“That’s Understandable” Podcast - Season 1 - Episode 8
Screenings & Early Detection
Final Transcript

Brendan 00:06
- Hi there and welcome to "That's Understandable," where we make the complexities of healthcare more, you guessed it, understandable. Thank you for joining us today. I'm Brendan McEvoy, US Head of External Communications at AstraZeneca, and I'm your host. Most healthcare providers suggest adults receive routine screenings for certain conditions, including things like regular physical exams, skin checks, and screenings for some cancers, to name a few. In addition to these, healthcare providers may also recommend screenings based on a person's age, gender, or family medical history. Despite the encouragement from medical professionals for people to get screened regularly and the evidence proving the benefits of screenings, only 8% of Americans undergo routine preventive screenings, 8%. Why is that number so low? As you can imagine, there are a variety of factors leading to that alarmingly low number, disparities in people's ability to access screenings, frequently changing guidelines and the confusion that comes along with it, economic obstacles, the list goes on. Joining me today to discuss the importance and complexities of health screenings are two of my colleagues at AstraZeneca. As medical doctors with experience in both direct and indirect patient care in the US and globally, they each bring a unique perspective to this conversation, having seen what encourages and discourages people from getting their recommended health screenings. Dr. Rachele Berria is AstraZeneca's Vice President, US Medical Biopharmaceuticals. She leads the US medical team, ensuring scientific leadership and a patient-centered approach throughout her entire organization. With more than 15 years experience and leadership, Rachele has focused her career in the areas of biopharmaceuticals, clinical research, and academic medicine, with a particular emphasis on diabetes and cardio metabolism. She is also a board certified OB/GYN. Dr. Carlos Doti is AstraZeneca's Vice President, Head Medical Affairs, US Oncology, where he is responsible for leading the medical strategy across our company's oncology portfolio. Originally from Argentina, Carlos came to AstraZeneca in 2016 and has held various medical affairs leadership roles in the oncology business unit within the international markets and on the global level. Most recently, he served as the global medical franchise Head of Hematology and is a hematologist by training. Thank you, Rachele and Carlos, for joining me today.

Dr. Rachele Berria 02:46
- Thanks for having us, Brendan.

Dr. Carlos Doti 02:48
- Thank you very much and thank you for the introduction. You make me sound very important, which I'm not. I'm just Carlos. (Rachele laughs)

Brendan 02:54
- No, you're both very important and I'm so glad to have you both on this podcast today. So a lot to cover, so I'm just gonna jump right in and maybe I'll start with you, Rachele. So I'd like to start with a bit of level-setting for our listeners with a simple question, and that is, what are screenings? Can you briefly explain what screenings are and the role that they play in healthcare?

Dr. Rachele Berria 03:15
- Yeah. I'll try to make it as simple as possible. The process of screening in healthcare is essentially systematically testing healthy individuals to identify those that are at risk for certain diseases before even the symptoms appear. Good examples of screening could be a simple

blood test, it's called hemoglobin A1C, that help you diagnose in diabetes, or a very simple urine test to look for proteins and then at that point you would know that there is some risk for kidney disease or a pap smear in women to detect cervical cancers.

Brendan 03:56
- That's great. And thanks so much for the description. I think it's helpful as we start this conversation to sort of have a bit of a baseline understanding, especially as it relates to the role of annual checkups and maximizing screenings' impact. So if we go a step further with this, I know the term screenings and early detection are sometimes used interchangeably, but really they aren't the same thing. So to you, Carlos, with your expertise as it relates to cancer specifically, could you shed some light on the distinction between screenings and early detection?

Dr. Carlos Doti 04:30
- So early detection is trying to find cancer at its very, very, very beginning. So we all know, or if you don't know, it's in a simple way, when you're talking about solid tumors, most solid tumors evolve in stages. The further down the line in the stages that you are, the less probability of cure you have. So if you really want to cure cancer, we need to detect it as early as possible. Now, for example, if we think about something like lung cancer, you can actually detect a solitary pulmonary nodule, an incidental pulmonary nodule that if you work on that, you can actually, with surgery, radiotherapy, you can cure lung cancer. If you don't do it at the very, very beginning, you still have probability of cure, but the treatment will be much more intense. The suffering of the patient and the caregivers around it will be completely different. And as you go to metastatic setting, the outcomes will be completely different. So if you find a way to find the cancer at its very beginning, by very, very, very attentive on the first symptoms. On the other side of that, there is screening, and unfortunately, no, not all cancers can be screened. And what would we mean to screen? Similar to what Rachele has shared. Screening is going to people at risk and find a signal that will alert you that a cancer may be present or may be coming. For example, I turned 50 last year. That means that I'm at high risk for colon cancer. Does that mean that I have colon cancer? No. It means that after 50, the risk of having colon cancer, it's much bigger than when I was 40 or when I was 30. So now I need to go through screening, which is a colonoscopy or detection of blood in the fecal matter so that if it's negative, I know that I don't have it. If it's positive, I have to go to more in deep analysis to make sure that I detect as early as possible, right? And the interesting thing about screening is in some instances, you can screen for a risk in a patient that affects a family. Colon cancer, it's one of those conditions. If you go through a colonoscopy and you have multiple polyps, then not only is your risk of colon cancer increased, but as your family. So it's crucial when you are 50 and you go to annual checkup that you pay attention to the discussion of the physician. You're now at a higher risk of colon cancer. You're now at a higher risk of prostate cancer. If you're a woman, you're at higher risk of breast cancer. So there's a lot of things that you can do. Now, because the first point of contact is your primary care physician, and we can discuss this further, but there's two components in that screening. The physician needs to know, what are you at risk of? But we need to empower the patients and the families to ask for those because sometimes in a very, very busy healthcare system, this may be missed. And again, not everything can be screened, but the difference that we can make if we screen or early detect cancer for the patients and the family are radically different and therefore the importance of doing it.

Dr. Rachele Berria 07:50
- Yeah. And Carlos, you described it so well. In my view, there's three types of screen rules, right? And they play a huge role in healthcare. The first one is you manage risk factors. To your point, you're over 50, you want to make sure you go for a colonoscopy. Your BMI is over 25, you're overweight, you know that you might be at risk for diabetes or heart disease, even

cancer for that matter, so that's one first bucket. The other one is screenings that we do in the community to avoid spreading of certain viruses. Sadly, we all got familiar with the COVID-19 screening, right? Where we would test around to make sure that we were not spreading it unnecessarily. And then the third one that you quoted is how can we help with early detection of cancers that if taken in time, have higher likelihood of success? But the bottom line is patients need to be empowered and are being aware of the risk factors and how they can demonstrate self-efficacy and talk to clinicians about their family histories and things that will help him or her putting the pieces of the puzzle together, right?

Dr. Carlos Doti 09:12
- No, absolutely. And to close this early detection versus screening, two examples. So when a woman has a pap smear, it's actually to detect a condition that it's before cervical cancer. So it's called dysplasia of the cervix, right? And there's a procedure that you can do to eliminate that dysplasia. And then you have you never had cancer and it acted before cancer. That is the true meaning of screening. If you are a smoker, a heavy smoker under 50, I'm sorry, not 50, over 50, the screening procedure today will be have a high-resolution CT scan to detect that isolated pulmonary nodule. Now, that isolated pulmonary nodule, if I extract it and it's cancer, that was early detection of cancer. But I cannot find a lesion that is before that. What I can do is make sure that physicians, patients, everyone is aware of what are the risk factors, right? Best thing you can do, do not smoke. If you have stopped smoking, you're still at risk. So if you stopped smoking 10 years ago, doesn't mean that you have no more risk. So I still need to check up on you. And that's one of the misconceptions. Some risk factors, when you take them away, then you reduce the risk almost to zero. But some risk factors, it will take time so the risk goes to zero. So a big misconception of screening and early detection is, oh, I change this behavior, I'm okay. Well, not necessarily for all conditions. (soft music)

Brendan 10:53
- I could sense the importance and urgency Carlos and Rachele placed on screening as they described the impact they have on health. As they spoke, something stood out to me. The sheer number of screenings available could potentially make it difficult to stay informed. I wondered how to stay up-to-date with the latest guidelines. One of the things that we often hear about is guidelines changes. So we're obviously within the healthcare sector, much more familiar or attuned to those. But you do hear on sort of mainstream consumer news broadcast channels a lot around the changing or the evolution of guidelines related to when screenings should occur. So I'm curious, Rachele, from your perspective, given all these changes, and I think it's sometimes hard to keep up with, what do you recommend or how do you recommend that people stay informed of the appropriate screenings that they should have?

Dr. Rachele Berria 11:51
- Yeah, so that's huge, Brendan, right? So important. So, as we said earlier, patients should take an active role, but it takes a little bit of effort. What I would suggest is going to the website. People are familiar with internet now. They all Google things up. The USPSTF, and I know it's a mouthful, but it's essentially standing for US Preventive Service Task Force. It's a very good website because you can literally enter your age, your gender, your smoking habits and things like this and then it will give you a little bit of a list of those are the screenings that you should be undergoing. So that's a very simple way that I think we can all keep up with the changing guidelines and to the point that you were making, this is actually the beauty of how much we know about the science and the different diseases. And so it's hard for whoever writes the guidelines sometimes keep up with that and it's hard for clinicians as well. There was an interesting article that actually made the headlines a year ago. It was published in the Journal of General Internal Medicine and it's fascinating because what they did was a

simulation analysis taking, as an example, a primary care physician that sees an average number of patients per day. And they established that it would take 27 hours a day to follow the national recommended guidelines for preventive care. So you know when we say there's not enough hours in the day? Okay, this is proving the point. And to me, this has two key ramifications. One, as we were saying, patients, everyone should play an active role in his or her self-care because nobody knows better than you your family history, your risk factors, what you're exposing yourself to. But then the other piece is how can we help clinicians to make their lives a little easier to follow these guidelines? We can create tools to risk stratify their patients to make sure that really the ones that are at higher risk for diseases raise to the top. We can create tools whereby in the electronic health records, we can include the guidelines to make sure that quickly they get implemented. There's so many things that we could do also on that side.

Brendan 14:17
- I think that's helpful. I wasn't aware of that website and we'll make sure we include that in the show notes so that people can go to it because it clears up some of the mystery out of trying to stay on top of the evolution. So you mentioned one of the factors to consider is family or genetic elements. So important to have conversations with your family members to understand their health history. But you also had mentioned the role that gender and age play in guidelines as well. So can you explain a little bit more about those elements?

Dr. Rachele Berria 14:49
- Yeah, sure. Absolutely. So I think Carlos was hinting at that before. It's not that every screening is recommended at every age, right? Essentially these are large population health screenings and we have to strike the right balance between clinical and cost effectiveness. In other words, we have to find the best bang for the buck, right? And so are the resources that we put into the screening worth the positive outcome that we cause in patients? The example of colorectal screening after the age of 50 or pap smear starting from the age of 21 and so on and so forth. So in terms of the role that gender and age play is huge because as we were saying, we want to avoid the risk of higher cost, both direct, the test, implementation of the test, the personal, and indirect cause, even the anxiety that a patient may experience in case of false positive, right? So it's really important to strike that balance. And second aspect to keep in mind is that over time, the risk profile of a patient may change. Take the example of heart disease. Women in general are in their lifespan protected against cardiovascular disease for the vast majority. But then after menopause, that situation changes because there's a hormonal change that may actually make them even more prone to have heart disease. And then the third aspect is that certain diseases may manifest differently with different symptoms in men versus women. Again, taking the example of myocardial infarction, the classic is chest pain, right? That's the classic symptom in men. In women, actually the symptoms may be a lot more subtle. It could be just fatigue, nausea, shorten of breath. And so again, it's very important for patients to be aware of these differences because then they can act fast and have the better likelihood of treating that specific disease.

Dr. Carlos Doti 17:01
- Brendan, if I may add to that.

Brendan 17:03
- Absolutely.

Dr. Carlos Doti 17:04
- Next to risk factors and next to age and gender, there's another additional component which is geography, right? So for example, one of the biggest problems that Australia has is skin cancer and that's because they're exposed to sun in a different way. And because you're

in the southern hemisphere, the ozone layers also behaves different than the northern hemisphere. Now, if I try to implement a screening program from melanoma, skin cancer, in Australia should be completely different than that same program in a northern country or even in the different areas of the US. Now, we live in a country that is so big, that has so many different weathers, that have so many different social-cultural differences. That geographic or regional way of thinking the screening should be mandatory. Now, today, guidelines are great because it's a common source of studies. They reference. They're evidence-based. It's not just someone thought about I should do this or that, but then there's another component of education that those things needs to be regionalized and put into practice in the different ways in different areas. And then there's a component of education, if I may, and I'll go back to this example from Australia. Australia have a big problem with skin cancer, melanoma. And it says that primary care physicians, usually they're very busy. You have 15 minutes to see a patient. And as Rachele was mentioning, you go into all these things, blood pressure, diabetes, BMI, all these things that you actually do in your annual checkup. So they realize that not all primary care physicians will make patients undress, right? And one early detection of skin cancer is change in the mole. So we all may have mole in our skins, but if it change in size very abruptly, change in color, now it's itchy, it's splitting, then it's a very high risk for melanoma. So what they did, the government with physicians, they actually went to the beach where people are already half undressed and they came with buses. They got them outside when they're coming out of the beach and say, "Hey, hey, don't put your shirt on just immediately. Do you mind if we have a look at your skin?" And they just did a brief panel and they detected a lot of patients in early stage, so receptable melanoma, and you may not know this, but if melanoma advances and advances very quickly, it can be a devastating disease. So again, if I try to do that today in the New York area, first of all, I will have to screen a lot more patients to find that same melanoma and maybe the cultural component of approaching a person coming out of the beach in New York will not have the same effect because they're not as conscious as the Australian people. So education and make sure that you adapt to the region. It's crucial. I always say the same thing. When it comes to screening or early detection, education and common sense are the two things that should never be lacking.

Dr. Rachele Berria 20:15
- I love it, Carlos. Go where the source is, right? So in Australia, you go where people are wearing swimsuits, and this is a little bit what we do in the US in fairs and you see those little booths to check your blood pressure. We can find out if you're at risk for diabetes or things that such. Go where people are.

Dr. Carlos Doti
- Absolutely.

Dr. Rachele Berria 20:43
- There's an element of pragmatism, right?

Brendan 20:45
- Maybe just to stay on that topic a bit more, I'll ask each of you and maybe, Carlos, start with you, what do you think is preventing people from getting the screenings that they need at the appropriate times?

Dr. Carlos Doti 20:58
- So first of all, we're all human beings and we'd rather not know that now. Unfortunately, that is part of human behavior, right? There's a component of education and education is linked to social-cultural factors, right? So if you go to a primary care physician that is very, very busy and from all the 27 things, he chooses to do three, well, it's better than do nothing. But still,

you are actually leaving 24 behind. Now, if you are driving in that conversation because of your family risk, because of your own personal perception, because you're paying attention to specific symptoms, that can increase the list of things that are being done. So education is a big component and we need to be better at that. I always mention about skin cancer and other things. It's never in the list. However, if you live in the southern states, you're also exposed to sun as much and the incidence of skin cancer in those areas are much higher, right? And all those things probably are not completely incorporated in our guidelines. The second thing is, of course, the health system. The health system is overflowing. So there's a lot of things that need to do and there's a lack of awareness in some parts of the health system, I'm not talking about all, about containing cost, right? So everyone wants to contain cost and of course, when you want to do something at a big scale, usually there's a lot of cost, even if it's very, very small. So for example, the HPV vaccine, it's a lot more costly than a pap smear, right? So it's actually more cost-effective to do pap smears for all women in a country and detect cervical cancer than actually vaccinate all kids at age 13. But the probability of success of that is much lower. So specifically in undeveloped countries, in low income countries, it's much more effective to institute the vaccine early in the life of those young individuals than expect that people with very low income or problems with education will actually follow up the yearly pap smear thereafter.

Dr. Rachele Berria 23:35
- That's essentially the striking the right balance, right? As we were saying before, between clinical effectiveness and cost effectiveness. And to your point, it might be justifiable in that case to just go with the vaccine.

Dr. Carlos Doti 23:40
- No, absolutely, absolutely. And again, in my very biased and personal opinion, when it comes to cancer screening or early detection, there's a component of, in the general population, that we don't want to know. And there's also a component that if the screening is part of your yearly checkup, I have experienced this firsthand with people in my family, there's no follow-up. So for example, someone very close to me had a CT scan of the lung, and in that specific CT scan, they detected a very small nodule below, below the, what we would call a solitary pulmonary nodule, right? So according to guidelines, that should be retested within a year. That was put in the report. That was shown to the physician that asked for the CT scan, right? And just by chance, because I am the official second opinion in my house from everyone in my family, they send me these things, and I said, "So you have to do another CT next year." He says, "What do you mean?" Well, because you have an a pulmonary nodule that is below the leverage of what we would call a solitary pulmonary nodule, but still needs to be followed up. No, my primary care physician never said that. No, but it's here. It's in the report. It's in the guidelines. So again, sometimes we put a lot of pressure into that primary care physician to know everything and follow everything. So I think there's a component of education, and I mean, it's not just responsibility of the patients to be educated. Governments, health authorities needs to make sure that the same thing as we did tons of campaigns for COVID or we're doing tons of campaigns with other things, we pick the things that are more important or more relevant for the general population in each of the countries and educate in mass media campaigns about what you should be doing.

Brendan 25:46
- Yeah. Thanks, Carlos. Rachele, I know you had sort of chimed in as well throughout that. Anything else you would add in terms of anything different that you have seen that's maybe getting barriers to getting in the way of people getting the appropriate screenings?

Dr. Rachele Berria 26:01

- Yeah, no, I've seen so many all throughout my professional career. The one that Carlos identified, I call it the invincibility syndrome. Especially younger people, they feel like, why should that affect me? You know, it's impossible. And then the other aspect, Carlos, that you were mentioning is a little bit of fear of knowing. And so I've done it. It's uncomfortable. It's one and done. I'm not gonna follow up. Another component I think is a misconception on the complexity. People think that going for screening, to the point that you were making, Brendan, why it's only 8%. Well, some people may think it's really more complex than what it is. There's pharmacies all over the US. You can check your blood pressure. You can do a simple urine test to check for chronic kidney disease. It's not much more than that. As fourth component I would say is the fear of shame or social judgment. And so for example, people may avoid getting tested for sexually transmitted diseases, mental health issues, or addiction-related problems because they're fearing negative labeling, right? And then one that I love is time constraints, the people that will tell you, "Oh, I don't have time." And I always, that makes me smile, right? Because I hear the same from people that say, "I don't have time to work out." Well, if you make your priorities correctly, then you will find that time. And same goes for screening, right? And then probably last but not least is financial barriers and people thinking I don't have enough money. This is very costly. I guess to that I would say there has to be an understanding of the enormous benefit that those patients will then have, even if there's a little bit of a cost associated with screening, the money that you would save in the long run definitely justifies that portion. And I hope I convince everyone that is listening that this is so crucial. It's part of good self-care.

Dr. Carlos Doti 28:22
- And Brendan, I would like to bring back the common sense component that we spoke before. So there's a problem also when you rely everything on guidelines and you leave clinical judgment outside of the conversation. I'll give you an example. We have a project with ACCC which is screening for lung cancer in the Appalachian region, right? So the Appalachian region in the east coast is one of the highest incidence of lung cancer regions in the US and that is because there's a highest incidence of smoking also in those areas. So when we're doing this and trying to screen more people. Very, very early into that project, we realized that because it's an area that is known for high, high risk of lung cancer and because there's a high incidence of smoking, if you are a woman who does not smoke, your detection of lung cancer usually delayed. Why? Because everyone assumes that lung cancer is a male disease and associated with smoking. I'm talking about community, very small institutions, right? But there is a part of lung cancer that is more common in women that has nothing to do with smoking, which is the acquisition of a specific mutation in a gene that makes you prone to have lung cancer. Now, because you're thinking so much into one direction, you're missing the point of the other. So again, education needs to be into context and should be put also under the clinical judgment and the common sense of physicians. So definitely we need to do more screening, definitely we need to do more early detection, but all in the context of the disease itself. (soft music)

Brendan 30:18
- Carlos and Rachele brought up some very interesting points about the barriers to screening, whether financial, cultural, or even related stigmas that stuck with me. It seemed there were misconceptions about the process of screenings, what it entailed, and what could be done with the information following a screening. One of the pieces that a little bit of what you had shared, Carlos, but then Rachele, you also mentioned it as sort of the stigma related to lifestyle habits or addictions that might be one of those barriers that will prevent you from going in to get screenings because of potential shame associated with it.

Dr. Rachele Berria 30:57

- Yeah, you know, and related to the point that you were making, Carlos, on lung cancer, I was listening to a pulmonologist. She's an expert and she was proposing to change the term smoker, which immediately has a negative connotation, to tobacco exposed. I thought it was an interesting one. You know, for years, we have witnessed the same phenomenon for people affected by obesity. A little bit, there's a stigma, well, that's your fault. It's poor choices that you have made in your life. And then sooner people realize, well, in some cases, it's true, you could do a lot and change your life habit, but it is considered a disease and there's many reasons, emotional ones and others, that prompt that person to overeat and then have obesity and there's now good therapies for that as well. So I thought it was an interesting switch to move from smokers to tobacco exposed, to the point that you were making, Brendan, on the stigma.

Brendan 32:03
- Well, and I think, Rachele, that's a good point because you can get lung cancer by secondhand smoke. You have a higher incidence in that and you are not a smoker. You're just tobacco exposed.

Dr. Rachele Berria 32:12
- Right.

Dr. Carlos Doti 32:13
- I completely agree with that. And then when you mention obesity, there's a vicious circle when you put that stigma into the patients that it's not helping to reduce weight, which over time it gets to hypertension, with over time gets to type two diabetes, which over time gets to more things coming on your plate, overwhelm you even more, and that goes against you reducing your weight, which can actually prevent diabetes and can reduce your high blood pressure. So again, there's a lot of education, as we mentioned before, to emphasize the importance of this. It's not just on the physician. It's not just on the patient. It's on the community as a whole because everything that we just said, so I know the US healthcare is a private system, but will you go outside the US? Everything that we just described is a society problem because everything will translate into increased healthcare cost, but also will increase in reduce time on work, reduce of taxes, payments by the patients who are not working. So all those things are interlinked. So the wellbeing state that started in Europe and we all want to have there as a goal as a society includes education at its center because of all these things. Screening without educating, it won't work. Putting a treatment without educating, it won't work. And telling people it's your fault because that's what you think it is, it's not only not working, it's gonna be against what we want to accomplish, which could be everyone a better health.

Dr. Rachele Berria 34:01
- Very true. Wholeheartedly agree.

Brendan 34:04
- So we talked about some of the barriers, including stigma, time, the invincible syndrome. What about are there any other sort of common misconceptions about health screenings that you all have experienced or heard that you think might be important to address for the audience?

Dr. Carlos Doti 34:25
- I think there's another component that, and this is very, in my experience in cancer-related screening and early detections, so, which is the economic component. So in the US where there's a lot of copays in all of things that you need to do, first of all, most healthcare systems, when it comes to screening, will cover because they have learned that it's a much

better investment to go upfront to go to the screening that to pay for the treatment afterwards. But that is not clear to most people. So they think that, well, because I have a co-pay with these things, well, I have to co-pay with this, so I'm having a hard time. I don't have time to do it and it's gonna cost me some money. But then when it comes to early detection, not all early detection procedures are equal and they're not covered in the same way. So part of that education or part of the responsibility of the health system is to find out those who have the highest ratio of actually getting that early detection component and cover it. So there was a lot of discussion about who needs to have a high resolution CT scan for lung cancer, at what age, what are the risk factors? And that discussion is still ongoing, but while the discussion is ongoing, some part of the health system may not be covering that. So we are actually losing that early detection in parts of the United States because it's not clear what to do and it's not clear who should pay for this or how? What is the economic component of this? Which go back to the socioeconomical, cultural, educational background that all these things are linked to, right? We need to educate, but we need to lift the barriers for patients to get to that early detection or screening. (soft music)

Brendan 36:15
- While Rachele and Carlos cleared up some of the misconceptions about screenings and how those add additional barriers to patients, I had a thought. Screenings are clearly key to preventive care, but what are the impacts of preventive care versus post-diagnosis treatment, not just in effectiveness, but also in costs and environmental impact as well? Yeah, and if I might stay on that thread a bit, on sort of the economic implications and as well as environmental. So there's obviously a debate around sort of the, which is more impactful, sort of the preventive care or sort of the post-diagnosis care. So, Rachele, could you talk a little bit about sort of both the economic and environmental costs related to administering from a preventive care standpoint versus administering care post-diagnosis?

Dr. Rachele Berria 37:14
- Yeah. I'm gonna explain it with an example, Brendan. Take chronic kidney disease. There's an estimated 37 million Americans with chronic kidney disease and up to nine out of 10 people actually don't know they have CKD or chronic kidney disease. And it's a very simple test. It's a urine test to check for proteins. It's a lab that normally gets done. So it's a matter of putting two and two together. And it's a silent disease, by the way. It gives no symptoms, right? So to the point of early screening, but if we diagnose it and treat it at an early stage, we can actually halt it with acceptable cost. If we don't and then we let it go, then patients go to late stages of kidney disease and they may need either dialysis or put themselves on a list for a transplant. So it's huge cost to the society, 10 times higher than actually managing a patient early, let alone the emotional cost, right? That that has in terms of I'm on a list for a transplant. I need to find a good match. Sometimes they may not work out okay. I'm on dialysis. I'm spending on average two days a week attached to a machine. And then to the point that you were making, it's not only financial burden for the society, it's actually an environmental one because people don't realize, and this is something that I'm so passionate about, when you go on dialysis, there's water wastage, there's electricity, and we actually ran a study showing that patients undergoing renal replacement therapy, so either dialysis or transplant, the whole system increases the consumption of fresh water, fossil fuel depletion, and CO_2 emissions. And our motto at AstraZeneca is we want healthier patients, healthier communities, and a healthy planet. And it's all related. People just think about environmental impact in terms of, oh, let's make sure we don't pollute the environment with our cars, which is definitely one component, but the other essential one is that positive clinical outcomes actually drive better environmental impact.

Brendan 39:37

- Fantastic. No, that's great. It's great to put it in perspective of both the economic and the environmental because I think it, you know, depending on your perspective, where you sit, I think if one doesn't sort of catch your attention, maybe the other one will. And so I think it's obviously dollars and cents obviously piques a lot of interest because it's, especially during these times of, obviously it's something people are very aware of, but I think that environmental impact and in particular in an environment right now where we're seeing so many devastating storms and disasters related to climate change and that sort of, that impact of healthcare and climate and vice versa, I think is super relevant as well. So upfront, I shared a little bit, very brief bios about each of you and that you lead medical teams across the US from both the biopharmaceuticals and oncology perspective. So I'm curious if you could share what you do in your respective roles to work with the healthcare provider communities that you interact with on things like screening to ensure that patients are living the healthiest lives that they possibly can. Rachele, maybe I'll start with you and then, Carlos, I'll go to you.

Dr. Rachele Berria 40:57
- Yeah, maybe to continue on the theme of chronic kidney disease, actually, we started a large program a couple of years ago and we're helping clinicians and patients diagnosing chronic kidney disease. Nine out of 10 don't know they have it. And so it's imperative for us to do something for our society. And so we go from risk stratifying the patients and working with the electronic health systems of various hospitals about the US. We had a very successful program where we helped screening and diagnosing millions of patients already to having tests shipped to patients that could be at risk and have follow-up with clinicians. And so that's something that I am very proud of. And like I said, it's a very simple set of tests that in some cases are available in the electronic health records and we just need to help clinicians. To the point that we were making before, there's not enough hours in the day. And so how can we help them simplify the processes that they go through?

Dr. Carlos Doti 42:08
- So as I mentioned before, screening and early detection are not the same and it's even a different stakeholder when it comes to who's gonna run these tests. So we are focused on different projects. Some of them are more about understanding what is the current status and we have several real-world evidence initiatives to understand what is role of screening and early detection in breast cancer and in prostate cancer and so on. I think in lung cancer, because we've been longer, we have much concrete and bigger examples that are actually making a difference. I mentioned before the project that we have with Rural Appalachian with ACCC, which we're actually, it's a stepwise approach project where we're understanding what are the barriers to screening, what things are going on well, and how can we implement quality improvements in different areas of Appalachian? And honestly, I'm not from the US or I was shocked about how big the Appalachian region is and how many states are included into those areas and how some areas that are not recognized themselves in the Appalachian region are under the influence of the same risk factors. So we're working on that and it's been a very impressive learning experience. And also we think we can make a lot of difference by improving the quality of screening in these areas and the learnings will be transferred to other areas. The other thing that we published last year and it was really, really good was we embarked into a project in the New York area to screen for solitary pulmonary nodules, so as a screening for lung cancer. And it was amazing because we partnered with health system and we were able to screen 5.5 million people, right? So there's 20 million people living in the New York area and we screened 5.5 and we detect 152,000 pulmonary nodules to follow up that, again, not necessarily cancers, right? But we identified a lot of patients that were at risk because of the image. And then the importance of that is to follow through and make sure that they get the right assessment and so on. And again, I'm really proud of these two projects because although we work in lung cancer, both of these projects are completely brand agnostic, has nothing to do with our products in the market. Just part of a responsibility as a

company that if you are part or if you want to be part of the health system that take cares of the patients with a specific disease, you should never, ever forget that the most impactful, the most impactful measure that you can do is prevent a disease from happening. And that can only occur with screening or early detection.

Brendan 45:11
- Carlos, I think that's a great way to end this conversation, on the importance of prevention. So I want to thank each of you for joining us today and sharing all your incredible knowledge and insights and experience with us. I know I learned a lot during this conversation, so I hope our listeners leave the discussion with a better understanding of the importance of health screenings, but are also encouraged to stay up-to-date on their checkups. Before we close, though, I like to close out each of our episodes of "That's Understandable" with a little game where we get to know a little bit about a different side of you. So we end each episode with this rapid five questions. So I'm gonna ask you the questions and just love for you to shout out the first thing that comes to mind. Does that sound good to you?

Dr. Rachele Berria 45:55
- Sounds great.

Brendan 45:56
- Okay. All right. And so for each one, Rachele, I'll go to you first and then Carlos right after. All right, Rachele. So in what book or TV show series would you want to live?

Dr. Rachele Berria 46:09
- Hmm. That's a tough one. So I would say Ted Lasso. I loved it. If you haven't watched it, people are just, catch up with the episodes. It's a tiny little town in England and it talks about a football coach that moves to Europe, doesn't know the first thing about soccer, but it really speaks about the importance of being optimistic, bringing the best out of people, and creating that team environment and comradery. So for all these reasons, I would like to be in that setting.

Brendan 46:47
- Love it. How about you, Carlos?

Dr. Carlos Doti 46:48
- I would love to be one of those doctors in those TV shows like ER or Dr. House. (Rachele laughs) I always fascinated by how fast they get to those diagnoses. They see two things, one lab, and they come up with the most incredible diagnosis that I could have never done. It took me hours and hours to get even close to those things. So I would love to have that magic thing like television. This is amazing. Yeah.

Brendan 47:19
- All right. Back to you, Rachele. If you could be the best in the world at something, what would it be?

Dr. Rachele Berria 47:23
- If I could infuse optimism in people and helping them see the bright side of things, that would be my preferred superpower.

Brendan 47:34
- I love that, optimism. How about you, Carlos?

Dr. Carlos Doti 47:36

- One thing that I aspire to be, which is the best father possible for my three daughters, that is my go to everything. But if you're gonna do wishful thinking, I'm from Argentina, so soccer is a religion there. The problem there is I could never be the best at soccer because we already have Messi and Maradona, who you can never, ever, ever beat, and also because my main love in sports is rugby and the spirit of that sport on the things that I learned in that field remain with me. And I was always wondering, what if I was better?

Brendan 48:20
- Well, it can always be a dream, right? Or I should say maybe it's-

Dr. Carlos Doti
- Of course.

Brendan 48:23
- Or maybe it's never too late, right? (laughs) So, Rachele, what is your favorite thing to do to relax?

Dr. Rachele Berria 48:30
- I love to break a sweat. I am an Orangetheory fanatic and I don't know if you ever tried it, but it is addictive.

Brendan 48:39
- How about you, Carlos?

Dr. Carlos Doti 48:40
- I'm a huge, huge fan of music and I have favorite type of music for different activities and I have a very eclectic taste in music. So for example, people are surprised when I tell them that I'm a huge heavy metal fan and that my go-to song before a very difficult meeting is "Cowboys From Hell" from Pantera.

Brendan 49:03
- Well, full of surprises there, Carlos. I'll have to look up that song. Rachele, what is one of the most unexpected pieces of advice you've ever been given?

Dr. Rachele Berria 49:12
- So this was early in my career in the pharmaceutical industry and there was a project that was not going optimally. And so I get invited by one of the most senior people in the company and I'm already panicking and thinking, oh my God, you know, I'm gonna have to work even more. And I was working already long hours and I remember I had one small kid and one on the way and it was surprising to hear this person saying, you know, it's not working more, but it's working in a smarter way.

Brendan 49:44
- That's great, great advice. Carlos, how about you?

Dr. Carlos Doti 49:47
- I cannot remember the title of the movie, but it was a Russian spy movie from, so it is an American movie, but it was about Russian spies with Tom Hanks and everything during the Cold War. And there was this guy who was English in origin, but it was a Russian spy in the US was captured. And Tom Hanks was the lawyer defending him. And this Russian spy was always cool, never had a problem. And Tom Hanks keep asking him, why would you not get mad? Why are you not angry? And the guy always said the same thing, would it help? Will it change anything? And the usual answer is no.

Brendan 50:29
- Yeah, no, that's great advice. All right, final question. Rachele, what was the last thing you did for the first time?

Dr. Rachele Berria 50:35
- Oh, that's an easy one. So Carlos is from Argentina. I'm actually from Italy. Over there, golf is not as widespread as it is in the US, so I decided to learn and you know, I thought it would be easy, but it's actually a lot of technique that is involved with that. So, yes, I hope I will get better soon and go to the golf, yeah, courses.

Brendan 50:59
- Yeah, I think it requires quite a bit of patience too. (laughs)

Dr. Rachele Berria
- It does.

Brendan 51:03
- Yeah. Yeah. Carlos, how about you?

Dr. Carlos Doti 51:04
- So I will share something that I'm going to do tomorrow for the first time. Have not done it yet and I'm really, really scared. I am driving my oldest daughter to college tomorrow. (soft music)

Brendan 51:17
- We'll be thinking of you as you make that trip tomorrow. We all have a fear of the unknown. It's only human. But when it comes to our health, Rachele and Carlos made it clear that it is better to know before you notice symptoms or as soon as they start. I encourage all of us to visit uspreventiveservicetaskforce.org and talk with our primary care providers to find out what screenings you should be considering and to get them scheduled. Thanks again for joining me today. For more information on screenings and preventive care, be sure to check out our show notes. Until next time, be well, be healthy, be understanding.