

The Maintenance of Work-related Productivity During One Year of MMX^{®†} Mesalazine Treatment for Patients With Quiescent Ulcerative Colitis

PGI31

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INTRODUCTION

- Ulcerative colitis (UC) is a chronic incurable disease characterized by inflammation of the large intestine
- Patients with UC experience a number of symptoms, including abdominal pain, rectal bleeding, diarrhoea, and fatigue, that can potentially impact their work-related outcomes (WRO), such as work productivity
- There is some evidence that patients with active UC whose level of disease activity is decreased as a result of treatment exhibit improvements in WRO^{1,2}
- However, no studies have examined the impact of maintenance treatment on WRO in patients with quiescent UC

OBJECTIVES

- To examine changes in WRO in patients with mild-to-moderate quiescent UC who receive daily MMX[®] mesalazine 2.4 g/day for 6 and 12 months
- To examine the correspondence between changes in WRO and changes in disease activity over the 12-month treatment regimen
- To compare WRO of clinically recurrent and non-recurrent patients at 12 months

METHODS

Study Population and Design

UC patient sample

- Data were collected from the Strategies in Maintenance for Patients Receiving Long-term Therapy (SIMPLE) trial, a US-based, multicenter, single-arm, open-label trial that consisted of an 8-week acute phase (n = 132) and 12-month maintenance phase (n = 206)
- The data presented in the current analyses are from the 12-month maintenance phase, during which adult patients with mild-to-moderate quiescent UC received MMX mesalazine 2.4 g/day QD
- Quiescence of UC in the current study was defined as a patient obtaining a score of 0 on UC symptom measures of stool frequency (≤ 1 more bowel movement than normal) and rectal bleeding (no bleeding)
- WRO and disease activity were assessed at baseline and 6- and 12-month visits; clinical recurrence of disease was assessed at Month 12
- No imputation methods were used to replace missing data due to early withdrawal

Study Outcomes

WRO measure: Work Productivity and Activity Impairment Questionnaire: Ulcerative Colitis (WPAI:UC), V2.0³

- 6-item, self-report WRO survey using a 1-week recall period
- Measures 4 domains of the impact of UC on impairment in work or other activities
 - Absenteeism (percentage of work time missed)
 - Presenteeism (percentage of impairment while at work)
 - Overall work productivity loss (percentage of overall work impairment as a function of both absenteeism and presenteeism)
 - Activity impairment (percentage of impairment in non-work activities)
- Domain scores are expressed as percentage of impairment; therefore, higher scores indicate worse WRO

Disease activity measures: stool frequency and rectal bleeding severity

- Both were single-item, patient-reported measures
 - Stool frequency (SF): score of 0, ≤ 1 more than usual; score of 1, 2-3 more than usual; score of 2, ≥ 4 more than usual
 - Rectal bleeding severity (RBS): score of 0, no blood; score of 1, streaks of blood; score of 2, obvious blood; score of 3, mostly blood
- Each was measured daily throughout the trial (reported via interactive voice response)
- The average score from the 3 days prior to assessment point was used
- Lower scores indicate less disease activity

Clinical recurrence of UC

- At the 12-month visit, patients were classified as clinically recurrent if they satisfied both of the following criteria:
 - Self-report of ≥ 4 bowel movements per day above their normal frequency
 - Self-report of any rectal bleeding, urgency, or abdominal pain

Statistical Analyses

WRO of patients with quiescent UC at baseline and following 6 and 12 months of daily MMX mesalazine treatment

- Repeated-measures analysis of variance (ANOVA) models were used to test for differences in patients' WPAI:UC domain scores across baseline and 6- and 12-month visits

Correspondence between changes in patients' WRO with changes in disease activity following 12 months of daily MMX mesalazine treatment

- Spearman rank-order correlation coefficients tested associations among changes from baseline to Month 12 in WPAI:UC domain scores with changes in SF and RBS scores

WRO in clinically recurrent and non-recurrent patients following 12 months of daily MMX mesalazine treatment

- Univariate analysis of covariance (ANCOVA) models, with recurrence status as a between-subjects factor and with patient age, gender, and baseline WPAI:UC domain score as covariates, tested for differences between recurrent and non-recurrent patients for each WPAI:UC domain at Month 12

RESULTS

WRO of patients with quiescent UC at baseline and following 6 and 12 months of daily MMX mesalazine treatment (Figure 1)

- No statistically significant change in scores across baseline and 6- and 12-month visits were observed for any WPAI:UC domain (all $P > 0.50$)
- The magnitude of differences across time were extremely small; no change in mean domain scores among the 3 assessment periods exceeded 1.1%

Correspondence between changes in patients' WRO with changes in disease activity following 12 months of daily MMX mesalazine treatment (Table 1)

- Statistically significant correlations were observed between changes in WPAI:UC scores and changes in both SF and RBS measures (all $P < 0.05$), indicating that decreased disease activity was linked to decreased impairment of WRO

WRO in clinically recurrent and non-recurrent patients following 12 months of daily MMX mesalazine treatment (Figure 2)

- Clinically recurrent patients scored significantly higher (ie, worse) than non-recurrent patients on all domains except for absenteeism ($P < 0.001$ for differences)

WRO of Patients With Quiescent UC at Baseline and Following 6 and 12 Months of Daily MMX Mesalazine Treatment

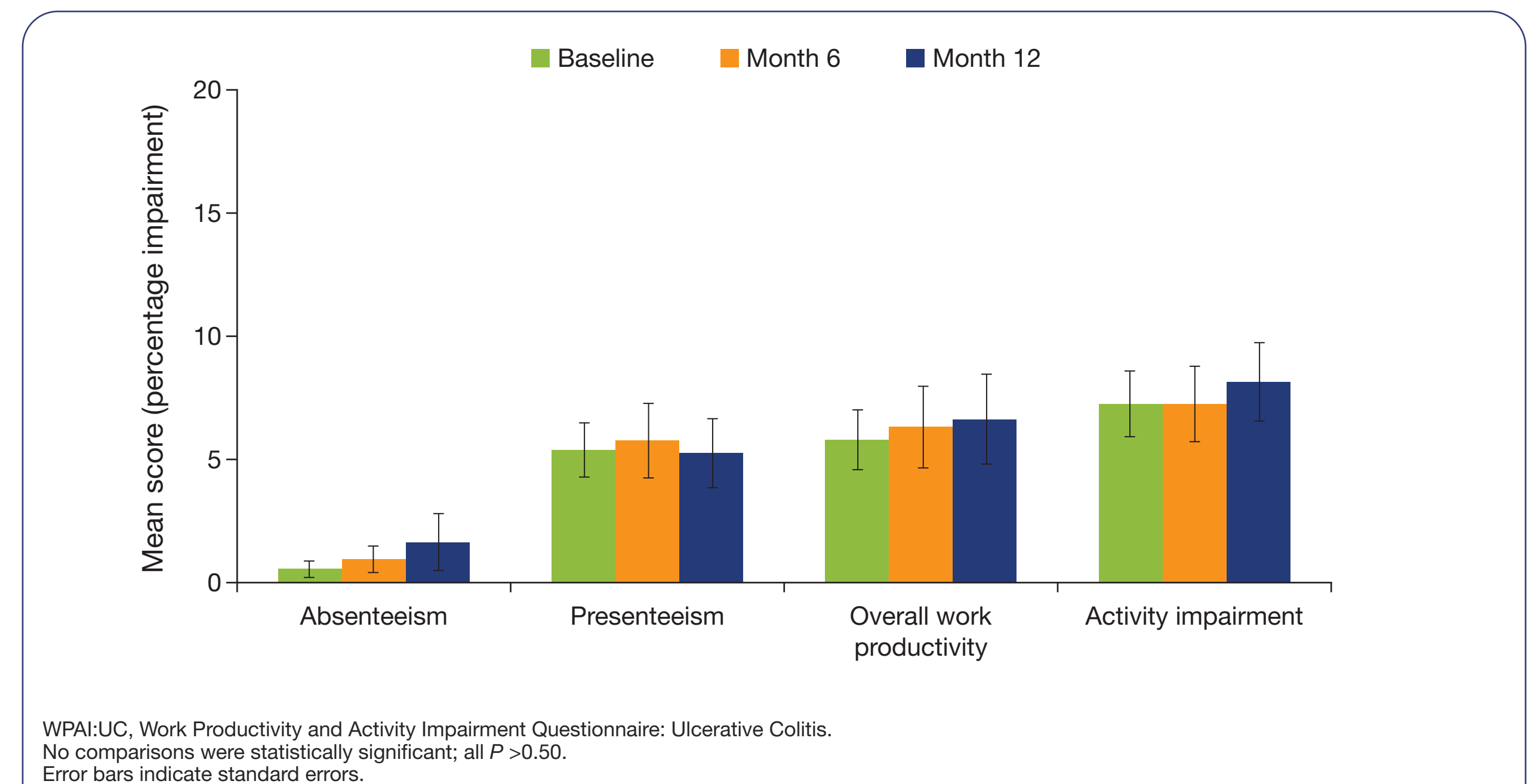


Figure 1. Mean WPAI:UC scores for patients with responses at baseline and 6- and 12-month visits (n = 128).

Correspondence Between Changes in Disease Activity and Changes in WRO Following 12 Months of Daily MMX Mesalazine Treatment

Table 1. Spearman Rank-order Correlations Between Changes From Baseline to Month 12 in WPAI:UC Scores and Measures of Disease Activity (n = 130)

	SF	RBS
Absenteeism	0.25**	0.38**
Presenteeism	0.38**	0.42***
Work productivity loss	0.36**	0.42***
Activity impairment	0.50***	0.51***

WPAI:UC, Work Productivity and Activity Impairment Questionnaire: Ulcerative Colitis; SF, stool frequency; RBS, rectal bleeding severity. ** $P < 0.01$. *** $P < 0.001$.

Sensitivity of WPAI:UC Scores to Clinical Recurrence Status

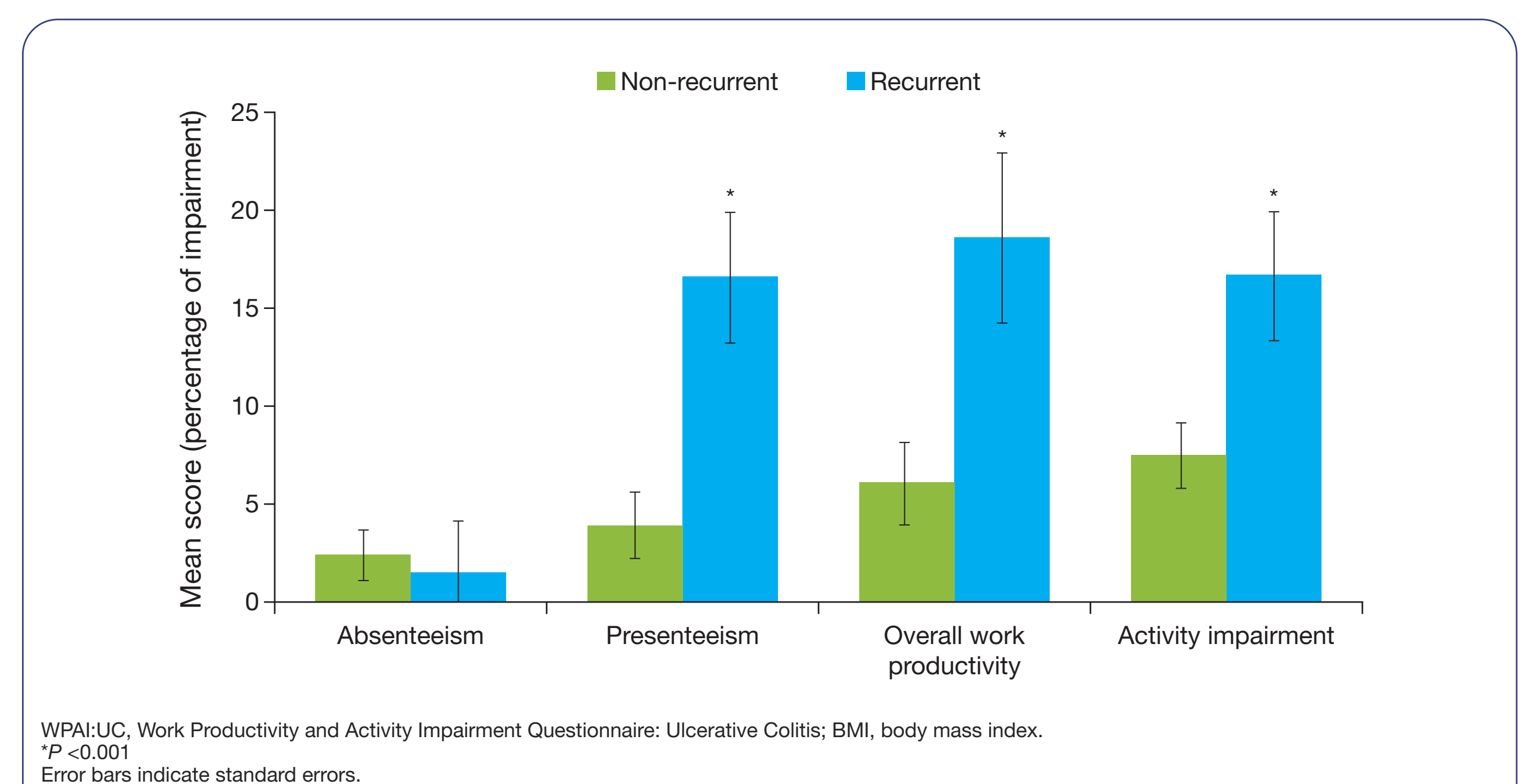


Figure 2. Estimated mean WPAI:UC scores (adjusted by age, gender, and BMI) at the 12-month visit of the maintenance phase for clinically recurrent (n = 29) and non-recurrent (n = 117) patients.

Safety and Tolerability

- At least 1 treatment-emergent adverse event was reported by 123 of the 208 patients (59.1%) in the maintenance phase safety population, with the majority of events reported as mild or moderate in severity

LIMITATIONS

- The open-label design used in this study may have led to biases in patients' responses due to expected changes from treatment; a patient-blinded trial would be needed to confirm these results
- The lack of data imputation for early withdrawal patients may have biased results, since patients who dropped out early may have had worse health and/or WRO outcomes than those who remained in the trial

CONCLUSIONS

- Patients receiving maintenance treatment with daily MMX mesalazine exhibited almost no change in WRO over the course of the trial; no drop-off was observed in any dimension of WRO at the midpoint or end of the 12-month treatment period
- WRO was associated with disease activity; decreases in disease activity over the course of the trial were generally accompanied by decreased impairment and increased work productivity
- Further, patients in the study whose disease remained in remission demonstrated significantly better average WRO than patients with clinically recurrent disease

References

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[†]MMX[®] is a registered trademark of Cosmo Technologies, Ltd., Ireland.

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