

## Supplementary Materials

### Association of body weight variability with adverse cardiovascular outcomes in patients with pre-dialysis chronic kidney disease

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**Running title:** BW variability and CV outcomes in CKD

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Table S1. Baseline characteristics of study participants by BW slope

	BW change			P value
	Decrease	Maintenance	Increase	
Annual rate of BW change (kg/year)	-1.540 ± 1.341	-0.014 ± 0.290	1.360 ± 1.226	< 0.001
Age (year)	55.184 ± 12.138	54.323 ± 11.507	50.558 ± 12.621	< 0.001
Male	292 (61.7)	249 (59.0)	292 (62.9)	0.322
Charlson comorbidity index				0.005
0 – 3	325 (68.7)	724 (77.8)	334 (72.0)	
≥ 4	148 (31.3)	206 (22.2)	130 (28.0)	
DM	184 (38.9)	243 (26.1)	165 (35.6)	< 0.001
CAD	33 (7.0)	45 (4.8)	29 (6.3)	0.564
Arrhythmia	22 (4.7)	14 (1.5)	8 (1.7)	< 0.001
Current smoking	76 (16.1)	147 (15.8)	66 (14.2)	0.684
BMI (kg/m <sup>2</sup> )	25.502 ± 3.411	24.216 ± 3.106	24.335 ± 3.622	< 0.001
WC (cm)	84.533 ± 21.573	80.728 ± 23.086	83.630 ± 20.785	0.004
SBP (mmHg)	127.159 ± 17.202	126.123 ± 15.172	126.970 ± 15.864	0.432
DBP (mmHg)	76.233 ± 11.860	76.486 ± 10.778	77.183 ± 10.985	0.388
Medications				
ACEi/ARBs	407 (86.0)	808 (86.9)	403 (86.9)	0.901
Diuretics	169 (35.7)	258 (27.7)	147 (31.7)	0.008
Number of anti-HTN drugs ≥ 3	151 (31.9)	228 (24.5)	141 (30.4)	0.005
Laboratory findings				
Hemoglobin (g/dL)	12.727 ± 1.984	13.138 ± 1.888	12.984 ± 2.080	0.001
Albumin (g/dL)	4.136 ± 0.429	4.245 ± 0.349	4.234 ± 0.387	< 0.001
Total cholesterol (mg/dL)	174.339 ± 383.063	173.124 ± 37.378	174.365 ± 38.011	0.782
LDL cholesterol (mg/dL)	96.524 ± 332.109	95.456 ± 30.116	97.562 ± 30.129	0.477
HDL cholesterol (mg/dL)	48.615 ± 15.045	50.459 ± 15.797	48.732 ± 14.502	0.044
Triglyceride (mg/dL)	168.609 ± 102.519	151.492 ± 94.493	155.793 ± 102.683	0.009
Fasting glucose (mg/dL)	113.837 ± 43.259	107.142 ± 31.613	111.446 ± 45.172	0.006
hsCRP (mg/dL)	0.8000 [0.300, 2.000]	0.545 [0.200, 1.500]	0.600 [0.200, 1.500]	0.307
25(OH) vitamin D (ng/dL)	17.866 ± 7.749	18.640 ± 8.179	16.974 ± 6.939	0.001
24-hr urine protein (mg/dL)	738.900 [292.450]	430.400 [152.350, 1085.250]	490.900 [138.000, 1345.550]	< 0.001
Urine ACR (mg/g Cr)	494.728 [162.643, 1303.109]	270.194 [49.640, 741.250]	255.451 [60.281, 843.487]	< 0.001
eGFR (mL/min./1.73m <sup>2</sup> )	46.196 ± 29.051	54.223 ± 28.237	55.637 ± 31.307	< 0.001

Table S1. (Continued)

	BW change			P value
	Decrease	Maintenance	Increase	
CKD stages				< 0.001
Stage 1	62 (13.1)	159 (17.1)	95 (20.5)	
Stage 2	65 (13.7)	218 (23.4)	97 (20.9)	
Stage 3a	73 (15.4)	168 (18.1)	90 (19.4)	
Stage 3b	114 (24.1)	216 (23.2)	83 (17.9)	
Stage 4	130 (27.5)	150 (16.1)	85 (18.3)	
Stage 5	29 (6.1)	19 (2.0)	14 (3.0)	

Note: Values for categorical variables are given as number (percentage); values for continuous variables, as mean ± standard deviation or median [interquartile range].  
Abbreviations: ACEi, angiotensin-converting enzyme inhibitor; ACR, albumin-to-creatinine ratio; ARB, angiotensin receptor blocker; BMI, body mass index; CAD, coronary artery disease; CCI, Charlson comorbidity index; CKD, chronic kidney disease; DBP, diastolic blood pressure; DM, diabetes mellitus; eGFR, estimated glomerular filtration rate; hsCRP, high-sensitivity C-reactive protein; SBP, systolic blood pressure; WC, waist circumference.

**Table S2. Raw numbers for the composite outcome by enrollment sites**

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	P value
Event cases	17	8	19	17	10	8	14	48	22	0.592
Total cases	125	112	199	164	137	109	199	588	234	

Note: Values are given as raw number.

Table S3. Raw numbers for the composite outcome by subgroups

		Event cases	Total cases
All subjects	Low BWV	30	496
	Moderate BWV	83	934
	High BWV	50	464
Age < 60 years	Low BWV	13	297
	Moderate BWV	32	606
	High BWV	21	316
Age ≥ 60 years	Low BWV	17	172
	Moderate BWV	51	328
	High BWV	29	148
Male	Low BWV	22	278
	Moderate BWV	58	556
	High BWV	35	299
Female	Low BWV	8	191
	Moderate BWV	25	378
	High BWV	15	165
CCI ≤ 3	Low BWV	12	360
	Moderate BWV	49	710
	High BWV	23	313
CCI ≥ 4	Low BWV	18	109
	Moderate BWV	34	224
	High BWV	27	151
DM (-)	Low BWV	13	344
	Moderate BWV	46	654
	High BWV	19	277
DM (+)	Low BWV	17	125
	Moderate BWV	37	280
	High BWV	31	187
BMI < 25 (kg/m <sup>2</sup> )	Low BWV	20	300
	Moderate BWV	52	561
	High BWV	24	215
BMI ≥ 25 (kg/m <sup>2</sup> )	Low BWV	10	169
	Moderate BWV	31	373
	High BWV	26	249

Table S3. (Continued)

		Event cases	Total cases
Diuretics (-)	Low BWV	17	320
	Moderate BWV	57	668
	High BWV	27	305
Diuretics (+)	Low BWV	13	149
	Moderate BWV	26	266
	High BWV	23	159
Number of anti-HTN drugs $\leq 2$	Low BWV	24	354
	Moderate BWV	53	690
	High BWV	31	303
Number of anti-HTN drugs $\geq 3$	Low BWV	6	115
	Moderate BWV	30	244
	High BWV	19	161
eGFR $\geq 45$ mL/min./1.73m <sup>2</sup>	Low BWV	9	216
	Moderate BWV	39	509
	High BWV	20	238
eGFR $< 45$ mL/min./1.73m <sup>2</sup>	Low BWV	21	226
	Moderate BWV	44	425
	High BWV	30	253
Random urine ACR $< 300$ mg/g	Low BWV	10	220
	Moderate BWV	49	456
	High BWV	19	211
Random urine ACR $\geq 300$ mg/g	Low BWV	19	235
	Moderate BWV	35	437
	High BWV	30	238

Note: Values are given as raw number.

Abbreviations: ACR, Albumin-to-creatinine ratio; BMI, body mass index; CCI, Charlson comorbidity index; CI, confidence interval; DM, diabetes mellitus; HTN, hypertension; eGFR, estimated glomerular filtration rate.

**Table S4. Charlson Comorbidity Index components of study participants by BWV**

	<b>BWV</b>			<b>P value</b>
	Low	Moderate	High	
Myocardial infarction	8 (1.7)	10 (1.1)	7 (1.5)	0.581
Congestive Heart Failure	3 (0.6)	8 (0.9)	8 (1.7)	0.201
Peripheral vascular disease	11 (2.3)	37 (4.0)	17 (3.7)	0.288
Cerebrovascular disease	23 (4.9)	43 (4.6)	41 (8.8)	0.004
Dementia	1 (0.2)	0 (0.0)	0 (0.0)	0.225
COPD	1 (0.2)	7 (0.7)	1 (0.2)	0.248
Connective tissue disease	26 (5.5)	56 (6.0)	32 (6.9)	0.676
Peptic ulcer disease	8 (1.7)	18 (1.9)	7 (1.5)	0.849
Mild liver disease	10 (2.1)	19 (2.0)	15 (3.2)	0.355
Moderate-to-severe liver disease or Liver cirrhosis	0 (0.0)	2 (0.2)	0 (0.0)	0.368
Diabetes without complication	20 (4.3)	53 (5.7)	32 (6.2)	0.217
Diabetes with organ damage	105 (22.4)	226 (24.2)	155 (33.4)	< 0.001
Hemiplegia	3 (0.6)	2 (0.2)	4 (0.9)	0.219
Moderate-to-severe renal disease	348 (74.2)	626 (67.0)	320 (69.0)	0.022
Any tumor within last 5 years	0 (0.0)	0 (0.0)	0 (0.0)	
Lymphoma	0 (0.0)	0 (0.0)	0 (0.0)	
Leukemia	0 (0.0)	0 (0.0)	0 (0.0)	
Metastatic solid tumor	0 (0.0)	0 (0.0)	0 (0.0)	
AIDS	0 (0.0)	0 (0.0)	0 (0.0)	

Note: Values for categorical variables are given as number (percentage).

Abbreviations: AIDS, acquired immunodeficiency syndrome; COPD, chronic obstructive pulmonary disease.

Table S5. Cox proportional hazards regression of BWV for the fatal and non-fatal CV events in various subgroups

		Unadjusted		Adjusted	
		HR (95%CI)	P value	HR (95%CI)	P value
Age < 60 years	Low BWV	1.810 (0.816, 4.011)	0.144	0.573 (0.174, 1.888)	0.360
	Moderate BWV	Reference		Reference	
	High BWV	1.689 (0.889, 3.208)	0.109	0.747 (0.252, 2.217)	0.599
Age ≥ 60 years	Low BWV	1.137 (0.582, 2.221)	0.708	1.380 (0.586, 3.251)	0.462
	Moderate BWV	Reference		Reference	
	High BWV	2.181 (1.284, 3.704)	0.004	2.191 (1.054, 4.557)	0.036
Male	Low BWV	1.894 (0.986, 3.639)	0.055	1.770 (0.772, 4.059)	0.178
	Moderate BWV	Reference		Reference	
	High BWV	1.529 (0.944, 2.476)	0.084	1.865 (1.020, 3.412)	0.043
Female	Low BWV	0.713 (0.300, 1.695)	0.444	0.361 (0.074, 1.770)	0.209
	Moderate BWV	Reference		Reference	
	High BWV	2.631 (1.206, 5.741)	0.015	0.615 (0.153, 2.476)	0.493
CCI ≤ 3	Low BWV	0.974 (0.454, 2.087)	0.946	0.915 (0.307, 2.728)	0.874
	Moderate BWV	Reference		Reference	
	High BWV	2.239 (1.230, 4.075)	0.008	1.901 (0.810, 4.460)	0.140
CCI ≥ 4	Low BWV	1.851 (0.916, 3.742)	0.086	4.447 (1.547, 12.786)	0.006
	Moderate BWV	Reference		Reference	
	High BWV	1.560 (0.878, 2.770)	0.129	1.962 (0.908, 4.238)	0.086
DM (-)	Low BWV	1.261 (0.604, 2.630)	0.537	1.626 (0.576, 4.587)	0.359
	Moderate BWV	Reference		Reference	
	High BWV	1.946 (1.000, 3.788)	0.050	1.548 (0.575, 4.165)	0.387
DM (+)	Low BWV	1.347 (0.661, 2.473)	0.412	2.099 (0.699, 6.300)	0.186
	Moderate BWV	Reference		Reference	
	High BWV	1.687 (0.989, 2.878)	0.055	2.300 (1.147, 4.612)	0.019
BMI < 25 (kg/m <sup>2</sup> )	Low BWV	1.484 (0.789, 2.789)	0.220	2.131 (0.924, 4.914)	0.076
	Moderate BWV	Reference		Reference	
	High BWV	1.963 (1.109, 3.475)	0.021	1.923 (0.900, 4.113)	0.092
BMI ≥ 25 (kg/m <sup>2</sup> )	Low BWV	0.996 (0.407, 2.436)	0.993	1.138 (0.284, 4.565)	0.855
	Moderate BWV	Reference		Reference	
	High BWV	1.602 (0.880, 2.914)	0.123	3.048 (1.181, 7.869)	0.021



Table S5. (continued)

		Unadjusted		Adjusted	
		HR (95%CI)	P value	HR (95%CI)	P value
<b>Diuretics (-)</b>	<b>Low BWV</b>	1.716 (0.872, 3.376)	0.118	2.286 (0.938, 5.572)	0.069
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	3.041 (1.659, 5.573)	< 0.001	2.515 (1.165, 5.428)	0.019
<b>Diuretics (+)</b>	<b>Low BWV</b>	0.997 (0.448, 2.221)	0.995	0.677 (0.201, 2.280)	0.529
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	1.365 (0.747, 2.496)	0.312	1.106 (0.469, 2.608)	0.817
<b>Number of anti-HTN drugs ≤2</b>	<b>Low BWV</b>	1.332 (0.738, 2.406)	0.342	1.715 (0.811, 3.629)	0.158
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	1.637 (0.981, 2.732)	0.059	1.615 (0.817, 3.194)	0.168
<b>Number of anti-HTN drugs ≥ 3</b>	<b>Low BWV</b>	0.986 (0.339, 2.870)	0.980	0.889 (0.118, 6.728)	0.909
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	2.504 (1.264, 4.963)	0.009	7.993 (2.145, 29.779)	0.002
<b>eGFR ≥ 45 mL/min./1.73m<sup>2</sup></b>	<b>Low BWV</b>	1.651 (0.630, 4.327)	0.308	0.285 (0.061, 1.340)	0.112
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	1.976 (1.063, 3.671)	0.031	2.142 (0.920, 4.991)	0.077
<b>eGFR &lt; 45 mL/min./1.73m<sup>2</sup></b>	<b>Low BWV</b>	1.201 (0.648, 2.224)	0.561	1.668 (0.734, 3.793)	0.222
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	1.847 (1.073, 3.179)	0.027	2.195 (1.051, 4.582)	0.036
<b>Random urine ACR &lt; 300 mg/g</b>	<b>Low BWV</b>	1.583 (0.723, 3.464)	0.251	2.915 (0.982, 8.648)	0.054
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	2.111 (1.130, 3.944)	0.019	2.219 (0.921, 5.348)	0.076
<b>Random urine ACR ≥ 300 mg/g</b>	<b>Low BWV</b>	1.061 (0.536, 2.099)	0.865	1.321 (0.506, 3.445)	0.570
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV</b>	1.554 (0.890, 2.715)	0.121	1.932 (0.913, 4.091)	0.085

Note: Models were adjusted for age, gender, Charlson comorbidity index, history of DM, smoking history, BMI, SBP, DBP, Medications (ACEi/ARBs, diuretics, Number of antihypertensive drugs), hemoglobin, albumin, HDL-cholesterol, triglycerides, fasting serum glucose, hs-CRP, 25(OH) vitamin D levels, eGFR, and 24-hour urine protein. Abbreviations: ACR, Albumin-to-creatinine ratio; BMI, body mass index; CCI, Charlson comorbidity index; CI, confidence interval; DM, diabetes mellitus; HTN, hypertension; eGFR, estimated glomerular filtration rate.

Table S6. Cox proportional hazards regression of BWV for all-cause mortality in various subgroups

		Unadjusted		Adjusted	
		HR (95%CI)	P value	HR (95%CI)	P value
Age < 60 years	Low BWV	0.994 (0.316, 3.124)	0.992	0.508 (0.139, 1.862)	0.307
	Moderate BWV	Reference		Reference	
	High BWV	1.101 (0.407, 2.980)	0.850	0.888 (0.278, 2.843)	0.888
Age ≥ 60 years	Low BWV	0.960 (0.461, 1.999)	0.912	0.998 (0.466, 2.138)	0.995
	Moderate BWV	Reference		Reference	
	High BWV	2.182 (1.238, 3.845)	0.007	2.438 (1.324, 4.490)	0.004
Male	Low BWV	1.061 (0.511, 2.205)	0.873	0.950 (0.446, 2.025)	0.895
	Moderate BWV	Reference		Reference	
	High BWV	1.625 (0.914, 2.890)	0.098	2.039 (1.093, 3.807)	0.025
Female	Low BWV	0.984 (0.308, 3.137)	0.978	1.064 (0.316, 3.582)	0.920
	Moderate BWV	Reference		Reference	
	High BWV	1.780 (0.702, 4.511)	0.224	1.374 (0.451, 4.186)	0.576
CCI ≤ 3	Low BWV	0.878 (0.351, 2.201)	0.782	0.736 (0.308, 2.058)	0.638
	Moderate BWV	Reference		Reference	
	High BWV	1.733 (0.855, 3.512)	0.127	2.636 (1.227, 5.662)	0.013
CCI ≥ 4	Low BWV	1.113 (0.480, 2.578)	0.804	0.983 (0.393, 2.461)	0.971
	Moderate BWV	Reference		Reference	
	High BWV	1.311 (0.662, 2.595)	0.437	1.556 (0.714, 3.390)	0.266
DM (-)	Low BWV	1.306 (0.586, 2.910)	0.513	1.022 (0.441, 2.370)	0.959
	Moderate BWV	Reference		Reference	
	High BWV	1.408 (0.649, 3.053)	0.386	1.701 (0.736, 3.933)	0.214
DM (+)	Low BWV	0.761 (0.282, 2.051)	0.589	0.682 (0.245, 1.898)	0.463
	Moderate BWV	Reference		Reference	
	High BWV	1.580 (0.829, 3.011)	0.164	1.707 (0.815, 3.576)	0.156
BMI < 25 (kg/m <sup>2</sup> )	Low BWV	1.050 (0.481, 2.293)	0.903	0.902 (0.300, 2.713)	0.855
	Moderate BWV	Reference		Reference	
	High BWV	2.361 (1.245, 4.479)	0.009	3.413 (1.372, 8.491)	0.008
BMI ≥ 25 (kg/m <sup>2</sup> )	Low BWV	0.972 (0.353, 2.677)	0.956	0.846 (0.293, 2.448)	0.758
	Moderate BWV	Reference		Reference	
	High BWV	1.160 (0.543, 2.479)	0.701	1.129 (0.476, 2.677)	0.783

Table S6. (continued)

		Unadjusted		Adjusted	
		HR (95%CI)	P value	HR (95%CI)	P value
Diuretics (-)	Low BWV	1.334 (0.599, 2.971)	0.480	1.203 (0.524, 2.763)	0.663
	Moderate BWV	Reference		Reference	
	High BWV	1.812 (0.901, 3.645)	0.095	1.993 (0.941, 4.218)	0.071
Diuretics (+)	Low BWV	0.684 (0.253, 1.848)	0.454	0.733 (0.251, 2.139)	0.570
	Moderate BWV	Reference		Reference	
	High BWV	1.435 (0.723, 2.849)	0.302	1.574 (0.682, 3.631)	0.288
Number of anti-HTN drugs ≤2	Low BWV	1.122 (0.511, 2.466)	0.774	1.064 (0.474, 2.389)	0.880
	Moderate BWV	Reference		Reference	
	High BWV	1.847 (0.945, 3.609)	0.073	1.773 (0.854, 3.681)	0.124
Number of anti-HTN drugs ≥ 3	Low BWV	0.930 (0.340, 2.542)	0.887	0.674 (0.208, 2.189)	0.512
	Moderate BWV	Reference		Reference	
	High BWV	1.267 (0.617, 2.600)	0.519	1.837 (0.770, 4.382)	0.170
eGFR ≥ 45 mL/min./1.73m <sup>2</sup>	Low BWV	0.779 (0.165, 3.672)	0.753	0.624 (0.123, 3.161)	0.569
	Moderate BWV	Reference		Reference	
	High BWV	2.623 (1.035, 6.647)	0.042	2.459 (0.784, 7.709)	0.123
eGFR < 45 mL/min./1.73m <sup>2</sup>	Low BWV	0.959 (0.486, 1.892)	0.903	0.906 (0.442, 1.855)	0.786
	Moderate BWV	Reference		Reference	
	High BWV	1.449 (0.808, 2.599)	0.213	1.409 (0.743, 2.673)	0.294
Random urine ACR < 300 mg/g	Low BWV	1.087 (0.451, 2.623)	0.853	0.989 (0.385, 2.543)	0.982
	Moderate BWV	Reference		Reference	
	High BWV	1.857 (0.915, 3.768)	0.086	2.580 (1.177, 5.660)	0.018
Random urine ACR ≥ 300 mg/g	Low BWV	1.025 (0.426, 2.463)	0.956	1.030 (0.403, 2.631)	0.950
	Moderate BWV	Reference		Reference	
	High BWV	1.546 (0.769, 3.112)	0.222	1.679 (0.730, 3.859)	0.222

Note: Models were adjusted for age, gender, Charlson comorbidity index, history of DM, smoking history, BMI, SBP, DBP, Medications (ACEi/ARBs, diuretics, Number of antihypertensive drugs), hemoglobin, albumin, HDL-cholesterol, triglycerides, fasting serum glucose, hs-CRP, 25(OH) vitamin D levels, eGFR, and 24-hour urine protein. Abbreviations: ACR, Albumin-to-creatinine ratio; BMI, body mass index; CCI, Charlson comorbidity index; CI, confidence interval; DM, diabetes mellitus; HTN, hypertension; eGFR, estimated glomerular filtration rate.

Table S7. Multinomial logistic regression of BWV for longitudinal BW change

		BW decrease vs. BW maintenance		BW increase vs. BW maintenance	
		OR (95%CI)	P value	OR (95%CI)	P value
Unadjusted	BWV, low	0.412 (0.304, 0.558)	< 0.001	0.481 (0.356, 0.649)	< 0.001
	BWV, moderate	Reference		Reference	
	BWV, high	2.598 (1.966, 3.432)	< 0.001	2.907 (2.198, 3.846)	< 0.001
Adjusted	BWV, low	0.429 (0.300, 0.614)	< 0.001	0.541 (0.384, 0.763)	< 0.001
	BWV, moderate	Reference		Reference	
	BWV, high	2.310 (1.661, 3.213)	< 0.001	2.642 (1.912, 3.652)	< 0.001

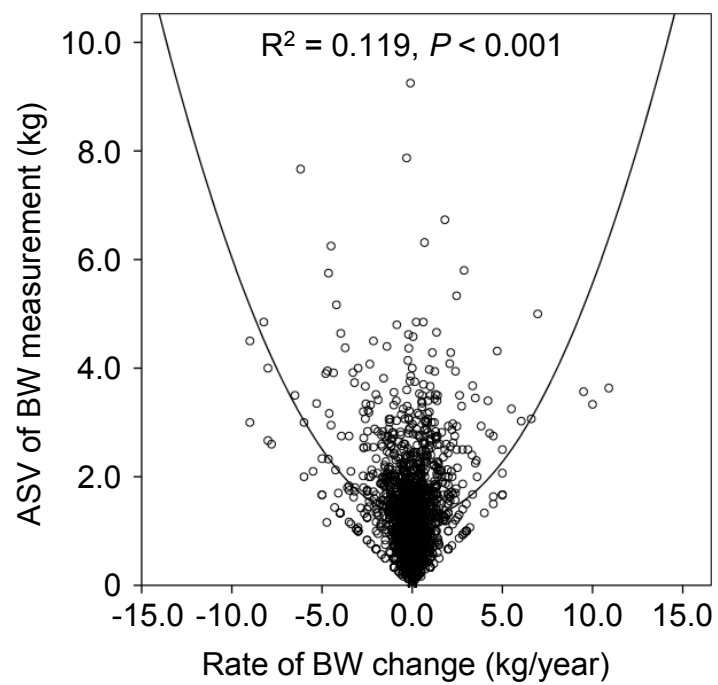
Note: Models were adjusted for age, gender, Charlson comorbidity index, history of DM, smoking history, BMI, SBP, DBP, Medications (ACEi/ARBs, diuretics, number of antihypertensive drugs), hemoglobin, albumin, HDL-cholesterol, triglycerides, fasting serum glucose, hs-CRP, 25(OH) vitamin D levels, eGFR, and 24-hour urine protein.  
Abbreviations: ACR, Albumin-to-creatinine ratio; BMI, body mass index; CCI, Charlson comorbidity index; CI, confidence interval; DM, diabetes mellitus; HTN, hypertension; eGFR, estimated glomerular filtration rate.

Table S8. Cox proportional hazards regression of BMI in addition to BWV for the outcomes

		Unadjusted		Adjusted	
		HR (95%CI)	P value	HR (95%CI)	P value
<b>Composite outcome</b>	<b>Low BWV</b>	1.236 (0.743, 2.056)	0.416	1.455 (0.795, 2.663)	0.224
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV, BMI 20 - 24.9 kg/m<sup>2</sup></b>	1.967 (1.205, 3.210)	0.007	1.482 (0.808, 2.721)	0.204
	<b>High BWV, BMI &lt; 20 or ≥ 25 kg/m<sup>2</sup></b>	1.592 (0.917, 2.766)	0.099	2.149 (1.107, 4.173)	0.024
<b>Fatal and non-fatal CV events</b>	<b>Low BWV</b>	1.281 (0.771, 2.131)	0.339	1.602 (0.884, 2.902)	0.120
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV, BMI 20 - 24.9 kg/m<sup>2</sup></b>	1.998 (1.225, 3.258)	0.006	1.582 (0.873, 2.868)	1.582
	<b>High BWV, BMI &lt; 20 or ≥ 25 kg/m<sup>2</sup></b>	1.636 (0.942, 2.842)	0.081	2.286 (1.180, 4.426)	0.014
<b>All-cause mortality</b>	<b>Low BWV</b>	1.008 (0.543, 1.869)	0.980	0.933 (0.493, 1.759)	0.831
	<b>Moderate BWV</b>	Reference		Reference	
	<b>High BWV, BMI 20 - 24.9 kg/m<sup>2</sup></b>	1.425 (0.768, 2.642)	0.262	1.618 (0.810, 3.232)	0.173
	<b>High BWV, BMI &lt; 20 or ≥ 25 kg/m<sup>2</sup></b>	2.078 (1.138, 3.796)	0.017	2.124 (1.101, 4.095)	0.025

Note: Models were adjusted for age, gender, Charlson comorbidity index, history of DM, smoking history, BMI, SBP, DBP, Medications (ACEi/ARBs, diuretics, Number of antihypertensive drugs), hemoglobin, albumin, HDL-cholesterol, triglycerides, fasting serum glucose, hs-CRP, 25(OH) vitamin D levels, eGFR, and 24-hour urine protein.

Abbreviations: BWV, body weight variability; CV, cardiovascular; CI, confidence interval.



**Figure S1. Scatter plot for the correlations of BW slope with BWV**

Abbreviations: ASV, average successive variability; BW, body weight; BWV, body weight variability