

Supplementary Materials: The Combination of Predictive Factors of Pharmacokinetic Origin Associates with Enhanced Disease Control During Treatment of Pediatric Crohn's Disease with Infliximab

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Table S1: Predictive factors of PK origin and time to CRP based clinical remission in pediatric CD

				Time (days)	HR	p value
Infusion 2						
Clearance	above	0.294		110±27	ref.	
L/day						
Clearance below	0.294 L/day			71±14	1.3 (0.9 to 2.0)	0.188
IFX below	20µg/mL			95±18	ref.	
IFX above	20µg/mL			69±13	1.4 (0.9-2.1)	0.140
Infusion 3						
Clearance	above	0.294		138±28	ref.	
L/day						
Clearance below	0.294 L/day			76±13	1.5 (1.0 to 2.3)	0.047
IFX below	15µg/mL			139±20	ref.	
IFX above	15µg/mL			46±12	2.3 (1.5-3.6)	<0.001
Infusion 4						
Clearance	above	0.294		188±35	ref.	
L/day						
Clearance below	0.294 L/day			68±11	2.1 (1.3 to 3.2)	0.001
IFX below	10µg/mL			142±21		
IFX above	10µg/mL			53±12	2.2 (1.4-3.3)	<0.001

Table S2: PF of PK origin either alone or combined at the end of induction and during maintenance and disease control over maintenance period.

	parameter*	estimates
Time and IFX >5µg/mL	θ_{pop}	-0.38±0.53 (p=0.473)
	θ_{time}	0.004±0.002 (p=0.046)
	$\theta_{concentration}$	1.53±0.43 (p<0.001)
	-2LL	361.6
Time and Clearance <0.294 L/day	θ_{pop}	1.53±0.58 (p=0.008)
	θ_{time}	0.004±0.002 (p=0.046)
	θ_{Cl}	2.57±0.50 (p<0.001)
	-2LL	353.7 (Δ =-7.9; p=0.005)
Time and PF of PK origin (IFX >5µg/mL with Clearance <0.294 L/day)	θ_{pop}	1.06 ±0.48 (p<0.001)
	θ_{pop}	0.004±0.001 (p<0.001)
	$\theta_{both\ PF\ of\ PK}$	2.97±0.81 (p<0.001)
	-2LL	396 (Δ =-12.6; ; p<0.001)
Time and both PF of PK origin at infusion 4 (IFX >10µg/mL with Clearance <0.294 L/day) and dur- ing maintenance	θ_{pop}	0.35±0.50 (p=0.012)
	$\theta_{both\ PF\ of\ PK\ 4th\ inf}$	2.44±0.64 (p<0.001)
	θ_{time}	0.002±0.001 (p=0.046)
	$\theta_{both\ PF\ of\ PK}$	2.51±0.73 (p<0.001)
	-2LL	377.8 (Δ =-23.2; p<0.001)

*Model: $\text{logit}(\text{Probability of CRP based remission}) = \theta_{pop} + \theta_{covi} * cov_i + \dots$

Figure S1: IFX concentration and Clearance at each of the Induction time point and maintenance.

Panel A: infusion 2; panel B: infusion 3; panel C: infusion 4; panel D: maintenance

