

Transcript Details

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Evaluating Race-Neutral Equations in PFTs: Implications for Severe Asthma Care

Announcer:

You're listening to *Clinician's Roundtable* on ReachMD. On this episode, Dr. Isabel Bazan will discuss her research on how race-neutral lung function equations impact asthma classification among patients with severe asthma. Dr. Bazan is an Assistant Professor of Medicine at Yale School of Medicine, and she spoke on this topic at the 2025 American Thoracic Society International Conference. Let's hear from her now.

Dr. Bazan:

Back in 2020 and 2021, there was a lot of conversation in the media about eGFR, how we were using race to adjust the eGFR score, and how that was impacting people's eligibility for kidney transplant. And there became a really big conversation about race-based medicine and how there's actually not any physiologic basis behind it and how we're potentially perpetuating disparities unfairly to certain groups of people, and particularly people of color, who are already at a disadvantaged place. And so that really came into question of where else we are using race where we shouldn't be. And that's when I started thinking about PFTs, where we've been using race-specific equations from the beginning of time, as far as I know, and I realized that I didn't know the history of that and why that was the case. ATS came out with a statement in 2023 where they were officially recommending race-neutral reference equations or this new way of interpreting the data, and that was really fascinating because it felt like a step forward in terms of equity but not a lot of understanding about how this was going to impact all of our patients.

I'm an asthma provider, so of course, my interest was, how is this going to impact our asthma patients? I'm specifically interested too in how some of our vulnerable groups within asthma are going to be impacted, because, for example, there's been a little bit of data about these new race-neutral equations and how it's going to impact White and Black patients but very little about how it's going to impact those that identify as Hispanic or Latino. And I think the problem with that is that the Hispanic-Latino population is so heterogeneous, and even their prevalence of asthma is different. Puerto Ricans have a much higher prevalence of asthma, and Mexicans have a lower prevalence of asthma than even White patients, and so grouping all of those people in together—and, of course, there's a lot of different races within that—how is this going to impact that group as well?

Some of the initial findings that we found were consistent with some of the other limited data that's come out in terms of how this race-neutral equation compares to the race-specific equations. We're finding that White patients are being categorized as less obstructed, and Black people are being categorized as more obstructed, so their percent predicted FEV1s are higher on the race-neutral when they're a White patient and then lower when they're a Black patient. And it may be because we were underestimating one and overestimating one with the race-specific. Prior data has shown that, so our data is consistent with that.

We also looked at the Hispanic-Latino group and found that there was a slight trend towards having an increased percent predicted FEV1. However, when we actually divided up the Hispanic-Latino group into their race and how they identify—White, Black, or other—we found that there was a marked correlation with the Whites also increasing as the non-Hispanic Whites did, Blacks increasing as the non-Hispanic Blacks did, and then the group of other kind of stayed fairly neutral and had no impact between them. And the main reason I suspect that's the case is because the race-neutral equation mathematically is very similar to the race-specific other category, and so that's why there's not a lot of change with that group.

So the magnitude of differences has been small, but I think the change for White patients was about 3.5 percent. The change for Black patients was greater, more at about 6.5 percent. But I think the main takeaway is how many people are moving from normal to abnormal, from abnormal to normal, because those cutoffs are a strict line of cutoff, so even if your change is small, you still might be

moving to another category.

One of the things that's also important to mention is that a lot of the data that we happen to be looking at was done at tertiary care centers of patients who are being seen by a specialist for their asthma, and a lot of our patients are White, and so we really need a much larger N for other racial groups to be able to say more about them. But I think this is a really important start to think about how this is going to be impacting our patients.

When we start to think about needing to get cleared to work at a certain job and you have to have normal PFTs to be able to get that, when we're qualifying people for lung transplant and you need to have below a certain cutoff of value, or if you develop lung cancer and you need to have a section of your lung removed and you need to meet a certain value of lung function to be able to get that, that's when these really specific numbers matter a lot. And so we all just want to take good care of our patients, and we want to do what's right for each individual patient, and I hope to find that this race-neutral equation does a better job at determining what someone's actual clinical picture is to help us make better clinical decisions.

Announcer:

That was Dr. Isabel Bazan discussing how race-neutral reference equations for pulmonary function testing can impact patients with severe asthma. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!