Electronic Supplementary Material

Clinical Pharmacokinetics

Population Pharmacokinetics of an Anti-PD-L1 Antibody, Durvalumab in Patients with Hematologic Malignancies

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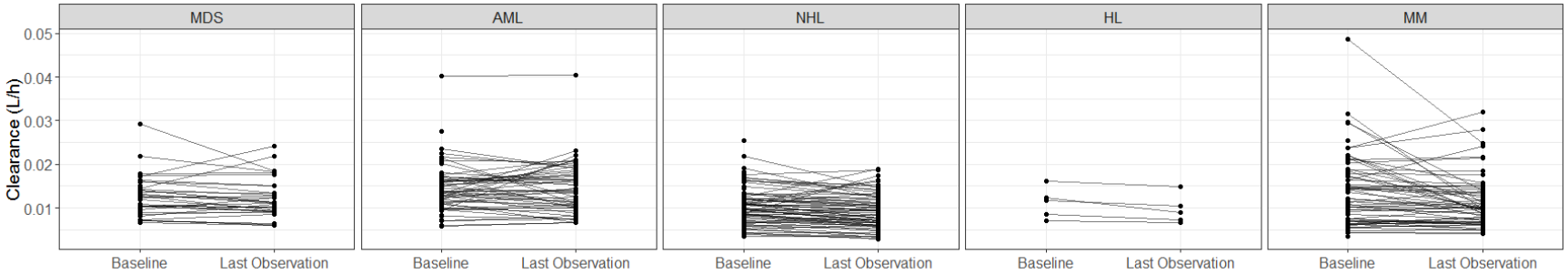
Supplementary Table 1 Summary of covariate model building steps from base to final population-pharmacokinetic model of durvalumab

Order	Covariate	Parameter	ΔOFV
Forward inclusion step			
1	Albumin	CL	−290.57
2	IgG	CL	−159.38
3	Weight	CL	−63.40
4	Sex	Vc	−59.72
5	Albumin	Vc	−27.74
6	Sex	CL	−20.27
7	MDS/AML	CL	−23.30
8	MM	Vc	−20.76
9	Weight	Vc	−22.13
10	sPD-L1	CL	−16.63
11	LDH	CL	−15.44
Backward elimination step			
-	Albumin	CL	+238.72
-	IgG	CL	+153.48
-	Weight	CL	+32.02
-	Sex	Vc	+30.08
-	Albumin	Vc	+34.89
-	Sex	CL	+28.32
-	MDS/AML	CL	+32.10
-	MM	Vc	+24.32
-	Weight	Vc	+22.16
-	sPD-L1	CL	+18.28
-	LDH	CL	+15.44

AML acute myeloid leukemia, *CL* clearance, *IgG* immunoglobulin G, *LDH* lactate dehydrogenase, *MDS* myelodysplastic syndromes, *MM* multiple myeloma, *OFV* objective function value, *sPD-L1* soluble programmed cell death ligand 1, *Vc* volume of distribution of central compartment

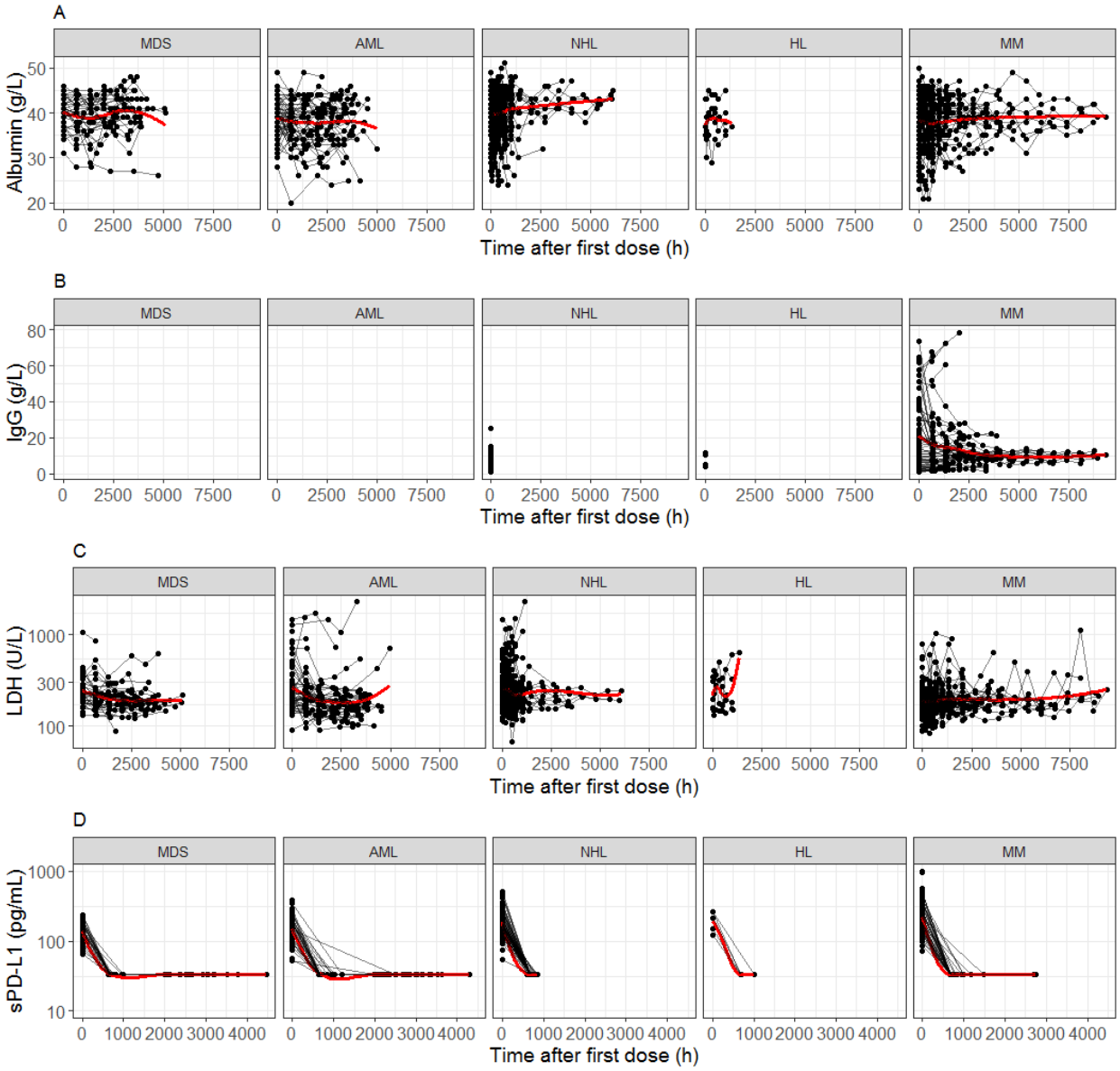
Supplementary Figure 1



Supplementary Fig. 1 Comparison of durvalumab clearance (CL) at baseline and last observation by type of hematologic malignancies. Last observations that occurred within cycle 1 were excluded from the plot.

AML acute myeloid leukemia, *HL* Hodgkin lymphoma, *MDS* myelodysplastic syndromes, *MM* multiple myeloma, *NHL* non-Hodgkin lymphoma

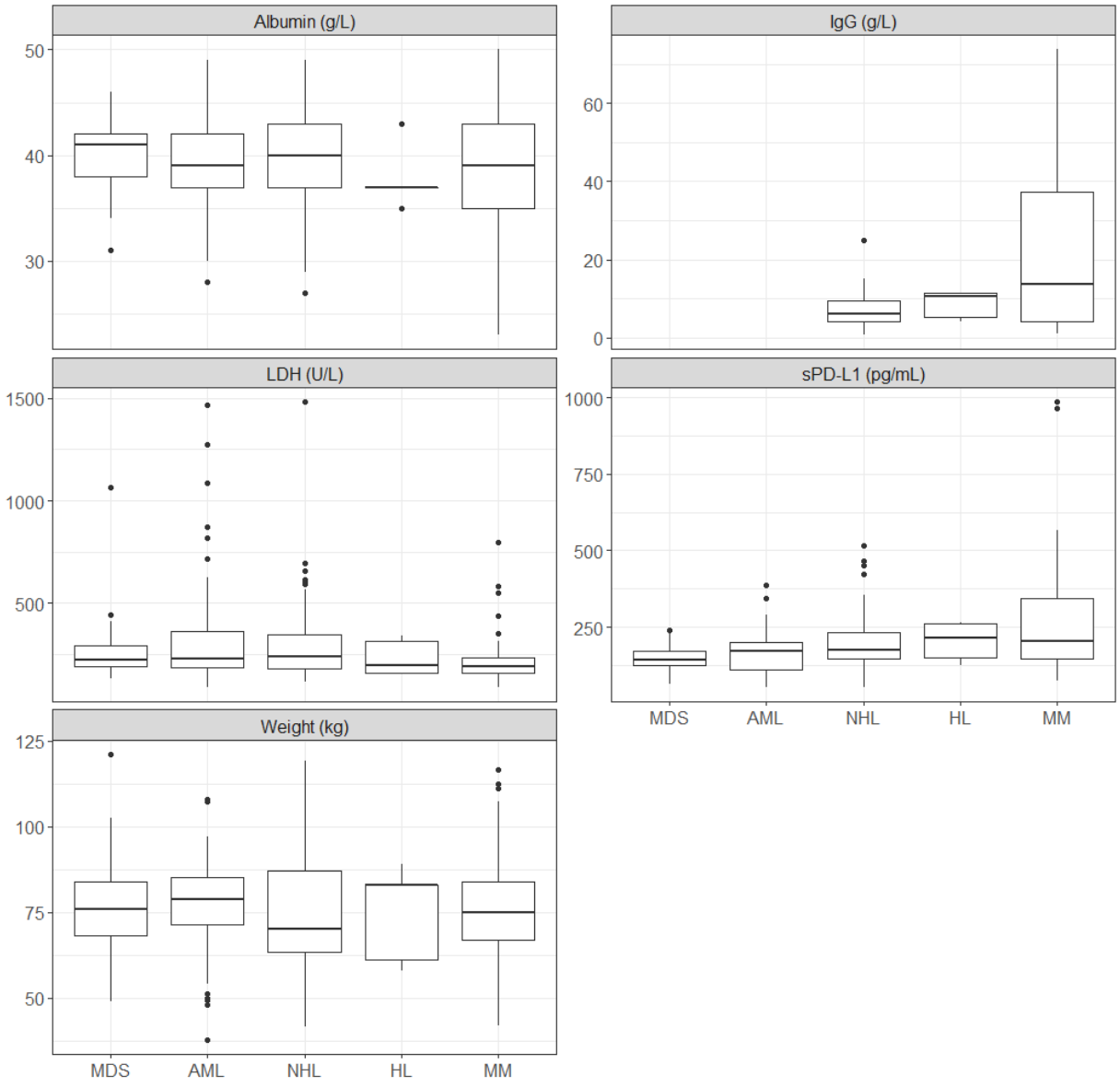
Supplementary Figure 2



Supplementary Fig. 2 Changes in albumin (**A**), immunoglobulin G [IgG] (**B**), lactate dehydrogenase [LDH] (**C**), and soluble programmed cell death ligand 1 [sPD-L1] (**D**) over time by type of hematologic malignancies. Change in IgG over time was available only from patients with multiple myeloma (MM). Soluble programmed cell death ligand 1 levels below the limit of detection (LOD, 67.1 pg/mL) was imputed as LOD/2 (33.55 pg/mL). The *red line* represents the locally weighted scatterplot smoothing line.

AML acute myeloid leukemia, *HL* Hodgkin lymphoma, *MDS* myelodysplastic syndromes, *NHL* non-Hodgkin lymphoma

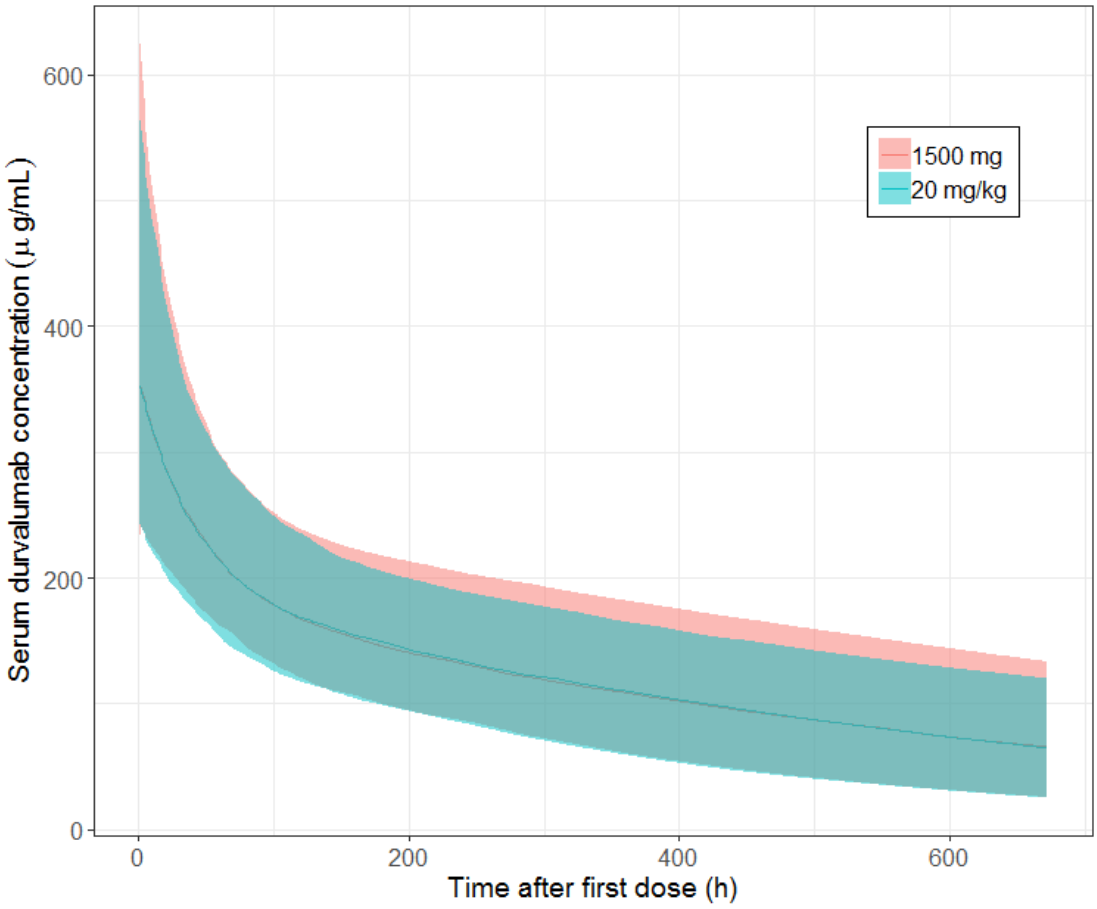
Supplementary Figure 3



Supplementary Fig. 3 Distribution of significant covariates at baseline by type of hematologic malignancies.

AML acute myeloid leukemia, *HL* Hodgkin lymphoma, *IgG* immunoglobulin G, *LDH* lactate dehydrogenase, *MDS* myelodysplastic syndromes, *MM* multiple myeloma, *NHL* non-Hodgkin lymphoma, *sPD-L1* soluble programmed cell death ligand 1

Supplementary Figure 4



Supplementary Fig. 4 Simulated serum durvalumab concentration–time profile at cycle 1 following a fixed dose (1500 mg) and a body weight-based dose (20 mg/kg). *Lines* and *shaded areas* represent median and 90% prediction intervals of the simulated durvalumab concentration obtained from 267 patients in the population-pharmacokinetic dataset