

Gene expression ratio may aid rapid pneumonia diagnosis

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(HealthDay)—A ratio evaluating the expression of two molecular markers may assist in the rapid diagnosis of community-acquired pneumonia (CAP) on ICU admission, according to a study published in the Oct. 1 issue of the *American Journal of Respiratory and Critical Care Medicine*.

Brendon P. Scicluna, Ph.D., from the University of Amsterdam, and colleagues evaluated two cohorts of consecutively enrolled patients treated for suspected CAP on ICU admission. The discovery cohort (between January 2011 and July 2012) consisted of 101 CAP and 33 no-CAP patients, while the validation cohort (between July 2012 and June 2013) had 70 CAP and 30 no-CAP patients. Blood was collected within 24 hours of ICU admission.

The researchers found that blood microarray analysis revealed distinct gene expression patterns between CAP and no-CAP patients. A 78-gene signature was defined for CAP, from which an FAIM3:PLAC8 gene expression ratio was derived. The ratio had an area under curve of 0.845 and positive and negative predictive values of 83 percent and 81 percent, respectively. In the validation cohort, the FAIM3:PLAC8 ratio outperformed plasma procalcitonin and IL-8 and IL-6 in discriminating between CAP and no-CAP [patients](#).

"We propose the FAIM3:PLAC8 ratio as a candidate biomarker to assist in the rapid diagnosis of CAP on ICU [admission](#)," the authors write. Two authors have a patent pending for the molecular biomarker.

More information: [Abstract](#)
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