

ORIGINAL ARTICLE

## Discontinuation of anti-tumor necrosis factor therapy in inflammatory bowel disease patients: a prospective observation

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### ABSTRACT

**Background:** Discontinuation of anti-TNF therapy in patients with inflammatory bowel diseases (IBD) in remission remains a controversial issue. The aims of our study were to assess the proportion of patients who relapse after cessation of biological treatment, and to identify potential risk factors of disease relapse. **Methods:** Consecutive IBD patients who discontinued anti-TNF therapy in steroid-free clinical and endoscopic remission were prospectively followed. Multiple logistic regression and Cox proportional-hazards models were used to assess the predictors of disease relapse. **Results:** Seventy-eight IBD patients (Crohn's disease, CD 61; ulcerative colitis, UC 17) were included and followed for a median of 30 months (range 7–47). A total of 32 (53%) CD patients and nine (53%) UC patients relapsed by the end of the follow-up with a median time to relapse of 8 months (range 1–25) in CD patients and 14 months (range 4–37) in UC patients, respectively. The cumulative probabilities of maintaining remission at 6, 12, and 24 months were 82%, 59%, and 51% in CD patients, and 77%, 77%, and 64% in UC patients, respectively. Survival of CD patients who were in deep remission (clinical and endoscopic healing; faecal calprotectin <150 mg/kg; CRP ≤5 mg/l) was not better compared with those who did not fulfill these criteria. In multivariate models, only colonic CD protected patients from disease relapse. **Conclusions:** Approximately half of the IBD patients relapsed within 2 years after anti-TNF discontinuation. In CD patients, no difference between those who were or were not in deep remission was found. Colonic localization protected patients from relapse.

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## Introduction

Treatment of patients with inflammatory bowel diseases (IBD) with antibodies to TNF (anti-TNF) was shown to be both short- and long-term effective [1]. Continuing with long-term therapy is generally recommended in responders, unless medically important adverse events or definitive loss of response occurs [2]. However, it is still unclear how long the therapy should continue in patients who have achieved remission of the disease.

At least two questions need to be answered when termination of anti-TNF therapy is to be considered: (1) What disease course can be expected in the event of therapy withdrawal? (2) What are the predictors of disease relapse after discontinuation of biological

treatment? Several uncontrolled studies have shown that the relapse rate 1 year after stopping anti-TNF agents varies from 33% to 44%, with approximately one-half of patients relapsing within 2 years [3–8]. Summarizing currently available data, Pariente and Laharie concluded that, in order to minimize the relapse risk after anti-TNF withdrawal, patients should both receive biologic treatment long-term (at least 1 year) and achieve deep remission, i.e., the absence of clinical, endoscopic, and biologic signs of disease activity [9].

As prospective data on this topic are scarce, we aimed our study to assess the proportion of patients who relapse after cessation of biological treatment at the time of clinical and endoscopic remission, to identify potential risk factors of