

# FeNO by NIOX®

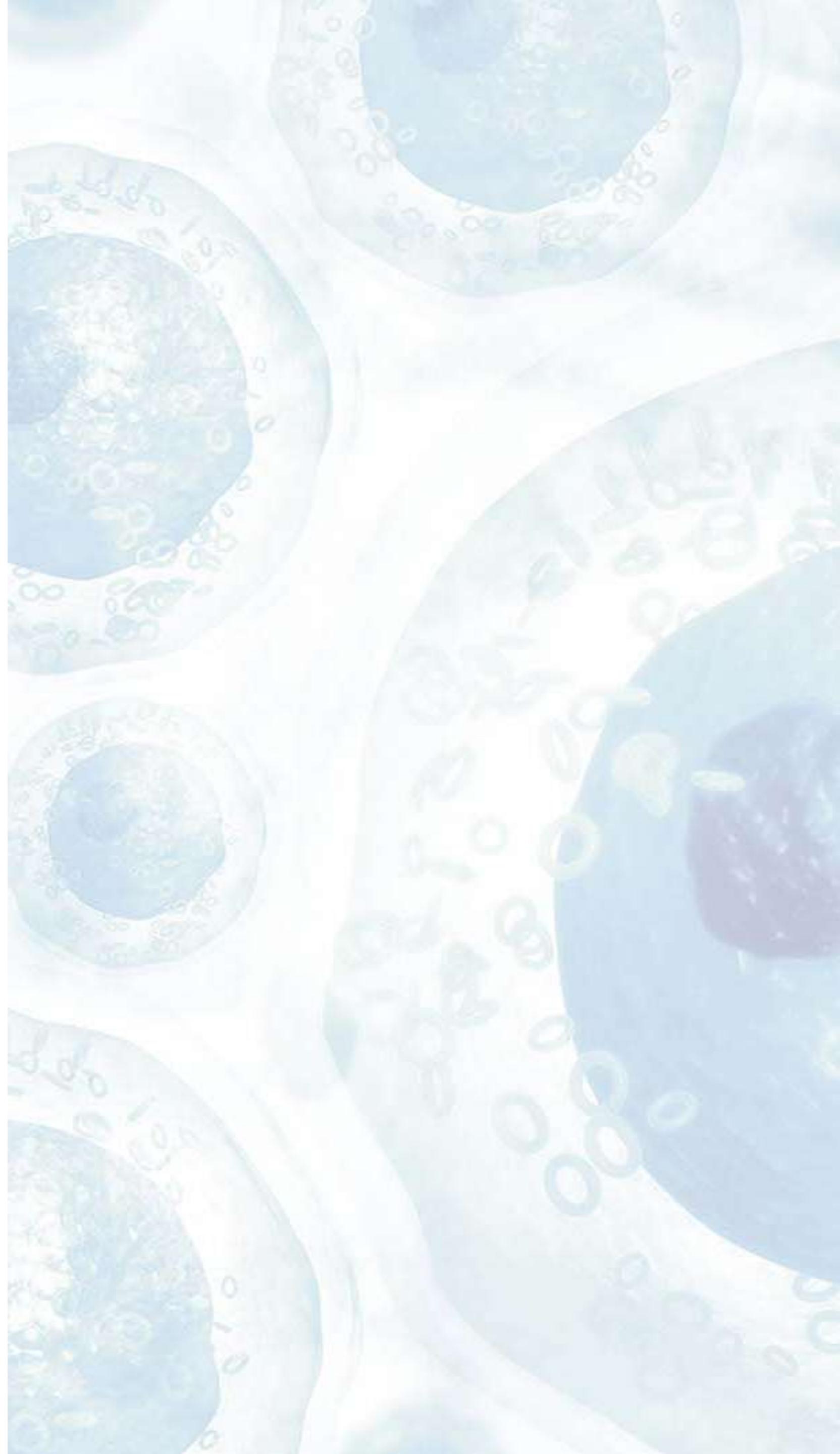
A safe and easy way to instantly  
transform your asthma care



# Airway inflammation is key in asthma

Airway inflammation contributes to airway obstruction and airflow limitation by swelling the bronchial muscles. This causes the symptoms of asthma, such as wheeze, cough, breathlessness and chest tightness.<sup>1</sup>

Only measuring airway obstruction is not enough to support the diagnosis and management of asthma.<sup>2</sup>



FeNO stands for fractional exhaled nitric oxide and correlates directly with the level of inflammation in patients' lungs. FeNO is the only biomarker of airway inflammation available at the point-of-care.

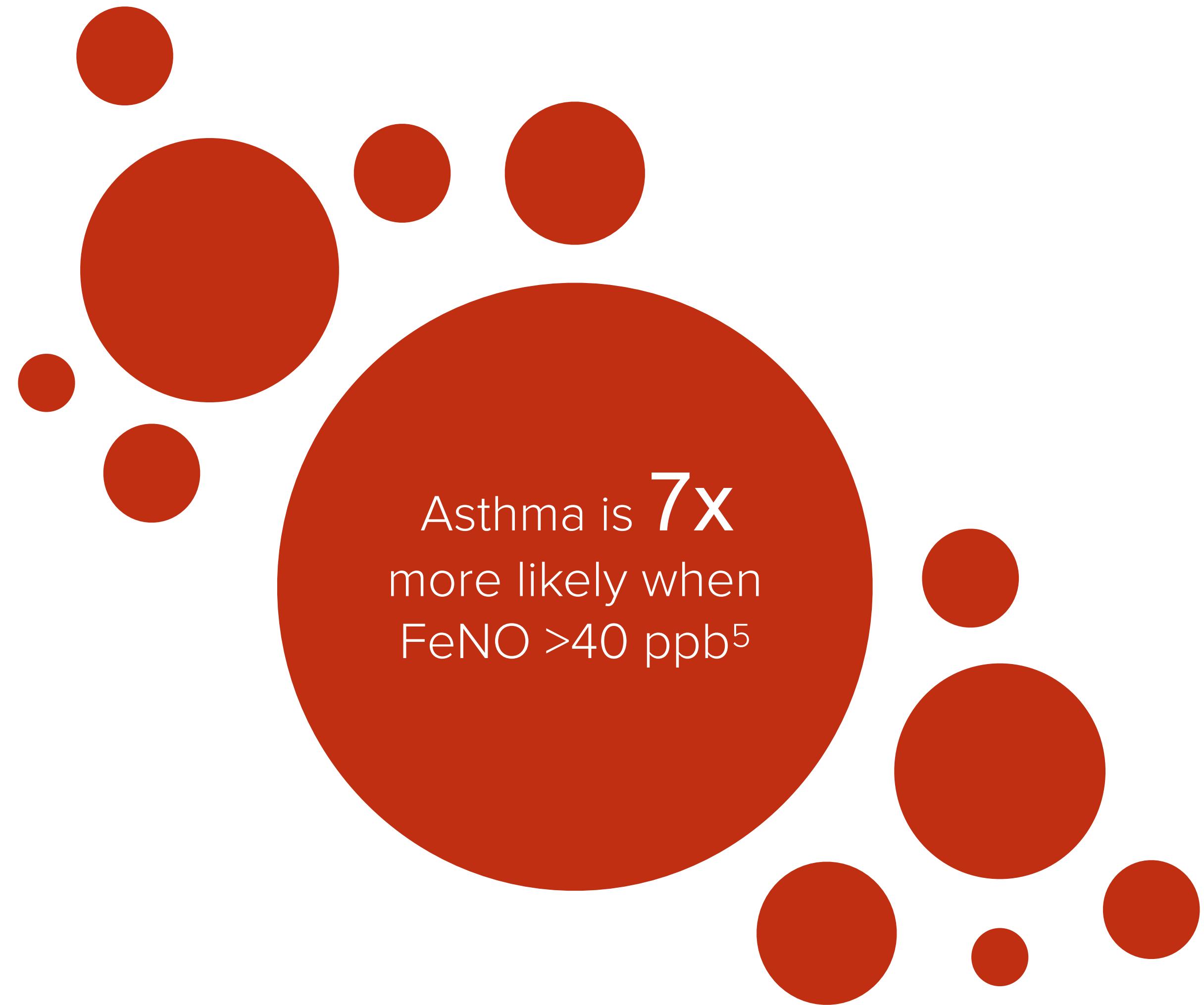
Recent research has shown that **up to 84%<sup>3</sup>** of asthma patients have Type 2 inflammation, which is particularly associated with exacerbations. When Type 2 inflammation is present, interleukins IL-4 and IL-13 upregulate the production of nitric oxide in the airways, increasing FeNO levels.<sup>4</sup>

the most  
convenient biomarker

FeNO testing is safe and easy to perform, even when lung function is severely reduced, in patients from the age of four.

Simply inhale and exhale to visualise airway infammation in a single number in less than two minutes at the point-of-care.

**SIMPLE  
IMMEDIATE  
NON-INVASIVE**

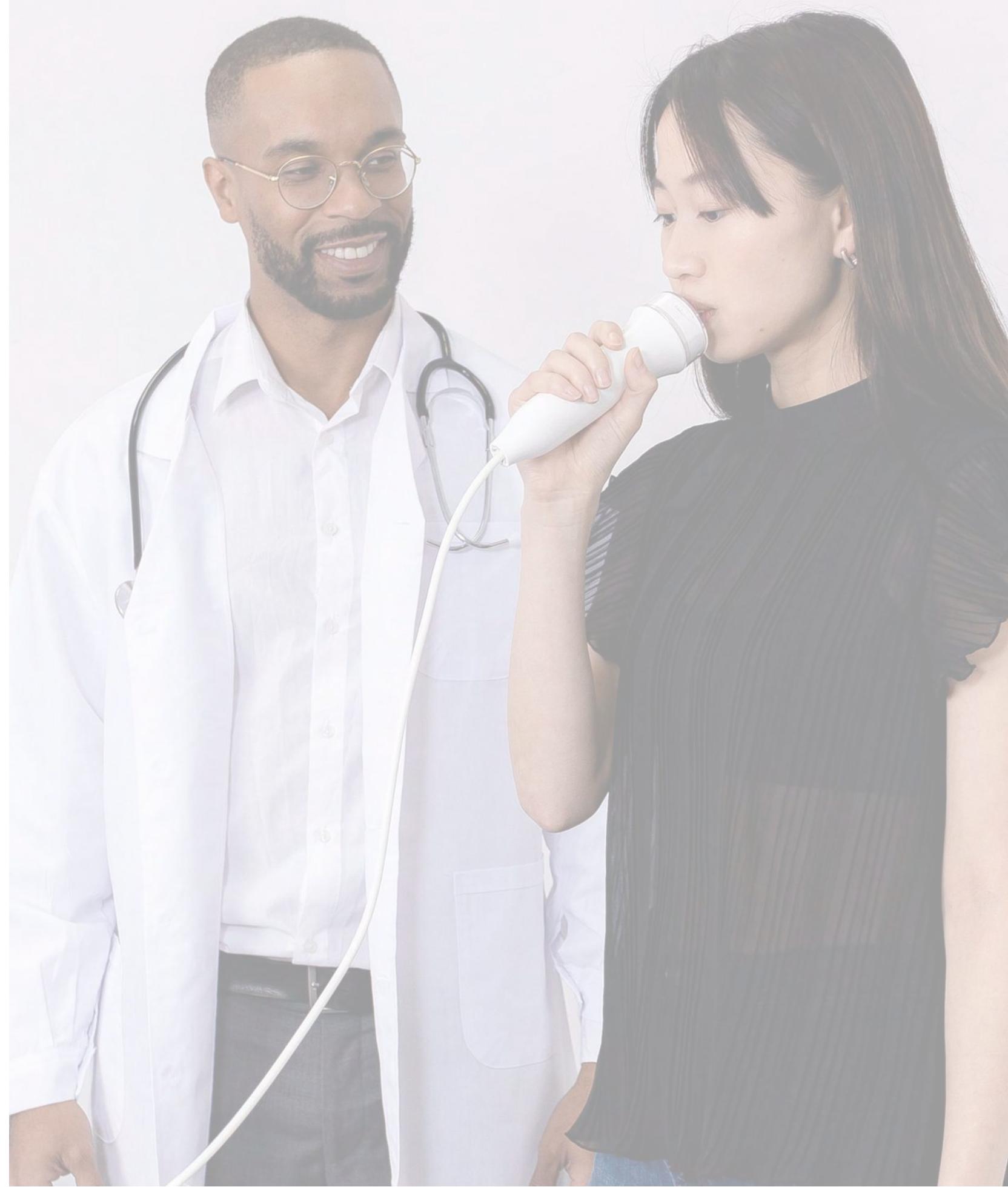


Asthma is **7X**  
more likely when  
FeNO >40 ppb<sup>5</sup>

All asthma patients have underlying airway inflammation regardless of symptoms. Lung function tests are not enough to make a confident diagnosis.

Up to  33% of adults and  50% of children are incorrectly diagnosed with asthma and almost half of all asthmatics remain undiagnosed.<sup>6</sup>

Incorporating FeNO testing into your clinical routine will help improve diagnostic accuracy and give you complete confidence in your decision.





## Sophie Toor

Clinical Director, Respiratory Matters

“It just gives you that extra bit of the puzzle,  
which makes you more confident that  
the diagnosis is correct.”



Asthma  
kills

1,000 people worldwide will die from asthma today.<sup>7</sup>

58% are being treated for mild or moderate asthma.<sup>8</sup>

65% of these deaths could be prevented.<sup>8</sup>

# Reducing exacerbations is a top priority

High levels of airway inflammation are an important risk factor for exacerbations.<sup>1</sup>

Regular monitoring of inflammation is crucial to keep a close eye on the patient's future risk.

High FeNO values are associated with **more exacerbations and increased mortality**.<sup>9,10</sup>





High FeNO values are  
associated with

**2.5x<sup>10</sup>**

more exacerbations

Exacerbations are  
reduced by up to

**50%<sup>11</sup>**

with FeNO-guided  
asthma management



## Optimising treatment

FeNO testing can safely guide the step-wise approach to confidently titrate ICS dosage.<sup>12,13</sup>

## Monitoring adherence

FeNO testing can identify patients who are not taking their ICS medication as prescribed.<sup>14</sup>

# “What’s my number today, doctor?”

Patients really love FeNO. It's a great engagement tool as well as a practical management tool, to reinforce the message that asthma patients with airway inflammation need to take corticosteroids regularly.

FeNO testing can help healthcare professionals advise and demonstrate in a visual way what's happening inside patients' lungs.



Dr Richard Russell

Consultant at Southern Health NHS Foundation Trust and  
Clinical Director of the West Hampshire  
Integrated Respiratory Service



Listen to Dr Richard Russell (UK), as he explains the value of FeNO for patient education.



# Good for patients. Good for budgets.

FeNO testing has been proven to considerably reduce costs and improve quality of life when used in asthma patients and those are two reasons why it's recommended in most guidelines.

Thousands of healthcare professionals around the world are enjoying the economic and clinical benefits of FeNO with NIOX VERO®.

FeNO testing is  
safe and easy  
with NIOX®



# The gold standard FeNO device

With over 40 million tests performed worldwide, NIOX® is trusted by thousands of healthcare professionals as the device of choice for clinical use and global research.





ACCURATE  
RELIABLE  
STRAIGHTFORWARD



# Inhale. Exhale.

The unique NIOX® breathing handle is designed with accuracy in mind.

Inhaling through the handle first is key. As patients inhale, ambient NO and other contaminants are removed from the breath, ensuring the exhalation reflects their true FeNO level.

ACCURATE. RELIABLE. STRAIGHTFORWARD.



# One test, one result

NIOX® protects your patients from failing a test.

Flow Rate Control™ guides patients to easily perform a steady exhalation throughout the test, leading to an accurate result each time, every time.

ACCURATE. RELIABLE. STRAIGHTFORWARD.



# Never-ending performance

Our sensors just work, from the first test to the last test. NIOX® products are accurate throughout their lifetime and never require recalibration.

Whenever you need a new sensor, replace instantly and simply resume testing.



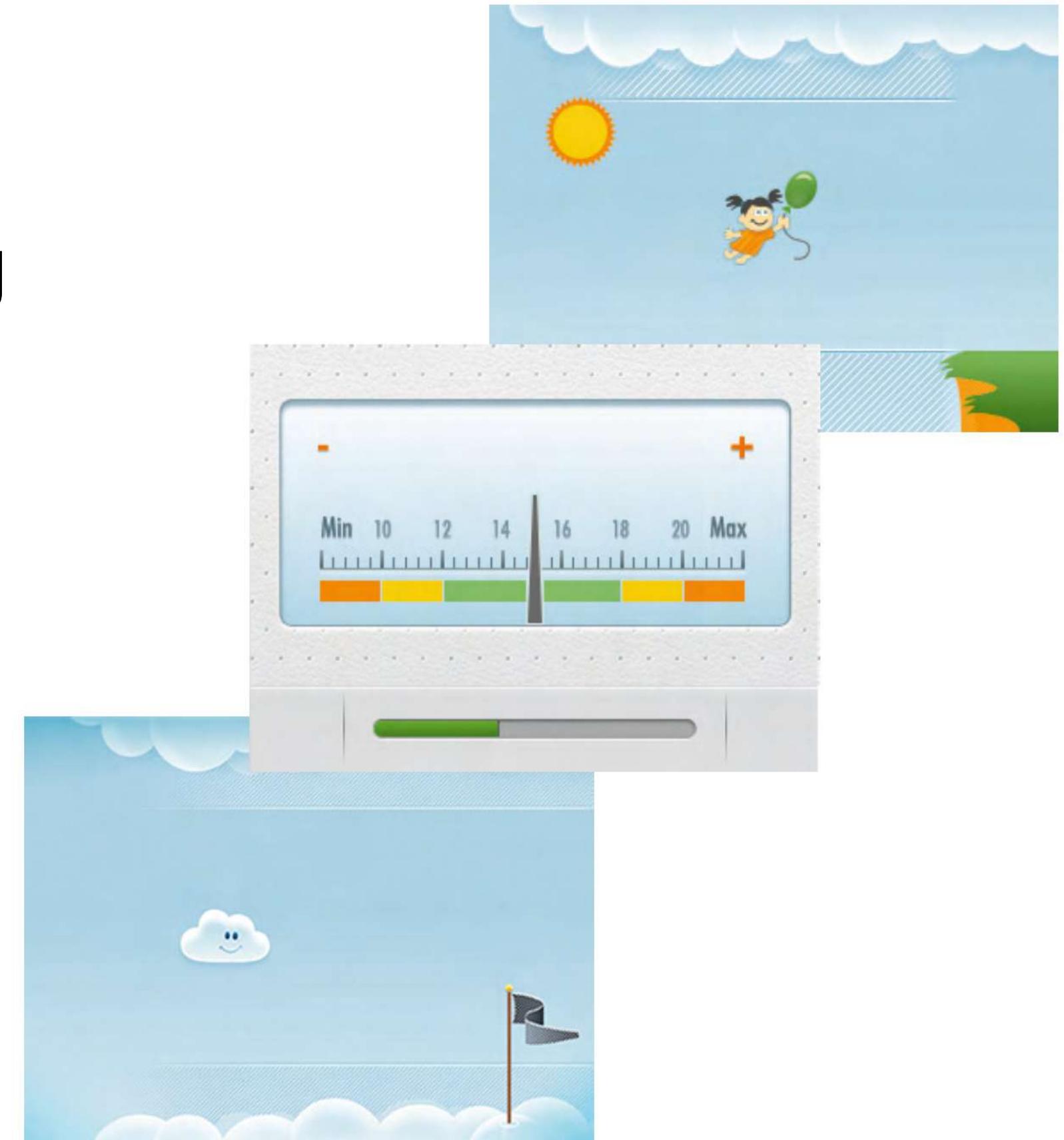
ACCURATE. RELIABLE. STRAIGHTFORWARD.

# Everything you need

With two exhalation modes (6-second and 10-second), everyone can perform FeNO testing from children aged 4 to patients with severely reduced lung function.

Three engaging animations with sound effectively guides your patients to a successful test.

In approximately one minute, NIOX VERO® analyses the breath sample and displays the FeNO result as a single number.





See NIOX® on your desk now  
[niox.com/ar/](http://niox.com/ar/)



# Learn more about NIOX®

Our dedicated customer service team is here to help you!



Get a quote, book a demo & access support:

# References

1. Global Initiative for Asthma (GINA). Global strategy for asthma management and prevention, 2021. Available from ginaasthma.org.
2. Louis R et al. European Respiratory Society guidelines for the diagnosis of asthma in adults. Eur Respir J. 2022;DOI:10.1183/13993003.01585-2021.
3. Heaney LG et al. Eosinophilic and noneosinophilic asthma: an expert consensus framework to characterize phenotypes in a global real-life severe asthma cohort. Chest. 2021;160(3):814-830.
4. Menzies-Gow A et al. Clinical utility of fractional exhaled nitric oxide in severe asthma management. Eur Respir J. 2020;55(3):1901633.
5. Wang Z et al. The clinical utility of fractional exhaled nitric oxide (FeNO) in asthma management. Rockville (MD): Agency for Healthcare Research and Quality (US). 2017. Report No.: 17(18)-EHC030-EF.
6. Kavanagh J et al. Over- and under-diagnosis in asthma. Breathe (Shef). 2019;15(1):e20-e27.
7. Global Asthma Network. The Global Asthma Report. 2018.
8. Royal College of Physicians (RCP). Why asthma still kills: the National Review of Asthma Deaths (NRAD). 2014.
9. Ikwu I et al. Fractional exhaled nitric oxide and mortality in asthma and/or chronic obstructive pulmonary disease. SSRN Electronic journal. DOI:10.2139/ssrn.4043745.
10. Mansur AH et al. Disconnect of type 2 biomarkers in severe asthma; dominated by FeNO as a predictor of exacerbations and periostin as predictor of reduced lung function. Respir Med. 2018;143:31-38.
11. Petsky HL et al. Tailoring asthma treatment on eosinophilic markers (exhaled nitric oxide or sputum eosinophils): a systematic review and meta-analysis. Thorax. 2018;73(12):1110-1119.
12. Hanania NA et al. Measurement of fractional exhaled nitric oxide in real-world clinical practice alters asthma treatment decisions. Ann Allergy Asthma Immunol. 2018;120(4):414-418.
13. Wang K et al. Using fractional exhaled nitric oxide to guide step-down treatment decisions in patients with asthma: a systematic review and individual patient data meta-analysis. Eur Respir J. 2020;55(5):1902150.
14. Heaney LG et al. Medical Research Council UK Refractory Asthma Stratification Programme (RASP-UK). Remotely monitored therapy and nitric oxide suppression identifies nonadherence in severe asthma. Am J Respir Crit Care Med. 2019;199(4):454-464.

## Important safety information

NIOX VERO® is a portable system for the non-invasive quantitative simple and safe measurement of Nitric Oxide (NO) in human breath (FeNO) and Nasal Nitric Oxide (nNO) in the aspirated air from the nasal cavity. For FeNO: Nitric Oxide is frequently increased in some inflammatory processes such as asthma and decreases in response to anti-inflammatory treatment. FeNO measurements should be used as part of a regular assessment and monitoring of patients with these conditions. NIOX VERO FeNO is suitable for patients age 4 and above. As measurement requires patient cooperation, some children below the age of 7 may require additional coaching and encouragement. NIOX VERO FeNO can be operated with 2 different exhalation times, 10 seconds and 6 seconds. The 10 second mode is the preferred mode. For children who are not able to perform the 10 second test, the 6 second is an alternative. The 6 second test should be used in caution with patients over the age of 10. It should not be used in adult patients. Incorrect use of the 6 second exhalation test may result in falsely low FeNO values, which can lead to incorrect clinical decisions. For nNO: nNO has been shown to decrease in patients with Primary Ciliary Dyskinesia (PCD) and measurement of nNO can assist in the identification of cases of PCD. Measurement of nNO is suitable for patients age 5 and above. Suspected cases of PCD following screening with nNO should be confirmed according to published recommendations for PCD diagnosis and management.

In case of an adverse event involving Circassia product, please email [product.safety@circassia.com](mailto:product.safety@circassia.com).

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