The search for the “healthy” blood eosinophil count

Signe Vedel-Krogh

Affiliations: 1Dept of Clinical Biochemistry, Hertlev and Gentofte Hospital, Copenhagen University Hospital, Copenhagen, Denmark. 2The Copenhagen General Population Study, Hertlev and Gentofte Hospital, Copenhagen University Hospital, Copenhagen, Denmark. 3Dept of Clinical Biochemistry, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark.

Correspondence: Signe Vedel-Krogh, Rigshospitalet, Dept of Clinical Biochemistry, Blegdamsvej 9, Copenhagen 2100, Denmark. E-mail: signe.vedel.krogh.01@regionh.dk

Although traditionally associated with allergy and parasitic infections, eosinophils are pleiotropic cells. They function as modulators of innate and adaptive immunity and are implicated in the pathogenesis of several local and systemic inflammatory processes, tissue injury and tumour immunity [1]. In the respiratory tract, eosinophils are specifically associated with the development of allergic asthma and are recruited to the lungs by cytokines released by activated Th2 cells as part of the inflammatory response [2]. COPD is classically regarded as a Th1-mediated disease dominated by neutrophil cells; however, a subset of COPD shows evidence of eosinophilic airway inflammation [3]. In observational studies, high blood eosinophil counts are associated with higher risk of asthma and COPD exacerbations [4, 5], and both the Global Initiative for Asthma [6] and the Global Strategy for the Diagnosis, Management and Prevention of COPD [7] recognise the use of blood eosinophil counts to guide therapy in asthma and COPD.