

Season 2 Episode 5 – A Legacy of Innovation: Transitioning  
Leadership at the Renal Research Institute  
*Guest: Len Usvyat, PhD*

**Peter Kotanko**

Welcome to the Renal Research Institute' Frontiers in Kidney Medicine and Biology, where we share knowledge and advances in kidney research with the world. In this episode, I'm joined by Doctor Len Usvyat, Senior Vice president and new head of the Renal Research Institute. Together, we will discuss the transition of leadership as I hand over the reins to Len and explore what lies ahead for RRI under his guidance. Welcome Len, to this episode of Frontiers.

**Len Usvyat**

Peter, thank you very much.

**Peter Kotanko**

Len. It's really a pleasure having you. And thinking back, I believe we met for the first time in 2003 when I spent, I guess it was something like six weeks at the Renal Research Institute. We ran into each other, and you were working on some data analytics. And we, I think, immediately clicked in a way it didn't it, when we start discussing about the data you have and, and the kind of analysis you're doing.

**Len Usvyat**

Yeah. No, absolutely. Peter, I think it was when we first met, I vividly recall that some of the re-related analytics were done using very manual methods, using mostly Excel spreadsheets. And so, I do very much recall our conversations about the power of bigger data before the term big data was actually even invented. So, I recall those days very well.

**Peter Kotanko**

I went back from the research institute to Austria, and in 2005 I joined RRI right again. And back then, under the leadership of Doctor Nathan Levine and my predecessor, they stayed there for a year. And during this year I think data analytics, at least in, in my recollection, became such a central part of the of the work.

And I remember that we would develop together some new indicators of inflammation and look to, looking to anemia management. It was just it was just wonderful. And, and you were always so supportive and, and helped to, you know, to advance the field and, and follow me even into some, you know, weird thoughts that, that led us to interesting statistical analysis.

**Len Usvyat**

Yeah. No, of course, I, you know, Peter, I should I probably I think you know this, of course, but I actually, when I was younger, I actually wanted to go into medical school. And, you know, I ended up not going to medical school, but it was really our work together back then that made me realize that by using data, you can influence patient care.

And no, you don't influence. And by being there sitting with a patient, you can very much influence how we deliver care. Or you can very much understand various learnings that the data is telling us. So, I think it was such an exciting moment. I mean, I, I very much remember this excitement of being able to see so many different things in our data and not necessarily being a physician by doing so.

Thanks.

**Peter Kotanko**

And you're so right. I mean, this is one of the beauties of medicine that that I mean, whether you sit, you know, behind an electronic microscope or perform an epidemiological or an epidemiology, perform statistical analysis, sit in a lab and, and perform multi-omics or really at the bedside, or through surgery. It's such a wide field and there are hundreds, thousands of ways to contribute to improving the health of our patients.

And I think data analytics has been important for something like two decades, maybe two and a half decades or so, starting with epidemiological study standard in the UK on infectious diseases. But then obviously we say it went from computer and large databases. This has really taken off and, and you were at the forefront of this then.

**Len Usvyat**

Well, I think it was, you know, sometimes in life it's the confluence of two or 3 or 4 things together that leads to something great. And, and I, you know, very much remember also using as you probably remember, some of our longitudinal analysis on yes or hospitalization events and, and its ability to gather insight from data from large amounts of data, which, of course, we're very fortunate to have this access as well.

And I do also think we're of course, has also happened is the advancement in technology. So, it's not just that we have a lot of data, but the ability to process data quickly and be able to use new methods, be in data science. So be it. You know, computer science, in addition to, of course, the more traditional mystical methods, all of that came together over these last.

**Peter Kotanko**

20 years and no end in sight now with cloud computing, both storage but also, the sheer speed of computation has increased. I mean, I remember very well I think it may have been your very first kidney international paper. Right. The events before this and this was it was really in my mind; this was one of the important papers.

I had the pleasure to coauthor because it also led to the foundation of this Mundo initiative, the Mundo standing for Monitoring dialysis Outcomes initiative. But where both you and I were some of the founding members. Right?

**Len Usvyat**

That's right. And I very much remember the excitement when we were able to see that, you know, human, this and what patterns across the globe, maybe some of them are not necessarily surprising, but it is always wonderful to see the type of information that you would see an average albumin go down before patients, passed away or may go to the hospital.

So, I do think it's just it's a beautiful thing about data, and, and the ability to practice it.

**Peter Kotanko**

Well, and maybe it's also a beautiful thing about biology that, as humans, we share some great biology. Right.

**Len Usvyat**

It's exactly.

**Peter Kotanko**

Right. And it was, you know, this this was for me, the profound insight that something we, we, some signal we detected here in the US in some, right patients, a few thousand of them. We saw this thing in Europe, in Asia, in Latin America. And, and so this was interesting. This told me.

Yep. We are just sharing some common biology. And this was very this this was another hit, a beautiful part, of me. But that line, I mean, you take the RNA over with is very, very strong background in data analytics in, in, you know, experience working with large databases. So, what's your vision for. All right. You know, 2025 and beyond.

**Len Usvyat**

Yeah. Well, I mean obviously it's I mean, it goes without saying extraordinarily humbling on the one hand. On the other hand, I do think it's a very exciting time where the team, the new right team is really kind of teams, all these different skill sets that are in

analytics, advanced analytics, statistics, epidemiology, data science, mathematics and some of the other elements that of course you build.

And some of the other elements that I brought from my existing team. So, I do think the combination, the data that we collect, the skill sets of how we can utilize the data, then the ability to pilot some of these algorithms or things that we're going to be developing in our own dialysis clinics that we have access to.

And then, which is a unique element of, you know, research institute, the ability to collaborate with external academics and, you know, partners because I think it's so important that when we generate this knowledge, we don't just necessarily do it in one set of clinics, but we do it in different types of environments. And, you know, it could be a university somewhere that we may be collaborating with.

So that to me is very exciting. So, all these different pieces come together. Yeah.

### **Peter Kotanko**

Yeah. I think you mentioned something important. This external collaboration is certainly one of my goals. And, for my predecessor, Nathan Levine, was to make sure that that there isn't a bubble trade. That's right. There are so many bubbles anyway, so I looked it up once, maybe a year ago or so. Since its inception in 1997, ROI has collaborated with researchers from over 500 institutions.

So, and this is I mean, this is so, so fulfilling and encouraging and inspiring to get input from, from colleagues really around the globe because I think there is always the danger too, to be too focused on one's own. I wouldn't say small world because your world, your data world is of course, gigantic, but also to be always open to opinions, to experiences, of other colleagues that work outside of their own, foibles.

So, it's, I think that this will be something important. I mean, at length, how do you think that artificial intelligence will, well, you know, evolve over the years to come? Do you think it will become, it lifts reality for our patients for, for nursing staff, for physicians? What do you think?

### **Len Usvyat**

Well, I certainly think so, but I think it will take some time. I don't think it's a development that will happen overnight. IPU, AI as any other types of technological advancements, it's the ability to apply maybe new methods, but I still think it's I still think medicine is medicine and healthcare delivery. Healthcare delivery. So, I think over time we're going to see more and more small world developments that come to our dialysis clinics, be it, you know, facial aneurysm apps or be it some sort of spin off, stethoscopes or whatever the application is, it's going to be these more individual use cases, which eventually I do

think would, you know, would become more and more transparent. It's almost like, you know, when we started using iPhones, I don't know, ten years ago, we would have thought that iPhone would have really become such an important part of our lives because initially it was really more about maybe making phone calls and maybe you're able to browse the web on your iPhone, but it's really over time.

But it's become such an important part of it, and I think then it will take quite a bit of time. And we all know health care is a very sensitive topic. So, I think when it comes to healthcare and making sure that we have patients' safety, you know, making sure that we're doing the right thing by using AI, I think all of this is very critical.

**Peter Kotanko**

Has it? Yeah. To see that AI will be used by patients, that there will be at some point in time you and your team may develop apps, but whatever nutrition apps or whatever Ava and the AV access apps or whatever that the patient will use. So as a sort of point of care for what you're saying, you will always be sort of centralized.

**Len Usvyat**

No, I certainly think I think that the patients will be using AI a lot as well. But I think what is really important, and I want to stress the point is, I definitely think IPU AI is complementary to the skills of our nurses, of our adopters, of course, and other staff that works in our dialysis clinics or in healthcare in general.

Do I think there are some pieces that could be handled by AI or an algorithm? I think so, but I think overall, I think it's still very important that there is a clinician in the workflow in many of these in at least in many of these activities. And, you know, if, you know, we like to use I love to use the airplane analogy.

You know, I think it's maybe a day will come when we're going to get on a plane without a pilot on board, but I think that will take quite a long time. I think we'll think, despite the importance that technology plays in flying a plane, I think it's hard to imagine the future that there will be.

**Peter Kotanko**

That.

**Len Usvyat**

Independent of.

**Peter Kotanko**

Of going and going from driverless trains at the airports to travelers' cars to travelers. That's, that's the kind of trajectory is envisioning. Yeah. Who knows? Now in your team,



you have also a group that really deals with, built patterns generation. So, yeah, that is, how will this group interact with, say, the, or AI team or in the, in the mass team.

So how are you. Yeah. Do you see that.

### **Len Usvyat**

Yeah. So that's one of the more exciting things. Of course. One of the, one of the exciting things to me in this whole development is the fact that I do think we have very complementary skills, I think between kind of the more real-world evidence, more epidemiology focused folks, as well as combining them together with more AI.

Folks and maybe more computer science skills. And then together with mathematical modeling and, you know, more mechanistic approaches to thinking, I think there's quite a bit of benefit that we can see from combining these skills. You know, I think oftentimes, or at least that's what I often hear from mathematicians, you know, the mathematicians and the statisticians don't usually get along very well together.

Well, I think a lot can be achieved by putting statisticians and AI folks together. I think it's actually very exciting to me. So, and I think the real-world evidence piece, I also want to stress that as, largest dialysis provider worldwide, probably sitting on one of the largest databases of, of patient with ESG. But really, it's not just good.

I think it's almost like our obligation to be able to do this evidence generation in the medical community of what we see in our data, like in Covid. It was a perfect example. You know, the whole dynamic. We are so much data on.

### **Peter Kotanko**

Len, do you think that large providers or large health care networks should make parts of that data public? I mean, obviously, respecting all the, the necessary, privacy rules?

### **Len Usvyat**

Sure, sure. You know, as you know, Peter, this is a complicated question and has so many angles to it. I think in principle, it's not a bad idea. Now, in practice, I think the issue becomes and especially in a place like VeriSign, it be it Fresenius Medical Care or other kind of large health care providers, I think the issue becomes it's that our local data analysts have gathered so much knowledge about the very tiny little intricacies of every data point we collect millions and millions of data points.

And I think it is very easy for somebody who doesn't understand the data very well to take the data set, derive some conclusions, publish a paper on it. And I'm a little bit worried that I think that's what may end up happening. When you make a very large amount of data publicly available, it may be a little bit different when you talk about

things like CMS data, where the data is very structured, all the same thing, it's all the same claims, very rigid structures.

I think it I think with different health care providers, it's time. So, I do think it principle I think it's a good idea. But I think in practice I think it's very we need to be very thoughtful about how the.

**Peter Kotanko**

Yeah, obviously in Europe there are initiatives now under way by the European Union to mandate that health data are provided. So, I'm it will be very interesting to see how this will pan out eventually. Lynn, I just realize I'm asking all the questions. I mean, like, I think I totally, I missed that call that, but that's great.

**Len Usvyat**

You know, as you can imagine, I could ask you so many different questions, Peter, but maybe, you know, as you of course know, as I mentioned in the very beginning, it is a very humbling opportunity for me to try to step into this role. And, and one of the, one of the reasons that is so humbling and because you're an expert in so many things and your ability to collaborate with others and to think innovatively and to really have this very positive, outlook, I think is important in mentoring others.

I think all these different pieces are, what you have done is, is incredible. And I think that's important to me. And so maybe the first question is, how do you usually think about what will the future of health care be? How do you focus on topics relating to what will be important in dialysis care in five years and ten years and 20 years?

As I mentioned at the very beginning, back in 2003, we talked about big data. Maybe you didn't call it big data, but that's really what we talked about. You know, you talked about mathematical modeling because in seven you talked about AI when nobody really talked about AI. And so, I guess my question is, how do you how do you stay on top of these things?

How do you think about what will be important in the future?

**Peter Kotanko**

So, I think that collaboration among disciplines will be more important than ever. And every discipline feature medically, staff physicians, nurses, the, but also, you know, statisticians, AI experts, they must, to find common ground even in the conversation so that, you know, person working on an AI system understands what the, what the medical colleagues want to express, and vice versa.

So, I think a major challenge will be to, to arrive at the common language that eventually will foster the construct for exchange of ideas. And, so this, I think, is one challenge and I think just rubbing shoulders with experts from other fields will be important in that hope that technology will bring people more together now.

And all these virtual meetings you and I are on, across the globe, I mean, this may help here. I mean, there has been a tendency in, in medicine over, over, you know, they Kate, if not centuries starting, I think with a year of enlightenment just to be more and more segregated. You know, there is there was this holistic, healer at the beginning.

And then it became more, yeah, there are surgeons and there are then those in, in, you know, dermatology and obstetrician, obstetrician and so on, so forth, and that they got more and more, when more subdisciplines emerged, for good reasons, obviously for good reasons, because things just became more and more complicated. I but I really hope that maybe through modern technologies such as artificial intelligence and other tools, that to some extent convergence may happen again so that that the connection between, you know, people who are specialized in liver disease and those that specialized in kidney disease, may that they find more common ground because, I mean, we function as a human being in the unity. This whole separation is, in various disciplines. It makes sense from and from an effectiveness standpoint. And because it's gotten so complicated somehow and I don't have an answer, obviously, I would really hope that that it can be more, in more holistic view of the human in front of you be a healthy person. A patient will emerge. This, I think, is a big, big challenge. And I said, I hope maybe through some. Yeah, I mean, it's this, this could be facilitated, as well. This will become more embedded in technology; I have no doubt. Also think that more responsibility will be given back to the person, the healthy person and the patient.

So more points of care or at home therapy at home diagnostics will come up by hospitals. Maybe. I mean, they will be there to perform highly specialized interventions. But a lot of the health care I think will go back to the, to the individual person. It's just it's also mandated by, you know, by money.

It's driven by that because it's coming so expensive. This, specifically this, hospitalized medicine. I hope that prevention of illness will take center stage when I think about, about kidney disease. I mean, major drivers are, are diabetes, high blood pressure, maybe even more upstream obesity, say so. So, this is something that must do a lot with lifestyle.

So, I think and hope that, you know, further upstream preventive interventions. This will, specifically in the field of kidney medicine, help to reduce this relentless growth of patients with, with end stage kidney disease. On the other hand, patients then will have end stage kidney disease. I really hope that home therapies will become more prevalent.



And by doing so, give some of the responsibility back to patients. I know it's not for everyone, but I would have thought of a larger proportion than the current one. Well, this is a very fragmented response to what you were asking, but it's a big question. And maybe I should have said I was originally trained as a physiology test to understand, you know, really the, the function of the, of the human being from head to toe.

And then I was trained as an internist, which I deeply enjoyed, because it was also this more holistic approach to patient. And then, of course, I specialized in the follow by. And now with the past, whatever, 15 years within the follow into kidney replacement therapy. And there within, you know, hemodialysis. So, it's a, it's a, it's a sliver of the richness of, of medicine.

And I know it's necessary to advance things, but also in, in terms of care for patients, I think it's important to step back a little bit. So, for example, in my dialysis patients I would do ultrasound. Of course I would do echocardiography. I would see them frequently. And I would, you know, I would take care of many, many other aspects, illnesses they may have, they may have whatever inflammatory bowel disease.

So, I would, I would really take care of these things. And after consultation I was with colleagues. But I think it's important to take care of the, of the human being. It's in entirety.

### **Len Usvyat**

Yeah. You know, Peter, I have to say this is really fascinating. I could probably ask you so many questions on this. Of course, several things came to my mind. One of them was one of your favorites, I think expressions about the island of knowledge. The expanding island of knowledge. And I think as you were talking about how medicine has gotten deeper and deeper and our knowledge has gotten deeper and deeper over the centuries, that, of course, what may or what may have happened.

And I hadn't thought about it. This way, but I think you're right. What ended up happening is that it is very hard for one person to keep all of this in their mind. You know, all this truly massive island that we've now created. So, I do think that's actually very interesting. You also brought up something about different opinions.

And that leads me to my next question, because you've built a very international team. I think you are very diverse in terms of where people come from. And so, my assumption is you would also say that in addition to diversity of skill sets and viewpoints, diversity of cultural origins and where people come from is also very important.

I would assume.

**Peter Kotanko**

Of course. Yeah. I mean, this is this has been always my, my philosophy here. And, and I have to say in the United States in general, but specifically in New York, that's the perfect, the perfect, you know, environment. I told you; I believe that my last count was that the arise staff member comes from 18 different countries and speaks 14 different mother tongues.

So, it's a very, very diverse group. And it's also in terms of skills, it's very diverse. And this is just important I think, because when we looked at the problem, we looked at why question at hand. We looked at it from different angles and everyone came up with a different perspective. And then through discussion, though constructive discussion, we came up with some solutions.

Right. And I think this multi dimensionality is, is just fundamentally important. So, you will keep this growing and growing and growing. So, this is something that just makes a lot of sense. I mean in today's complicated and complex world, I've a very nice example. So, for example, we, we recently we were joined by a pediatric nephrologist from Sudan, from war torn Sudan.

And we learned something from her about the diagnosis of peritonitis that she's pursuing. She applied there at a very low cost. And I was stunned when I learned about this. It just shows. There is, of course, knowledge transfer across the globe, not just from the global North, if I may say so, to the global South, but also vice versa.

But we all we it's we just must be open to and receptive for these thoughts. And I think this is one of them. Well, this is a great experience with diverse teams. And the other is of course to acknowledge the limitedness of one's own, you know, knowledge and, and insight.

**Len Usvyat**

So, it's quite fascinating. And of course, both you and I are, I guess, fortunate, I think fortunate kind of having lived in more than one country, in our lifetime. So, I do think it's unique, I think respected and I, you know, completely agree, of course, with the diversity of skill sets and cultural backgrounds, because I do think that helps tremendously with how solutions are made.

And a lot of companies struggle with some of that globalization. But I see it as beneficial if you've been in it and done, you know, done properly. So now that.

**Peter Kotanko**

And I think as, as leaders, our role is to create a safe environment where everyone is, you know, free and, and feels comfortable speaking up, indicating his or her views and, and being respected. This, I would think, is one of the most important ingredients for a successful work.

**Len Usvyat**

And, you know, it's interesting, you, the ability to speak up, I think in your group, you have mentored so many people. And every time I show up at our office. And every time I'm there, there's a lot of energy, there's a lot of positivity. And I think, you know, one of the questions I would love to know is how are you able to feed that?

You know, you feed in this tremendous environment where people do seem to be very happy and very, very interested in the work that they do. And I think I'd love to know your thoughts about how do you do this in a team, especially a global team? You know that we're now established?

**Peter Kotanko**

All I can say is I just profoundly enjoy what I'm doing, and maybe this radiates. I think that's important that this, this really radiates. And on the other hand, I also I'm, very curious. I just love to understand what our colleagues are doing. What are they thinking.

Because there is always an opportunity for oneself to learn and to fail. And because this is a genuine, you know, sentiment. I think the colleagues feel this, understand this. And I'm always very grateful for the conversation that's held between, between colleagues and myself because there's always something to take away and that, in the issue, I think the joy of work, I think that's, that's certainly one aspect and the other is a very, very high and genuine respect for the colleagues and their opinions.

**Len Usvyat**

You know, Peter, as I think we conclude this session, of course, one question I would like to ask you is what would you say has been the most rewarding experience for you leading this tremendous team over the last 15 plus years?

**Peter Kotanko**

Yeah, I don't. I would need to think long about this because I don't rank these experiences, I believe. But what has been very rewarding to me is to bring different disciplines together and to enable them to have a, an intellectually stimulating and rich, conversation across the boundaries. These are artificial boundaries of disciplines and these, boundaries also of, you know, countries.

And so, really putting people together to work towards a shared goal. I think that's this in general is the most rewarding experience. And again, I think here in this respect, New

York is an outstanding place to do that. I can hardly think of any other place in the world where this is possible. At least that is easily possible.

But yeah, bringing people together and, you know, communicate is being able to communicate, to share the vision and then work towards a goal, together. It's a strong team. And I think this was the best experience.

**Len Usvyat**

Well thank you Peter.

**Peter Kotanko**

Yeah. No thank you Len. Hey, man, I wish you all the best. RRI in good hands. And I'm sure in one way or another will stay in touch. All the best.

**Len Usvyat**

No. Of course. Yeah. Well, again, thank you very, very much. This is extraordinarily humbling. And for everything you've done and not just for what you've done, but also over the last few months to this transition period. It was nothing short of, what I would say predictable, Peter. Continual, attitude of being very collaborative, very supportive and very insightful.

And I'm extraordinarily grateful for this.

**Peter Kotanko**

You and the team made it very easy. It's been an honor to lead both around this podcast, and I'm excited to see the impact our AI will continue to have under your leadership.

**Len Usvyat**

Thank you, Peter, not only for your leadership at the Renal Research Institute, but also for the thoughtful conversations you have led here on Frontiers in Kidney Medicine and Biology. Your work has set a very strong foundation, and, of course, I'm honored to continue building on it. And thank you to our listeners for joining us for this special episode.

We invite you to connect with us on social media channels and stay tuned for future episodes as we continue sharing insights and advancements in kidney research. Until next time, take care and we'll see you soon.