Value contribution of filgotinib for the treatment of moderate to severe rheumatoid arthritis using Multi-Criteria Decision Analysis (MCDA)

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Introduction

- Rheumatoid arthritis (RA) is a chronic inflammatory disease that can lead to progressive disability, impaired quality of life and increased mortality compared with that of the general population.[1,2]
- The current therapeutic approach to RA is aimed at controlling inflammation, structural sequelae and comorbidities, and includes early treatment with disease-modifying anti-rheumatic drugs (DMARDs), which is a heterogeneous group of drugs.[3]
- Recent development and approval of biologic and synthetic drugs directed against specific targets have expanded the family of DMARDs, increasing the availability of therapeutic alternatives.[3]
- Filgotinib is a recently approved DMARD that belongs to the Janus kinase (JAK) inhibitor family and is indicated for the treatment of adults with moderate to severe RA.[4]
- Multi-Criteria Decision Analysis (MCDA) methodology has proven to be valuable in supporting healthcare decision-making through value assessment of new drugs compared with the alternatives currently used in clinical practice, allowing evaluations to go beyond the classic criteria of efficacy, safety and cost.[5]

Objective

- The aim of this study was to determine the **value contribution of filgotinib for the treatment of moderate to severe RA** in Spain, compared with two therapeutic alternatives and using MCDA methodology.

Methods

- The EVIDEM MCDA framework, previously used and validated in various studies regarding treatment value contribution assessment and its relevance in clinical decision-making in Spain, was selected.[6,7]
- A literature review was conducted to populate the framework, which comprised 12 quantitative and four contextual criteria (**Table 1**).
- A multidisciplinary panel of nine experts, including two rheumatologists, two hospital pharmacists, one advanced practice rheumatology nurse, three regional evaluators and one patient representative, determined the value contribution of filgotinib with respect to upadacitinib and baricitinib, two therapeutic alternatives from the JAK inhibitor family.
- Experts scored quantitative criteria on an ordinal scale, which was different for non-comparative criteria (scale ranged from 0 to +5) and for comparative criteria (scale ranged from -5 to +5). Contextual criteria were rated on a nominal scale with three options, whether filgotinib would have a negative, neutral or positive impact for the National Health System (NHS) on each criterion.
- Means and standard deviations (SDs) were calculated for quantitative criteria while contextual criteria were analyzed as percentages of experts that considered a positive, neutral or negative impact for the NHS. Global value contribution of filgotinib was calculated by adding up the value contribution of each individual quantitative criterion.

Table 1. Criteria from the EVIDEM MCDA framework used in the study

EVIDEM MCDA framework quantitative criteria
Domain: Impact of the disease
Disease severity
Size of affected population
Unmet needs
Domain: Comparative outcomes of the intervention
Comparative efficacy/effectiveness
Comparative safety/tolerability
Comparative patient-perceived health/patient-reported outcomes
Domain: Type of benefit of the intervention
Type of therapeutic benefit
Domain: Economic consequences of the intervention
Comparative cost-consequence: Cost of the intervention
Comparative cost-consequence: Other medical costs
Comparative cost-consequence: Non-medical costs/indirect costs
Domain: Knowledge about the intervention
Quality of evidence
Expert consensus/clinical practice guidelines
EVIDEM MCDA framework contextual criteria
Domain: Normative context
Population priorities and access
Common goal and specific interests
Domain: Feasibility
System capacity and appropriate use of the intervention
Opportunity costs and affordability

Results

MCDA quantitative criteria

- RA was considered a severe disease (mean±SD: 3.4±0.9) that has great impact on patients' quality of life and is associated with high mortality without early diagnosis and appropriate treatment. The size of the affected population was considered moderate (3.0±0.7) and the panel perceived that RA still presents moderate unmet needs (2.9±0.8), highlighting that only a limited percentage of patients achieve sustained clinical remission with currently available treatments.
- Experts considered that filgotinib might provide a marginal benefit in efficacy/effectiveness (1.5±1.3) and safety/tolerability (1.4±1.1), whereas minimal differences were found in patient-reported outcomes (PROs) (0.5±1.1).
- Therapeutic benefit provided by filgotinib was considered moderate to high (3.6±0.7), constituting an effective therapeutic alternative, with a good safety profile and positive results in PROs.
- Experts anticipated that filgotinib would present a similar, or slightly lower, cost to the average cost of current alternatives (1.7±1.1). The panel considered that no impact on other medical costs (0.1±0.3) and non-medical/indirect costs (0.1±0.3) should be expected with the introduction of filgotinib in the NHS.
- Evidence presented for filgotinib was considered robust (4.6±0.7), with high consensus among experts regarding its future recommendation in Spanish guidelines (2.4±1.1) as an additional therapeutic alternative for the treatment of RA.

- **Figure 1** shows the result of the global value contribution of filgotinib, which was 0.44 (scale ranged from -1 to +1).

MCDA contextual criteria

- Results of contextual criteria are shown in **Figure 2**.
- Most experts perceived that the introduction of filgotinib would present a positive impact on population priorities and access (89%), common goal and specific interests (67%) and system capacity and appropriate use (78%) criteria.
- Impact on opportunity costs and affordability was considered neutral (56%) or positive (44%) by the majority of experts.

Figure 1. Global value contribution of filgotinib

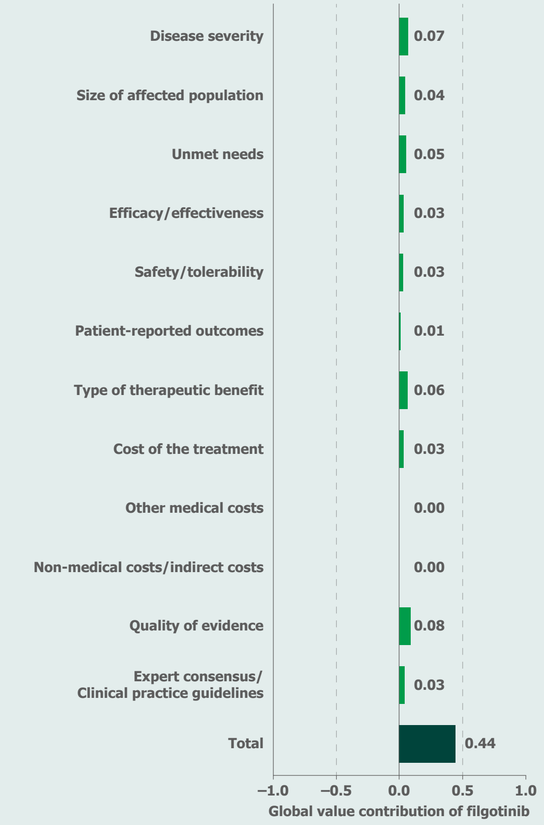
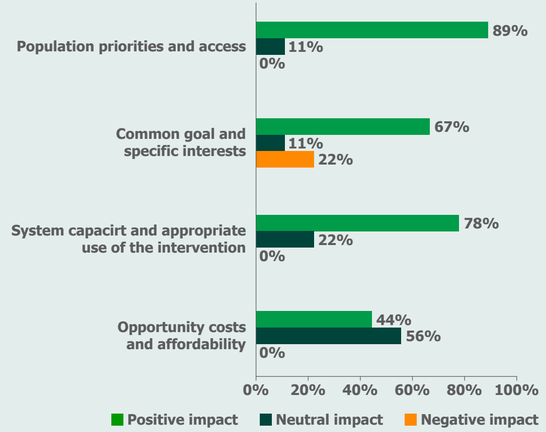


Figure 2. MCDA contextual criteria results



Conclusions

Filgotinib provides an added small value to moderate to severe RA management compared with two therapeutic alternatives, showing a good risk/benefit balance, and will constitute a new therapeutic alternative for patients with RA in Spain.

Disclosures

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