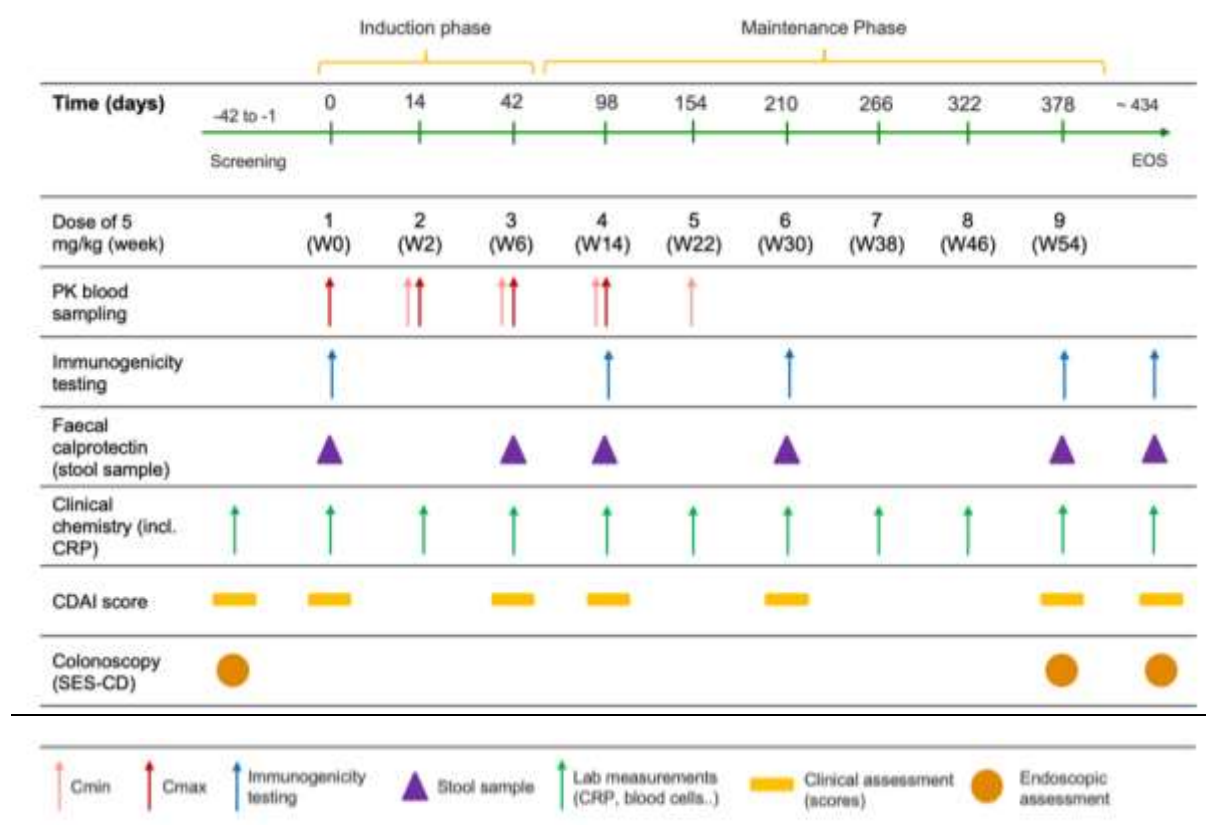
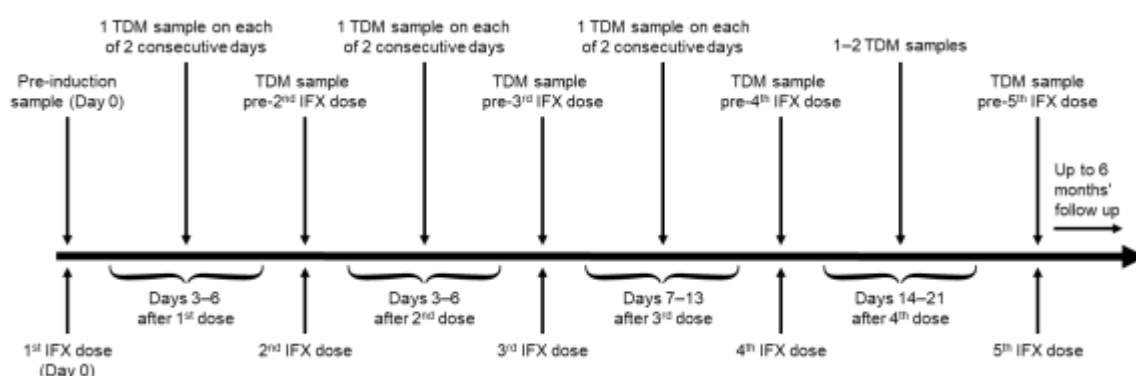


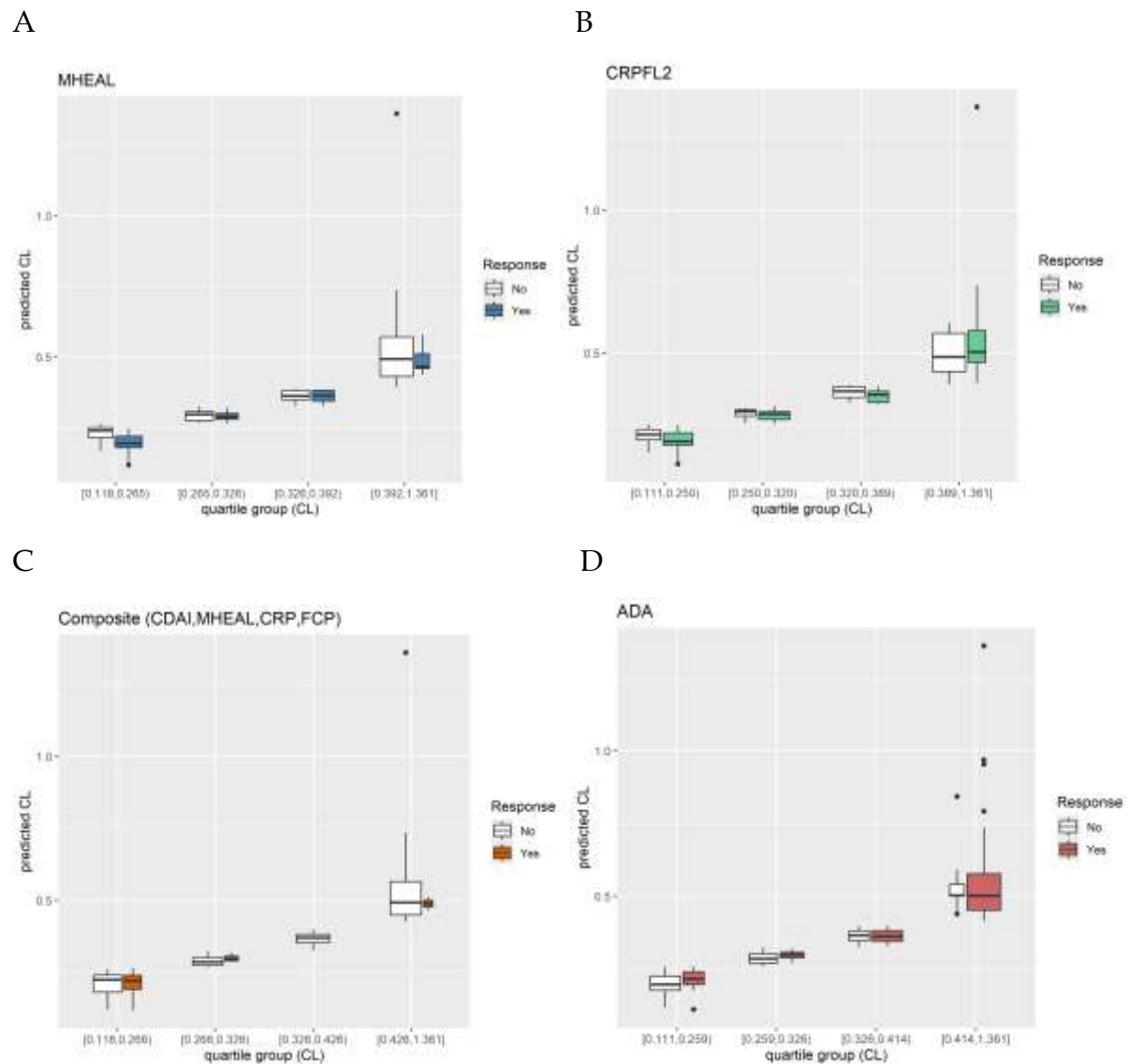


Supplementary Figure 1 Study procedures of the CT-P13 3.4 trial. CDAI, Crohn's Disease Activity Index; C_{max} , maximum serum infliximab concentration; C_{min} , minimum serum infliximab concentration; CRP, C-reactive protein; EOS, end-of-study; Lab, laboratory; PK, pharmacokinetic; SES-CD, Simplified Endoscopic Score for Crohn's Disease; W, week.



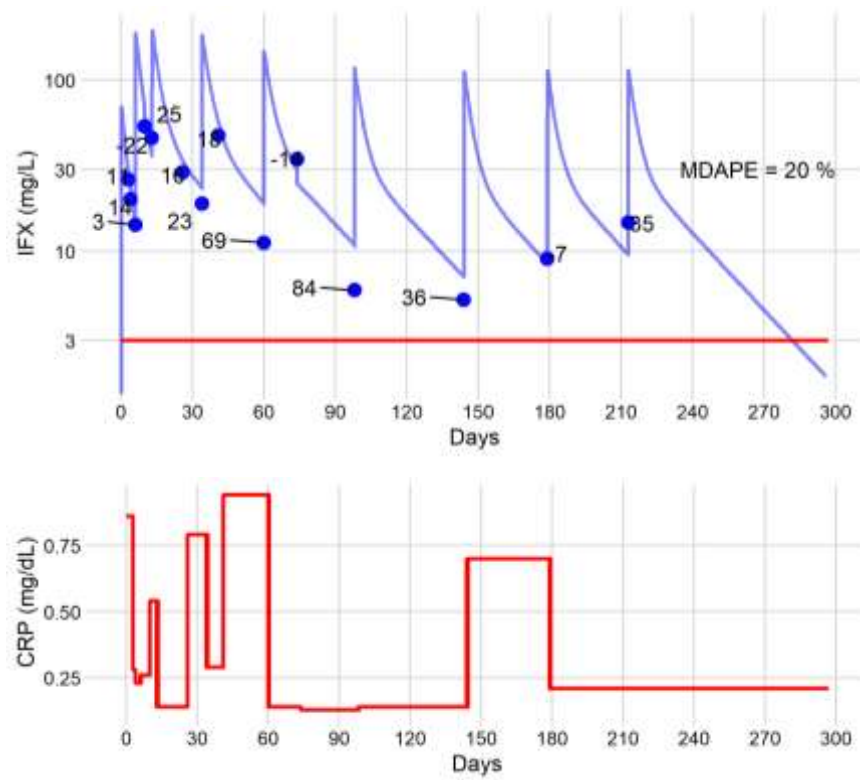
Supplementary Figure 2 Flowchart of therapeutic drug monitoring sampling for iDose-guided patients. Day 0 pre-induction sample included evaluation of serum

chemistry, CRP, albumin, and ADAs, stool sample for FCP, and body weight. TDM samples included evaluation of serum chemistry, CRP, albumin, ADAs, and serum IFX levels, and stool sample for FCP. ADA, antidrug antibody; CRP, C-reactive protein; FCP, faecal calprotectin; IFX, infliximab; TDM, therapeutic drug monitoring.

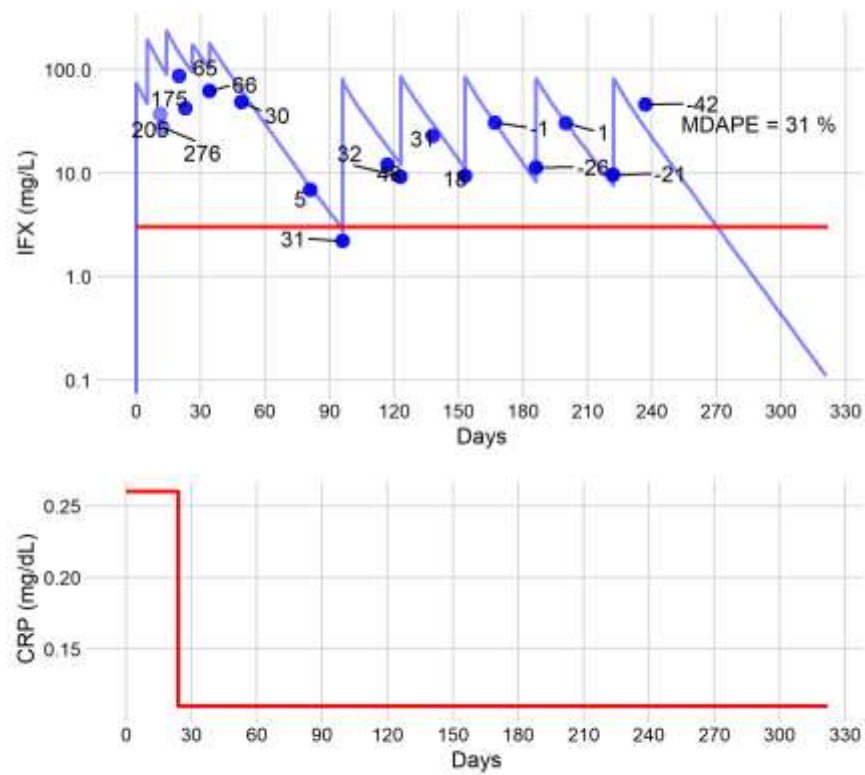


Supplementary Figure 3 Box Plot of Quartiles of IFX CL for Responder Status by Endpoint.

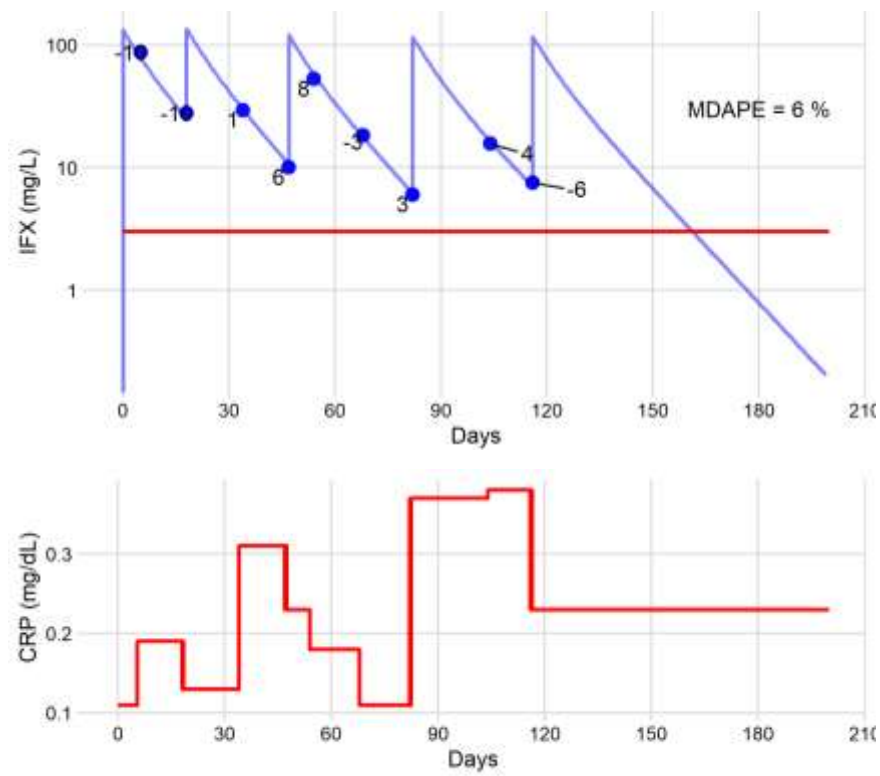
Patient 1



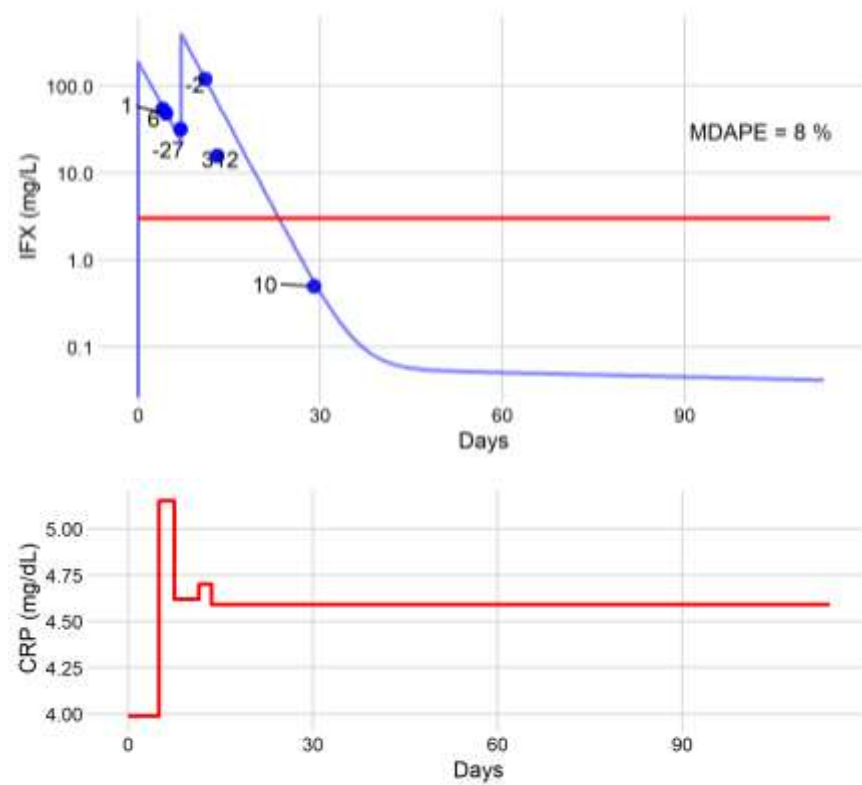
Patient 3



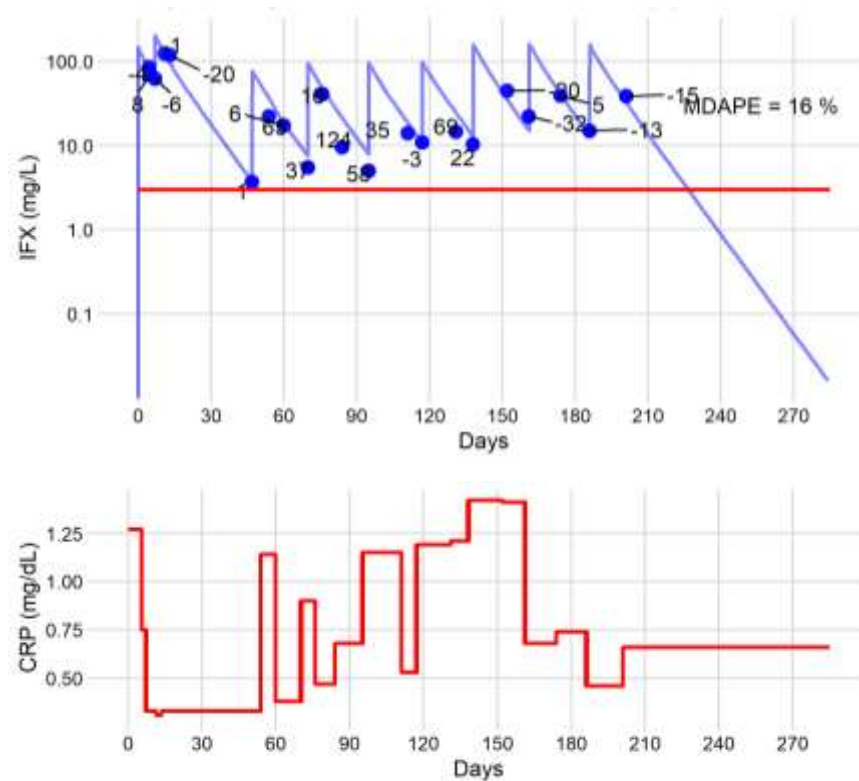
Patient 6



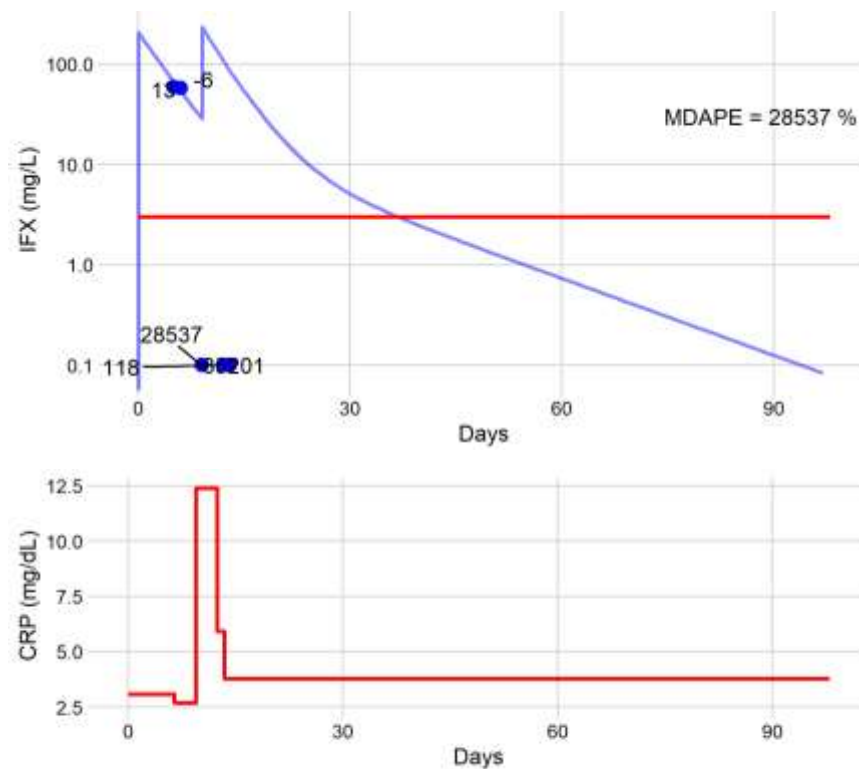
Patient 7



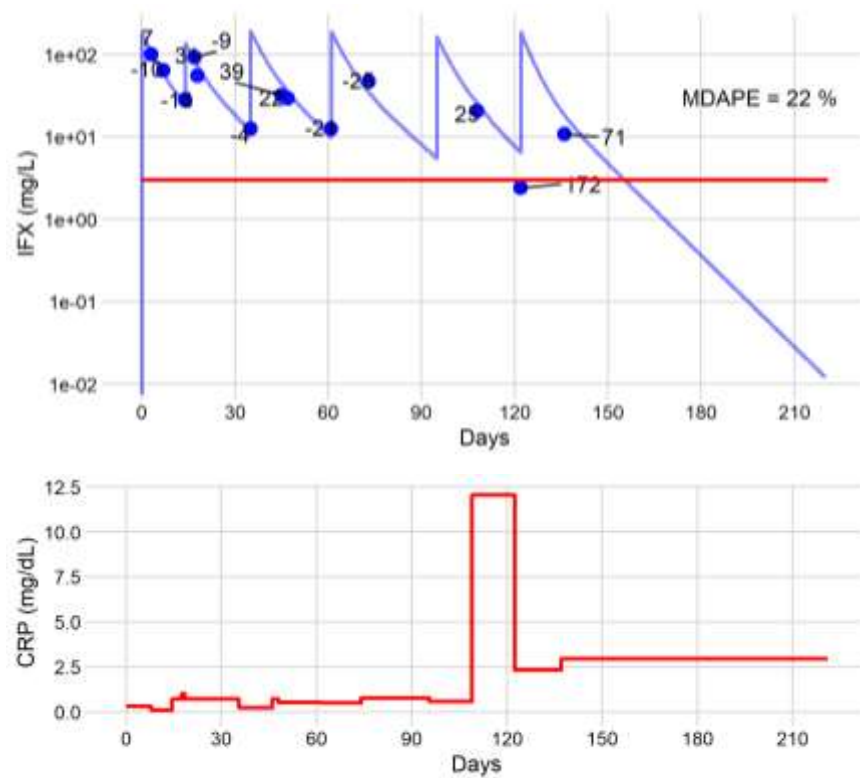
Patient 8



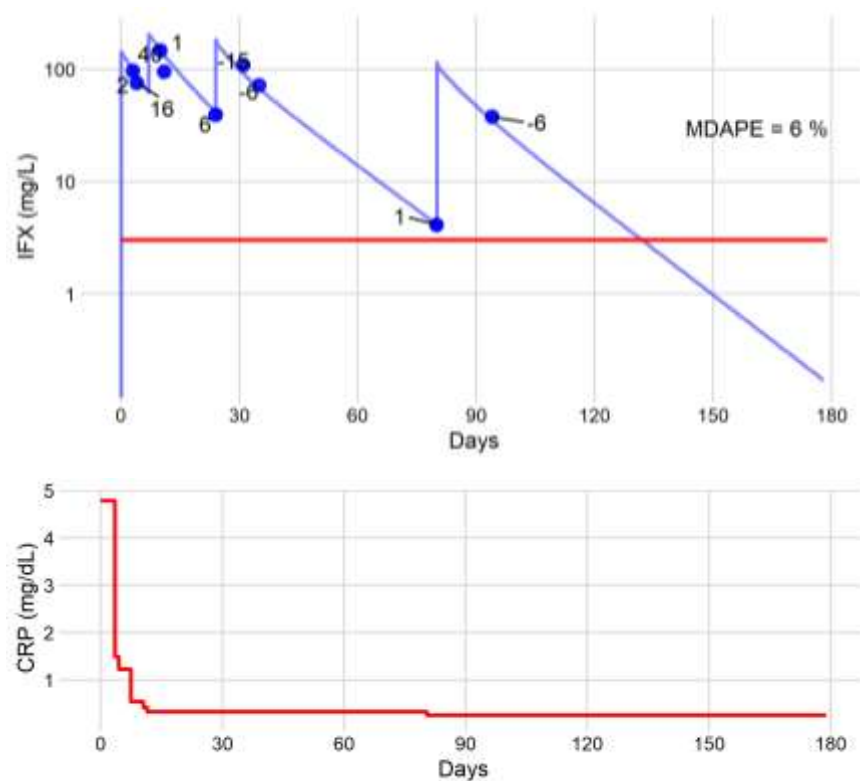
Patient 9



Patient 11



Patient 12



Supplementary Figure 4 Observed versus predicted serum IFX concentrations, [†]MDAPE, and CRP levels for all iDose-guided patients. [†]For serum IFX

concentrations, the blue line shows model-predicted values and symbols show observed values (with labels showing the prediction error, as a percentage). The red line shows the target serum IFX concentration. CRP, C-reactive protein; IFX, infliximab; MDAPE, median absolute percentage error.

Supplementary Table 1 MHEAL logistic regression parameters

Parameter	Estimate	Standard error	Statistic	P value
(Intercept)	1.70	0.654	2.61	0.00915
CL	-6.75	1.99	-3.39	0.000697

Supplementary Table 2 CRPFL2 logistic regression parameters

Parameter	Estimate	Standard error	Statistic	P value
(Intercept)	1.73	0.648	2.67	0.00757
CDDUR	0.0510	0.0299	1.71	0.0878
CL	-4.37	1.46	-2.99	0.00276
AGE	-0.0201	0.0132	-1.52	0.129

CDDUR – Crohns disease duration

Supplementary Table 3 ADAFL Logistic Regression Parameters

Parameter	Estimate	Standard error	Statistic	P value
(Intercept)	-1.88	0.823	-2.28	0.0225
CL	8.28	1.64	5.04	4.67E-07
AGE	0.0210	0.0124	1.7	0.0897
DOSE	-0.00407	0.00251	-1.62	0.105

Supplementary Table 4 Combined Logistic Regression Parameters

Parameter	Estimate	Standard error	Statistic	P value
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(Intercept)	0.201	1.00	0.200	0.841
CL	-6.62	3.32	-1.99	0.0461

The hazard function for the final mod is displayed below: $h(t) = e^{\beta_0 + \beta_1 \cdot (CL - 0.32) + \beta_2 \cdot IMM + \beta_3 \cdot (DOSE - 328)}$

Supplementary Table 5 Hazard Parameters for Time to First ADA

Predictor	Estimate (SE)	HR (95% CI)	Comment
Intercept	-5.72 (0.123)		
B ₁	4.79 (0.649)	1.61 (1.42 1.83)	Hazard ↑ by 61% for ↑CL of 0.1
B ₂	-0.891 (0.201)	0.410 (0.277 0.608)	Hazard ↓ by 49% for IMM
B ₃	-0.00344 (0.00146)	0.709 (0.533 0.944)	Hazard ↓ by 29% for ↑DOSE of 100mg

IMM – taking immunomodulators