Diagnosing asthma in general practice with portable exhaled nitric oxide measurement--results of a prospective diagnostic study: FENO $\leq 16$ ppb better than FENO $\leq 12$ ppb to rule out mild and moderate to severe asthma [added].

To evaluate the sensitivity, specificity and predictive values of fractional exhaled nitric oxide (FENO) for the diagnosis of asthma in general practice. Prospective diagnostic study with 160 patients attending 10 general practices for the first time with complaints suspicious of obstructive airway disease (OAD). Patients were referred to a lung function laboratory for diagnostic investigation. The index test was FENO measured with a portable FENO analyser based on electrochemical sensor. The reference standard was the Tiffeneau ratio (FEV1/VC) as received by spirometric manoeuvre and/or results of bronchial provocation. Bronchial provocation with methacholine was performed to determine bronchial hyper-responsiveness (BHR) in the event of inconclusive spirometric results. 88 (55%) were female; their average age was 43.9 years. 75 (46.9%) patients had asthma, 25 (15.6%) had COPD, 8 (5.0%) had an overlap of COPD and asthma, and 52 (32.5%) had no OAD. At a cut-off level of 46 parts per billion (ppb) ($n = 30$; 18.8%), sensitivity was 32% (95%CI 23-43%), specificity 93% (95%CI 85-97%), positive predictive value (PPV) 80% (95%CI 63-91%), negative predictive value (NPV) 61% (95%CI 52-69%) when compared with a 20% fall in FEV1 from the baseline value.
after inhaling methacholine concentration 46 ppb. Mild and moderate to severe asthma could be ruled out with FENO