Introduction to Jane McLelland and Her Cancer Journey

Today I get the honor to chat with a gorgeous and dynamic Jane McLelland. She is the author of this incredible book, How to Starve Cancer. And it has helped.

I don't know how many people do you think have read that book by now? Hard to say. Rarely, but certainly over a hundred thousand. Sure. And yeah. And I can't imagine.

I mean, the it you put repurpose drugs on the map, you know, with this book and and the amount of people, amount of patients struggling with cancer that's been how you know from that as I I can't even imagine so what a service to mankind.

Thank you. From the jaws of death. So I see. Coming out the other side, too, to helping lots of people. That's the way it should be, shouldn't it, really?

If you've been through that, you've gone down that path, you've you've suffered as much as cancer patients do suffer. Part. Of the way through. And then pieced together the kind of jigsaw, if you like, to find some sort of solutions.

My approach may not be absolutely right for everybody, but I've hopefully mapped out some sort of structure that people can create their own path. That's what I've done.

That's that's been my mission to try and create an understanding of how cancer works and how it fuels itself and ways to actually kill it off. That's that's my approach.

You know. And when we were talking about jaws of death, you know, for everyone out there that does not know, Jane was diagnosed with cervical cancer in 1994 and did conventional treatment in you know, at that time in 1999, her cancer progressed to stage four and she started incorporating complementary and alternative treatments alongside the chemotherapy.

In 2004, she started developing leukemia as a result of the chemotherapy and, you know, and then facing terminal cancer a little time to live. She poured all her research on old drugs with anti-cancer effects and put together cocktail of off label drugs and nutraceuticals supplements, an attempt to block the pathways that cancer stem cells use for fuel.

This metabolic approach effectively starved her cancer of its fuel, glucose, glutamine and fat. And here you are. Yeah, you're am beautiful. And it's like doctors never thought I would be here.

This point, you know, it's eight. And I look back and I can't quite believe I'm here. I'm coming up to a big birthday next year. I'm thinking, my God, it is just extraordinary.

Building the Metabolic Approach and Metro Map

Extraordinary, really, because, you know I'm nearly well I'm since terminal diagnosis so it's over 20 years so terrific. That's incredible. That's absolutely great.

So so you went off then went on to kind of map the different pathways. And obviously we're learning more and more as we're going. You created the the metro map sort of say where people can look at their cancer and then see which pathways that impact their cancer and then find the different repurposed drugs that are associated with those pathways.

So yeah, so just to make it easier. And also, you know, I use a heck of a lot of supplements as well. I know I'm seen as the queen of off label drugs, but really there were a whole load of natural supplements that I used as well as question curcumin.

Berberine, you know, a whole host of of really effective anti-cancer supplements that work very effectively, again, to stop various cancer pathways that feed the cancer through glutamine, through the fat pathways, as well as because everybody gets obsessed with glucose.

So blocking that pathway, but it's not, you know, it'll swap. And that's that's what I try to portray in my metro map, which is kind of like a triangle with various different pathways going in from the three sides and then the second swap.

So you've got one pathway, it'll just swap and use another one. And there are pairs that link upon my metro map like mTOR and autophagy glycolysis and OXPHOS and the pentos phosphate pathway nucleoside salvage.

These are pairs that work together. If you block one, you've got to block the other one as well. And I talk about that in the book. It's not if people just go online and just look at my metro map, they won't necessarily understand that.

But, you know, in a lot of people get very confused about my book when they first read it, and I think it was too complicated for me, but I think the light does switch on after after you've done a little bit more research.

And I know people get terribly confused right at the beginning of diagnosis when you've got this massive overwhelm where you're trying to deal with your diagnosis and chemo and you got all of these things going on, you've got people telling you to do one thing, your relatives telling you to do another.

And, you know, you've got you've got many things coming at you all at once. And it's very hard to try and sift out what you should do, what you shouldn't do.

Unfortunately, people tend to leave these complementary approaches until the cancer has progressed quite far. And then they're you know, they realize that there isn't this great big magic bullet that the oncologists are going to give you that they haven't quite got the answers, certainly for stage four, they don't have the answers.

So you have to look at complementary approaches in order to provide that combination approach, which is what everybody likes really with conventional treatments.

They don't give you that combination that's really going to help. And I like because it's not an either or thing, so it doesn't yeah, these complementary therapies, you know, like using repurposed drugs or you know, you're talking about quercetin, you know, Berberine is used a lot.

There's so many different natural agents out there that then will enhance the effect of the conventional therapies. Correct. And they do that because they're blocking various different fuel lines, if you like.

So Quercetin will block the glucose transporters that will help block the gluten one, which is your glucose transporters that's most used in cancer. The cancer pulls the glucose in through that.

And then the question will help block that. So, you know, that's great. That's terrific. That's what you want. You want to block that. And then you've got curcumin and resveratrol work quite well in prostate cancer to block the glutamine.

You've got Egcg, which is from green tea, which helps to block the glutamine getting into the cell, the transport into the cell. So there are many different natural supplements you can use that will actually enhance the effect of what you're trying to do and starve the cancer.

Once it's starved, it's much weaker and then you can use chemo radiotherapy much more effectively to kill it because it's it then hasn't got the same level of defenses.

And one of the issues with the conventional therapies and is that it really is great at shrinking tumors, but in the discussion of like cancer stem cells, for instance, I mean, we know that people usually don't die from just the cancer.

They die when it metastasizes. When it goes into other locations, that is when it becomes really deadly. So to control them, the cancer stem cells becomes a really important strategy.

And since the traditional oncology really doesn't have an answer to that, it becomes really important to bring in as part of your therapy. Totally. And the cancer stem cell is what they feel.

They don't have a drug to target. They haven't actually looked at all the old drugs like metformin, doxycycline, even just an antibiotic.

Using Supplements and Repurposed Drugs to Block Fuel Pathways

All of these drugs seeking the statin, they works synergistically together and they will help kill off the cancer stem cell. Ivermectin is one of my favorites as well.

I love that for boosting the immune system. It also blocks something called Interleukin six. And I've just been looking at this in more detail because of course, with architecture and things, it's really important to block the wasting condition that you get with cancer as well, particularly if you're going to try a diet like the ketogenic diet.

I don't know whether you read the recent research that came out about interleukin six actually making the ketogenic diet much more likely to cause cancer and actually not have the beneficial effects at all.

So it's actually trying to enhance the effect. If you're going to do a ketogenic diet, you've got to block that interleukin six quite effectively. You've also got to look at other ways to try and boost the immune system.

And I mean, cachexia is actually quite a complex condition anyway, I'm going to write a blog on that. So on my website I'll do a blog on that fairly soon because it's quite in-depth and the cachexia, it does need a multi targeted approach really on the ketogenic diet, particularly for pancreatic cancer patients, colorectal patients, non-small cell lung cancer at once, they actually tend to get that cachexia condition.

I've seen it so many times. They start a ketogenic diet, then they get too weak and actually the effect of the cancer takes over and they haven't got the energy to keep going and they fail at the stomach.

Dot They fail, you know, on every level because they're trying to do too much. Interesting. They come out with the fact that it's got something to do with the glucocorticoid receptors and they suggested dexamethasone as something to take alongside the ketogenic diet.

Now to me was kind of like, Oh, that's just going to be immunosuppressant. It's going to make them want more glucose. So I kind of wrote it off and then I had a little bit more of an in-depth look and actually dexamethasone, if you take it in combination, maybe with interleukin six inhibitors, like the like the ivermectin that might actually help enhance the benefits.

And so this is what I'm going to write about because it's actually quite an in-depth, complex area and that's my current current area of research because so each tonic diet stimulates and causes ferroptosis, which of course is obvious.

First me going, Oh, we need to stimulate ferroptosis, which if people don't know, that's the other thing I've kind of brought to the forefront of potential treatments for cancer patients.

Nobody really knew what for ptosis was. But this in my latest addition, which I'm not sure you got I got my first addition. I think that. But anyway, my if you haven't got my second edition, I will send it to you.

But the Ferroptosis is a new chapter. I write my second edition, which is all about using iron and lipid peroxidation. In other words, fat making fat oxidize on the cell membranes in the cancer, and that causes death.

It's a cancer cell. And of course fat is the predominant element of the ketogenic does, of course it causes ferroptosis like it's obvious, isn't it? But it wasn't.

It didn't strike me as being because you've got to be very careful about the type of fat you put into your diet. In order to do that, you know, you've got to have the right polyunsaturated fatty acids and particularly the fish cause cod liver oil, one cell, you know, DHEA, e EPA, all of those are absolutely critical in order to cause the fraught ptosis.

That's why they're so important. But anyway, that's that's silly. Talk a little bit. But don't stop now. I mean, this is fascinating. So so yeah, let's let's go down that rabbit hole.

But because yeah, the ferroptosis, you know, we use herbs, you know, like we do ivy artists and a tier, you know, and and then you talked about the different good omega gas for the cell wall membrane.

So tell a little bit more what is Ferroptosis? So it is so cancer has this desire to use iron because that helps fuel quite a lot of its metabolic processes.

So it's very keen on taking up and storing iron as part of what it does and the cancer cell because it has more of that iron inside it. Once you release early on you get it to oxidize so you can kill off that cancer cell much more effectively.

If you use intravenous vitamin C, that becomes pro oxygen. So that creates hydrogen peroxide near the cancer cells. Specifically, it's quite targeted in that way.

It's quite targeted drug. And if you take things that are actually going to release oxygen in that area and release the iron, so things like garlic are really good at helping to release the iron.

But the artesian night or artemisinin combined with the vitamin C plus, there are other things I've got kind of like a full protocol is it's relatively complicated, but one of the things that you need to do is reduce coke you ten and this is a big issue for a lot of people because that means taking statins and statins kind of don't resonate resonate well with many people.

They worry about the side effects. They worry about potential dementia issues or whatever. But when you look at the research, it actually helps prevent Alzheimer's and any dementia tends to be short term.

So seriously, come off the settings, you're fine. So, you know, it's just a temporary blip. I think when you're on the statins, if you get the side effects, which not that many people do.

So I think it's an unfounded fear that people have with statins. And I'm trying to encourage people to be a little less worried about them. And I find that's my constant fight out there on social media.

They go, I mean, I took statins as part of my anti-cancer protocol and I probably simulated some ferroptosis. I have no idea. I mean, I took intravenous vitamin C, I did take Artemis Zinc because I knew I had parasites on you, you know.

So I took I didn't know about fruit. Ptosis. Ptosis was only discovered as a concept of, you know, a new way of cancer, cell death that's existed forever.

But they didn't realize until 2012 when it became recognized as a new form of cell death rather than apoptosis or apoptosis, which is a normal cell death.

Cancer Stem Cells, Metastasis, and Immune Support

Suicide Ferroptosis is a new way to not a new way, just a newly recognized way of killing the cancer cell, using on using oxidants and actually creating so it dies in a different way.

But you have this that the cell membranes disintegrate and they die differently, too. They would do they just go through the apoptosis route, which is what oncologists try and use most the time in order to try and, you know, kill cancer.

So it's totally is it a different a different spin on the same thing? You're still trying to kill the cancer, but it's a slightly different route. So should a person then, because you're talking about using an iron, is that beneficial for an individual then to also be an iron to increase the quantum?

It's just a tricky thing because actually a lot of you don't want to be taking it if you're not doing the ferroptosis. And actually some people you could have a an idea of what your ferritin levels are.

You know, it's not something you should go ahead and try on your own. You need to know where you are. If you take on and you're not doing a ptosis protocol, you're not being monitored and you don't know where your version is, etc.

Be very careful is all I would say. But I have had, you know, people who haven't really known what they were doing quite well. But I'm not suggesting people try it on their own.

You know, I think it's it's it's a tricky one to say, because actually it's different to starving cancer. Starving cancer requires, you know, just blocking the fuel pathways.

Whereas ferroptosis, you have to have specific oils in order to create it. You need to have a specific protocol in order to encourage the right reaction.

In the cells, you need to block things like the an RF two pathway, things like that. So how do you do that? Well, as a supplement called Bruce Atoll. So there are lots of things that you need to put into place in order to make it work.

It's not as straightforward. She Go try a bit of autism like vitamin C because it's actually you've got a block of the pathways as well. And the STATINE is critical because a CO Q10 is a major antioxidant and that will stop ferroptosis happening in the cancer cells.

And I see people fail to get apoptosis. Those who actually achieve the ferroptosis managed to get much longer survive. What I'm noticing is they get a much longer remission.

In fact, people who've achieved it properly and I possibly am one of those, I think have actually, you know, they've done it and they've got rid of the cancer, hopefully forever.

It kind of triggers a cascade in all the cancer cells. So all that, it just triggers that cell death from one cell to another. And it's like a it's like a fantastic cascade of cell death in cancer.

And you can have a fairly a fairly foster mission sometimes. I've seen with some of this, I'm I'm excited by it I want to bring it to the UK because nobody's doing it properly in the UK.

So there are lots of things I want to do. I feel frustrated that cancer patients can't hack set up, talk about these things and cancer patients can't actually access to treatment.

So that's that's important for me is to actually make sure there's somewhere that patients can go and get this in the UK, you have a few places in the US and you obviously provide some fantastic treatments to help.

There's some photodynamic therapy, which I know is something that you do really assist us enormously. So great. I need to bring that to the UK cannot do that.

I'm somehow I'm going to have to do it. So working on it. You're going to rocket and the and that's the thing is that you know when you deal with cancer is to layer these therapies together because it's like like I mean and that comes becomes very clear in your work is that it's not just a a of you do one bullet and think you're done you got to work on all these different avenues and all these drivers and and really put pressure on cancer.

And then also at the same time, you get to consider the individual that the cancer exists within. So you get to play that whole whole game the whole time.

The whole holistic approach is so important to look at all the different elements of that person, whether it's their sleep, their stress levels, their exercise levels.

There's a whole host of factors that come into when you're evaluating your cancer patient, how much are they going to be able to tolerate of off label drugs or, you know, everybody has individual quirks that these things as well.

So I'm going to be working with some fantastic doctors over here and hopefully we're going to do something different in the future and keep your eyes peeled for that one anyway.

So love it. I'm excited. Yeah, you know. Excited about that and yeah. So so tell me one, one of the issues, I mean, in regards to cancer, everybody talks about, you know, saying it's a metabolic disease, you get to support the mitochondria.

When the mitochondria are functioning appropriately, then that's where you have the cell death switch. And obviously Coke ten becomes really important.

And then they talk about doctors cycling being toxic to the mitochondria. So so came bringing a little bit kind of light to to that. Disparity to that.

Well it's very tricky because I do have a whole army of people saying, oh, you need to mend the mitochondria. It's all about mitochondrial damage and you can't.

But actually when you look at it, you've got a combination of glycolic glycolysis going on in some cells and then feeding the other cells with the lactate.

They then scoop up the lactate and feed it through the oxytocin pathway. Now there is mitochondrial damage going on and some of those mitochondria in the cancer cells.

Ketogenic Diet, Cachexia, and Interleukin-6

But actually the way to deal with that is to kill off the mites, you know, the bad mitochondria first and then you rebuild the body afterwards. You can't just try and you know, it's a process of doing it step by step.

So yes, you can put Kochie ten into your program, but once you've kind of got to a point where you're maybe needy and you're trying to rebuild, I don't think it should come in when you're having active treatment because you really want to reduce the glutathione in the cells and you want to actually create a situation where the cell is vulnerable to treatments.

Chemo, radiotherapy work much better if you can reduce the glutathione in the cell. So it's a matter of where and when. So Dr. Cyclin works brilliantly to starve the ox first pathway, and you can use many different approaches to try and get rid of the, the, the, with the glycolysis.

There are many enzymes in that pathway you can target with different things both off label drugs, intravenous vitamin C or even vitamin C on its own and other things as well, like melatonin, cinnamon there there are many different supplements and things that will help block the glycolysis pathway.

And then you layer on that other pathways as well that may be particularly relevant to your type of cancer. So the metabolic pathway, for example, with triple negative breast cancer statines were really well.

And so you need to be adding those in because that really is an effective blocker for that particular type of cancer. And then once you've kind of got the cancer under control and you've kind of killed off the stem cells as well as just be fast dividing cells, then you can work on rebuilding.

And I think that's important to know. It's a step by step program and you shouldn't just try and sometimes rebuild it the same with same time as a killing.

I think you do, actually, sometimes, unfortunately feel like you need to go backwards, go through some pretty grotty treatments, come out the other end and then rebuild yourself so you will feel rubbish.

Once again, three achievements. But having said that, when I did all my of labels and supplements and the intravenous vitamin C in 2000 and in fact 23 and 2004, I had no side effects at all.

I really didn't feel bad. It's like it just disappeared without me having to go in and feel rubbish. And I think a lot of people get terribly worried about the off label drugs that they're going to cause these terrible side effects and stuff.

But when you when you compare them to immunotherapy treatments to the chemotherapy, it's really nothing to compare at all. They are in a totally different league.

So I was fine and I know a lot about people who take these off label drug cocktails and they're fine, too, you know, they they actually feel pretty good on them, so.

Yeah, and that's that's what I hear frequently. Our patient, when they call initially and we chat, you know, whether I'm a good fit or not in regards to their their cancer journey.

And then always the question comes, well, what are the side effects and, and how bad is going to going to be? And they've already gone through chemo. And, you know, it really can't even compare to the chemo journey using these type of therapies. So yeah, the concern is quite unwarranted.

Yeah, I've lost my head twice now. I have no plans to go through that again. But you know, who knows? But it's it's one of those things you've really got to weigh up the pros and cons and look at the risk to benefit.

If you're a stage four cancer patient and you've been given a terminal diagnosis, what's the risk of taking a few off label drugs that your doctor has prescribed for you?

That check the interactions? We've checked that it's safe for you to do that. You sometimes have to take that leap of faith just to get to that point.

For me, I didn't have anybody going before me who'd done this. I had no idea whether it was going to work for me or not. This was new territory for me.

New territory, I think for the world really, for sort of doing a cocktail like I did. And, you know, it it's effective, but the sooner you can get on it, don't wait until the last minute.

So you know, Oh, I'm dying. I've got to do this now. Do it when you're doing your chemo. I would love it for people to actually learn about this approach when they first diagnosed.

I mean, it just is too late for people when they've got to the end of the road to start, you know? And I'm trying to rescue people from really dire prognosis with trying meningeal meds.

And, you know, these are terrible. You know, that's probably one of the worst things I have left her meningeal. So I give you terrible headaches. And they, you know, you normally give them 3 to 6 weeks max of survival.

Ferroptosis and Iron-Based Cancer Cell Death

You know, and it's like I can do my best and try and save people into the right direction is but it can be quite tough for me if people coming to me at that stage and you know, and I, I wish they'd come to me before.

Yeah. And that. That's all the time you must get that every day where people are just kind of not really realize there are all these supplementary things is complimentary treatments that they could be having all this time.

Yeah, I'm right to the last minute. Yeah. It's so much. It is so much nicer to, to get to address it right from the get go before they start start chemo so you can support the body prior to chemo and then also you can then make sure that the pathways are blocked so that the oxidative therapy, chemo, radiation is much more effective.

And if they do surgery, you know, with where the immune system will be suppressed during surgery, that we support the immune system during that time. So it is it is nice to get to be part of that whole journey instead of somebody coming, you know, dealing with severe societies.

You I can eat, you know, can't, you know. Yeah, it's it's a whole whole lot nicer. I mean, we have great successes in those areas as well. But it is it's nicer if we can get them sooner.

Absolutely. A site is can be quite tricky. I don't know whether you've looked at losartan as a potential for a sites have a look at that that's there's some interesting research on that particularly with the stroma and you get things like pancreatic cancer which has a very thick stroma.

Sometimes the immune system cannot get through that, but strong with it it has. So it's actually helping to break that down as well. There are many different off label drugs out there that can already help and whatever's right for you.

I'm trying to do some protocols with quite a big organization. I won't say who they are, but anyway, what we're looking at may be doing some more specific protocols for different types of cancer just to try and make it easier for doctors or whoever.

This is a doctor led organization to try and make it easier for people to to find things that will be specifically good for different types of cancer.

And to get get this information as you're unfolding. I mean, where is that your Facebook group? I mean, where should they be in order to be able to have access to when these kind of news unfold?

I will probably be writing about it in blogs and newsletters and it will be available through this organization. And I'll let people know when that is.

But yeah, I'm keeping a little bit quiet. They are a little bit controversial. People don't necessarily, they they were focused on COVID. They're now looking more at cancer with repurposed drugs and things.

So I'm working with some some pretty top doctors, but they think they've had some controversy in the past. So I'm just keeping my head downloaded a bit on that one for the moment until we we've established what we're doing with it.

Yeah, I love it. Yeah. And that's the thing when, when you are trying to do these, this type of work, when you just say the word, you know, hydroxychloroquine or ivermectin, then all of a sudden, yeah, exactly.

People come at you attacked. Oh my God. I had I did a an interview, just a podcast with a lady in the UK and she's very into ivermectin against COVID and that was it that attracted so many, so much unwanted attention that I wasn't really expecting anyway.

But that's that's life, isn't it? You've got to kind of take that on the chin a little bit and just know there are these

people out there who aren't looking at the science.

They're just happy to bash you without actually really looking a bit deeper because ivermectin can really assist people like triple negative breast cancer.

If you're on an immunotherapy, they're actually doing proper clinical trials. Now to look at these, I mean, there's some new drug that they're looking some map that they've got out, but they're using it in combination with ivermectin because it helps make the tumor blocked.

You know, it makes it react to the immunotherapy. And that's the point is so many off label drugs, it actually synergize with these conventional drugs.

I'm not against the conventional drugs. I'm not you know, I think we overuse some chemotherapy, for example, is traditionally given a much too high dose.

And stage four, I think they need to really be very careful about how much you give a stage for cancer patient the chemo because it can really overwhelm the immune system.

And ultimately, in order to get better, you need an immune system that will help to take over and keep those means to keep the cancer cells at bay. So really the chemo is overused, but there are so many things that will synergize and enhance those conventional therapies much better.

Talk to me a little bit about, you know, so we talked about CoQ10 and the importance of of depleting that during Ferroptosis. And then we have the issue then of cancer cells use using glutathione on assay that that's their antioxidant defense.

I mean when we do this. Yeah. And it just spits out a huge amount of glutathione on to protect itself against chemo, against any kind of oxidative stress.

So we have then the issue, you know should glutathione iron ever be used as should and a C which promotes then glutathione ion production should that ever be incorporated and yeah can give us a little direction.

Again that's a slightly complex picture because you're healthy cells and some if your anti-cancer immune cells need some energy, they need some and I see some time.

So actually there may be a case for having MHC once you have your chemotherapy, if you're having high dose chemotherapy, you want to protect your healthy cells.

So there is a case for having a dose, a sort of a bolus of MHC about four or 5 hours after you've had your chemo in order to. So you've got the chemo in there. It's killing all your cancer cells.

Then you take the AC on that day, maybe the day after, I don't know. But then you are actually going to protect your healthy cells much better. But generally speaking, I would say you could be quite careful about seeing how much you take in.

You should probably only take it for short periods in order to reboot your immune system and help the healthy cells. But generally speaking, I would say you actually steer clear of and I see if you can, but there are those windows where I think it would be good to maybe reboot the system and actually help protect your healthy cells a bit more.

Mitochondria, Glutathione, and Treatment Timing

And so would it be beneficial then also to you know, some strategies bring in like Tylenol as a glutathione depleting drug while doing chemotherapy? Is that something that can be useful in your mind?

Some people do give it with intravenous vitamin C as well. I know there's a clinic out west somewhere that does

that. And there are I don't know, Tylenol has quite bad, you know, potentially negative effects on the liver.

But that's because it's depleting the glutathione. And some people get tremendous effects doing that. So it needs to be done under supervision just to make sure you're not taking it too far and not causing liver damage with it.

I'd just be a little bit concerned about that. I think there are some natural supplements you can take, like pie polonium that helps block something called the antiproton that pulls in the cysteine, the A. C., and that can help block that coming in.

So you can create the the drop in glutathione using hyper long amine, which is long pepper. So that's, I would say, insightful way of doing it rather than using Tylenol.

So what I would just. Add so I appreciate about your all your research is yeah looking at the whole picture this way is there and then you also have I know there and I don't know if you've touched on this in regards to copper and you have copper depleting therapies.

Obviously, this needs to be done under supervision because, you know, if if not, then that can be dangerous. So what what are your thoughts in regards to that?

I think he can help because it's all about the angiogenesis as well. With the copper and tetra can be used very effectively at times, and particularly if you've got into an IED.

So if you've managed to get yourself into it, know, evidence of disease status, then Tetrick can be a really useful drug to then add in at that point.

And that's copper depleting drugs, so that there are definitely times where I think that is very beneficial. But again, it's down your doctor to decide if it's right for you or not.

Over to you. I'm not a doctor. So you do. You do an amazing job to make it a whole lot easier for for myself when I see patients so that we can research it.

I mean, again, my mission is to help patients understand what they're doing. And then hopefully your job is easy when you come to explain things and get them to follow the protocol, because most people just balk at the idea of taking a cocktail of things and they just go, Oh, I'll have that.

And then you give them a benzyl or an anti-parasitic, for example. I go, Oh, well, I've got that. I don't need niclosamide, I don't need nitrous oxide, I don't need so they kind of block off all of these other potential antimicrobials.

And we know the micro and the microbiome and the all of that is intimately linked to the progression of cancer. And, you know, I often tell patients I need a cocktail of antimicrobials in in their mix because of the effects that the microbiome and the potential of these microbes, the sending of these this epigenetic material, the micro RNA, this kind of gets into the total light receptors and causes that, you know, actually starts the whole process of oncogenes.

So this is something that I don't think is fully on the own. I do talk about this in my book as well, but I think people gloss over that because I focus on my metro map or they focus on the choices that don't really have a sort of trying to put down a step by step process of what happens when cancer evolves.

But know I might have to do another one. I'm sure there'll be another be. Yeah. So, so that you're talking about till like receptors and you have things like IGF one and so you really want to.

Yeah, yeah. I think the surface of the cell is surrounded. The tumor microenvironment we know is what actually starts cancer off. It's not just random mutations happening in the might mitochondria or in the DNA.

You know, it's because of the fact that everything that there's an increase in metabolism in the cell. This loosens up the histones, which hold the DNA together and makes it damage much more likely to happen.

You know, if you don't have that going on, these the chromatin is so tight, damage doesn't happen. It's only when you've cause these initial issues and you've got a lot of a C tile being made in the cell.

This is what is the opposite to methylation. It sort of spreads out the that the things that hold the DNA together these histones anyway this is what causes the DNA damage so much conger into the cell nucleus and all the rest of it.

Copper Depletion, Microbiome, and Tumor Biology

And you get potentially mutations but they're not always you don't always have huge mutations happening in a cancer cell. And this is what oncologists are slightly confused about.

It's this massive pattern of different mutations. They thought they were going to have this pattern when they did the Cancer Genome Atlas that they would have the answer.

But of course, it wasn't because there is so many different mutations that can occur or not occur. And it just was very complicated. But learning that certain genes definitely control different metabolic processes.

So the p53, for example, controls glutamine policies. It controls glycolysis, it controls for ptosis. So it controls those things very definitely. And if you have a p53 involvement, you should definite blocking those three things.

We're certainly trying to achieve alkalosis with with what you're doing. Yeah. Yeah. That is what I love with cancer. And obviously my desire, my original direction is that I wanted to be like a particle physicist.

So because I love these kind of intricacy of things and cancer becomes this living entity that you have to develop a relationship with to really understand how it moves about.

It's not just the simple, simple, direct. Yeah, it has personalities, quirks, and you got to figure all of that out. So yeah, it's fascinating and. Yeah, it needs, it needs to fill, but sometimes it can, you know, I think doing a full work up sometimes isn't just give them something to get going with and then look at the the intricacies and the delve in a bit later, sometimes you can get great effect with just giving a cocktail of of of labels that you know is going to have a really good effect.

And then you can work on, you know, patients need a big effect. They need those big guns right at the beginning, looking at everything else in the work ups can come, I think just maybe as you go down the line.

But there's so much, so much for cancer patients to kind of do all the time. It's just it's it's really hard for them to to get through it. I mean, I had multiple blood tests.

I had all sorts of things don't feel microscopy eyes and, you know, all sorts of things going on to try and diagnose and keep tabs on what was going on.

It's a hard, hard job trying to keep on top of it and here I am is. 20. Years later. I'm taking very, you know, much more relaxed view on life. And the thought of dying doesn't end to my you know, it used to obsess me all the time, every waking moment I'd be thinking about death.

At one stage, it was awful. It just is like a black cloud envelops you totally is awful. And you know, I've thank God for that. But it's, you know, a long time ago, actually, and that's how I can do what I can do now.

I think it's very hard for patients to help other patients when they've got their own issues going on. You know, and I fortunately have come out far enough.

The other end, I can get back into it and I can look at it fairly with a, you know, stand back enough to sort of look at it fairly dispassionately to say, right, you say this is what you're doing.

That's how you stop it and try and be quite clinical about and not too much emotional about it. How did you get rid of that cloud? Because that's that's a big deal.

I mean, that's a big I think it just. Came with time. Time. It's awful, you know? And I think the more you the longer you survive, the less it's there.

And there was anything that really kind of made me think it's gone. It was just one day was like, I'm not thinking about it all the time. And but it was a gradual process.

A gradual process. It's not something that just happened overnight. Well, Jane, you spoke Jane, it's always such a pleasure and I'm so grateful for what you're bringing to the world, the impact to have on people.

And so and for for assisting us doctors and looking in directions so that we can be more effective in our work. So thank you so much. Thank you.