

CWS-Ep2: Ken Dychtwald, PhD & Katsuto Shinohara, MD

[Ken Dychtwald, PhD]

It's made me more of an optimist about breakthroughs in medicine. You know, we've lived our lives and we hear about all sorts of new technologies and such, but we still got Alzheimer's, we still got cancer, we still got diabetes, we still got strokes, we still got heart disease. And as I became a patient, after having become familiar with focused ultrasound, I thought, wow, we may be on the doorstep of technologies and breakthroughs that will require a new way of thinking about how we deal with ill health or if we have cancer or other conditions. And yeah, it's made me more hopeful.

[Allison Preston-Smith]

Welcome to Curing with Sound, a podcast presented by the Focused Ultrasound Foundation. I'm your host, Alison Preston-Smith. According to the American Cancer Society, one in eight men will be diagnosed with prostate cancer during their lifetime, and nearly 300,000 men are diagnosed in the US every year.

Today's guest is all too familiar with those stats, being recently diagnosed with prostate cancer. Dr. Ken Dychtwald is a psychologist, gerontologist, best-selling author of 19 books on aging and a public speaker. He was also the executive producer and host of the acclaimed PBS documentary, *The Boomer Century*, as well as the public television special, *Life's Third Age*, and more recently, *Sages of Aging*.

He's the founder and CEO of Age Wave, an acclaimed think tank on the social and business implications of global aging and rising longevity. He was also a featured speaker at two White House conferences on aging. Joining Dr. Dychtwald is Dr. Katsuto Shinohara, who specializes in urologic cancers, mainly prostate cancer. He earned his medical degree from Yokohama City University School of Medicine in Tokyo, Japan, completed his residency in general surgery at Mitsui Memorial Hospital in Tokyo, and also completed a fellowship in urologic oncology at Baylor College of Medicine in Houston, Texas. Dr. Shinohara is a member of numerous professional societies, including the Japanese Urological Association, Japan Society of Ultrasonics and Medicine, American Institute of Ultrasound and Medicine, American Urological Association, and Engineering and Urology Society. And he has also lectured widely on urologic cancer and his work has been published in numerous medical and scientific journals.

Welcome to the podcast, Dr. Dychtwald and Dr. Shinohara.

[Ken Dychtwald, PhD]

Thank you, great to be here, Allison. Thank you.

[Allison Preston-Smith]

So Ken, you've dedicated your life to studying gerontology. What was it that sparked your interest in the field?

[Ken Dychtwald, PhD]

When I was a very young man, actually 50 years ago, I was asked to head up the first preventative health research project in America focused on older adults. And I became just captivated by the perspective of older men and women, by the possibilities for improving their health and wellbeing. And the project, which was called the SAGE Project, became kind of internationally renowned.

And before I knew it, I was setting up similar projects around the world. But a few years later, I got asked to be an advisor to the Office of Technology Assessment, which used to be the think tank of the U.S. Congress. It was nonpartisan and it was a two-year study.

And we were looking at how America and the world were gonna be transformed by increasing longevity, declining fertility, and ultimately the aging of the baby boom generation. And I thought, oh my God, there's like an age wave coming. And this has never happened before.

Two thirds of all the people who've ever lived past 65 in the entire history of the world are alive now. But in the years to come, there's gonna be more and more older people. And that both presents new challenges, Alzheimer's, arthritis, diabetes, absence of purpose, but also new opportunities.

The chance to live 80, 90, 100 years, the chance to grow in wisdom, the chance to know your great-grandchildren. And so I thought that this was a territory and a lifescape worthy of my attention. And I've spent the last 50 years, 19 books later and giving talks to over two and a half million people since then, leading research all over the world.

Trying to figure out what becomes of us as we live longer and longer lives.

[Allison Preston-Smith]

And as you experienced middle age and life beyond your fifties, did your lived experience change the way that you approach your research?

[Ken Dychtwald, PhD]

Well, that's a very interesting question because I was a young man when I wrote my first book when I was 22 and started writing about the aging of America in my thirties and the aging of the world. But then all of a sudden I reached an age where my dad became blind and then he passed away. Then my mom had Alzheimer's and we cared for her and then she passed away.

And I thought, wow, it's one thing to talk about statistics. It's another thing to feel the

emotions of becoming a middle-aged person. But then as I moved into my seventies, it became a little bit like dodge ball.

All of a sudden people I cared about, friends of mine were growing ill, were having health problems, were getting knocked down. And I thought, wow, this is far more emotional and frightening in a lot of ways than I had thought when I was a young man.

[Allison Preston-Smith]

Did you find you were focusing less on the data side of things and focusing more on, like you said, the emotional aspect and feeling different in your own body as you're aging?

[Ken Dychtwald, PhD]

Yeah, but it wasn't one or the other. It was sort of in a way holistic. I continued to try to understand the demographic changes, the numbers, the economics, by the way, the new ventures, the business opportunities, what new technologies were appearing on the scene.

But I was weighing it all from the point of view of somebody who was growing older himself. And that balance, I think, made me a little bit wiser about it all.

[Allison Preston-Smith]

And as someone who is very familiar with this work and the realities of aging and health and wellness, did it come as a shock when you were diagnosed with prostate cancer or had this been something that you were preparing for in the back of your mind and your research was preparing you for?

[Ken Dychtwald, PhD]

Was not preparing me for. My first thought was, that can't be me. I haven't eaten meat for 40 years.

I exercise every day. I'm the right body weight. I take some medications for blood pressure.

I mean, I really think of myself as a fit, youthful guy, even though I've grown older. So it was a little bit terrifying and a little bit sobering. And I think what a lot of men go through, but I don't know because this was sort of new to me, was a sense of vulnerability, which I had never felt before.

I kind of felt indestructible. And this led me realize I had piercings in my body armor. By the way, I grew up in Newark, New Jersey.

And although that's a long time away, every month or two, the guys I grew up with,

about eight of us get together on a Zoom call and we talk about our lives. And when I got my diagnosis, we had a call and I asked these guys, have any of you ever had kind of prostate issues? And every single person on the Zoom call raised their hand.

They'd either had a large prostate or they'd had prostate cancer, they'd had a prostatectomy. And so I thought, man, oh man, men might talk about a knee problem or a headache or they're straining their muscles at the gym, but prostate health is not something we feel comfortable talking about. In fact, this is the first time I've ever done this publicly.

And we ought to talk about it more openly. My salute goes to women who talk about breast cancer and treatments and so on. So back in 2021, focus ultrasound was brought to my attention and I thought this is sort of an amazing technology.

The idea of triangulating sound beams, which sounds like Star Trek, to a pinpoint and then zapping various cancers, essential tremors, maybe even Alzheimer's disease, I looked into it. I looked into the clinical work being done around the world and I thought this is an amazing technology and actually began talking about focus ultrasound in my speeches and advisory work all over the world to corporations and government leaders. I began to wonder if maybe focus ultrasound had any relevance to me.

And then my doctor, who we'll hear from in a moment, Dr. Shinohara, who is considered sort of the leading oncologist, urologic oncologist at UCSF, said to me, you know, this is only a tiny bit of tissue. I don't think we need to remove the prostate gland and you can wait and we can actively surveil it, but there is a technology called HIFU that maybe you've never heard of. And I said, "what's HIFU?" And he said, high intensity focused ultrasound. I said, "heard of it? I've been sort of promoting it!" And he said that there is a procedure that could be done that would only last a few minutes. It was under general anesthesia so I could be in and out in the morning, but I should think about it, that there were choices. There was chemotherapy, there was radiation, there was seeds, you know, guys, I guess, go through this, but don't know who to talk to.

And I felt very comfortable and confident in UCSF. And I really did think I had sort of an elder statesman of the field as my doctor. And so I jumped on it and thought, aren't I lucky because five or 10 years ago it wouldn't have been available.

[Allison Preston-Smith]

Well, that's fantastic too. Just going back to what you said, talking with your friends about this and about your diagnosis, it's scary to, you know, share about your medical journey, but so helpful when other people are able to hear about it. What was the reception from your friends?

[Ken Dychtwald, PhD]

The ones who had already been through prostate surgeries were like, I wish that this technology would have been available when I was in trouble. But those who were dealing with current prostate health issues, you know, immediately went to the Focused Ultrasound website. And that's partly what prompted me to want to do this interview with you.

The idea that there might be hundreds of thousands, maybe millions of men who aren't aware of this extraordinary new procedure that can zap the cancer cells and leave all the adjacent tissue just fine. In fact, when I had my procedure by one o'clock that day, I was back at work. Oh, wow.

That's incredible. Unbelievable. So, you know, I mean, there was a few days where I was wearing a catheter and I had to be sensitive to not disrupting anything, but I feel just fine.

I feel great. And I feel very fortunate. So that's what the people I've mentioned it to have said to me, you know, you need to tell more people about this because they ought to ask their doctor, what do you know about focused ultrasound? And is that available in this medical system? Because it was reimbursed. It's been tested in countries all over the world for 60 different health conditions.

And, you know, for me, it's a little bit more of a secret than it ought to be, but I'm so glad that I was able to be a patient, a recipient of this remarkable treatment and be able to mention it to people who might have a loved one or they themselves are going through some prostate issues. And weren't aware that focused ultrasound is now a therapeutic that's got a big clinical base behind it, that is remarkably swift. You know, it just took a few minutes and the recovery is almost instantaneous.

I mean, it's a few days, but nothing compared to what people like my brother went through or my brother-in-law went through when they went through their prostate cancer procedures.

[Allison Preston-Smith]

It almost sounds too good to be true. Is that what you were thinking when you first came across focused ultrasound or were you converted right away?

[Ken Dychtwald, PhD]

It sounded way too good to be true. And I did a lot of homework, you know, I went on websites. This was before I had a diagnosis.

I just thought, wow, there's millions of people getting chemotherapy. You know, sometimes the treatments are as rugged as the disease. And I thought it's time for a transformation.

I mean, for all of our AI and all of our advanced technology and exponential improvements and so on, how come we're still doing treatments that are barbaric? And so when I first heard about focused ultrasound, I thought this is truly a game-changer. Something that works on sound beams, not even laser beams, or doesn't involve surgery and doesn't require radiation treatment, and that can pinpoint a place of illness and leave all the adjacent tissue to be healthy.

I thought this is truly amazing. And then when I went through the procedure, that night I was at home with my wife and I thought, wow, I'm a lucky guy. I mean, I just took a trip to the future and more people ought to be thinking about this as an option and talking to their doctors and their medical systems about is it available and is there somebody in the system who's excellent at doing the procedure?

[Allison Preston-Smith]

Absolutely. And on the day of your procedure, was there anything you had to do to prepare or anything during the procedure that you think other patients should know?

[Ken Dychtwald, PhD]

Well, I was scared, you know, because, you know, I don't know, maybe people don't worry as much as I do, but I thought I've got friends who died on operating tables from general anesthetic. I know that things can go wrong. So I worried about that, talked to my wife and my kids the night before.

I mean, I did a little bit of that, but I was mostly eager to get it behind me. And so I just, you know, my wife and I just showed up and got wheeled into the operating environment and they put me out. And next thing I know, I'm waking up and the nurse asked me if I could put my clothes on, which I could, and then she waited a little while and walked me around.

And I got home at 1230, I went to work at one. And then that night I was feeling almost giddy, like, wow, what an amazing thing I've just been through that was so minimal and so modest in terms of what it required for me. I'm a lucky guy, more people ought to know about this.

[Allison Preston-Smith]

And similar to what you're already saying, I mean, has this impacted your research at all? Or is this something that, you know, you want to incorporate in more topics that you discuss in the future?

[Ken Dychtwald, PhD]

It's made me more of an optimist about breakthroughs in medicine. You know, we've

lived our lives and we hear about all sorts of new technologies and such, but we still got Alzheimer's, we still got cancer, we still got diabetes, we still got strokes, we still got heart disease. And as I became a patient, after having become familiar with focus ultrasound, I thought, wow, we may be on the doorstep of technologies and breakthroughs that will require a new way of thinking about how we deal with ill health or if we have cancer or other conditions.

And yeah, it's made me more hopeful about scientific breakthroughs. We could do a far better job of matching our health spans to our lifespans. We know that we're living longer and longer and longer, but for far too many people, they're beaten down by illnesses.

And the idea that there are new breakthroughs like focused ultrasound now on the scene that are clinically proven and reimbursable by insurance is maybe the start of a new era.

[Allison Preston-Smith]

Yeah, it's definitely exciting. There's so many new discoveries. It's very exciting.

So Ken, you were a good candidate for focused ultrasound for prostate cancer. And Dr. Shinohara, what is it that you look for in patients when you're trying to determine who would be a good candidate for HIFU treatment?

[Katsuto Shinohara, MD]

Yes, so the HIFU is not for everybody. Usually we select out the relatively high grade prostate cancer, which could be a clinically significant cancer, but located on the one side of the prostate, not involving both lobes of the prostate. Then we just treat that selective area on the one side and preserve all the functions, neurovascular bundle for the erectile functions and sphincter functions should remain the same.

So that's a criteria that clinically significant cancer in the one lobe and preferably visible on MRI or ultrasound. So we can target that.

[Allison Preston-Smith]

And have you seen an increase in the number of people looking into focused ultrasound treatment or any other kind of noninvasive options?

[Katsuto Shinohara, MD]

So it's called a focal ablation treatment. Not only the HIFU, but there are a number of different procedures available, different energy source to apply to destroy the cancer cells, such as cryo-ablation, irreversible electroporation. Also the TULSA is another procedure.

Laser ablation is also available. But anyway, all those treatments to treat just the focus of the cancerous area and not to treat entire gland. And in order to do that, the cancer has to be one location preferably visible and biopsy also determined that to be clinically significant cancer.

[Allison Preston-Smith]

And Ken, what was it like going through the procedure as the procedure was happening? Did you feel anything? Were you aware of anything going on or was it painless?

[Ken Dychtwald, PhD]

I was unconscious. It was explained to me that I would be strapped down because the important thing was that I not wriggle around or move when these pinpointed sound beams were triangulating. And so I was given a general otoscenic and then I woke up and that was explained to me that the surgery or the procedure wasn't really a surgery, went well.

And then I was fine. And the cancer is no longer there in that location. And when I was able to walk and dress myself, I was sent home.

My wife drove me home. So I wasn't aware of anything. I found out later on that although I was out for about an hour, hour and a half, the whole procedure took less than 15 minutes itself.

And so there was preparation and positioning me and getting all the equipment in place. But the procedure itself is relatively swift.

[Allison Preston-Smith]

And Dr. Shinohara, can you explain what happens from your perspective during treatment?

[Katsuto Shinohara, MD]

The HIFU procedure requires very precise stereotactic ablation using a robotic arm. So if the patient moves, patient movement, then we have to start over again. So the patient not moving completely, immobilized, fixed in one position is important.

That's why we do under general anesthesia. And also that muscle relaxation is given so that the patient won't move during our procedure.

[Allison Preston-Smith]

And after the treatment, Dr. Shinohara, can you talk about if there's anything that you look out for or that patients should look out for?

[Katsuto Shinohara, MD]

So generally the HIFU procedure doesn't create any incisions or the puncture of the tissue. All the energy applies through the rectal wall from outside of the body to the inside of the prostate gland treatment. So there shouldn't be so much pain involved.

However, the ablations can create some swelling of the prostate gland. And the patients may have some difficulty urinating after the procedure. So usually though we send the patient with a catheter to drain urine. And catheter usually taken out in two days. But some patients, there may be some obstructive conditions happening after that period. So we have to watch for the patient able to urinate after catheter removal. And also that the HIFU procedure may damage the urethra, which can lead to the dizziness, difficulty urinating, tissue sloughing. So that's also that we need to watch that. And infections can also happen after the treatment.

[Allison Preston-Smith]

And just with the possibility of using HIFU and focused ultrasound for so many different diseases and conditions, it's really showing the possibilities of noninvasive treatment and contributing to longevity. Dr. Shinohara, when you do these procedures, is it changing your mind about aging and just the possibilities out there for patient care?

[Katsuto Shinohara, MD]

Yeah, so prostate cancer used to be over-treated conditions. We treat every single prostate cancer diagnosed. However, majority of those prostate cancer diagnosed are low-grade prostate cancer and do not need any treatment for a long period of time.

But of course, people live long and how long they should live and how long we should keep watching, it can be changing as people's longevity extends. And also the way of treating prostate cancer, we know that lots of prostate cancer don't cause death. However, the treatment may cause the quality of life change, urinary incontinence, erectile dysfunction, et cetera.

So that needs to be also carefully explained to the patients and which extent we need to do the treatment. And that's the key for the future.

[Allison Preston-Smith]

And Ken, how does the rapid advancement of medicine impact your outlook on healthy aging?

[Ken Dychtwald, PhD]

Yeah, and it's interesting for me to listen to Dr. Shinohara because this is a subject, the aging of the world's population that I've been thinking about and advising companies

and governments and associations for 50 years. So here I am, a patient. I've got a very close friend that's got stage four cancer because he didn't do anything when he had early cancer and it spread outside the capsule.

And I thought, oh, I don't wanna be a guy that says I should have. And I know other people that don't know about focus ultrasound that have had extensive radiation and chemotherapy and it's kind of knocked them out. So when Dr. Shinohara said to me, there's this technology which he refers to as HIFU, high intensity focus ultrasound. I know there are also low intensity focused ultrasound procedures. I thought, wow, this is wild because I will be the beneficiary of this breakthrough new territory in medicine and healthcare. And there will be more and more folks like me there already are who will look back at the day when everybody was getting their prostate removed or having extreme surgical procedures done as the thing of the past and how lucky we are to be part of this future era.

[Allison Preston-Smith]

Absolutely. And Dr. Shinohara, what would you say to listeners who are considering focused ultrasound treatment?

[Katsuto Shinohara, MD]

Yeah, so focused ultrasound sounds like a panacea, but as I said, of course there are certain criteria that people can have that. And on top of it, there are some downside of the HIFU, especially the HIFU do not treat entire gland. The prostate cancer is known to be a multifocal.

So treating one location, there is a chance that a small amount of cancer is still left behind. And you have to continue to watch those conditions carefully. Sometimes new cancer may develop in the untreated area.

So that's a downside of the treatment.

[Allison Preston-Smith]

And Ken, what would you say to others who are considering focused ultrasound?

[Ken Dychtwald, PhD]

Well, let me first say, as I listened to this, that I would imagine whether it's six months from now or six years from now, that I might need another treatment. So I don't think that I'm done for life. I'd love to be, but I imagine, and now I see what was done and I hear Dr. Shinohara explaining, it's gotta be focused on one lobe and not the other and so on and be able to see it and zap it. I would say to anybody who finds themselves with a diagnosis of prostate cancer or enlarged prostate, they should ask their doctor, what are

the treatment options? Or look on the website of their health system and see if focused ultrasound is explained. For example, on the UCSF system, there's an entire section that talks about focused ultrasound.

And so I would say to inquire. And you may be surprised that your doctor would say, well, you're not a candidate or you are a candidate. And if you are, then it becomes one of the choices available to you.

And maybe one that could be relatively easy, swift, minimal in its invasiveness and put you back on your feet in a few days.

[Allison Preston-Smith]

Well, thank you both for being on this podcast, for sharing your expertise, Dr. Shinohara and Ken. Thank you for sharing your story as a patient and an advocate for focused ultrasound. We're so appreciative.

And before you go, Dr. Shinohara, what is a way that our listeners can keep up with your work or how can they reach out to you?

[Katsuto Shinohara, MD]

You know, they can, you know, they at least read the UCSF site, urology site explaining HIFU treatment and other focused, you know, focal treatment modalities. To reach out to us, they can, of course, they communicate through the phone number listed on our website, UCSF urology. And that can be a great resource to start.

[Ken Dychtwald, PhD]

I wanna add too that now that I've been a patient versus just a commentator and an analyzer, having trust that your doctor is not just trying to hustle you as to what he or she likes to do or makes the most money, but believing that Dr. Shinohara was truly an elder statesman and a master of this part of the body. And he came to the conclusion, I didn't press him. He came to the conclusion that I might be a candidate and I should think about it.

And also, as I've been a spokesperson for new technologies, I also wanna say that I have never invested in a focused ultrasound technology. So this is not about I can make more money if more people do it, but it's not just for the prostate, breast cancer, other cancers, essential tremor, even Alzheimer's is now their applications where focused ultrasound is being part of the palette of choices. And I would say that that's how transformation happens.

People hear about things and they ask.

[Allison Preston-Smith]

And Ken, how can our listeners keep up with you?

[Ken Dychtwald, PhD]

Our company's website is simple. It's agewave.com. And all of our research and our new media and things we're working on are posted right there for people to see free of charge.

[Allison Preston-Smith]

Well, thank you both again for joining us today, sharing your experiences with focused ultrasound and providing such helpful information to our listeners.

[Ken Dychtwald, PhD]

Thank you. And thank you for everything, Dr. Shinohara. You're welcome.

Thank you very much.

[Allison Preston-Smith]

This episode of Curing with Sound has been presented by the Focused Ultrasound Foundation. If you would like to learn more about focused ultrasound or the foundation, visit our website at fusfoundation.org. You can also sign up for our newsletter and follow us on social media.