Introduction
Ulcerative colitis (UC), characterized by periods of active disease and remission, is challenging to manage. Recent studies have identified mucosal healing as an optimal patient outcome.

Aims
In this study, we investigated whether blood and fecal biomarkers of inflammation are able to distinguish between mucosal healing defined by endoscopy from intestinal inflammation, to differentiate between clinical remission and sustained clinical remission (CAI<2, normal bowel frequency and no blood in stool) as defined by the CAI.

Methods
Endoscopy (Index EI - Rachmilewitz <=1 indicating mucosal healing) (baseline, 12 month), clinical activity index (CAI - Rachmilewitz), fecal Lactoferrin (FLA; cut-off: >7.25 µg/g), Calprotectin (CAL; >500 µg/g) and PMN-Elastase (PMN-e; >0.062 µg/g), serum CRP (>0.5 mg/dl) and white blood count (WBC>8.5/nl) (baseline, 1, 3, 6, 9, 12 month) were determined repeatedly and in events of acute flares.

In 91 patients (45 female, mean age 52±13.4 years), 620 CAI and 180 endoscopies were performed. A total of 42 (46%) patients developed a clinical flare.

Results
In 91 patients (45 female, mean age 52±13.4 years), 620 CAI and 180 endoscopies were performed. A total of 42 (46%) patients developed a clinical flare. Median levels for acute clinical flare (CAI > 4), patients in clinical remission (CAI<5) and patients in sustained clinical remission (CAI<3) are shown in table 1.

Fecal biomarkers showed moderate correlation to endoscopy in UC for detecting mucosal healing and only fecal Lactoferrin had a median level above the pre-defined cut-off for active inflammation. Using optimized cut-offs, FLA, CAL, PMN-e and CRP were predictive of a flare.

Conclusion
Fecal biomarkers showed moderate correlation to endoscopy in UC for detecting mucosal healing and only fecal Lactoferrin had a median level above the pre-defined cut-off for active inflammation. Using optimized cut-offs, FLA, CAL, PMN-e and CRP were predictive of a flare.

References


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