

REAL-WORLD INSIGHTS ON ANALYTICAL PARAMETERS AND ANTI-TNF CONCENTRATIONS IN INFLAMMATORY BOWEL DISEASE

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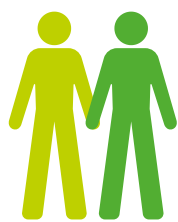
BACKGROUND AND IMPORTANCE

Therapeutic drug monitoring (TDM) is increasingly used to **optimize anti-TNF therapy** in inflammatory bowel disease (IBD). Nutritional status and systemic inflammation may influence drug clearance, but comparative real-world evidence between different anti-TNF is scarce.

AIM AND OBJECTIVES

To evaluate the association between **analytical parameters and trough concentrations of adalimumab and infliximab** in routine clinical practice.

MATERIAL AND METHODS



Retrospective observational study conducted over seven months in patients treated with adalimumab or infliximab for IBD

Analytical variables

Serum albumin
C-reactive protein (CRP)
Fecal calprotectin
Leukocytes
Neutrophils
Erythrocyte sedimentation rate



Correlations between analytical parameters and trough concentrations were assessed, and **multivariable linear regression** was applied to explore independent associations

RESULTS



N=185

Adalimumab cohort

Number of patients	40 (42 determinations)
Mean age	44 ± 16 years (range 13–74)
Mean body weight	68 ± 12 kg
Median trough	12.1 µg/mL

Albumin correlated positively with trough concentrations ($r = 0.41$, $p = 0.03$) and remained significant after adjustment. **CRP** ($r = -0.15$, $p = 0.45$) and **fecal calprotectin** ($r = -0.10$, $p = 0.62$) **were not significant**

Infliximab cohort

Number of patients	145 patients (420 determinations)
Mean age	47 ± 20 years (range 4–85)
Median trough	8.0 µg/mL

Negative correlations were observed with **CRP** ($\rho = -0.24$, $p < 0.01$), **leukocytes** ($\rho = -0.31$, $p = 0.005$) and **neutrophils** ($\rho = -0.40$, $p < 0.001$), while **albumin showed a non-significant positive trend** ($\rho = 0.11$, $p = 0.08$).

Multivariable adjustment for the covariates

CRP, leukocytes, and neutrophils remained independently associated with lower infliximab levels.

CONCLUSION AND RELEVANCE

In this real-world IBD cohort, **serum albumin was positively associated with adalimumab concentrations**, whereas **infliximab levels correlated inversely with systemic inflammatory markers** (CRP, leukocytes, neutrophils). These findings support the value of routine analytical parameters in the interpretation of anti-TNF drug monitoring and highlight the need for prospective studies to confirm these associations and guide individualized treatment strategies

