

Serum B-cell maturation antigen could be a simple and accurate biomarker to identify and prognosticate monoclonal gammopathy of undetermined significance and smoldering multiple myeloma

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Supplemental material

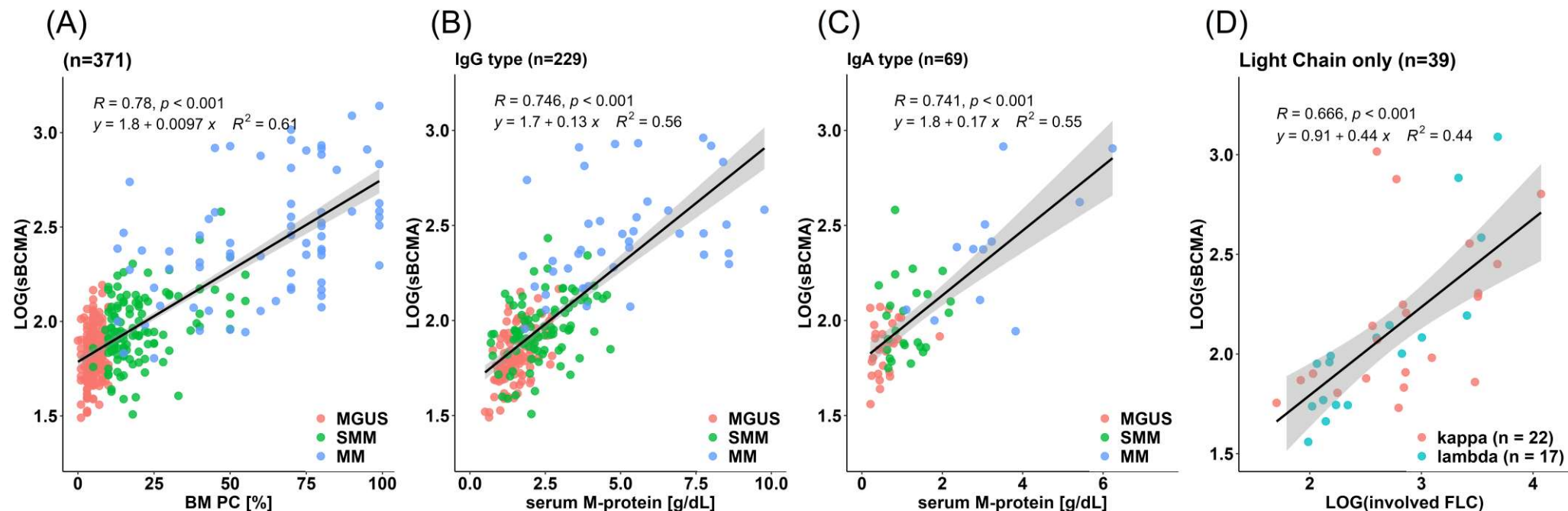
Table 1S. Patient characteristics of MGUS, SMM, and MM

	MGUS	SMM	MM
Total number of patients	202	138	75
Number of patients for final analysis (%)	172 (85.2)	124 (89.8)	75 (100)
Age at diagnosis (years), median (IQR)	72 (64–79)	71 (63.5–79)	74 (67–80.5)
Female - n (%)	66 (38.4)	56 (45.2)	26 (34.7)
Male - n (%)	106 (61.6)	68 (54.4)	49 (65.3)
Immunoglobulin type - n (%)			
IgG type	106 (61.6)	88 (71.0)	41 (54.7)
IgA type	29 (16.9)	25 (20.2)	16 (21.3)
IgM type	23 (13.4)	0	0
IgD type	0	1 (0.8)	3 (4)
Light Chain only	14 (8.1)	10 (8.1)	14 (18.7)
Non-secretary	0	0	1 (1.3)
Bone marrow plasma cell (%), median (IQR)	5.0 (3.0–7.0)	15.0 (11.71–22.48)	70.0 (40.0–80.0)
Serum M-protein (g/dL), median (IQR)	1.19 (0.69–1.69)	1.99 (1.36–2.82)	4.12 (3.05–5.66)
Hemoglobin (g/dL), median (IQR)	12.2 (10.5–14.1)	12.4 (11.1–13.9)	9.4 (8.43–11.8)
Calcium (mg/dL), median (IQR)	9.4 (9.1–9.6)	9.4 (9.2–9.8)	9.65 (9.3–10)
Creatinine (mg/dL), median (IQR)	0.95 (0.68–1.43)	0.8 (0.64–1.07)	1.01 (0.74–1.45)
Creatinine Clearance (mL/min), median (IQR)	85.51 (51.01–108.38)	89.22 (70.22–110.27)	70.7 (41.7–103.6)
Serum FLC ratio, median (IQR)	1.67 (1.10–2.78)	3.71 (1.70- 11.61)	34.67 (9.35–108.16)

Immunoparesis - n (%)	51 (29.7)	61 (49.2)	68 (90.7)
Circulating plasma cells - n (%)	70 (40.7)	72 (58.1)	69 (92)
(x 10⁻⁵), median (IQR)	2.104 (0–29.88)	16.47 (0.72–100.0)	551.0 (53.32–7003)
Bone marrow plasma-cell FISH - positive/all (%)			
Del(13q)	11/84 (13.1)	24/83 (28.9)	33/74 (44.6)
t(4;14)	2/91 (2.2)	6/100 (6)	13/74 (17.6)
t(14;16)	0/88 (0)	3/95 (3.2)	3/74 (4.1)
t(11;14)	19/98 (19.4)	28/93 (30.1)	20/74 (27)
1q+	6/101 (5.9)	22/95 (23.2)	29/73 (39.7)
Del(17p)	0/111 (0)	2/101 (2.0)	5/75 (6.7)
Imaging - n (%)			
Xray	172 (100)	124 (100)	75 (100)
CT	157 (91.3)	120 (96.8)	75 (100)
MRI	75 (43.6)	104 (83.9)	74 (98.7)
PET-CT	32 (18.6)	72 (58.1)	75 (100)
CT and MRI	73 (42.4)	101 (81.5)	74 (98.7)

Abbreviation: *MGUS*; monoclonal gammopathy of undetermined significance, *SMM*; smoldering multiple myeloma, *MM*; multiple myeloma, *IQR*; interquartile range, *Ig*; immunoglobulin, *FLC*; free light chain, *FISH*; fluorescence in situ hybridization, *CT*; computed tomography, *MRI*; magnetic resonance imaging, *PET*; positron emission tomography

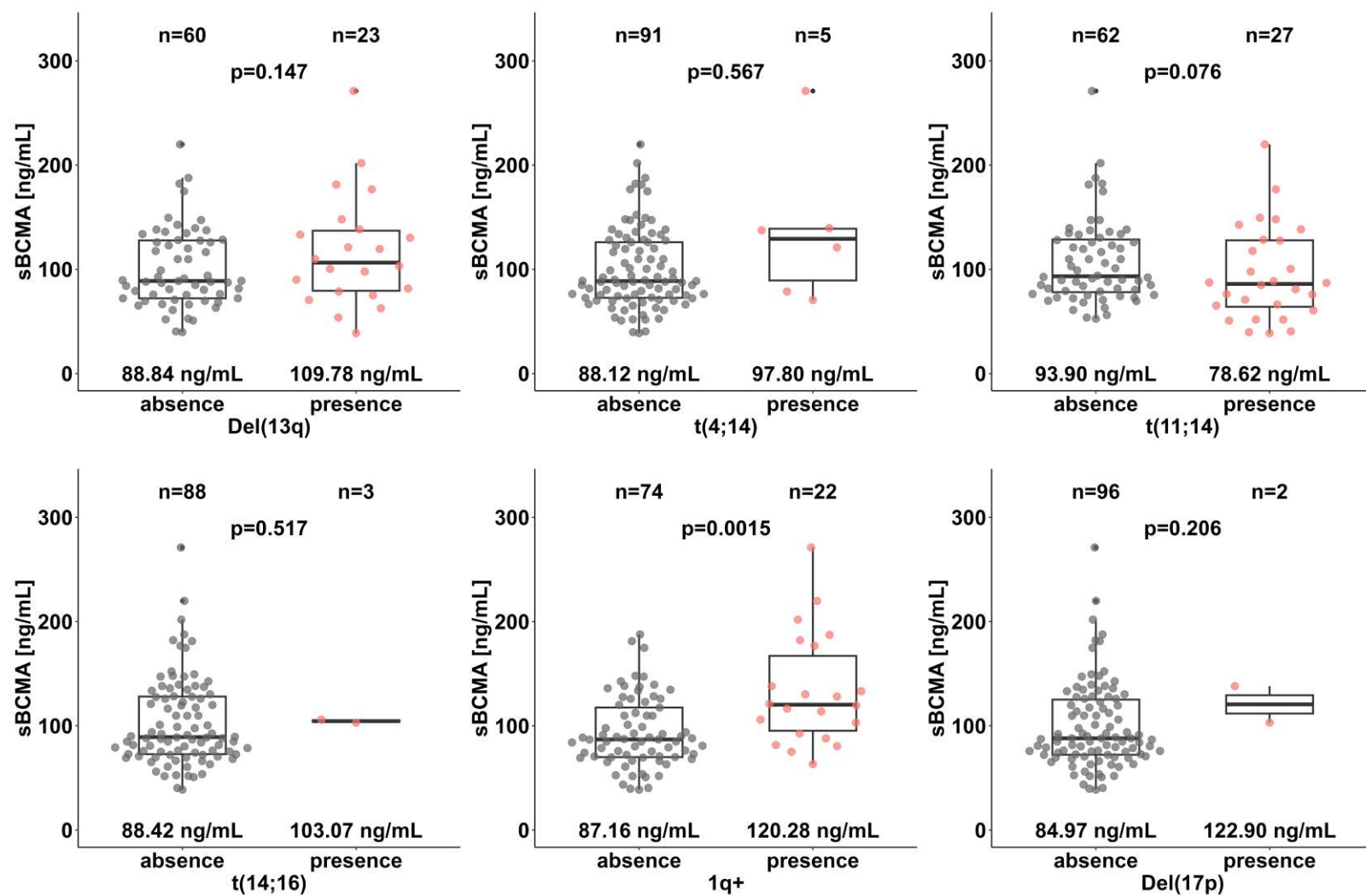
Figure 1S. Correlations between % of bone marrow plasma cell and involved paraprotein levels.



Abbreviation: MGUS; monoclonal gammopathy of undetermined significance, SMM; smoldering multiple myeloma, MM; multiple myeloma, Ig; immunoglobulin, FLC; free light chain, BM PC%; bone marrow plasma cell percent

Figure 2S. Association between sBCMA levels and FISH abnormalities, including Del(13q), t(4;14), t(14;16), t(11;14), Del(17p), and 1q+ in SMM.

No significant differences in sBCMA levels were observed for abnormalities other than 1q+. However, sBCMA levels were significantly higher in patients with 1q+.



Abbreviation: sBCMA; serum B-cell maturation antigen, SMM; smoldering multiple myeloma, FISH; fluorescence in situ hybridization