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## Baseline characteristics of severe asthma patients initiating biologic treatment worldwide

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**Introduction:** To identify responders to biologic treatment, patients' pre-therapy characteristics must be understood.

**Aim:** To describe the characteristics of biologic users at initiation.

**Methods:** Patients from the International Severe Asthma Registry (ISAR) who initiated a biologic therapy (anti-IgE or anti-IL5/5R) were included in this study. Characteristics of the two biologic groups were compared at biologic initiation.

**Results:** Among 9211 patients from 19 countries who enrolled into ISAR from May 2015 to October 2020, a total of 1609 (17.5%) biologic patients were included in this study. Out of which, 794 (49.3%) and 809 (50.7%) reported initiating anti-IgE and anti-IL5/5R, respectively. The **table** shows anti-IL5/5R patients were more likely to be older, male, older at asthma onset, receiving long-term oral corticosteroid (LTOCS), have lower BMI, and less likely to be smokers. Anti-IL5/5R patients, at the exception of emergency visits, had evidence of worse asthma control.

**Conclusions:** Anti-IL5 patients had more severe asthma characteristics at initiation. Responses at post-biologic periods will inform the effect of therapy on these patients.

**Character count limit:** 1751/1810 characters

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**Abbreviations:** Long-term oral corticosteroid (LTOCS), body mass index (BMI)

Characteristics	Anti-IgE (n=794)	Anti-IL5 (n=809)
Age, mean (SD)	50.9(15.7)	54.2(14.1)
Male, N (%)	268 (33.7)	349 (43.1)
Age at onset, mean (SD)	23.7 (16.9)	31.4 (18.1)
BMI, mean (SD)	33.0(9.1)	29.9(7.5)
Smokers, N (%)	34 (4.7)	9 (1.2)
GINA uncontrolled asthma, N (%)	241 (61.3)	328 (71.8)
Receiving LTOCS, N (%)	40 (9.8)	114 (17.0)
Annual events, mean (SD)		
Exacerbations	3.41 (3.55)	4.12 (3.81)
Hospitalizations	0.43 (1.39)	0.72 (1.76)
Invasive ventilations	0.07 (0.42)	0.12 (0.63)
Emergency room visits	2.39 (5.23)	1.03 (3.08)