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Poster abstract: Characterising the impact of sex on severe asthma (SA) in the UK Severe Asthma Registry (UKSAR)

Loewenthal, L., Busby, J., McDowell, R., Brown, T., Burhan, H., Chaudhuri, R., Dennison, P., Dodd, J. W., Faruqi, S., Gore, R., Idris, E., Jackson, D. J., Patel, M., Pantin, T., Pavord, I. D., Pfeffer, P. E., Price, D., Siddiqui, S., & Heaney, L. (2023). *Poster abstract: Characterising the impact of sex on severe asthma (SA) in the UK Severe Asthma Registry (UKSAR)*. Abstract from European Respiratory Society International Congress 2022, Barcelona, Spain.

Document Version:

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Characterising the impact of sex on severe asthma (SA) in the UK Severe Asthma Registry (UKSAR)

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Introduction: Women are more likely to develop SA than their male counterparts. This analysis examines sex differences in disease, biological phenotype and treatment from UKSAR.

Methods: Data for patients meeting the ERS/ATS SA criteria in UKSAR (n=3,679) was analysed by sex using univariate and multivariate logistic regression analyses.

Results: SA patients were predominantly female (60.9%). Women were more likely to be obese (OR 1.67, 95% CI: 1.45, 1.93) and to have uncontrolled disease on asthma control questionnaire 6 (OR 1.14, 95% CI: 1.09, 1.18), more likely to have exacerbations (OR 1.13, 95% CI: 1.10, 1.17) and report asthma hospital admissions (OR 1.46 95% CI: 1.26, 1.70). Lung function was better in women, with percent predicted FEV₁ 3.9% higher than their male counterparts. Women had lower mean IgE (129 vs 208 IU/mL, p<0.001) and mean FeNO (36 vs 46ppm, p<0.001) type-2 biomarkers but no significant difference in blood eosinophils or biologic therapy. Women were less likely to be on long-term OCS (OR 0.86, 95% CI: 0.75, 0.99). Results are displayed in figure 1.

Conclusion: Significant differences were seen between the characteristics of men and women with SA. Women had worse asthma control, increased exacerbations and obesity despite higher FEV₁ percent predicted, lower FeNO and Total IgE compared with their male counterparts. Understanding these disparities is important to deliver personalised SA treatment.

Figure 1. Regression analysis of sex differences in severe asthma

