

IMPROVEMENT IN HEALTH-RELATED QUALITY OF LIFE FOLLOWING TREATMENT WITH MMX[®] MESALAMINE IN PATIENTS WITH ULCERATIVE COLITIS

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Background

- Ulcerative colitis (UC) places a substantial burden on all aspects of patients' health-related quality of life (HRQoL).
- Thus, improving HRQoL of UC patients is a fundamental goal of treatment.
- 5-Aminosalicylic acid (5-ASA), or mesalamine, is the recommended first-line therapy for mild-to-moderate UC, due to its demonstrated efficacy and high safety profile.
- There are no existing studies that measure UC patients' generic HRQoL following treatment with the recently developed multi-matrix (MMX) formulation of mesalamine.

Objectives

- To assess the burden of HRQoL in patients with mild-to-moderate active UC relative to an age and gender matched United States (US) general population sample.
- To examine changes in HRQoL in these UC patients after receiving daily MMX mesalamine 2.4–4.8g/day for 8 weeks.
- To examine the association between changes in HRQoL and disease activity.

Methodology

Study population and design

UC patient sample

- Data were collected from the Strategies in Maintenance for Patients Receiving Long-term Therapy (SIMPLE) trial, a phase IV, multi-center, single-arm, open-label trial that consisted of an 8-week acute phase and a 12-month maintenance phase.
- The data presented in the current analyses are from the acute phase, during which adult patients with active mild-to-moderate UC received MMX mesalamine 2.4–4.8g/day treatment for 8 weeks (dose titrated based on physician decision).
- Study outcome measures were assessed at acute phase baseline and 8-week endpoint.

US general population normative sample

- Age-and gender-matched respondents to the 1998 US National Survey of Functional Health Status
- Subjects (n=7069) were administered surveys that included age, gender, and the SF-12v2

Study outcomes

HRQoL: SF-12v2[®] Health Survey

- 12 item self-report health survey with a 4-week recall period.
- Includes 8 domains of functional health and well-being, and 2 component summary measures:
 - physical functioning (PF)
 - role physical (RP)
 - bodily pain (BP)
 - general health (GH)
 - physical component score (PCS)
 - vitality (VT)
 - social functioning (SF)
 - role emotional (RE)
 - mental health (MH)
 - mental component score (MCS)
- Scoring
 - each scale/summary measure is calculated and standardized into a T-score (Mean= 50; SD=10)
 - higher scores indicate better health
 - minimal important difference (MID) for PCS & MCS has been estimated at 3 points.

Disease activity: Stool frequency (SF) and Rectal bleeding severity (RBS)

- Both were single item patient-reported measures
 - stool frequency – scores ranged from 0 (≤1 more than usual) to 2 (≥4 more than usual)
 - rectal bleeding severity – scores ranged from 0 (≤1 streak of blood) to 3 (mostly blood).
- Each measured daily (IVRS reported)
- Averaged score from the 3 days prior to assessment point was used.
- Lower scores indicate less disease activity.

Analysis

HRQoL baseline comparison between UC patients and US general pop. norms

- Data from the US norm sample were adjusted to the age and gender of the UC sample using least squares multiple regression models for each scale and summary measure.
- MANOVAs were used to test for significant differences between UC patients' baseline scale and summary scores and those of the US norm sample.

Impact of MMX mesalamine treatment on UC patients' HRQoL

- Repeated-measures ANOVA techniques were used to test for differences between baseline and endpoint SF-12v2 scale and summary scores.
- MANOVAs were used to test for significant differences between UC patients' 8-week endpoint scale and summary scores and those of the US norm sample.

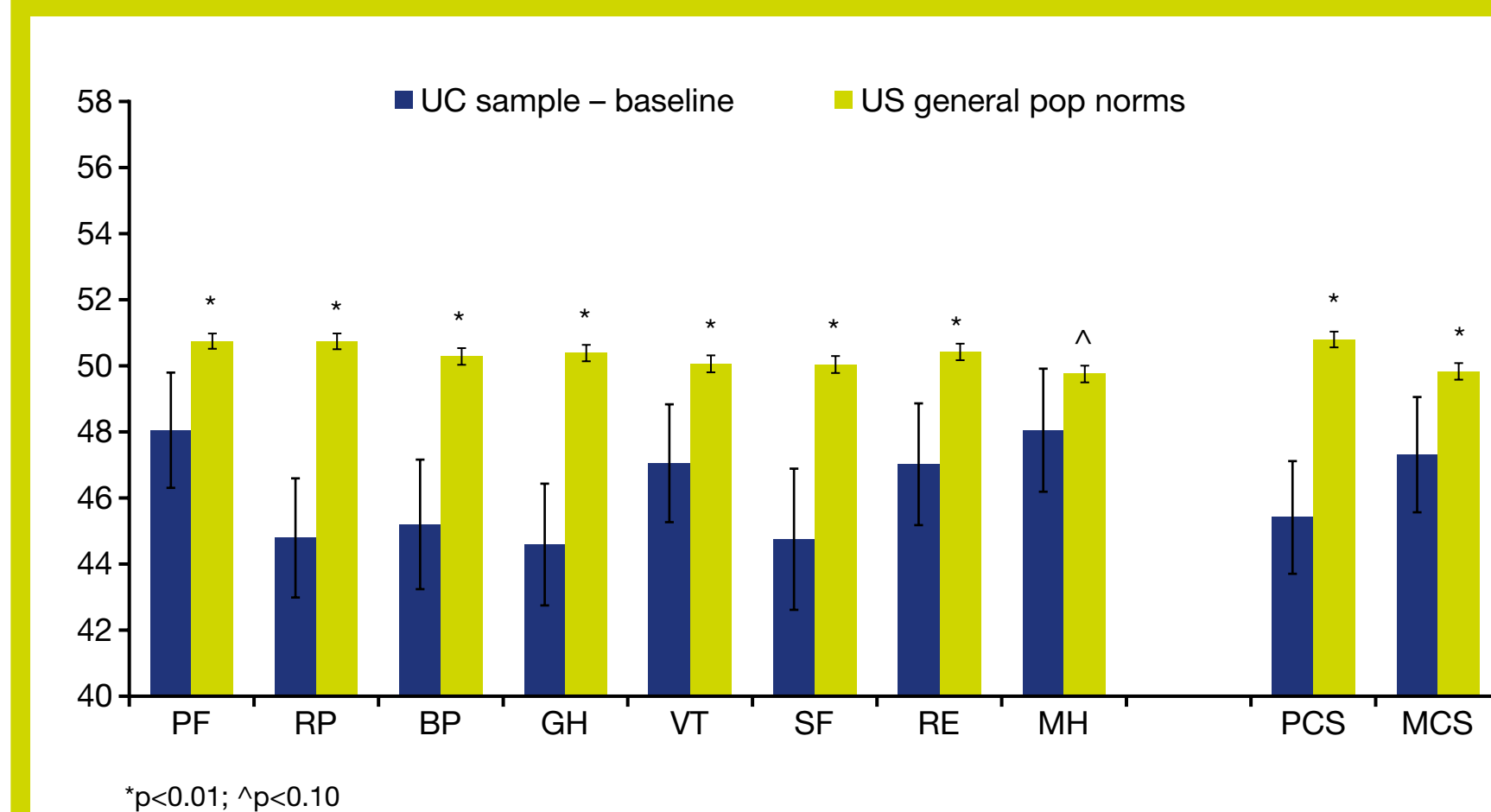
Association between changes in HRQoL and disease activity

- Pearson correlation coefficients assessed the strength and direction of associations between baseline-endpoint change in SF-12v2 scores with SF and RBS change scores.

Results

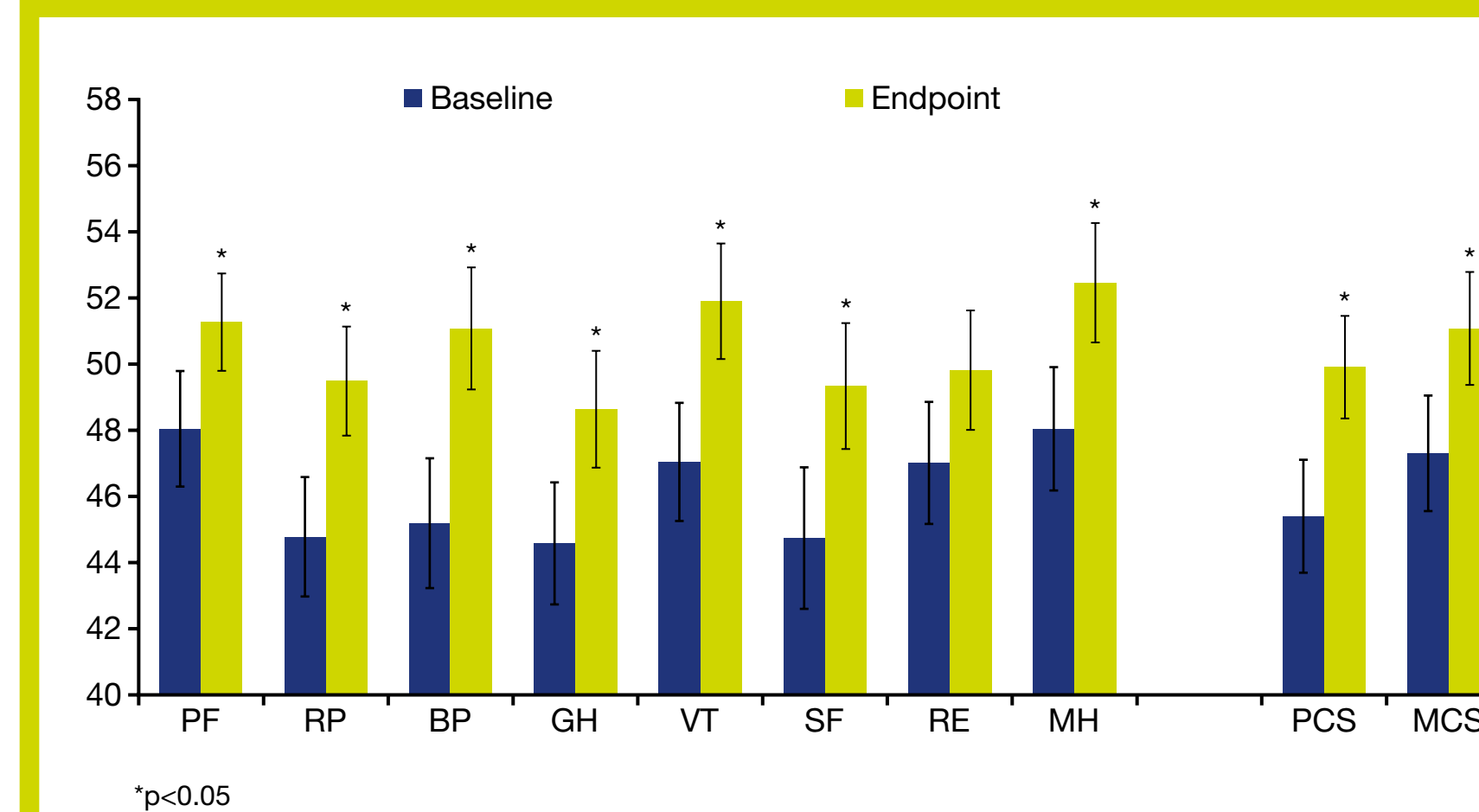
Burden analysis: comparison of HRQoL between UC patients at baseline with US general population norms

Figure 1. Mean SF-12v2 scores for UC sample at baseline (n=132) and US general population normative sample (n=7069). Error bars indicate 95% confidence intervals.



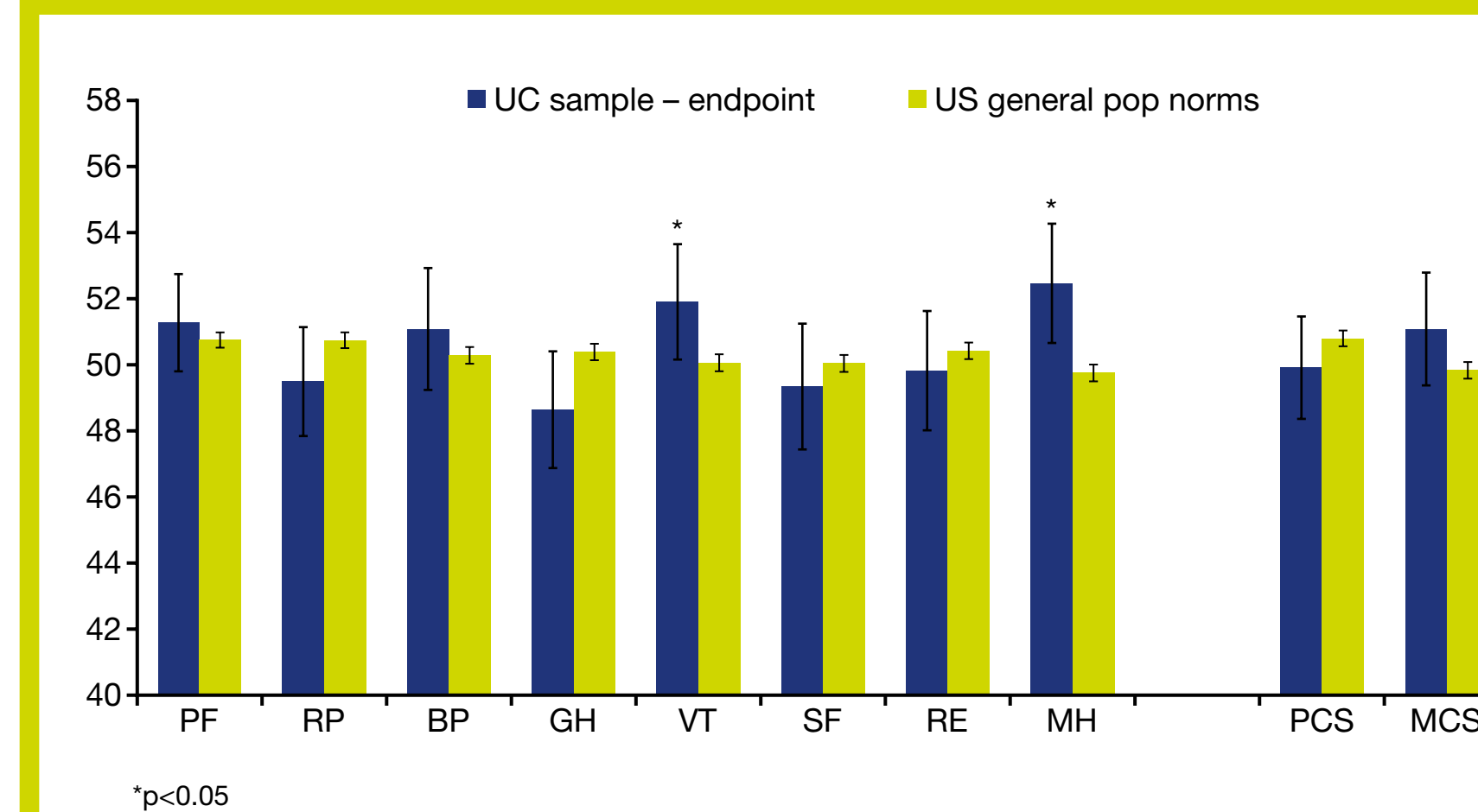
HRQoL of active mild-to-moderate UC patients before and after daily MMX mesalamine treatment

Figure 2. Mean SF-12v2 scores at baseline and 8-week endpoint (n=109). Error bars indicate 95% confidence intervals



Post-treatment burden: comparison of HRQoL between UC patients at endpoint with US general population norms

Figure 3. Mean SF-12v2 scores for UC sample at baseline (n=109) and US general population normative sample (n=7069). Error bars indicate 95% confidence intervals



Correspondence between changes in disease activity and changes in HRQoL

Table 1. Correlations between baseline-endpoint changes in SF-12v2 scores and changes in disease activity (n=109).

	Bowel movement frequency	Rectal bleeding severity
Physical functioning	-0.26**	-0.29**
Role physical	-0.32**	-0.38***
Bodily pain	-0.35***	-0.38***
General health	-0.32**	-0.28**
Vitality	-0.36***	-0.47***
Social functioning	-0.33***	-0.40***
Role emotional	-0.25*	-0.35***
Mental health	-0.12	-0.23*
PCS	-0.40***	-0.40***
MCS	-0.24*	-0.38***

*p<0.05; **p<0.01; ***p<0.001

Main findings

- Mean baseline SF-12v2 scores for UC patients in the trial sample were significantly below those of the general population for 7 of 8 scales (with a marginally significant difference for MH) and both summary measures (Figure 1).
- From baseline to 8-week endpoint, mean SF-12v2 scores significantly increased for 7 of 8 scales (all but RE) and both summary measures. The increase in mean PCS scores of greater than 3 points exceeds its MID, indicating significant clinical improvement in physical HRQoL (Figure 2).
- Mean endpoint SF-12v2 scores for UC patients in the trial sample were equivalent or greater than those of the general population for all scales and summary measures (Figure 3).
- Improvement in all SF-12v2 scales and summary measures was significantly associated with decreases in both stool frequency and rectal bleeding severity (Table 1).

Conclusions

- UC presents a significant burden of illness as shown by low HRQoL compared to population norms.
- Patients with mild-to-moderate active UC who received daily MMX mesalamine treatment showed significant improvement in virtually all aspects of HRQoL.
- The diminished HRQoL observed in active UC is eliminated following treatment: UC patients at endpoint exhibited HRQoL that was similar or better than that of the general US population.
- Improvement in HRQoL was significantly linked to decreases in disease activity.

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