A Cost-Effectiveness Analysis of 1.5% Ruxolitinib Cream Compared With Systemic Treatments for Adult Patients With Moderate Atopic Dermatitis in Germany

EE426

Institute for Policy Evaluation

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INTRODUCTION

Atopic dermatitis (AD) is a chronic, relapsing inflammatory skin disease. Adults with moderate AD may experience substantial pruritus, sleep disturbance, and psychosocial burden[1]. When topical corticosteroids or calcineurin inhibitors provide inadequate control, escalation to systemic therapy may increase treatment burden, systemic exposure, and monitoring requirements[2]. An effective topical alternative could therefore address an important gap between insufficient topical control and systemic escalation.

OBJECTIVE

To evaluate the cost-effectiveness of 1.5% ruxolitinib cream versus systemic therapies and best supportive care (BSC) for adults with moderate AD in Germany, from the statutory health insurance (SHI) perspective.

METHOD

We combined a short-term decision tree with a lifetime Markov model (61-year time horizon):

- Mean baseline characteristics: age 39 years, 45.6% male, body weight 78.15 kg, BSA affected 14.98%.
- Response was defined as a ≥75% improvement in the Eczema Area and Severity Index (EASI), assessed at week 8 for ruxolitinib cream and at week 16 for BSC and systemic therapies [3,4].
- Responders remained on initial treatment until discontinuation; non-responders and discontinuers entered a utilization-weighted basket of active subsequent therapies[5].
- Comparators included conventional immunosuppressants, biologics, oral Janus kinase (JAK) inhibitors, and BSC[2].
- Inputs were informed by the TRuE-AD4 phase 3b trial, network meta-analyses, real-world evidence, and published literature[6].
- Costs of therapy, concomitant medication, healthcare resource use, and adverse events were derived from German list prices and the statutory fee schedule[6,7,8].
- Utilities for the health states were based on EQ-5D values while efficacy was informed by direct evidence from the TRuE-AD4[9].
- Direct medical costs in 2026 Euros and quality-adjusted life years (QALYs) were discounted at 3% annually[10].
- Uncertainty was assessed through one-way, probabilistic, and scenario analyses.

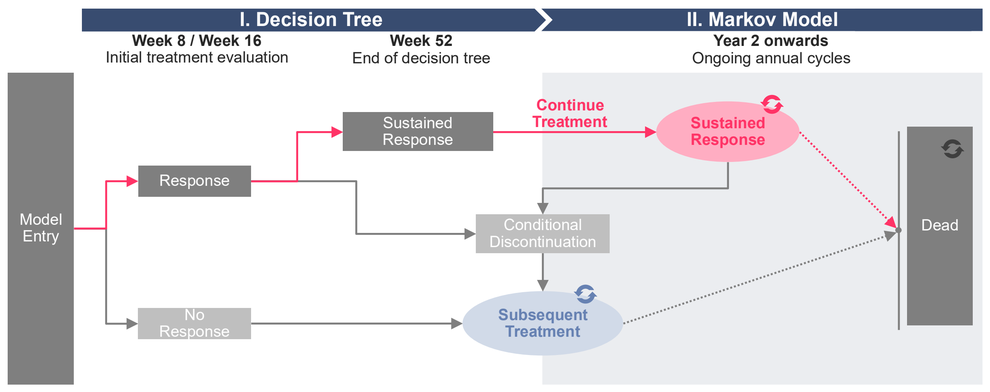


Figure 1: Illustration of the model structure

RESULTS

Ruxolitinib cream generated the lowest discounted lifetime costs (€296,000) and the highest QALYs (21.27) hence dominating all eight comparators, with savings of €49,000–€92,000 and QALY gains of 0.11–0.16. At €40,000/QALY, ruxolitinib cream had the highest NMB in 99.0% of iterations. Pairwise probabilities of dominance ranged from 95.5% to 96.9%; simultaneous dominance occurred in 92.9% of probabilistic sensitivity analysis (PSA) iterations. BSC still generated high lifetime costs because non-responders entered the costly subsequent-treatment pathway earlier and more frequently.

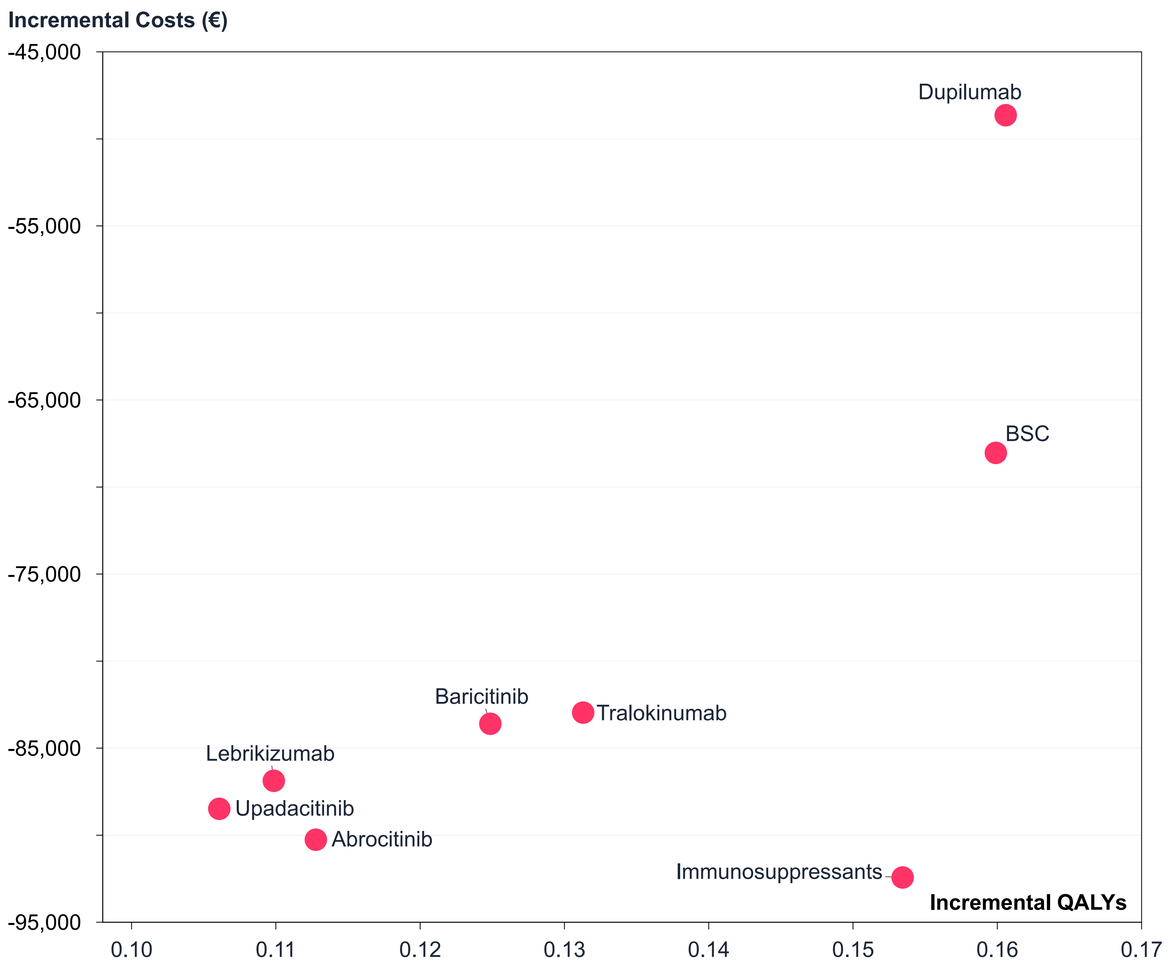


Figure 2: Cost-effectiveness plane for ruxolitinib cream versus comparators. Incremental values represent ruxolitinib cream minus comparator.

In the base case the net monetary benefit (NMB) was €55,000 versus dupilumab. For all comparators, results remained cost-effective across all one-way sensitivity ranges. Ruxolitinib cream also remained dominant across all prespecified scenarios, including equalized discontinuation rates, response assessment at week 16 instead of week 8, and concomitant TCS use with systemic comparators and BSC. The principal drivers were response, discontinuation, and long-term ruxolitinib cream use. Tornado diagrams for all comparators and supplementary information are available via the QR code.

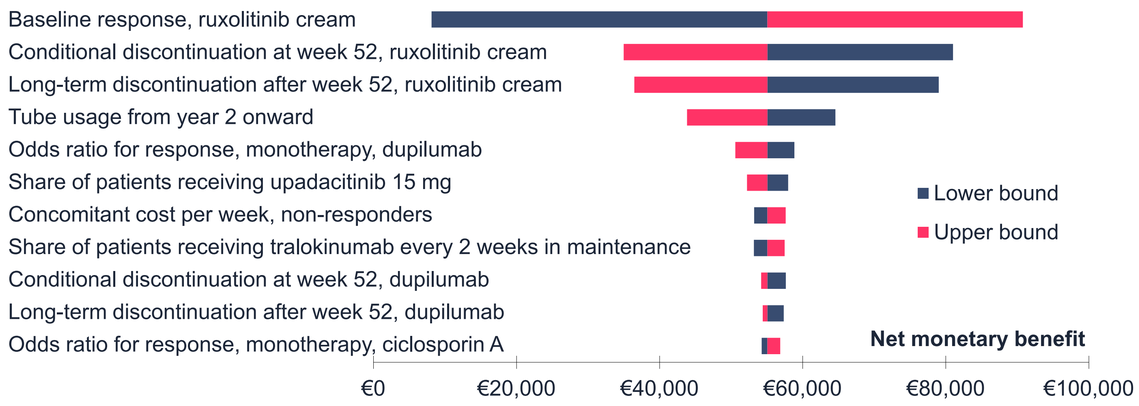


Figure 3: Tornado diagram of NMB for ruxolitinib cream versus dupilumab; parameters ranked by influence on NMB

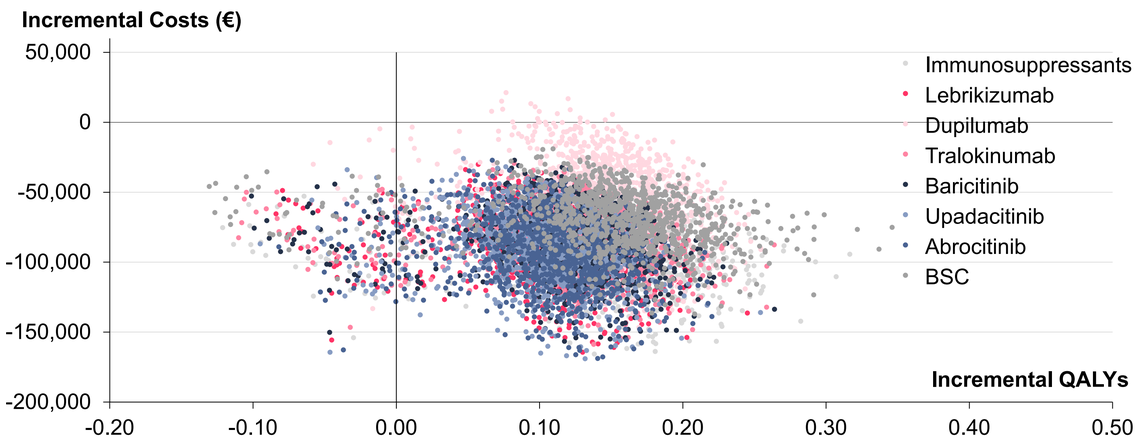


Figure 4: PSA Scatter

CONCLUSIONS

From the German SHI perspective, 1.5% ruxolitinib cream dominated all evaluated comparators for adults with moderate AD, yielding greater QALYs at lower lifetime costs. These findings support its consideration as a cost-effective topical alternative to systemic escalation.

Supplementary Data

Scan the QR-Code for supplementary information.

REFERENCES

1. Guttman-Yassky E, Renert-Yuval Y, Brunner PM. Atopic dermatitis. Lancet. 2025;405:583–596. doi:10.1016/S0140-6736(24)02519-4.
2. Werfel T, Heratizadeh A, Aberer W, et al. S3-Leitlinie Atopische Dermatitis (AD). AWMF Register No. 013-027; 7. 2023.
3. Carrascosa JM, Prajapati VH, Hong HC, et al. Ruxolitinib cream in adults with moderate atopic dermatitis after failure of other topicals: a randomized trial. J Eur Acad Dermatol Venereol. 2026;00:1–13. doi:10.1111/jdv.70595.
4. Incyte Biosciences International Sàrl. Network Meta-Analysis of Randomized Controlled Trials Evaluating Ruxolitinib Cream 1.5% Versus Systemic Therapies in Patients With Moderate Atopic Dermatitis: Results for EASI-75 Based on the March 2026 Systematic Literature Review Update. Data on file. 2026.
5. Kraska R, Kortendick K, Wintersohl K, Flume M. Systemic therapy of atopic dermatitis in Germany: real-world data on care structures and economic implications in a retrospective longitudinal study. Value Health. 2024;27(Suppl):S179. doi:10.1016/j.jval.2024.10.908.
6. Wissenschaftliches Institut der AOK. PharMaAnalyst. Accessed April 4, 2026. https://arzneimittel.wido.de/PharMaAnalyst
Bundesinstitut für Arzneimittel und Medizinprodukte (BfArM). Festbeträge für Arzneimittel. Accessed May 23, 2026. https://www.bfarm.de/DE/Arzneimittel/Arzneimittelinformationen/ Festbetraege-und-Zuzahlungen/Festbetraege/_node.html
8. Kassenärztliche Bundesvereinigung. Einheitlicher Bewertungsmaßstab (EBM), 2026 Q1. Accessed January 29, 2026. https://www.kbv.de/praxis/abrechnung/ebm
9. Ludwig K, Graf von der Schulenburg JM, Greiner W. German value set for the EQ-5D-5L. Pharmacoeconomics. 2018;36:663–674. doi:10.1007/s40273-018-0615-8.
10. Schild M, Weber V, Thaçi D, et al. Treatment patterns and healthcare resource utilization among patients with atopic dermatitis: A retrospective cohort study using German health claims data. Dermatol Ther (Heidelb). 2022;12:1925–1945. doi:10.1007/s13555-022-00773-3.

DISCLOSURES

This study was funded by Incyte Biosciences Germany GmbH. IPE received funding from Incyte to conduct the study; YZ served as an external consultant to IPE.

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