According to the recommendations of EULAR, the conventional synthetic DMARDs (csDMARDs), usually methotrexate, are the initial standard treatment for active peripheral psoriatic arthritis (PsA). When an inadequate response to at least one csDMARDs, therapy with a biological DMARD (bDMARDs), usually a TNF inhibitor, should be commenced.

Apremilast was recently approved for the treatment of active peripheral PsA. EULAR recommendations noted apremilast must be limited to patients who failed to reach their therapeutic target on csDMARDs and bDMARDs may not be appropriate.

A recently published study has evaluated the relative efficacy of adalimumab, apremilast and methotrexate in the treatment of methotrexate-naïve patients with PsA in the United States of America. To the best of our knowledge, the CPRs of these treatments have not been estimated in Spain. This research aims to compare the cost and the CPRs of adalimumab, apremilast and methotrexate in the treatment of methotrexate-naïve patients with PsA considering Spanish costs.

## METHODS

### EFFICACY

The efficacy of the treatments in terms of number needed to treat (NNT) for achieve a ≥20% improvement in American College of Rheumatology component scores (ACR20) was obtained from a Bayesian network meta-analysis of 3 phase 3 randomized controlled trials (RCT) previously published (Figure 1).

The time horizon was 16 weeks.

### COSTS

The official Spanish prices were considered to calculate the costs of the treatments (table 1). The cost of placebo was assumed to be zero.

Drug cost for 16 weeks were determined based on the dosing regimens of the RCT.

The drug annual costs were calculated based on the dosing regimens recommended in the summary of products characteristics.

The costs were calculated by multiplying the cost per unit dose with the total dose required.

### EFFICIENCY

The efficiency was assessed in terms of CPR. The CPR for each treatment was calculated by multiplying the incremental drug cost by the NNT.

### SENSITIVITY ANALYSIS

A sensitivity analysis was performed to evaluate the effect of the uncertainty to estimates of NNT on the CPR. This analysis was made building three scenarios: the base case (with central estimators) and the most and least favourable scenarios (with the 95% credible intervals).

#### RESULTS

Table 1. Drug cost (euros).

<table>
<thead>
<tr>
<th>Drug</th>
<th>How supplied</th>
<th>Price (euros)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adalimumab</td>
<td>2 prefilled pens, 40 mg</td>
<td>907.00</td>
</tr>
<tr>
<td>Apremilast</td>
<td>56 film-coated tablets, 30 mg</td>
<td>649.35</td>
</tr>
<tr>
<td>Apremilast</td>
<td>Film-coated tablets, 10/20/30 mg</td>
<td>313.08</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>24 tablets, 2.5 mg</td>
<td>1.46</td>
</tr>
</tbody>
</table>

*Laboratory sale price plus 4% VAT minus the 7.5% obligatory reduction.

Considering the official Spanish prices and the dosing regimens recommended in the summary of products characteristics, the annual costs are 11,791 € for adalimumab, 8,430 € for apremilast, and 9.5-19 € for methotrexate.

In clinical practice, these costs may be different because of price changes and changes in the dosing regimens used.

## CONCLUSIONS

Among methotrexate-naïve PsA patients, adalimumab is associated with the lowest NNT to achieve ACR20 response compared with methotrexate and apremilast.

According the official Spanish prices, the most efficient treatment (in terms of incremental cost per ACR20 responder) was methotrexate because of its low price, followed by apremilast.

The results provide knowledge that may help in the decision making process of health professionals.

## REFERENCES

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