

Guide to Interpretation of The NIOX Value in Patients with Airway Disease

Do not use the guide if the patient is a smoker. Data are inconclusive for current smokers. The NIOX Value is complementary to spirometry in the diagnosis and assessment of airway disease.

	LOW	NORMAL	INTERMEDIATE	HIGH
Eosinophilic inflammation	Unlikely	Unlikely	Present, but mild	Significant
ADULTS				
NIOX Value (ppb)*	<5	5–25	25–50	>50 (or a rise of > 60% since previous measurement)
CHILDREN < 12 years				
NIOX Value (ppb)*	<5	5–20	20–35	>35 (or a rise of > 60% since previous measurement)

Consider:
PCD (2)
CF (3)
Chronic lung disease of prematurity

If symptomatic:
review diagnosis (1)
If asymptomatic and on treatment:
• Implies that patient is compliant
• Consider dose reduction or withdrawal of anti-inflammatory drug

Interpretation based on clinical presentation
If symptomatic and on anti-inflammatory treatment, consider:
• Infection as reason for worsening
• High levels of allergen exposure
• Dose increase
• Adding LABA
In addition for children
• Check
– compliance
– inhalation technique (4)
If asymptomatic and on treatment:
• No change of anti-inflammatory drug dose, if patient is stable

• Consider atopic asthma if the history is appropriate
• A positive response to a trial of inhaled or oral steroids is likely
In addition for children
• If combined with any objective evidence of reversible airway obstruction, asthma is very likely
If symptomatic and on anti-inflammatory treatment:
• Check
– compliance
– inhalation technique (4)
– drug dose
• Consider
– high levels of allergen exposure
– imminent exacerbation or relapse
– steroid resistance (rare)
If asymptomatic and on treatment:
• No change of anti-inflammatory drug dose, if patient is stable

(1) Consider: Neutrophilic asthma, anxiety/hyperventilation, vocal cord dysfunction, gastroesophageal reflux, rhinosinusitis and cardiac disease. In addition for children: Wheezy bronchitis, ENT disorders and immuno-deficiencies.

(2) Primary ciliary dyskinesia (check nasal NO).

(3) Cystic fibrosis.

(4) For children, consider metered dose inhaler and spacer if patient is currently using a dry powder device.