

## Prognostic value of terminal ileal inflammation in patients with ulcerative colitis in remission

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**Background/Aims:** Few studies have investigated terminal ileal lesions and their prognostic values in patients with ulcerative colitis (UC). We evaluated the clinical significance of these lesions as a prognostic factor in patients with UC who are in clinical remission.

**Methods:** We retrospectively selected 567 of 4066 colonoscopic reports, which included positive findings from the orificial observations of the terminal ileum (TI) and appendix in patients with UC. We finally recruited the patients who were in clinical remission following (n=204). We compared their clinical courses including relapse and other prognostic parameters associated with UC between groups.

**Results:** The baseline patient characteristics were not significantly different between patients with (n=69, TI+ group) and without TI lesions (n=135, TI- group), although there were more never-smokers in the TI+ group [n=57 (82.6%) in TI+ group; n=86 (63.7%) in TI- group; p=0.005]. Of note, appendiceal orifice inflammation (AOI) was less frequently found in the TI+ group (14.5%) than in the TI- group (71.9%, p<0.001). The cumulative relapse rate was numerically higher in the TI- group, but this was not significantly different according to Kaplan-Meier analysis (p=0.116). Multivariate Cox regression analysis also revealed advanced age at diagnosis as the most significant factor (adjusted HR 0.964, 95% CI 0.932-0.998, p=0.037), but neither TI inflammation nor AOI were significantly associated with the cumulative relapse in patients with UC in clinical remission.

**Conclusions:** For patients with UC in clinical remission, neither terminal ileal lesions nor AOI had significant clinical and predictive values for future relapse.

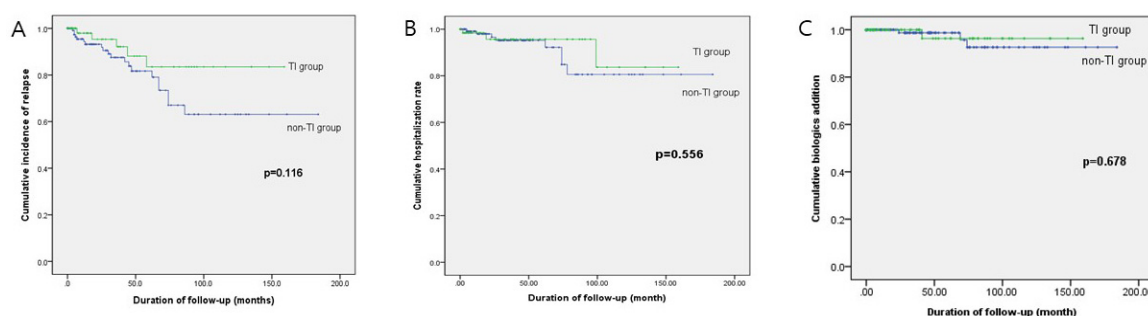


Figure 1. Kaplan-Meier curves (A): Cumulative incidence of relapse (p=0.116), (B): Cumulative incidence of hospitalization due to acute UC exacerbation (p=0.556), (C): Cumulative incidence of adding biologic agents (p=0.678)

**Table 1.** Univariate and multivariate analysis for the effect of terminal inflammation in Ulcerative colitis for future relapse.

Variable	Univariate analysis		Multivariate analysis	
	HR (95% CI)	P value	Adjusted HR (95% CI)	P value
Male	Reference		Reference	
Female	1.184 (0.536-2.615)	0.677	1.449 (0.574-3.657)	0.216
Age at the UC diagnosis	0.966 (0.936-0.998)	0.036	0.964 (0.932-0.998)	0.037
E1	Reference		Reference	
E2 at the diagnosis	0.503 (0.182-1.387)	0.184	0.503 (0.177-1.428)	0.197
E3 at the diagnosis	1.123 (0.427-2.951)	0.814	1.165 (0.438-3.100)	0.760
Never-smoking	Reference		Reference	
Ex-smoking	1.126 (0.467-2.718)	0.791	1.521 (0.564-4.099)	0.407
Current smoking	0.859 (0.112-6.568)	0.883	0.999 (0.119-8.408)	0.999
Family history	1.141 (0.269-4.847)	0.858		
History of appendectomy	0.045 (0.000-54.85)	0.392		
Age during colonoscopy at remission	0.966 (0.937-0.995)	0.021		
AOI on remission	1.250 (0.555-2.812)	0.590	1.383 (0.536-3.568)	0.503
TI lesions on remission	0.465 (0.174-1.239)	0.126	0.583 (0.197-1.729)	0.331

HR, hazard ratio; UC, ulcerative colitis; E1, ulcerative proctitis; E2, left-sided ulcerative colitis; E3, extensive ulcerative colitis; AOI, appendiceal orifice inflammation; TI, terminal ileum