

Consensus Meeting at National Jewish Health

The following White Paper presents points of clinical consensus arrived at by participants in a closed meeting held at National Jewish Health in Denver, Colorado. The meeting took place on July 20, 2009. The group of clinicians and researchers, all leaders in the field of asthma, met to discuss the utility of FE_{NO} in the diagnosis and management of asthma. The following represents a summary of their presentations, discussions and recommendations.

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Moderator:

David Tinkelman, MD

National Jewish Health, Denver, CO

Presenters:

Peter Boggs, MD

The Asthma Allergy Clinic, Shreveport, LA

Neal Jain, MD

Dean Health System, Madison, WI

Miguel Lanz, MD

AAARDS Clinical Research Center, Coral Gables, FL

Stanley Szeffler, MD

National Jewish Health, Denver, CO

Discussants:

Kaiser Lim, MD

Mayo Clinic, Rochester, MN

Andrew Liu, MD

National Jewish Health, Denver, CO

Harold Nelson, MD

National Jewish Health, Denver, CO

Jeffrey Rosch, MD

Penn State Milton S. Hershey Medical Center, Hershey, PA

Executive Summary and Panel Recommendations

FE_{NO} is a good surrogate marker for eosinophilic inflammation, which is associated with steroid responsiveness. FE_{NO} significantly correlates with bronchial hyperresponsiveness, bronchodilator reversibility and atopy. In addition to assisting in predicting steroid responsiveness, measurement of FE_{NO} can help distinguish asthma from other respiratory conditions, is reproducible and is associated with other markers of asthma severity. It is also a useful measure to monitor adherence to inhaled corticosteroids and to assist in optimizing the dose of inhaled corticosteroids (ICS) to obtain both symptom and inflammation control.

This expert panel recommends:

1. FE_{NO} measurement should be a part of the clinical management of asthma in ambulatory settings in conjunction with other conventional methods of asthma assessment.
2. FE_{NO} should be used to determine the presence or absence of eosinophilic airway inflammation, to determine the likelihood of steroid responsiveness, to measure response to steroid therapy and level of inflammation control. In addition, FE_{NO} is a useful tool to monitor patient ICS treatment adherence and allergen exposure. Due to phenotypic distinctions and variability in the underlying pathology of asthma, FE_{NO} should not be the sole determinant of asthma diagnosis.
3. While standards exist for normal and elevated FE_{NO} levels, the benefit of following FE_{NO} levels can be enhanced by comparing levels in each individual to their baseline for each individual rather than compared to others in the community, due to wide inter-patient variability and imprecise reference norms.
4. When interpreting the results of FE_{NO} clinicians should be familiar with associated variables that can affect FE_{NO} readings, such as race, smoking status, a diet high in nitrates, etc.

If you request a copy of the complete paper, send us an e-mail with your name and address.

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