

1.11 A retrospective analysis of referrals and outcome measures of the influence of Fractional Exhaled Nitric Oxide Testing (FeNO) in the support of an asthma diagnosis.

O'Donnell M^{1,2}, Casey D¹, O'Riordan U¹, Bowen B¹, Vairamani P¹, Varghese P.¹, Ahern M¹, Osbourne M¹, Noonan C¹, Meade C¹, O'Regan H¹, Carvalho J¹, Paulos V¹, Murphy J¹, Gomez F^{1,2}

¹Chronic Disease Hub, Respiratory Integrated Care, SMOH, Gurrabraher, Cork

²Department of Respiratory Medicine, Cork University Hospital, Wilton, Cork.

Background: Fractional exhaled nitric oxide testing (FeNO) is surrogate biomarker of airway eosinophil inflammation in allergic asthma and rhinitis. Ireland has one of the highest rate of asthma worldwide.

Objective: To evaluate patients with query asthma and determine clinical and physiologic characteristics of patients with high FeNO.

Methods: A retrospective analysis of patients who attended for spirometry to the Respiratory Integrated Care hub and also had FeNO completed. Smoking history, exacerbation history, inhaled corticosteroids use, mean eosinophils were reviewed, as well as airflow variability and spirometry results. A diagnosis of asthma was made on the basis of having a pretest diagnosis of asthma, airway reversibility, and either raised eosinophils (>0.3) or FeNO >30.

Results: Out of 119 patients, 17 (14.3%) fulfilled the criteria for a diagnosis of asthma. Those with high FeNO had statistically significant airflow variability, smoking, and raised eosinophils. ($p < 0.05$). Of the 17 diagnosed, 4 did not have a raised FeNO. These 4 were all current smokers. Of the 17 diagnosed, 17 (100%) had airway reversibility, 10 (58.8%) had high eosinophils, and 13 (76.4%) had high FeNO.

Conclusions: In patients with suspected asthma, FeNO was found to be high in 76% compared 100% with airway responsiveness and 59% with high eosinophils.

Conflict of Interest: The authors declare that they have no conflict of interest.