Introduction to Lyme and Autoimmune Disease

Welcome to another really great interview for the M. S. and Autoimmune Summit. And this is going to be a really compelling topic for many of you. Doctor Mariah Hinchey is a physician and a fellow at the Medical Academy of Pediatrics, special needs.

And she's a recognized expert in the area of Lyme. Now, the reason I'm so excited to have her is that Lyme, often Co occurs, with people who have an autoimmune disease, including multiple sclerosis.

So it's really an important area, to consider. And so with that I'm going to, hand this over to Doctor Hinchey and see if there's anything else you'd like to add, to your introduction.

Thank you. No, I'm so excited to be here and, helping to get out true information regarding Lyme disease and other vector borne diseases is is really my mission.

And, you know, this stems from being a natural path, doctor who's trained to find the root or underlying cause, you know, often times, you know, not that Lyme is not all over the world, but where I live here in Connecticut.

You know, which was pretty much ground zero often times, you know, when you're looking for that root cause with a lot of my patients that turned out to be Lyme disease or a co-infection.

So I've treated multiple patients, multiple family members, unfortunately, myself. And actually, I shouldn't say unfortunately, because I will tell you, sitting here with what I do 17 years later really has come from not only what I've learned from my amazing mentors, but I think, like you, Terry, going through this yourself and and having to learn on yourself and, you know, having not just having where someone describes a symptom and you're like, I know exactly what you're talking about when nobody else has, but also really being able to walk the talk, right?

So like all of the lifestyle stuff that I do, all of the fixing the immune system and healing the gut and, and everything that I talk about, I really had to go through and experience myself.

Vector-Borne Infections and Bartonella Symptoms

And then, you know, I kind of say like, everything happens for a reason. And that happened to me so that now I am able to help all of my patients. Which is why I'm so excited to have you, as part of our summit.

So let's let's sort of step back a little bit. And we talk about vector borne illnesses. I know, ticks, have been around for a long time. They're part of the ecosystem.

We've been, I grew up as a, a kid on, a farm. We had plenty of ticks, a wide variety of ticks, that we were taking off our dogs, off ourselves. I did a lot of camping.

So, again, plenty of ticks. And many of us are exposed to a wide variety of ticks. What? You mentioned vector borne illnesses. What all do we have to think about?

For those of us who are exposed to ticks? So I would and I'll just make a clarification. So I say vector borne because for example there's Bartonella which is a co-infection.

You know, of Lyme disease. And it's not just transmitted by text. So it's also mainly transmitted by fleas. So just want to point out, because so many people will say, well, you know, my child never had a tick bite or I never had a tick bite, or I never had the, rash, which, by the way, less than 40% of people even have an Em rash.

When I think online, people may not know what em is. So let's. Oh, sorry, era thema migraine. So it's that classic bullseye rash, you know, where you have, the red ring and then the central clearing, and a lot of times it will spread, as it goes.

So a lot of, people rely on that rash for diagnostic criteria. And it actually happens in less than 40% of people diagnosed with Lyme disease. But again, I say vector because there are other routes of transmission for Lyme and co-infections than just a tick bite.

Okay. Very important, for all of us to know. So fleas and ticks. So you mentioned Bartonella. Okay. What is Bartonella? So Bartonella is a bacteria. I would say, you know, to get into the symptomology, it's most famous for causing, I would say kind of like sinuses, see, like headaches, brain fog.

There is a lot of neuropsychiatric symptoms that accompany, accompany it, like anxiety, panic attacks, depression. There's can be a lot of irritability and rage.

Some of the physical symptoms are, like I said, brain fog, headache, pain in the soles of your feet seem to be a classic Bartonella symptom. We can have lymphadenopathy or swollen glands.

And there tends to be a classic striae rash that kind of looks like stretch marks, but it can migrate around the body. And unlike stretch marks, when you press on it, it will blanch or turn white, whereas typical stretch marks would not.

And then obviously stretch marks, which are basically scars, would not come and go and they certainly wouldn't move around the body. And the patients who end up with this striae get them in very strange areas.

So, you know, there's pretty classic areas where one would get a stretch mark. And so this striae does not follow the normal dermal plains that a typical stretch mark would follow.

So Bartonella causes a lot of neuropsychiatric symptoms and a lot of central nervous symptoms as well. And then we just talk about Lyme. So short little clue on Bartonella.

The other, big thing Lyme. So I would say acutely Lyme presents like a flu. So you can just have general feelings of malaise or not feeling well. A lot of fatigue.

You can have a stiff neck. Can often be one of the first signs of neurological Lyme. But it's it's very hard to tell between the acute presentation of Lyme disease and something like, you know, like your typical flu, you know, so summer flus aren't common.

Lyme Disease in MS and Chronic Illness

And, you know, if you find yourself having, you know, symptoms of a flu and you've been to the clinic and they say, well, you know, this is an influenza A or B, and we can't really figure out what it is.

You know, then you should definitely try to assess for whether or not it could be Lyme. And I don't want to mislead people by saying a summer flu because these ticks are out year round.

I have pictures of these ticks literally crawling in the snow. And, you know, the highest months of transmission are actually, April and October. So we think of this as a summer thing, and we think of this as something that you have to go into the woods for, or go camping or, you know, hiking or something like that.

But, I mean, it's it's in mowed grass, you know, we spray. We are very diligent. My son had a larva tick in the back of his head two weeks ago. Thank God it came back negative.

But I mean, you could barely see the thing. And he had just been outside playing in a yard that is sprayed routinely. Okay, so, I think we have a sense of acute symptoms.

Yeah. Many of the folks listening, you know, have multiple sclerosis, newly diagnosed or being worked up for it or have had Ms. for a few years. Should they be thinking about Lyme as well?

Well, I think so for sure. So as I'm sure you know, you know, Lyme is the great imitator. It mimics every other disease and disorder out there. And it's because Lyme infects every single cell in the body.

So it has the potential to cause symptoms, especially chronically, in every part of the body. So, you know, when, when I look at Lyme disease chronically, I look at basically the inflammation, inflammatory piece of it.

Right. As well as the immune dysfunction. And not only does the immune dysfunction and the inflammation cause a host of the symptoms as well as the cellular degeneration in the body, but it's also what allows this organism to evade the immune system and get its chronos in our bodies, if that makes sense.

Sure. So. So we could have our diagnosis of Ms.. I'm getting my treatment. You know, maybe, okay. This, you know, very common treatment right now. I seem to be doing okay.

Do I still need to be thinking that we should investigate the possibility of Lyme? So. I would think so. And you tell me after if you agree, you know.

So I feel like most of our conditions, chronic conditions, chronic diseases in this country, I mean, everything, even, you know, right down to, cardiovascular disease, right.

At the root of that is inflammation and immune dysfunction. And so with our masks, with it being, you know, like a neuro immune disease in my mind, anything that is going to make our immune system less competent and anything that's going to drive more inflammation, I would think would enhance the acceleration, right, that a patient with Ms.

would deteriorate. And so if Lyme or a Cohen faction or even viruses or anything that's going to drive that inflammation and cause immune dysfunction is at the root, right?

One of the underlying causes of why I'm as developed, it would be important to address those things, get inflammation as low as possible, get our immune system functioning as correctly as possible.

And I would think that that would either halt the deterioration or it could even help to reverse some of the symptoms that patients are experiencing. Okay.

So I think you've made a good case that we should be thinking about could Lyme be part of my illness? And so if our listeners are like, okay, I should talk to my medical team about this, what would you be asking your medical team to check?

Testing Challenges and Specialty Labs

Okay, so we'll talk a little bit about diagnosis and treatment, which are, sorry, diagnosis and testing, which certainly is probably one of the most controversial pieces of this disease.

So, a few things. Number one, Lyme is a clinical diagnosis. So we cannot just rely on a test saying positive or negative, to get that diagnosis. And even if you go to the CDC's website, it says that Lyme it should be diagnosed based off of clinical findings.

Your, the possibility of you being infected. Right. And then certain laboratory findings should be used to basically back up the diagnosis. Okay. But a lot of clinicians are just ordering a test.

And if the test comes back positive you're positive. If it comes back negative, even though you might have every symptom in the book of Lyme disease, they will say that you're negative.

And so one of the biggest issues is that with these commercial laboratories, like quest or lab core or any hospital lab they are, if you go in and you just have a test for umbrella bark to fry, that is all they are looking for.

So right now there are depending on which laboratory you use, between 17 and 20 different species of Borrelia that are known to cause either Lyme disease or tick borne relapsing fever.

Outbreath, which is another basically type of Lyme disease still caused by Borrelia. And the conventional testing is only looking at a burg to Frye. So there's Borrelia Miyamoto.

There's Borrelia. Officially there's Borrelia. Californian says. There's there's all of these different species of Borrelia that cause Lyme. And so the typical scenario is the patient gets tested and they get tested for one of them.

And then that is so specific to that species. And then they're told, nope, you don't have Lyme. So the analogy that I use with my patients is that, you know, that's like me saying, I'm going to test you for an apple, but I'm going to use a test that will only detect a granny Smith apple.

So if you have a Golden Delicious or a Red delicious or a macintosh or a Honeycrisp or a gala, you could be holding it right there. And I'm going to say, no, you don't have a Granny Smith, therefore you don't have an apple.

And you're going to tell me I'm crazy and I'm going to agree because that's how bad the testing is when it comes to looking, at Lyme disease. And then just like a test for an apple isn't going to tell you if you have an orange or a pear or a banana, testing you for Lyme disease is not going to tell you if you have BCR or Bartonella or Licky or Anaplasmosis, right.

These are all completely different types of bacteria. And BBC as the parasite. Okay. So there are there are many considerations, that you've just, listed that should be, considered and your most primary care folks, most neurologists are not as knowledgeable about all of these.

Tickborne. Vector borne infections that may disrupt our immune system and lead to this chronicity. So, the listeners are like, What do I do? So there are specialty labs that are focused on detecting, vector borne disease.

I would say the industry gold standard is I genex laboratories in California. And so, how do you spell that? I gen x IgG an x. Okay. Okay. So they offer they offer accurate I believe.

They're testing if you do. You know their panel that looks at the immuno blot. And so also it's it's important to understand like what you're actually looking for.

So they have an immuno plot for Lyme disease that I believe looks for eight species of Borrelia. But that's only eight. So then to get the other balance you have to order the tick borne relapsing fever immuno blot.

And so if you do the two of those together, that would be the most comprehensive testing that they offer, for Borrelia. And so they do offer a PCR, which is a direct test.

It's looking for the actual genetic material of the infection. But pcrs are often times negative because Lyme does not like to live in the bloodstream.

And basically a PCR from a blood draw is looking for genetic material in the bloodstream. So I think doing these immuno blots are much more, sensitive.

And you're going to get, you know, a better result without, in my opinion, wasting money on a PCR. So we've got a lab identified, to work with. Likely my specialist doesn't know about this lab.

My primary care person. May not know about this lab. So again what do our listeners do. I mean so unfortunately the burden falls on the patients, you know.

So the patients have to request that the practitioner use, one of these tests through genetics. And so they can go to I Jennings's website and they can contact, you know, the lab, and they can, get that information and give it to their clinician.

Recently I Genex has actually come out with a much more affordable at home kit, but it kind of just gives you a yes or no. It doesn't give you or your clinician the ability to actually look at, like the level of reaction or know which bands you're testing positive for, which can actually be helpful clinically, but at least it's a starting point.

So this is something new by Iconix where the patient can actually go on order it themselves. It's a fingerstick. So they can actually do it at home. And then they can get their results.

And just keeping in mind no test that tests for anything is 100% accurate. So these tests are up in the high 90s which is better you know, than what we're going to get through quest for example.

Finding a Lyme-Literate Practitioner

Because depending on the source those tests yield false negatives anywhere from 50% to 70% of the time. Another thing that's important to point out is all of these tests that I'm talking about beyond the PCR.

And again, I'm focusing just on Lyme for simplicity right now. But they're indirect tests. So what they're measuring is a person's antibody response or immune response to this organism.

And so if you think back and go okay, well this is an organism that's able to become chronic because of the way the inflammation breaks the immune system.

And now we're relying on the immune system to tell us if it's there or not. It doesn't really seem like a like a great setup, but unfortunately there's nothing better.

Okay. So I'm trying to help help the listeners. I've been sensitized that maybe Lyme or the tick borne illnesses might be part of my health issues. I could go to I genetics.

You know, get, a testing strategy to figure out the Borrelia infections. But you've mentioned, several other names and the businesses, Bartonella, are like yours.

So, like dosis. Yes. Those are other organisms that would not be captured by that Borrelia. Immune blocked. Correct. So you would want to order those other tests, as well.

You would have to add all of those other tests on. So we would want to do a separate test looking at BCR. And we would want to look at IgG and IgG antibody production, as well as ordering what's called a fish.

And for us H test. And then we would want to do Bartonella. We can do an immuno blot as well as a fish test. And then I'll be honest or like yeah. And and a plasma quest is pretty good at looking at those.

So I don't feel patients should spend extra money out of pocket to look at or licky, or an a plasma or even mycoplasma. But there's another one that I haven't mentioned yet called rickettsia.

And so Rickettsia causes Rocky Mountain spotted fever as well. As you know, there's there's 1 or 2 other, species of Rickettsia that can cause other things as well.

But Rickettsia is something that's important to be looked at, to. And acute cases of rare cases can actually be fatal, as can in a plasma. So, you know, it's a complex topic.

And again, there are kind of telltale signs that go back to especially when someone has an acute or a chronic infection. So really working with a practitioner, a clinician that not only is Lyme literate, but really like is is an expert, I would say gives the patient the best bet at, you know, knowing what they should test for and how to test for it

accurately.

You know, the difference between an acute case and a chronic case? A lot of times I see the scenario where the patient was bit by a tech. They go to their doctor within a couple of days.

They're tested for Lyme usually only. And then the test comes back negative. And literally from that point on it's like, well, you were negative. You were negative. It can't be Lyme. You were negative.

And what happens is, is when those those tests through quest, they're looking at an Elisa. And if you do, you know typically it's a reflex. So it's what's called a two tiered test.

So if you don't test positive on the first test, they won't even do a Western or immuno blot. So it's important to order both of these tests at the same time.

But know that we're still looking for antibodies. And it takes at least two weeks for your bodies to really produce IgG, antibodies. That would be high enough to earn you a positive on that test.

And then IgG antibody production really isn't going to come in and peak until weeks 4 to 6.

Holistic Treatment Approach for Chronic Lyme

So if you're testing within the first three days or week or two weeks, you're likely to get a false positive, even if it is Borrelia burgdorferi, because a false negative sorry. Yes.

False negative. You're likely to get a false negative because your body hasn't had the time to produce adequate antibody response. Okay. So I again, I think for the listeners, the hearing, it's a complicated topic sorting out, all these different potential infectious causes.

I genetics great lab to be very helpful, but I think it's probably really very helpful to find a clinician that is aware of the these nuances so they can do a careful history, a careful exam order, a more comprehensive look at the various organisms that may have been transmitted.

And so now we get to a complicated question. How can the listeners find someone who's knowledgeable to help them navigate all of this? So I would say one of my favorite resources, and this is where, you know, besides my personal mentors, this is where I have learned over the past, you know, 15, 17 years.

What what I know about Lyme disease is at the International Lyme and Associated Diseases Society or Islands I lads. And so, their website is Ilha adams.org and they are a group of medical practitioners and it's the gamut.

So we have MDS and DOS and ends and aprons and paths and there's a lot of nutritionists and, and whatnot. So it's just it's a world wide organization of medical practitioners who basically have dedicated their lives and practices to researching and, treating Lyme and vector borne disease.

And now, since Covid, they're actually focusing a lot more on chronic inflammatory diseases as a whole. But I would say that is where you're going to find the most, cutting edge, up to date information.

They have a find a practitioner directory. And then there's other organizations like Project Lyme, there's Lyme disease.org. And then actually I host what's called Lyme bites l y m e b y us.

And we just had our annual symposium last weekend. And so we bring in, experts in the field of Lyme and vector borne disease. And we talk about this is more of a functional medicine integrative conference where we're talking, you know, way beyond focusing on just killing these infections.

If you have them. We're really looking at how nutrition, lifestyle, stress, gut health, just overall helping the person to heal their body while eliminating the infections.

And kind of like all of the resources that you need to do that. And there's a wealth of information on that site as well, which is Lyme bites.com. Okay.

I've been sort of taking notes here as you go along, and I'm sure our listeners are taking notes. So finding, a medical team to help, you know, understand your symptoms, your exam, and then, getting the appropriate lab testing, helping interpret the results.

Because in my experience, it's usually not completely straightforward. You have to have some, assistance knowing how to interpret all of this and then making a decision like, okay, there is a vector borne illness that is contributing to your current health issues.

And then, we begin navigating treatment, and, can we, I know we could talk for hours about all of that. But I don't want to overwhelm people. Yeah, I I'm assuming, because you're confident that once we have a diagnosis of what the underlying organisms are, that there is a holistic approach to helping people eradicate or suppress, better manage that organism?

Yes, absolutely. And, Terry, I feel the need to just say one thing quickly before I dive into that, if that's okay. Sure. So I would say, you know, because you kind of asked earlier about, you know, okay, so I have my misdiagnosis.

I know I have as like, why does it matter or should I still be looking for if there is a vector borne disease? And I just want to give one tip, I feel like any diagnosis that somebody has been given that has the word atypical along with it, right, is to me a huge red flag.

So, you know, there are certain diagnostic criteria, right to, to be diagnosed with arms. And I cannot tell you how many people I have come in to me with the diagnosis of arms.

And it's like, but my doctor says it's atypical. Okay. What does that mean? It means I don't fit the criteria. I'm not having the episodes, you know, the way that I'm supposed to, or I don't have lesions in more than two areas or I don't, you know, fill in the blank and so on.

That, to me is a huge red flag. And then another red flag would be, okay, let's say you do fit the typical diagnosis, but let's say that you're having all of these other bizarre symptoms that literally have nothing to do with, us.

You know, that's when you're like, okay, what could be causing these other symptoms, you know? So just like a simple example would be, to my knowledge, you know, we shouldn't be having chills or, you know, relapsing fevers or, you know, flushing or or any of those types of symptoms when somebody just has, you know, typical.

Ms.. Correct. So if you're seeing something like that where it's like, this doesn't really fit, you know, that's where that red flag or that light bulb should go off that like maybe something else is going on and maybe I need to investigate it because, you know, there might be something else like Lyme disease that actually explains all of those symptoms, you know, as well as the demyelination, which we know can occur from Lyme disease.

Okay. So okay. So now I'll answer your question. Yeah, I think, I think we've we've got a constellation of reasons to think about getting a little further evaluation.

It comes back, and I have some organism or maybe a couple of organisms. What what happens then? Next. Right. So I like to take at least a six pronged approach to this.

Okay. So number one is we have to deal with the inflammation because again the inflammation is what causes the symptoms. And the inflammation is what drives the immune dysfunction or the imbalance in the T helper cells.

Right. Which can lead to 17 dominance autoimmunity etc.. So there are a multitude of anti-inflammatory herbs. Amongst my favorites are Japanese knotweed Chinese skullcap, cordyceps.

Okay. So that's like number one knowing what inflammatory cytokines are being expressed. And then I love using

herbal medicine to help to manage that.

Immune Support, Stress, and Long-Term Management

Then looking at where, you know, where is the immune system dominating. Is it in a teen. Is it two like what's going on? One of the best herbs to help to rebalance the immune system is ashwagandha.

So that's my absolute favorite. Rhodiola can be helpful as well. Then if we look at what parts of the body does this specific organism like to basically invade and eat for its nutrition and live?

Because if we can shut that off, we can help to starve them out. So, without getting too technical, Lyme induces the release of enzymes that break down our collagen and break down our connective tissue.

And so this is one of the reasons why Lyme loves to go to the joints. Right. Because it has cartilage and ligaments and tendons and, and all this collagen is tissue in there that it can eat.

So it turns out lime's nutrient profile that it needs to exist is contained in collagen. And so that's why it loves it so much. Another reason why it loves the joints is because there's not a lot of immune cells there.

Like there's not a good blood supply. It's a lot of synovial fluid. Like if you think of the knee or the shoulder, you know, two of the places that lime loves to go.

So if we use a combination of Japanese knotweed, Chinese skullcap and ashwagandha, we can actually inhibit the collagen. Is that how Urana days and the Agra kinase, which are the three enzymes that lime uses to break down the connective tissue and feed itself.

So that's number three. Number four is obviously using antimicrobials. So there's a lot of antimicrobial IRBs out there that recently, over the past four years have been studied and have actually shown to be as effective as some of the conventionally used antibiotics at killing spy rockets.

Right. Which is the type of bacteria that Borrelia is, the type of Lyme bacteria. And so we can use these antimicrobials and not do such a rough job on our microbiome because as I know you know, our microbiome is critical for our immune system to be able to function properly as well as manage inflammation as well as be able to detox.

And so that brings me to number six detoxification. So we have to be detoxing and eliminating all of these endotoxins that these dying organisms are releasing into our body as we kill them.

Because if we don't, we will end up experiencing a pretty severe jerks. And a Herkes isn't just like, oh, all of my symptoms temporarily feel worse, and I feel crummy and I'm going to lay in bed for a couple of days.

When you're Herc Singh, you're actually increasing inflammation and one of the big inflammatory cytokines that goes up when you herkes is interleukin six.

And so interleukin six can actually push us back into like a th 17 dominance. Right. Which is going to push us down. That autoimmunity path again. So really trying to balance all six of those treatment bases at once to me is crucial.

All at getting these infections into remission was which is the ultimate goal, because I don't think anyone who claims themselves to be Lyme literate actually uses the word cure, right?

Because you have to be able to prove a cure. You know, it's like with cancer, we can't see it. We can't detect it on a test. We don't see it in your body.

But most oncologists don't say that they're curing cancer. They say we've gotten your cancer into remission. And

so that's always my goal to get these infections to the point where they're no longer causing symptoms, they're no longer replicating.

But I would never want to fear. Way to think about this is where we are, using a variety of herbal strategies. And, and I'm predicting that you're also talking a lot about, lifestyle, modifiable lifestyle factors.

And eventually we've suppressed and killed off the microbes enough that my immune system is able to properly manage and keep everything at bay. It would would that be a fair way, to describe what happens with your six, prong approach here?

100%. Tara. Yes, you nailed it. Yeah. You know, and I'll tell everyone who's listening, there's more awareness that when we get the various infections that we have viruses, bacteria, parasite fights, we never completely get rid of them.

They're there all of the time. What we are trying to do is shift the balance such that my immune system can manage them. And it's also why when, we get as we get older.

And I'm very aware of that now, I also, you know, soon be 69, and my immune system will become less and less effective unless I do a really good job with my modifiable lifestyle factors that I keep my immune system healthy and vibrant, and it can protect me from all the mischief makers that I've acquired, throughout my, vigorous life.

Yes, 100%. And I think, you know, there are people and I was one of these. I lived with the Lyme disease for a long time. I got it somewhere between when I was eight and ten, but I didn't actually know it and didn't have symptoms of it until I went through an extremely, extremely stressful period in my life and my immune system tanked.

And that's when it actually came out, because my immune system could no longer control it, you know? So I kind of think about like, you know, chickenpox and shingles, right?

So like, everyone gets acute chickenpox and most people, well, years ago most people didn't end up with shingles. It was a very, very rare, rare thing.

But now with immune dysfunction right. And immune suppression, the virus comes back out, becomes reactivated and you end up with a shingles infection.

So in my mind I kind of like in the to in that way I think we a lot of us have been exposed to a multitude of bacteria, viruses, etc. and when we keep our bodies healthy, our immune system is able to keep them in check in for, I think most of you who are listening, to our interviews, go back and think through when you became, diagnosed with, Ms.

or whatever chronic, major health challenges that you have. In every one of my clinical patients where we have this conversation, they can describe to me in the two years prior to their diagnosis, there was some major trauma, either.

Most often it's a severe psychological trauma. That happened because of family circumstances or work circumstances. That was extraordinarily difficult in that 24 month period prior to their diagnosis.

And then it unmasks the, they become the symptoms are severe enough. They finally going to see the physician, begin to work up and get diagnosed. And, I think that matches what you're telling me, that there is a severe stress.

It might be a physical stress. It might be psychological stress. And our immune system is no longer able to keep the mischief makers at bay. It turns on the autoimmune process, and then we end up with our diagnosis.

Yes, exactly. So, I, all of you who are listening, I really want you to take this to heart that we all have to really take care of our immune system. Modifiable lifestyle factors are key for you.

Now, are there these mischief makers, in finding, someone through I let's see and let's make sure we get the

organizations correct. I led.org is probably a great place to start Lyme bites.

Is that.com or.org. Dot com.com would be another really wonderful resource. This is you know, I could talk for for another several hours because this is so important.

But I know if, if we go on too long, I'll lose people. But this has just been so wonderful. I wonder if you could tell us, how people can find you in your organization.

Oh, sure. Yeah. So I have a website, doctor HSN.com. So Dr. H. I and Wkyc.com and then my practice, my clinic is Tao vitality. So Teo vitality SI.com.

So you're still seeing patients? I am, yes. Oh actually, I have a long wait list. I want to warn everyone because when people call, they get upset. We're we're doing what we can to try to revamp and get people in sooner.

But I just fair warning we have I have a pretty long wait list. Well, again, this has been, really a wonderful. I think it's certainly worth considering.

Could you have these mischief makers as part of why, you developed your, Lyme associated diseases? Miss certainly is one of them. Your primary care person probably won't know how to do this.

Your neurologists certainly may not know how to do this. And so investigating, I lots to find a practitioner in your neighborhood would be helpful. And if you have the time and the resources to go to.

And what state are you in? I'm in Connecticut and in Connecticut, where the hub of where, understanding of Lyme disease and tick borne illness, all began.

Thank you so much for being with us. Thank you so much for having me. It's truly been a pleasure and an honor. Thank you.