Healthcare Resource Use in Patients With Severe Eosinophilic Asthma After the Initiation of Mepolizumab in Real-Life Settings: REALITI-A Study

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Objectives

- Patients with severe asthma, including severe eosinophilic asthma, comprise only 3–10% of the total asthma population but require a disproportionately large amount of total healthcare resource utilization (HRU), and have greater activity impairment and lower work productivity than patients with mild or moderate asthma.[1–5]
- Treatment with the anti-interleukin-5 monoclonal antibody, mepolizumab in patients with severe eosinophilic asthma, improves disease outcomes, work productivity and activity impairment, and may reduce HRU.[6–8]
- The prospective, open-label, observational REALITI-A study assessed the real-world clinical outcomes of patients with severe eosinophilic asthma with mepolizumab treatment including HRU, work productivity and activity impairment; these data may be informative for healthcare system resource allocation.
- The objective of this early initiators' analysis of the REALITI-A study is to describe HRU and work productivity and activity impairment of patients with severe eosinophilic asthma from REALITI-A before and 12 months after mepolizumab initiation.

Methods

REALITI-A (GSK ID: 204710)

Study Design

- Real-world
- Observational
- Prospective
- Global
- Single-arm

Clinical diagnosis of asthma:

- ≥18 years of age
- Newly prescribed mepolizumab
- Relevant medical records available
- ≥12 months data prior to enrollment

Mepolizumab 100 mg SC

At physician's discretion

Follow-up period: 24 months

Early initiators' analysis: 12 months

Early initiators' analysis*: 368 patients

Study enrollment period: **Dec 2016 to Oct 2019**

Early Initiators' analysis enrollment period: **Dec 2016 to Feb 2018**

Endpoints

HRU

WPAI:Asthma

Before and after 12 months of mepolizumab treatment

*This early initiators' analysis of the REALITI-A study includes all patients enrolled globally with 1 year post-exposure data by the cut-off date of February 28, 2019.

SC, subcutaneous; WPAI:Asthma, Work Productivity and Activity Impairment Questionnaire: Asthma

Results

Patient population prior to treatment index (total population)

Mean (SD) age **53.1 (13.7)** years

Mean (SD) asthma duration: **20.0 (15.1)** years

Female: **62%**

Comorbidities
Nasal polyps: **38%**
Atopic dermatitis: **13%**
Chronic sinusitis: **39%**

BEC cells/µl Geo. Mean (SD Log) Baseline: **370 (1.248)**

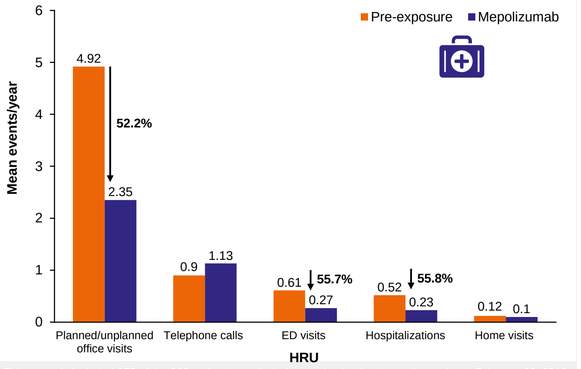
Mean # exacerbations* in the previous year: **4.7**

Never smoked: **61%**
Current smoker: **3%**
Former smoker: **37%**†

Mean (SD) ACQ-5 score: **3.0 (1.35)**

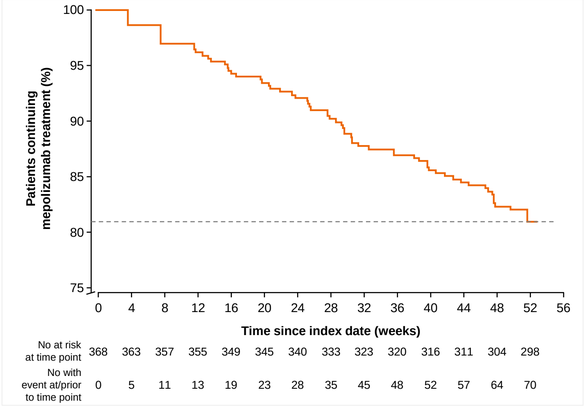
*Exacerbations requiring systemic glucocorticoids for ≥3 days (or a ≥2-fold increase in dose for patients already receiving maintenance OCS), and/or an ED visit/hospitalisation. †Total percentage sum appears greater than 100% due to rounding. ACQ-5 Asthma Control Questionaire-5; BEC, blood eosinophil count; ED, emergency department; OCS, oral corticosteroid; SD, standard deviation

HRU was reduced following 12 months of mepolizumab 100 mg SC treatment compared with 12 months pre-exposure

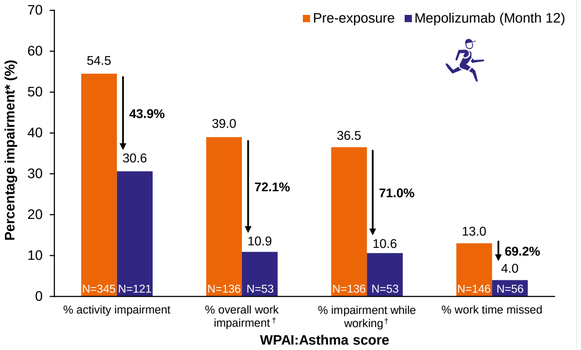


This analysis included 355 of the 368 patients enrolled who received at least one dose prior to February 28, 2018 for whom 12-month data is available.

In total, 19% of patients discontinued mepolizumab 100 mg SC in the first 12 months of treatment



Work productivity and activity impairment was reduced from the pre-exposure baseline with mepolizumab 100 mg SC at Month 12



*Due to asthma. Questions answered relative to 7 days period prior to assessment date; †impairment while working' refers to reduced productivity at work, whereas 'work impairment' refers to reduced productivity at work in addition to absenteeism.

Conclusions

- The use of mepolizumab 100 mg SC in real-world clinical practice in patients with severe eosinophilic asthma was associated with substantial reductions in HRU, particularly hospitalizations, and emergency department and office visits.
- Similarly, treatment with mepolizumab 100 mg SC was associated with substantial improvements in activity and work productivity.
- These results suggest that patients with severe eosinophilic asthma demonstrate real-world improvements in HRU, and work productivity and activity with mepolizumab.

References

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- SY, AM, SJ, and RAC are employees of GSK and own stocks/shares. RC has been an advisory board member for GSK, AstraZeneca, Novartis, Teva, and Boehringer Ingelheim; received a study grant from AstraZeneca within an MRC project and educational grants from Novartis and lecture fees from GSK, AstraZeneca, and Novartis. EP reports no disclosures. JKL reports grants and personal fees from Novartis, AstraZeneca, and Sanofi, as well as personal fees from GSK, Merck, and CSL. TK reports personal fees for lecturing and advice from Actelion, AstraZeneca, BerlinChemie, Chiesi, GlaxoSmithKline, and Novartis, outside the submitted work. DR-B has received fees for advisory boards and speaker meetings from GSK, AstraZeneca, TEVA, Chiesi, and Novartis. FS reports honoraria or consultation fees from GSK, AstraZeneca, Chiesi, Menarini, Mundipharma, and Novartis in addition to participation in sponsored bureaus for AstraZeneca, Chiesi, GSK, and Novartis. GS has served as a speaker or advisor for Aimmune, ALK, Allergy & Asthma Network, AstraZeneca, Boehringer Ingelheim, and Optinose; and has been an investigator for 3M, AstraZeneca, Chiesi, GSK, Lupin, Menlo, Merck, NeRRE, Novartis, Pearl Therapeutics, Sanofi, Teva, and Watson.
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