



Cost-Utility Analysis and Efficiency Frontier Approach of Tafasitamab in Brazilian Private Healthcare System Perspective

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INTRODUCTION

Up until 2022, chemotherapy was the only therapy available in Brazil for patients with relapsed or refractory diffuse large B-cell lymphoma who are not transplant eligible (NTE R/R DLBCL)¹. Currently, tafasitamab and polatuzumab have ANVISA registration for this indication, as well as axicabtagene ciloleucel (Axi-C) which has a broad indication.

OBJECTIVES

The objective was to assess the cost-effectiveness and efficiency frontier of tafasitamab in combination with lenalidomide (Tafa-len) compared with therapies available for 2nd line NTE R/R DLBCL in the Brazilian private healthcare system (PHS).

METHODOLOGY

A partitioned survival model, of three health states – progression-free survival (PFS), overall survival (OS), and death – was developed (Figure1). Patients begin the simulation in PFS and can move to different health states in 4-week cycles with a lifetime time horizon. Clinical parameters were extracted from L-MIND² and MAIC studies³, while costs were extracted from CMED list price⁴, CBHPM list⁵ and the polatuzumab NICE evaluation⁶ (Table 1). The comparators were Pola-BR, R-Gemox, R-DHAP and R-ICE. An alternative scenario was considered with Axi-C. Sensitivity analyses were conducted to assess impact of varying the inputs on the model results.

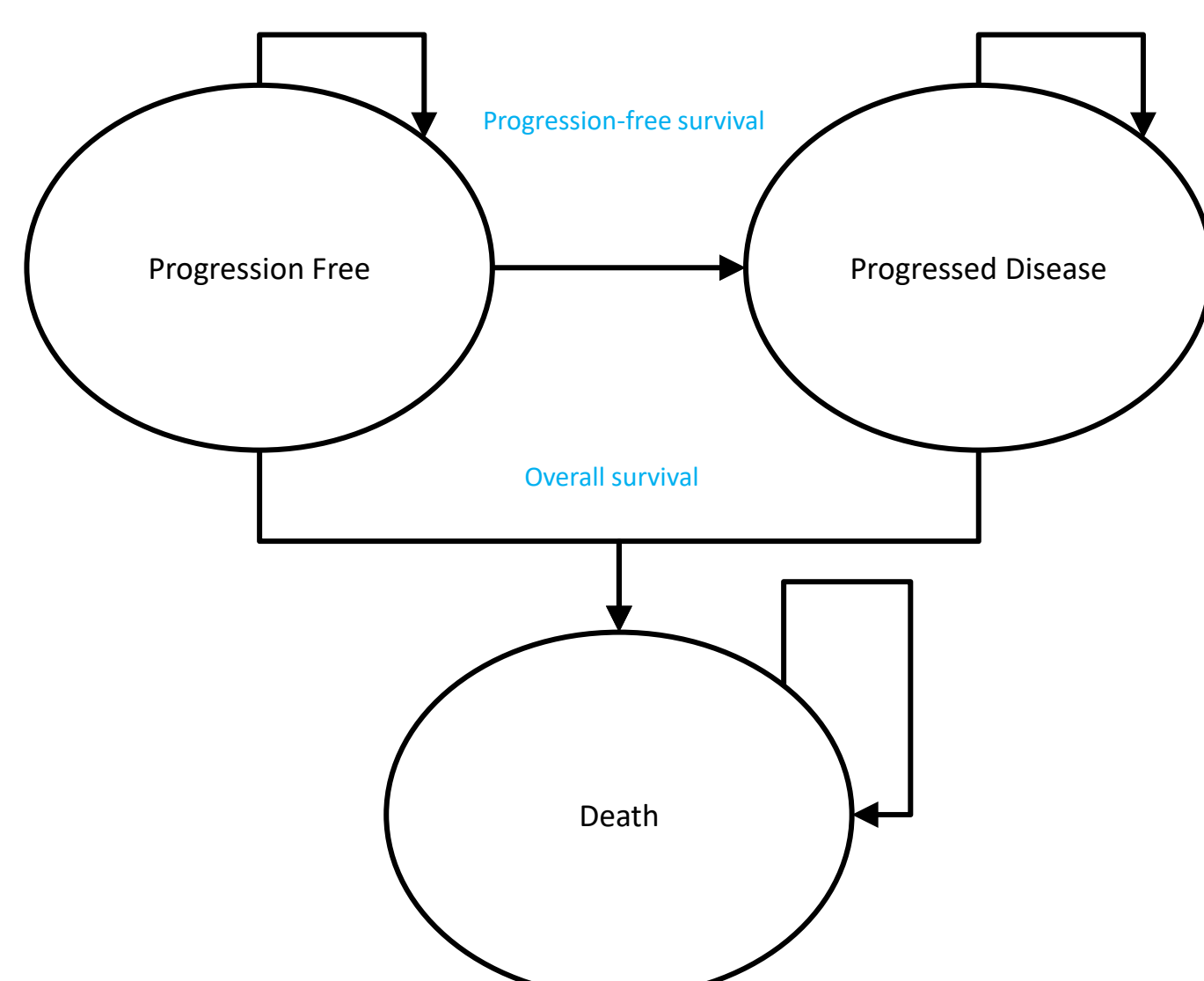


Figure 1: Model Structure

Table 1: Costs

Description	Cost	Description	Cost
Tafasitamab	R\$ 5,504.13/pack	IV administration	R\$ 685.91
Lenalidomide	R\$ 15,977.74/pack	Physician care	R\$ 122.98
Polatuzumab	R\$ 74,206.73/pack	UCI day	R\$ 2,293.38
Bendamustine	R\$ 416.99/pack	Hospitalization day	R\$ 687.47
Rituximab	R\$ 9,215.33/pack	AE Tafa-Len	R\$ 6,463.29
Gencitabine	R\$ 247.56/pack	AE Pola-BR	R\$ 7,933.97
Oxaliplatin	R\$ 2,634.81/pack	AE R-GemOx	R\$ 8,543.66
Dexametasone	R\$ 8.70/pack	AE R-DHAP	R\$ 15,331.80
Citarabine	R\$ 1,195.04	AE R-ICE	R\$ 15,331.80
Cisplatin	R\$ 308.09/pack	AE Axi-C	R\$ 9,496.93
Ifosfamide	R\$ 2,057.19		
Carboplatine	R\$ 468.79/pack		
Etoposideo	R\$ 985.09/pack		

IV: intravenous, AE: adverse events, R\$: Brazilian currency, Exchange: USD\$1 = R\$5.7

RESULTS

The analysis of Tafa-len compared to Pola-BR, R-GemOx, R-DHAP and R-ICE showed that Tafa-len provides more benefits to patients at a higher cost. Tafa-len was considered dominant when compared to Axi-C. The efficiency frontier showed that rituximab-based regimens had lower effectiveness compared with Tafa-len (Table 2 and Figure 2). The results of the probabilistic sensitivity analysis follow the pattern seen in the base scenario of the analysis, which demonstrates the robustness of the economic model.

Table 2: Base case and Scenario

Base Case	Tafa-len	Pola-BR	R-GemOx	R-DHAP	R-ICE	Axi-C
Cost of treatment (R\$)	604,970	490,044	181,208	116,679	111,125	2,336,849
QALY	3,44	1,37	1,92	2,07	2,07	2,49
ICUR		55,266	278,539	355,450	359,492	Dominant

QALY: Quality-adjusted life years

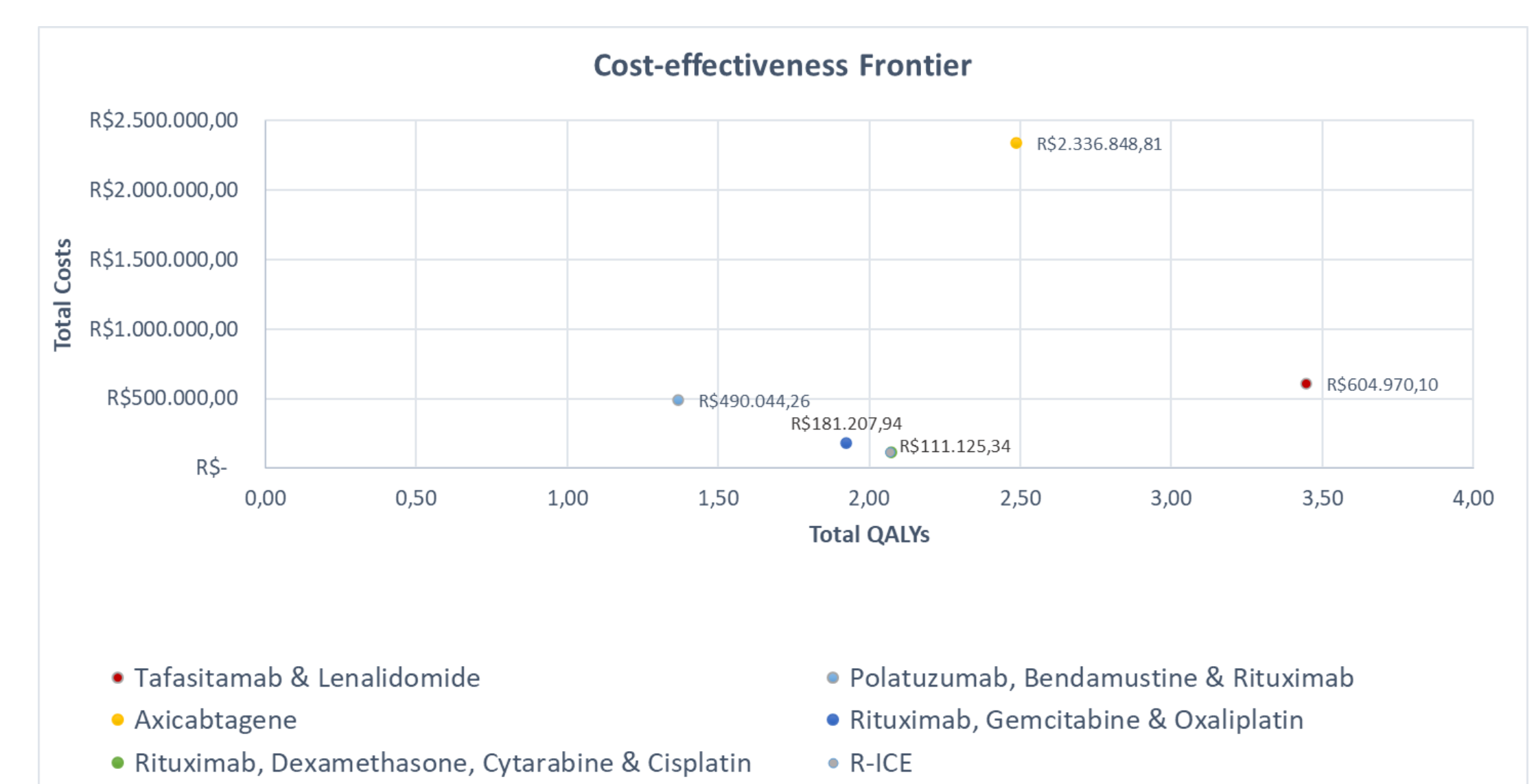


Figure 2: Cost-effectiveness Frontier

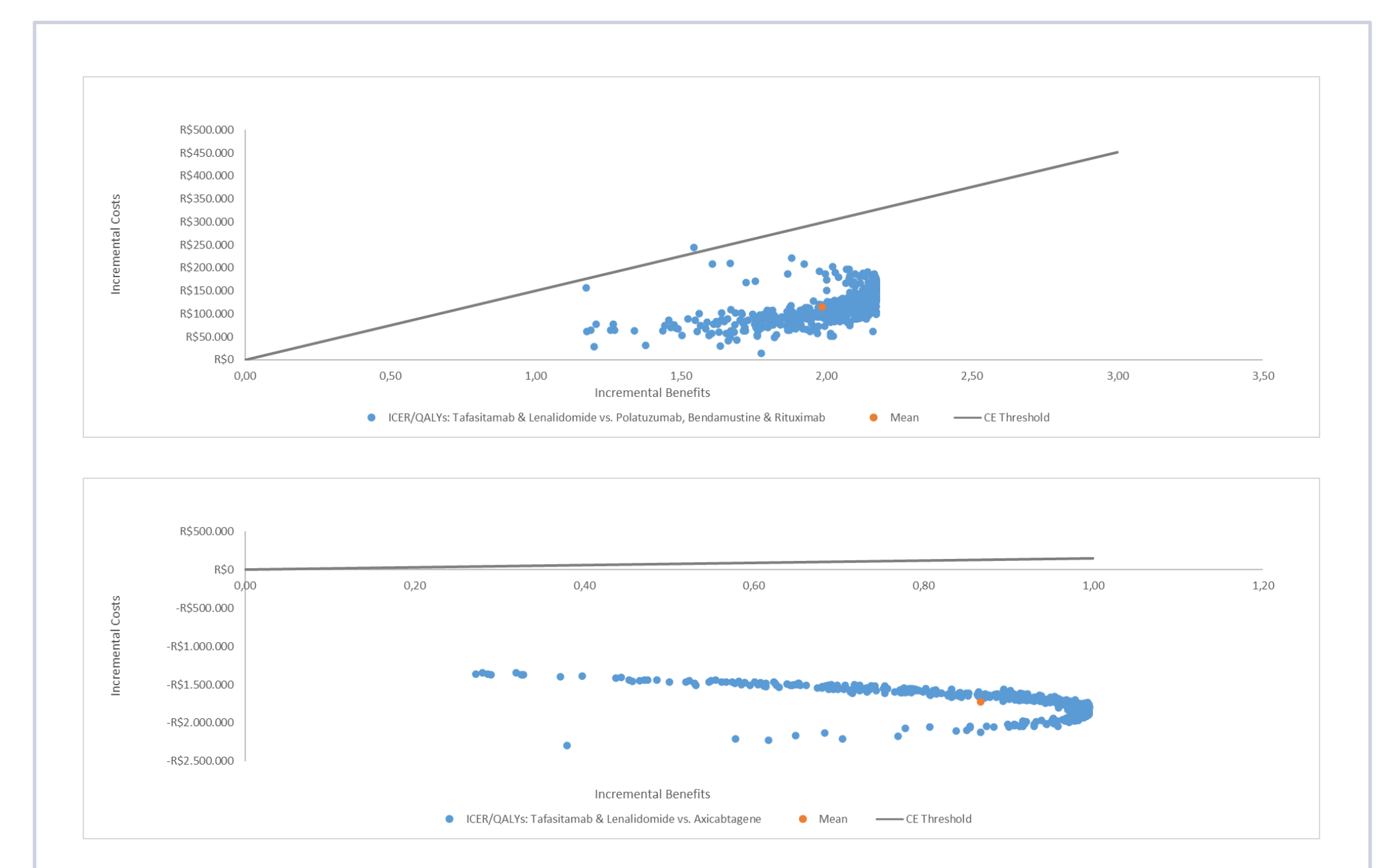


Figure 3: Probabilistic sensitivity analysis vs Pola-BR and vs Axi-C

CONCLUSION

Tafa-len is an effective and economical therapeutic option for DLBCL patients providing more QALYs than other options. The PHS do not have defined cost-effectiveness threshold, but the values of ICUR obtained were already accepted by PHS for the reimbursement of other drugs.

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