

Cost-effectiveness and value matrix in a structured model for the provision of immunobiologic therapies in dermatology: a real-world analysis

F.F. Munari¹, M.C. do Amaral², L.L.R.J. de Paula¹, M. Campos¹, M.F. de Paula¹, D. Johann², I.A. Costa², C.D. Fleith², F.R.C. Fagundes¹, S. Floriani²

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Introduction

The management of chronic inflammatory skin diseases, such as psoriasis and atopic dermatitis, has been revolutionized by the introduction of immunobiologic therapies. While these treatments offer significant clinical improvements, their high acquisition costs and the growing variety of therapeutic classes—including anti-IL agents and JAK inhibitors—pose substantial challenges for healthcare sustainability and resource allocation. In the transition toward Value-Based Healthcare, it is no longer sufficient to measure clinical efficacy in isolation. A value lens requires a simultaneous evaluation of clinical outcomes, patient-centered metrics, and the total cost of care delivery.

Objective

To evaluate the cost-effectiveness performance and value distribution of immunobiological therapies used in a structured model for dermatological care using a real-world value matrix approach.

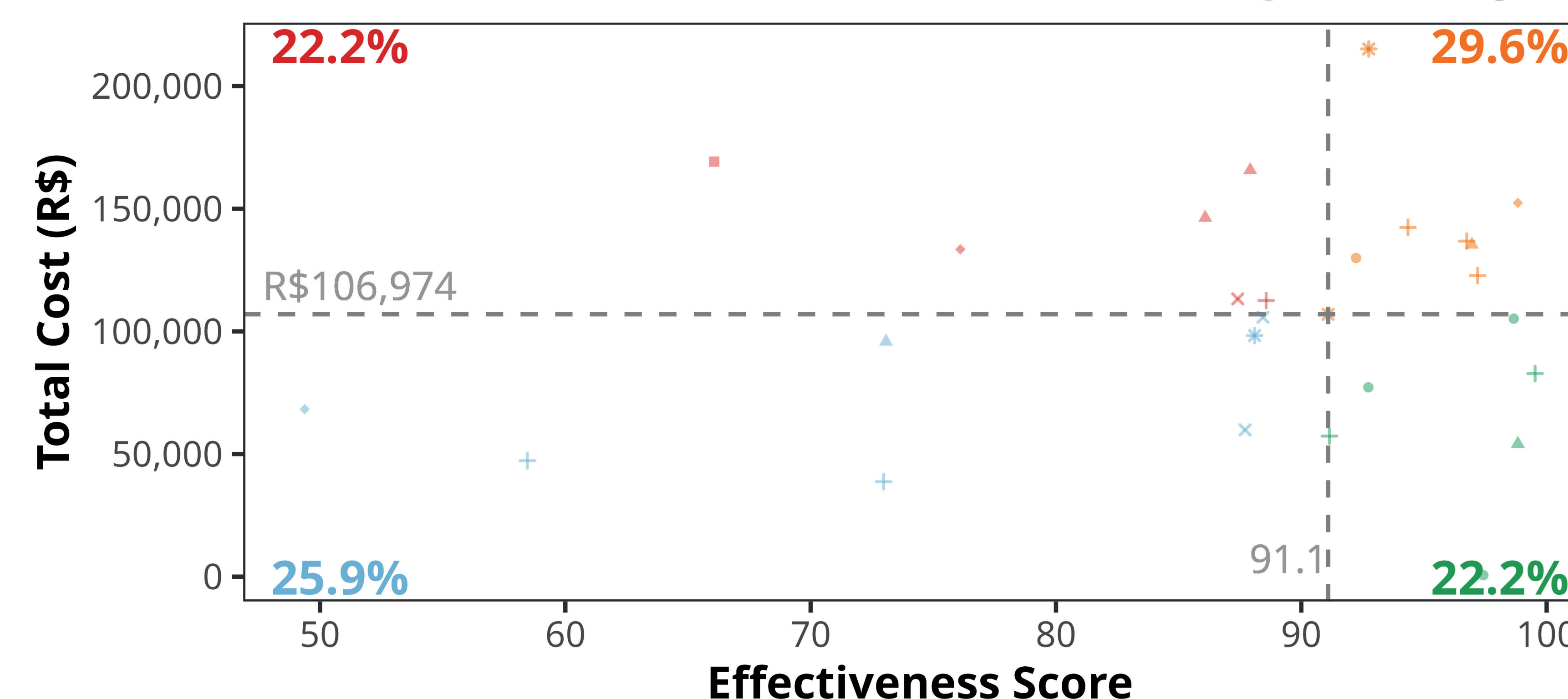
Methods

An observational analysis was conducted including 27 patients with psoriasis or atopic dermatitis receiving immunobiologic therapies, followed between January 2024 and April 2025. Effectiveness was measured using a composite score of clinical and patient-centered outcomes, and costs were estimated based on the care delivery components of the model. Treatments were positioned in a value matrix according to total cost and effectiveness, and a comparative performance ranking was constructed.

Results

The model showed a mean effectiveness score of 86.99 points, with a mean total cost per patient of BRL 106,421.72 and a mean performance score of 0.53. Substantial heterogeneity was observed across immunobiologic therapies. In terms of mean effectiveness, COSENTYX (95.5), STELARA (90.4), and TALTZ (88.7) showed the highest scores, whereas OLMANT had the lowest effectiveness (66.1). Mean costs ranged from BRL 58,036.78 (COSENTYX) to BRL 167,204.78 (OLMANT). The value matrix analysis showed that some therapies combined higher effectiveness with lower relative costs, whereas others were associated with higher costs without proportional effectiveness gains. By therapeutic class, anti-IL therapies showed higher mean effectiveness (87.8) compared with JAK inhibitors (66.1).

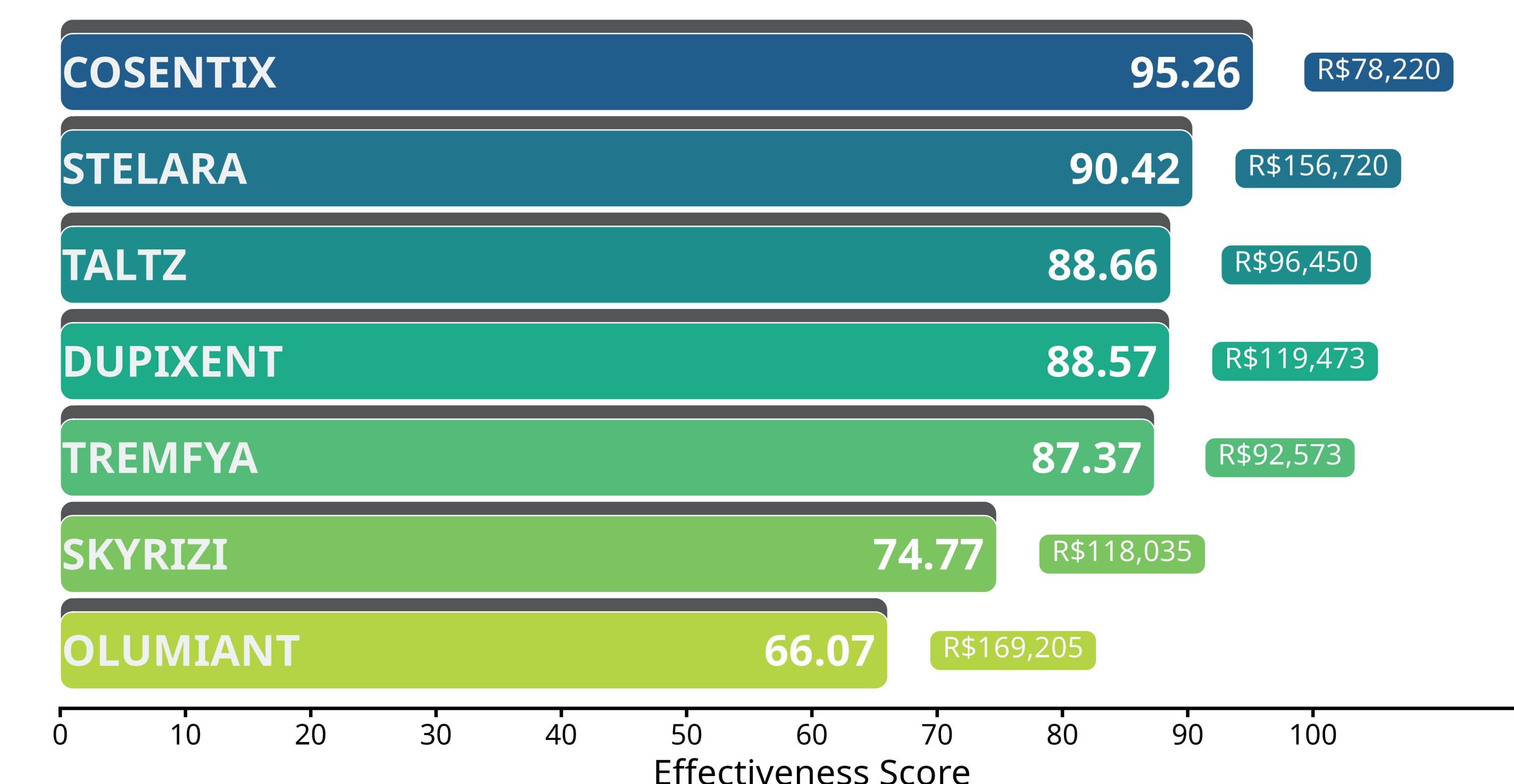
Cost vs. Effectiveness of immunobiologic therapies



Immunobiologic therapy

- COSENTYX
- ▲ DUPIXENT
- OLUMIANT
- ◆ SKYRIZI
- ✱ STELARA
- ✕ TALTZ
- +

Effectiveness and Mean Cost of Immunobiologic Therapies



Conclusions

Although this structured model for the provision of immunobiologic therapies in dermatology shows good overall mean effectiveness, the cost-effectiveness analysis and the value matrix revealed substantial heterogeneity among available therapies, with coexistence of options with better cost-effectiveness performance and others associated with higher costs without proportional clinical benefit. These findings indicate that healthcare value can be increased without additional budget impact by adopting real-world data-informed therapeutic choices, implementing explicit value-based criteria in decision-making, and strengthening clinical governance mechanisms based on comparative performance.

Contact information:

Felipe Ribeiro Cabral Fagundes: felipe.fagundes@saudehi.com

¹Research and Data Science Division, Hi! Healthcare Intelligence, São José dos Campos/SP, Brazil.

²Unimed, Santa Catarina, Brazil.

