

Supplementary table 1: Association of sCTLA-4 serum levels with best overall response in IPI-treated MM patients without the mucosal subgroup.

sCTLA-4 levels (pg/ml)	Total	irCR+irPR		irSD		irPD		irSD vs irCR+irPR			irPD vs irCR+irPR		
		N	%	N	%	N	%	OR	95%CL	P-value	OR	95%CL	P-value
≤ 200.56	51	7	36.8	6	40.0	38	56.7	1.00	(Ref.)	0.224	1.00	(Ref.)	0.020
> 200.56	50	12	63.2	9	60.0	29	43.3	0.26	0.03-2.27		0.11	0.02-0.70	
Whole sample	101	19	100.0	15	100.0	67	100.0	-	-	-	-	-	-

Association of sCTLA-4 serum levels with BOR was estimated through a multinomial logistic regression modelling using the value 200.56 pg/ml as cutoff point for serum sCTLA-4 levels. Detection of sCTLA-4 levels was performed by ELISA. All samples were tested in duplicate with deviation between duplicates lower than 10% for any reported value.

IPI ipilimumab, irCR immune-related complete response, irPR immune-related partial response, irSD immune-related stable disease, irPD immune-related progressive disease, OR odds ratio adjusted for age at 1st IPI cycle, gender, time from diagnosis, LDH levels, dNLR, pre-IPI immunotherapy, brain, liver and cutaneous metastases and participating center; 95%CL 95% confidence, P-value significance level of the likelihood ratio test, Ref. reference category.

Supplementary table 2: Correlation of sCTLA-4 serum levels with twelve, twenty-four and thirty-six month overall survival probabilities in IPI-treated MM patients without the mucosal subgroup.

sCTLA-4 levels (pg/ml)	N D D%			Follow-up time (months)		Overall survival						P-value
						12-month		24-month		36-month		
	Median	Range	Prob.	95%CL	Prob.	95%CL	Prob.	95%CL				
≤ 200.56	51	44	86.3	5.0	0.1-49.9	0.28	0.19-0.40	0.15	0.07-0.26	0.13	0.05-0.24	0.120
> 200.56	50	44	88.0	12.6	0.2-52.6	0.52	0.37-0.65	0.28	0.17-0.41	0.18	0.08-0.29	
Whole sample	101	88	87.1	7.4	0.1-52.6	0.36	0.30-0.49	0.22	0.14-0.30	0.15	0.08-0.23	-

Overall survival probabilities were estimated through the Kaplan-Meier method according to sCTLA-4 serum levels using 200.56 pg/ml as cutoff point.

IPI ipilimumab, N number of patients entered the study, D/D% number/percentage of deaths during the follow-up period, Prob. survival probability, 95%CL confidence limits of Prob., P-value significance level of the log-rank test.