

AAAAI/ACAAI Joint Statement of Support of the ATS Clinical Practice Guideline: Interpretation of Exhaled Nitric Oxide for Clinical Applications

In September 2011, the American Thoracic Society (ATS) published a new guideline on the Interpretation of Exhaled Nitric Oxide for Clinical Applications. (Dweik RA et al. Am J Respir Crit Care Med 2011;184:602-615). The purpose of this document is to serve as formal recognition and support of the ATS guideline by the American College of Allergy, Asthma and Immunology (ACAAI) and the American Academy of Allergy, Asthma and Immunology (AAAAI).

The measurement of fractional exhaled nitric oxide (FeNO) is quick, simple and reproducible, and has been standardized for clinical use. Over the last decade, numerous studies have demonstrated its utility as a biomarker for the identification of corticosteroid sensitive inflammation and the responsiveness to anti-inflammatory therapy. The ATS guideline provides a foundation for clinicians in the interpretation of FeNO measurement in the context of the diagnosis and management of asthma.

The 2011 guideline acknowledges that the measurement of FeNO provides complementary information that is not available solely through the use of traditional clinical tools, including history, physical examination, and pulmonary function measurements. It provides strong recommendations for the use of FeNO in the identification of patients who are likely to respond to inhaled corticosteroid (ICS) therapy when FeNO is high, and in the identification of patients who are unlikely to respond to ICS therapy when FeNO is low. Specific cut points are suggested when interpreting FeNO levels. Additionally, FeNO is a marker that identifies airway inflammation related to ongoing allergen exposure and is of particular value in identifying patients who are non-adherent with prescribed anti-inflammatory therapy. The ATS guideline also suggests monitoring changes in FeNO relative to personal best values to optimally determine asthma control and the need to adjust asthma treatment regimens. It should be noted however, that asthma is a complex disease with multiple phenotypes. While the baseline measurement of FeNO would be helpful in identifying specific phenotypes, its sequential measurement, although of value in many asthma patients, would not be expected to be useful in all asthma patients. It must also be emphasized that FeNO values, of themselves, do not justify a diagnosis or change in treatment and must be interpreted in relation to the clinical context, as discussed in the ATS Guideline.

The ACAAI and AAAAI recognize that the measurement of inflammation, using FeNO, is a paradigm change in the diagnosis and management of asthma. As such, it provides a perspective otherwise unavailable to the clinician. Rather than focusing solely on the assessment of symptoms and lung function, FeNO allows for the identification of inflammation and the need for appropriate therapy to prevent the symptoms and airflow obstruction that are the end results of the inflammatory process.

Therefore, the American College of Allergy, Asthma and Immunology and the American Academy of Allergy, Asthma and Immunology formally recognize and support the 2011ATS Clinical Practice Guideline on the Interpretation of Exhaled Nitric Oxide for Clinical Applications.

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