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Evaluating the sensitivity and specificity of NEATstik technology compared to an activity-based immunoassay in sputum samples from participants with COPD

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NEATstik is a point of care test which gives a qualitative result on whether neutrophil elastase is elevated from sputum in 10 min with minimal processing and could be of benefit in clinical practice <http://bit.ly/2SohUhf>

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To the Editor:

Chronic bacterial infection may play an important role in the progression of COPD [1] with the pulmonary inflammatory response driven by neutrophils [2]. Neutrophil elastase (NE) is a serine protease stored and secreted by neutrophils [3] and is an essential defence against bacterial infection [4]. Proteases are produced and stored in the latent form and are only activated upon appropriate signalling [5]. Active sputum NE is a potential biomarker for infection in several respiratory diseases including, but not limited to, cystic fibrosis, COPD and bronchiectasis [6–10], with levels correlating to bacterial infection [11] and future risk of exacerbations in patients with bronchiectasis [12]. NE has been shown to be active in host defence against bacteria [4], both intracellularly and *via* extracellular traps [13]. NEATstik is a point of care test for NE which gives a qualitative result from sputum in 10 min with minimal processing. This may benefit clinical practice as a rapid indicator of bacterial infection and neutrophil activation.