

Online Supplementary Material

Use of Minimal Residual Disease Status to Reduce Uncertainty in Estimating Long-term Survival Outcomes for Newly Diagnosed Multiple Myeloma Patients. *JHEOR*. 2023;10(1):1-9. [doi:10.36469/jheor.2023.56072](https://doi.org/10.36469/jheor.2023.56072)

Table S1: Statistical Goodness of Fit by Treatment and Model Structure

Figure S1: Log-Cumulative Hazard and Schoenfeld Residual Plots

Table S2: Average Mean, Median, and Interquartile Ranges Estimated by 2000 Simulations, by Treatment and Model Structure

This supplementary material has been provided by the authors to give readers additional information about their work.



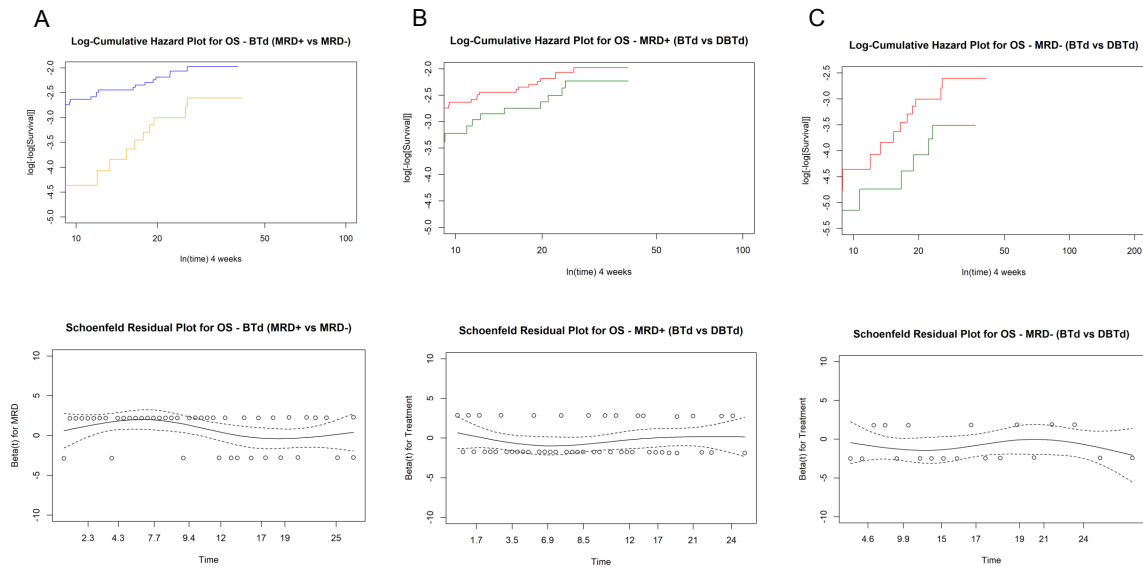
Table S1. Statistical Goodness of Fit by Treatment and Model Structure

Extrapolation Curve	Standard PSM (OS)				Response-Based PSM (OS)	
	DBTd		BTd		BTd MRD+	
	AIC	BIC	AIC	BIC	AIC	BIC
Exponential	391.54	395.84	659.73	664.03	404.29	407.96
Weibull	390.77	399.36	657.55	666.14	405.48	412.82
Log normal	389.09	397.69	656.68	665.27	403.70	411.04
Log logistic	390.65	399.24	657.29	665.88	405.11	412.45
Gompertz	392.69	401.28	659.90	668.49	403.36	410.70
Generalized gamma	388.15	401.04	658.67	671.56	405.44	416.45

Blue cells indicate the curves that were chosen for the base case extrapolations.

Abbreviations: AIC, Akaike information criterion; BIC, Bayesian information criterion; BTd, bortezomib, thalidomide, and dexamethasone; DBTd, daratumumab, bortezomib, thalidomide, and dexamethasone; MSD, minimal residual disease; OS, overall survival; PSM, partitioned survival model.

Figure S1. Log-Cumulative Hazard and Schoenfeld Residual Plots



Each panel depicts a log-cumulative hazard plot and Schoenfeld residual plot for OS in each patient population. Panel A compares BTd MRD+ and MRD- patients, panel B compares BTd MRD+ patients and DBTd MRD+ patients, and panel C compares BTd MRD- patients and DBTd MRD- patients. Abbreviations: BTd, bortezomib, thalidomide, and dexamethasone; DBTd, daratumumab, bortezomib, thalidomide, and dexamethasone; MRD+/-, minimal residual disease positive/negative; OS, overall survival.

Table S2. Average Mean, Median, and Interquartile Ranges Estimated by 2000 Simulations, by Treatment and Model Structure

Extrapolation Curve	Response-based PSM						Standard PSM					
	DBTd			BTd			DBTd			BTd		
	LQ-UQ (IQR)	Mean	Median	LQ-UQ (IQR)	Mean	Median	LQ-UQ (IQR)	Mean	Median	LQ-UQ (IQR)	Mean	Median
Exponential	21.28-25.03 (3.75)	22.77	23.38	15.11-17.57 (2.46)	16.30	16.33	23.42-24.77 (1.35)	24.03	24.17	18.72-20.41 (1.69)	19.58	19.58
Weibull	22.54-25.75 (3.21)	23.62	24.50	16.61-20.67 (4.06)	18.32	18.94	15.36-21.58 (6.22)	18.19	18.93	11.72-15.77 (4.05)	14.00	13.53
Log normal	24.35-26.26 (1.91)	25.04	25.53	20.95-22.86 (1.91)	21.71	21.96	22.40-24.47 (2.07)	23.11	23.65	19.13-21.27 (2.14)	20.05	20.30
Log logistic	23.39-26.04 (2.65)	24.33	25.02	18.96-21.65 (2.69)	20.07	20.51	18.79-22.65 (3.86)	20.44	21.01	15.25-18.40 (3.15)	16.73	16.95
Gompertz	25.13-26.43 (1.30)	25.19	25.97	22.99-24.43 (1.44)	22.88	23.88	8.38-20.46 (12.08)	11.13	13.86	7.16-11.39 (4.23)	10.22	8.49
Generalized gamma	24.78-26.36 (1.58)	25.33	25.75	21.43-23.84 (2.41)	22.48	22.83	24.26-25.87 (1.61)	23.46	25.41	16.73-22.09 (5.36)	18.80	20.14

Abbreviations: BTd, bortezomib, thalidomide, and dexamethasone; DBTd, daratumumab, bortezomib, thalidomide, and dexamethasone; IQR, interquartile range; LQ, lower quartile; PSM, partitioned survival model; UQ, upper quartile.