

Cost Per Responder Analysis of Patients With 3 Previous Lines and Lenalidomide Refractory Multiple Myeloma Who Received Cilta-Cel in the Brazilian Private Health System

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OBJECTIVE

Evaluate cost per progression free survival (CPFS) and cost per complete response (CCR) of cilta-cel versus other therapeutic regimens for lenalidomide-refractory patients with multiple myeloma (MM), who underwent 1-to-3 prior therapies. The analysis considered the Brazilian private health system's perspective.

METHODS

A cost per responder model was developed based on efficacy from CARTITUDE-4 and an indirect treatment comparison (ITC¹). This model encompassed treatment regimens available in the Brazilian private health system for lenalidomide-refractory MM patients. The comparison between cilta-cel and daratumumab, pomalidomide and dexamethasone (DPd); and pomalidomide, bortezomib and dexamethasone (PVd) was based on the head-to-head CARTITUDE-4 trial with the Interim Analysis#2. Its cilta-cel PFS Kaplan-Meier curve was extrapolated for this analysis. The comparison between cilta-cel and daratumumab, carfilzomib, and dexamethasone (DKd56/DKd70); carfilzomib and dexamethasone (Kd56/Kd70); and daratumumab, bortezomib, and dexamethasone (DVd) was based on an ITC. Dose recommendations and country-specific prices² were utilized to calculate drug costs. Generic molecule prices weren't considered. Median price of available dexamethasone options was used. Drug costs, treatment administration costs, hospitalization costs, and costs associated with disease progression were included.

Table 1: Cost of medical resources

Variable	Cost (in BRL) ³
Entry in the ER	R\$ 92,30
Medical consultation	R\$ 98,14
Consultation with other professionals	R\$ 38,17
ICU daily cost	R\$ 2.230,00

Table 2: Cost of cilta-cel administration

Variable	Cost (in BRL) ⁴
Apheresis	R\$ 12.681,06
Triage	R\$ 5.432,50
Bridge therapy	R\$ 283.466,20
Cryopreservation	R\$ 6.376,89
Pre-medication	R\$ 13.529,59
Infusion	R\$ 47.291,89
Cilta-cel acquisition cost	R\$ 2.813.351,76
Monitoring	R\$ 3.409,73

RESULTS

Over a 10-year time-horizon, based on CARTITUDE-4, cilta-cel demonstrated higher PFS (5.0 years [y]), lower CPFS (BRL634.4 thousand [k]) and lower CCR (BRL4.3 million [M]) vs DPd/PVd (1.81y; BRL691.6k; 5.7M).

Figure 1: Cilta-cel vs DPd/PVd (PFS)

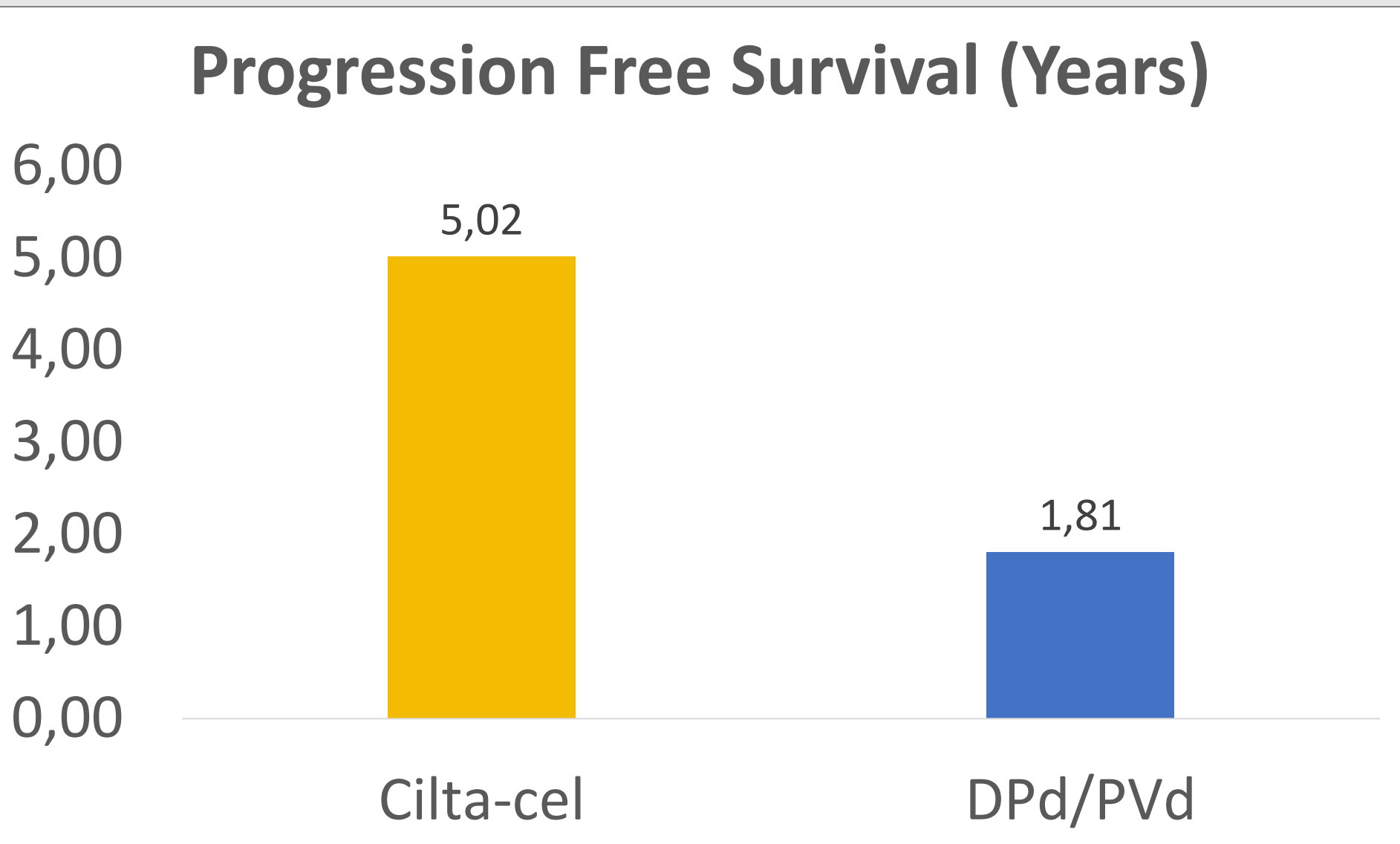


Figure 2: Cilta-cel vs DPd/PVd (CPFS)

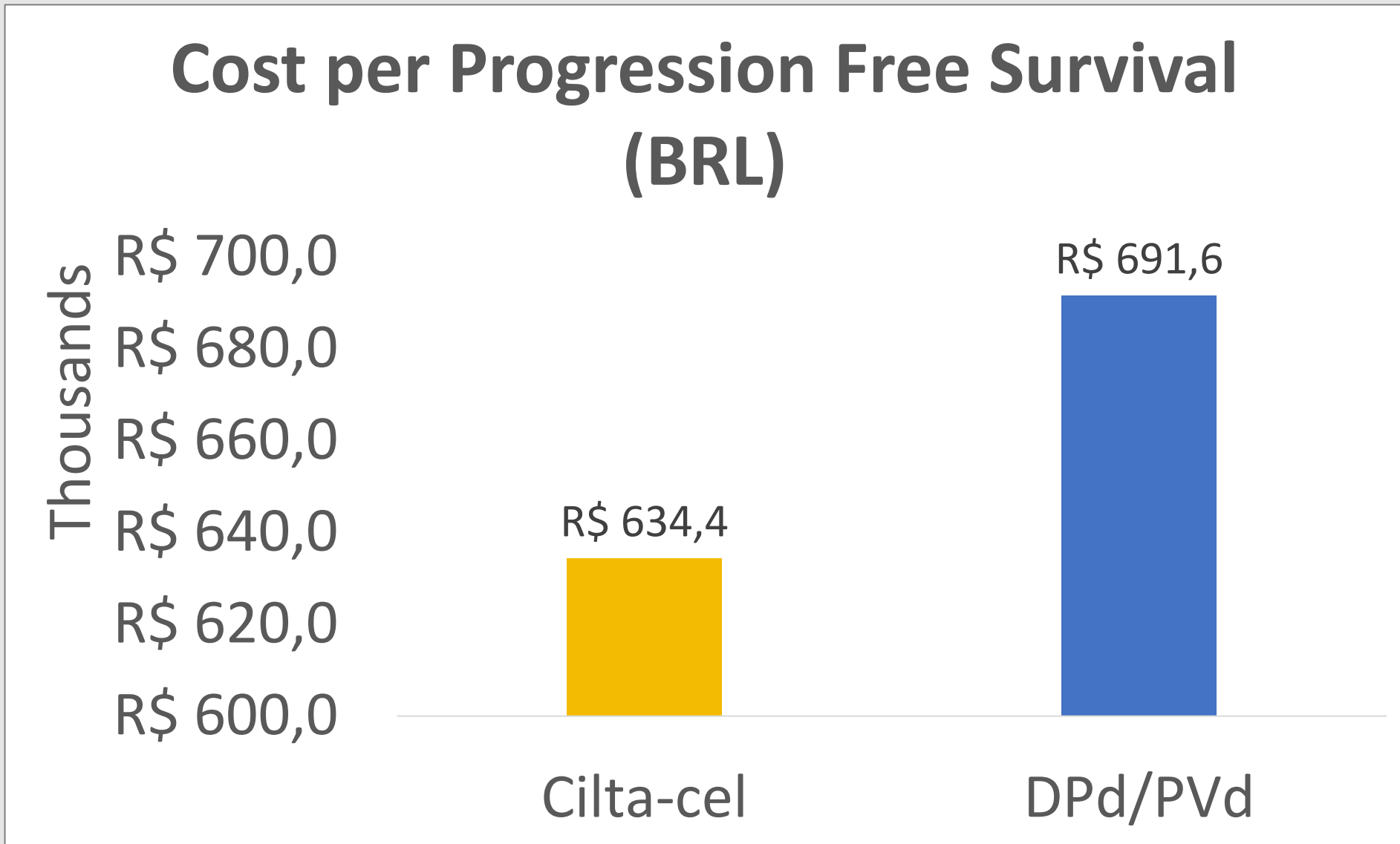
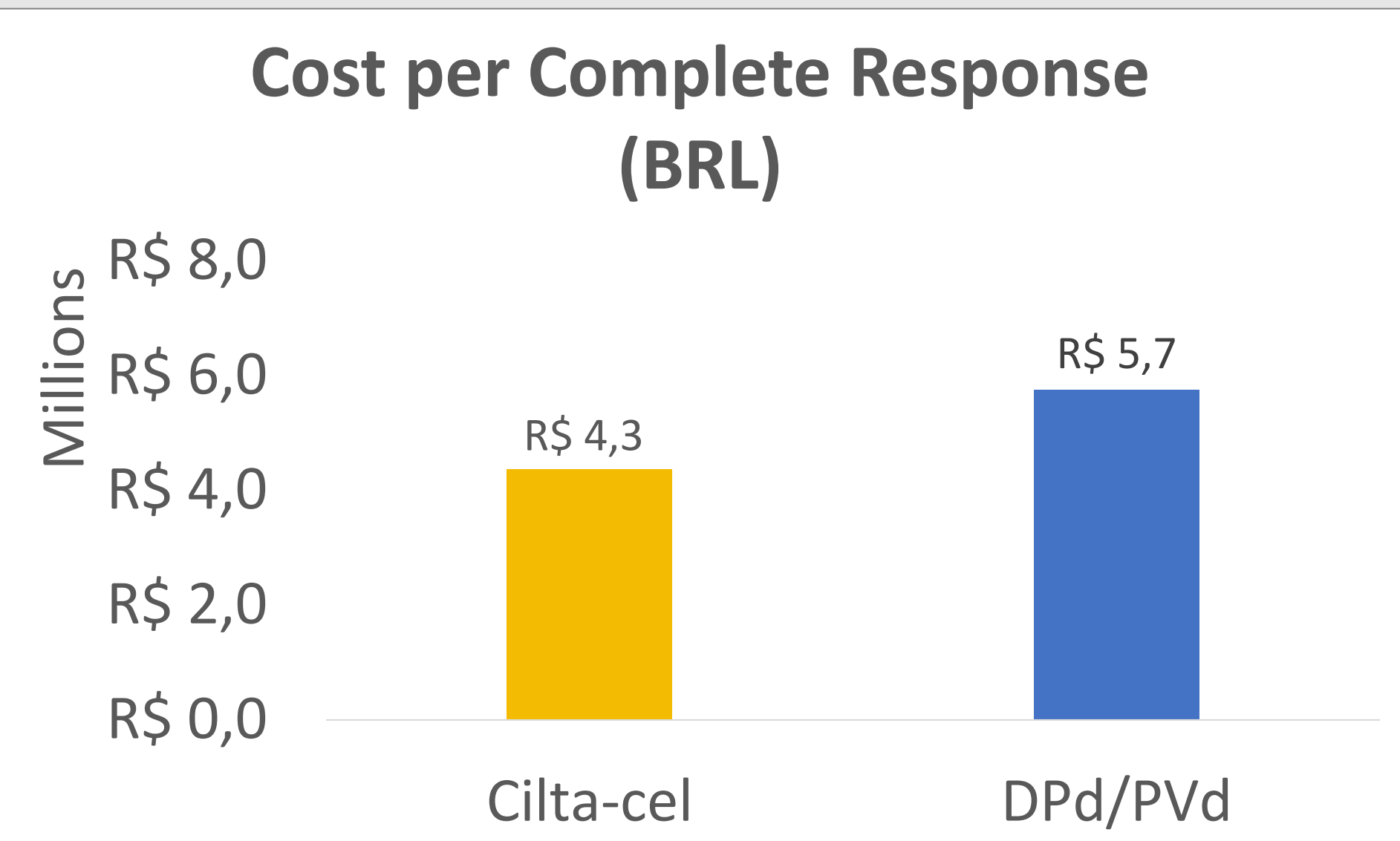


Figure 3: Cilta-cel vs DPd/PVd (CCR)



Regarding the ITC, cilta-cel exhibited the highest PFS (5.9y) vs DKd56, DKd70, Kd56, Kd70, and DVd (3.8y; 3.8y; 1.3y; 1.3y; 1.2y, respectively). Cilta-cel demonstrated the lowest CPFS (BRL539.5k vs 1.4M; 1.1M; 1.0M; 764k; 637k, respectively). Additionally, cilta-cel demonstrated the lowest CCR (BRL4.1M vs 19.8M; 16.2M; 10.9M; 8.2M; 9.2M, respectively).

Figure 4: Cilta-cel vs DKd/Kd/DVd (PFS)

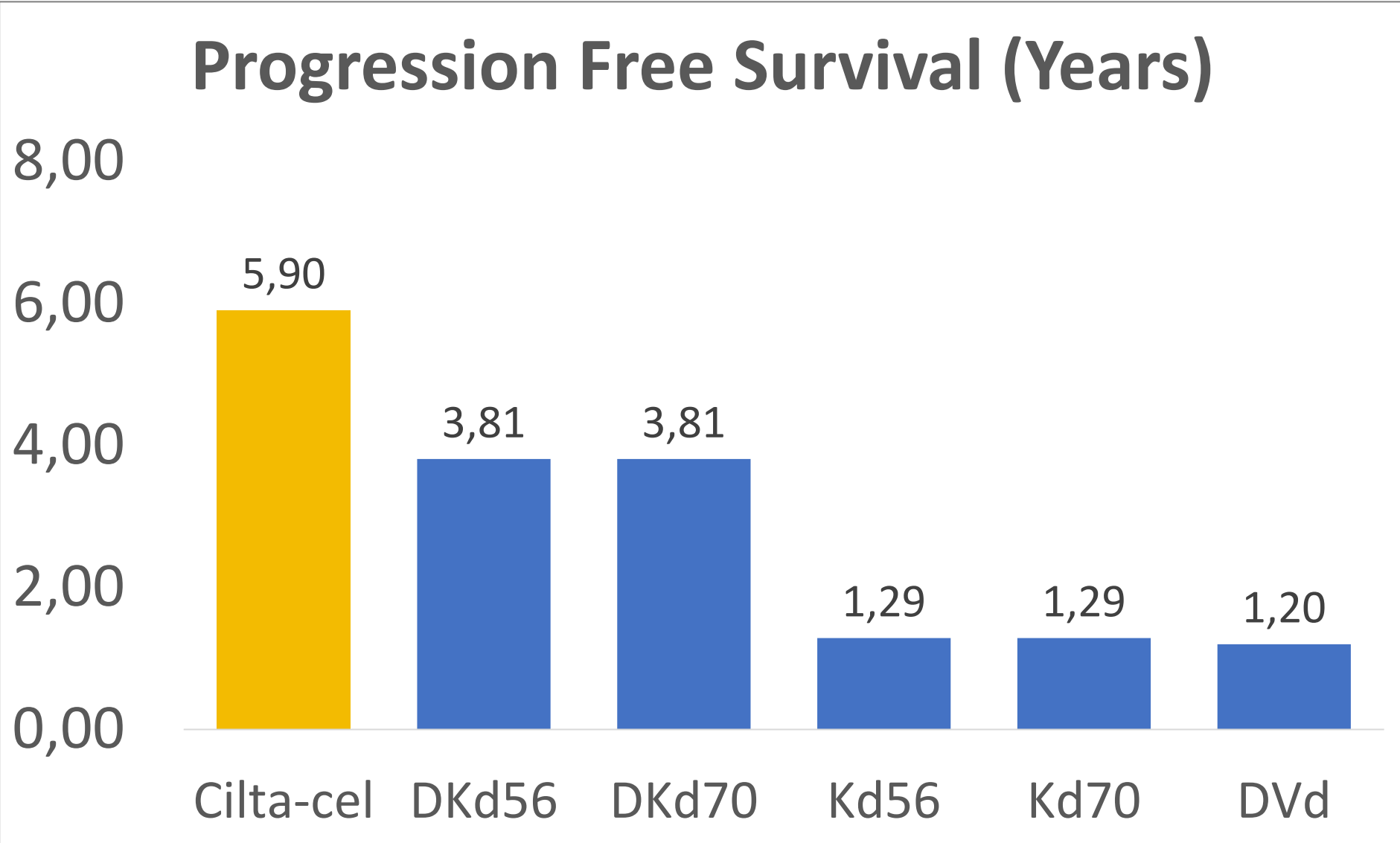


Figure 5: Cilta-cel vs DKd/Kd/DVd (CPFS)

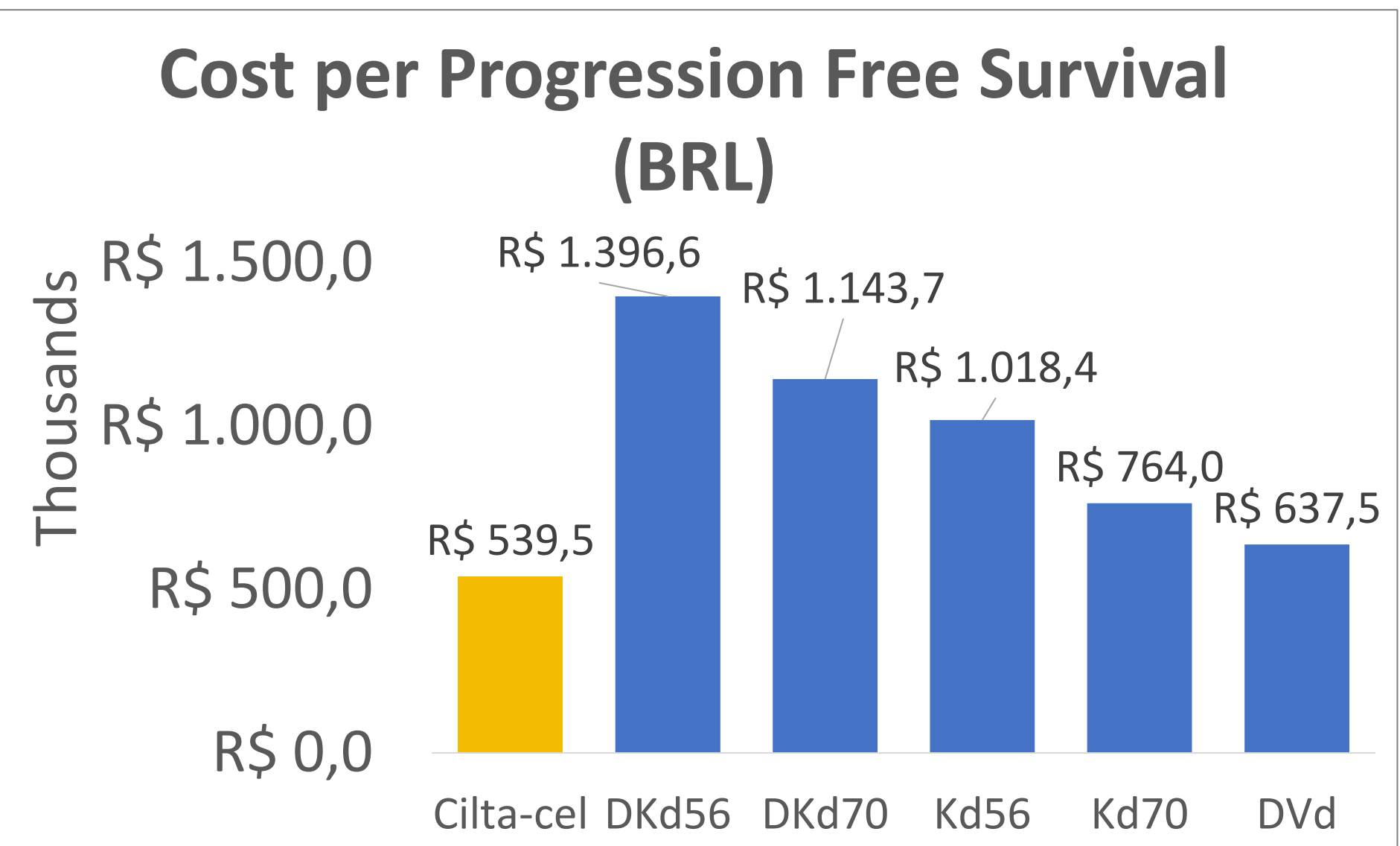
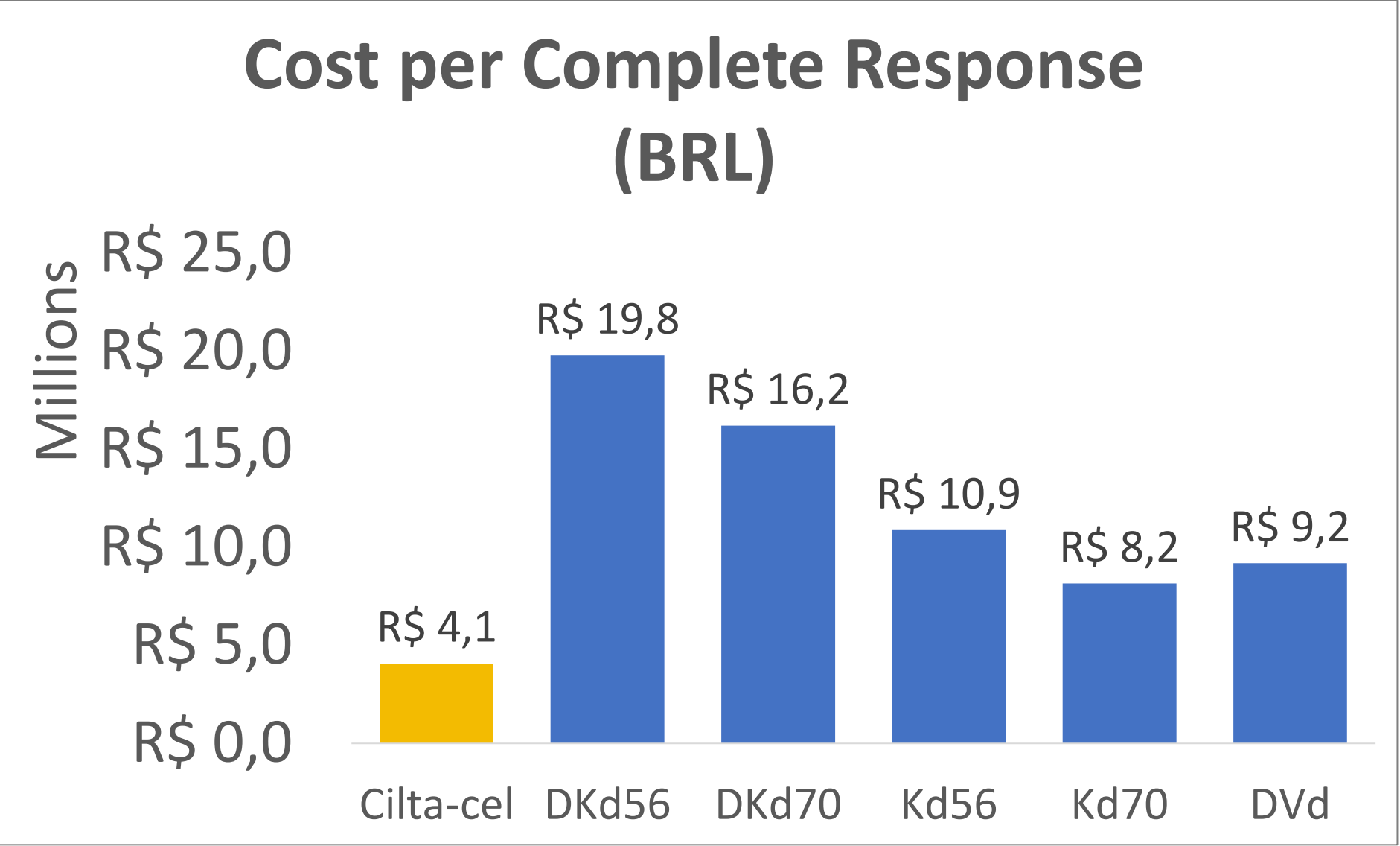


Figure 6: Cilta-cel vs DKd/Kd/DVd (CCR)



CONCLUSIONS

Cilta-cel demonstrated the highest PFS, lowest CPFS and lowest CCR in every comparison.

Given its cost profile, superior response rates and PFS, cilta-cel represents an optimal treatment for lenalidomide-refractory MM patients who underwent 1-to-3 prior therapies in the Brazilian private health system.

REFERENCES

1. Alsodori W, Diels J, Ghilotti F, et al. Efficacy of CARVYKTI in CARTITUDE-4 versus other conventional treatment regimens for lenalidomide-refractory multiple myeloma using inverse probability of treatment weighting. J Comp Eff Res. 2024;13(9):e240080. doi:10.57264/ceer-2024-0080; 2. CMED Price List, 2024. 3. D-TISS Panel - 2023, ANS. Codes utilized were respectively: 10101039, 10101012, 50000144 and Code 31 from table 63 (TUSS). 4. Janssen. Data on file. Interviews with Key Opinion Leaders. August 2020.