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Rethinking Chronic Kidney Disease: A Key Driver of Cardiovascular Risk

Announcer:
You're listening to *Conversations in CV Risk Assessment* on ReachMD. Here's your host, Dr. Jennifer Caudle.

Dr. Caudle:
This is ReachMD and I'm your host, Dr. Jennifer Caudle. And joining me to discuss the relationship between chronic kidney disease, or CKD, and cardiovascular risk, are Drs. Dustin Le and Niloo Nobakht. Dr. Le is an Assistant Professor at Sidney Kimmel Medical College at Thomas Jefferson University in Philadelphia. Dr. Le, welcome to the program.

Dr. Le:
Yeah. Thank you so much. Happy to be here.

Dr. Caudle:
Of course. And Dr. Nobakht is an Associate Clinical Professor of Medicine in Nephrology at the David Geffen School of Medicine at the University of California at Los Angeles. Dr. Nobakht, thank you so much for being here today.

Dr. Nobakht:
Thank you, pleasure to be here.

Dr. Caudle:
Of course. So, Dr. Le, I'd like to start with you. For some context, why is CKD now considered a cardiovascular risk amplifier, rather than just a renal issue?

Dr. Le:
We've known chronic kidney disease in itself is a risk factor for cardiovascular disease, CVD, risk. But then really, I'd say, over the past decade, there's been a lot more research and a lot more interest, in evaluating what the role of chronic kidney disease is, both in cardiovascular disease and diabetes. And then we know the role of all three kind of interact with each other. Let's say, having cardiovascular disease increases your risk of kidney disease and diabetes. And then same thing, having chronic kidney disease increases your risk of cardiovascular disease and diabetes.

And so then maybe even two or three years ago now, the American Heart Association came up with this idea of cardio-kidney-metabolic syndrome, really just to recognize that all three of these diseases interact with each other. All three need treatment. And then the big one that I think we'll talk a little bit more later is that all three really need to be monitored and evaluated for. And it really just has implications for treatment and for starting new therapies, which, at least in the chronic kidney disease space in the past four or five years, a lot of new medications have come out—a lot of medications that show cardiovascular benefit, especially. And so we're trying to identify these patients and get them on the right treatment, which can mean a lot in the patients.

Dr. Caudle:
And Dr. Nobakht, turning to you, let's talk for a moment about the KDIGO 2024 clinical practice guideline for the evaluation and management of CKD. This guideline advises clinicians to test patients at risk for and with CKD using both urine albumin measurement and assessment of glomerular filtration rate. Now, with that in mind, how could earlier diagnosis of CKD help mitigate cardiovascular risk?

Dr. Nobakht:
Early identification through uACR testing allows clinicians and healthcare providers to initiate therapies such as SGLT2 inhibitors and

statins before irreversible damage happens. Detecting CKD before GFR declines reclassifies CV risk and enables earlier and more targeted prevention strategies.

Dr. Caudle:
Excellent. And Dr. Le, coming back to you, once albuminuria is identified, how does that change the treatment plan? And what interventions offer the most cardiovascular protection in these patients?

Dr. Le:
Sure. And so I think the biggest ones that come to mind, just for the general practitioner, are things like hypertension and diabetes. And so if you ignore the chronic kidney disease space, you have different medications like calcium channel blockers, beta blockers, metformin, sulfonylureas, and other treatments like that. And then sort of identifying early albuminuria can change patients from having essentially no history of chronic kidney disease to now having chronic kidney disease potentially. And so we now know we should then strategize different therapies. So the example being, for hypertension, I often see a lot of patients on beta blockers or calcium channel blockers—essentially not being on ACEs or ARBs, which we know treat both hypertension and kidney disease.

So at least in my practice, I'll get a decent amount of referrals for new-onset proteinuria, or, I'd say, newly identified proteinuria or albuminuria. And so the very easy intervention is I will essentially stop their amlodipine or nifedipine if their blood pressure is well controlled and switch them over to an ACE or ARB. And hopefully, what I'm really looking for is not only the blood pressure control staying optimal, but then hopefully also seeing reductions in proteinuria. And then, alongside the reduction in proteinuria, hopefully that also entails a reduction in risk. And so then albuminuria, in and of itself, is a risk factor for chronic kidney disease and cardiovascular disease outcomes.

In terms of the most important therapies, at that point it's really more historic. And so now we've had, I think for 20 or 30 years now, ACEs and ARBs as first line for hypertension management. They're used most commonly, even for cardiovascular disease in itself or things like heart failure. Cardiologists use ACEs and ARBs first.

And then really, for therapy after that, in terms of looking from the nephrology and the kidney standpoint, I think most nephrologists would agree that we would use SGLT2 inhibitors next, which also help lower cardiovascular disease risk and help treat diabetes a little bit.

And then a lot of ongoing research after that is asking what is the next best, third- or fourth-line agent? And that's where you get into medications like glucagon-like peptide-1 agonists, your GLP-1s—weight loss medications that have become very popular. Right? Originally studied for diabetes, they help with cardiovascular disease and kidney disease. And then the most recent class of medications that we're trying to figure out where they all fit in the order of medications is your mineralocorticoid antagonist medications. And even more recently, now we have non-steroidal mineralocorticoid antagonists, which might be a little bit more effective, but it's hard to say, and the evidence is evolving.

Dr. Caudle:
For those of you who are just tuning in, you're listening to ReachMD. I'm your host, Dr. Jennifer Caudle, and I'm speaking with Dr. Dustin Le and Dr. Niloo Nobakht about the link between chronic kidney disease screening and cardiovascular risk diagnosis.

So Dr. Nobakht, we've discussed the value of uACR testing in cardiovascular risk protection, but despite the evidence, it's still not standard practice in many settings. From your perspective, what's preventing broader clinical adoption?

Dr. Nobakht:
We all know that many clinicians default to serum creatinine and eGFR, often overlooking albuminuria as a meaningful risk marker. I recall my mentor—who was a textbook writer, Dr. Bob Schrier—used to say uACR is a very important, non-invasive, and non-pricey test that can give us very important information about end-organ damages—brain, eyes, heart, and kidneys. So we know that the problems that are playing a role here are workflowing gaps, lack of electronic medical record prompt, absence of uACR in the standard lab panel, and education and instructions to our patients, colleagues, and next generation of doctors. They all contribute to underutilization.

Dr. Caudle:
Thank you. And as we near the end of our program, I'd like to ask each of you one more question, starting with you, Dr. Le. What are some practical ways that health systems can integrate uACR testing into routine cardiovascular care to address these barriers?

Dr. Le:
Yeah, I'd say that's a great question, a perfect question, and probably multi-million-dollar question. Because at the end of the day, I think it's not going to be a straightforward solution or we would have done it already. Sort of like you alluded to, we know a lot of patients both with hypertension and diabetes who, where albuminuria screening is recommended by all the big guidelines, like cardiology,

nephrology, endocrinology, it's not done. Typically, I think the numbers people quote for people with diabetes is only about one in three patients actually get checked for albuminuria or proteinuria. And then for hypertension, it's even less than 10 percent, despite these being guidelines now for several years.

And so we know there's this huge gap, so what's the best way to do it? I think that's also a very tough question, right? So we have the research topics, we have the research findings, but then how we implement them into routine practice is a much harder question.

A lot of times it becomes context specific. A lot of health systems will have things like BPA, or best practice advisories, built into their EMR. And then even those sometimes don't really translate to optimal outcomes. And so these days, we have things like clinical decision supports, like Dr. Nobakht was alluding to, which will have potential options, hopefully, to order uACR for patients. I know some other institutions/centers right now are looking at things like reflexive proteinuria measurement, meaning, if you order someone a urinalysis and you see proteinuria that's qualitative, like 1+, 2+, or 3+, some health systems are seeing if we reflex and actually order how much proteinuria is there, does that change management long-term? I think that's more of an outstanding question.

But really, on the individual physician-to-physician level, I think the most important thing is watching videos like this, getting content, sort of seeing what's the most up-to-date literature and seeing how to best care for patients, and then hopefully just sort of shifting culture over time.

A patient asks, "Do I need a statin?" and every doctor checks. But then, at least for the kidney space, we're not there yet, right? If patients ask, "What's my risk of needing dialysis? What is my risk of other things like that?" we're saying, it'll just take time and more learning. But programs like this promote SGLT2s, GLP-1s, state-of-the-art therapy, and the most contemporary practice possible.

Dr. Caudle:
And finally, Dr. Nobakht, do you have any key takeaways you'd like to share with clinicians who aren't used to thinking about kidney function in their cardiovascular risk assessments?

Dr. Nobakht:
Sure. CKD should be seen as a cardiovascular condition from the start. When we go through KDIGO guidelines and we show our colleagues, our trainees, and our next generation of doctors, they go based on the GFR and albuminuria to assess stage of chronic kidney disease. So even if someone has normal GFR, they might still have chronic kidney disease because of albuminuria. 30 to 300 milligrams is a very important step for us, which in routine tests might be just a trace protein in the UA. So detecting at an earlier stage and paying attention to uACR, not only for nephrology, but other providers, is a big, important factor. We all know albuminuria is a vital biomarker and has both vascular and systemic risks. So, in my view, this should be routine frontline care.

Dr. Caudle:
Well, with those closing thoughts in mind, I'd like to thank my guests, Dr. Dustin Le and Dr. Niloo Nobakht, for joining me to explore how kidney function testing can help us detect cardiovascular risk and guide prevention efforts. Dr. Le and Dr. Nobakht, it was great having you on the program today.

Dr. Le:
Yeah, thank you so much for having me.

Dr. Nobakht:
Thank you for having me as well.

Announcer:
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