**Harlan Krumholz:** Welcome to *Health & Veritas*. I’m Harlan Krumholz.

**Howard Forman:** And I’m Howie Forman. We’re physicians and professors at Yale University. We’re trying to get closer to the truth about health and healthcare. We’re excited to welcome Dr. Manisha Juthani today. But first, we’d like to check in on current hot topics in health and healthcare. And honestly, Harlan, there’s a lot that we can cover, so I’m excited to hear what has you interested today.

**Harlan Krumholz:** Well, there’s a lot to catch my attention this week, but there’s one thing that’s still puzzling me, I wanted to share with you and see what you thought about it. I don’t know if you’ve been tracking this issue about [these retracted](https://www.nytimes.com/2024/01/22/health/dana-farber-cancer-studies-retractions.html) papers from Dana-Farber Cancer Center. It’s a—

**Howard Forman:** Only because of you I got interested in this topic, but I really have a lot of questions for you. I could probably interview you for 20 minutes on this.

**Harlan Krumholz:** Well, I don’t know if I quite have the answers because it still seems a little bit opaque. So for people who are listening, of course, Dana-Farber Cancer Institute is arguably one of the leading cancer centers in the country. I mean, there’s a handful of them that really stand out, and Dana-Farber’s one of them. But they’ve made recent news, by the way, because they’re integrated in with — they’re separate, but they’re integrated in with Brigham and Women’s Hospital in Boston. And this last year they announced that actually they’re leaving the Brigham, they’re going to work with Beth Israel across the street and they’re going to build a big cancer hospital. And lots of people in Massachusetts were kind of just saying, “Do we really need a new cancer hospital? And how’s this going to fit?” It sounded like the big business of cancer was driving some of these decisions. And so they were in the news around that this year.

But more recently, they were in the news because there’s [this British biologist and blogger](https://www.theguardian.com/science/2024/jan/29/sholto-david-biologist-finds-flaws-in-scientific-papers). Actually the guy seems to be unemployed right now, but spends a lot of his time scouring the research literature. He is a PhD, seems like a really bright guy, and looking for problems in published studies. He seems very successful in identifying lots of studies that have had these problems. And there’s a website, [PubPeer](https://pubpeer.com/static/about), that is a place where people talk about problematic studies. But what he did was he came upon a series of studies that were written by leaders at the Dana-Farber Cancer Institute, and then [he blogged about it](https://forbetterscience.com/2024/01/02/dana-farberications-at-harvard-university/).

I don’t know if you’ve seen [this blog](https://forbetterscience.com/), Howie, it’s a little snarky. This is his style. He’s sort of mocking these highfalutin leaders and so forth, but he’s also embeds in this blog a lot of evidence that he’s found of problems. This is kind of a big deal. This guy, Sholto David, he flagged almost 60 papers published between 1997 and 2017 that contained image manipulation and other errors in this sort of this blog post. But many of these papers were from Dana-Farber’s Chief Executive Officer, Laurie Glimcher, who’s one of the most renowned researchers in the world but also the chief operating officer who’s also an MD and a researcher on topics including multi myeloma and immune cells. He goes through this, and he shows figures from these tables where it’s clear that what they’ve done is sort of cut and pasted or copied, more copied and pasted. So there are images that are appearing in more than one place that really are representing image manipulation.

Here’s the bottom line that really got me going on this was you think, “Well, yeah, people take shots all the time around this stuff,” but Dana-Farber is moving to retract at least six of these research papers and correct 31 others of them because of these allegations and manipulation. So essentially agreeing with him that there’s stuff that needs to be addressed in these papers. I’m just trying to figure this out, how in the heck? This isn’t a paper mill. It could be like a place that you don’t think of as being a major science, but Dana-Farber’s different.

**Howard Forman:** So let me just a couple of quick questions that came to me because you highlighted this. So I spent a little time reading [the *STAT* article](https://www.statnews.com/2024/01/27/sholto-david-profile-dana-farber-retractions/), I think it’s *STAT*. and we’ll put it in the—

**Harlan Krumholz:** [*STAT*](https://www.statnews.com/2024/01/27/sholto-david-profile-dana-farber-retractions/)*,* [*New York Times*](https://www.nytimes.com/2024/02/02/science/sholto-science-papers-misconduct.html)*, Harvard Crimson*.

**Howard Forman:** Yeah. We’ll put the links for that because part of what makes this interesting is this guy, this guy is snarky, he’s probably obnoxious. There’s a lot of things to say about him. But what struck me is, he’s in this very narrow area of just this image manipulation. Apparently, there are other people that are just as effective in the data area and the methodology area and a lot of things where people are catching either errors or frank fraud. What I’m curious about is all these people seem to be doing this for free, maybe for some notoriety, maybe for fame, whatever you want to call it. They’re doing it for free. The journals don’t have the capacity to be able to do this type of work. Is there some role for either government or for not-for-profits to be able to play a more active role in doing this so that it’s not built around snark or fame but built around auditing of our science?

**Harlan Krumholz:** Well, this is definitely crowdsourcing. I think somebody called it like a bunch of scientific sleuths who are sitting around and looking at this thing. This guy himself, he’s 32 years old, he’s a young guy. He says in that *STAT* article, he goes, “Look, I’m not a successful scientist, but I’m able to look and see and find these things.” But you’re looking to the policing of it. Howie, this is the CEO of Dana-Farber.

**Howard Forman:** I know, but that’s all the more reason why because once you get to a certain level, people accept that what you do is perfect. And maybe we need auditing.

**Harlan Krumholz:** Anyway, that story’s going to continue to go. Howie, we should probably get to our guest. So let me hand it to you, and let’s get going.

**Howard Forman:** Dr. Manisha Juthani is a professor of infectious diseases at the Yale School of Medicine, and since 2021 serves as the [commissioner of the Connecticut Department of Public Health](https://portal.ct.gov/DPH/About-the-Commissioner#:~:text=Overview,-MANISHA%20JUTHANI%2C%20MD&text=Manisha%20Juthani%2C%20MD%2C%20is%20the,Program%20from%202012%20to%202021.). Prior to this, Dr. Juthani directed the Infectious Diseases Fellowship Program at Yale for almost 10 years, while also serving as associate program director for career development in the internal medicine residency program.

Her work ranges from analyzing infectious diseases in elderly populations to researching antibiotics in palliative care. Dr. Juthani was a reasoned and expert voice for local and national communities as we were confronted with a truly novel coronavirus in 2020 and remains a thoughtful voice and trusted advisor through her current public service. Dr. Juthani received her undergraduate degree from the University of Pennsylvania before going on to obtain her MD at Cornell, where she also completed her internal medicine residency prior to a fellowship at Yale.

So first, I want to welcome you. It’s always a pleasure to have somebody who’s in your position, but even more so that you’ve retained your faculty title at Yale, so you’re still a colleague of ours. And I want to start off with that because you came up through the internal medicine ranks the way Harlan did, and Harlan went into cardiology. I want to know, when did you first think that infectious diseases was what drew you into medicine?

**Manisha Juthani:** So first, thank you so much for that really kind introduction, and it’s a pleasure to be here with both of you. During residency, I remember I was an assistant chief resident at Cornell during my third year of residency, and I had this case that I was presenting to residents about a young woman who had typhoid fever, salmonella typhi, and she hadn’t traveled anywhere.

It turned out that in reporting that case to the New York City Health Department, they did their investigation and identified [a fast food restaurant](https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/216736) in Queens where a healthcare worker had been chronically colonized with salmonella typhi. And that went on to three different people in the city of New York being infected and getting typhoid fever without any travel whatsoever. I was just so jazzed by that epidemiologic investigation about the clinical presentation, and that’s what drew me into infectious diseases. And that’s when I said to myself, “I think I know what I’m going to apply for going forward.”

This case of salmonella typhi really made me interested in infectious diseases. But interestingly, all these years later, it’s actually the public health aspect of it that was also so interesting to me. It was the detective work, both on the identification of the disease that the individual patient was faced with but also a case that highlighted how the health department really was instrumental in identifying a root cause to a situation that infected multiple people in the community.

**Harlan Krumholz:** So I’m going to go in a whole different direction. I just wanted to start with a little bit of a whimsical thing here. So what do you think about cranberries?

**Manisha Juthani:** Harlan, you know I have [devoted practically 10 or 15 years](https://jamanetwork.com/journals/jama/fullarticle/2576822) of my life to cranberries. I eat them in my oatmeal every day.

**Harlan Krumholz:** Yeah, yeah, okay.

**Manisha Juthani:** I really enjoy cranberries overall. But do I think that they prevent urinary tract infections? I would say that the answer and the body of evidence would suggest no.

**Harlan Krumholz:** Oh.

**Manisha Juthani:** That does not mean that I suggest not eating them or not drinking cranberry juice, but do it because you like it and not because you necessarily think it’s going to prevent a UTI. I also do think though that cranberry juice may make people feel better. It may have an anesthetic effect when you do have a UTI. So that doesn’t mean don’t drink it if it makes you feel better.

**Harlan Krumholz:** There are lots of, I almost call them wives’ tales, beliefs. And by the way, when you get to things like we consume, foods and juices, a lot of promotion around that kind of stuff because it’s not as strongly regulated as drugs and devices. So as you walk down the grocery store, you can see... I saw one day a cereal said, “Boost your immune system with this cereal.” There can be a lot of claims. But I thought one of the cool things was that you took this on and actually employed rigorous research methods to answer some of this. And that’s why when you said, “I’ve spent years” as people are listening to it, I want to make sure they know that this is what we need, right? I mean even on the most basic things you say, “Well, cranberries,” yeah, but lots of people believing it. People are wondering about it. It’s an issue. By the way, if it is effective, it’s fantastic.

**Manisha Juthani:** Exactly.

**Harlan Krumholz:** If it’s not, let’s just dispel it. But what I really thought what was great, and maybe I can just ask you, what drew you to actually begin those studies?

**Manisha Juthani:** So when I was an infectious disease fellow at Yale, I would go around the hospital. Most of the patients we took care of were older individuals. And as I was thinking about where I was going to focus my research efforts, I decided to focus on the topic of infection prevention in older adults, broadly speaking. And my primary mentor, Dr. Vinny Quagliarello, was working on pneumonia prevention in older adults, and the other big infection in older adults is urinary tract infections. And so I started looking at ways that we could diagnose and prevent UTIs and older women better. That took me down that road of what are the different ways that we can do that? I came upon cranberry in that way.

I was working with another colleague who was in the similar area. And actually there’s been research done previously on cranberry juice going back to [a *JAMA* paper](https://jamanetwork.com/journals/jama/article-abstract/366888) in 1994 by Jerry Avorn from the Harvard system. I was curious that older people often cannot drink enough. Their thirst drive is down; they just don’t have the drive to drink. So could cranberry capsules, which as you mentioned are marketed all over the place and there are different concentrations of what the active compound, proanthocyanidin, PAC for short, is in all these different compounds. So as you said, I tried to approach this in a rigorous fashion.

I found a capsule that had the highest PAC content. I did a dosing study to identify a feasible dose. These were years of research to do this, to ultimately do an NIH R01-funded clinical trial looking at two cranberry capsules for prevention of asymptomatic bacteria, so bacteria in the urine of older women. And it did not show that we reduced that.

Now what I can say is a lot of older people are living on fixed incomes. They are supported by insurance, by Medicare. Many people do not have a lot of ancillary income to spend on over-the-counter unregulated products. That’s part of the reason I decided to do this work, was that when you’re looking at a population that is already challenged in that way, for them to spend funds on something that may or may not work, I really wanted to try to get to the bottom of that answer.

And that’s really what took me down that road. When I gave Grand Rounds at Yale after I published this paper, I titled the Grand Rounds presentation [“Debunking a Myth,”](https://files-profile.medicine.yale.edu/documents/fadebff0-0254-4104-99d6-7b2da11534f2) which is very difficult to do as you clearly articulated. And so I get asked every year at Thanksgiving to comment on what I think about cranberries. But what I can say is, I do not feel that the evidence supports using cranberry capsules for that purpose. I do clinically feel that hydration is a critical component, hydration in and of itself. And so does cranberry juice help sometimes because you’re hydrating yourself? Maybe because you’re anesthetizing yourself and making your symptoms less, I think it very well could for those reasons.

**Harlan Krumholz:** I’m just thinking about… you’re named Commissioner of Public Health in Connecticut. It’s a big platform. What do you do on that first day? Did you set certain priorities? I mean, you’re only going to be there for a certain period of time because that’s how these kind of positions work. So you are walking in, of course there’s crises here and there’s issues here that take your attention. But as you thought about it and said, “What’s the kind of thing I want to have accomplished by the time I’m done?”, did you set one or two or three priorities that you said, “These are the areas that I really want to make an impact in while I’m in this position?” I’m just curious how you were thinking about that.

**Manisha Juthani:** It’s a great question, and I absolutely did just that. But Harlan, your question is exactly what was at the heart of what I thought of when I came into this job. I will say the day I came into this job, we had all kinds of vaccine mandates happening in the state, and I was asked to come into this decision and that decision. So it was off and running right away. And so as you said, I had to really think in the gaps because I walked right into a COVID crisis with the Omicron wave taking off at about the 90th to 100th day that I was in the job.

But in between that, I did come up with a few priorities. So number one I would say is emerging infectious diseases. So I came into COVID, but right after that was mpox, right after that was polio in New York state, right after that was Ebola. We didn’t have any cases in the United States, but there’s a lot that has to go on in terms of preparedness, being able to test for the Sudan variant at our lab. So emerging infectious diseases broadly. And I think there’s going to be more of that because the second priority of climate and health, with all the changes that are happening in climate, what we’re going to see in the United States, malaria in Maryland, malaria in Florida and Texas. What’s next for us in Connecticut? We have to be prepared.

So emerging infectious diseases, climate and health, revitalizing public health more broadly. That applies to mental health, maternal health, infant mortality, STDs. The list goes on and on: cancer prevention, cardiovascular disease. These are all the preventative things that kind of fell by the wayside during COVID that we’re trying to make sure all these programs are in person and actually happening in the way to help get them back under control.

Reimagining long-term care in the nursing home industry. We had a crisis in COVID. What is healthcare going to look like for an aging population? What does that look like in Connecticut? Also an important topic. We got an infusion of funding around water. The Department of Public Health provides safe drinking water to people in the state of Connecticut. Water that comes into the body is regulated by this department. And with the bipartisan infrastructure law under President Biden, we had a huge infusion in infrastructure for drinking water, making sure that is being distributed fairly, equitably, and in areas that need it most. That also includes $30 million of American Rescue Plan Act funds that were put towards getting led out of homes. So this sort of broad area of environmental health was another area that’s a big push in terms of what we’re looking at.

And then overlying all of that is health equity. Because quite frankly, if we don’t do this in an equitable way that really impacts the citizens in our state—as you mentioned, Howie, that social determinants of health generally are high in Connecticut, but our disparities are so vast. The differences between what’s going on in Bridgeport and Hartford and Waterbury in our state, to name just a few, and other areas is so vast that health equity has to be at the center of all of that.

**Howard Forman:** I want to ask, you’ve been involved in medical education for your entire career, and it was inspiring to hear you talk about what got you into infectious disease. It reminds me that most of our medical students do not have direct experience with our public health agencies. I wonder if there are lessons to be learned about how do we train people like you who are going to go into medicine but also public health and not necessarily have to go through the infectious disease pathway?

**Manisha Juthani:** So the first thing is, I was just at Yale a couple of weeks ago giving a talk on just this topic to first-year medical students. So maybe that helps open their eyes to what the public health department does. I think for them to understand that we do surveillance of so many diseases, we then try to risk-communicate. 50% of what I think the health department does is trying to communicate with the public on what’s going on and what’s important so that you can ultimately change your behavior, disease modify. I often talk about the three Es for our department of public health. The first is to educate. The second is to engage the public. And the third is to evolve their behavior. And so those three key principles, if medical students can learn that and remember how the health department interfaces with the work they may do as clinicians in the long run, we’ll be better off.

**Harlan Krumholz:** Great. I want to just return quickly to the disparities issue because it’s also an area of intense interest of mine. I know Howie’s too. One of the things that’s interesting is Connecticut’s a lower mortality state than most of the others. I mean, we really are, I think, what, among the top five or so. We’re in the top 10% of all the states with regard to our life expectancy and health measures.

But what’s disturbing across the nation is no matter where you sit on this spectrum of performance around health, there’s still this delta, there’s still this difference between how, for example, White people do and Black people do. This difference in mortality rates, this excess mortality. I’ve been calling it excess mortality among Black Americans compared to White Americans because of course this is all about social context and social determinants and structural racism. It’s not about their intrinsic biology. It’s not how they were born.

I’ve just been trying to think hard. What can we do as a state to actually break this pattern? Up until now, we haven’t been able to make that progress. Yale is a great institution, hasn’t been able to do it. Connecticut is a great state, hasn’t been able to do that. Do you have any thoughts about what we need to do to accomplish, then?

**Manisha Juthani:** Structural racism didn’t happen in a day, and it’s not going to be undone in a day. I think that’s something I’ve had to accept. That doesn’t mean that it doesn’t stop me from trying to do all the things we’re all trying to do because I think there’s so many barriers to trying to accomplish what you’re talking about.

Right out of the gate, a young child born into a situation which may have the cards stacked against them makes it challenging right from the start. So we really have to do this over the entire life spectrum. One example I can give you is we’ve been entrusted with funds to reduce community gun violence. We issued our first set of eight grants to community-based organizations that are specifically targeting the public health approach to firearm injury prevention. And that is on the ground in communities. So what are the types of groups that are doing this? We have groups that are working with students in New Haven, making them feel good about themselves, feel connected with each other, doing activities with each other to show a pathway that maybe doesn’t lead down a place of self-worth being less of engaging in violence, potentially getting into drugs and going in a direction that takes us off that path. We have groups that are helping young mothers and young fathers stay in that trajectory. We have groups that are taking young kids in Hartford to a farm every week.

Again, taking care of somebody else, taking care of something else. These are strategies that we have to start young and we have to be persistent. Preventing recidivism. If somebody’s coming out of the justice system, how do we help them get back on their feet? And we have to keep being persistent across the life spectrum, starting from birth all the way to nursing home care. And if we keep doing that, we will slowly move the dial. It’s not going to change overnight, but all the programs that we work on are one step in that direction. And I’m hopeful that in my time that I’m in this job, we will move the needle at least a little bit.

**Howard Forman:** I’m a lot more hopeful and a lot more optimistic because you’re in that job. So thank you very much for joining us on the *Health & Veritas* podcast, and we look forward to having you back.

**Manisha Juthani:** Thanks so much for having me.

**Harlan Krumholz:** Well, that was a terrific interview. We’re so lucky to have the commissioner on today and I’m so glad that you were able to book her. But let’s get to your part of this podcast, Howie. What’s on your mind this week?

**Howard Forman:** Yeah, so I wanted to end with some good news for our listeners and for you, Harlan. I don’t often talk about global health occasionally, but really, not often enough. I mostly deal with domestic policy, but these are really important. They give me hope, optimism, and we have too little of that.

So first up, the Guinea worm. In 1986, there were 3.5 million reported infections in individuals resulting in disability and just plain pain. I mean, this is a debilitating infection.

**Harlan Krumholz:** What is the Guinea worm?

**Howard Forman:** So the Guinea worm, if you go really far back to the Bible, it’s the serpents we talk about when we talk about the 10 plagues. It’s a nematode. We could talk about the whole life cycle, but it’ll take a lot of time. But literally a worm gets inside a human being and eventually exits through their skin. It’s horrible. We will put [a link on our page](https://www.cdc.gov/parasites/guineaworm/index.html) for people to look at it if they want to, but I would caution them not to. But it’s a serious illness.

**Harlan Krumholz:** It’s too gross for them to look at.

**Howard Forman:** It really might be, but we’re going to leave a link for them if they want to. It’s on the second page of the link.

Through the efforts of [our 39th president and his Carter Center](https://www.npr.org/sections/goatsandsoda/2023/02/23/1158358366/jimmy-carter-took-on-the-awful-guinea-worm-when-no-one-else-would-and-he-triumph), there were only 13 cases last year for the second year in a row. Down from 3.5 million, down to 13. Just amazing. This has been a incredible effort on the part of local and global public health officials that comes from getting better access to cleaner—which means filtered—water, eradicating the disease from host animals, and getting earlier treatment for the affected patients. The Carter Center itself invested over $500 million in this effort and many others as well. It’s not the only neglected disease to be tackled by the Carter Center, but it’s the only one that could result in true eradication of this parasite from the earth. Smallpox is the only other infectious human disease to have seemingly been eradicated.

But there’s still [more good news](https://www.bbc.com/news/world-africa-67951537) because this time out of Cape or Cabo Verde, however you say it, an island nation off the coast of West Africa, in an archipelago. In this case, the World Health Organization has certified that they are just the third African nation and the first sub-Saharan nation in 50 years to be certified as malaria-free after three consecutive years of no malaria cases. Much like the case of Guinea worm, this effort is multidisciplinary, multi-attack, and it comes from huge local and global efforts. Now, 580,000 people died of malaria in Africa in 2022. So this is a major cause of morbidity and mortality, and there is a lot more work to be done in the world to eradicate disease. But to me, it’s exciting to celebrate the wins as we’re in the beginning of a new year.

**Harlan Krumholz:** I can’t tell you how much I appreciate hearing good news, Howie, because we always are talking about the problems around the corner or the problems we’re facing. And of course, the commissioner was identifying even malaria in the United States. And so what you’re saying is we actually can come together, make progress, and improve global health.

**Howard Forman:** That’s my belief.

**Harlan Krumholz:** So we just got to spark that a little bit more, right?

**Howard Forman:** Yeah, I hope so. I mean, it shows me the power of public health, of public health schools, of public health institutions. We just have to work together. We have to oar in the correct direction and together.

**Harlan Krumholz:** Yeah, and you’re talking a lot about infectious diseases, but the noncommunicable diseases like heart disease and cancer, I think those are all on the horizon too.

**Howard Forman:** And as people live longer lives in those countries, they become much more important.

**Harlan Krumholz:** So let’s try to look for those same kind of successes. So yeah, great. Thanks for sharing that. You’ve been listening to *Health & Veritas* with Harlan Krumholz and Howie Forman.

**Howard Forman:** So how did we do? To give us your feedback or to keep the conversation going, you can find us on Threads.

**Harlan Krumholz:** I’m @H-A-R-L-A-N-K-R-U-M, that’s [@HarlanKrum](https://www.threads.net/@harlankrum).

**Howard Forman:** And I’m [@the4man](https://www.threads.net/@the4man) on Threads. Or you can still look for me [@thehowie](https://twitter.com/thehowie/) on Twitter. You can also email us at [health.veritas@yale.edu](mailto:https://twitter.com/thehowie/) aside from Twitter and our podcast. I’m fortunate to be the faculty director of the healthcare track and founder of the MBA for Executives program at the Yale School of Management. Feel free to reach out via email or in any other format you want so that we can talk more about our innovative programs or check our website at [som.yale.edu/mba](http://som.yale.edu/mba).

**Harlan Krumholz:** Finally, if you have a view on the podcast, please rate and review us on your podcast app. We always read and talk about these reviews. For instance, recently one person wrote, “Super informative. Well done.” That was good. But they said, “My only wish is to hear less of the Yale-centric accolades, as it sounds too click-y.” Howie, should we cut down on this?

**Howard Forman:** Look, I think I will say this. We have to be fair. We do this as a labor of love. You and I have both spent essentially our entire academic careers at Yale. We love Yale, but we are so proud of everybody as part of the public health community, the healthcare community, and it’s nice to get some feedback. I’m personally trying to talk a little less about Yale. We’ll have to get more feedback to find that if we’re succeeding.

**Harlan Krumholz:** Yeah, maybe a little less inside baseball, because every once in a while you and I default to something about Yale. That’s a little insider stuff. So yeah, let’s try to be sensitive to that.

*Health & Veritas* is produced with the Yale School of Management and the Yale School of Public Health. Thanks to our researchers, Ines Gilles and Sophia Stumpf, and to our producer, Miranda Shafer. Extraordinary people helping us every single episode.

**Howard Forman:** So appreciate everything that they do for us.

**Harlan Krumholz:** Yeah, talk to you soon, Howie.

**Howard Forman:** Thanks very much, Harlan. Talk to you soon.