

Supplementary Table 1. Baseline characteristics of MM patients at diagnosis

Characteristics	All patients (n = 157)
Age, years, median (range)	64 (37-92)
Male, n (%)	88 (56.1)
ECOG PS, n (%)	
0-1	112 (71.3)
≥2	45 (22.9)
BM Plasma cell, % (range)	43.8 (10.2-96.9)
FLC ratio, median (range)	3.81 (<0.01-20637.78)
Kappa FLC (mg/L)	72.25 (3.65-31886.00)
Lambda FLC (mg/L)	16.30 (0.90-35758.00)
Type, n (%)	
IgG kappa/lambda	51 (32.5)/36 (22.9)
IgA kappa/lambda	16 (10.2)/14 (8.9)
IgD kappa/lambda	2 (1.3)/5 (3.2)
Kappa/lambda only	23 (14.6)/10 (6.4)
High-risk cytogenetics, n (%)	
t(4;14)	4 (2.6)
t(14;16)	5 (3.2)
del17p	23 (14.7)
amp1q21	36 (23.1)
N/A	1 (0.6)
ISS staging	
I	51 (32.5)
II	47 (29.9)
III	59 (37.6)
R-ISS staging	
I	40 (25.6)
II	89 (57.1)
III	27 (17.3)
N/A	1 (0.6)
First-line treatment	
VTD	64 (40.8)
VMP	58 (36.9)
VD	5 (3.2)
TD	11 (7.0)
RD	12 (7.6)
Others	7 (4.5)
ASCT	62 (39.5)
CMV IgG (+), n (%)	156 (99.4)

ECOG, Eastern Cooperative Oncology Group; PS, performance status; BM, bone marrow; FLC, free light chain; ISS, International Staging System; R-ISS, Revised ISS; V, bortezomib; T, thalidomide; D, dexamethasone; M, melphalan; P, prednisolone, R, lenalidomide; ASCT, autologous stem cell transplantation; CMV, cytomegalovirus.

Supplementary Table 2. FACS antibodies used in this study

Antibody	Company	Cat no.
FITC anti-human CD3	eBioscience	11-0038-42
PE-CF594 anti-human CD14	BD Biosciences	562335
PE-CF594 anti-human CD19	BD Biosciences	562294
APC-H7 anti-human CD45	BD Biosciences	560178
BV786 anti-human CD56	BD Biosciences	742662
BV605 anti-human CD16	BD Biosciences	563172
PE anti-human PD-1	Biolegend	329906
BV711 anti-human TIM-3	Biolegend	345024
BV650 anti-human LAG-3	Biolegend	369316
PerCP-eF710 anti-human TIGIT	eBioscience	46-9500-42
BV786 anti-human CD226 (DNAM-1)	BioLegend	338321
PE-CF594 anti-human CD314 (NKG2D)	BD Biosciences	562498
PerCP-Cy5.5 anti-human CD38	BD Biosciences	551400
BV421 anti-human CD138	BD Biosciences	562935
FITC anti-human Galectin-9 Antibody	Biolegend	348912
PE anti-human CD159a (NKG2A)	Miltenyi Biotech	130-113-566
BV650 anti-human CD335 (NKp46)	BioLegend	331927
BV421 anti-human CD337 (NKp30)	BD Biosciences	563385
FITC anti-human Galectin-9	Biolegend	348912
APC anti-human HLA-ABC	BioRad	MCA81
PE anti-human HLA-E	Miltenyi	130-118-541
PE-Cy7 anti-human CD155 (PVR)	Biolegend	337613
PE-Vio770 anti-human CD158e/k (KIR3DL1/DL2)	Miltenyi	130-116-180
PE-Vio770 anti-human CD158b (KIR2DL2/DL3)	Miltenyi	130-099-892
PE-Vio770 anti-human CD158a (KIR2DL1)	Miltenyi	130-120-447
FITC anti-human FcεRI γ-subunit	Merck Millipore	FCABS400F
APC anti-human NKG2C/CD159c	R&D systems	FAB138A-100
PE anti-human CD107a	BD Biosciences	555801
Pe-Cy7 anti-human TNF	BD Biosciences	557647
BV711 anti-human IFN-γ	BD Biosciences	564039
PE anti-human PLZF	BD Biosciences	564850
Pe-Cy7 anti-human CD57	Biolegend	359624
BV421 anti-human Bcl-2	Biolegend	658709