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The Role of Albuminuria in Assessing Cardiovascular Risk

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

Dr. McDonough:
Welcome to ReachMD. I'm Dr. Brian McDonough, and joining me to discuss albuminuria as the potential early warning sign for cardiovascular risk is Dr. Anu Lala. She's an Associate Professor of Medicine in Cardiology at the Icahn School of Medicine at Mount Sinai in New York. Dr. Lala, welcome to the program.

Dr. Lala:
Thank you so much for having me. I'm looking forward to this discussion.

Dr. McDonough:
So, Dr. Lala, let's set the stage a bit. How has albuminuria traditionally been used in clinical practice? And how is it starting to inform cardiovascular risk, particularly when LDL-C or blood pressure appear well controlled?

Dr. Lala:
Yeah, I think it's such an important question for multiple reasons, right? Albuminuria has historically been framed as a renal-specific marker. It's primarily tracked by nephrologists. Us as cardiologists were not routinely measuring this biomarker. But in recent evidence—and this is really based on the backdrop of the American Heart Association putting forth this cardio-kidney-metabolic health framework—we are recognizing that even low levels of sustained albuminuria signals elevated cardiovascular risk. And what's interesting about this is that it's independent of blood pressure control or lipid control, so it offers and sustains its own prognostic implications.

So I think it's incredibly interesting, and I'm sure we'll talk more about this, but what we're seeing is that everything is connected. We've always known that the heart and kidney are connected. This is just a more concrete representation of that connection.

Dr. McDonough:
Now, new longitudinal data show that persistent elevations in urine albumin to creatinine, or uACR for short, carry significantly more cardiovascular risk than transient spikes. Why is that distinction so critical?

Dr. Lala:
Super important question as well. I think transient uACR elevations can be seen in the situation of fevers, intense exercise, and sometimes even glycemic variability. So it's important that we don't just react to transient spikes or changes in this biomarker because in the setting of those different scenarios that I just offered, they don't necessarily confer the same cardiovascular risk as confirmed and sustained elevations in albuminuria.

So if we get specific with numbers, a uACR over 30 mg/g is strongly associated with higher rates of heart failure—and I'm a heart failure cardiologist—cardiovascular mortality, and vascular events. So a key thing is, don't just look at transient spikes. Remember the clinical context in which you're measuring the uACR, and then—this is a reminder to all of us—over 30 is considered abnormal when sustained and elevated in that range.

Dr. McDonough:
For those just tuning in, you're listening to ReachMD. I'm Dr. Brian McDonough, and I'm speaking with Dr. Anu Lala about the role of albuminuria in assessing cardiovascular risk.

So Dr. Lala, since it's clear from our discussion that albuminuria can be a helpful predictor of cardiovascular risk, let's zero in on some

thresholds. When a patient's uACR is consistently over 30 mg/g, what should our next step be?

Dr. Lala:
Yeah, this is now what do we do with it, right? So first, it's a big plus if we're actually even checking it, so kudos for doing that.

Once we've confirmed a uACR over 30 on two tests approximately 3 months apart—so that's confirmed sustained elevations, like we talked about—what we really need to think about is, what are the antihypertensives this patient is on? If they are already on a RAS blockade agent, that's wonderful, but then there's room for us to optimize that further. Because uACR, we know, is also a representation of derangements or sustained elevations in renin angiotensin aldosterone system activation. So we want to up-titrate the medications that block that pathway.

And then other steps include tighter glycemic control and sodium reduction, although that's sometimes a little challenging, especially in the United States. And I love this again because we talked about the cardio-kidney-metabolic health derangements—how can we optimize patients from that more holistic perspective? Considering a GLP-1 receptor agonist and weight optimization on the backdrop, of course, of lifestyle modifications.

But uACR is just another representation of deranged cardio-kidney-metabolic health, so optimizing patients from that standpoint is really critical.

Dr. McDonough:
And if a patient's uACR exceeds 300 mg/g, how do priorities shift? And what should we be focusing on?

Dr. Lala:
Yeah, so that's the key threshold. Once we say that uACR is 300 mg/g or more, this is where we're talking about macroalbuminuria, not just microalbuminuria. And so this confers a significantly elevated risk beyond that over 30 range—and this is the kicker—even when eGFR is preserved. So they've done beautiful studies on this where the eGFR could be, let's say, over 45 but the uACR is over 300, and it confers a very heightened risk for heart failure hospitalizations, cardiovascular death, and otherwise.

So in that setting, when we're looking at macroalbuminuria, key priorities are making sure that our patients are on SGLT2 inhibitors and potentially intensifying the diuretic. Because again, we're also trying to optimize their renal function and prevent cardiovascular risk or mortality, of course, so fluid management plays a role. And then, depending on the type of specialist you are or your comfort zone, a potential cardio-kidney referral.

Put simply, make sure they're on an SGLT2 inhibitor and make sure that their glucose and their A1c is appropriately controlled. Make sure that we're looking at adequate weight—you know, that their weight is in the optimal range. And then, if there are further concerns, certainly take the help of allowing for a multidisciplinary approach with nephrology and cardiology. But regardless of your specialty, we should feel comfortable doing the aforementioned.

Dr. McDonough:
Now, when it comes to integration, what's the potential impact of including serial uACR values in dynamic risk models? And what might that mean for primary care or cardiology workflows?

Dr. Lala:
Yeah, I'm so glad you asked that because again, I have to be vulnerable and share that I'm only recently uniformly checking uACR in my patients. But we do know that models that take into account multiple timepoints of uACR assessment offer more of an accurate assessment of cardiovascular risk rather than these one-time values. It goes back to what we were talking about before because those one-time values can sometimes be a one off. They may be in the setting of certain clinical scenarios where the uACR is elevated, like we talked about with fever, intense exercise, et cetera.

So integrating serial uACR assessments into EHR-based tools could enable earlier identification of those patients who are at heightened risk, thereby hopefully allowing for earlier treatment and treatment intensification along the lines of the medications that we've already mentioned.

Dr. McDonough:
Before we wrap up our program, Dr. Lala, do you have any final insights you'd like to leave with our audience?

Dr. Lala:
I'm so glad you asked that. For me, I feel like what's old is new again in the sense that if you look back—and you're a family practice doctor, so you're the consummate physician and you're looking at patients holistically—I feel like as we've become increasingly subspecialized, we've lost an element of that. And so this cardio-kidney-metabolic health framework allows us to recognize that all our

systems are connected and that we need to be paying attention to patients holistically. And I am so happy that the data is showing that uACR is significant with respect to indicating risk because it reminds us how everything is connected and how we do need to check for other organ systems as we take care of patients.

Dr. McDonough:
With those key takeaways in mind, I want to thank my guest, Dr. Anu Lala, for joining me to discuss how albuminuria can shape cardiovascular risk assessment and treatment decisions. Dr. Lala, it was great having you on the program.

Dr. Lala:
Thanks so much for having me. I enjoyed our conversation.

Announcer:
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