



# Effect of maintenance oral corticosteroids on risk factors for frequent exacerbations in a severe adult asthma population

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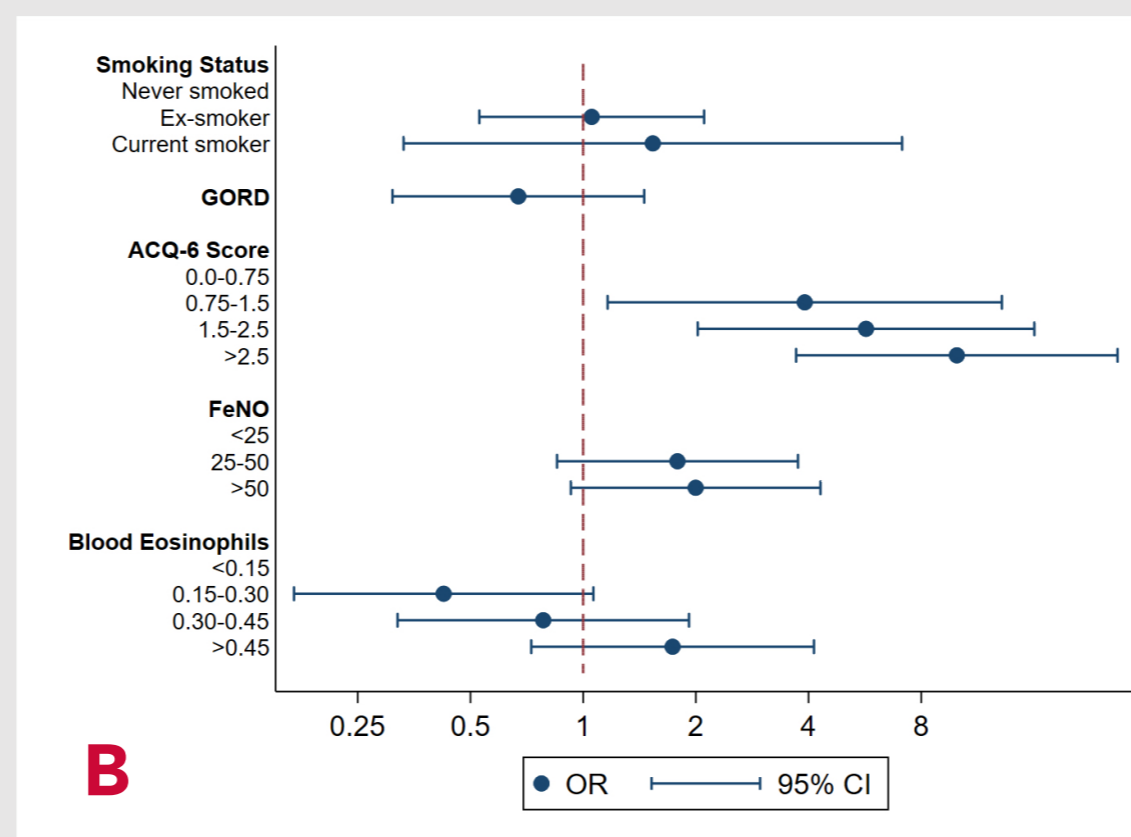
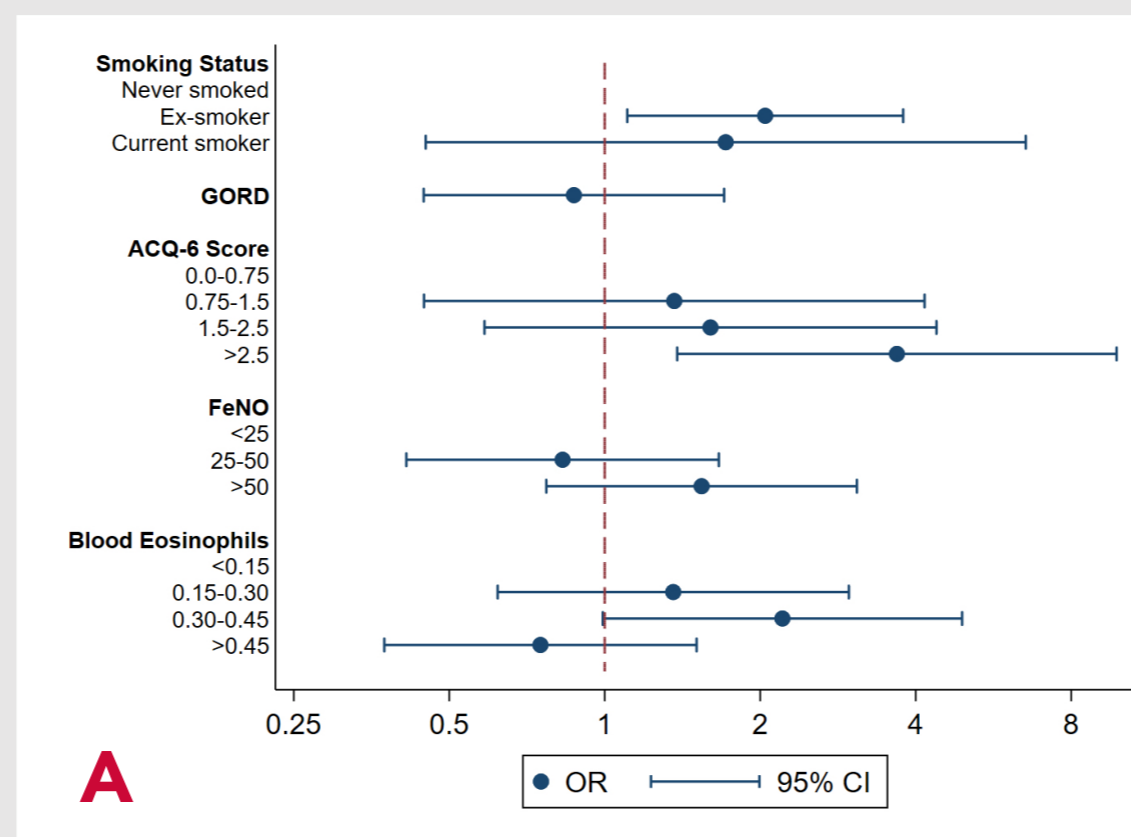
## INTRODUCTION

- Risk factors for frequent exacerbations (FE) include poor symptom control and persistent Type 2 inflammation.
- The effect of maintenance oral corticosteroids (mOCS) on risk factors for FE in a real-world severe asthma population is unknown.

## METHODS

- We conducted univariate and multivariate logistic regression analysis using data from the UK Severe Asthma Registry (UK-SAR) to identify risk factors for FE in patients with and without mOCS.
- All patients who fulfilled ERS/ATS criteria for severe asthma between the age of 18 and 80 years were included. Patients who had poorly controlled asthma due to non-adherence were excluded.
- FE was defined as  $\geq 3$  severe exacerbations during the 12 months before baseline assessment.

Figures A and B. Risk factors for frequent exacerbations in patients treated with (A) and without (B) maintenance OCS when adjusted for other risk factors.



## RESULTS

- Of 1193 severe asthma patients, 652 (55%) were on mOCS. There were no significant differences in the number of exacerbations between those who were treated with and without mOCS.
- In patients treated with mOCS, past smoking history (OR 2.04,  $p=0.02$ ) and ACQ-6 score  $>2.5$  (OR 3.68,  $p=0.01$ ) were associated with FE when adjusted for other factors.
- In patients not on mOCS, univariate analysis showed past smoking history, ACQ score  $>1.5$ , FeNO  $>25$ ppb and blood eosinophil count  $>0.45 \times 10^9/L$  were associated with FE. However, high ACQ-6 score (score 1.5-2.5, OR 5.70,  $p<0.01$ ; score  $>2.5$ , OR 9.96,  $p<0.01$ ) was the only factor associated with FE when adjusted for other factors.

## CONCLUSION

- High ACQ-6 score was the strongest independent risk factor for FE in a real-world severe asthma population irrespective of mOCS status.
- Other risk factors such as T2 inflammation markers differed in patients with and without mOCS.