Early cystic fibrosis lung disease detected by bronchoalveolar lavage and lung clearance index
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The lung clearance index (LCI) is a sensitive non-invasive marker of early lung disease in young children with cystic fibrosis (CF), according to a new study from Australian researchers.

"We found that LCI is elevated early in children with CF, especially in the presence of airway inflammation and Pseudomonas aeruginosa," said Yvonne Belessis, MBBS, MPH, PhD, respiratory staff specialist at the Sydney Children's Hospital. "LCI may not only be a marker of early CF lung disease, but may be useful as an objective outcome measure in future studies of young children with CF."

The findings were published online ahead of print publication in the American Thoracic Society's American Journal of Respiratory and Critical Care Medicine.

LCI was determined after multiple breath washout (MBW) testing in 47 presymptomatic/minimally symptomatic infants and young children with CF (mean age 1.55 years) and 25 healthy control children (mean age 1.26 years). Bronchoalveolar lavage (BAL) was also performed in the children with CF.

Mean (SD) LCI in children with CF was 7.21 (0.81), compared with 6.45 (0.49) in control children (P


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