



# **ROLE OF HLA-DQA1\*05 IN THE PERSISTENCE OF ADALIMUMAB** IN THE MANAGEMENT OF INFLAMMATORY BOWEL DISEASE

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### BACKGROUND AND IMPORTANCE

Efficacy of anti-tumor necrosis factor (anti-TNF) drugs is significantly reduced due to the formation of anti-drug antibodies, which can lead to treatment failure. HLA-DQA1\*05 haplotype has been linked as a possible biomarker of immunogenicity and loss of response to anti-TNF treatment.

#### **AIM AND OBJECTIVES**

To analyse persistence after 48 weeks of treatment with adalimumab (ADA) in biologic-naïve patients with Inflammatory Bowel Disease (IBD) starting ADA in 2022 who had HLA-DQA1\*05 determined.

### **MATERIALS AND METHODS**

- **Descriptive** and **retrospective** study
- Biologic-naïve patients diagnosed with IBD who started ADA in 2022
- **Data sources:** electronic medical records

## Variables collected:

- Demographic data: sex and age
- Type of IBD (Crohn's disease (CD) or ulcerative colitis (UC)
- Smoking status
- Previous immunosuppressant (IS) treatment
- According to the presence or absence of HLA-DQA1\*05 haplotype (table 1)

\*Target therapeutic interval (ADA maintenance) = 5-12 mcg/mL

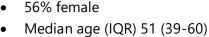
### **CONCLUSION AND RELEVANCE**

- The persistence at 48 weeks was 69.2% in the total study population after ADA initiation: **1.3 times lower** in patients with HLA-DQA1\*05.
- Further studies are needed in order to support the determination of HLA-DQA1\*05 prior to initiation of therapy.

### **RESULTS**



39 patients



- CD (74%), UC (26%)
- Smokers (26%), ex-smokers (31%)
- Previous IS treatment (30%)

HLA-DOA1\*05

	HLA-DQA1"05		
	<b>YES</b> (n=17)	<b>NO</b> (n=22)	Total (n=39)
Table 1:	N (%)	N (%)	N (%)
Persistence after 48 weeks of ADA			
YES	10 (58.8)	17 (77.3)	27 (69.2)
NO	7 (41.2)	5 (22.7)	12 (30.8)
Median time (days) to failure (IQR)	75 (34-103)	49 (29-112)	66.5 (36.5-102)
Reason for withdrawal			
Primary failure	4 (23.5)	3 (13.6)	7 (17.9)
Secondary failure	2 (11.8)	1 (4.5)	3 (7.7)
Immunogenic	1 (5.9)		1 (2.6)
Pharmacodynamic	1 (5.9)	1 (4.5)	2 (5.1)
Other causes	1 (5.9)	1 (4.5)	2 (5.1)
Anti-drug antibodies	2 (11.8)	2 (9.1)	4 (10.3)
Intensification			
Interval	3 (17.6)	3 (13.6)	6 (15.4)
Dose + interval	5 (29.4)	7 (31.8)	12 (30.8)
ADA levels			
Pre-intensification*			
Supratherapeutic	2 (11.8)	3 (13.6)	5 (12.8)
Therapeutic	7 (41.2)	9 (40.9)	16 (41)
Subtherapeutic	4 (23.5)	3 (13.6)	7 (17.9)
Post-intensification			
Supratherapeutic	4 (23.5)	5 (22.7)	9 (23.1)
Therapeutic	3 (17.6)	4 (18.2)	7 (17.9)
Subtherapeutic	1 (5.9)	1 (4.5)	2 (5.1)
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<sup>\*</sup>last level available if not intensified

