We are grateful to VAN DER GUGTEN *et al.* [1] for the opportunity to compare our findings with those from a larger cohort. While previous studies have demonstrated reduced lung function soon after birth in individuals who wheeze in infancy [7, 8], the relationship between infant lung function and wheezing disorders beyond infancy is less clear [5, 6]. The findings of VAN DER GUGTEN *et al.* [1] in conjunction with those from the Southampton Women's Survey provide evidence that structural airway impairments in infancy may differentially predict asthma and wheeze in childhood.

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Structural airway impairments in infancy may differentially predict asthma and wheeze in childhood http://ow.ly/qt3cw

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From the authors:

We would like to thank E. Brooke and co-workers for their interest in our article [1] and for the interesting study they performed. Their data from the Southampton Womens' Survey provide further evidence that an impaired neonatal lung function is associated with respiratory symptoms [1, 2]. Also, in their cohort, a lower neonatal compliance of the respiratory system was associated with asthma in childhood [1]. Additionally, they were able to measure the forced expiratory flow in 0.4 s ($FEV_{0.4}$) by using the raised-volume thoraco-abdominal compression technique. Also, lower $FEV_{0.4}$ measurements were found to be associated with increased childhood asthma risk [1].

Although longitudinal cohort studies are challenging, they enable us to study repeated observations of the same person at different points in time. Such studies allow us to track the changes of early-life lung function at the individual level in relation to respiratory symptoms in childhood. With longer follow-up, direct study of associations between neonatal lung function and the occurrence of adult respiratory diseases, such as chronic obstructive pulmonary disease, will be possible.

Studies performed to date, including the Southampton Women's Survey, clearly underline the importance of measuring lung function starting at birth. Although these measurements are challenging, new devices

have recently became commercially available for noninvasive measurements [3]. These developments can be helpful to further explore the role of neonatal lung function in the development of respiratory diseases in later life.

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Impaired neonatal lung function is associated with life respiratory symptoms; its measurement at birth is important http://ow.ly/rJjyd

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Bronchoalveolar lavage cytology resembles sarcoidosis in a subgroup of granulomatous CVID

To the Editor:

We read with great interest the article by Bouvry *et al.* [1] regarding similarities and differences between interstitial lung disease (ILD) in granulomatous common variable immunodeficiency (CVID) and sarcoidosis. In this retrospective study, differential bronchoalveolar lavage (BAL) cytology was analysed in 14 patients with granulomatous CVID and ILD. The authors found BAL lymphocytosis (>20%) in 11 out of 14 patients and a mean±SD proportion of BAL lymphocytes of 37.3±15.3%. Unlike the sarcoidosis group (5.3±4.0), the CD4/CD8 ratio was low in the analysed patients with granulomatous CVID and ILD (1.6±1.1, n=10) and even <1 in half of the patients (n=5). Bouvry *et al.* [1] concluded that there are significant differences in differential BAL cytology between sarcoidosis and granulomatous CVID.

We therefore retrospectively analysed a subgroup of 11 CVID patients (seven females and four males) with histologically proven granulomatous disease according to the inclusion criteria used by Bouvry *et al.* [1] and analysed BAL findings. Patients were 41.5±15.2 years of age and referred to the Centre of Chronic Immunodeficiency, University Medical Centre Freiburg (Freiburg, Germany) between 2003 and 2012. CVID was diagnosed based on the European Society for Immunodeficiencies/Pan-American Group for Immunodeficiency criteria [2]. In nine out of 11 patients, transbronchial biopsy was performed during bronchoscopy. In six (67%) of the biopsies, lymphocytic infiltrations could be detected, which did not fulfil the criteria for lymphocytic interstitial pneumonia. BAL lymphocytes (53.3±19.8%) exceeded 20% in all patients. CD4 cells accounted for 68.7±18.1% and CD8 cells for 16.6±8.2% of BAL cells. In contrast to the results reported by Bouvry *et al.* [1], we found a high CD4/CD8 ratio of 6.8±7.0 and no patient had a CD4/CD8 ratio <1.5. Moreover, the CD4/CD8 ratio (n=10; r=0.719, p=0.019) and the percentage of BAL CD4 lymphocytes (n=9; r=0.816, p=0.004) correlated negatively with BAL neutrophils (6.5±8.5%). The study by Bouvry *et al.* [1] showed significant differences in chest high-resolution computed tomography (HRCT) morphology between CVID and sarcoidosis patients. In particular nodules, air bronchograms, halo