

Supplementary material; Prognostic significance of faecal eosinophil granule proteins in inflammatory bowel disease

Supplementary material

Prognostic significance of faecal eosinophil granule proteins in inflammatory bowel disease.

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1. Predictive value of baseline measurements

Model 1A includes baseline faecal concentrations of EDN and ECP, respectively, age, and sex. In model 1B, treatment options that might confound the effect of the faecal EDN and ECP levels are included as covariates in an extended Cox regression model.

No violation of proportional hazards assumption was found for covariates, and there was no statistically significant interaction found between baseline EDN/ECP and time. Since the effect of baseline EDN/ECP on relapse did not vary with time, interaction term between EDN/ECP and time was excluded in the following models.

Ulcerative colitis

Table 1 Data from extended Cox regression on predictors of clinical relapse in ulcerative colitis, based on log concentration of baseline faecal EDN.

Model 1A - baseline EDN			
Predictors	HR	95% CI	p-value
Baseline EDN	1.20	1.01-1.42	0.035
Age	0.99	0.96-1.02	0.524
Sex	0.51	0.20-1.29	0.152

Model 1B - baseline EDN			
Predictors	HR	95% CI	p-value
Baseline EDN	1.27	1.04 - 1.54	0.018
Age	0.98	0.94 - 1.03	0.437
Sex	0.74	0.29 - 1.94	0.544
5ASA	0.40	0.14 - 1.19	0.099
Salazopyrin	0.48	0.11 - 2.04	0.316
Topical 5ASA	2.55	0.65 - 10.05	0.181
Azathioprine/ Methotrexate	0.72	0.23 - 2.21	0.564

Remicade: no standard error available.

Table 2 Data from extended Cox regression on predictors of clinical relapse in ulcerative colitis, based on log concentration of baseline faecal ECP.

Model 1A - baseline ECP			
Predictors	HR	95% CI	p-value
Baseline ECP	1.13	0.90 - 1.44	0.298
Age	0.99	0.96 - 1.02	0.641
Sex	0.56	0.21 - 1.45	0.231
Model 1B - baseline ECP			
Predictors	HR	95% CI	p-value
Baseline ECP	1.11	0.84 - 1.46	0.471
age	0.99	0.95 - 1.03	0.752
Sex	0.73	0.27 - 2.00	0.543
5ASA	0.41	0.14 - 1.23	0.111
Salazopyrin	0.50	0.11 - 2.21	0.363
Topical 5ASA	2.82	0.64 - 12.48	0.171
Azathioprine/ Methotrexate	0.90	0.28 - 2.85	0.858

Remicade: no standard error available.

Crohn's disease

Table 3 Data from extended Cox regression on predictors of clinical relapse in Crohn's disease, based on log concentration of baseline faecal EDN.

Model 1A - baseline EDN			
Predictors	HR	95% CI	p-value
Log2 EDN	0.91	0.71 - 1.15	0.419
Age	0.99	0.96 - 1.03	0.729
Sex	0.77	0.29 - 2.10	0.614
Model 1B- baseline EDN			
Predictors	HR	95% CI	p-value
Log2 EDN	0.88	0.69 - 1.13	0.329
Age	1.02	0.97 - 1.07	0.446
Sex	0.82	0.26 - 2.57	0.734
5ASA	3.02	0.60 - 15.22	0.603
Salazopyrin	0.80	0.19 - 3.40	0.761
Azathioprine/ Methotrexate	1.21	0.40 - 3.71	0.733

Topical 5ASA, Remicade: no standard error available.

Table 4 Data from extended Cox regression on predictors of clinical relapse in Crohn's disease, based on log concentration of baseline faecal ECP.

Model 1A - baseline ECP			
Predictors	HR	95% CI	p-value
Log2 ECP	1.14	0.85 - 1.52	0.392
Age	1.00	0.97 - 1.04	0.875
Sex	0.78	0.29 - 2.13	0.630

Model 1B - baseline ECP			
Predictors	HR	95% CI	p-value
Log2 ECP	1.12	0.84 - 1.50	0.450
Age	1.03	0.98 - 1.07	0.296
Sex	0.86	0.26 - 2.82	0.802
5ASA	2.70	0.49 - 14.96	0.255
Salazopyrin	0.83	0.19 - 3.62	0.809
Azathioprine/ Methotrexate	1.19	0.39 - 3.63	0.755

Topical 5ASA, Remicade: no standard error available.

2. Predictive value of time-variant measurements

The analysis is based on all EDN/ECP measurements during the entire study period and model 2A includes time-variant faecal EDN/ECP levels, age and sex. Model 2B includes a sensitivity analysis by adding baseline treatment options as covariates in the extended Cox regression model.

No violation of proportional hazards assumption was found for covariates, and there was no statistically significant interaction found between EDN/ECP and time. Since the effect of EDN/ECP on relapse did not vary with time, interaction term between EDN/ECP and time was excluded in the following models.

Ulcerative colitis

Table 5 Data from extended Cox regression on predictors of clinical relapse in ulcerative colitis, based on time-variant faecal EDN, age, sex; and extended model 2B, including time-variant EDN, age, sex and different treatment factors.

Model 2A- EDN			
Predictors	HR	95% CI	p-value
Log2 EDN	1.31	1.09 - 1.58	0.004
Age	0.99	0.96 - 1.02	0.604
Sex	0.48	0.19 - 1.25	0.133

Model 2B - EDN			
Predictors	HR	95% CI	p-value
Log2 EDN	1.32	1.10 - 1.59	0.003
Age	1.00	0.96 - 1.03	0.850
Sex	0.59	0.22 - 1.56	0.284
5ASA	0.77	0.26 - 2.22	0.623
Salazopyrin	0.38	0.08 - 1.90	0.240
Topical 5ASA	1.42	0.18 - 11.43	0.743
Azathioprine/ Methotrexate	0.74	0.24 - 2.32	0.605

Remicade: no standard error available.

Table 6 Data from extended Cox regression on predictors of clinical relapse in ulcerative colitis, based on time-variant faecal ECP

Model 2A - ECP			
Predictors	HR	95% CI	p-value
Log2 ECP	1.27	1.00 - 1.61	0.046
Age	0.99	0.96 - 1.03	0.728
Sex	0.51	0.19 - 1.35	0.176

Model 2B - ECP			
Predictors	HR	95% CI	p-value
Log2 ECP	1.27	1.00 - 1.62	0.054
Age	1.00	0.96 - 1.03	0.881
Sex	0.57	0.21 - 1.54	0.269
5ASA	0.83	0.29 - 2.43	0.739
Salazopyrin	0.46	0.09 - 2.24	0.338
Topical 5ASA	1.81	0.22 - 15.14	0.582
Azathioprine/ Methotrexate	0.76	0.24 - 2.42	0.641

Remicade: no standard error available.

Crohn's Disease

Table 7 Data from extended Cox regression on predictors of clinical relapse in Crohn's disease, based on time-variant faecal EDN

Model 2A - EDN			
Predictors	HR	95% CI	p-value
Log2 EDN	0.95	0.75 - 1.20	0.671
Age	0.99	0.96 - 1.03	0.738
Sex	0.81	0.29 - 2.23	0.682

Model 2B - EDN			
Predictors	HR	95% CI	p-value
Log2 EDN	0.94	0.73 - 1.21	0.627
Age	1.01	0.97 - 1.06	0.533
Sex	0.82	0.27 - 2.52	0.736
5ASA	2.78	0.51 - 15.24	0.240
Salazopyrin	0.65	0.12 - 3.46	0.612
Azathioprine/ Methotrexate	1.14	0.34 - 3.81	0.828

Topical 5ASA, Remicade: no standard error available.

Table 8 Data from extended Cox regression on predictors of clinical relapse in Crohn's disease, based on time-variant faecal ECP

Model 2A - ECP			
Predictors	HR	95% CI	p-value
Log2 ECP	1.15	0.86 - 1.55	0.346
Age	1.00	0.97 - 1.04	0.802
Sex	0.74	0.27 - 2.03	0.564

Model 2B - ECP			
Predictors	HR	95% CI	p-value
Log2 ECP	1.16	0.86 - 1.57	0.340
age	1.03	0.98 - 1.07	0.283
Sex	0.74	0.24 - 2.28	0.604
5ASA	2.31	0.40 - 13.36	0.349
Salazopyrin	0.61	0.11 - 3.24	0.561
Azathioprine/ Methotrexate	1.32	0.43 - 4.07	0.624

Topical 5ASA, Remicade: no standard error available.