Improvements in Activity and Work Productivity in Patients Treated With Mepolizumab Across Eosinophilic Diseases

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Introduction

Patients with eosinophilic diseases, SEA, EGPA, CRSwNP and HES, can experience symptoms that disrupt their daily activity and ability to work.[1,2]

Mepolizumab has been shown to improve patient-reported symptoms and quality of life in patients with eosinophilic diseases, in both RCTs and real-world studies.[3–7]

Through minimizing the symptoms of eosinophilic diseases and reducing the risk of exacerbations, mepolizumab may improve daily activity and work productivity for these patients.

Aim

This post-hoc analysis aimed to describe the changes in daily activity and work productivity in patients receiving mepolizumab across four eosinophilic diseases.

Study design

- GSK ID: 217608

Four eosinophilic diseases evaluated changes in activity and work productivity after mepolizumab initiation.

4 RCTs (WPAI-GH)
Phase III, randomized, double-blind, placebo controlled

- SYNAPSE (CRSwNP)[3]
- MIRRA (EGPA)[4]
- FLARE (HES)[5]
- MENSA (SEA)[6]

1 RW study (WPAI-Asthma)

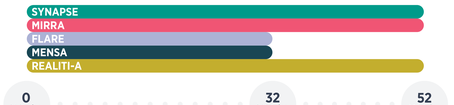
- REALITI-A (SEA)[7]

WPAI-GH and WPAI-Asthma outcomes were scored on a scale of 0–100%* and included:

- Overall work impairment
- Impairment while working
- Work time missed
- Daily activity impairment

*WPAI composite scores were analyzed using MMRM with adjustment for baseline covariates. A lower percentage represents improvement in work productivity and daily activity.

The mean change from baseline (randomization or enrollment) in WPAI composite scores were reported:



Abbreviations
CI, confidence interval; CRSwNP, chronic rhinosinusitis with nasal polyps; EGPA, eosinophilic granulomatosis with polyangiitis; HES, hypersinophillic syndrome; LS, least squares; SEA, severe eosinophilic asthma; RCT, randomized controlled trial; RW, real-world; SD, standard deviation; SE, standard error; WPAI-GH, Work Productivity and Activity Index General Health; MMRM, mixed model repeated measures.

Disclosures
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- **RGP**, **SZ**, **RA-C**, are employees of GSK and hold stocks/shares in GSK. **WA**, **LB** are permanent employees of GSK. **JH** and **SNV** are University workers employed by GSK.
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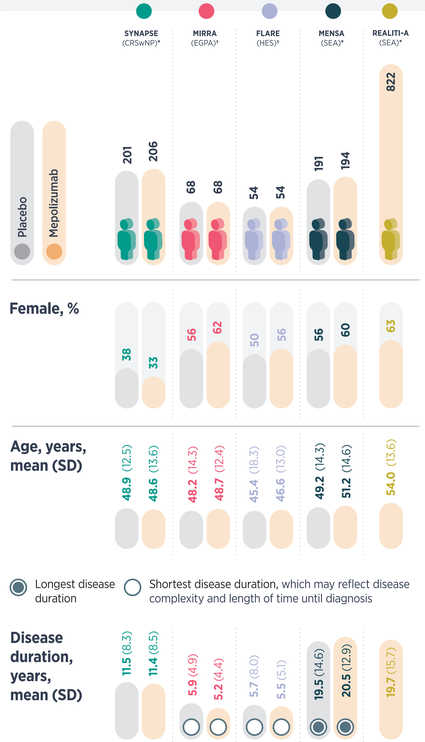
Results

Patient demographics



*Active treatment arm was mepolizumab 100 mg subcutaneous (mepolizumab 75 mg intravenous data within MENSA study has been excluded from this analysis); †active treatment arm was mepolizumab 300 mg subcutaneous.

Daily activity impairment was reported most highly at baseline (pre-treatment) for all indications; work time missed was reported as the least prevalent WPAI parameter.

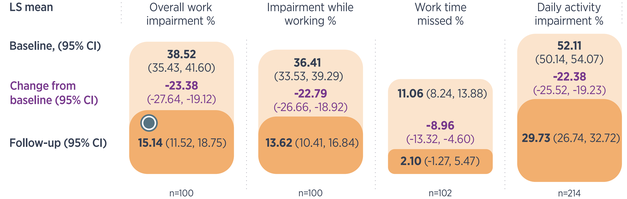
Baseline · Follow-up · Most improved across indications (mepolizumab vs placebo)

n represent patients with analyzable data at Week 32/52

*For work time missed, patients with EGPA and HES showed worsening relative to placebo. For daily activity impairment, patients with HES showed worsening relative to placebo.

RW study (REALITI-A)

Improvements were seen in all WPAI categories relative to baseline · Greatest improvement relative to baseline



Mean WPAI improvements were greater for the real-world study compared with the

Conclusions

- Across RCTs and real-world studies, mepolizumab improves overall work impairment and impairment while working in patients with eosinophilic diseases including EGPA, CRSwNP, HES, and SEA.
- The benefits of mepolizumab on work time missed and daily activity impairment depended on the patients' eosinophilic disease category.
  - Patients with SEA, CRSwNP, and HES benefited from mepolizumab with regards to daily activity impairment.
  - For work time missed, improvements were only observed for patients with CRSwNP and SEA; fewer patients with EGPA and HES completed this component of the WPAI questionnaire, which may explain the lack of improvement in these patient populations.
- Mepolizumab, through improving disease symptoms, may help minimize the impact on patients' work productivity and daily activity, leading to improved quality of life for patients with eosinophilic diseases.

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