Cystic Fibrosis Research News

Citation:

Quantitative chest computerized tomography and FEV_1 equally identify pulmonary exacerbation risk in children with cystic fibrosis. Sanders DB, Li Z, Parker-McGill K, Farrell P, Brody AS. Pediatr Pulmonol. 2018 Oct;53(10):1369-1377

What was your research question? (50 words maximum)

We wanted to understand whether there were cut-offs for chest computerized tomography (CT) scores that could identify risks for future hospitalizations among among children with cystic fibrosis (CF).

Why is this important? (100 words maximum)

Being able to predict which patients with CF are at risk for more frequent hospitalizations would help us identify which patients may benefit most from additional treatments to prevent hospitalizations.

What did you do? (100 words maximum)

We determined which CT scores were best at identifying patients with different risks of future hospitalizations. For this work, we used data from chest CT scans from two clinical trials as well as from the CF Foundation Patient Registry. We compared these results with lung function testing completed at the same time as the CT to understand if CT scores were better predictors of future hospitalizations than lung function tests.

What did you find? (100 words maximum)

The CT scores that best predicted future hospitalizations were similar in both clinical studies. However, CT scores were not any better than lung function tests at identifying patients ~~at risk for~~ future hospitalizations.

What does this mean and reasons for caution? (100 words maximum)

Chest CT scans may help identify children with CF who have mild lung disease who are at risk for future hospitalizations~~.~~ However, the use of CT scans may not be better than lung

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function testing to predict future hospitalizations. Children with CF who have normal lung function are still at risk for future hospitalizations.

What's next? (50 words maximum)

More sensitive chest CT scores and lung function testing are currently being developed. We are hoping that these new testing methods will be better at identifying children at risk for hospitalizations.