Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/frontlines-copd/decoding-copd-precision-medicine-approaches-for-complex-patient-profiles/35540/

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Decoding COPD: Precision Medicine Approaches for Complex Patient Profiles

ReachMD Announcer:
You're listening to *On the Frontlines of COPD* on ReachMD. On this episode, we'll hear from Dr. Matthew Moll, who's an Assistant Professor of Medicine at the Channing Division of Network Medicine and an associate physician in the Division of Pulmonary and Critical Care Medicine at both Brigham and Women's Hospital and Harvard Medical School. He'll be discussing the important role of precision medicine in COPD management. Here's Dr. Moll now.

Dr. Moll:
So there are a lot of reasons that developing new therapies that slow COPD progression has been very slow. So one is that the disease itself is so complex. It's complex in terms of how you look at disease stage—early versus late—disease activity, how you even define progression, and the best measures of progression. It's complex in terms of risk factor heterogeneity, genetics, environmental exposures, and infections. It's complex in terms of the heterogeneity and clinical presentation. So there's people with emphysema, with airways disease, with combinations, and with emphysema to different parts of the lung. There's also differences in exacerbations: frequent exacerbators, people who don't exacerbate, and people who decline in their lung function rapidly. So when you take all of these people together and you say they're all one disease, how do you actually make a therapy for people? And that I think is where a lot of the challenges lie.

With precision medicine, what you aim to do is have a drug that targets people with specific pathobiology. And so one way to look at this is this subtype-endotype framework. And an endotype is a group of people that share common pathobiology, and a subtype is something you can observe. So, for example, emphysema might be a subtype—emphysema-predominant disease—and then an endotype might be the biological changes that lead to that subtype. In this case, you can have multiple endotypes that lead to a single subtype. And so you have genetic susceptibility, you have the right exposures, and you have changes in your pathobiology, and this leads to a specific endotype. It also produces biomarkers that you could measure. And then the endotypes lead to specific subtypes, and that's where precision medicine comes in. So if you can identify groups of people that share pathobiology, now you can give the right drug to the right patient, and that's really the essence of precision medicine.

ReachMD Announcer:
That was Dr. Matthew Moll talking about how precision medicine is changing our approach to COPD management. To access this and other episodes in our series, visit *On the Frontlines of COPD* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!