


Nasal polyposis in patients in the Severe Asthma Registry of The German Asthma Net

C. Bal, S. Stoshikj, K. Milger, D. Skowasch, M. Gappa, C. Koerner-Rettberg, M. Jandl, O. Schmidt, R. Ehmann, C. Taube, E. Hamelmann, R. Buhl, S. Korn¹, M. Idzko¹.

CB, SS and MI: Department of Pneumology, University Hospital Vienna AKH, Medical University of Vienna, Vienna, Austria, KM: Department of Medicine V, Ludwig-Maximilians-University (LMU) of Munich; Comprehensive Pneumology Center (CPC-M) German Center for Lung Research (DZL), Munich, Germany, DS: Department of Internal Medicine II - Pneumology, University Hospital Bonn, Bonn, Germany, MG: Evangelisches Krankenhaus Düsseldorf, Children's Hospital, Düsseldorf, Germany, CKR: Department of Pediatrics, Research Institute, Marien-Hospital Wesel, Wesel, Germany, MJ: Hamburger Institut für Therapieforschung GmbH, Hamburg, Germany, OS: Pneumologische Gemeinschaftspraxis und Studienzentrum KPPK, Koblenz, Germany, RE: Ambulante Pneumologie mit Allergiezentrum, Stuttgart, Germany, CT: Department of Pulmonary Medicine, University Hospital Essen - Ruhrlandklinik, Essen, Germany, EH: Kinderzentrum Bethel, Evangelisches Klinikum Bethel, University Bielefeld, Bielefeld, Germany, RB: Mainz University Hospital, Pulmonary Department, Mainz, Germany, SK: Thoraxklinik Heidelberg und IKF Pneumologie Mainz, Mainz, Germany.



German Asthma Net e.V. 

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Background and methods

Severe asthma often co-occurs with **Chronic Rhinosinusitis with nasal polyps (CRSwNP)**, characterized by increased type 2 inflammation. The concept of united airway disease arose due to the shared presence of type 2 cytokines, local IgE production, and eosinophil infiltration.

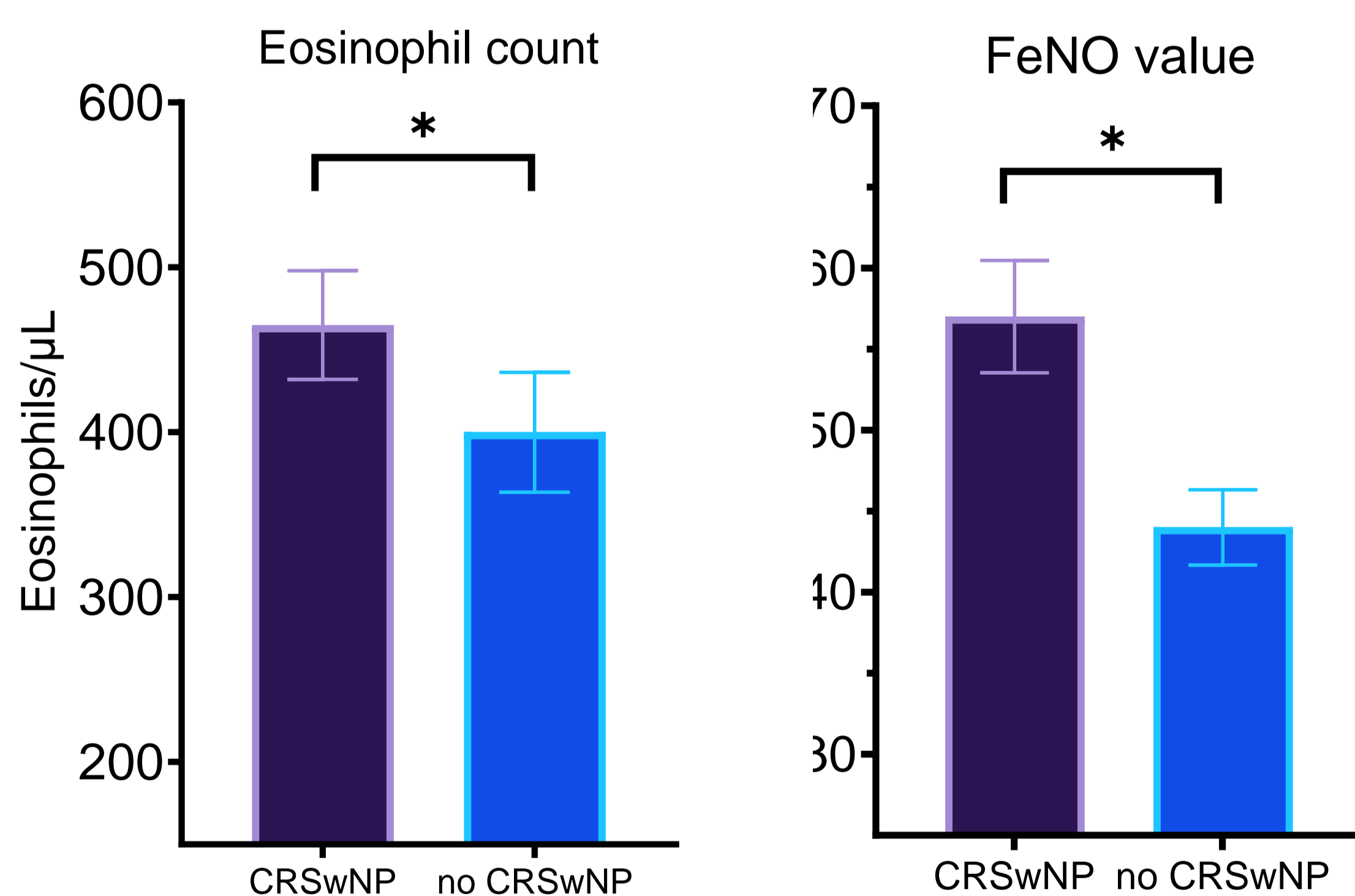
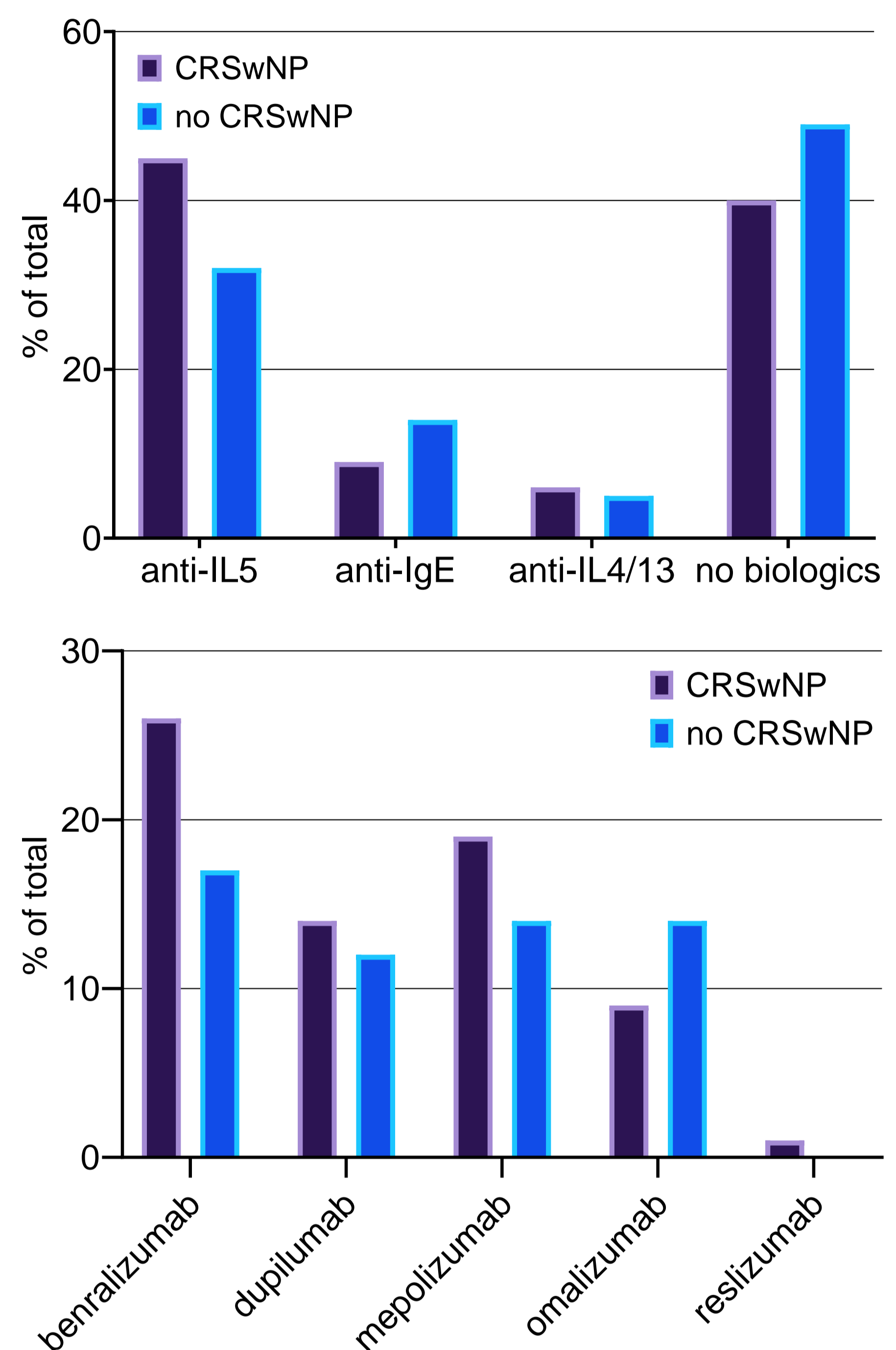
We aimed to characterize patients with severe asthma and comorbid CRSwNP in a real-life setting. We assessed epidemiologic, inflammation, disease control, and lung function parameters in patients from the **German Asthma Net (GAN)**, an international, multi-center registry that records long-term comprehensive data.

Cohort

Results: This cross-sectional study analyzed 1135 patients, 39% of who had CRSwNP, 58% were female, and in the mean 53±16 years, with 59% frequent exacerbations (≥2/year).

Biologics use

CRSwNP and severe asthma are **independent indications for biologics**, with increased use in this cohort. Corticosteroid use was irrespective of CRSwNP:



Type 2 inflammation parameters

Type 2 inflammation markers are significantly higher in CRSwNP patients: they exhibited higher levels of exhaled nitric oxide (FeNO, $p < 0.001$) and blood eosinophil counts ($p = 0.03$).

CRSwNP was also **more common in adults** than in children ($p = 0.003$) and **inversely associated with allergic diatheses** ($p < 0.05$).

Variables, mean (SD) / % of total (n):	CRSwNP, n=438	No CRSwNP, n=697	p-value
FeNO, ppb	57 ± 52	44 ± 44	<0.0001
Blood eosinophils/μL	465 ± 556	400 ± 797	0.03
Predominantly allergic asthma form	42% (184)	49% (339)	0.008
Seasonal sensitisation (Prick test)	50% (219)	58% (403)	0.009
Perennial sensitisation (Prick Test)	55% (239)	61% (427)	0.02

Conclusion

In patients with severe asthma from the German Asthma Net Registry, the history of nasal polyps marks pronounced type 2 inflammation, suggesting possible benefit from targeted treatments. There was no measured association with asthma control, exacerbation rates, and systemic corticosteroid treatments in this cross-sectional cohort with ongoing treatments.