

The Metabolism-Cancer Connection & How to Treat It – Dr. Charles Meakin with Dave Asprey – #801

Announcer:

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Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. Today, we are going to talk about cancer, but some things you probably haven't heard about cancer. Our guest today is chief medical officer for Care Oncology Clinic, Dr. Charles Meakin. He works on metabolic strategies for curing cancer. I got really good feedback on the last podcast with Dr. Jason Fung about cancer and his great book about it. I think you're going to hear some new things that work very well with Jason's line of thinking as well from Dr. Meakin.

He looks at alternative and holistic treatment strategies, and he founded actually a charity about this called Coach It Forward Chuck Charity. He actually does charity coaching for cancer as well as working on his main clinic, Care Oncology at careoncology.com. We'll talk personalized strategies, but very specifically some of the drugs that we take for anti-aging are very interesting for cancer, including stuff that is a little bit shocking to me even something like statins. We're going to get into that, and if you're interested in metabolism, this show is for you.

If you're interested in not dying of one of the leaders of the four killers that I wrote about, this is for you. There's prevention as well what you do in early stages here, and if you have a loved one or if you're dealing with cancer yourself, you definitely want this episode. Dr. Meakin, welcome to the show.

Dr. Charles Meakin:

Dave, thank you, and it's an honor to be here. I want to say thanks to Darcy, Cameron and Chris and everybody on the team that helps put this platform together. It's great education. It's provocative inquiry, and it fosters critical thinking. You've done a great service for the last 15 years.

Dave:

Thank you. I always like to know when I talk to the doctor, some doctors... Well, my parents made me do it, but there's usually a reason. What made you get into medicine in the first place?

Charles:

Well, my father worked in business. That's why I was a pre-med major, an economics major at Notre Dame. I like to fix things. I wanted to be able to service. I had an early calling to have a mission in life to maybe impact for the greater good. I flirted with maybe going into the missionary or priesthood to work in mission work, but when I started helping at a hospital, my second year of college at Notre Dame, St. Joe's hospital, it really touched me. I knew without a doubt I wanted to go that route, and really never have looked back ever since.

Dave:

Of all the things you could have done, radiation oncologist is pretty much that's the burn it out strategy.

Charles:

Yeah. In med school, maybe some people had some thoughts on what they want to do. Usually, that's not a good idea. You want to be open minded, but I, in general, wanted to work in something that was... I don't want to say anything's irrelevant, but something that was very relevant. I'd studied martial arts,

and studied philosophies and wanted to look at something where the body was pitted against the all-inclusive foe, where they had to mount spiritual and not just physical, but emotional strategies to help fix it.

It was always curious to me why some got through it successfully, and some didn't with the same cancer, same stage and whatnot. That was that important drawing card for me. Then I tried surgical oncology, medical oncology and radiation oncology. I was good with math and physics, and I knew I could get home at night, so that became the field of choice.

Dave:

Did your vision loss have anything to do with your path through medicine?

Charles:

Yes, it did. There's always one of the paradoxes in life where what looks like it might be an obstruction ends up being the path, and to explain that, I didn't really know I had retinitis pigmentosa until maybe my mid to late 30s. Of course, at that point, it was because an older cousin had it, and we all looked into it, but as I started losing my eyesight and knowing that that was something marching forward in my life actually fostered this amazing interest in general health and wellness strategies, which I then applied to cancer care.

In an ironic way, my loss of eyesight, it probably gave me some vision that has really changed the path in my life, and I think for the best.

Dave:

The good news now is you can still see everything in the middle of your vision, but your peripheral vision is pretty much gone.

Charles:

Yeah. As we were talking about, I'm one of the only 61 year olds that can read a menu these days without glasses, and I still have 20/20 central vision, but if you drop a dime on the floor, it's going to take me a while to find it. Most people don't really understand it, but it did foster my retirement at the beginning of 2019 from my 35 years of oncology care. But then, I redirect it into this metabolic oncology, which has been a pure joy.

Dave:

You use a ton of biohacking stuff within your holistic practice, which I find really impressive, especially given that you came from I'm going to call it the hardest core. The radiation guys and the chemo guys are sort of the most western of the Western cancer treatments. What did you find when you started doing things like exercise bands and oxygen therapy and these other things? What did you find in your patients and in yourself when you added these in?

Charles:

Generally, like yourself and many, I tested it on myself. I've always been curious, and I've always wanted to bring simple, accessible, low cost, safe strategies to the clinic and see how we can marry those. Unfortunately, allopathic and Western medicine frequently look at it like either or. I call it the tyranny of dichotomy. There's the loss of integration. Maybe we could have both, and care oncology is trying to

change the science by working within it, and not from the edges, so we bring what we think is metabolic strategies and doing testing and science-based papers.

But for myself, I've verified things would work, looked at the data, and then for those that were appropriate, I would offer those as options. To this day, I see tremendous opportunities in that. In fact, I think, after I did my Bulletproof coaching in 2016, I was organized to put together what I called a cancer rehab or a cancer reboot center. Then I heard about integrative labs, and thought, "Well, Dave's going to do it and his team, and that looks like a good path," but I've always wanted to bring some of these strategies to the cancer clinic.

Dave:

Well, I'm really happy that you're doing that, because really, Upgrade Labs is about recovery. I don't mean cancer recovery, I just mean being more resilient, because we all have stress, and it seems like cancer and cancer treatments are generally really stressful. If you could do... Even if it does require chemo, or it does require radiation, and by the way, guys listening, there are times when that is the right strategy for cancer, and it's okay. It just shouldn't be your first line strategy.

I've known too many people who say, "I'm just going to treat it naturally," and they're riddled with tumors, and it's not okay. If you go natural, monitor the crap out of it, and work with an oncologist anyway. Anything I'm saying wrong there, Charles?

Charles:

No. No. We have five lovely oncologists and six oncology nurses that quite frankly are probably smarter than all of the doctors. They're brilliant. We're all survivors and veteran in our fields. Most of the time, we do talk people back to the fold, and say, "Hey, you got a simple, vetted treatment here that if we combine with metabolic strategies, there's a great synergy, so consider it." We've had a lot of wins like that. I'm sure a lot of local oncologists have been appreciative of just having another voice emphasize that we need to get back on this.

Usually, that option is successful, especially with metabolic blockade or management with it.

Dave:

That's cool. What's changed in the last 10 years about what we know about cancer?

Charles:

Stepping back a little further, it might help to explain... You've mentioned the name Otto Warburg on your podcast from the '30s. Otto won a Nobel Prize for his elucidation of how cancer cells have a disrupted metabolism, and actually, they burn glucose in the presence of oxygen. It's called aerobic glycolysis. That disrupted metabolism leads to failures and the transcription of new DNA, and translation of mRNA to make proteins. It was pitched by him, and ultimately buried in the '50s after his passing.

We then adopted, in 1971, the war on cancer with Richard Nixon, the somatic mutation theory of cancer, which is generally the premise that we inherit some genes that become cancerous or viral insults or environmental exposures, and then those mutant genes just grow in a clone, and that we can then fix that by a targeting strategy. Well, that predominant theory has been going on since 1971. We know about the war on cancer, and it hasn't worked out real well. Cancer hits one in two men, four in 10 women, and we spend a lot of money on it, and it's still not fixing it.

Metabolic theory and therapy has reemerged. In fact, there's a famous set of authors, Weinberg and Hanahan. They wrote the Six Hallmarks of Cancer. Then in 2011, they added two. They added that

seventh and eighth is... Reengineering of cancer metabolism is one of the hallmarks. The other one is loss of tumor or cellular immunity. Those two new additions were added. I think there's more awareness that metabolic issue is a big factor. There's also a lot of work on this avoidance of immune destruction, and some of the targeted therapies are working on that, but metabolic disruption is common to virtually all cancers, and our four repurposed drugs address that issue.

Dave:

Now, when you say metabolic disruption, you mean fat?

Charles:

Well, there is a link there. Smoking-related cancers have leveled off and gone down, and those cancers might be lung and a few others. Cancer is about to be the number one cause of death in the U.S., and it's mainly because of metabolic or obesity, or, as you said, fat-related cancers. That's metabolic disruption. Hormone-related cancers are on the rise. As I mentioned earlier, four in 10 women, five in 10, half men get it in their lifetime. Yes, there are small improvements and iterations that have been championed by somatic mutation theory, but in general, we're failing in my mind on the war on cancer.

That's why I jumped in with care oncology, because I really feel great alignment with where they're going. I spoke to a patient this week who has failed... In three years, he's had colorectal cancer stage four, and he was young when he got it. He has spent... or not he has, but the insurance company has spent \$1.5 million dollars, and he's had a lot of out of pocket and missed opportunity. He and his wife haven't been able to work. He's the perfect example of four or five issues with cancer care today. In general, at times, I felt like I was in the theater of the absurd, if you could say it that way.

Most cancer therapies are fairly aggressive, and fail more than half the time. It's quite expensive. It's the number one cause of medical bankruptcy. It's always inconvenient. You go there and wait, and you always have a caregiver with you or someone with you, and miss work. The treatments, as you said earlier, can disrupt other health conditions, and put you at risk for other diseases and chronic and second cancers as well. Then at the end of it, you're sitting there frozen with fear, and you get every three months scanning that have deleterious effects to the body with radiation dose.

Three to five or three to four of the people, they get cured are at risk for a second cancer. Our field, our platform addresses all of those. When I heard about it, and learned more about it, I said, "I need to be a part of this."

Dave:

One of the things you've done that I found just really intriguing is you sent me a bunch of papers about repurposing these four drugs. Can you tell me about what is drug repurposing, and then tell me about these four drugs and how they caught your interest?

Charles:

Repurposing of drugs is a... It's kind of under the carpet, but it's there, and so what I feel is the unidentified pearls that are floating around. Most drugs have four to six molecular pathways of activity. Minoxidil was a blood pressure medicine, but they serendipitously found that it grew hair on people's heads, so now, it's part of Rogaine. There's many examples of that. Like most things in life, it starts with a story of love and pain. Robin Bannister, our founder who's still with us back in England in 2013, his wife had stage four breast cancer.

Over there, she'd gone through the common treatments at that time, was offered hospice. She was in her young 50s, and that was unacceptable. Robin, who had already worked in drug repurposing, he looked through the literature, and identify things that might have opportunities with other maladies, said, "Honey, I think I can help you in this. This is my job. I'm a PhD pharmacist. I have already done this." She said, "Robin, only if we do it for a purpose bigger than myself," so they formed the Metrics Trial.

She ended up living for four and a half years with her breast cancer, and died in 2017. But during that time, to get traction, to really prove that this worked, they tested it against glioblastoma, the formidable brain tumor that in my 35-year career, generally had about a nine-month median survival. That's what Harvey Cushing identified 90 years ago when he first wrote about it. They did a trial where people got standard of care along with these four drugs, these four drugs that are inexpensive and easy to tolerate.

They had to really petition the medical health research council of England or the FDA-like organization, but they got it passed. They did the four drugs along with standard of care. Instead of seeing what would be the best in the literature results of 13 to 14-month median survival, it got a strong signal, 28-month median survival, and just under 60%, two years survival. Now, we have 50 people in that cohort. We've republished again at the Metabolic Health Conference this past year. The original paper was published in 2019.

To give everybody a sense of it, everybody remembers John McCain and Ted Kennedy. They didn't agree on much politically, but they would agree that the diagnosis of glioblastoma was a difficult one, and they had the best access to care. We're pretty vigorous when they got it. I think John lived 13 months, and Ted lived 14 months. Now, I have four patients, three that have never had a recurrence, and they're all out. One of the longest is 33 months.

Dave:

Wow.

Charles:

The youngest is... I mean, not the youngest, but the least far out was about 28 months. One's a teacher at Pepperdine. One's a mother of three young boys in Wisconsin. The other is a podcaster artist out in LA. Then I had a patient that started with us two years into his path. He's pretty much not progressed since he joined us. I know a lot of my partners have other cases, and my oncology teammates in England have many cases like this. I'm seeing a really strong signal that things are working.

We also treat other types of cancers as well. I mean, we treat all types of cancers as well.

Dave:

I've got to ask since we're on glioblastoma, the brain cancer, have you ever used oxaloacetate with them?

Charles:

I've paid attention to that data. I've steered in my normal original practice a few patients toward that, especially when they're progressing, but I personally haven't managed anybody for that. Once again, I believe that works on a metabolic way against the glioblastoma, the glial cell. Those are the exciting things that I see out there that will hopefully make a difference.

Dave:

The reason I'm asking is oxaloacetate is a natural compound found in the cells. It's a mitochondrial stimulant. I've written about it in my anti-aging books with having nothing to do with cancer, but there are some intriguing data out there about it in cancer as well. I've been looking to find someone in oncology who's actually tried it out on someone with cancer, because it's one of my favorite supplements, and it's-

Charles:

I was going to say I've used your supplement that incorporates that.

Dave:

Got it, but we haven't tried it, or we haven't tried that compound at least in the U.S. for cancer. I'm aware of [inaudible 00:19:48] studies in Europe, but okay. What are the four drugs?

Charles:

As I said, Robin looked through 200 drugs, and then we did down to 100 to 10. Nobody can take 10 extra medicines, so he ultimately chose four. Generally, people use two all the time, and two in alternation. These four drugs were picked because they had non-overlapping mechanisms of action. They were well vetted and safe and been out in the literature, and used for more than 30 years, so the side effects have been well verified, and as well as they were available. They're generic and as can be generic and easy to access.

Metformin, which is, as you said, one of the darlings of the anti-aging longevity crowd. Atorvastatin, it's a lipophilic statin. It's the number two most common drug use on adults in America. Metformin is number four.

Dave:

Is this a generically available diabetes drug that's pennies? Then the statin drug, is that affordable? I don't mess with statins.

Charles:

It's very affordable. Then doxycycline, the 113th most common used drug that-

Dave:

Antibiotic.

Charles:

It's an unusual antibiotic that it works by being psycho static. It's absorbed in the upper GI tract, so it doesn't crater the gut biome like a lot of antibiotics. It also blocks protein production, and that's really important. Therefore, it's not as deleterious to the gut biome. Cancer stem cells are like villains that hang out in the closet, and they're stopped dividing, but are around to continue to propagate once the chemotherapy or radiation or standard therapies are done, but by blocking protein production, doxy is able to cripple them, and help foster their pathway through apoptosis.

Then the final drug is mebendazole. It's the human form of an antiviral... excuse me, an anti-parasite medication that works on all parasites. That drug is less used in the United States, and was

made very expensive, kind of like EpiPen by a company. We compound that to provide it to our patients at a low cost. We don't sell any of these drugs. We use to partnership pharmacies worked with us closely. They independently vet through consumer labs the quality and lack of tenuous in the drugs.

They get them to their doorstep, once again, the convenience in two to three days, usually within 10 days of first contacting our website platform. The cost is generally about \$150 to \$270 for three month's supply of the medications. It's spelled out very clearly.

Dave:

Now, there are people out there who say, "Cancer is bacterial. Cancer is viral. Cancer is fungal." What do you say to those people?

Charles:

Well, literature would say that about a third of the time when you have a cancer diagnosis, there is some chronic bacterial, fungal, viral, parasitical infection brewing in the background, this churning inflammation that makes it harder for your own body to identify those tumor cells through your T-cell mediated immunity, and get a hold on it. We make aberrant cells all the time. The good news is most of the time, virtually all the time, we deactivate them and let them break down through autophagy and things like that, I mean, apoptosis and things like that.

Yes, that's maybe one of the ways in which these two drugs work, the doxycycline and the mebendazole.

Dave:

Mebendazole is a drug that I am personally grateful for. A few years ago, I picked up an exotic Amoeba in a salad in Phoenix. I spent about four months, I'm feeling like I had an overdose of MCT oil. I mean, it was 10 times a day.

Charles:

Disaster pants.

Dave:

It's disaster pants times 10. I had several different tests, and no one could figure out what it was. I finally went to this old master of infectious diseases in New York, who figured out what it was with a scope, and he put me on mebendazole. Eight days later, I'm like, "Finally, I'm free of my turbo disaster pants there," but it wasn't a drug that I was familiar with.

Charles:

It's exciting. If you go to clinicaltrials.gov, there's six trials. One is ours with mebendazole, our Metrics Trial from England. Then for the statins, there's over 30 of them. There's 36 trials in place. For metformin, there's over 200. For doxy, there's 26 trials going on. For the doc who says, "I don't know anything about that," I think that's mumbo jumbo. There's a lot of work going on in this area, and usually with these drugs individually, we feel that the combination is the important thing there.

Mebendazole is... One of the current researchers who's looking at it, he believes that it actually competitively inhibits with the uptake of glutamine, one of the amino acids that may be an escape route when those nimble cancer cells figure out how to... If the sugar burning route is shut down or mitigated, that may be one way they continue to make energy, and so blocking glutamine may be a strategy, and

mebendazole is being researched for that right now. It also works in mobilizing the microtubules similar to taxanes and vincristine, similar chemotherapy agents, but without the side effects.

It blocks mitosis. Anaphase and mitosis keeps those cancer cells from dividing, and then go down the path of, as I said, apoptosis.

Dave:

I'm going to ask you a question that will probably raise your hackles.

Charles:

That's okay.

Dave:

What would happen if a person said, "You know what, for two weeks this year, I am going to take metformin. I'm going to take the statin. I'm going to take mebendazole and maybe even doxycycline, although that seems kind of dumb?" I want to keep my metabolism strong and healthy, just like we would do an intermittent fast, sometimes the high intensity interval training. Should you push all those pathways every now and then just to make sure that nothing bad's happening at stage zero, stage one?

Charles:

Yes, yes and yes.

Dave:

Really? Okay, that doesn't even scare you.

Charles:

No. No. I mean, you do it. I do it. Intermittent fasting, it's hermetic effect, but it helps with apoptosis. It helps those in autophagy, where it helps normal cells create resiliency. In cells that are flawed, it fosters and accelerates their demise. In the same way, pharmaceutical fasting through these four medications, that's a generalized statement. They work in a pleiotropic way in many ways. In fact, we are working with a company that I can't mention the name of, but our ultimate goal is a paradigm shift to not just let cancer develop, and then try to jump on it in our current ways once it's done, but to work in a better way with prevention and earlier identification.

Dave:

Wow.

Charles:

We believe the tentative name will be alert and avert. We want to use these four drugs for two weeks, strangely, you said that in a lighter dose, and then couple that with some metabolic with nutritional training, and couple that as well with after two weeks, take five supplements that they would do for another 10 weeks, and then repeat that 12 weeks cycle four times a year. We roll this out for the high risk individuals like the genetic risk bracket one, bracket two, and then pilots and firemen and people with higher levels of cancer in their family.

The beauty of this as well is our potential partner, we're working out in a sprint way the agreement now, has a blood test, a blood biopsy, more or less, that works on looking at mRNA pathways, and what the body's doing internally with eight markers. These eight markers predict four green light, very low risk, you're in balance and doing things well, versus an amber light, which might be some things are at risk versus red light, which means you need to repeat your basic screening because something is going on.

Then we would do that at the beginning of the year and then at the end of the year, and verify which this combination of supplements and medications should self-correct these metabolic abnormalities, and get them back on track. We suspect this might be able to reduce cancer risk from 25% to 50%.

Dave:

Wow. Is it test first and then go on the supplements, or just do the supplements every now and then?

Charles:

Yes. No, it'd be do the blood test, and then do the two weeks of the four drugs under a physician oversight, because we do want to test a few blood tests that we'd want to make sure are normal, and then do the five supplements, then total 12 weeks and then repeat that. We would do this for people. I mean, there's 14 million people walking around who've been treated for cancer or in limbo, not sure if it's going to come back or not, probably holding off on life decisions. This blood test will greatly help them, and then for those people we treat with the metabolic treatment, we usually do that intensely for 18 to 24 months.

Then we walk back from that. We would go to more of this remission or prevention protocol, because you're right, you don't want to push on the brakes with proliferation too hard for too long, because we need proliferation. We need to keep our immune system strong. We need to activate mTOR occasionally to keep our muscles strong, and there's a balance.

Dave:

There's a reason that chemo and radiation can be so wasting, because you suppress all of that, you get sarcopenia, muscle loss and all those things, which you don't want to have to climb out of. It reminds me... I interviewed Mike Koenigs, a good friend who wrote a book called Cancerpreneur a while back when he had a very life-threatening cancer and just what happened in his head and taking care of his family and all that, but to be able to say, "Okay, I had it. Now, I'm going to just make sure that it's not coming back."

I think everyone has had cancer, and everyone, especially looking at my mom's family, who just know that they have a high prevalence of cancer would just love to be able to do it. It seems like, though, there's already one blood test out there. I did it last year. I'm forgetting its name, where they can detect nine types of cancer at very early stage just from a blood test. There's eye resolution MRI stuff. I've had that done as well. I'm not, by the way, particularly worried about cancer.

In my case, I handle my metabolism well, but I'm just interested. I like to see the data, and get the data and know if any of my anti-aging strategies push proliferation too far. Do you feel like now if someone isn't budget constrained... By the way, I know that's not fair right now, but all the expensive stuff will become cheap in 10 years. That's how it works, but if someone's willing to spend stupid amounts of money, can they detect most cancers early on now, or are we not there yet?

Charles:

Well, they say in 2021, there's going to be two or three blood biopsies, and they're based on different... Our partner is looking at mRNA, but there's also a group looking at methylation patterns and that prediction for cancer. There's also others looking at protein breakdown, products in the blood that may reflect cancer, and then there's other looking at nucleic acid or DNA breakdown products. They all have variable specificity and sensitivities. Right now, that work is not totally sound.

When we roll all ours out, we're hoping that it's going to be in a... We're working with the FDA now with a clinical research group to have an FDA path so that when we generate data on this, we'll be able to publish results in a peer-reviewed journal.

Dave:

There's also the gut bacteria. Viome is doing some really interesting work on that as well. It seems to me that there's definitely a fungal connection with cancer, because I know all that environmental mold, eating mold, raises your risk. Some cancer, according to some guests, may be fungal in origin, but other guests absolutely say that's BS. What's your take on the fact like a sac fungus and some cancer just being misdiagnosed fungal infections?

Charles:

Well, it's interesting that a lot of the treatments resemble antibiotics, adriamycin. Ketoconazole is a treatment for prostate cancer. A lot of this overlaps, and part of it is that our mitochondria, as you know, developed from a bacterium, and so some of the treatments attack, if they're effective, the mitochondria or energy generating component of the cancer cell. It goes back to what I think I mentioned earlier, the dichotomy of either or, or the... excuse me, the tyranny of either or, or the tyranny of dichotomy.

Most people try to go down one path or another. It's probably a blend of both. I think a lot of times with the right risk factors, with a indwelling fungal infection or parasitical infection, you are driving proliferation, and that may override the protective mechanisms. I know that in my background, when a person has a chronic infection, it's almost impossible to eradicate that cancer in the patient, and you need to spend time trying to fix the infection.

Dave:

I appreciate that nuanced approach. Thank you. I've had one guy on the show a while back saying, "All cancer's genetic, and we're going to have a cure in a couple years." What percentage of cancer do you think is purely genetic and not epigenetic?

Charles:

The common number I keep hearing is 5% to 7%. When people debate that, I remind them that if you do a biopsy of a metastatic deposit in the liver of a breast cancer patient, you will get more than 200 mutations, and most of them are downstream mutations. They're not driver mutations. What I mean there is these are just the byproduct of reckless division by the chromosomes in a rogue way making stuff. Very few of them are targetable, where if you could fix that mutation, you're going to change the course of the cancer.

That goes back to the somatic mutation theory versus the metabolic theory. That's what Thomas Siegfried and Dominic D'Agostino and some of these wonderful predecessors that we're learning from have identified. I see more of a return to some of this metabolic theory of cancer and hopefully, using every tool we have in the toolbox, not just targeted therapies or chemotherapy, radiation that block cellular division.

Dave:

When it comes to cancer, what's different for men and women?

Charles:

From my observation, I would say that men tend to be diagnosed later, because they're generally headstrong and ignore symptoms. The common cancers in women are different than those in men. Some are overlap as well. I think women are more willing to consider the various options, the integrative approach, as opposed to the, "This way or my way or the highway or one way is the only way." I think we use the wisdom of women to use their heart and their gut to read the BS meter, and usually get to the right answer quicker.

Dave:

You talked about something called the big six that every cancer patient has. What are the big six?

Charles:

Dave, once again, I was always in my group. I was a little bit on the fringe, but I practiced good standard of care medicine and care. I trained at Stanford, but I always try to bring simple, accessible, safe, easy things to the cancer clinic. It boiled down to some basics. I use the acronym the big six, because people could remember that. I wrote it down on my board in my office after the clinical exam in the room. I invited them into my hospital, home, my office, so they can see me as a real person. We'd walk them out like you would somebody in your house.

The big six is a simple acronym. B is for breath. To effectively manage your cancer, you need to stay in parasympathetic balance. Your immune system does not work when you're running from the line. If your cortisol levels are high, we've proven that there's so much data now to say if you put a mouse under stress or give them exogenous steroids, or disrupt their diurnal rhythm, the chemotherapy doesn't work, or they develop cancers at a greater rate or die at a greater rate. My first suggestion is to teach them about nostril breathing, the foundation of meditation, and yoga and all that.

Dave:

Wow.

Charles:

The I in the big six stands for ingest serious hydration, ingest real food. Serious hydration is, in my terms, 18 to 24 ounces of a good flush in the morning of filtered water to get rid of the metabolic sludge from the night. You got to clean the deck for things to work. I usually encourage them to put maybe some sea salt in it and maybe some aloe vera to help heal the insides. Most people have disrupted GI tracts from chemotherapy. Then the second thing for ingest real food, the kind of food that our grandmothers would recognize, food that is not made in a factory, food that doesn't have labeling in it.

That's an easy thing for people to understand. Then I started teasing in generally low carbs. Beware of fruit. Fruit is mainly fructose and water, and fructose is the number one favorite food of cancer, so we've got to back people off the standard American diet for that. Then, of course, we can talk more about intermittent fasting and low carb strategies. The G in big is for get moving. A body in motion stays in motion. I get them to think of, "Hey, you've got to do today to verify that you can continue doing what you did yesterday." The body has this rule of adaption where it will get stronger if you ask it to.

Cancer patients so often are told to rest and do nothing. Of course, at the end of their treatment, they're just weak as Jell-O, and so it's really important for them to maintain that. I remind them that exercise is almost like a little intermittent, a small fast. It does everything good for the body, and what it does for the brain is remarkable. Then the S is for sleep is king. I kind of use your... I think it came from one of your podcasts. There's a reason that in our evolutionary development, that we dedicate one third of our time to sleep, and we weren't seeking food or avoiding perdition and or seeking a mate during that time.

It's because it's critically important for our healing and for our brain function. I get people back on a normal diurnal rhythm and better sleep. Then the second I in big six is for intention, setting an intention. I give people a little bit of a recipe, and anybody can do it the way they want, but I encourage people to make a movie of them doing things they love with people they love in the future looking strong and vital for a purpose bigger than themselves. They make that movie in their head, and pull it into their heart, so that is a transition to sleep.

They have a little card there to remind them to do it. They pull it into their heart, and really set that intention, and maybe repeat that again in the morning. In that way, they anchor an intention that they're almost falling forward to in the future, and it helps them to vaccinate against negative thoughts, those automatic negative thoughts that we have, those ants. It really helps them have a toolbox or a tool they can use in the toolbox to set intentions. Then the final X is for extreme love. I use a metaphor of looking for those yellow cars.

If you buy a yellow car, you start seeing them everywhere. They say pregnant women wants to become... Maybe Dr. Lana notice this. When you become pregnant, you start noticing pregnant women everywhere. In the same way-

Dave:

They're like mushrooms. They just pop up all over the place, because you suddenly can see them, right?

Charles:

Yeah, you notice them. In the same way, if we look for generosity and beauty and kindness and love in our fellow human beings, strangers, and family and friends, we start to see it. The more we see it, the more we percolate it up and reflect it and echo it. You can really feel it, and then when you really feel it, you want to metaphorically grab it, and pull it into your heart, and link it to your own healing, once again, for a purpose bigger than yourself. As I said, you want to pull it in and link it to your own healing. Those are non-Western strategies that you don't hear about too much.

In fact, there's a book by Kelly Turner. It's called Radical Remission. She brilliantly in a novel way looked at not the standard outcome. She looked at the outliers that really broke the code and survived a long time with impossible cancers, and she found more than 100 of them. She listed nine things that were unique and common characteristics. Believe it or not, the fifth through nine, five of the nine are all emotional, intentional and spiritual.

Dave:

Wow.

Charles:

These tools don't get pulled out of the toolbox. In our system, we try to emphasize those.

Dave:

That's beautiful. The mindset seems to affect healing from everything even cancer. How much do you worry about prostate cancer in older men?

Charles:

I should. My dad... I'm 61. My dad had stage four, Gleason nine, high grade prostate cancer at 59. He was a very vital guy, and he was out-of-the-box thinker and entrepreneur. He passed away in five years, didn't tell anybody he had it, because he didn't want anybody to start the conversation with, "Oh my goodness, how are you doing?" In fact, it was tough keeping that secret for four years. I was the only sibling. I was one of five, and my mom knew about it as well as his doctors. I don't really worry about it.

First of all, I do the standard stuff, the PSA. For the last 20 years, I've thought about things, and been very curious and try to target strategies that will prevent it, intermittent fasting, a low carbohydrate diet. I haven't eaten since last night now, and I've fat burning strategies as well as I pulse metformin and atorvastatin. I use a range of supplements as well. But stepping back from that, as far as our own mortality, I've been able to come to a reckoning with it. I do it not because I'm ready to go or anything like that. I just find that...

I encourage this with patients, to come to a reckoning with the possibility or the probability, 100% probability of death at some point. Your goal is to come to terms with liking yourself. When you get those two issues resolved, it liberates you to do what's really important, and live in the moment and not worry about it. I tried to climb a mountain every year that was scary, and push me to do some aggressive training. Of course, walking in the dark at night for a blind guy or partially blind guy is always a little bit of a challenge.

That was my way to go through a crucible to reinvigorate the comfort level with whatever is ahead for me, and then bring it back to the clinic. I always felt more liberated and more resilient after doing that.

Dave:

That idea of equanimity says, "You know what, we are all going to die," and even if you're a radical immortalist like... James Clements has been on the show has a really good book on mTOR and things like that. I first met him 20 something years ago at the Life Extension. Their headquarter is in Fort Lauderdale. I mentioned, "We're all going to die," and he was visibly offended at the thought. I'm like, "Look, even if we live forever, the universe will collapse in on itself at some point. Death is truly inevitable."

Charles:

We may outlive the universe.

Dave:

Most people really... There's some of you who probably hung up on the podcast listening right now, just because the idea is so important. You deal with death a lot in your practice, because cancer kills people, despite our best efforts some of the time. You've clearly reached it for yourself, but as a caregiver, it's harder when you're dealing with people who pass more often than a general practitioner. How do you come to grips with that?

Charles:

Well, even years ago, I felt that death was inevitable, but my job is offer the best of what I can bring to the table with humility and kindness. Obviously, if death is inevitable from the cancer, you can create opportunities, where you can help people release baggage, help people address the fact that they're on that path, but also, they can create an opportunity to teach their grandchildren how to live with courage. When you're in pain, and you got a short runway, there is always opportunities that you can pull in. Once people find meaning in their suffering, they can do amazing things.

Sometimes, you just got to clear the glass, so they can see that, but yeah, there are some patients that have been hard to lose. I had a 12-year-old guy with a brainstem tumor early in my career, when I was out in the Bay Area working. He took a part of me. His first day, he showed up with a Notre Dame hat on his head, not knowing I was an avid fan of Notre Dame and whatnot. He had a rocky course. We did the best we could. We took him on a UCSF trial, but probably treat him a little different today.

Sometimes, they take a piece of you with you, but that's okay. That's okay. This is my mission, and I'm good with it.

Dave:

Wow. It's really rough. I've talked with people who work with hospice. Lately, it seems like psychedelic mushroom therapy just to let people get more relaxed about the fact that the end will come at some point. Those of us who aren't expecting to die like me, you can do a little bit of plant medicine, a little bit of the right altered states from esoteric practices. You just get comfortable with the fact that it's all temporary, and then your fear levels drop. Are you seeing anything with the legal trials of MDMA or mushrooms or ketamine or any of those things that's helping in cancer therapy?

Charles:

I saw that just last week that there was a published trial that showed that they had a significant reduction in anxiety and all the metrics of what happens in a hospice patient compared to best therapy. I think this was one partially sponsored by Tim Ferriss' group. I certainly applauded it. He did a GoFundMe to help raise that money. I see that moving back in, and so I'm optimistic that that's going to make a big difference, because I do feel like euthanasia, the doctor-assisted euthanasia that exists here is a dangerous path.

I've talked to a lot of those people, and a lot of people can have a bad day. If they had a lever they could pull down, they would have. But then in my dad's case, he had beautiful things that happened in the final three months of his life. In my mom's case, she's been in hospice now for a year and a half. That's why we're down here in Florida.

Dave:

I'm sorry.

Charles:

So many nieces and nephews have come down here and had to step up and do difficult care. My two sisters and I do the nights. There's been some blessings from it. Sometimes you miss out on those things if you try to just stop things immediately. There's opportunities there.

Dave:

That's such a nuanced and wise view on death. Thank you for sharing that. It's always a rough conversation to have, because no one wants to think about that on a regular basis. In fact, it's the number one thing that pushes our buttons is something that might kill us, you should run away from it. It's that sitting and feeling safe thing. It's a big topic in the fastest way, my new book, not necessarily death, but just fasting is going without and in the fear of going cat food for me was a really big scary thing when I weighed 300 pounds, because I knew I would crash.

Just to learn how to sit with loneliness or sit with fear, or sit without a substance you're addicted to, whether it's food or something else, all of those have the same mindset in there. It's one that I don't think they teach anything about that in medical school even to this day. Do they, I mean, to your knowledge?

Charles:

No. Not to my knowledge. Thank you for taking this 300-pound body, and going to save your ass university and figuring that out.

Dave:

I didn't have much choice about it, right?

Charles:

I mean, all the downstream echoes that you've created to help people. I was in school last year with 56 lovely 20 year olds. It was a one-year program on entrepreneurial work at Notre Dame. It's one of the best undergrad business schools, and they're trying to do great engineering schools. They're trying to keep more companies there. One of the things that I had fun with was teaching these brilliant, mainly engineer and computer science and biology background students, some basics about living. We did Wim Hof. We did breath hold strategies to maximize parasympathetic balance.

We did a run around the lakes, which is Our Lady of the Lakes, the two lakes there the last day before December break. It was December 8th or 9th. Everybody had to come. They'd run in July. Then we did a Wim Hof looking at the dome.

Dave:

Wow.

Charles:

At first, it was like, "You're crazy," and then I said, "Anybody who gets there, I'll give a Santa hat to." I end up getting 30 kids. They did the cold immersion. Well, we weren't allowed to jump in the lake. They did just cold exposure. Then I had I called the Friday fitness fools, where every Friday at 7:00 am, probably about six or seven kids would come and do a workout with me. That was a day we didn't have class, so that's why I called it fitness fools. There were so much great learning and opportunities that went with that.

Dave:

Well, it's refreshing to hear a cancer doctor doing just the broad spectrum stuff that on its face has nothing to do with cancer care, just living a better life. Do you believe that living a better, happier, more fulfilling life reduces your odds of getting cancer?

Charles:

Oh yes, oh yes, oh yes. There's so much. I mean, I did a course up at Notre Dame. It was an elective called Hallmarks of Cancer and Metabolism of Cancer. It was like a candy store for a guy like me. There's interesting ways... I worked with the lovely Dr. Laurie Littlepage, who's a big cancer researcher, has nine PhDs, but they unfortunately take mice, and induced stress by putting them in with bully mice, and that mice then would propagate with cancer much faster, or get cancers from a cellular transplant.

In addition, if they put them in little tubes where they couldn't move, that simulates some of the treadmills that many of us are on or many people are on. They would then get cancer quicker, or if you gave them exogenous steroids, which is still unfortunately a routine practice with our cancer patients to mitigate nausea, and so-

Dave:

Are you talking about prednisone steroids, not testosterone?

Charles:

Yeah. I mean, it will save your life if you're having an anaphylactic reaction, but if you use it a lot, we know it raises risk of multiple cancers. There's all this data with having a spiritual side. It goes back to, I think, cortisol levels and being more at peace and equanimity, as you said.

Dave:

Wow, I love it that you're willing to go out there and say that, because there are very few oncologists who will say, "It lowers risk," because most of them say, "There are no studies or more research is needed." You're not there. You're straight up, "That's how it is."

Charles:

I mean, Larry Dossey, for books spirituality and medicine, and logged so many trials where people, this was in San Francisco, would pray for every odd number in the ICU. Those people were in there for serious cardiac events, and they followed them. On average, the people in the odd rooms, who got prayed for who didn't know they're being... who was double blinded, didn't know they're being prayed for. The people praying didn't know the names of people they're praying for, just the number.

Those people had less complications, and got out of the hospital earlier.

Dave:

Wow.

Charles:

The data is all over the map. You just got to look for it.

Dave:

Impressive. Well, Dr. Meakin, I appreciate you coming out and just talking about the whole world of this bringing low cost things that are very likely to lower cancer risk, and you're not afraid to mix supplements and pharmaceuticals to get exactly the results you want. That is exactly the middle path, where you're not dogmatic on either side of it, and with your background, to not be dogmatic kudos, so thank you.

Charles:

Thank you.

Dave:

It's awesome.

Charles:

Thank you. I have a slide in one of my talks. It said, "There are some moon shots, and we're trying to be the earth shot, so we can have a prevention protocol that everybody could afford." In fact, the insurance company is going to want to buy it for you, because it's going to save them downstream cost, something very reasonable. That's why I'm doing this in my retirement. That's why our 20 plus people at Care Oncology works so hard every day. We don't know weekends. We don't know nights, because it's what I call metabolic movement.

We joke around, and a lot of some of our letterhead, it's like, Care Oncology because metabolism matters. That's just a basic fundamental of living a healthy life, and it's certainly a fundamental of managing cancer.

Dave:

Well, I hope you come out with a book sometime about all of this. I know you've written some medical papers and chapters and books and things like that, but I think you've accumulated enough knowledge here that the world could use a book like that. In the meantime, careoncology.com is the URL people can go to learn more about you and your work?

Charles:

Yes, that would be a good spot. I have a charity coaching site as well that I started right after I retired, but you can find me at careoncology.com. We have all our white papers there, our published papers and some good information, some beautiful patient stories too. I could have gone into incredible stories. The common link is that people say, "Gee, Doc, I know I still have cancer, or I have a threat of cancer coming back, but I am so much healthier now than I was a year before the diagnosis." That's the most common thing we hear all the time.

Dave:

Wonderful. Have an awesome day, and I look forward to chatting again.

Charles:

Dave, thank you. Thank you for your generosity. Thank you, Darcy. Thank you, Chris. Thank you, all the people who put this together, and keep spreading the good word. Keep us thinking. Stay curious.