talk about high blood pressure, high cholesterol, family history of heart disease, diabetes, smoking. So if you're younger and don't have high pressure high, cholesterol diabetes.

You're low risk trying to get a heart scan. We want them to come in when they're a little bit older. so the very young those are low-risk people minimal radiation high risk or the opposite.

They have all those risk factors, or most of them, they have diabetes, and their cholesterol is high, their blood pressure's high. And we need to be aggressive, we don't need scan them to prove that.

This is Doctor Talks. Well, everybody buckle up, don't move. We really, really have what I already has praised Dr. Matthew Budoff as a big kahuna. Dr Buduff is probably the best known expert in the world on imaging the heart, early heart disease detection.

You can't really reverse heart diseases if you don' know you have it. So we're going to talk about early heart disease detection, of which he is an esteemed professor, an endowed professor at the David Geffen School of Medicine in UCLA Harbor in Los Angeles.

He's a native New Yorker, but spent most of his life on the West Coast. And he has published more than 1,000 research articles. It's just an amazing academic output.

I read that and I actually learned from them in many book chapters and many books. Uh, and really this is an exciting, exciting enterprise. You might not see him much on Instagram.

He's probably writing the next guidelines for a society's one, you know, every award out there. But so thank you so much for joining us, Doc. Rudolph really, really appreciate it.

No, it's a pleasure to be here. Thanks for having me on. So these are really layup softball questions, uh, that you and I know you more than I, but I think they're so important.

I mean, give, let me just tell you some personal note, the first. scanner in the state of Michigan, where I've been most of my career, except for cardiology training and such, was in Flint, Michigan.

And my brother bought it for the hospital. So an Imatron CT scanner, in 1995, brought calcium scoring, early detection of silent heart disease to the State of michigan.

I was not at that institution. That was an hour away, but saw what was happening, started to refer to a very expensive test back then. And then as you and I know, the technology became widely available with more prolific CT scanners and Imatron as a company and as an expensive option went away.

Largely, there's a few around. I now they're still providing studies. So I've been deep in this and referring people, and you are the world expert. Why do you think a 50-year-old man or woman with some risk factor shows up at a good internist, a family doc, an executive physical, gets what they get, but nobody brings up, you got the colonoscopy, the mammogram, digital rectal, pelvic exam for early detection of cervical cancer.

Where's the heart? And then let's go from that right into what calcium scoring CT imaging might do. But why do think there's been, from 1995 to now, such a slow adoption by the medical community of what is now a very widely available, very inexpensive test.

Yeah, no, you know, it's remarkable to me. I mean, we screen for everything else except for heart disease, even though heart diseases is the number one cause of death for both men and women in the United States.

So we're screening for lung cancer and colon cancer, and breast cancer. And all the way down the list, yet we just do not look at the heart. Partly because there was some early pushback.

Unfortunately, the entrepreneurs early on advertised this directly to the public, kind of went around the medical societies and the Medical Societies didn't like that and pushed back a little bit.

But they are firmly on board now. There is not a Medical Society that does not advocate for coronary artery calcium score now since 2018. So everybody's on board.

And I think now we just have to keep rolling out the education. We have keep educating the primary care doctors that this is an important thing to screen for.

As you said, they're widely available and they are not expensive. Right. So let's even go back. The observation by radiologists that if you do an x-ray of a leg or a chest, before we had CT scanners, that you could identify calcium and blood vessels.

Just talk for a minute about that background that we know that calcium an atherosclerosis are a very common partnership. Yeah, so the word atherosclerosis means hardening of the vessel.

Athero is vessel, sclerosus is harding. And that is calcification. So literally, the aferosclarosis word means basically calcification of the arteries.

The arteries get stiff. They get full of plaque and they get blocked off and patients have a heart attack or a stroke or they got a blockage in their leg and need their legs amputated.

So this goes back to middle ages and beyond when we first started categorizing why people drop dead. It's not a new concept, it's just one that we haven't been screening for as systematically as we should be.

So calcium isn't always bad. We need it for our bones. But it never normally is in arteries, at least in a way detectable by x-ray imaging. It's never normal to have calcium.

Is that a fair statement? Very fair. Yeah, that's absolutely correct. And I don't want people to be afraid of calcium supplements, right? Because if you take a calcium supplement, 99.9% of that goes into the bones.

The bones take up all the dietary calcium. This is scar tissue, this is calcification. It's not from dietary calcium. I don't want people to avoid eating foods or taking their normal supplements for osteoporosis as fear of developing these problems in the heart.

But then those very, very first generation CT scanners, probably in the eighties for head imaging and lung imaging, the heart was basically a blur because the art was moving.

So what was the breakthrough that you were part of and that great documentary, The Widowmaker Movie lays out that I would encourage people to watch online?

You know, what was that breakthrough? We mentioned the company Imatron and ultimately multi-slice CT, but we can see the heart. Tell us about what a revelation, revolution that was simple CT imaging of the hearts.

Yes. As you said, CT scanners used to take about a minute to, take a picture. And in a, minute our heart beats about 60 to 80 times. So the heart's beating away.

Everything's blurry in the, heart because we need to freeze that image. We needed a fast camera to. Take a. Picture of a moving object. In the late eighties, scientists at UC San Francisco and Doug Boyd was one of the PhDs that were involved.

developed a machine that could take a very, very fast picture in one-tenth of a second. So instead of taking a

picture, in minutes, it took a photo in a tenth of second and now it could freeze the heart, see the arteries clearly, and quantify those calcified plaques that are sitting in the artery causing blockages.

So tell the public listening, I had my last calcium score about a year and a half ago, probably still is zero. I'd like to keep it that way for a long time.

But what does a person go through now? You know, the actual experience of getting a modern state of the art calcium scoring CT scan. Yeah, so it is so simple and it's become so inexpensive relative to where it started.

So patients basically go in, they can be dressed like they are. They lay down on the table. After about one minute, maybe two minutes, They're done. It's literally they align the patient on The table, take a couple pictures of the heart and they get them off the Table.

There's no needles, there's No injections, There is no contrast. The radiation dose is about the same as a mammogram. So if women are afraid to get mammography for breast cancer, then they probably don't want to do this.

But I would say that's probably a pretty safe test and we do that every year. And I will advocate we only need a heart scan maybe once every three to five years.

It's nowhere near that level of risk that a Mammogram affords patients and it's very, very low. So compared to the effort of going through a colonoscopy or the discomfort of a mammogram, which I can't relate to personally, but according to my wife, it's not the most joyful thing.

This is a nothing burger test. And what's the cost currently in your community at your institution? Yeah. So we run anywhere between about the common costs are about 99 to $149 a test.

I always tell patients for the price of a good meal, you can live longer and have more good meals. It's not out of range for most of us. Yeah, we have a series of hospitals that are $75 in Detroit.

And I know the University Hospital in Cleveland does it for free. So if you're ever near there, you might just walk in and ask if can get a coronary calcium CT scan.

They do that as a public service. It's a wonderful thing. I noticed that your most recent publication, number 1031, I think it was, was an editorial why insurance payers should cover the cost, although it's not very high and people do pay out of pocket in most states of the United States, but why insurers should pay for intermediate risk patients.

Tell us a little bit about what that means. Who's very low risk, maybe can skip the scan. Who's very high risk and maybe already knows that their disease doesn't need the scan?

And who's that sweet spot that you just wrote about? Yeah, so very low risk people have no cardiac risk factor. So the cardinal risk factors that we talk about, high blood pressure, High cholesterol, family history of heart disease, diabetes, smoking, and then age, men or women, age becomes the sixth risk Factor.

If you're younger and don't have high Blood pressure or high cholesterol diabetes you're low risk. So we don't want people coming in in their 20s and 30s trying to get a heart scan because dad or mom had a hard attack when they were 60 or 70 years old.

We want them to come in when you are a little bit older. The very young, what we call the worried well, we do not want to scan. Those are low-risk people.

They yield is almost zero and it is really not worth the time, cost or minimal radiation to undergo the test at that point. very high risk or the opposite.

They have all those risk factors or most of them, they have diabetes and their cholesterol is high and the blood

pressure's high. We know they've heart disease already or at least plaque in their arteries already and we need to be aggressive and don't need scan them to prove that.

But it's everybody in the middle, maybe a little bit of blood-pressure, may be just a family history and you're 40 years old as a male or 45, 50 years as female and somebody in your family had a problem.

Those are the age, that's the Age of atherosclerosis, and no doctor, I don't care how good or how astute they are, can say, look at you and say you know what, you don t have anything going on in your arteries or not.

Unless they have x-ray vision, literally, they can't tell. And we don' t know. So we need to take a look and then decide how to treat. And there is that term reassessments and risk reassessment that 45-year-old man with a cholesterol of 245 or that 51- year- old woman with cholesterol 260 that goes through this inexpensive scan and comes back a perfect zero, no calcium score.

You know, what does that do to the decision? Here's your lifelong prescription versus lifestyle approaches and a more gentle, non-pharmacologic approach.

What does the science say and what do the societies say about that now? Yeah, absolutely. And I'm trying to answer on behalf of what a lot of the societies say, not just my personal opinions, but there are a lots of societal papers on this.

But they all say basically, if your score is zero, so it's like golf, right? Low score wins and zero happens to be no plaque detected at all, which is wonderful.

You don't have a lifetime immunity to developing heart disease. Just like a negative HIV test or negative COVID test doesn't mean you can never get those illnesses.

It just means you don' have anything now. So we say wait five years and get retested. But in the interim, live healthy, right? You dont want to build a plaque.

You want start going down that road of heart attack, stroke, stent, bypass surgery or death. So live healthy. So we reinforce good behaviors even when you have a score of zero.

We say, look, you got a zero right now. Let's keep it that way. And we'll test you again in five years. That's usually about the protocol I use to about five, sometimes seven years.

Let's talk for a minute about this, the invisible plaque and what a calcium score can't do. So it can see a kind of plaque we call non-calcified soft plaque, and it cant see the degree of narrowing in an artery.

We have to go to more advanced technology. How common have you seen in your practice a calcium score of zero and actually a patient end up in the emergency room or actually have a heart attack or a stent because there just happened to be a burden of soft plaque?

I've got one in my practice that I reassured and then eight months later, he assured me I'd given him bad advice. Well, it is very rare. It's less than 1% chance of something like that happening over the next five years.

So it's not 100% guarantee, It is a 99% percent guarantee. But that is excellent because if you were not to do the scan, The best you can do with risk factors and being a good doctor is probably give them a 90% guarantee.

So this raises that 90 percent guarantee to a 99 percent. Karen, so we have every now and then we'll all have anecdotes of a person who slipped through, who had a score of zero and and had heart heart problem.

Some of that is non calcified, what we call soft plaque. that might be sitting in the artery that we can't see with this simple x-ray and we need to go beyond that.

But most of the time it might just be something that floats into the arteries and blocks it off that that, we might not have detected by any test and just some bad luck happened causing a heart attack.

It could still happen in rare cases. A common scenario, somebody walks in your preventive clinic, wants to talk to you about careful assessment and what the plan ought to be, is an ex-smoker and mentions that they're in a low dose chest CT program, scanning, screening for lung cancer.

I mean, how interested are you on getting your hands on either that chest CT report or the actual disc images, as opposed to ordering a new calcium score?

Because maybe three months ago, they did have a CT that included their heart images. Some radiologists comment, some don't comment on the heart anatomy.

Have you found that helpful? Do you encourage people to, before they plunk down their $150 and one more millisievert of radiation to use a recent chest-CT for information?

Absolutely. I think that if you had a CT of the chest, even of your abdomen, if we see in the aorta, the pipe that runs down the body, there's a lot of atherosclerosis there, we have our answer as well.

So, If you've had CT scan for another reason, chest or abdomen or pelvis, We can often take a look at that and look the arteries, the coronary arteries or the aorta and say, you know what?

There's something there. We need to get on top of this. Sometimes I still like to a calcium score if there's a modest amount of plaque or if it's moving a lot, if they're motion artifact.

But most of the time that suffices to give me the answer to whether I should intensify treatment, get them on a cholesterol pill or get him on better diet and exercise regimen or whatever we're going to do.

versus pat him on the back and say, you know what, it looks good. Let's just keep an eye on things and be healthy for the next few years. And the patient brings you the report of their chest CT, their lung CT and the radiologist was sharp and mentioned moderate coronary calcification.

Is there any way to take that image and retrospectively do a calcium score or you just can comment mild, moderate, extensive calceification? No, you can actually get a number.

There's actually a company that's coming out. It's called Heart Long, where they're going to look at these existing scans and actually quantify the calcium if you want.

And then you get an actual number and it's pretty good. This case is where there's a lot of motion where it might not be ideal, but most of the time you'd get pretty accurate score and then use that as kind of a baseline to see what happens over time.

Okay. That's really important information. And how about Joe or Jane walk in your clinic? They've had a heart attack, they've have a stent. They have had bypass and the primary care doc ordered a calcium score or they ask about a Calcium score.

What would your advice be to that person? I mean, that's the ultimate high risk person. It's not really a matter of risk, it's already a known diagnosis.

Why does that fairly large group not need a coronary calcium scan? Yeah, so people have established heart disease, whether they've had a heart attack or a stent or bypass, we already know there's plaque in the arteries and getting a calcium score shouldn't change anything because they should already be being treated aggressively.

What we do in those cases, especially if they have some symptom, is we the next test up, which is called the CT angiogram. similar to a calcium score, except we do have to start an IV and we have die into the heart.

So it's a little bit more complicated, a bit a more expensive, but it is largely almost 100% covered by insurance. There are a few HMOs that don't do it.

But every major payer in the US covers a CT angiogram, like a non-invasive angiogram, and then we can look into stent or look in to the bypass graphs and see if they are working or not, if there are open.

We'll be talking with James Min, a colleague of yours, about CT angiography and advances in detail. We fight in Michigan to get an insurance approval for a coronary CT androgram and somebody with known coronarity disease.

It's crazy, it's on their algorithm, but that's a different story than problems you go through. Well, usually when it is a fairly heated phone call I have to make, unfortunately.

How about Bob or Brenda that have seen you, you've got them on their lifestyle plan because their calcium score was 300 or 400. They're asymptomatic and they're doing great with all that.

Do you expect the calcium's score to go down and do you reorder one expecting it to 300 to 200 or forget about it as they say in the Sopranos? Well, so, you know, I would say any test, any tests in the world, if it's not going to change what you're doing, You don't need to do the test.

So if they're already on great therapy, they were already doing great, and you are not gonna change anything, getting another look is not Going to help.

Because if comes out the same, it is going not to go down, but it comes up the Same number. Let's say they are 300 score. And now they're about 300 score.

That's great. We can pat them on the back and feel good. But if it comes back, and it goes up a little bit, now it's 400. What do we do? Right? We're already doing all the things we can do.

So it doesn't it. Doesn't often add a lot. Now, I have a They want to start slow, they want start with just a few lifestyle changes. They don't really want do major things.

they don' want go plant-based, They dont' wanna start medication. And then I do repeat the score in a couple years, and if it's going up by more than 20% per year, so I look at the scores, if its gone up more then 20 percent per years.

I say, you know what? We are failing. You are laying down more plaque. We gotta double down now, we gotta do something else. Yeah, I want to emphasize that's your published data that in your database, uh, the calcium score went up by average about 20% per year.

I'm sure there was a lot of variability and you might shock the listeners if you tell what your observation was about the rate of rise of the Calcium score.

If you're on a statin medication, what happened to that? Yeah. So statins do something really good, which is take the soft and early plaque and turn it into later stable plaque.

Part of that is more calcification. So it actually raises the calcium score. Now, usually by about 10%, maybe 15% per year. Even if they're on a statin and they are going up by, I calculate their rate of change and it's 32% a year, that's more than the staten.

Then I think, okay, they were on statins, but we're still seeing plaque. What do I do next? Do I increase the dose? We have about six medicines that have proven to add on to statins to lower risk further.

Maybe I'll add one of those therapies. So even if they're on a statin, I sometimes repeat the scan. If I'm going to up the amputee and put them on icosapent ethyl, vasipa fish oil, or if I am going put him on, um, a new cholesterol medicine or one the injectables to get their LDL even lower.

Real aggressive approach. Yeah. I actually had just yesterday, a chiropractic physician, I only get to see once a year who came in really upset and he had stopped all his medicine, all those lifestyle approaches because his original calcium score was 400 and his primary care doc ordered a second one.

And I didn't know about this. It went 400 to 500, A little bit more than 20% a. year. and He figured this is a failure because. It hadn't been explained that one, it does go up.

And number two, will go a little faster on his statin. Really slow them and calm them down and say, and he is scheduled for a coronary CT angiogram. He had some ST depression on a treadmill stress test.

So there's more than enough reason to do that. We'll get the real data, but I think people do expect that if we ever repeat it, It might go 400 to a hundred or zero.

How about. I follow closely the chelation literature, the Taq1 trial of IV chelasin, and then we await the taq2 trial. I'm not sure how far out that is, but I've not seen any convincing data that a calcium score goes down with intravenous EDTA therapy over and over.

Are you aware of any? No, it's really unfortunate. I worked with the group on tact one and for tact two, we actually built in in the protocol, serial calcium scans to answer that question.

And they had some budget cuts that those years at the end at The National Institute of Health and they cut out the calcium scores. So I don't think we'll ever see.

good data. Unfortunately, yeah, we tried we try to read it and get a grant going and it was just logistically didn't happen. We worked pretty hard on that.

And unfortunately, We won't have that answer. But I don't believe I think calcium once it's embedded in the arteries of the heart is scar tissue, and It's not going to go anywhere.

So you don' want more scar tissues. I Don't want it to perpetually go up by a lot. But once it's there, it not going from 400 down to 100. I don't believe that can happen.

Yeah. And I. Don't see it either. Actually had a couple of people come to me. Just done 30 weeks of IV chelation, which costs a fortune and a lot of time.

Why'd my calcium score go up? And sometimes they brought me these studies that has gone up. Because there actually are data points, as you know, that chelasion may have some clinical benefit.

in peripheral vascular disease and coronary disease, but we have no idea what it does specifically to coroner anatomy. So if we're not bullish about chelation in the last few minutes, if you carry a lot of titles, you undoubtedly carry the title, the king of chiolic garlic.

And just share, since this is a summit about reversing heart disease naturally, there's not too much more natural than aged odorless garlic tablets. How did you get interested and what have you contributed multiple times to the literature that I'm fascinated by?

And all my patients are on Keola Garlic, in fact, this exact brand, but how did get down that road? Yeah, it was very interesting. One of the hematologists, one of, the blood doctors came up to me and he said, we're working with this company.

We're doing some safety studies to make sure you can take it with blood thinners and that people don't get bleeding problems. But it really has a lot of cardiac benefits that have been shown in Japan, but nobody's really done any studies in the US.

So I started, I approached the company and they supported a small trial and I was idea if it would work or not, but I

said, I'll do the study. I did the.

And it worked. So it was a small study and it lowered plaque, uh, the soft plaque and its slow calcium, CT angiogram and calcium score. We did both. And the calcium score slowed compared to placebo.

So it slowed the progression of plaque. It didn't reverse it. But we saw a little bit of reversal in the coronaries on the CT engine. I said, you know what, that's interesting, but it's a very small pilot study.

Let's do a larger trial now and really prove the point. and we did another study and it worked and then they wanted to keep doing trials so then we Did a trial in firefighters and It worked it even lowered anxiety levels, which was very interesting stress and anxiety Levels in the firefighter group.

We measured that because there's also some data out of Japan This drug in Japan that coyolic is considered a prescription drug practically So it has to go through the registration process of a much more advanced protocols than what we do with other dietary supplements in the U. S.

where there's really, you could just put something out on the shelf basically today. So it's very well validated. I think there are over a thousand publications now on that product.

If you want a garlic supplement that has data behind it, Kyolac is the one. And over six trials now, we've seen market slowing of the calcium score. It definitely helps with calcification progression.

but it's going to slow the plaque. And we've seen reversal on some of those CT angiograms that you'll talk to Dr. Min about, where we can actually see less of the soft plaque, the non-calcified plaque starts to go away with chiolic.

Very interesting data. Yeah, and patients do well. I've had two out of probably 2,000 patients, they claim they smell a little garlicky, taking two a day and they drop to one a But everybody else, plus there are randomized studies of dropping blood pressure with the same product, mildly dropping LDL cholesterol with same products.

And I can't even imagine that there's any risk in any situation. What was the conclusion with a hematologist, a patient on Xarelto adding in a keel of garlic?

I wouldn't be concerned. No, there was no problem with Warfarin or with Xeralt, one of the newer anticoagulants. He tested both. So no safety issues, although the surgeons will probably ask you to stop the garlic a couple days before the operation, which is fine.

I think that's prudent. It does have a tiny bit of blood thinning property, for health and preventing heart disease, but when you're getting operated on, you don't want your blood too thinned out.

So it has a very mild effect there. And the last thing, which I think is very interesting, and I wish we did a study on it, garlic has remarkable benefits on infection, both bacteria and viral infections.

We didn't study COVID per se, it is been historically, I'm talking about now thousands of years of research going back, considered an anti-infective therapy.

So I think there, I have, as you do, a vast majority of my patients are on it. I'm a huge advocate of it because the science backs it up, not because of anything that I've done personally.

but the thousand papers really make it worthwhile and it's so easy to take and well tolerated. It is odorless so I can't think of anybody who's complained of the garlic smell but really you don't smell like a clove of garlic in most cases.

Maybe there's a couple of people who tease that out. Yeah, and I agree. I think it's a powerful, powerful natural agent. Last question. We started with the inquiry.

Why has the primary care world so slowly adopted this amazing test? I've got a lot of people excited if they've never had it to ask for it. It usually does require a prescription from a healthcare practitioner.

A few places you can just walk in and get it, But a skeptic might say, show me the randomized study that outcome is different if you apply calcium scoring to a large population.

So as this airs, the Dan Kavis trial, and I think I got that acronym right, was presented in Barcelona and published I, think in the New England Journal of Medicine.

45,000 Danish men, age 65 to 75, randomized to getting screening, including a calcium-scoring asymptomatic man. or no screening. Unfortunately, the women did not get included.

Maybe the risk wasn't high enough. And it seemed like in the 65 to 70 year olds, they proved a benefit to screening asymptomatic people. Just comment on that a bit.

Would you have chosen that age range? I think there's a reason they did. How is that going to impact adoption? So they chose that data based on aneurysms and that they had showed a previous benefit for aortic anurysm.

And that's an older disease. That's probably too late. What they saw basically was below age 70, there was an 11% reduction in death. Literally, the original proposed title to the New England Journal of Medicine was that screening reduces mortality, all-cause mortality by 11% in patients under the age of 70. And New English Journal is a very conservative journal and didn't run with that title, but it did work.

The 70 and older no benefit because it's probably too little too late once you're in your 70s. The other problem that they had which was really to me still I don't understand and I've spoken to them, they included people who had known heart disease.

the people who we talked about before who already had a heart attack or already have stents and bypass and obviously there was no value in that group.

So if you get rid of those patients, it's probably about a 14% reduction in death in the clean population. You get another 5% benefit by eliminating people already who have known heart disease because they didn't derive any benefit either.

If you really get to the screening population, there's a pretty robust benefit for screening. Okay, yeah, and I think we need to inform our primary care population and the public that we now have a randomized study that proves the concept that you introduced and others introduced.

SHAPE Society is still in existence? Yeah, Mort Nagob, who formed the SHPe Society, is a cardiologist at a Houston and he actually is doing that heart-lung that I mentioned earlier.

He's trying to bring the ability of taking these millions of lung scans that are done, CT scans of the lung that were done for all different reasons, lung cancer screening, chest pain in the emergency department, and getting, deriving a calcium score using AI and being able to provide patients with a number that they can then use to inform their health kind of getting a free scan off of existing data right so so very clever and and he's still working and shape is still going and just just to talk about one success shape was able to convince Texas the state of Texas legislature to mandate heart scan and calcium scoring coverage.

So if you live in the state of Texas, it is state law that they have to pay for calcium score if your intermediate risk. We're making some progress, but it's going to be one state at a time, I think, for the foreseeable future.

We're going back 15, 18 years for the Shape Society. We are finally getting there. It's an exciting time. And again, I gave a shout out to this documentary online, The Widowmaker Movie, that tells the story of the Texas legislature and how they finally approved it.

So everybody go look that up. Well, Doc Rudolph, tremendous gratitude. I honestly believe you probably have saved some lives with the comments you made today, because I think people will now have the ammunition to ask their primary care, their healthcare practitioners to get this scan and change their lifestyle.

I mean, change anyways, but some people need a kick in the rear, as we all know, a little scare factor that they're walking around with plaque. If you're lucky enough to be a zero, don't go down the cheeseburger path.

As you said, stay a 0. They had double zero club, or I've now got three zeros every 10 years, so I'm not sure I could do it the fourth time. That includes a clearly CT angiogram recently just for the fun of it.

Seven millimeters of black, pretty low. It's great. Anyways, I wish you a great day. Thank you for your time, Professor. Thank you for tuning in to Doctor Talks.

We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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