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A Budget Impact Analysis of Introducing Filgotinib as a First-Line Treatment for Moderate to Severe Ulcerative Colitis in Greece

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Background & Objective

Ulcerative colitis (UC) is a chronic inflammatory disease that primarily affects the colonic mucosa, causing continuous inflammation. Characterized by altered mucin production and damage to the epithelial barrier, UC can vary in both severity—ranging from mild to severe—and extent, involving the rectum, sigmoid, or the entire colon. Commonly presenting in young adults aged 15 to 30, UC is increasingly diagnosed in older populations, complicating diagnosis and treatment due to comorbidities. Filgotinib, an oral preferential JAK1 inhibitor, has shown efficacy in treating moderate to severe UC in the SELECTION Phase IIb/III study (NCT02914522) [1]. The aim of this study was to evaluate the budget impact of introducing filgotinib as a first-line treatment option for patients with moderate or severe ulcerative colitis (UC) in Greece.

Methods

To perform the Budget Impact Analysis (BIA), relevant data on patient characteristics, treatment options, and healthcare resource utilization were gathered through a literature review. However, due to a lack of specific data for ulcerative colitis (UC) in Greece, expert opinions were used. A panel of experienced UC specialists was consulted through structured interviews. A questionnaire, developed based on a detailed literature review, collected information on the number of UC patients, disease severity, and resource usage in Greece to address the missing data points needed for the model.

The budget impact model used in this analysis is based on an existing pharmacoeconomic model to evaluate the financial impact of introducing filgotinib for moderate to severe UC. Two scenarios were compared: a "World without filgotinib",” reflecting current UC management practices, and a "World with filgotinib",” to estimate post-introduction economic implications. The model calculates direct medical costs under both scenarios, focusing on the differences in pharmaceutical costs, administration, monitoring, and adverse events. The analysis uses a five-year time horizon, starting from 2023, and focuses on the perspective of the third-party payer in Greece.

The analysis considered various costs, including those for pharmaceuticals, administration, monitoring, and hospitalizations. Health resource utilization and cost data, including drug prices, administration, and monitoring, were sourced from official Greek health system data [2-3], with drug prices adjusted to reflect a 5% hospital rebate.[4]. The model also accounted for the costs of managing adverse events, particularly serious infections, which are a significant consideration in UC treatment.

Table 1: Main Features of Economic Evaluation

Population	**Adult patients with moderate or severe ulcerative colitis**
Intervention	**Filgotinib 200mg**
Comparators	**Current clinical practice**
Perspective of the analysis	**Third-party payer: only third-party payer benefits and costs are included**
Economic evaluation	**Budget impact analysis**
Time horizon	**5 years, starting from 2023**
Inputs	**Pharmaceutical cost** **Administration cost** **Monitoring cost** **Hospitalization cost** **Adverse event cost**
Outputs	**Costs per year, cumulative costs**
Discount rate	**No discount rate included in the analysis**

Results

The results of the budget impact analysis reveal that introducing filgotinib into the treatment landscape for moderate and severe UC patients generates significant cost savings for the third-party payer. In the first year alone, filgotinib's introduction results in savings of approximately €177,873, with these savings projected to grow in subsequent years as the drug’s market share increases. By the fifth year, annual savings reach €560,051, primarily driven by reductions in drug acquisition and administration costs.

When examining the cumulative savings over the five-year period, the implementation of filgotinib leads to a reduction in overall spending for the third-party payer by approximately €1.83 million. This equates to a 2.33% decrease in the total budget allocated to the management of moderate and severe UC patients. The savings are largely attributed to lower pharmaceutical and administration costs, as filgotinib is projected to replace more expensive biologic treatments. While filgotinib introduces slightly higher costs related to adverse event management compared to some alternatives, the increase is minimal and is easily offset by the substantial budget reductions achieved in other areas, such as drug acquisition and administration costs. These marginal increases in adverse event costs do not significantly impact the overall savings, ensuring that the implementation of filgotinib remains a cost-effective option for the third-party payer

In addition to the base case analysis, a deterministic sensitivity analysis (DSA) was conducted to assess the robustness of the findings. This analysis varied key parameters, including the time horizon, population estimates, treatment costs, and adverse event probabilities. The DSA highlighted that the market share of treatments in the absence of filgotinib had the most significant impact on the budget, due to the varying costs of these therapies. Filgotinib’s relatively lower price compared to its competitors consistently made it the most cost-effective option in the scenarios analyzed, underscoring its potential to alleviate financial pressure on healthcare systems.

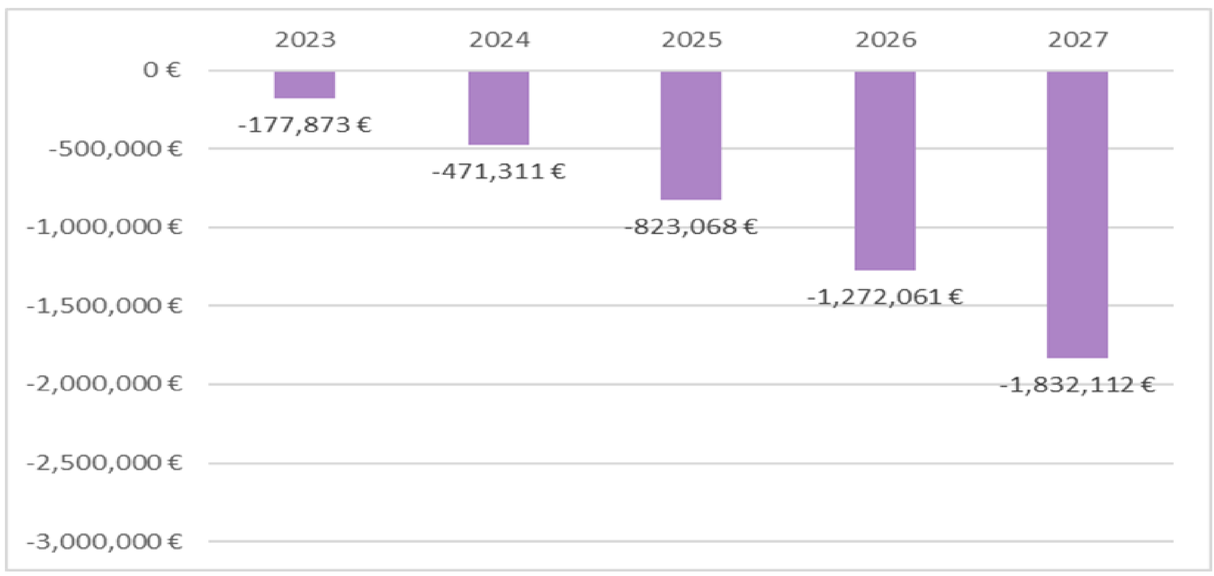
Table 2. Budget impact of introduction of Filgotinib in euros (€), per year

Scanario	2023	2024	2025	2026	2027
Without filgotinib	13,956,191.0	14,854,322.8	15,735,300.7	16,599,369.9	17,446,772.5
With filgotinib	13,778,318.0	14,560,884.4	15,383,544.4	16,150,376.4	16,886,721.7
Budget impact	-177,873.0	-293,438.4	-351,756.3	-448,993.6	560,050.8

Table 3. Budget impact of introduction of Filgotinib in euros (€), cumulative

Scanario	2023	2024	2025	2026	2027
Without filgotinib	13,956,191.0	28,810,513.8	44,545,814.5	61,145,184.5	78,591,957.0
With filgotinib	13,778,318.0	28,339,202.4	43,722,746.8	59,873,123.2	76,759,844.8
Budget impact	-177,873.0	-471,311.4	-823,067.7	-1,272,061.3	-1,832,112.1

Figure 1. Cumulative savings for third payer by the introduction of filgotinib



Conclusions

Filgotinib's favorable economic impact, alongside its clinical efficacy, supports its potential as a valuable addition to current treatment options for moderate to severe ulcerative colitis, promising both healthcare cost efficiencies and improved patient outcomes in the Greek healthcare setting. This study provides compelling evidence for policymakers and healthcare providers considering the economic impact of filgotinib's inclusion in UC management protocols.

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