



# STUDY OF THE PREVALENCE OF IMMUNOGENICITY IN PATIENTS TREATED WITH ANTI-TUMOUR NECROSIS FACTOR MONOCLONAL ANTIBODIES

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## Introduction

The loss of response in patients treated with anti-TNF $\alpha$  monoclonal antibodies is relatively frequent. One of the reasons is the development of immunogenicity, causing treatment failure.

## Objective

To determine the prevalence of immunogenicity in patients with anti-TNF monoclonal antibodies.

## Materials and methods

- Retrospective observational study.
- We included all patients with serum levels of **adalimumab**, **infliximab** or **etanercept** (May 2015-September 2017).
- Serum samples are routinely collected every six months before the next drug injection.
- Samples were analyzed by enzyme-linked immunosorbent assays (ELISA).
- Variables** studied: sex, age, number of serum samples collected, diagnosis, previous biologic therapy, serum drug concentrations and antibody level.
- Antibodies were performed in patients who had undetectable concentrations of drug.
- We used  $\chi^2$  test to compare the association between categorical variables, using SPSS version 23.0.

## Results

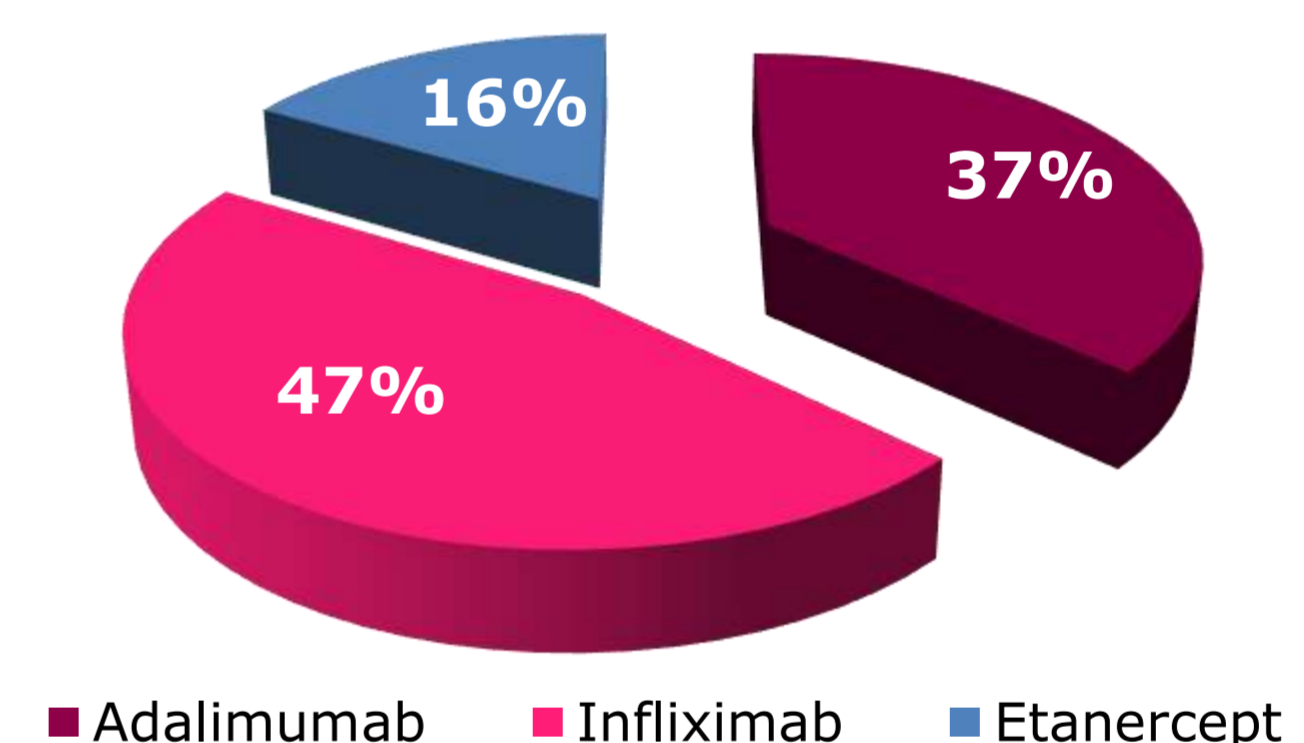
- **310** patients  $\rightarrow$  50.3% women, mean age: 46.2 (SD: 15.1) years.

- Frequent **diagnoses**

- Crohn's disease (26.5%)
- Rheumatoid arthritis (19.4%)
- Ankylosing spondylitis (16.8%)

- The 53.4% had not received prior treatment with biological drugs, 29.1% were treated with one biological and the 17.5% received two or more.

582 Samples collected



Mean serum trough concentrations (mcg/mL)		
Infliximab 6.0(SD: 4.8)	Adalimumab 6.4(SD: 4.3)	Etanercept 2.2(SD: 2.1)

36.1% were below the therapeutic range

19.4% were higher the therapeutic range

44.5% were in range therapeutic

**Antibodies** were analyzed in 60 patients

$\rightarrow$  **27** patients presented antibodies

44.4% against infliximab  
55.6% to adalimumab  
No patient with etanercept  
(p = 0.229)

- 85.2%** of patients with antibodies had received a previous biologic therapy, compared to 14.8% who had not received previous treatment(p<0.001).
- The **8.7%** presented antibodies, in all cases it was changed to another biological drug.

## Conclusion

- The **8.7%** of our population has presented antibodies against these drugs, which prevents to get the therapeutic objective in these patients, this percentage is lower than the published studies show.
- The monitoring of biological drug levels and the analysis of antibodies provide an improvement in the management of the patient.