

OSTEOPOROSIS TREATMENT RANKING IN POSTMENOPAUSAL WOMEN AT HIGH RISK OF FRACTURE IN BRAZIL: MCDA APPROACH

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OBJECTIVES

Osteoporosis is detrimental to a patient's quality of life causing high mortality and financial burden on health systems. Therapeutic alternatives available in Brazil include romosozumab and teriparatide for postmenopausal women at high risk of fracture. This study aimed to **rank these treatments using a multi-criteria decision analysis (MCDA) approach to identify the best treatment considering the therapeutic options.**

METHODS

A literature review was conducted to develop a performance matrix for romosozumab and teriparatide. **The MCDA TOPSIS method was applied to create a treatment ranking and to identify the best option considering the preferences (elicited in a previously MCDA panel) of three groups of stakeholders:** medical specialists (two rheumatologists and one gynecologist), representatives of patient associations and healthcare managers in public system. The result from MCDA TOPSIS for each treatment determine the relative proximity of an alternative to the optimal solution. (Figure 1)

RESULTS

The final criteria set included: *clinically relevant adverse events, tolerability, new vertebral and non-vertebral fractures, bone mineral density, dosage convenience, incremental cost-effectiveness ratio, cost per responder and budget impact.* MCDA TOPSIS method showed that **romosozumab was the alternative with the highest score (relative proximity).** For the medical specialist group, the score of romosozumab was 0.79, while teriparatide reached 0.21. For the group of representatives from patient associations, the results were 0.83 and 0.17, respectively. For the healthcare managers group they were 0.91 and 0.09, respectively. (Figure 2)

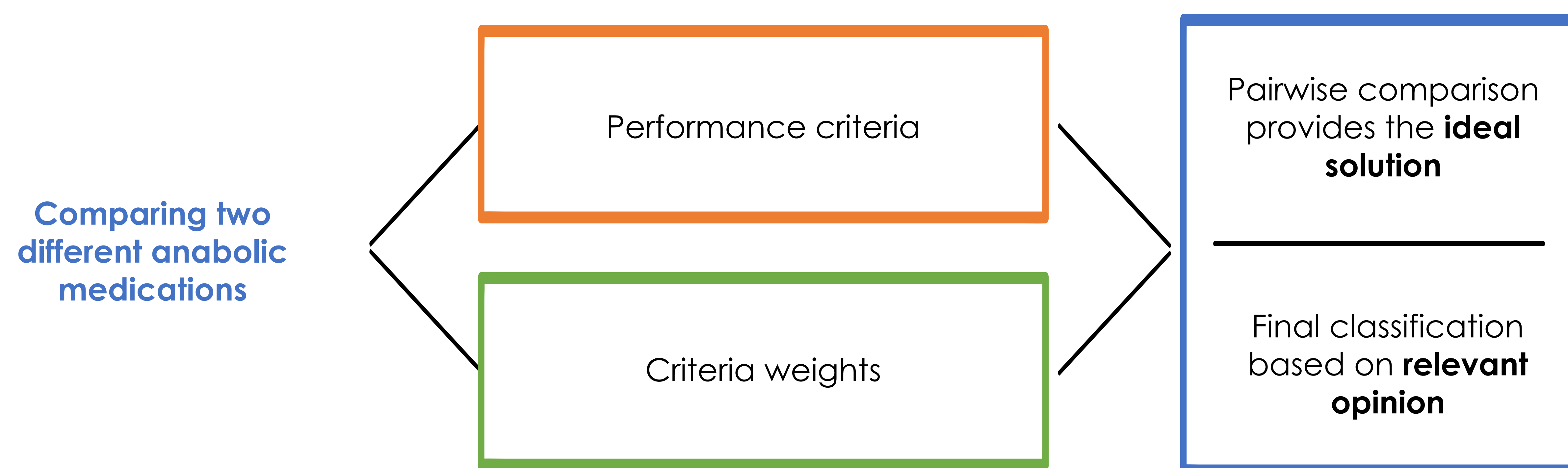


Figure 1: MCDA TOPSIS method

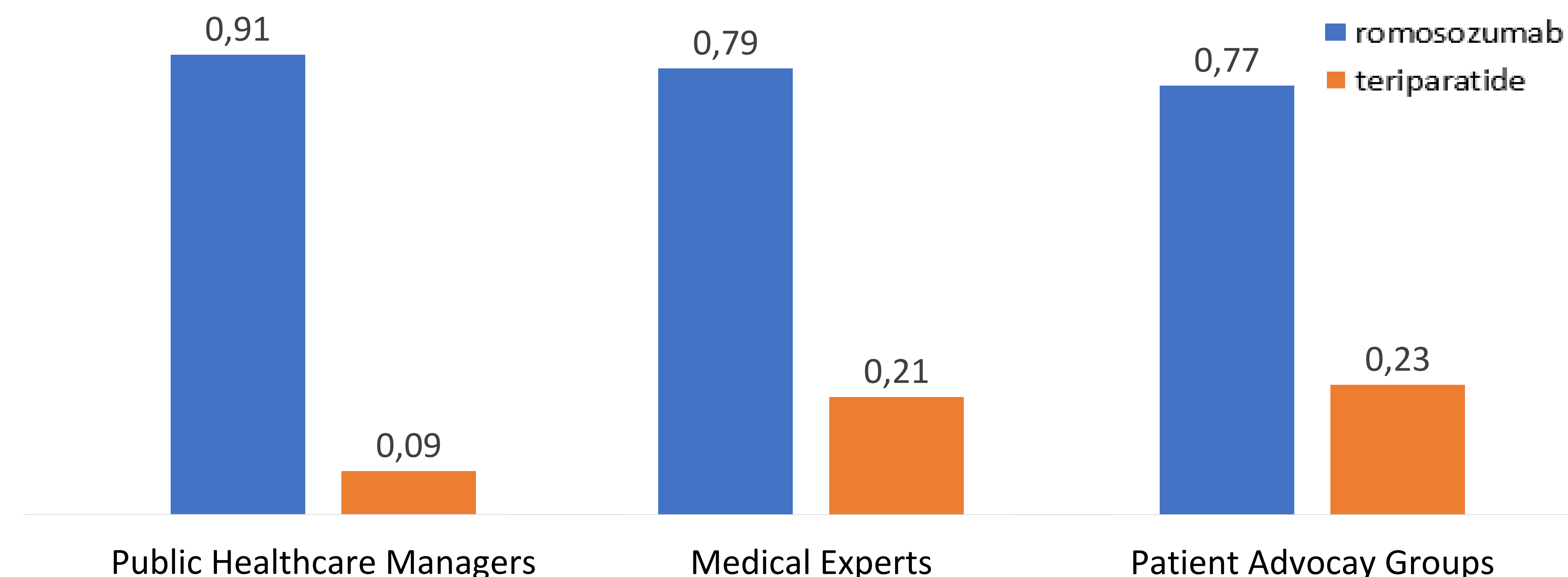


Figure 2: Performance analysis results

CONFLICTS OF INTEREST

Mensor L.L., and Marchesan T. are Amgen employees. Rosim M.P. was an Amgen employee when the poster was written. Murta L. was contracted by Amgen to conduct the MCDA panel.

CONCLUSIONS

Even though treatment preferences vary between groups, our results showed that **romosozumab had the highest score (relative proximity) for all stakeholder groups**, considering preferences and the performance matrix evidence for both treatments.

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