

PREANTIF: Method for predicting the response of a patient suffering from ulcerative colitis to a treatment with anti-TNF antibodies

**Business area***Diagnostics***Market sector***Anti-TNF therapies,
Precision Medicine***Medical Indication***Ulcerative colitis,
anti-TNF therapies*

Research goal

The research aims to identify a biomarker that can predict the response to anti-TNF therapy in patients with ulcerative colitis before the treatment begins.

Problem to solve

While biologic therapies offer significant benefits, a substantial portion of patients with ulcerative colitis do not respond to these treatments. As a result, healthcare systems invest heavily in therapies that may not improve patient outcomes. Currently, there is no reliable biomarker used routinely in clinical practice to determine which patients will benefit from specific biologic treatments. The administration of these therapies follows an established sequence of treatments.

Innovation

This research proposes the use of a novel biomarker (PREANTIF) that will allow for better-targeted therapy for patients with ulcerative colitis. PREANTIF can predict a patient's response to anti-TNF therapies before treatment begins, offering a significant advancement over the current approach, which is largely based on trial and error. At present, clinicians have no reliable tool to identify which patients will benefit from biologic therapies such as infliximab or adalimumab. As a result, many patients undergo costly and potentially ineffective treatments, leading to delayed improvements in health and increased strain on healthcare resources. By utilizing PREANTIF, physicians will be able to implement a more personalized treatment strategy for UC patients. This allows them to select the most appropriate biologic therapy from the outset, thereby maximizing therapeutic efficacy and minimizing the risks associated with ineffective treatments. For patients who would not respond well to anti-TNF therapies, alternative treatments could be considered earlier, reducing the trial period and associated complications. In effect, PREANTIF serves as a precision medicine tool, enabling more accurate treatment decisions tailored to the individual's biological profile. By offering a more individualized approach to UC management, PREANTIF not only improves clinical outcomes but also enhances the efficiency of healthcare delivery, contributing to a more sustainable and patient-centered healthcare model.

Market opportunity

The market opportunity for a biomarker detection kit in ulcerative colitis is substantial, driven by the increasing global prevalence of the disease and the high costs associated with biologic therapies. The global market for inflammatory bowel disease treatments, including ulcerative colitis, is projected to reach approximately USD 9.5 billion by 2028, with anti-TNF therapies being among the most prescribed biologics. In the U.S. alone, the cost of anti-TNF treatments ranges from USD 30,000 to 60,000 per patient annually. Given that up to 40% of patients fail to respond to these therapies, the economic burden of ineffective treatments is significant. The introduction of a biomarker detection kit that could predict response before treatment initiation has the potential to save healthcare systems millions of dollars in wasted drug costs and unnecessary treatments. With hundreds of thousands of patients globally receiving biologics, and thousands annually in individual countries like Spain, this diagnostic tool could target a sizable market segment, offering both clinical and financial benefits.

Research team

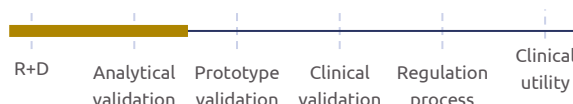
Molecular and Cellular Gastroenterology group and Department of Gastroenterology and Hepatology

- **Javier Conde Aranda**
- **Manuel Barreiro de Acosta**

Intellectual property

European patent **EP24382243** "In vitro method for predicting the response of a patient suffering from ulcerative colitis to a treatment with anti-TNF antibodies"

Development stage:



Available for: *Licensing, co-development*

