and stimulate possibly methylene blue.

I'm not sure if Thomas Siegfried says anything about methylene blue, to be honest, but just to reinvigorate mitochondria. But I'm saying, well, taking a broad look at things, you need to look at the terrain, really get healthy.

That's changing your diet. That's the first thing that really you need to do. Make sure you get the nutrients you need. So organic possibly may mainly plant based because a lot of the the compounds in organic plant based foods, such as the soil purifying.

We touched on resveratrol. They're anti-microbial as well as providing you with the antioxidants. So it's all about reducing the chronic inflammation.

That's what you wanna do. First off remove toxins out of your life. Make your life as healthy as possible because then you're you're giving strength back.

Essentially to the immune system and to the cells. You're making the environment, not conducive to fungal infection because the fungi, survive and thrive within a toxic, damaged, inflamed environment.

Okay. So that's the first step. And that comes from the tissue organization field theory perspective. Then you would need to address the microbiome in conjunction with that.

Because the microbiome is a key feature of your immune system, it makes up approximately 70 to 80% of your

immune system. People don't know that, and information can be generated throughout the body if you have the wrong metabolites being produced by the wrong microbiome, microorganisms in your gut and in various areas of the body.

So those two kind of go hand-in-hand. Then it would be follow the advice from the metabolic theory, because that's the next really best, or most accurate theory in my opinion.

So do the metabolic therapies go do ketosis because it's a it's a catabolic state whereby your body is reducing the body, the access to glucose for want.

And that's going to put pressure on the pathogen itself because that's its primary food source as well.

Diet, microbiome, and treatment strategy

But you're also you're entering into autophagy might if AG you're reducing your your body's becoming more efficient. That's what you're forcing it to do in that sense.

So follow the metabolic strategies because they're also antifungal as well. On top of that you want to be addressing the stem cells and have that in mind.

But that would come with utilizing these plant based compounds. And I'm not saying be vegan or vegetarian, because we also need to be utilizing to gain access to nutrients, meat as well, because it's more bioavailable.

We just want to be careful about the iron intake. So again targeting cancer stem cells with that in mind curcumin. A lot of natural compounds are have been shown to inhibit cancer stem cells.

You know much much better than a lot of drugs. And then it would be from the perspective of my theory, which is highlighting that fungal pathogens, you want to address the fungal pathogens, but you want to so you want to test really ideally you want to test to see if you've got mycotoxins overload in your blood, if you've got any particular pathogens, if you can identify them in and around your tumor, then you will have an idea of which particular antifungal drugs if you want to go down that route, to administer which particular combination of, of labels.

So but for me it depends if you tumors more like, glutamine based will determine what type of drugs you're going to use. So there's a number of combinations.

But always keep in mind that use off label drugs that target the metabolism but also antifungal. Tamoxifen is antifungal like I say metformin is antifungal.

Statins are antifungal. But make sure it's the right kind of stat in for your type of, treatment. But at the same time, targeting the pathogen, you won't you will be dealing with all these natural compounds because they're anti-microbial.

This is why silver and honey can kill cancer cells because they're microbial. You're doing all this. You are. You're creating an environment that is hostile to the pathogen.

You also need to realize that in and around the tumor, that tumor site is hostile to immune cells because of the lactic acid being produced in the iron overload, and the fact that the pathogen is doing a number of things to calm the immune system down to evade capture.

So you want to try and reverse the two phenotype to a one phenotype, which is immune cells that go interestingly and target intracellular pathogens. Very clever.

These fungal pathogens have, the ability to switch to a T H2 phenotype, thus avoiding intracellular immune cells essentially coming into to eliminate them.

So that can be done various means. You could use medicinal mushrooms. And there's a number of other natural compounds that can try and re stimulate the immune system in that environment around 2 to 1 immune response, which is what you want.

The immune system is critical, absolute critical. And that will help reduce it back back to an M2 phenotype. But you also want to reduce the lactic acid being produced as well through hyperbaric oxygen therapy.

All these different therapies, all these different approaches that there's so many that you can use. There's no one specific one which is going to benefit everyone because people will react differently to each different one.

But what I'm trying to outline here is this framework that you need to be targeting the terrain, the microbiome, the abnormal metabolism, the stem cells and the fungal pathogen, which you'll be doing anyway, but have the fungal pathogen foremost in in your mind, because we see all these treatments that are antifungal and antifungal drugs have shown great efficacy, against, many, many cancers.

And we see that the work of Robert Strauss, when he's looked at different cancers, 35 different cancers, he looked at and he identified bacterial and fungal pathogens present in all of them.

Okay. So they're there. And we know that with certain other cancers. So in case studies, pancreatic cancer, for instance, when they used antifungal drugs on the particular tumor and they noticed that Malaysia fungi had, proliferative 3000 fold, they the antifungal reduced the tumor by 40%.

And you from growing. They then reintroduced the the the fungal pathogen Malaysia. And it grew again because they introduced the fungal pathogen. So we know there's a direct link there.

So yes it would be that to to try and modulate the immune system. And then finally it would be pro oxidant therapies can aid, the destruction of the pathogen and damage the cell if you need to actually damage it.

So you've got to use them wisely, at the right time. Post them. But they can be targeted using, say, vitamin C. And because the other thing I didn't mention when you're thinking about fungal pathogens, that's nuanced as well, because not all pathogens will be eliminated by a particular, antifungal.

And you've got to really try and break down the biofilms because that's where they live, and sustain themselves. And antifungal drugs can't access them within the biofilm.

And, vitamin C can actually help to break down, that biofilm. So that there's a lot of nuances involved and a lot of that is covered in my book. Fascinating as things, it's just a couple questions that I know we've we've covered a lot already, but, you know, first, I mean, you were shifting a little bit between plant based and then ketogenic, in regards to the diet, you know, are you thinking that they can be married in some way, or are you thinking that you do them in phases?

You know what? What are your thought patterns? And reassure that, well, you can get into ketosis in whatever diet you choose. Really. But it's just, probably a lot more difficult if you go vegan because the carb carbohydrates are quite a lot more difficult to eliminate.

I don't so what I'm trying to say is try and I don't like the, the notion of just going for based on the research that I've done, just going for a carnivore diet, it's going to be done.

I mean, again, it depends on the health profile of the person. Even the blood type, you know, we absorb things in different ways, but by eliminating, natural plant based compounds, what you're doing is you're eliminating the natural compounds, the anti-microbial compounds that that can target the tumor.

So Doctor Michael Greger, talks about this in his book, and it's a fantastic study that was done with breast cancer patients. They fed breast cancer patients before they were due to have a mastectomy.

So fewer purifying broccoli, certain amounts of broccoli to see and then to see whether or not the. So fewer thing actually entered the tumor. And when they remove the tumor, they analyzed it.

They could they found that, yes, this sort of thing enters the tumor and it was present within the tumor. And we know that. So purifying is anti cancerous.

So in his book he highlights that we know that these natural compounds do actually get to the place that we want them. It's just whether or not they get converted in the right way and whether or not they are there in sufficient quantity to cause an anti-cancer effect.

So I wouldn't want to say to people eliminate, natural plant based compounds because even sell vegetables, that that's another whole aspect. These these compounds have been shown to be anti cancerous.

So but at the same time certain natural compounds can have a negative effect if you consume in nightshade via varieties that are can be quite toxic to the body.

So it's understanding which ones are the most the most effective which diet use. Utilizing them as well can get you into a state of ketosis. And it can be done with various different diets.

And I mean, you you've brought up the word breast cancer. And then I start to think of all the kind of estrogen therapies, you know, you're blocking hormones for prostate, for, for breast cancer, you know, are are they effective or are they are we missing the mark with those?

What do you mean? Therapies that are used for breast cancer? Yeah. Well, I don't know the overall effect effectiveness figure for any particular one type of drug.

I know there is there is a failure, right? With with a lot of them and, but there like tamoxifen will be used for quite a number of years. That has shown in a number of studies, to prevent the disease returning, but it's also antifungal.

But then there's also the issue of using a particular drug for, for too long because the efficacy of the drug is diminished over time because cells, are able to, eliminate the toxin from the drug essentially more effectively.

And then pathogens also generate a workaround. The interesting thing about estrogen is that actually it it fuels the virulence of fungal pathogens.

Hormones, immune phenotypes, and closing remarks

So you, you essentially can have fungal pathogens on present on the skin. Asia, for instance, gain access through the nipple. And higher levels of estrogen stimulate the growth of these pathogens.

So that could be the explanation for why breast cancer is, one of the is the dominant, cancer type in women. So, yeah, there's a huge link between pathogens and estrogen and, the particular therapies used and these estrogen based or hormonal therapies and that aspect of the disease needs to be understood a lot more.

And I need to go a little, a little bit more into depth that but there's definitely this link with fungal pathogens and targeting hormones and being able to regulate hormones effectively, which pathogens they cause.

This instability, which causes hormones to be going all over the place because it benefits them. Yeah, yeah, yeah, it almost seems like, you know, we are missing the mark with it.

And, like you're mentioning, you know, you have, you know, when you're testing that tumor tissue and seeing is that estrogen, progesterone, Her2 positive.

Yeah. And in reality, you know, these, you know, like you're saying that may be, the reason for that is then to, pathogens way to kind of upregulate their activity.

And, you know, like you're saying tamoxifen is, it's also an antifungal. So maybe in this in, instead of just kind of blocking the different hormones, then, you know, working more on going after the fungus and then also work on the terrain and, and, you know, doing the, you know, kind of following your theory instead.

I mean, to me that that makes much more sense. One, one kind of question here. So you're talking about 1 to 2, you know, one is more kind of that go and kill two is a little bit more set back, in regards to immune system function.

Yeah. How can a person know if they have shifted in a to is there like a test or something that somebody can do to kind of see where their immune system is at so they know that, dang it.

I'm, I'm in this space right now and I need to take do these strategies to shift into like a one. I, I don't know, personally. I, I know that if you have regulation of particular immune cells, so a sun feels they're more directed to external pathogens.

So H2 response is more for external pathogens or external immune cells that are operating externally to try to remove parasites. So for instance, so the type of immune cell that's present or upregulate, you can give a signal, I suppose, of, which phenotype is being produced.

But generally the medical literature highlights that there is this shift to H2 phenotype, in cancer. Anyway. So again, you, I'm not the expert on, knowing which particular type of test would be able to highlight that process, unfortunately.

But it's, if you're dealing with cancer, then it's almost like you're saying we can assume that you shifted into the two and need to, you know, bring out strategies to shift it back to one to more actively go after cancer cells. Yes.

And just even if you don't think you've got to shift to two, you still want to be using compounds that can prevent that from happening and ensuring that the immune system stays in that one state, which is essentially neutrophils and macrophages, and immune cells that will enter and deal with issues within the cell itself.

So there's always going to be a benefit of ensuring that your immune system is modulated correctly. For it. Do you, do you mind just showing a picture of, of your book, the cancer resolution?

Because, you know, we we've kind of, all of this here is covered in your book and, and I know people can go to your website also, you know, self suppression.com.

But yeah, I would love for people just kind of visually see your book and so they know what to get. Sure. Okay. And I probably I'll, but this is my website.

I'm not sure if you can see that. Perfect. Right. So there's the book itself. And there's the website. So, yeah. Thank you for to let me share this. It's a phenomenal book.

And, yeah, I, I highly I, I had the pleasure of, of, you know, I've had the pleasure reading it and it's, phenomenal. So. Well, Doctor Linton, thank you so much.

You know, this this has been amazing. I really appreciate your work. And we we really need to, have all hands on deck to understand, you know, this issue of cancer, because it is, it's truly a pandemic.

And, you know, we we need to really understand what how to address it and what to do about it. And like you're saying, to having the appropriate theory, is what will then allow us and then to develop the appropriate treatments.

So thank you so much. Thank you. Absolutely. It really is, this notion of, of keeping, keeping an open mind because we don't know what the underlying mechanism that is driving it yet.

And we need if we want to find out what that is, we need to keep an open mind. So yes. Thank you. I really appreciate the time and talking to you. Thank you.