

**Supplementary Table 6.** Clinical characteristics according to the use of DPP-4i and/or RAS blockade in Korean COVID-19 patients with diabetes based on the NHID-COVID database from the National Health Insurance Service of Korea

Characteristic	No RAS blockade, no DPP-4i user (n=402)	RAS blockade only user (n=127)	DPP-4i only user (n=90)	Both DPP-4i and RAS blockade user (n=85)	P value
Age group, yr					0.062
<40	13 (3.2)	2 (1.6)	1 (1.1)	0	
40 to <50	41 (10.2)	4 (3.1)	7 (7.8)	3 (3.5)	
50 to <60	111 (27.6)	26 (20.5)	23 (25.6)	20 (23.5)	
60 to <70	118 (29.4)	41 (32.3)	37 (41.1)	34 (40.0)	
70 to <80	76 (18.9)	35 (27.6)	15 (16.7)	20 (23.5)	
≥80	43 (10.7)	19 (15.0)	7 (7.8)	8 (9.4)	
Male sex	155 (38.6)	46 (36.2)	45 (50.0)	38 (44.7)	0.133
Height, cm	160.9±8.8	158.6±8.2	161.4±9.4	159.8±8.6	0.341
Weight, kg	62.3±11.9	65.7±11.1	64.5±11.4	67.1±10.1	<0.001
BMI, kg/m <sup>2</sup>	23.9±3.4	26.0±3.4	24.6±2.9	26.2±3.1	<0.001
Waist circumference, cm	81.9±9.3	86.1±8.3	84.1±8.9	87.6±8.1	<0.001
SBP, mm Hg	122.5±14.7	133.0±14.1	123.6±15.4	132.6±16.8	<0.001
DBP, mm Hg	75.0±9.9	79.2±9.1	74.7±9.7	79.7±10.9	0.001
Fasting glucose, mg/dL	111.7±42.4	111.9±27.0	140.5±69.0	142.2±41.9	<0.001
Total cholesterol, mg/dL	195.6±40.4	186.0±42.7	177.7±40.6	177.2±35.2	<0.001
Smoking	40 (10.0)	7 (5.5)	8 (8.9)	4 (4.7)	0.262
Drinking	31 (7.7)	9 (7.1)	10 (11.1)	7 (8.2)	0.635
Regular exercise	96 (23.9)	30 (23.6)	29 (32.2)	18 (21.2)	0.316
Hypertension	144 (35.8)	127 (100.0)	32 (35.6)	85 (100.0)	<0.001
Dyslipidemia	342 (85.1)	124 (97.6)	85 (94.4)	80 (94.1)	<0.001
Cardiovascular disease	282 (70.1)	94 (74.0)	71 (78.9)	67 (78.8)	0.189
Cerebrovascular disease	47 (11.7)	12 (9.4)	11 (12.2)	9 (10.6)	0.893
Chronic kidney disease	5 (1.2)	4 (3.1)	4 (4.4)	3 (3.5)	0.181
Asthma	98 (24.4)	40 (31.5)	25 (27.8)	25 (29.4)	0.396
COPD	25 (6.2)	13 (10.2)	3 (3.3)	3 (3.5)	0.120
Cancer	10 (2.5)	2 (1.6)	2 (2.2)	3 (3.5)	0.837
Medication					
Metformin	37 (9.2)	42 (33.1)	76 (84.4)	67 (78.8)	<0.001
Sulfonylurea	14 (3.5)	17 (13.4)	28 (31.1)	27 (31.8)	<0.001
Meglitinide	0	0	0	0	NA
TZD	5 (1.2)	2 (1.6)	8 (8.9)	6 (7.1)	0.055
DPP-4i	0	0	90 (100.0)	85 (100.0)	<0.001
SGLT2i	10 (2.5)	6 (4.7)	0	0	0.055
AGI	0	2 (1.6)	0	0	0.028
Insulin	0	0	0	0	NA
RAS blockade	0	127 (100.0)	0	85 (100.0)	<0.001
ACEi	0	6 (4.7)	0	4 (4.7)	<0.001
ARB	0	121 (95.3)	0	81 (95.3)	<0.001
Beta blocker	17 (4.2)	20 (15.7)	8 (8.9)	9 (10.6)	<0.001
Diuretics	12 (3.0)	33 (26.0)	5 (5.6)	26 (30.6)	<0.001
CCB	35 (8.7)	63 (49.6)	13 (14.4)	37 (43.5)	<0.001
Statin	68 (16.9)	84 (66.1)	53 (58.9)	53 (62.4)	<0.001
Fibrate	3 (0.7)	3 (2.4)	4 (4.4)	5 (5.9)	0.008

Values are presented as number (%) or mean ± standard deviation.

DPP-4i, dipeptidyl peptidase-4 inhibitor; RAS, renin-angiotensin system; COVID-19, coronavirus disease 2019; NHID, National Health Information Database; BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; COPD, chronic obstructive pulmonary disease; NA, not applicable; TZD, thiazolidinedione; SGLT2i, sodium glucose cotransporter 2 inhibitor; AGI, alpha glucosidase inhibitor; ACEi, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; CCB, calcium-channel blocker.