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/clinicians-roundtable/ct-imaging-in-structural-lung-disease/67691/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

The Evolving Role of CT Imaging in Characterizing Structural Lung Disease

Announcer:
This is *Clinician's Roundtable* on ReachMD. On this episode, Dr. Emily Wan joins us to discuss the evolving role of imaging in identifying and characterizing structural lung disease. Dr. Wan is the Section Chief of Pulmonary and Critical Care at the Minneapolis VA Health Care System and an Associate Professor of Medicine at the University of Minnesota. Let's hear from her now.

Dr. Wan:
I think one of the most important things that we can take away from lung imaging is the fact that the information that you get from a CAT scan, for example, can complement the information that you're getting from the patient's pulmonary function test. To use radiographic emphysema as an example, we are now able to quantify this amount by measuring the density of each voxel on a CT scan. And robust literature shows that this correlates with negative outcomes even after you adjust for lung function.

The importance of these radiographic features of COPD has been consolidated recently with a publication in *JAMA* where they proposed a new definition of COPD, which incorporates imaging features such as emphysema or increased wall thickness. So I think that we are finally formally recognizing the importance of structural lung abnormalities in COPD.

We're also learning a lot about comorbid diseases, such as COPD with pulmonary fibrosis or COPD with interstitial lung abnormalities. We are finding that these diseases, which I think we used to think of as separate entities, co-occur on a higher frequency than we thought.

Another example would be something like pulmonary hypertension that can co-occur with COPD. We currently have active research exploring the pulmonary vasculature using these same non-contrast, non-gated chest CT scans, and they're providing really interesting metrics in terms of loss of blood vessels as well as other radiographic measures of pulmonary hypertension, which can complicate our COPD patients' lives and have real impacts in terms of worsening oxygenation and worsening exercise tolerance. And excitingly, on the therapeutic side, this may change the way we manage patients, meaning does your COPD patient also need treatment for pulmonary hypertension?

So I think that we are understanding the interrelatedness and the co-occurrence of different lung diseases, and we are able to leverage real structural abnormalities—not just in the static sense, but in the dynamic sense. For example, in the case of pulmonary hypertension with COPD, we can actually look at where the vessels are being lost, and we can correlate this with other metrics of blood volume within the lungs. In theory, we could say, "Oh, we could try putting somebody on a medicine for pulmonary hypertension as well as optimizing their COPD, and then scan them to assess their response."

So these advances could serve as intermediate biomarkers of the efficacy of the therapies that we try on our patients, and this could be done on an individual level. So I think dynamic imaging is going to be an interesting and exciting frontier that's going to complement clinical practice in the near future.

Announcer:
That was Dr. Emily Wan talking about the evolving role of imaging in identifying and characterizing structural lung disease. 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!

© 2026 ReachMD