Cost-Per-Responder Analysis of Ritlecitinib Versus Baricitinib in Severe Alopecia Areata: A Spanish Healthcare Perspective

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BACKGROUND & OBJECTIVE

BACKGROUND

- Alopecia areata (AA) is a chronic immune-mediated disease characterized by patchy or complete nonscarring hair loss on the scalp, with or without additional loss of facial and/or body hair[1].
- In Spain, two JAK alternatives are publicly reimbursed for the treatment of severe AA: ritlecitinib, a JAK3/TEC family kinase inhibitor, and baricitinib, a JAK1/2 inhibitor[2,3].
- With multiple treatment options available, comparative economic evidence is increasingly relevant to inform treatment selection and healthcare decision-making.
- Cost per responder (CPR) assesses treatment cost-efficiency by estimating the cost associated with achieving one treatment responder[4].

OBJECTIVE

- To compare the 52-week CPR of ritlecitinib versus baricitinib in patients with severe AA from the Spanish National Health System perspective.

METHODS

Model

- A deterministic decision-tree model was developed from the Spanish National Health System perspective over a 52-week time horizon.

Comparators

- The base case compared ritlecitinib 50 mg once daily with baricitinib 4 mg once daily.

Treatment response

- Short-term response was defined as a ≥30% relative improvement from baseline in Severity of Alopecia Tool (SALT) score (SALT Δ≥30%) at Week 24, and long-term response as SALT ≤20 at Week 52. Patients not achieving the predefined response criterion were assumed to discontinue treatment.

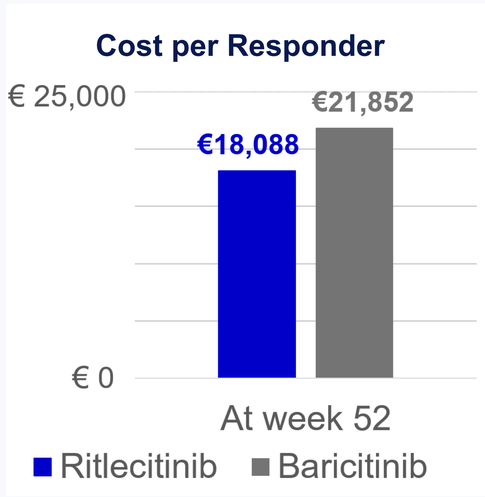
Model inputs

- Clinical response probabilities were derived from ALLEGRO-2b/3 for ritlecitinib[5] and BRAVE-AA1/BRAVE-AA2 for baricitinib[6,7]. Week 48 efficacy for ritlecitinib was assumed to remain unchanged at Week 52. Drug acquisition costs were obtained from local Spanish pricing sources (€, 2026)[8]. List prices were €448.15 for ritlecitinib 50 mg and €451.09 for baricitinib 2 mg and 4 mg.

Analyses

- Outcomes included the proportion of patients achieving clinical response, drug acquisition costs per patient, and CPR. An alternative baricitinib dosing scenario and a two-way deterministic price-discount sensitivity analysis were conducted.

RESULTS



Clinical and economic outcomes

Outcome	Ritlecitinib 50 mg	Baricitinib 4 mg	Difference (Ritlecitinib – Baricitinib)
Response rate at Week 24 (SALT Δ ≥30%)	**52.10%**	46.80%	**+ 5.30%**
Week 52 SALT ≤20 among Week 24 responders	**77.27%**	65.45%	**+11.82%**
Overall response at Week 52 (SALT ≤20)	**40.26%**	30.63%	**+ 9.60%**
Total drug costs at Week 52 (per patient)	**€ 7,282**	€ 6,692	**+ € 590**
Cost per responder at Week 52	**€ 18,088**	€ 21,852	**− € 3,764**

A higher proportion of patients treated with ritlecitinib 50mg achieved clinical response at week 24 and week 52. Ritlecitinib 50 mg was associated with a € 3,764 lower CPR at Week 52

A. ALTERNATIVE BARICITINIB DOSING SCENARIO ANALYSIS

- The initial distribution of baricitinib treatment was 12.70% for the 2 mg dose and 87.30% for the 4 mg dose[9].
- Clinical response of patients receiving baricitinib 2mg was assessed in the short term at Week 18 to align with mean time to dose up-titration in a real-world analysis[10]. Week 18 non-responders were assumed to up-titrate to 4 mg and were subsequently assessed at Week 36 using SALT≤20; Week 36 responders were assumed to maintain response through Week 52.
- Response probabilities at interim timepoints were estimated from published baricitinib response trajectories based on the timing of first SALT Δ ≥30% achievement[11].
- At week 52, ritlecitinib achieved higher response rates (40.26% vs. 33.90%) at a higher drug cost than baricitinib (€ 7,282 vs. € 6,874), resulting in a lower cost per responder (€ 18,088 vs € 20;278).

Ritlecitinib 50 mg was associated with a € 2,189 lower CPR at Week 52

B. PRICE SENSITIVITY ANALYSIS (Two-way price sensitivity analysis)

- To account for potential differences between reported list prices and effective acquisition prices in Spain, a two-way deterministic sensitivity analysis applied independent discounts to the reported list prices acquisition of both treatments, holding all other inputs constant.
- Week 52 CPR differences (ritlecitinib − baricitinib) were recalculated for each discount combination.
- Negative values favored ritlecitinib in terms of CPR and positive values favored baricitinib.

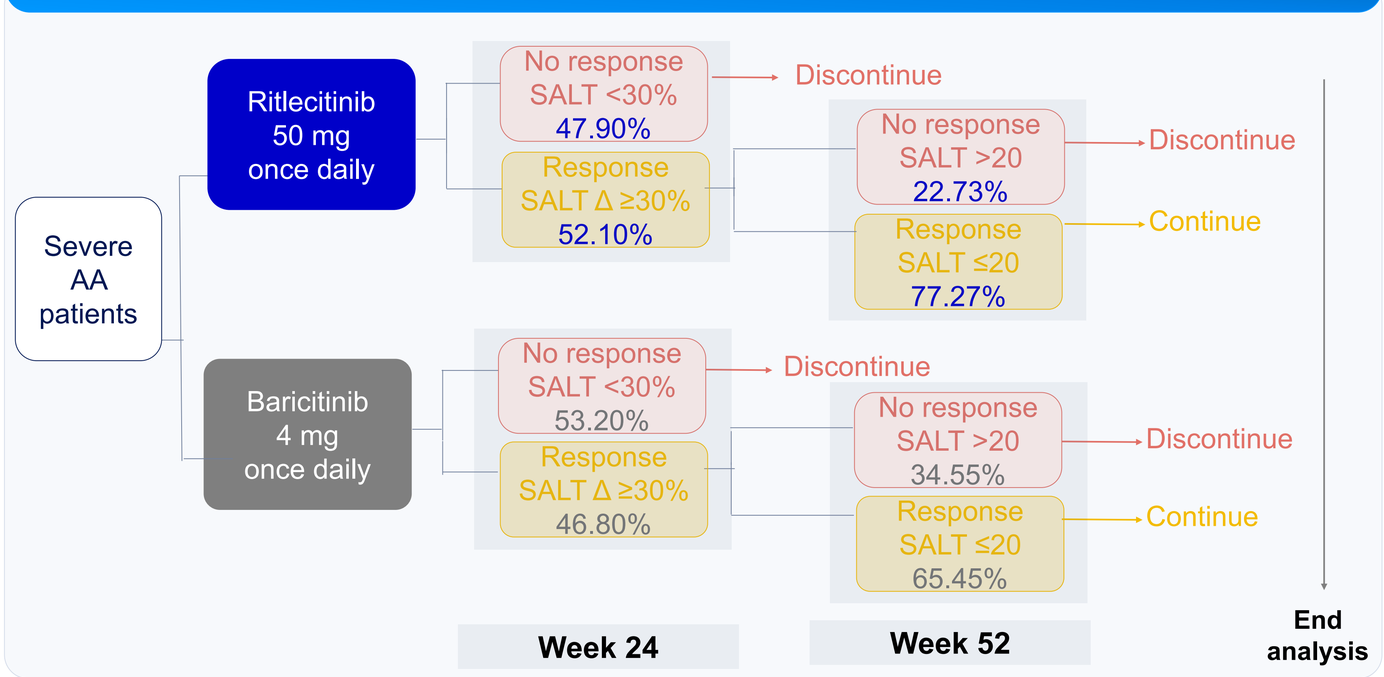
Two-way sensitivity analysis of treatment discounts on cost per responder

Ritlecitinib discount \ Bariticinib discount	0%	10%	20%	30%	35%	40%	50%	60%	70%
0%	€ -3,764	€ -1,578	€ 607	€ 2,792	€ 3,885	€ 4,977	€ 7,162	€ 9,348	€ 11,533
10%	€ -5,572	€ -3,387	€ -1,202	€ 983	€ 2,076	€ 3,168	€ 5,354	€ 7,539	€ 8,931
20%	€ -7,381	€ -5,196	€ -3,011	€ -826	€ 267	€ 1,360	€ 3,545	€ 5,730	€ 7,915
30%	€ -9,190	€ -7,005	€ -4,820	€ -2,635	€ -1,542	€ -449	€ 1,736	€ 3,921	€ 6,106 €
35%	€ -10,095	€ -7,909	€ -5,724	€ -3,539	€ -2,446	€ -1,354	€ 831	€ 3,017	€ 5,202
40%	€ -10,999	€ -8,814	€ -6,629	€ -4,443	€ -3,351	€ -2,258	€ -73	€ 2,112	€ 4,297
50%	€ -12,808	€ -10,623	€ -8,437	€ -6,252	€ -5,160	€ -4,067	€ -1,882	€ 303	€ 2,489
60%	€ -14,617	€ -12,431	€ -10,246	€ -8,061	€ -6,968	€ -5,876	€ -3691	€ -1,505	€ 680
70%	€ -16,426	€ -14,240	€ -12,055	€ -9,870	€ -8,777	€ -7,685	€ -5,499	€ -3,314	€ -1,129

Favors ritlecitinib — 0 — Favors baricitinib

Ritlecitinib had a lower CPR unless the discount for baricitinib was more than 15 percentage points higher than that for ritlecitinib

DECISION TREE OVERVIEW



LIMITATIONS

- Results may be sensitive to response assessment and discontinuation timepoints, which may vary in clinical practice.
- The model considered drug acquisition costs, excluding other healthcare resource use.
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- The alternative baricitinib dosing scenario incorporated assumptions regarding treatment initiation, dose escalation, and subsequent response.

CONCLUSIONS

- Ritlecitinib 50 mg was associated with a lower Week 52 CPR than baricitinib 4 mg
- Across the base case, alternative baricitinib dosing scenario, and two-way treatment price sensitivity analysis, ritlecitinib demonstrated favorable economic value versus baricitinib, supporting evidence-based decision-making in the Spanish setting.

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OUTCOMES 10 A PRODUCTLIFEGROUP COMPANY

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