

# FeNO Case Study: Christina



Christina, 59 years old Initial FeNO result: < 25 ppb (Normal)

#### Symptoms on examination:

- FeNO 14 ppb (normal)
- Pulse 76/regular
- Peak flow 460 L

## **How FeNO Helped:**

Absence of high FeNO values indicating airway inflammation means Christina is very unlikely to respond to ICS treatment (used to reduce airway inflammation typical in a majority of asthma patients).

In addition to symptoms outside the scope of how asthma would typically present, Christina's FeNO value was 'normal' at 14 ppb, which indicated Christina does not have airway inflammation, typical with allergic asthma. FeNO was able to strengthen the HCP's decision of an alternative diagnosis to asthma.

#### **Recommendations:**

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**Christina's Background:** 

- Suffering shortness of breath for 6 years
- Has previous investigations including spirometry but presented as normal
- Has taken Methotrexate for 14 years to treat rheumatoid arthritis
- Breathlessness is mostly related to exertion
- Symptoms worsen with any upper respiratory tract infections even mild infections
- One emergency episode but settled without intervention, tests show no abnormalities, unsure of tests performed
- Takes Salbutamol to relieve symptoms of breathlessness, was daily now taking as required (mostly alternate days)
- Previously taken Lansoprazole daily but now takes it as needed but is still symptomatic
- No ankle oedema
- Sleeps fairly flat with 1 pillow but usually coughs when lays down
- Has no history of eczema, rhinitis or allergies.
- Has relatives with asthma including children and grandchildren who use inhalers
- Non-smoker

## **Summary:**

Ongoing difficulty with shortness of breath for 6 years. Cardiac investigations to date normal. History not in keeping with asthma and FeNO normal (below 25 ppb). Absence of high FeNO level (indicative of airway inflammation) in addition to symptoms outside the scope of how asthma would typically present, helps supports the HCP's decision to consider an alternative diagnosis.

These are fictional case studies for illustrative purposes only.





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