Introduction: colorectal cancer and embarrassment

Dorectal cancer is the deadliest cancer in Americans under 50, second-deadliest in the U. S. overall, in large part because it goes undetected for too long.

And then if you do detect it, it's so sensitive in nature that you often don't even have the conversation you need to have with your care team until months or sometimes years later.

By that point, its progressed to the point where it is stage 3 or stage 4. And so basically my belief is that embarrassment is a clinical risk factor because it predicts the time you have to intervention and particularly with things like colorectal cancer that time to Intervention is the primary determinant of your outcome whether you're going to live or die.

Hello and welcome back to the podcast. This week we interview Scott Hickel. He is the CEO and co-founder of a company called Throne. Thronescience.com.

this is a new passive wearable that you put on your toilet that is going to give you information about your patient's stool, about their urine, their hydration levels and even about the menstrual blood.

This is a very interesting innovation. And I think that if you listen to this podcast, you're going to see that this might be an incredible tool for practicing the next generation of functional medicine.

Let me know if. Enjoy Scott Hickle. Welcome Scott. Thanks for having me, James. Yeah, so I'm really excited to get into what you've been up to at Throne Science.

And as I've shared with some of the practitioners over the last little while that I was going to interview you, we're all in agreement that Thron is definitely the best name for what your doing.

So before we get in to the details, I'd love to just understand how you ended up doing this. I know you worked at some pretty interesting companies before.

What was it that got you excited about what comes through the throne? Yeah, so the company originally started as a joke about the name. A friend pitched me the idea of Smart Toilets and I was like, clearly you named that company Throne.

It wasn't until a couple years later, I called my mother, she's a geriatrician, and asked, you know, hey, mom, is there any medical utility to looking at people's waste?

And she launched into a 45-minute, master class in all things gut health and kind of the things that stuck with me. She said, honey, chronic constipation is probably a third of my patient visits.

How Throne was inspired and built

And I stopped giving my phone number to my patients many years ago because they send me so many pictures of their poop. And it turns out a lot of doctors who hear that story can empathize.

But that really inspired me to start taking a deeper look at, you know, what can you learn about people's health through closer examination of what's left in the toilet bowl, not just stool, but also urine, menstrual blood, any excrement.

And pretty quickly, I was just amazed, you know, wow, we have like 15 devices to track our sleep and our cardio and metabolic health, but nothing giving us that same degree of daily fidelity into what's happening in our gut health

and hydration and urinary function and you can track cycles.

Ultimately, what really compelled me to start the company was the realization that there is an opportunity to look for microscopic blood. as the earliest sign of not only colorectal cancer but also bladder cancer, kidney cancer or ureter cancer.

And if we can accomplish that, then we'll have built a smoke detector for roughly one in six U. S. cancers. Wow. That's a really interesting side point.

So what gave you the background to think that you could stand up this kind of company? I started mechanical engineering undergrad and then spent most of the last decade doing software as a product manager.

And so this is right at the intersection of those two things. You have to have comfort building devices. Obviously, so much of this, is the computer vision, machine learning, AI algorithms, and building a consumer software product.

And ultimately, it was just conviction like this needs to exist in the world. There is a market for this is, you know, there's 60 million Americans with chronic digestive disease, another 50 million American with urinary tract conditions.

And we live in a world now where colorectal cancer is the deadliest cancer in Americans under 50. Like this feels inevitable to me. Yeah, really interesting.

Well, so most of the practitioners that are listening to this, you know, are at least aware of digestive as a big issue. Maybe they focus on it in their practice.

It's been actually a strong area for the functional medicine community because GI doctors don't tend to want to understand what you eat. They don' really get into that kind of conversation.

What sort of information are you getting from Throne that maybe you couldn't get from like a gut test that is looking at the microbiome internally? It's totally different than a microbiome test.

So we are not looking at the microbiomes, we're looking your functional digestive patterns and all the morphological properties of stool. The way I think about it is the micro biome is a huge driver of your day-to-day GI health, but What people experience today is their stool patterns and their symptomology.

And right now, one of the most common asks that clinicians, dietitians, nutritionists, GIs, functional medicine practitioners will ask is keep a stool log or a diary of your bowel movements.

Nobody does that, right? Compliance for that rounds down to zero, despite the fact that Constipation is a pattern, you know, IBSD is pattern. I guess it's literally defined by changes in the frequency and consistency of bowel movements.

It's defined up by a patter. You know I BD has managed to stool frequency patterns and right now. We're either relying on memory, which every study done on memories shows that people are absolutely terrible at remembering their bathroom habits, or we're relying in journals which people just will not do.

Study after study shows the compliance is terrible and people lie about it.

What Throne measures in the toilet

So we decided let's build something that gets you objective data into your gut health, looking at stool color, volume, consistency, buoyancy, Bristol stool scale.

We actually just published, had our first abstract accepted for presentation today at the American College of Gastroenterology, showing that our AI models are as accurate as board-certified GIs at assessing Bristol's stool

form.

Then we also look at hydration based on the color and cloudiness of your urine. And we can measure your urinary flow rate based in the acoustics of it, which is more of a prostate health consideration.

And then we look at your bathroom timelines as well. So like the time to first evacuation, how long you're sitting there before you have your first movement is a great proxy for urgency or constipation.

Then how you sit on the toilet in total is one of the leading factors associated with hemorrhoid risk. All of that gets tracked in the app and you can see your patterns as they change day to day, week to week, month to month, and export that data and share it with your care team.

No one is going to the bathroom with a stopwatch. That's just not happening. So yeah, tell me a little bit more about the urine because I think that's another big piece.

And I thing that again, it's not something that is captured the Bristol stool chart. I've been part of groups and otherwise that have had people talk about that kind of thing with their patient or with a doctor or the health coaching group, but certainly like urine color is I would say notoriously hard to measure or to judge, but tell me a little bit about how that works.

Yeah, so it's exactly right. Our AI models are just far less subjective than someone who's eyeballing it, and we can account for changes in lighting environments and how bright it is with the ambient light.

But basically, it' s a camera looking down in the toilet bowl, then we have different computer vision models targeting urine, targeting stool. And so we're looking at, we estimate what's called urine osmolality, or the concentration of your urine based on the color and cloudiness of the urine and how it changes as you're in the toilet or at the having a session.

So from that we can estimate your concentration over urine which is measured in osmlality. We present it to you as osmalality but also as a simple 0 to 100 score because most people have no idea what good or bad osmolality is, but everyone can intuit, you know, 20 is a bad hydration score and 85 is not bad.

And, one of the world's leading hydration researchers, Dr. Stavros Kabouris, out of Arizona State University, has a bunch of literature around this, basically found that looking at the color of your urine on the Armstrong scale and then counting how many times you're urinating a day, is, you know, as long as you are a three or lower and have urinating at least six times a day, that is like a 100% sensitive hydration test over 24 hours.

But again, like to your point, it's very subjective what color my urine is and nobody's counting that. So, especially for those who like live and work at home, this is a very good tool for measuring your hydration status not only every time you go to the bathroom, but over a 24 hour period.

whether the doctors who are listening to this and other practitioners who listen to the Evolution of Medicine podcast, some of the tools that they would use would be something ongoing, right?

We're just getting into the wearable era where you're getting information all the time. And then there may be some times where it's like, okay, it is useful to do it for a month and understand and then you can make some changes and hopefully You can move away once you understand your own area.

What's the vision for this? Is this a permanent part of your data stream or is this something that can be used to make adjustments and then learn about yourself and not have to use it again?

Great question. So ultimately the vision is both. The way I think about these tools is it's like driving my car. I have 37 sensors in my 2017 Jeep Cherokee that keep me from breaking down on the side of the road.

Check engine light and tire pressure gauges and fuel sensor that tell me when I'm going to run out of gas. Most

people spend less than 2% of their time in the car looking at their dashboard.

Most of your time is spent looking out at the world around you as you're navigating through it. And that's kind of the way I think about this. You are on an active gut health journey and really navigating and trying to find what does work for me, what agrees for, me what disagrees with me.

Does this intervention bring me regularity and relief or does that intervention, you're going to spend a lot more time focused on looking at the map, focus on the tools.

But if you are healthy. then ideally you're not spending that much time looking at the tools, but it is still very helpful to have the tool so that you can notice changes before they become real problems, right?

Because so much of healthcare is determined, or I guess I should say so, much the outcomes in healthcare are determined by the time to an intervention.

Yeah. Yeah, that's really, really interesting. Well, one of the things that I've seen you talk about and just be following along since we agreed to this interview is this idea of embarrassment as a way of understanding why this kind of information doesn't get tracked.

And I'd just love for you to talk a little bit about that because ultimately this actually could be the major blockage in getting some of this information already.

Hydration tracking and urine analysis

I love to see how you think about embarrassment, as an issue in healthcare and how this solves that. So, yeah, embarrassment is a really interesting thing because for most of human history, we were not embarrassed of our waste.

It was a perfectly natural thing. You know, like all of the traditional healthcare traditions talk about stool observation, waste examination as one of primary diagnostic tools, right?

Like Ayurvedic medicine, traditional Chinese medicine. Hippocrates wrote extensively about the stool examination. Somewhere in the 1800s, that changed.

And my theory is that it was the convergence of the Victorian era, which put emphasis on modesty and propriety and made it improper to talk about your privates and anything having to do with them.

At the same time, the toilet. emerged and made it easy to be out of sight, out mind. You flush it, you don't look at it. you Don't think about it and now it was a private thing.

The diarrheal diseases of the 19th and 18th centuries were some of them deadliest diseases and they were diagnosed by looking at people's stool, which happened out in the world.

And so you could tell, okay, this person has dysentery or cholera based on that. All of that went out-of-sight, and that was great thing for public sanitation and public health.

However, It now has resulted in it's actually a uniquely somewhat Western phenomenon where, you know, large parts of the world aren't nearly as cagey talking about stool.

You know especially my friends from Asia, there's just, toilet culture is just not quite as sheepish. And so now we find ourselves in a place where there was actually study out of, it was a Danish study a few years ago, which found that people who ended up with a colorectal cancer diagnosis on average waited longer to have a conversation with their physician if the first symptom they noticed was rectal bleeding.

And that like broke my brain when I first heard that because that seems like it should be the opposite, right? Like if

you see blood, you should rush to the doctor.

But it turned out it was this factor of embarrassment and people, uh, feel ashamed to admit that something is broken with these sensitive parts of their bodies.

And so basically, you know, that and so many stories like it, colorectal cancer is the deadliest cancer in Americans under 50, second-deadliest in the U. S.

overall, in large part because it goes undetected for too long. Then if you do detect it it's so sensitive in nature that you often don't even have the conversation you need to have with your care team until months or sometimes years later by that point it has progressed to the point where it is stage three or stage four.

And so basically my belief is that embarrassment is a clinical risk factor because it predicts the time you have to intervention. And particularly with things like colorectal cancer, that time to Intervention is the primary determinant of your outcome, whether you're going to live or die.

Yeah. So interesting. It reminds me of a story. A few years ago, I get random text messages from people in the community too, because I ran the functional forum and people know that I'm down with this sort of information.

And a few year ago a friend of mine literally sent me the picture that you're talking about of his poop and was like, hey, should I be concerned about this?

And ultimately it had gone a funny color. And I'm not a doctor. Um, I don't pretend to be, but like the first thing I asked him was about whether he'd be needing beetroot because ultimately, you know, that would be the thing to look at.

And it turns out he had, and it was a big false alarm, But that can be an alarming moment when you see something in your poop and you don' really know what to do about it or who to call.

Yeah, and that says a lot about you as a friend and community member, that he felt comfortable taking that to you. I think one of my favorite aspects of working in this world of, corner of the world that I work in now, is that, I get to have that relationship with people.

Passive wearables and the vision for ongoing monitoring

And it's a very intimate, special connection that people feel that they can open up to, you or myself, about these things that would be too ashamed to talk about with their partners or family members.

I think a beautiful thing and so much of my mission is not only to improve people's quality of life and one day save lives with the product and the technology that we're building but I Think culturally I see so Much of our mandate is being just helping people break down that taboo and feel more comfortable having these conversations Beautiful.

Well, I love that. So tell me a little bit more about what kind of diseases that you're bullish on now with this information and where you think that could have the most impact.

You've mentioned colorectal cancer a few times, but that's a smaller percentage of the population. But digestive disorders are a huge issue. Also, the degree to which digestive disorder will be the kind of thing that shows up first and if you don't deal with it, then you might end up with an autoimmune disease or some other chronic issue because of the inability to move out the way.

So I'd love to get your thoughts as to the range of diseases that you think Throne can have an effect on if it was to to any sort of scale. I just want to take a minute to talk about the incredible mission partners that we have here at The Evolution of Medicine that have made this possible.

First and foremost, a lot of thank. So Fullscript has been an amazing partner for 10 years. We only pick partners

that can help us achieve our vision and help you achieve your practice vision.

And FullScript have been incredible partner, for a decade, but their new offering journeys, this is why we called it the Evolution of Medicine Journeys, is allowing practitioners to combine the relationships that they have with the newest technology to sell direct-to-consumer lab testing and use it as a funnel to bring into your practice and it's a game changer for the whole industry.

So go to goevomed.com slash journeys and you can get started on building the journeys for your practise an optimal way into you practise. We're going to have some conversations about it.

This is a Game Changer. Next, Jenova. Janova have been fans of the Evolution of Medicine for a long time. We're big fans with them and they now have a lot more specialty testing.

They have lot of more tools and it's a key part of understanding the body ecologically. So go to goeome.com slash Jonova to find out more. Come on over here and I want to show you about the other mission partners.

If you've been following us for a while, you know that these are organizations that we trust, that add a lot of value. Freedom Practice Coaching. I have been supported by them since the beginning.

And so many of the issues that practitioners face in building a successful practice, scaling a success practice come down to having the right support with people who have being there and done that.

Go to goevomed.com slash FPC. Big boost marketing. Uli and his team are the best in the business when it comes to really understanding how to market your functional medicine practice.

Go to goevomed.com slash big boost and see how they can help you. And then what you're going to be hearing a lot about is the formation of clinical networks.

Ultimately, True Neura is our first effort at that, which is to build an integrated clinical network combining independent practices from across the country into a network that can reverse cognitive decline.

And if you go to goevomed.com slash true neuro, you can get a demo.

Embarrassment as a clinical risk factor

You can see what it means to be part of an integrates clinical networks, mentorship, that software, and that's making it easier for you to get incredible outcomes in a disease state where there are no other options.

So thanks to our mission partners. Let's get back to the content. Yeah. So I think the most obvious would be, you know, IBS, roughly 35, 45 million Americans have Ibs depending on whose estimate you're looking at.

And that is a particularly frustrating diagnosis to those who find themselves with it because they often feel dismissed by the traditional healthcare system.

You know it's really just a description of symptoms. It tells you nothing about the underlying root cause and my I BS might be totally distinct from, my best friend's I B S.

Um, and so. getting the objective data on their digestive patterns and how those digestive are responding to different interventions is super important.

It's basically automating the practice of keeping a stool diary and a food and symptom diary, and then pattern matching across them, but giving you objective and making it a lot easier to get that stool data that's so painful to collect otherwise.

The next big one that I'm very excited about is IBD. So my co-founder, John, has ulcerative colitis, the worst form

you can have called pancolitis. And he, prior to starting Throne, was the co founder and CTO of Whoop.

So, you know, one of the big pioneers in wearables, he started that company before wearable was even a word and he served there as CTO for over a decade.

And part of what brought him to Throne is that in his time there, He was able to really just be impressed by the power of personal, longitudinal, passive health data.

And, you know, but by the time he left, whoop, they were able to identify, if someone was coming down with a flu or with COVID, sometimes days before they even felt symptomatic by looking at changes in HRV.

And he and a lot of our clinical advisors who wrote the clinical guidelines for ulcerative colitis are very excited about the opportunity for Throne to one day be able predict flare-ups.

you know, vision state, we're not there yet, but when you, to your point, when we have this product at scale. And we know people's diagnoses, we'll be able to see those patterns and be to make the kind of big data inferences that just nobody in the world has the data to do that right now.

And so I think that has a very real and compelling opportunity to change the quality of life for roughly the three million Americans with Crohn's and ulcerative colitis in country now, and then another one that I'm particularly motivated by is benign prostatic hyperplasia.

So non-cancerous enlargement of the prostate. which affects roughly 50% of men by age 50 and about 80% us by 70. One of my grandfathers, he's in his 90s now and he just got a permanent catheter installed because he ignored the signs of BPH for far too long and it basically tore up his bladder.

And BPH is another one of those conditions that the earlier you are aware of the symptoms and you know, hey, this isn't normal. And there is something you can do about this.

You know even something as simple as like Kegels can help improve. Puff and floor exercises can improve your prognosis with BPh and slow down the progression.

That's one those that I think just has a very real opportunity to improve the quality of life for like basically every man at some point in the age and stage of, you know, our natural progression.

So I'll stop there, but it is just, it's amazing to me how much of our personal health information finds itself in a toilet that we are just completely unaware of.

Yeah. Well, I'd love to go a little further on that because we're seeing, and I've been focused in the last couple of years on thinking about brain issues.

And obviously the gut brain is a huge area of interest. Most of the practitioners that are doing advanced tool testing or otherwise see that changes in their gut can lead to changes all over the body.

It might be autoimmune disease and other different parts of their body, it might things related to the brain with a gut-brain connection, the vagus nerve.

Diseases Throne could impact

So you're really dealing with the most important thoroughfare in the body and I'm sure there's tons of information that can be gathered and it can evolve over time.

I think one of the things that really struck me about this is that of being in the business of trying to get people to use wearables, right? And that can be tricky because you actually have to do things.

It seems like there's at least the potential and I don't know exactly how it works. I didn't have one, but it seems this might be something that you don t really have use.

You just sort of have make sure that use the same toilet consistently, regularly so that get the right kind of information in. Am I right on that? That's exactly right.

So here, I'll give you a quick demo. So this is the device itself, clips onto the side of your toilet bowl, just like that. The toilet water would be down here.

And then this a motion sensor, so it wakes up when you're at the toilet, and then it uses your phone's Bluetooth to tell it, hi, this Scott versus James.

If you don't bring your phones with you to the bathroom, then you can also just push one of the two buttons, player one or player two. Alternatively, we are currently building a mode that's we call it solo mode.

So if you're the only person that ever uses your toilet or you know, in the care of someone who's the one person who ever used that toilet, you can just assign them to that and then they don't have to bring their phones with them.

And then, yeah, use the motion sensor to turn on and turn off. You get your results sent to you as a report card about 60 seconds after you flush. And the whole idea is exactly as you were saying, it should be totally passive, totally effortless, just melt into your daily routine invisibly.

As a result, you get these helpful notifications that tell you how you're trending, how hydrated you are. We have, to your point about memory care, some of our most passionate users are caregivers who are caring for their aging parents.

Some of which are unable to even really articulate their bathroom habits, and as a result are at higher risk of constipation that could land them in my mom's office.

And so just being able to see like, has my mother gone to the bathroom in the last 72 hours is a huge, you know, peace of mind for those users. Very interesting.

Yeah. Tell me a little bit about, You mentioned period blood before that, like what is helpful there and what are the sort of, what can you learn from that?

So one of our top requested features that is on our roadmap is helping people understand, as I say, people, helping of menstruating age understand is this related to where I'm at on my hormonal cycle or is something else that's causing me this episode of Bad Gut Health?

You know, it's a phenomenon of period poops and so when you're on your period, There is a hormone called prostaglandins. That is what tells your uterine wall to shed its lining.

And that same thing also leads to loose and liquid bowel movements. People often wonder, am I having this episode of bad gut health? you know, in relation to my period or is it something dietary or some other lifestyle factor that might have triggered this?

And so being able to correlate thrown data against your cycle tracker is kind of one of our most highly requested features that, you now, I'm very excited to be able build out here in the next few months.

Really cool. Yeah, I think that's going to be really powerful and valuable. You know, one of the things, there's some skepticism on wearables. There's a lot of practitioners that just love it, swear by it.

They think the changes in HRV readiness scores can be very valuable, but we've recently seen the Aura S1 and seen that Aurea isn't particularly confident about the medical information that is coming through it and they think there is a whole lot more work to do to turn it into something that that's actually relevant to healthcare generally.

Do you think there's something different with the journey that you're going to go on with this project? Yes, just because the types of metrics that we are tracking require less education for clinicians.

So like, for example, HRV is a perfect example where that really wasn't a popular clinical measurement 15 years ago, like before our ring. Our ring and whoop together brought HR V into the public consciousness.

Whereas things like Bristol stool scale, stool frequency, color, volume, buoyancy, urinary flow rate, peak flow and average flow, these are some of the primary questions that gastroenterologists, urologists, functional medicine practitioners are asking their patients on a daily basis.

And they just know the answers they're getting are very good right now. So the types of things we're tracking are already some of the foundations of clinical practice and have been for, you know, in some cases up to 30 years, going back to Bristol stool scale.

We are, there's a lot less work we have to do in terms of, education as to why the things were tracking our valuable and important. And then ultimately, our holy grail is that fecal occult blood and micro hematuria.

and every clinician we speak to about that, they are like, Yes, please. Yeah. No, that's a great point, and that you're dealing with things that are already relevant, the people are talking about, it's new window in to get information that people already want rather than introducing a new concept that People have to sort of rally around and I'm sure to what degree it is valuable or otherwise.

How the device works and menstrual cycle tracking

So this is mainly a consumer facing business. Could you imagine a situation where a doctor who's listening to this might have these kinds of things in their practice and might loan it to a patient for a month and then take it back and loan if someone else put it through the dishwasher in the meantime?

I don't know about loans. So far, we have not done any kind of refurbishment and just kind the consumer sentiment around that has been a little squeamish using a refurbished throne.

But we are working on a care team dashboard so that a clinician can basically share a code with you. And then if you put that code into your app, then your data will be shared with your clinician in real time.

They can go through and see all of their patients in the real-time and say, all right, well, we talked about this dietary change and we're changing supplements or probiotics and adding psyllium husk to their stack.

how are they responding to that intervention three weeks afterwards? And should I check in on them or, you know, send them a note saying, great job, this appears to be working or hey, the data doesn't seem to show any improvement, let's try something else.

I think that is the real exciting opportunity for me working with care teams is giving them view into how their patients are responding interventions outside of a clinical visit.

That's interesting. So yeah, I guess what have you learned so far? Like what are some things that you've learned in the journey already that surprised you?

And what is some of the things typically come up as negatively affecting gut health that didn't expect when you started? Okay, so I think the biggest surprise for me is, again, both of my parents are doctors.

My dad is an anesthesiologist. Mom's a geriatrician. And so my whole life, I had this view of medicine. It's a very allopathic view, right? Which is that like, once you get a diagnosis, that informs what the intervention is, and that sets you on the healing path.

And I've been stunned to find how untrue that is. Particularly when it comes to gut health. When it come to

surgeries. We're very used to, you know, hearing the surgeon, in a pre-op conversation say, well, this is a surgery that has a 75% success rate or a 17% successful rate.

This is an experimental exploratory surgery, but it's the best hope we got. And the risks are clearly laid out to us in that conversation. That is not the case when it comes to most drugs.

You know, most people don't think of drugs as being a, you know a coin flip, but when it comes to like, for example, IBD, the most effective, like pharmacological, biologic for IB D is effective in like 50% of patients 12 months later.

And that has been mind-blowing. So much of healthcare has reshaped my view of the world. Every study you see is giving you a distribution on a bell curve, and here's the average, but it tells you nothing about where any individual falls on that bell-curve.

Clinical adoption and care team sharing

You know, so much of what I see the value of, what we're building is giving people the ability to run these N of one experiments on themselves and get real data and real results faster than they otherwise would.

Because even something like, you know is seemingly, uh, well documented as acromancia, like some people just don't naturally grow any acromantia themselves.

And it's a very, I don' know. I've just been stunned to find, how individualistic people's bodies truly are in a way that I did not appreciate. I thought it was far more mechanistic than that.

Does it give you a better appreciation for the potential of functional medicine as a new standard of care in medicine? Absolutely. Personalized individual medicine is the inevitable future.

Again, maybe I'm biased here, but my perspective as mechanical engineer is You know, when you build a system, you monitor the system to understand, You monitor, the outputs of the, system.

To understand the health of, The system and. It just seems to me that the future is inevitably moving towards a 360 degree view of people's health, where you have wearables tracking your outputs, stool and urine, you wearable tracking, your vitals, blood pressure, heart rate, respiratory rate at night, and you regular labs, regular imaging, all of that gets fed into a personalized AI.

And that AI, you know, will be cross-trained against 10 million others and with a diagnostic data, because really the value is if you have someone's medical records and you can say, okay, we've been monitoring all these different quadrants of someone health for 10 years.

And this is the day they were diagnosed with some autoimmune condition. Now, if we look at another 10,000 people like that, when we have all these metrics around them, how far back in those medical histories can we go and still make that same diagnosis with confidence?

And we could potentially make the same diagnosis months or years earlier and totally change the outcome of that person's life. And the best example of this is diabetes, right?

Like it used to be that only diabetics got continuous glucose monitors. It was viewed as shameful if you as a non-diabetic asked for a glucose monitor because it was like, no, this was only for really severe diabolics.

So much of the work that Levels Health and Casey Means have done you know, educating the public around metabolic health and the fact that like, no, like understanding your personal metabolic, health as a pre-diabetic can totally shift the outcome of your life just by changing diet and lifestyle.

Like how many more diseases are there like that, that we just have no appreciation for right now. I completely agree. And it's one of the reasons why I've been at functional medicine all this time, because it just attuted that that

was the way that things are going.

I guess I'd love to say, I said quite a few times recently that I feel like the practitioner networks that specialize in certain areas and we've talked about the opportunity in digestive disorders for all the numbers that you've quoted there, how many people have them and how ineffective most of the regimens are and essentially doing a very simplistic input into what's a complex system I think is doomed to failure.

You need a more rich understanding of what's happening and up until now that may have been doing a stool test but here's another opportunity to do something different and learn a little bit more and I think that if you had a digestive program in your practice and you said hey one of the things that we're going to outfit you with is this throne so that You know, suddenly the standard of care that you're offering is like exponentially better than a GI doctor.

Lessons learned and the future of personalized medicine

And I've always thought, why would you go to a gi doctor before you went to functional doctor? Because this is going to give you a much better understanding of where you are going.

But this could even tip the scales further, I would say. Yeah. I think there's just so much to be said for tracking health in real time and actually seeing how interventions are responding objectively.

Nice. Alright, so how much is it? How much do people pay and what do they get? It's the exact same price as an aura ring. So the hardware is $400 plus $6 a month.

And they get the app with the membership, so it's unlimited analysis. You can use it as many times as you need in a months. Each person who uses it has their own private profile so you can share it with up to six members in the household and everybody gets their private profiles.

It is six dollars per month per user. And then you can export your data as a CSV or a 90 day summary of a PDF and share that with your care team. And we're working now on a careteam dashboard so that you'll be able to share an access code and just give your Care Team that access in real time in perpetuity.

Nice. I love that. The last question I want to ask is I have some friends who have built projects inside, I would say, like areas that are embarrassing, you know, potentially.

So I have a friend who built Tushy, which was a sort of a bidet attachment. She's also, you know, was one of the co-founders of Period, Blood, Panty. And I'd love to just get your thoughts on like building in an area that maybe when you tell someone at a cocktail party what you do, they might spit out their drink.

What's it like, building it in area like that? Uh, it's funny. Mickey is like one of my role models in this space. Uh there, nobody has done it quite like she has.

And I think the best thing about building in the space is two things. Number one is it feels like you're getting away with something, right? Like having these conversations about poop and pee in polite company is there's an element of Like I shouldn't be able to say this out loud, but also like I'm saying this in all sincerity, you know, very earnest.

Uh, and there's that's fun, right? There's, there there is like a, like, I get a. A childish joy, like you can't talk about this and not have a smile on your face.

But then the bigger thing is like we were talking about, you know, your friend who sends you his picture of his bowel movements, it turns out to just be beats.

Thank God. Like I get calls, at least monthly from people telling me like, or sending me screenshots of their throne data being like. You'll never believe like I'm having like the best week I've had in years.

And like, that is so cool. NPR had a podcast episode on invisibilia called Poop Friends several years ago. The whole idea is that your innermost echelon of friends are the people that you can talk openly about your poops with.

And one of the great joys of my career is I get to be people's poop friends that I would never have anticipated they'd be so candid with me. Love that.

Well, Scott, thank you so much for being part of the Evolution of Medicine podcast. I think you'll find a right audience here with the functional medicine community.

If you go to thronescience.com, you can find out more about it. You can also read up about the study that you just released. And, you know, I think that many practitioners will be interested in being at the forefront.

I mean, they've kind of chosen that by practicing functional medicine to really understand what causes what, how to intervene in complex systems in ways that are, net positive, both in the short term and the long term.

And so I think there's a natural fear. As soon as I heard about it, I was like, yeah, we've got to talk about this because I, think it's, a source of data that's really valuable.

I love the fact that it is passive. You can learn a lot in a short period of time. There's an accountability and support to this. So we wish you all the best on this journey.

And I hope that functional medicine practitioners will start to play with some of these ideas because it could really validate this operating system. Thank you for going out there and building this James, thank you so much for the opportunity to be here.

Pricing, product model, and building in an awkward category

All right, well, this has been the Evolution of Medicine podcast. I'm your host, James Maskell. We've been with Scott Hickel. He's the CEO and co-founder of Throne.

You can find out more at thronescience.com. If you have questions about this or if you thoughts, feel free to get in touch. if You have other cool things you think that we should be featuring, you know, the functional forum and the evolution of medicine has always been about a third clinical, a Third practice management and a 3rd technology.

you can see that this actually captures all three of those because, You know it is a new technology If you wanted to separate your services from other services in the space, you could market your digestive programs with a tool like this and this being included.

And then obviously there's a big clinical element here, especially if you can get ahead of the game on things to do with hydration. information to do with poop or otherwise.

So this is a really exciting development. Thanks so much for tuning in and we'll see you next time. Journeys allows you to set up your own lab offerings as the top of the funnel.

Give the patients what they want. They want to know about themselves and it's the easiest way to bring them into your practice. We have all types of practices from across the country that are building their own unique lab panels for their unique practices, selling them to their community and acting as a great funnel into their practice is a massive innovation.

I think this will accelerate the evolution of medicine. You can go to goevomed.com slash journeys to find out more, set up your own journeys in half an hour and transform the health of your community.

Go get it. So that was the podcast. What an epic session. Thank you so much for tuning in to the Evolution of Medicine podcast, we'll be back again next week and thanks so