Supplementary Figure 1. Receiver-operating characteristic curve analysis for infliximab trough concentrations at start of therapeutic drug monitoring stratifying patients with or without treatment failure (*A*), inflammatory bowel disease–related surgery (*B*), inflammatory bowel disease–related hospitalization (*C*), antibodies to infliximab (*D*), and serious infusion reaction (*E*). AUC, area under the curve; CI, confidence interval.

Supplementary Table 1. Variables Associated With Time to IBD-Related Surgery

Variables	Univariate analysis			Multivariate analysis		
	P value	HR	95% CI	*P* value	HR	95% CI
Gender	.689					
IBD type (UC vs CD)	.123					
CD location	.399					
CD behavior	.126					
Age at diagnosis	.488					
Age at start of IFX	.766					
Duration from IFX initiation until start of TDM	.746					
UC extension	.146					
Perianal fistulizing CD	.003	4.3	1.6–11.2	.010	3.6	1.4–9.5
Ileocolonic resection prior to TDM	.476					
Concomitant IMM at start of TDM	.200					
Anti-TNF naive	.516					
Smoking ever	.376					
IFX dosing other than 5 mg/kg q8w at start of TDM	.004	2.9	1.4–6			
IFX concentration at start of TDM	.055					
ATI at start of TDM	.878					
Proactive TDM	<.001	0.18	0.08–0.40	.017	0.30	0.11–0.80

ATI, antibodies to infliximab; CD, Crohn's disease; CI, confidence interval; HR, hazard ratio; IBD, inflammatory bowel disease; IFX, infliximab; IMM, immunomodulators; TDM, therapeutic drug monitoring; TNF, tumor necrosis factor; UC, ulcerative colitis.

Supplementary Table 2. Variables Associated With Time to IBD-Related Hospitalization

Variables	Univariate analysis			Multivariate analysis		
	P value	HR	95% CI	*P* value	HR	95% CI
Gender	.376					
IBD type (UC vs CD)	.063					
CD location	.129					
CD behavior	.241					
Age at diagnosis	.705					
Age at start of IFX	.896					
Duration from IFX initiation until start of TDM	.271					
UC extension	.098					
Perianal fistulizing CD	.105					
Ileocolonic resection prior to TDM	.502					
Concomitant IMM at start of TDM	.327					
Anti-TNF naive	.890					
Smoking ever	.771					
IFX dosing other than 5mg/Kg q8w at start of TDM	.065					
IFX concentration at start of TDM	.018	0.94	0.90–0.99			
ATI at start of TDM	.043	2.2	1.1–4.8			
Proactive TDM	<.001	0.14	0.07–0.3	<.001	0.16	0.07–0.33

ATI, antibodies to infliximab; CD, Crohn's disease; CI, confidence interval; HR, hazard ratio; IBD, inflammatory bowel disease; IFX, infliximab; IMM, immunomodulators; TDM, therapeutic drug monitoring; TNF, tumor necrosis factor; UC, ulcerative colitis.

Supplementary Table 3. Variables Associated With Time to Detectable Antibodies to Infliximab

Variables	Univariate analysis			Multivariate analysis		
	P value	HR	95% CI	*P* value	HR	95% CI
Gender	.630					
IBD type (UC vs CD)	.293					
CD location	.650					
CD behavior	.270					
Age at diagnosis	.825					
Age at start of IFX	.029	1.021	1.002–1.041			
Duration from IFX initiation until start of TDM	.530					
UC extension	.551					
Perianal fistulizing CD	.608					
Ileocolonic resection prior to TDM	.034	2.3	1.1–4.9			
Concomitant IMM at start of TDM	.109					
Anti-TNF naive	.343					
Smoking ever	.927					
IFX dosing other than 5 mg/g q8w at start of TDM	.459					
IFX concentration at start of TDM	<.001	0.7	0.6–0.8	<.001	.7	0.5–0.8
Proactive TDM	<.001	0.2	0.1–0.4	.025	.25	0.07–0.84

ATI, antibodies to infliximab; CD, Crohn's disease; CI, confidence interval; HR, hazard ratio; IBD, inflammatory bowel disease; IFX, infliximab; IMM, immunomodulators; TDM, therapeutic drug monitoring; TNF, tumor necrosis factor; UC, ulcerative colitis.

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Supplementary Table 4. Variables associated with time to serious infusion reaction

Variables	Univariate analysis			Multivariate analysis		
	P value	HR	95% CI	P value	HR	95% CI
Gender	.994					
IBD type (UC vs CD)	.827					
CD location	.544					
CD behavior	.382					
Age at diagnosis	.917					
Age at start of IFX	.685					
Duration from IFX initiation until start of TDM	.260					
UC extension	.928					
Perianal fistulizing CD	.844					
Ileocolonic resection prior to TDM	.747					
Concomitant IMM at start of TDM	.540					
Anti-TNF naive	.654					
Smoking ever	.718					
IFX dosing other than 5 mg/kg q8w at start of TDM	.325					
IFX concentration at start of TDM	.003	0.74	0.61–0.90	.011	0.78	0.65–0.94
ATI at start of TDM	<.001	8.1	2.8–23.3			
Proactive TDM	<.001	0.10	0.02–0.46	.023	0.17	0.04–0.78

ATI, antibodies to infliximab; CD, Crohn's disease; CI, confidence interval; HR, hazard ratio; IBD, inflammatory bowel disease; IFX, infliximab; IMM, immunomodulators; TDM, therapeutic drug monitoring; TNF, tumor necrosis factor; UC, ulcerative colitis.

Supplementary Table 5. Testing Results Stratified by the Type of Therapeutic Drug Monitoring Based on the First IFX Concentration and ATI

Variable	Proactive TDM (n = 130)	Reactive TDM (n = 134)	P value
IFX concentration undetectable	12 (9)	43 (32)	<.001
ATI	7 (5)	37 (28)	<.001
IFX TC undetectable	12 (9)	30/91 (33)	<.001
IFX TC, µg/mL	9.1 (3.6–13.9)	3 (0–8.6)	<.001
IFX TC			<.001
<3 µg/mL	28 (21.5)	45/91 (47)	
3–7 µg/mL	28 (21.5)	19/91 (23)	
>7 µg/mL	74 (57)	27/91 (30)	
IFX TC			<.001
<5 µg/mL	40 (31)	54/91 (59)	
5–10 µg/mL	31 (24)	19/91 (21)	
>5 µg/mL	59 (45)	18/91 (20)	
Change in IFX treatment	52 (40)	91 (68)	<.001
Change in IFX treatment type			<.001
IFX discontinuation	1 (1)[a]	38 (29)	
IFX therapy escalation	34 (26)	50 (37)	
Shorten interval	11	21	
Dose increase	17	20	
Combination[b]	6	9	
IFX therapy de-escalation	17 (13)	3 (2)[c]	
Prolong interval	8	3	
Dose decrease	7	0	
Combination[d]	2	0	

NOTE. Values are n (%), n/n (%), or median (interquartile range).
ATI, antibodies to infliximab; IFX, infliximab; TC, trough concentration; TDM, therapeutic drug monitoring.
[a]Due to high ATI titer (35.6 U/mL).
[b]Shorten interval, dose increase, or addition of an IMM.
[c]Following clinical evaluation patients' symptoms were attributed to other reasons than increased IBD activity, such as gastrointestinal infection or irritable bowel syndrome.
[d]Prolong interval, dose decrease, or stopping an IMM.

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