Doctor Youngu2019s Background and Longevity Medicine Journey

Doctor Marcella Young is a graduate of the University of Miami in obstetrics and Gynecology, the University of West Virginia, and Internal medicine and Energetics Education and Research, Foundation and age management medicine.

She has more than 30 years of professional experience in the United States, the country where she chose to continue her post-graduate education after graduating from the University of Buenos Aires with a degree of doctor and medicine, Doctor Young has more than countless accreditations granted by the American Medical Association for her continuous medical education to remain at the leading edge of this area of medicine.

So innovative and revolutionary with this multidisciplinary training, Doctor Young is able to bring to her patients a vast amount of knowledge and experience to help them optimize their health.

By entering into her treatment protocols, her patients enjoy healthy aging free of diseases and therefore significantly improves quality of life independently of their chronological age.

In the last two years, Doctor Young has been nominated as a member of the Society of International Business Fellows based on her continuous efforts to spread her knowledge internationally outside the United States, to Europe and recently South America in Uruguay and Argentina.

Well, it's great to have you on the Telomere Summit, Marcella. You know, you and I have been friends and colleagues for quite a long time now. I'm meeting, at the various meetings we go to and talking about the changes in the field of longevity medicine in general, but also telomere biology.

And I'm really excited to have you on the show to talk about, you know, share some of the conversations we've had, some of the talks you've had about patients and, and your views on, the kind of medicine you practice and why it's really the best way to take care of your patients and extend their health span.

So, I'd like you to just get started, maybe by telling us, the audience a little bit about how you made the transition from obstetrics and, and gynecology training and internal medicine training.

And in the past 30 years of practicing medicine into this new and exciting field, of longevity medicine. So, first of all, thanks for having me. You know, it's, it's an honor to be, an Apollo panel with, you.

And so many other, and very, very well known, people in telomere biology, which I, by the way, consider mentors of mine. So thank you. Well, it's a long story, but we're going to try to make it short.

So yes, I did train, and I'll be doing and, training in internal medicine. But essentially for the last 20 years or over 20 years, I've been, practicing internal medicine.

So, you know, from med school, through all my years of experience in internal medicine, I have I have focused on on diseases, right, on disease, diagnosis and treatment and basically just think about it from an organic point of view, right.

But, you know, I think about when I was in medical school and, I think this is what would have driven my desire to go into longevity medicine. I have been really, really curious and really passionate about the molecular basis of everything, which we learn a little bit and, you know, biochemistry, which, by the way, was my favorite subject in med school.

But, you know, just to know the the why of the why and why things happen, right. But then we go on, you know,

straightforward to, our game and, you see, and then we learn about the organs and, you know, when they get sick and what we need to do, to make them better.

So, essentially, that's what I practice for 20 plus years, in Greenville, South Carolina, which is where, where I live. But, you know, always with that focus of, you know, knowing that there was something out there was more that can be done.

And, you know, it just happened that, I decided to do, my, fellowship training certifications in, in, age management medicine in 2011. And that opened up a new whole, area of my practice, which, if I'm talking to a patient, I tell them, well, this is the preventive side of the of the practice, and this is the reactive side of the practice.

So, very shortly into my, conversations with patients, I explained this. I want them to know where they are because my name is known. I practice in the same city for many years, and, patients come to me, for different reasons.

Most of my patients are patients that are pretty healthy, or they want to stay healthy. They're health conscious. They want to stay healthy. I don't practice.

I'm not in the hospital, and, I'm not a hospital employee. Private practice, which makes my life a lot easier. In fact, I would say that this is the best stage of my career.

Not only because of the type of medicine that I'm practicing now. And the rewards that I get from seeing my patients getting better and better and feeling better and better, but also because I don't have to deal with which the majority of the audience, I hope is not dealing with.

Reactive vs Proactive Medicine and Healthy Aging

And if they're dealing with, it's probably, something that will know physicians don't like. So, I very early on, I talked to them about. I just want you to know where you are.

I'm still practicing internal medicine. I'm still, you know, I'm not a, I am in school age management medicine practice, but I still continue and shrink in and shrink, and that's that's my goal.

The internal medicine side. But I wanted to know what they are. So we talk about reactive medicine versus proactive medicines and, and the differences.

So that's, that's essentially how, how I approach it says, okay, you know, if you have a problem, you come to me and, you know, we will we will take care of it, which is what almost 100% of patients are accustomed to.

But by the way, we offer this other side of the practice in which we focus on healthy aging. And, let's talk about aging. I opened on my conversations with patients in that manner.

And, you know, as you know, and everybody knows, people have this concept about aging is a gene is inevitable. Aging is something that brings connotations of negative, negative, diseases, impairments, dependencies, lack of functionality, cetera, etc.

and most people in their mind, consider that this is inevitable. And so they, they're very glad to hear the note that this this day is not inevitable in this century is not inevitable.

We do not have the tools, the scientific tools. We know what causes aging. In fact, I even tell them, you know, aging has been defined by United Nations in 2017 as a disease.

I share with them. I will respond to that. I mean, what, you have somebody to tell you said it's somebody who's coming to you, maybe as an age management or a longevity patient and preventative medicine side, and they don't have any diseases.

Now you've given them a disease to how do they respond to that? They you know, they don their surprise really as a disease. But not because I'm telling them you're sick.

Actually, what I see is a relief. Oh, really? So there is something we can do. So I, I do not have to give in to this. Okay, this is going to happen to me, sooner or later.

Based on what grandma told me she had. What type of disease or, what did that die off? You know, we we do have all these tools. You know, and I go straight to the signs and I explain, the signs, to them.

But we all have now this, scientific tools that we can intervene. So without intervention and intervention. Yes. You know, the the the process is going to continue.

The the degenerative process of the body, the cells. And I go straight to the cells, and I talk to them a lot about the cells. And, and I give him very simple examples.

You know, people don't think this way. And I've, examples such as, you know, each cell of your body is like an engine of a car. You know, there's this complicated mechanism.

And of course, when we talk about the cells, you know, greatly, much more complicated. But it needs all these things, and they need to function, and they need to communicate, and they need to do this.

And essentially what we want to do is we want to bring your cells to your cells had when you were 20 or when you were 30, thinks that you have been loosened little by little by little throughout your life.

But if we could tune them up and bring them back to what they needed over the head when they were, when you were 20 or 30, then, it's very logical to think and very simple things are going to work better.

And so the reaction going back to your question is that of surprise. But in it, in a great positive way, they they're they feel relieved. Really. Nobody told me this before.

It's a good we can do that. I just did not even know that we can do that. If you patients do not. But the few patients are very well read, and they already know what a telomere is, and, you know, but the majority of them, they don't. So.

So what tools do you use to sort of tell patients how their cells are doing in the aging process? Well, there's, very comprehensive panel of biomarkers of aging, that, you know, the, the physicians are in this specialty, know well, but, you know, metabolic changes, hormonal changes, nutritional changes, telomere attrition.

You know, we, we do we do a very comprehensive, panel, of of all the biomarkers of, of aging. So when they the first visit, they, they're a little bit they leave the office a little bit.

Thinking, okay, this sounds great, but let's see the second one the second time they come when I have all the, the, the results of, of this panels, including the, telomere length, they they're very excited.

And, you know, even even if we do, a telomere, and telomere length on someone and it's not, what they were expecting it to be or is shorter than their, you know, chronological age or it's longer or shorter.

They're the analogical age, meaning their biological age is older. Then of course, they're not very happy. But, you know, there's always this encouragement that work.

When I started this program, I will not created this program. And in a year later, I'm going to show you that all those biomarkers, including you're telling me your life is going to be it's going to be better.

And when they see it in black and white than they they're really, they're really getting excited. So, you know, of course, compliance is everything. I tell my patients, this is 5050.

We're a team, right? Because we all know, you know, the importance of, you know, lifestyle in all of this. I mean, this is one thing we knew and we always known lifestyle, which is, in my opinion, as an intern, is the only preventive, approach that we had with patients, you know, counseled them three times a year if we saw them three times a year about their lifestyle habits.

But that's it. We never did an internal medicine or anything preventive. Right? Right. Yeah. And, you know, we're too busy. What do you mean? Well, I want to or even or even what patients think is preventive is not prevention is early detection.

You know, colonoscopy or mammogram, you know, and and and then everything calls it prevention. But it really is not prevention. So they the patients are very, receptive and very receptive.

Telomere Testing, Biomarkers, and Patient Education

How do you, approach, the discussion? Because I know that, I've gotten emails and calls from other doctors who measured telomere length on their patients, and sometimes it comes back quite short.

And, you know, that can be you know, quite disconcerting to a patient. How do you go about explaining what that means and what can be done about it? What's your what's your elevator discussion about what a telomere is?

Look, I try to keep, always a positive attitude, and I try to transmit that to my patients. I do always tell them long telomeres are use and health shortening measures or aging and disease.

These telomeres are shorter than they should be. You're aging faster than you should. And your chances of getting any other diseases of ages, which are all of them, right, except for accidents and infections.

Your chances are, yeah, much higher. So let's work. You know, this is a big incentive because we can reverse this. We can make this better. And we we we see it.

I mean, I did my training job in 2011 and says 2011, approximately, I have been measuring telomeres and I have been treating my patients with the luminous activators.

I used to 65, exclusively. And, I see progress, I do see progress, I see progress, clinical progress. And I also see progress under, telomere testing.

And I see, progress in all the biomarkers. And you for your practices comprehensive. You do have been doing for a long time. Hormone replacement therapy in both men and women.

Hormone optimization, I guess, is a better word for it. So you have that approach, you have lifestyle, you have diet, exercise. It's a comprehensive approach.

I know that you take this sort of thing. How do you explain how those kind of work together to a patient, with the telomere biology, the results? Well, you know, actually, the laboratory area that I use, to measure telomeres, is life length.

And I, the report of their telomere test helps me a lot with that. Okay. So, you know, here is a page in which it shows are these are all the things that will make your telomeres shorter.

These are all the things that I will make that will help make your telomeres longer. So let's go one by one by one by one. Right. You know, sleep being kind of sleep.

You know, you are under a lot of stress when I talk about managing your stress, you know, your your hormone levels are suboptimal. Let's optimize your hormone levels because of the importance of hormonal optimization.

And I explain all that why they are so important. Because the knowledge of people in general about hormones is

very limited, and the science supports a huge evidence on the benefits of hormone optimization.

So this is, educate my patients a lot of Joe, I really take a lot of time and I educate them. I think that an educated patient is a patient that is going to be more compliant and is the patient that is going to succeed.

So we talk we talk about all that. We talk about that you need the supplementation and we measure the biomarkers and we're done. And why this you need this supplement versus others.

We talk about quality of supplementation, you know, and and that's, that's very important because every day I measure, you know, biomarkers, just to give you a very common one, vitamin D.

And, and I see people taking my and having, very low, vitamin D levels. So, you know, we talk about quality and what they tell you, because, you know, as you know, it's highly and unregulated.

So it is important, so, you know, and yeah, diet we do have a specific program that patients, and, and wrong in which we only do, nutrition. In fact, our visits are just for nutrition.

So we don't do anything else other than talking about nutrition. And, you know, three months long, they come every two weeks, and we talk about nutrition.

It's just for weight loss, primarily. Not really. I mean, we have, I see this is very surprising, but I see approximately 85% of my patients are pre-diabetic prediabetes defined by an elevated basal insulin level and an elevated, insulin resistance level.

You know, and by that, we always talk about optimization, right? So we want the basal insulin levels not to be within the parameters of the laboratory.

We want it to be really low because it should be real lower, the better the lower the better. Exactly. So I define them as pre diabetics. And and I tell them that they're prediabetes because with time, if that does, if that is not corrected by diet mainly when we use metformin a lot as well for that reason and for, for the, longevity reasons as well.

But, you know, they that is they, they get better, their numbers get better, and, inflammation, and again, everybody's in hormonal to be stationary. But you know, obviously we do is very thorough and we're very thorough screening of to in regards to who give hormone hormone optimization and what type of hormones.

Right. Because, you know, everybody's different. And some people, in my opinion, some people, benefit from doing full hormone optimization and some people need to be the regimen needs to be, modified according to their medical history.

Right. But, you know, everybody is on, nutritional supplementation. Everybody is on, telomeres, activators to 65, everybody's in the nutritional program and we talk about exercise.

In my practice, I don't have an exercise physiologist, but I, I personally give him all the exercise recommendations. But you work with, I go to a doctor, I'm going to go in the, in, in near life.

Right. He's an exercise physiologist. When you're setting up now life in Madrid. So I guess you learned a lot over there. Yeah yeah, yeah, yeah, yeah. Other.

Right. Yes yes yes yes. I was, we were co-founders of, New Life Clinic, which was the first age management medicine clinic in, in Europe, basically. And, so that was, that was very, very rewarding, very interesting.

I'm no longer associated with that. And then in 2018, I opened, the first age management medicine in, clinic in Argentina. Which, by the way, is where I am now seeing patients.

But can you, Yeah. Well, it's. Yeah, it's it's nice. It was a little difficult to get in, due to, all the Covid restrictions.

Right? Right. Yeah. Yeah. So, tell me, and you've had some interesting cases of, patients that get baseline and then have changes in their telomere length.

Tell me about the a couple of those. Yeah. Yeah. I'm going to look at numbers because this is all numbers. Right. But you know, as, as I told you on a previous conversation, I, I do, look at their median telomere length, and I also look at the, 20% down on their short telomeres, which in my opinion, are more specific for that reason.

Because sometimes we see median, median numbers changing. But, it is my opinion that, as the database grows and is continually growing with more and more people are getting their telomeres check.

It also, the diversity of that database, increases. So, I like I like looking at the 20 percentile or the short telomeres because I consider that to be more clinically relevant.

And that's what I tell patients. You know, sometimes, bases show a very low median telomere length. And then when we flip the page and we go to 20 percentile of their short term measures, it's much better.

So I said, you know, what I explained to them is this is this is this is you. We discarded all the long telomeres in your sample, in your specimen. And we just are looking now, your short term ears and, and we do the 20 percentile.

And if this number is better, it's better than we looked in, you know, in the first page. And then so, you know, we have some patients and, because a reagents have change, I don't go back to 2015, I mean, with the laboratory.

Lifestyle, Hormones, Nutrition, and Supplementation

So I've, I've had a few patients in which, you know, the, let me, let me post for a second, not getting shorter is success. I think you would agree with me. Absolutely.

If you're telomeres don't get shorter, then you're doing great. Right. So and they they get longer. You're doing fantastic. So but they needed to get longer.

If you're like, depends on how old you are. But yeah, I think as a general rule, most most people are getting their telomeres tested. Getting a little longer is a good thing.

Exactly. So, you know, we have a Bayesian over here that in 2019, the who's telomere, were ten kilo bases and 2020 was 10.2. But when I look at the 20 percentile, he is, 20%.

And in 2019 was 4.7 kilo raises, and in 2020 was 6.1. So this is a this is a very, nice improvement. So how would you, would you interpret that by saying that, you had a decrease, in the critically short telomeres because your 20th percentile is now higher, relatively, than your median.

The change in it. And that's goes along with the biology that we know. Telomerase activators go after the shortest if telomerase itself goes after the shortest telomeres.

So if you're lengthening the telomerase in your bottom 20th percentile, the really really short ones, then the average length of your 20th percentile is going to go up more than the ones that are really long.

It doesn't add that muscular length to the longer ones. So that's that's kind of what we we would expect to see. In that I think, you know, it does show the benefit of the 20th percentile versus the median telomere length.

Right. Let's have another, another one, a third one, which, you know, and again, 2019 a year. Right. The 2020, it was 9.5 and 18.4. And the 20% is 4.9 and went up to 6.1.

And on and on. I mean, I have in this page and I don't want you to just, for the sake of time, go through everything. But I have about 16 samples that I just pull from my own database.

And, you know, life length helped me a little bit to pull out because obviously they have, you know, a lot more, organized because they do all the research.

So, you know, there's there is no question that I see improvement. Now, you, you invariably see an improvement and you start out with a certain dose and then have to change the dose because you don't see.

Or how does that work for you? How is that what's been your experience with that? Right. People that have had very, very short telomeres, I do, increase the does, but I don't have that data to share with you right now.

Just majority of my patients, the great majority of my patients are 150 units of 65 a day. Yeah. So, And I wish I had that, but I don't, because I don't see a lot of patients with really, really short telomeres.

And the ones that I see, are very noncompliant. So the follow ups are not, you know, get them, get them, or then do we tell them, you know, it's like I say, you take the 65, but you don't do all this other things.

I, I cannot tell you that in a year I'm going to show you improvement. You know, it's it's interesting when I'm in Argentina and I lecture here, you know, and I and I've put this slide about to 65.

Everybody picks up the phone, and then when I take a picture of the magic model, right. And, and and and then although it is almost magic, you know, they have to do their part.

And the patient that as it was very short centimeters are not compliant, as you can imagine. Right. And and I see adults I mean I know we do see children with, with short telomeres but I don't see children I see adults.

Right. Yeah. And those are usually kids with genetic mutations and that are pretty common. What's the, shortest telomere length you've seen and what's the longest one?

And, have you made any correlation between that and other biomarkers or state of health or, or any. I don't know what the number is when you are above the blue line, which is the 95%, I don't know what the number is because I stop.

All right. But I, let's see. I would say that. And now we've gone to the medium, right. Well, you know, we're 20th percentile either the, I guess the, the 95% is a little bit between about 13.

Right. So, I'm happy to tell you I was there, but I, I did take it 65 since existed. So I don't know what it was before I started, but, it started at the same time.

The testing on the 65 and the shorter is. I guess you are below. When you are in the 5 to 10 percentile, you are a little bit over eight, in kilo races, right.

Have I seen them below that? Yes, I have, I have seen them below the, five percentile I have. Yeah, yeah. And like, like in this particular patient, she's off the charts.

I just the reveal is a she she's she's definitely. I will show you that she's off the chart. That's very high. Yeah. And that's the anything about her clinically that that goes along with that?

I mean, is she more useful in appearance? Does she have fewer? I mean, I didn't see what the age was. What was the what's what what the hell was she two time?

I don't have that. I don't have that in the report because it's all, you know, there's no names. It's all codes. Okay. There's not that. There's not age, but, I believe she is 50.

It's immediate. It's okay. Yeah. No, I mean, I personally with the experience, and I'm sure you, feel this way. I cannot look at a person before we measure the telomeres and and pretty much predict what's going to be.

I cannot only look at the patient, but listen to the patient. No other medical history know about their lifestyle habits. What they do, what they don't do and, and predict.

And it's pretty much right on. I've had a few surprises, but, I mean, I sometimes patients say, well, I don't want I don't know if I want, I know what my biological age is and, and and I really feel sometimes I don't say if I think it's going to be low, but if I think it's going to be good, or at least consistent with the chronological age, I'll make a comment and then, I guess is clinical experience, right.

If you, do you do, any of the other testing, like the lymphocyte subset panel or any of those test, to get experience with that? No. Yeah. I mean, that's an extra cost that a lot of patients don't want to bear that at times.

And, I just was curious whether you'd seen anything, in terms of sort of, what patients might. I know you, since you're doing a lot of other things. Perhaps it's a little difficult to tease out.

Have you heard anecdotal reports of, of, improvements or adverse effects? Anything that, occurs when they're taking 65? For instance, I've had patients, and other doctors tell me about their patients who've had documented improvement in, in presbyopia, and also in myopia, and any seen anything like that?

Improvements? Yes. Improvements. Yes. I haven't seen any, any adverse effects at all. Not even one is either. 0%, but improvements. Yes. Visual skin hyperpigmentation of the skin I've seen similar reduction in that reduction.

Oh, really? Interesting. Do you use, the cream at all? I then personally use the cream, and I have a few patients. I use the cream. At the beginning, patients.

Responses. Well, you know, I'm taking I'm taking this orally, so I should go to all my cells. And so I explain to them, is is a booster for your skin?

Well, it's a higher concentration. It gets into your skin than you're going to get from your blood for sure. Right. And there is the, randomized controlled trial data for improving skin appearance and wrinkles.

Fred Stern did that, study a number of years ago showing beneficial effect from 265? I think it'd be synergistic with it, orally versus, transdermal, directly on the skin.

But particularly the hyperpigmentation of face and neck. Yeah. I've seen significant improvement. And, you know, people feel better the report to feel better.

Clinical Cases and Telomere Length Improvements

I never over, when I talk to them about it is, I want to be realistic with them. And now they're going to feel better. I know intellectually that their cells are getting younger, so they are going to be better with they have a wow effect like they do.

For instance, when you do hormone replacement therapy, I try to lower expectations and say, this takes time. It takes all these years to be for your telomeres to shorten is going to take time, at least a year.

And what we seen in this study in Spain, that, that you did, that, you know, a year, at least a year is where we need to wait to, to really see, to to the benefits.

Yeah. No, I, I when I talk to patients about it, I almost explain it like it's, sort of a blood pressure medication or a cholesterol lowering medication in some ways, because it.

I don't set expectations if they're going to feel different. Or like a bone density matter measurement, medication, because bone density is a kind of an interesting analogy.

You know, you lose bone very slowly and you get it back slowly. But whatever therapy you use to get it back, you

know, even if you stopped that therapy, you still have that bone that it's not like a blood pressure medication.

You stop and all of a sudden your blood pressure goes back to what it was. You know, you've built up telomere length over the year of therapy on average.

From the Spanish trial that we did, it was about 0.3 kilo basis of, of telomere length. You're not all of a sudden going to go back to a year ago. You're going to then start losing telomere length at the same rate that you did prior to being on the activator.

And that's going to take time, the same as if you stopped some anti resort of medication. You start losing bone again at that same rate. So I tell them that you're doing it to preserve the organ.

And then it is you know particularly for hormone replacement therapy sort of synergistic because those are helping cells to divide to, to, you know, replenish tissues.

And the telomerase activator in addition to helping, you know, your white blood cells, which is what we're measuring it in, are presumably, turning on telomerase and lengthening telomeres in stem cells and other tissue niches so that then you can regenerate and replace cells that you're asking more of to make your muscles bigger with testosterone or growth hormone.

And they, you know, they, they get that synergistic kind of approach to it, which, which I think that makes them think, oh, really got is thinking about the whole, the whole, the whole process for me.

And I think that's why it dovetails nicely with, hormone optimization in, you know, in my, in my practice little bit. So this is a perfect example. And, you know, because, you know, like, like you said, the student logistic program is not just one, one component is everything is, is, is is the hormone optimization is is is the nutritional.

You're bringing balance to your vitamin D, your, de 65 and making your telomeres longer, counseling about their exercise and their diet. I'm having to use, prescriptions for, osteopenia, osteoporosis in years.

No, with diet change and supplements. And I check and I check their bone density, and they're better and better. Better. So, that that is, that is really, really rewarding.

And, but you know what? One thing I wanted to mention to you on this bring this back almost to the beginning of the of our chat that, something that I mentioned that, statistically, there is there is really, an eye opener, the the United Nations now came up with this statistics, and in 2015, we're going to have 2.1 billion people over the age of 60.

And if, naturally, the increases of Alzheimer's and cancer and cardiovascular disease increases every five years doubles, you know, that's, that's that's a paradigm we all we need to be looking into aging.

We need to be looking into what can we do because this, this this a problem. That's a that's a huge problem. We're going to have a lot, a lot of older people, but they're they're not going to be.

Well, there's another study from Yale that, we were talking about last time that says that, you know, from the to the 20th century to 21st century that we're going to live extra 30 years, but only 18 months of those are going to be of healthy, functional life.

And, so how could you not be interested in the signs of aging and everything that we can do, you know, from a longevity medicine point of view to help people, you know, age well and stay, you know, stay well until the last day.

Yeah. Well, that's I think that's that's the that's the phrase die young, as old as possible. Exactly. Yeah. Well, that's I mean, I think that shift has taken place, you know, with the advent of the team trial, the first time the FDA is going to look at multiple endpoints of, disease onset, to see, you know, if metformin can help keep people healthy and disease free for a longer period of time, I think it's going to open the doors for, other therapeutics that don't have a

specific disease indication but have a, you know, some biomarker, of aging as, as the indication.

And, and that really is the way it needs to go, because the goal is not just to be disease free. My patients come to me and they want to not only, you know, remember the tennis score, but be able to, you know, play singles tennis again or continue to play singles tennis.

They don't want to watch them go down the same pathway that their parents went, from, you know, debility into Alzheimer's disease over 20 years. And there is, as you said earlier, in the beginning of our of our discussion that I think aging is really a technological problem at this point.

I'm not sure that we know exactly what causes it, but we know that it is, something that can be changed because we've done it in animal models that are quite close to to what humans are.

I mean, we've lengthened lifespan in mice in smaller and smaller organisms, organisms. There's the dog aging trial that's going on right now with rapamycin.

So I think, you know, if we can see a 30% increase in healthy aging lifespan, and then that translates into 30 more years of good aging in humans. And that's much more.

I'm sorry. Yeah. We'll see much more than we know about this. In this interview, you know, I mean, from a practical point, which is where I'm coming from, I'm not a researcher.

I, I'm a clinician. And if I see if I talk to a patient about age of being a disease, and then they look at me, and how is that role when I get old? I said, well, and now we know what causes or we know the majority of the things that cause aging.

We don't we may not know him all, but we know a lot of them. We know how to intervene. We know how to do to to reverse them. How is that, different than any other disease?

It is the same. We know how to diagnose it, we know how to treat it. And the end result is a people feel better, look better. And when I look at the papers like.

And why their biomarkers are better, right. So, you know, I do understand that we have a lot more research, you know, coming our way. But I think that we are very well positioned going in a very good direction.

Aging, Menopause, and the Future of Longevity Medicine

When you think about it, it's, you know, we I mean, you and I, I'm sure I mean, it was controversial at one point probably still is. But, I mean, the same concept is really thinking of menopause as a disease.

Yes. It's universal if a woman lives to be old enough past 50. But that doesn't mean it was intended. That doesn't necessarily mean it's a good thing.

And we know there's so many deleterious consequences to menopause. So as far as I'm concerned, you know, menopause is a disease just as aging is, because it happens to everybody.

And it means that then you should address it, and treat it. I mean, going from an ideal level of between 50 and 250 for the first 50 or not, the first 50, the first 40, the last 40 years of your life before you got through puberty.

I have to go through puberty, you know, to go into nothing. It's a deficiency syndrome. I mean, besides all the political correctness that goes along with it is I mean, who can't see that? I often tell my patients with regard to that when they're sitting across the me, you know, your husband, who's 55, has four times the level of estrogen that you have right now.

Think about that. So that's the hope, you know. And that's why he's not grumpy and flashing and and and has brain

fog. So I'm just asking you to get back to that level.

And likewise with the aging process. You know, you want to slow down that gradual 1% decline in virtually every organ system that we see, starting in your mid to late 20s.

And by the time you're in your 50s or 60s, it really starts to have some clinical impact in you even before then, if you try to do something at a very high level, you know, the idea is to treat that decline in organ function, which starts at the cellular level, as you mentioned, and then again at the molecular level with the telomeres.

So, it's an exciting field. I mean, that's what, you know, we're both internists and, you know, they're probably not a whole lot of super happy internists out there.

Because I think they're focusing still on on the disease model, but we're using the disease models now focus really on unhealthy aging, which is, is, you know, what telomere biology is about, really, to a large extent.

And, and I think the, the future is going to be incredibly exciting. I mean, I may end up working for another 30 years, which would be a good thing, you know?

Yeah, absolutely. I feel the same way. Like I mentioned, initially, I can't tell you and the other better stage of my career than this one. This is, this is great.

Is is so rewarding. And, super happy doing what I'm doing. And, I wanted to I wanted to mention something about in hormone and and women and menopause, but, I, I'm fascinated about or I would say are passionate about treating perimenopause because it's such an underdiagnosed stage in a woman's life and is such a prominent in terms in some ontology, stage of their life, anywhere between 3540 and 5055.

It's incredible. And been an intern is I've been there I've done this personally delegation you know. Well you you might have your thyroid is or fibromyalgia or or.

Well, maybe you're not sleeping well because, you know, you're raising kids and you're the prime of your career or, as a stress and, and, you know, you start treating women, through menopause and you recognize that if you don't ovulate, you don't have progesterone, or at least in months, you don't ovulate and you don't have to start strong.

You have a little bit secreted by the adrenal glands, but, you know, you replace hormones, and women and, and clinically they do, incredibly better. So that by itself, after so many years of being an internist and, and seeing women going through this until I did my, my own training and I started looking at my replacement, as part of a longevity medicine program that I learned, how much, how much can we help?

We can help a lot. Yeah, yeah, yeah. Well, listen, it's been really fantastic talking to you. Hearing about your experience with, your patients and telomere biology and and, the case reports and, I, look forward to seeing you at one of the meetings really soon.

Although I, I, I'm a little jealous that you're down in Argentina right now with the summer coming up rather than the winter that we're moving into here.

And, you know. Yeah, well, we're going to we're going to have to organize something for you to be here. Well, yeah. I would love to visit Argentina again.

Again, thank you very much. Marcella. It was a pleasure. We'll talk soon. Take care. Thank you. Bye.