



SHAREABLE PDF

# Sputum neutrophil elastase in bronchiectasis: a Southern European cohort study

Andrea Gramegna <sup>1,2</sup>, Stefano Aliberti <sup>1,2</sup>, Oriol Sibila<sup>3</sup>, Carlotta Di Francesco<sup>1</sup>, Giovanni Sotgiu <sup>4</sup>, Lidia Perea<sup>5</sup>, Leonardo Terranova<sup>1,2</sup>, Martina Oriano<sup>1,2,6</sup>, Tommaso Pilocane<sup>1,2</sup>, Laura Saderi <sup>4</sup>, James D. Chalmers<sup>7</sup>, Paola Marchisio<sup>1,8</sup> and Francesco Blasi <sup>1,2</sup>

**Affiliations:** <sup>1</sup>University of Milan, Dept of Pathophysiology and Transplantation, Milan, Italy. <sup>2</sup>Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Respiratory Disease and Adult Cystic Fibrosis Center, Milan, Italy. <sup>3</sup>Respiratory Dept, Hospital Clinic, IDIBAPS, CIBERES, Barcelona, Spain. <sup>4</sup>Clinical Epidemiology and Medical Statistics Unit, Dept of Biomedical Sciences, University of Sassari, Sassari, Italy. <sup>5</sup>Inflammatory Diseases, Biomedical Research Institute Sant Pau (IIB Sant Pau), Barcelona, Spain. <sup>6</sup>Dept of Molecular Medicine, University of Pavia, Pavia, Italy. <sup>7</sup>Scottish Centre for Respiratory Research, University of Dundee, Dundee, UK. <sup>8</sup>Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Paediatric Highly Intensive Care Unit, Milan, Italy.

**Correspondence:** Stefano Aliberti, University of Milan, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Via Francesco Sforza 35, 20122, Milan, Italy. E-mail: stefano.aliberti@unimi.it



@ERSpublications

**Activity of neutrophil elastase is a generalisable biomarker related to disease severity and clinical characteristics across different populations of patients with bronchiectasis** <https://bit.ly/2XKDUqn>

**Cite this article as:** Gramegna A, Aliberti S, Sibila O, *et al.* Sputum neutrophil elastase in bronchiectasis: a Southern European cohort study. *Eur Respir J* 2020; 56: 2001702 [<https://doi.org/10.1183/13993003.01702-2020>].

This single-page version can be shared freely online.

## To the Editor:

Bronchiectasis is a chronic respiratory disease with neutrophilic airway inflammation playing a prominent role in its pathophysiology [1]. The inflammatory process depends on the release of neutrophil elastase and subsequent formation of neutrophil extracellular traps to facilitate the neutralisation of pathogens. An excessive release of neutrophil elastase can lead to several damaging lung effects, including mucus gland stimulation, increase in sputum production, impairment in ciliary beat frequency and extracellular matrix and airway epithelia destruction. The activity of neutrophil elastase (aNE) has been evaluated previously in sputum samples of a Scottish cohort of bronchiectasis patients [2]. The authors demonstrated that increased levels of aNE in sputum are associated with disease severity and poor clinical outcomes. This experience identified neutrophil elastase as one of the most promising biomarkers in bronchiectasis and, subsequently, a point-of-care assay for aNE was validated [3].