Worldwide Characterization of Severe Asthma Patients Eligible for Both Anti–IL-5 and Anti-IgE Biologic Therapy: Data from the International Severe Asthma Registry (ISAR)

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Introduction

- Patients with severe asthma are most frequently administered anti-IgE or anti–IL-5/5R biologics.
- 1/3 of severe asthma patients might be eligible for both[1-4].
- It is unclear if one class works better than the other amongst patients eligible for both.

Aim

To describe the demographic and clinical characteristics of anti-IgE or anti–IL-5/5R users who were eligible for both.

Methods

Study Design and Population

Observational cohort study using patient data (≥18 years old, GINA Steps 4/5) from the International Severe Asthma Registry (ISAR; http://isaregistries.org/).

Patient Inclusion

- Meet eligibility criteria for both anti-IgE and anti–IL-5/5R prescription (**S-Table 1**).
- Started either modality after 2014, ensuring approved drugs in both biologic classes were accessible to patients.

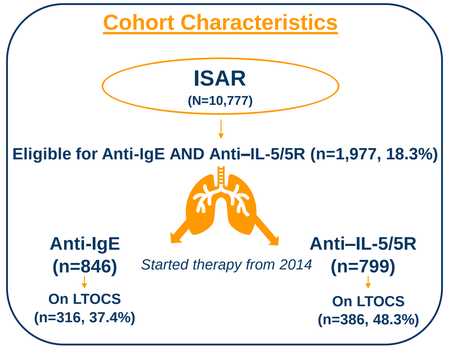
Exposures of Interest

- All exposures were considered pre-therapy, in the 12 months preceding initiation of anti-IgE or anti–IL-5/5R.

Abbreviations:
- LTOCS: Long-term oral corticosteroids; BD: bronchodilator

Results

Cohort Characteristics



Anti-IgE patients:

- More likely to be female.
- More likely to report osteoporosis (p <0.001) and Type 2 diabetes (p=0.004) (**Figure 1**) among long-term oral corticosteroid (LTOCS) users.
- More likely to have a <80% predicted FEV_1 (p=0.021) post-BD (**Table 1**).

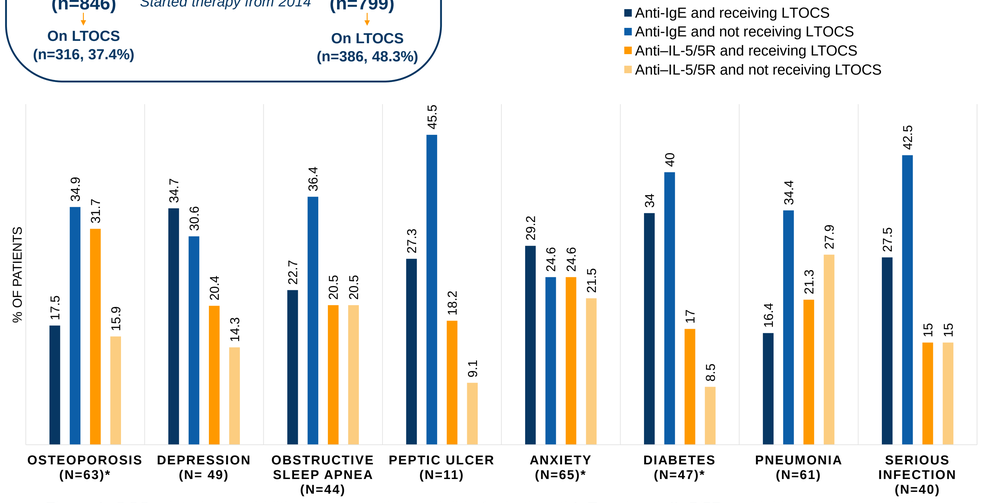


Figure 1: OCS related comorbidities among patients eligible for both anti-IgE and anti–IL-5/5R and initiated either modality

Anti–IL-5/5R patients:

- Were slightly older (54 vs 50.8 years), had later asthma onset (26.1 vs 29.9 years), had uncontrolled asthma, ≥5 exacerbations, FeNO>50 ppb (**Figure 2**), and suffered from anxiety (**Figure 1**).
- Were more likely to have airflow limitation (ratio mean (SD): 0.66 (0.14)) as compared to anti-IgE users (0.74 (0.19)), post-BD (p<0.0001) (**Table 1**).

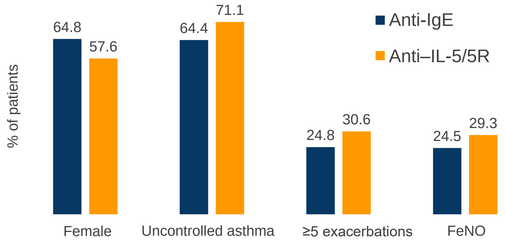


Figure 2: Characteristics of patients eligible for anti-IgE AND anti–IL-5/5R and initiated either modality

Intervention	Pre-BD, FEV_1 <80%	Post-BD, FEV_1 <80%	Post-BD FEV_1/FVC ratio <0.7
Anti-IgE + LTOCS, n (%)	N=214 190 (88.8%)	N=95 79 (83.2%)	N=91 45 (49.5%)
Anti-IgE only, n (%)	N=233 202 (86.7%)	N=156 120 (75.5%)	N=150 62 (41.3%)
Anti–IL-5/5R + LTOCS, n (%)	N=233 164 (70.4%)	N=139 88 (63.3%)	N=141 83 (58.9%)
Anti–IL-5/5R only, n (%)	N=176 125 (71.0%)	N=141 81 (57.4%)	N=143 73 (51%)

Table 1: Lung function characteristics among patients eligible for anti-IgE and anti–IL-5/5R and initiated either modality stratified by OCS use.

Conclusions

About **one-fifth** of ISAR patients are **eligible for both anti-IgE AND anti–IL-5/5R therapy**. Most **eventually initiated biologic treatment**.

Anti-IgE patients had **higher proportions of pre-therapy comorbidities** while anti–IL-5/5R patients tended to have **more severe asthma characteristics pre-therapy**.

This has **implications when comparing effectiveness of these biologics**. Future research is needed on **clinical outcomes** of initiating either of the biologic classes **when a patient is eligible for both**.

Disclosures

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Additional COI disclosures | Electronic copy of the poster | Audio Summary | Additional Information

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