

# Economic Evaluation and Budget Impact of RVd as Induction Regimen Prior to ASCT in Patients with Newly Diagnosed Multiple Myeloma from the Perspective of the Public Health Sector in México.

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## INTRODUCTION

- MM is an incurable hematological cancer of plasma cells that has a relapsing course characterized by regrowth of residual tumor, immune suppression and is associated with significant morbidity and mortality.<sup>1</sup>
- Is the second most common type of blood cancer representing ~14% of all hematological malignancies<sup>2</sup>
- In Mexico the incidence is 2.8 per 100,000 per year<sup>4,10</sup> and 33% are eligible to ASCT.<sup>5</sup>
- RVd as induction regimen is the current mainstay of myeloma therapy who are transplant eligible. This is based on improved response rates, depth of response, PFS and OS.<sup>3,6</sup>
- 4-drug regimens – DVTd also is consider a primary therapy option but under the category “useful in certain circumstances”.<sup>6,7</sup>
- The majority of patients with MM experience numerous relapses of their disease, therefore the economic burden is considerably high for Public Health.<sup>8,9</sup>

## OBJECTIVES

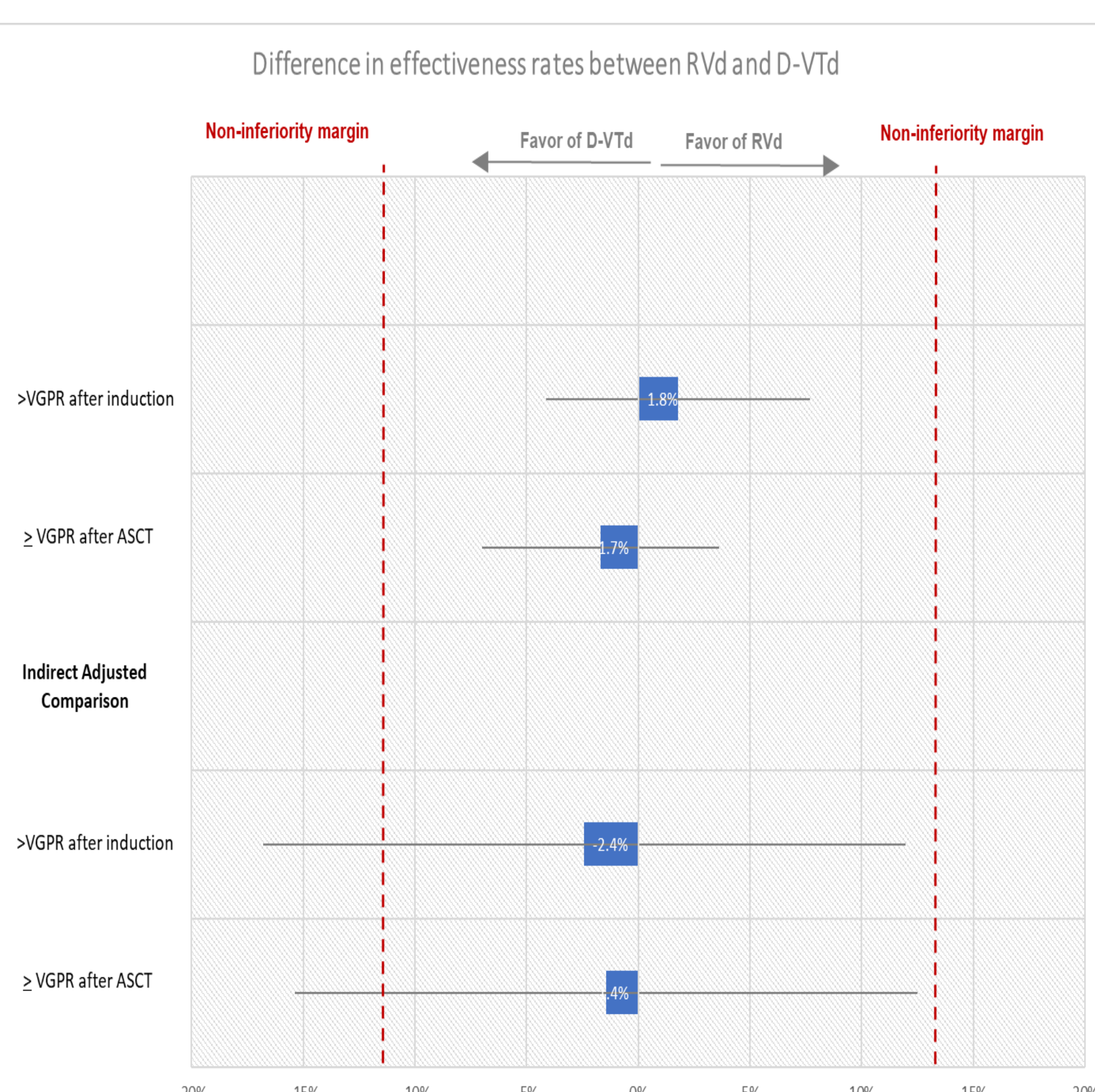
1. Compare the costs and effectiveness of RVd (lenalidomide, bortezomib and dexamethasone) and D-VTd (daratumumab, bortezomib, thalidomide and dexamethasone) as induction regimen prior to autologous stem cell transplantation (ASCT).

2. Estimate the budget impact associated with the use of RVd in this indication, from the perspective of the public health sector in Mexico

## METHODS

- Cost minimization evaluating very good partial or superior response ( $\geq$ VGPR) was performed.
- This measure of effectiveness is associated with long-term outcomes and is valuable in the clinical setting for therapeutic decision-making.<sup>11</sup>
- An adjusted indirect comparison was performed using the mini Meta tool of the freely available R software.

Figure 1. Difference in effectiveness rates between RVd and DVTd



## RESULTS

- A total of 657 patients were analyzed. The difference in the rates of patients with  $\geq$ VGPR between RVd and D-VTd was found to be very small (0.1%) and not statistically significant.
- The cost per patient was 49.5% lower with RVd vs. D-VTd regimen (\$540,609 vs. \$1,029,985 MXN).
- The difference is mainly due to savings in acquisition costs, the amount of which was calculated at almost \$450,000 MXN per patient in favour of the use of RVd.
- The budget impact analysis showed net savings in favour of RVd for \$18.35 million MXN in the first year (41 patients) and \$285.5 million MXN accumulatively from 2022 to 2026 (631 patients).
- DSA was not showing any changes in our study.

Figure 2. Yearly expense per patient RVd and DVTd

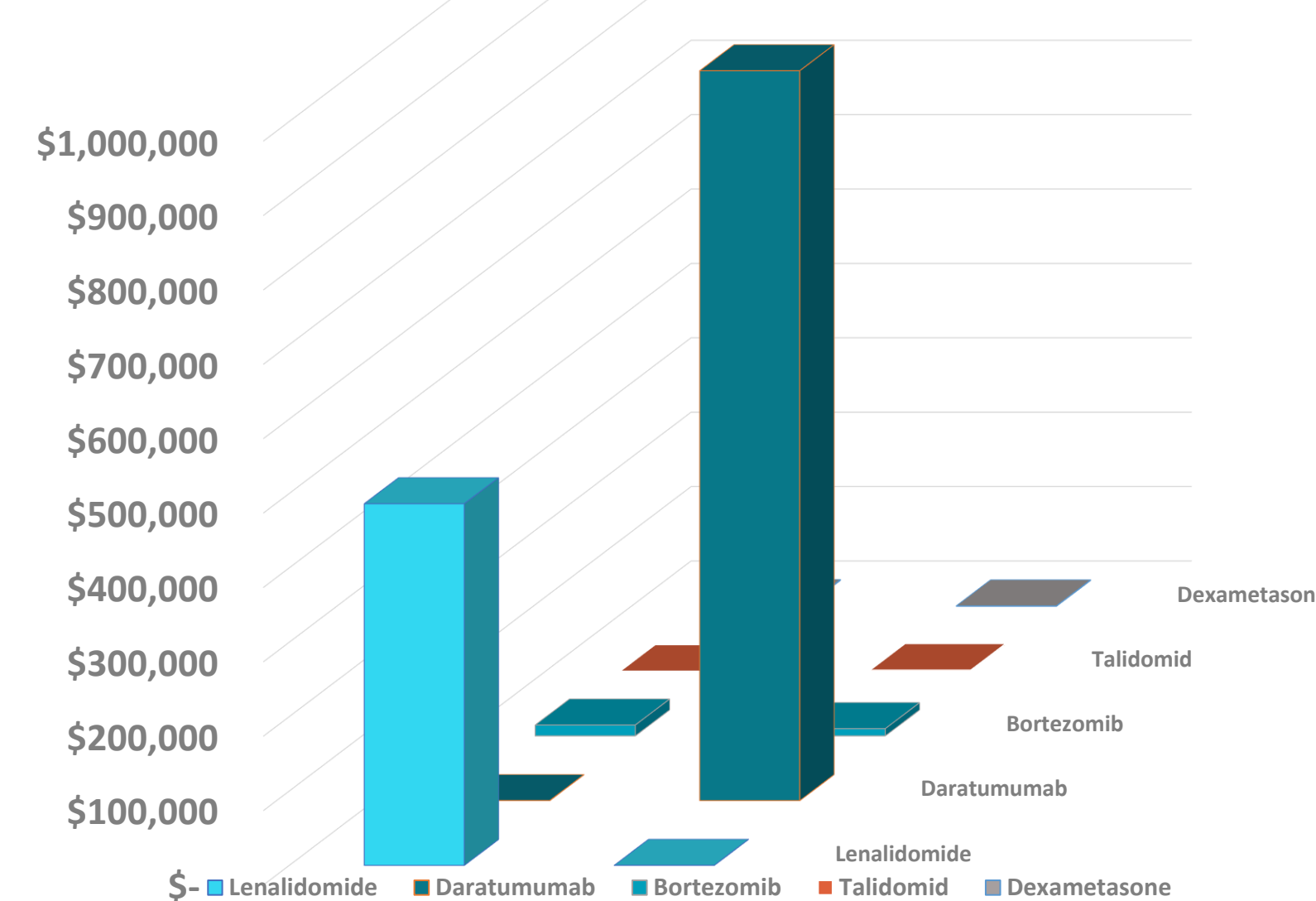
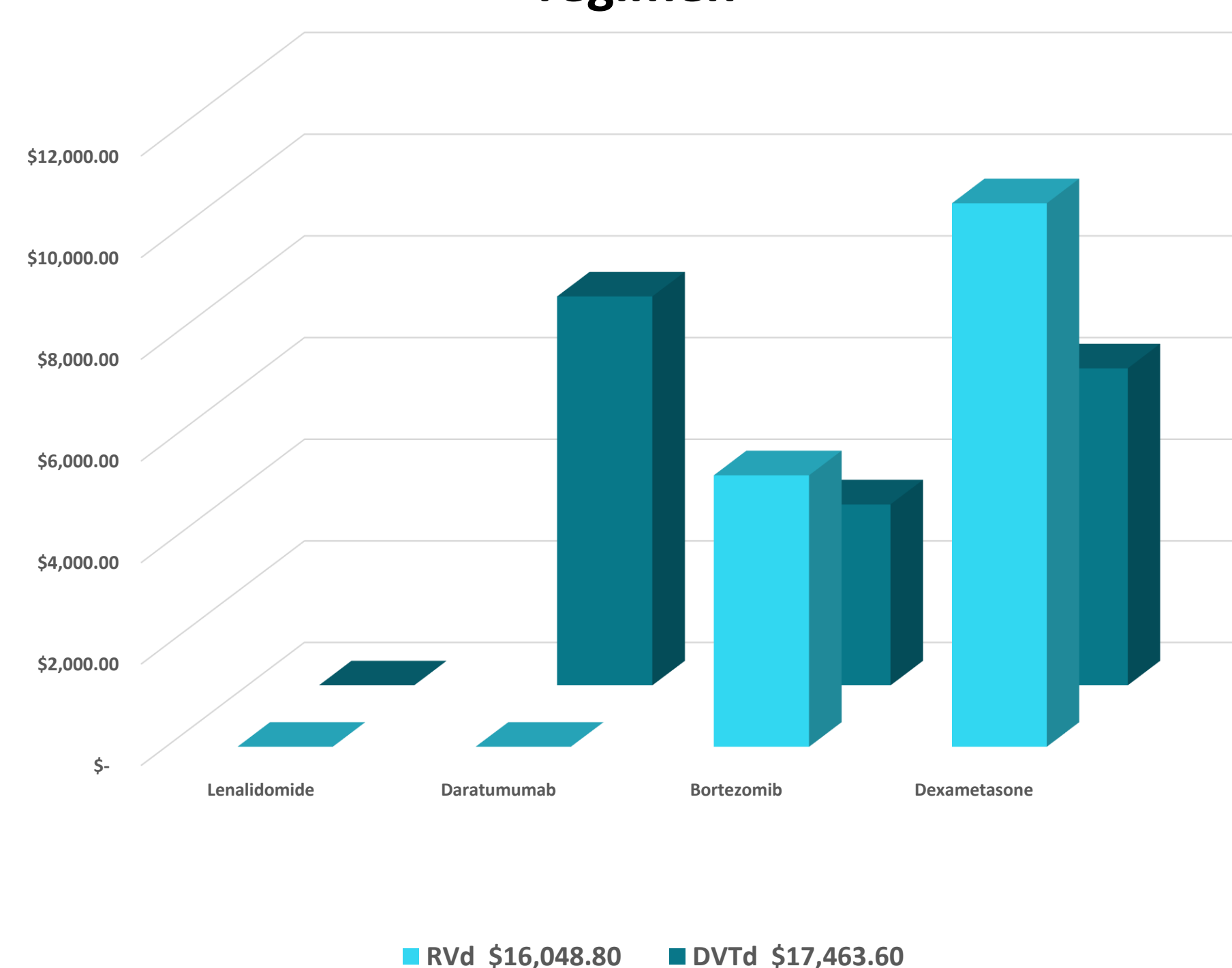


Figure 3. Administration cost of each treatment regimen



## BUDGET IMPACT ANALYSIS

- BIM Objective was to estimate the costs of using RVd instead of DVTd considering the Potential number of patients in the main public institutions of the health sector in Mexico.
- The analysis period is 5 years and covers from 2022 to 2026.
- The perspective of the study was that of the public health sector as a whole, although it is possible to observe the results also by category of institution: IMSS, ISSSTE, PEMEX, SEDENA, SEMAR and a category defined as population without social labor security; The latter integrates the beneficiaries of SSA, IMSS-BIENESTAR and the unaffiliated population.

Figure 4. % Public Institution Affiliation<sup>8</sup>

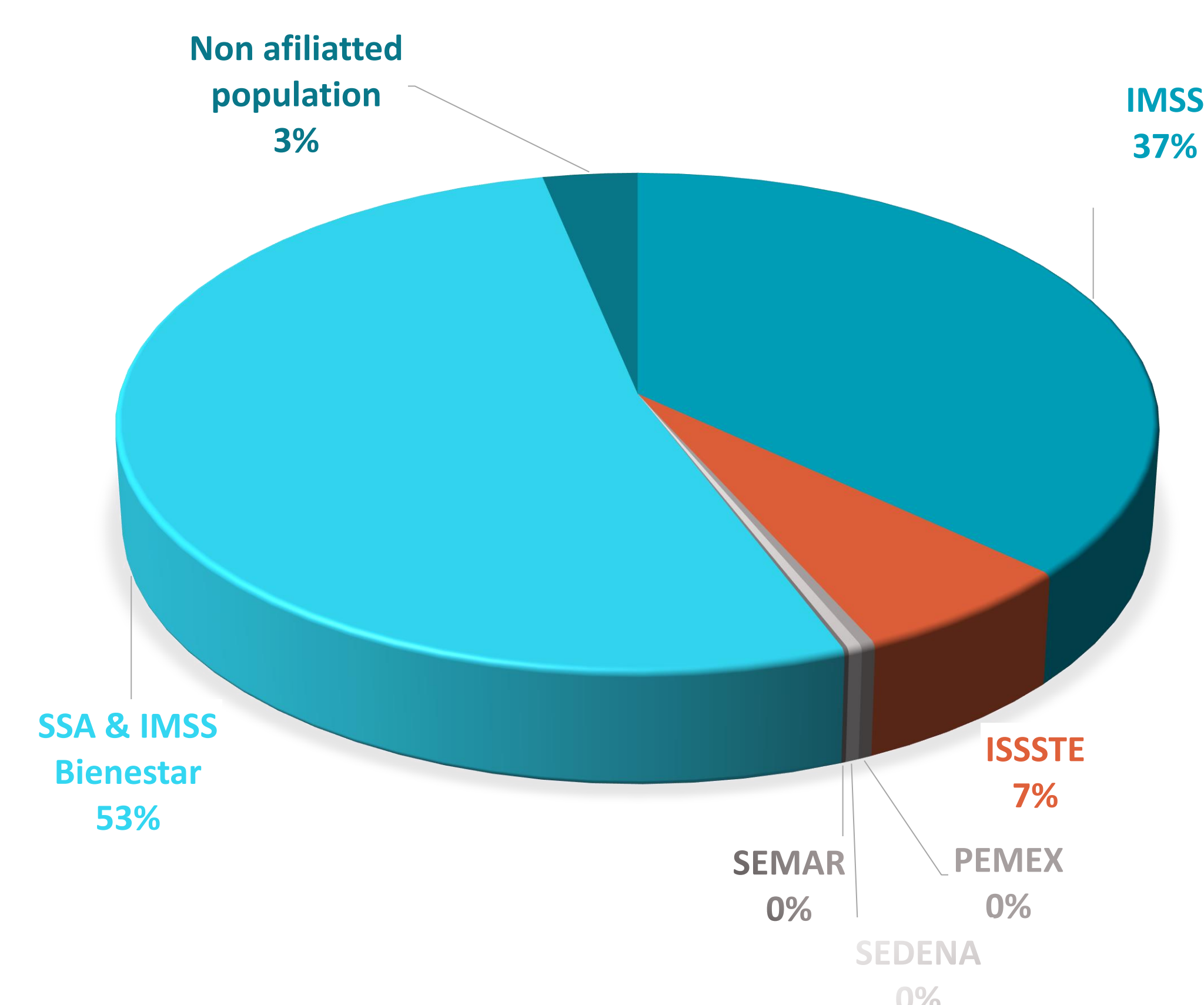


Table 1. Budget Impact Analysis (MXN)

Expense item	RVd	DVTd	Difference %
Expense item	\$ 333,886,826	\$ 619,410,171	-54%
Agent Acquisition	\$ 316,036,247	\$ 599,862,359	-53%
Agent Management	\$ 3,377,022	\$ 7,084,322	-48%
Routine care	\$ 11,856,380	\$ 8,733,410	-136%
Treatment of adverse events	\$ 2,617,177	\$ 3,730,080	-70%

## CONCLUSIONS

RVd is an induction regimen that delivers high response rates (VGPR or better) in close to 90% of patients after transplantation, and risk-adapted maintenance can deliver unprecedented long-term outcomes.

The use of lenalidomide in combination therapy with bortezomib and dexamethasone as an induction regimen prior to ASCT constitutes a cost-saving intervention compared to the use of daratumumab in combination with bortezomib, thalidomide and dexamethasone.

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