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LETTER TO THE EDITOR



## Diagnostic accuracy of periostin in asthma: question before celebration

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To the editor,

We read with great interest the article of Jia X, et al.(1) on the role of periostin in the diagnosis of Asthma: a systematic review and meta-analysis. The authors searched the electronic databases. In total, 9 studies with 1448 subjects were met the inclusion criteria. The aim of the study was to evaluate the accuracy for the diagnosis of asthma. Periostin achieves a moderate diagnostic performance in the detection of asthma. However, we were concerned by the control group selection.

Periostin is a secreted extracellular matrix protein that was originally identified in cells from isolated from osteoblasts and periosteum. It has been proposed as a biomarker of Th2 inflammatory response in patients with asthma. Chronic obstructive pulmonary disease (COPD) was associated with Th2-mediated eosinophilic inflammation. Periostin could function as a biomarker in COPD. There is a long-standing debate about whether asthma and COPD are different of the same disease or completely characterize disease entities generated by distinct mechanisms. Therefore, it is insufficient to distinguish patients based on symptoms, lung function or single biomarker. There was no definite conclusion on the use of periostin as a biomarker to distinguish asthma from COPD. The control groups in the Wang J, et al. (2) study was identified as 147 with COPD rather than 50 healthy nonsmokers. Although this study did find detectable periostin levels but found no difference in periostin between patients with asthma, COPD or healthy controls, they chose COPD as the control group, the bias caused by the selection bias could not be ruled out. It is noteworthy that a study (3) showed that serum periostin was higher in patients with atopic asthma compared to patients with COPD (126.4 ng/mL and 71.3 ng/mL respectively,  $p < 0.05$ ). As a result, the

conclusion of this meta-analysis needs to be interpreted with caution and further clinical trials are required to confirm their results.

### Declaration of interest

The authors have no conflicts of interest to declare. The authors alone are responsible for the content and writing of the paper.

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