

	Perianal fistulae	Other type fistulae	Multiple fistulae	Any fistula
Gender				
Male (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Female	0.64; 0.48-0.86; 0.003	0.97; 0.75-1.25; 0.817	1.32; 0.88-1.99; 0.179	0.75; 0.60-0.94; 0.011
Age at diagnosis [per year]	0.98; 0.97-0.99; 0.002	0.99; 0.98-1.00; 0.204	0.98; 0.96-0.99; 0.027	0.99; 0.98-0.99; 0.007
Age at enrollment [per year]	0.98; 0.97-0.99; 0.002	0.99; 0.98-1.00; 0.215	0.98; 0.96-0.99; 0.035	0.99; 0.98-0.99; 0.007
Disease duration [per year]	-	-	-	-
Initial CD location				
L1 (ileal) (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
L2 (colonic)	2.30; 1.41-3.77; 0.001	1.54; 1.03-2.31; 0.037	2.61; 1.26-5.41; 0.010	1.93; 1.36-2.73; <0.001
L3 (ileo-colonic)	2.18; 1.40-3.77; 0.001	1.52; 1.07-2.17; 0.019	2.30; 1.18-4.48; 0.015	1.75; 1.29-2.37; <0.001
L4 (upper GI only)	No obs	1.26; 0.27-6.00; 0.770	No obs	0.79; 0.17-3.75; 0.772
Unknown/unclear	1.45; 0.79-2.69; 0.233	1.40; 0.87-2.26; 0.169	1.51; 0.64-3.56; 0.351	1.43; 0.93-2.20; 0.100
Current CD location				
L1 (ileal) (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
L2 (colonic)	1.64; 1.12-2.40; 0.010	1.12; 0.81-1.57; 0.494	1.28; 0.75-2.18; 0.375	1.41; 1.06-1.88; 0.019
L3 (ileo-colonic)	1.16; 0.79-1.70; 0.457	1.23; 0.89-1.69; 0.210	1.09; 0.64-1.87; 0.741	1.26; 0.95-1.68; 0.102
L4 (upper GI only)	1.27; 0.28-5.81; 0.757	2.50; 0.82-7.66; 0.108	4.90; 1.25- 19.11; 0.022	1.52; 0.50-4.61; 0.461
Unknown/unclear	0.84; 0.35-1.99; 0.687	0.75; 0.37-1.53; 0.432	1.26; 0.49-3.21; 0.627	0.75; 0.40-1.43; 0.384
Smoking status at diagnosis				
Non-smoker (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Smoker	1.44; 1.07-1.93; 0.017	0.95; 0.73-1.22; 0.673	0.98; 0.65-1.48; 0.935	1.20; 0.96-1.50; 0.106
Unknown	0.96; 0.12-7.72; 0.973	2.00; 0.51-7.90; 0.321	8.26; 2.04- 33.47; 0.003	1.27; 0.32-4.99; 0.732
Smoking status at enrollment				
Non-smoker (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Smoker	1.33; 0.99-1.78; 0.059	1.03; 0.80-1.34; 0.799	1.16; 0.77-1.75; 0.485	1.14; 0.91-1.43; 0.244
Unknown	3.63; 0.92- 14.29; 0.066	1.29; 0.27-6.16; 0.752	5.46; 1.12- 26.72; 0.036	2.04; 0.57-7.33; 0.277
Ever used 5-ASA				
No (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Yes	1.16; 0.86-1.57; 0.336	0.73; 0.56-0.94; 0.015	0.97; 0.64-1.47; 0.893	0.83; 0.66-1.04; 0.113

Ever used Antibiotics No (ref) Yes	1 (ref) 2.54; 1.89-3.41; <0.001	1 (ref) 2.45; 1.90-3.16; <0.001	1 (ref) 2.36; 1.57-3.56; <0.001	1 (ref) 2.82; 2.25-3.53; <0.001
Ever used Steroids No (ref) Yes	1 (ref) 1.25; 0.85-1.85; 0.259	1 (ref) 0.98; 0.71-1.34; 0.878	1 (ref) 1.12; 0.67-1.88; 0.674	1 (ref) 1.05; 0.79-1.39; 0.740
Ever used Immunosuppressants No (ref) Yes	1 (ref) 1.52; 1.04-2.22; 0.030	1 (ref) 1.58; 1.40-2.18; 0.006	1 (ref) 1.62; 0.95-2.76; 0.078	1 (ref) 1.67; 1.26-2.21; <0.001
Ever used Anti-TNF agents No (ref) Yes	1 (ref) 2.50; 1.85-3.37; <0.001	1 (ref) 1.88; 1.45-2.42; <0.001	1 (ref) 2.59; 1.70-3.94; <0.001	1 (ref) 2.38; 1.90-2.98; <0.001
Ever used Calcineurin inhib. No (ref) Yes	1 (ref) 1.60; 0.52-4.91; 0.408	1 (ref) 1.63; 0.60-4.40; 0.336	1 (ref) 3.52; 1.12-11.06; 0.031	1 (ref) 1.47; 0.58-3.75; 0.416
Current 5-ASA use No (ref) Yes	1 (ref) 0.92; 0.63-1.34; 0.660	1 (ref) 0.59; 0.41-0.84; 0.004	1 (ref) 0.53; 0.29-0.99; 0.047	1 (ref) 0.73; 0.54-0.98; 0.038
Current Antibiotics use No (ref) Yes	1 (ref) 3.01; 1.74-5.22; <0.001	1 (ref) 4.35; 2.62-7.24; <0.001	1 (ref) 4.71; 2.46-8.99; <0.001	1 (ref) 5.22; 3.09-8.81; <0.001
Current Steroids use No (ref) Yes	1 (ref) 1.17; 0.85-1.60; 0.334	1 (ref) 0.82; 0.62-1.10; 0.185	1 (ref) 0.70; 0.43-1.14; 0.148	1 (ref) 0.99; 0.77-1.26; 0.904
Current Immunosuppressants use No (ref) Yes	1 (ref) 0.92; 0.69-1.23; 0.591	1 (ref) 0.98; 0.76-1.26; 0.882	1 (ref) 1.01; 0.67-1.51; 0.972	1 (ref) 0.99; 0.80-1.24; 0.957
Current Anti-TNF agents use No (ref) Yes	1 (ref) 1.98; 1.47-2.66; <0.001	1 (ref) 1.49; 1.14-1.94; 0.003	1 (ref) 2.31; 1.53-3.48; <0.001	1 (ref) 1.76; 1.40-2.22; <0.001
Current Calcineurin inhib. use No (ref) Yes	1 (ref) No obs	1 (ref) 2.03; 0.18-22.77; 0.565	1 (ref) 7.86; 0.69-89.01; 0.096	1 (ref) 1.14; 0.10-12.81; 0.913
Intest. resection surgery history None (ref) Yes	1 (ref) 1.50; 1.08-2.08; 0.016	1 (ref) 3.09; 2.33-4.10; <0.001	1 (ref) 3.26; 2.03-5.22; <0.001	1 (ref) 2.47; 1.93-3.17; <0.001
Anemia				

No (ref) Yes	1 (ref) 0.88; 0.59-1.31; 0.515	1 (ref) 1.26; 0.91-1.74; 0.170	1 (ref) 1.22; 0.73-2.04; 0.441	1 (ref) 1.12; 0.83-1.50; 0.467
Stenosis None (ref) Yes	1 (ref) 0.52; 1.13-2.07; 0.006	1 (ref) 2.02; 1.56-2.62; <0.001	1 (ref) 1.61; 1.07-2.44; 0.024	1 (ref) 1.92; 1.53-2.42; <0.001

Table 3: Univariate analysis of factors associated with occurrence of perianal, other type, multiple and any type of fistulae. Results are stated as OR; 95% confidence interval; p-value.

Outcome:	OR	95% confidence interval	p-value
Perianal fistulae			
Gender			
Male (ref)	1 (ref)	-	-
Female	0.571	0.420 – 0.775	<0.001
Age at diagnosis [per year]			
Disease duration [per year]			
Initial disease location			
Ileal (ref)	1 (ref)	-	-
Colonic	2.505	1.489 – 4.215	0.001
Ileo-colonic	1.797	1.137 – 2.844	0.012
Unknown/Unclear	1.273	0.674 – 2.401	0.459
Smoking status at diagnosis			
Non smoker (ref)	1 (ref)	-	-
Smoker	1.508	1.103 – 2.061	0.010
Unknown	0.662	0.079 – 5.554	0.704
Ever treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	2.167	1.594 – 2.945	<0.001
Ever treated with Anti-TNF			
No (ref)	1 (ref)	-	-
Yes	2.296	1.678 – 3.141	<0.001
Stenosis			
None (ref)	1 (ref)	-	-
Yes	1.422	1.023 – 1.978	0.036

Table 4: Multivariate analysis of independent factors associated with the occurrence of perianal fistulae. Results are stated as OR; 95% confidence interval; p-value.

Outcome: other type of fistula	OR	95% confidence interval	p-value
Disease duration [per year]	1.030	1.015 – 1.045	<0.001
Initial disease location			
Ileal (ref)	1 (ref)	-	-
Colonic	1.946	1.252 – 3.023	0.003
Ileo-colonic	1.426	0.984 – 2.067	0.061
Upper GI only	1.369	0.284 – 6.607	0.696
Unknown/Unclear	1.578	0.945 – 2.634	0.081
Ever treated with 5ASA			
No (ref)	1 (ref)	-	-
Yes	0.689	0.522 – 0.908	0.008
Ever treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	1.881	1.421 – 2.489	<0.001
Ever treated with Anti-TNF			
No (ref)	1 (ref)	-	-
Yes	1.610	1.231 – 2.106	0.001
Currently treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	2.729	1.560 – 4.774	<0.001
Intest. resection surgery history			
No (ref)	1 (ref)	-	-
Yes	2.705	1.957 – 3.738	<0.001
Stenosis			
No (ref)	1 (ref)	-	-
Yes	1.377	1.015 – 1.869	0.040

Table 5: Multivariate analysis of independent factors associated with the occurrence of other type of fistulae. Results are stated as OR; 95% confidence interval; p-value.

Outcome: multiple fistulae	OR	95% confidence interval	p-value
Disease duration [per year]	1.040	1.019 – 1.062	<0.001
Initial disease location			
Ileal (ref)	1 (ref)	-	-
Colonic	2.889	1.356 – 6.155	0.006
Ileo-colonic	2.080	1.052 – 4.112	0.035
Upper GI only	No obs	-	-
Unknown/Unclear	1.504	0.622 – 3.636	0.365
Ever treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	1.607	1.030 – 2.506	0.037
Ever treated with Anti-TNF			
No (ref)	1 (ref)	-	-
Yes	2.274	1.476 – 3.504	<0.001
Currently treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	2.914	1.420 – 5.977	0.004
Intest. resection surgery history			
No (ref)	1 (ref)	-	-
Yes	3.098	1.890 – 5.079	<0.001

Table 6: Multivariate analysis of independent factors associated with the occurrence of multiple fistulae. Results are stated as OR; 95% confidence interval; p-value.

Outcome: any fistula	OR	95% confidence interval	p-value
Gender			
Male (ref)	1 (ref)	-	-
Female	0.708	0.558 – 0.899	0.005
Disease duration [per year]	1.033	1.019 – 1.046	<0.001
Initial disease location			
Ileal (ref)	1 (ref)	-	-
Colonic	2.283	1.553 – 3.358	<0.001
Ileo-colonic	1.585	1.142 – 2.199	0.006
Upper GI only	0.869	0.180 – 4.186	0.861
Unknown/Unclear	1.472	0.925 – 2.342	0.103
Ever treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	2.119	1.654 – 2.714	<0.001
Ever treated with Anti-TNF			
No (ref)	1 (ref)	-	-
Yes	2.251	1.772 – 2.860	<0.001
Currently treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	3.120	1.765 – 5.517	<0.001
Intest. resection surgery history			
No (ref)	1 (ref)	-	-
Yes	2.116	1.581 – 2.831	<0.001
Stenosis			
No (ref)	1 (ref)	-	-
Yes	1.438	1.090 – 1.898	0.010

Table 7: Multivariate analysis of independent factors associated with the occurrence of any fistula. Results are stated as OR; 95% confidence interval; p-value.

	Stenoses
Gender	
Male (ref)	1 (ref)
Female	0.94; 0.75-1.16; 0.543
Age at diagnosis [per year]	0.99; 0.98-1.01; 0.498
Age at enrollment [per year]	0.99; 0.98-1.01; 0.479
Disease duration [per year]	-
Initial CD location	
L1 (ileal) (ref)	1 (ref)
L2 (colonic)	0.27; 0.19-0.39; <0.001
L3 (ileo-colonic)	0.82; 0.63-1.07; 0.149
L4 (upper GI only)	0.77; 0.22-2.65; 0.679
Unknown/unclear	0.46; 0.30-0.70; <0.001
Current CD location	
L1 (ileal) (ref)	1 (ref)
L2 (colonic)	0.28; 0.21-0.37; <0.001
L3 (ileo-colonic)	0.63; 0.48-0.81; <0.001
L4 (upper GI only)	0.85; 0.29-2.48; 0.764
Unknown/unclear	0.35; 0.19-0.66; 0.001
Smoking status at diagnosis	
Non-smoker (ref)	1 (ref)
Smoker	1.31; 1.06-1.63; 0.014
Unknown	0.66; 0.14-3.17; 0.607
Smoking status at enrollment	
Non-smoker (ref)	1 (ref)
Smoker	1.26; 1.01-1.57; 0.037
Unknown	0.68; 0.14-3.23; 0.625
Ever used 5-ASA	
No (ref)	1 (ref)
Yes	1.10; 0.88-1.37; 0.398
Ever used Antibiotics	
No (ref)	1 (ref)
Yes	1.81; 1.45-2.25; <0.001
Ever used Steroids	
No (ref)	1 (ref)
Yes	1.64; 1.22-2.21; 0.001
Ever used Immunosuppressants	
No (ref)	1 (ref)
Yes	1.66; 1.26-2.18; <0.001
Ever used Anti-TNF agents	
No (ref)	1 (ref)
Yes	1.18; 0.95-1.46; 0.139
Ever used Calcineurin inhib.	
No (ref)	1 (ref)
Yes	1.24; 0.48-3.16; 0.658
Current 5-ASA use	
No (ref)	1 (ref)



Yes	0.81; 0.61-1.08; 0.146
Current Antibiotics use	
No (ref)	1 (ref)
Yes	1.52; 0.91-2.53; 0.108
Current Steroids use	
No (ref)	1 (ref)
Yes	1.10; 0.87-1.39; 0.432
Current Immunosuppressants use	
No (ref)	1 (ref)
Yes	1.30; 1.05-1.61; 0.018
Current Anti-TNF agents use	
No (ref)	1 (ref)
Yes	1.00; 0.80-1.26; 0.972
Current Calcineurin inhib. use	
No (ref)	1 (ref)
Yes	0.97; 0.09-10.90; 0.981
Intest. resection surgery history	
None (ref)	1 (ref)
Yes	7.79; 5.99-10.11; <0.001
Aenemia	
No (ref)	1 (ref)
Yes	1.48; 1.11-1.96; 0.007
Any fistula	
None (ref)	1 (ref)
Yes	1.92; 1.52-2.42; <0.001

Table 8: Univariate analysis of factors associated with occurrence of stenoses. Results are stated as OR; 95% confidence interval; p-value.

Outcome: Stenoses	OR	95% confidence interval	p-value
Disease duration [per year]	1.018	1.003 – 1.032	0.016
Initial disease location			
Ileal (ref)	1 (ref)	-	-
Colonic	0.531	0.305 – 0.925	0.026
Ileo-colonic	1.001	0.678 – 1.477	0.996
Upper GI only	0.887	0.202 – 3.901	0.874
Unknown/Unclear	0.950	0.526 – 1.714	0.864
Current disease location			
Ileal (ref)	1 (ref)	-	-
Colonic	0.403	0.256 – 0.634	<0.001
Ileo-colonic	0.618	0.426 – 0.898	0.029
Upper GI only	0.623	0.160 – 2.422	0.495
Unknown/Unclear	0.370	0.151 – 0.905	0.029
Ever treated with Antibiotics			
No (ref)	1 (ref)	-	-
Yes	1.524	1.167 – 1.990	0.002
Ever treated with Steroids			
No (ref)	1 (ref)	-	-
Yes	1.756	1.242 – 2.481	0.001
Aenemia			
No (ref)	1 (ref)	-	-
Yes	1.529	1.106 – 2.115	0.010
Intest. resection surgery history			
No (ref)	1 (ref)	-	-
Yes	6.476	4.866 – 8.617	<0.001
Any Fistula			
No (ref)	1 (ref)	-	-
Yes	1.424	1.075 – 1.887	0.014

Table 9: Multivariate analysis of independent factors associated with the occurrence of stenosis. Results are stated as OR; 95% confidence interval; p-value.