

Supplementary Table 1: Patients' laboratory values

N o.	Sex	Age	Myeloma type	Disease duration (months)	β 2m (mg/l)	Albumin (g/dl)	Creatinine (mg/dl)	LDH (U/l)	Cytogenetics
1	m	76	IgG κ	PD	5.5	4.3	2.11	179	other
2	f	64	Plasmocytoma λ	PD	1.5	4.5	0.84	184	other
3	f	65	IgA κ	PD	2.0	6.0	0.67	138	high risk
4	f	65	IgA κ	3	2.3	3.7	0.63	228	high risk
5	m	64	IgG κ	4	7.1	4.2	1.05	157	other
6	f	60	IgG κ	120	8.8	3.6	1.60	239	other
7	m	54	IgA κ	PD	5.1	4.1	1.21	126	other
8	f	56	IgA λ	PD	4.7	3.2	0.96	89	other
9	m	60	IgA λ	9	8.1	4.3	1.68	3669	high risk
10	m	82	IgA κ	55	3.5	4.0	1.34	257	high risk
11	m	67	IgG λ	15	2.4	4.1	1.03	221	high risk
12	m	59	light chain κ	7	n/a	4.7	0.91	193	other
13	m	48	IgG κ	PD	2.7	3.6	0.81	102	other
14	m	70	IgG κ	103	5.4	3.6	1.43	193	other
15	f	69	IgG κ	10	3.2	4.0	0.83	214	high risk
16	f	63	light chain κ	32	5.9	4.5	1.14	247	high risk
17	f	74	IgG λ	PD	17.8	4.3	2.21	172	high risk
18	f	64	IgA κ	6	1.2	3.9	0.57	21	high risk

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19	m	56	IgA κ	32	3.6	3.2	0.73	14 7	other
20	f	62	IgG κ	11	1.8	4.4	0.66	17 7	other
21	m	63	light chain κ	PD	5.1	5.3	0.95	19 5	high risk
22	f	48	IgA λ	63	2.0	4.5	0.60	20 6	n/a
23	m	51	IgG κ	34	5.2	4.0	0.80	11 65	high risk
24	m	47	light chain κ	PD	2.5	4.8	0.95	74 9	high risk
25	m	62	light chain λ	PD	1.5	4.2	0.74	17 5	n/a
26	m	59	IgG κ	37	1.7	4.6	0.84	19 4	high risk
27	m	59	IgG κ	4	1.9	3.8	0.89	16 8	n/a
28	m	65	IgG κ	89	3.2	4.9	0.87	22 7	n/a
29	f	65	IgA κ	12	6.4	4.0	0.75	32 4	high risk
30	f	39	IgG λ	58	n/a	4.8	0.80	29 7	high risk
31	f	68	IgG λ	31	2.5	3.9	0.80	16 9	high risk
32	m	73	IgG κ	72	17.7	4.9	1.84	38 4	n/a
33	m	62	IgG κ	199	8.4	3.3	1.29	57 3	n/a
34	m	62	light chain λ	47	1.8	4.4	1.10	17 4	high risk
35	m	72	IgG λ	PD	9.6	3.8	1.22	16 6	other
36	f	53	light chain κ	122	2.4	4.8	1.19	27 0	other
37	m	63	light chain λ	6	1.5	4.4	0.66	20 7	other

38	f	63	IgG κ	22	5.7	3.9	0.78	15 9	other
39	m	63	IgG κ	86	2.1	4.0	0.81	23 3	n/a
40	m	60	light chain λ	22	3.7	3.9	0.89	18 4	high risk
41	f	63	light chain λ	23	2.3	3.6	0.90	20 3	n/a
42	f	49	IgA λ	72	n/a	4.3	0.58	22 9	n/a
43	f	40	light chain κ	39	1.8	4.2	0.75	15 2	n/a

Supplementary Table 2: Correlation of bone marrow involvement and MET/FDG uptake

Patient	BM infiltration (%)	MET		FDG	
		SUV _{mean}	SUV _{max}	SUV _{mean}	SUV _{max}
1	40	5.51	8.98	2.06	3.07
2	0	2.82	3.67	1.16	1.54
3	30	4.52	6.52	1.45	2.18
4	50	5.65	8.69	5.93	8.59
5	40	4.78	7.46	7.25	12.21
7	70	9.04	12.11	2.56	3.26
8	25	4.29	6.17	2.82	3.8
9	90	6.57	8.78	1.87	2.19
11	5	2.88	4.67	1.48	1.8
18	0	1.11	1.88	1.18	1.41
19	50	4.51	5.82	1.67	2.46
20	15	3.91	5.43	1.64	2.49
21	70	4.21	5.2	2.71	3.36
22	3	2.17	2.43	0.8	1.28
23	60	9.03	13.93	7.58	9.71
24	90	9.88	15.14	3.98	5.03
25	15	4.8	5.81	2.49	2.85
26	0	1.62	1.75	0.89	0.98
27	40	4.55	7.31	1.89	2.71
29	90	8.75	13.21	3.72	6.68
31	35	4.33	7.48	2	3.64
32	70	7.19	8.96	9.27	13.79
33	20	2.74	3.42	0.92	1.21
34	5	1.86	2.56	1.17	1.84
35	90	9.68	16	7.46	10.32
36	15	1.73	2.35	2.07	2.7
37	0	2.33	2.9	1.78	2.21
28	30	4.06	6.05	2.32	3.37
40	20	3.79	5.29	1.68	2.03
41	10	2.55	3.42	1.93	2.43
42	0	0.88	1.15	1.19	1.53

Given are the respective values of bone marrow (BM) infiltration (in %) as well as both mean (SUV_{mean}) and maximum standardized uptake values (SUV_{max}) of the biopsied iliac crest.

Supplementary Table 3: Diagnostic Performance of MET and FDG

	FDG	MET
patient-based analysis		
<i>PET-positive patients</i>	76.7%	90.7%
<i>appendicular skeleton</i>	65.1%	86.0%
<i>EMD</i>	23.3%	27.9%
<i>LN involvement</i>	14.0%	16.3%
<i>soft tissue involvement</i>	9.3%	14.0%
<i>lung involvement</i>	4.7%	4.7%
lesion-based analysis		
<i><20 FL</i>	48.5%	10.3%
<i>> 20 FL</i>	51.5%	89.7%
sub-group analysis >20 FL		
<i>>20 FL</i>	9.1%	8.6%
<i>>50 FL</i>	12.1%	20.0%
<i>>100 FL</i>	30.3%	71.4%
total no. EMD FL	28	42

Given are the positive-findings of the patient-based and lesion-based analysis of MET- and FDG-PET/CT, respectively. EMD = extramedullary disease; FL = focal lesion; LN = lymph node