ISPOR Europe 2024
17-20 November 2024, Barcelona, Spain

EE477

A Budget Impact Analysis of Introducing Filgotinib for the Treatment of Rheumatoid Arthritis in Greece

Nomikos Nikos[1], **Naoum Panagiota**[1], Athanasakis Kostas[1] , Kyriopoulos Ilias[2]
[1]Laboratory for Health Technology Assessment (LabHTA), Department of Public Health Policy, University of West Attica, Athens, Greece, [2]Department of Health Policy, London School of Economics and Political Science London, United Kingdom

Background & Objective

Rheumatoid arthritis (RA) is a chronic inflammatory disease that leads to joint swelling, tenderness, and tissue degeneration. Common symptoms include pain and morning stiffness, with disease manifestations often occurring years after initial symptoms. RA can also affect other organs and is associated with comorbidities like cardiovascular disease, which can impact treatment effectiveness. Risk factors include demographics, lifestyle choices, and clinical conditions. Filgotinib, a selective oral JAK1 inhibitor, has shown promise for patients with moderate to severe RA who have inadequate responses to disease-modifying antirheumatic drugs (DMARDs) and can be used alone or with methotrexate. This study aims to evaluate the budget impact of introducing filgotinib as a treatment option for moderate to severe RA in Greece from a third-party payer perspective. The Budget Impact Analysis (BIA) estimates the financial implications of adopting a new healthcare intervention within a specific system, assessing how the integration of filgotinib may influence treatment expenditures compared to current practices over a five-year horizon.

Methods

To assess the budget impact of introducing filgotinib for RA in Greece, we adapted an existing pharmacoeconomic model utilizing cost data from 2023 gathered through official resources [1-3]. This analysis compares two scenarios over a five-year horizon starting from 2023: a "World without Filgotinib," reflecting current RA management practices, and a "World with Filgotinib," estimating the economic implications post-introduction.

Data on patient populations, treatment options, and associated costs were obtained through a comprehensive literature review and an expert consensus panel of 8 rheumatologists specializing in RA management. Given the absence of specific data regarding the characteristics of RA patients in Greece, the expert panel method was employed to define key parameters for the budget impact model (BIM).

A structured questionnaire developed by the research team was administered to the experts, collecting anonymous responses on the prevalence of diagnosed RA patients, treatment patterns, and resource utilization. Discrepancies in estimates were reconciled through subsequent discussions among the panelists.

The BIM, created in Microsoft® Excel 2016, evaluates direct medical costs, including pharmaceuticals, administration, monitoring, hospitalization, and adverse event management. The budget impact is derived from the differences in direct costs between the two scenarios, providing a comprehensive financial assessment of integrating filgotinib into RA treatment strategies in Greece.

Table 1: Main Features of Economic Evaluation

Population	**Adult patients with RA**
Intervention	**Filgotinib 200mg daily plus methotrexate**
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 2022**
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 base analysis indicates that the introduction of Filgotinib leads to annual savings for the third-party payer of up to €235,767. In the first year of the analysis, there is no financial impact for the payer, as it is assumed that Filgotinib will not capture any market share initially. However, starting from the second year (2024), the introduction of Filgotinib begins to generate savings, which increase as its market share expands. The primary impact of Filgotinib is observed in drug acquisition costs, while its effect on administration and monitoring costs is minimal. Notably, there is no impact on hospitalization costs or adverse event management, as these expenses are consistent across all treatment options.

By the fifth year post-introduction, cumulative savings from the implementation of Filgotinib reach €548,258. This significant financial benefit primarily arises from the lower acquisition cost of Filgotinib, which does not incur administration expenses since it is an oral medication. In contrast, other treatments, which often require administration in healthcare settings, incur substantial costs. The analysis highlights that the economic implications of integrating Filgotinib into rheumatoid arthritis management strategies in Greece are largely favorable.

Additionally, a deterministic sensitivity analysis (DSA) was conducted as part of the budget impact analysis. This analysis assessed how changes in various parameters, such incident population, annual mortality rates, costs, probabilities of adverse events, and market shares of each treatment, affected the overall budget impact. The DSA results indicate that the market share of treatments in the scenario without Filgotinib and the time horizon are the most influential factors. Given that Filgotinib is generally less costly compared to most other available therapies, the DSA frequently shows a trend toward savings for the third-party payer.

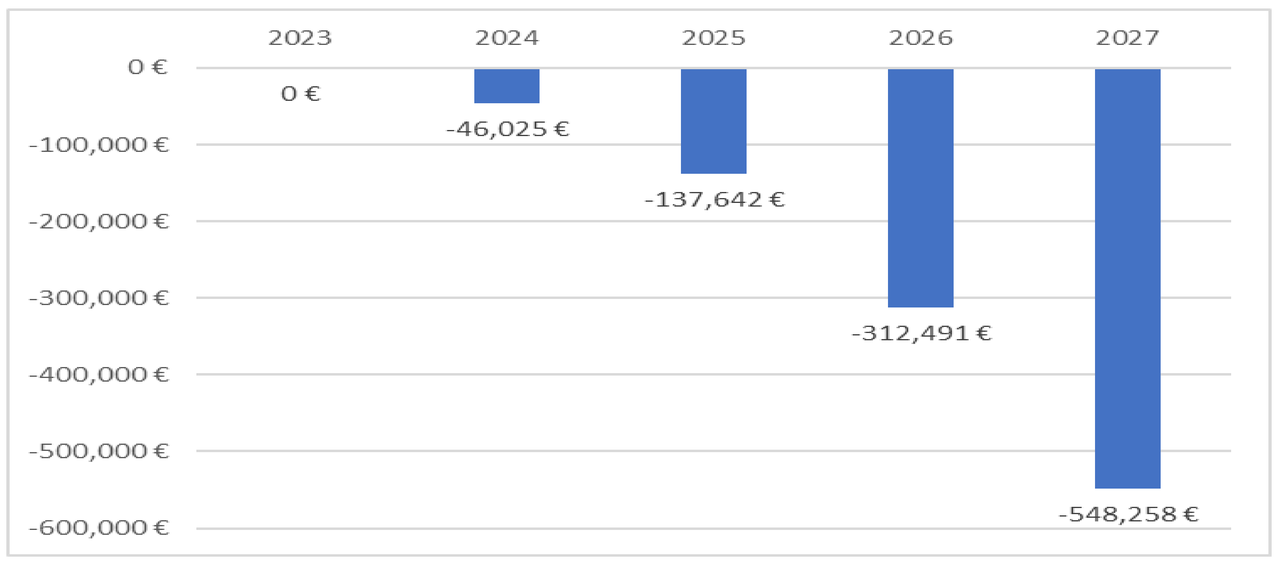
Table 2. Budget impact of introduction of Filgotinib in euros (€), per year

Scenario	2023	2024	2025	2026	2027
Without filgotinib	€ 172,650,535	€ 170,059,056	€ 167,416,155	€ 164,729,572	€ 161,988,022
With filgotinib	€ 172,650,535	€ 170,013,031	€ 167,324,538	€ 164,554,723	€ 161,752,255
Budget impact	**€ 0**	**-€ 46,025**	**-€ 91,617**	**-€ 174,849**	**-€ 235,767**

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

Scenario	2023	2024	2025	2026	2027
Without filgotinib	€ 172,650,535	€ 342,709,591	€ 510,125,746	€ 674,855,318	€ 836,843,340
With filgotinib	€ 172,650,535	€ 342,663,566	€ 509,988,104	€ 674,542,827	€ 836,295,082
Budget impact	**€ 0**	**-€ 46,025**	**-€ 137,642**	**-€ 312,491**	**-€ 548,258**

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



Conclusions

The introduction of Filgotinib offers significant potential for cost savings to third-party payers, primarily by reducing drug acquisition and administration expenses. This analysis reveals that cumulative savings exceed €548,258 by the fifth year post-introduction, highlighting the economic benefits of integrating Filgotinib into rheumatoid arthritis management strategies. While the first year shows no immediate impact as Filgotinib takes no market share, subsequent years demonstrate substantial savings as its utilization grows. The drug's oral administration further contributes to cost-effectiveness by eliminating the high administration costs associated with intravenous therapies. Overall, Filgotinib positions itself as a financially advantageous option within constrained healthcare systems, aligning with the objective of improving patient care while maintaining budgetary efficiency.

References
[1] Ministry of Health. Bulletin of revised prices of medicines for human use. Available at https://www.moh.gov.gr
[2] EOPYY (2024). Test reimbursement list. Available at https://www.eopyy.gov.gr/
[3] Government Gazette Issue A 74/19.05.2017

Funding: This study was financially supported by Swedish Orphan Biovitrum Ltd. (Sobi).
Disclosure statement: No authors have any conflicts of interest to disclose