

SUPPLEMENTAL MATERIAL

This appendix has been provided by the authors to give readers additional information about their work.

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Supplementary Figure 1: The distribution of propensity scores.

(A) is distribution of propensity scores between two groups, one is hypertensive patients with calcium channel blockers (CCBs), another is without in the coronavirus disease 2019 (COVID-19) patients.

(B) is distribution of propensity scores between two groups, one is hypertensive patients with RAAS inhibitors, another is without in COVID-19 patients.

(C) is distribution of propensity scores between two groups, one is hypertensive patients with beta-blockers, another is without in COVID-19 patients.

Supplementary Table1: The basic clinical characteristics of hypertensive patients with or without RAAS inhibitors.

Items	RAAS inhibitors	Non-RAAS-inhibit	Statistics	P value	CCBs (matched;	Non-CCBs	Statistics	P value
	(unmatched; n = 259)	ors (unmatched; n =1190)	(F/Z/ χ^2)		n = 236)	(matched; n = 236)	(F/Z/ χ^2)	
General condition								
Age, years	66(57,73)	66(58,72)	-0.17 [†]	0.8683	66(57,73)	65.50(57,73)	0.11 [†]	0.9091
Gender, male	132(50.97)	571(47.98)	0.76 [‡]	0.3842	117(49.58)	122(51.69)	0.21 [‡]	0.6453
Temperature, degree centigrade	36.50(36.30,36.70)	36.50(36.30,36.70)	0.74 [†]	0.4582	36.50(36.30,36.70)	36.50(36.30,36.70)	-0.06 [†]	0.9516
Respiratory rate, breaths per min	20(18,21)	20(19,20)	0.36 [†]	0.7159	20(18,21)	20(19,21)	-1.29 [†]	0.1969
Pulse rate	84.0(76.0,96.0)	84.0(78.0,94.0)	-0.13 [†]	0.8971	85.0(76.0,96.5)	86.0(78.0,96.5)	-0.85 [†]	0.3953
Disease severity			1.15 [‡]	0.2830			0.06 [‡]	0.8073
Mild type	11(4.25)	31(2.61)			10(4.24)	6(2.54)		
Ordinary type	182(70.27)	837(70.34)			163(69.07)	168(71.19)		
Severe type	59(22.78)	278(23.36)			56(23.73)	55(23.31)		
Critical type	7(2.70)	44(3.70)			7(2.97)	7(2.97)		
Blood pressure, mmHg								
Systolic	138(126,153)	136(125,148)	2.72 [†]	0.0066	138(126,152.50)	138(128,150)	0.60 [†]	0.5500

Diastolic	84(77,93)	82(76,90)	2.38 [†]	0.0173	84(77,93)	84(78,92)	0.15 [†]	0.8845
Medical history								
Diabetes	55(21.24)	301(25.29)	1.89 [‡]	0.1691	54(22.88)	49(20.76)	0.31 [‡]	0.5774
Coronary heart disease	40(15.44)	156(13.11)	0.99 [‡]	0.3194	33(13.98)	39(16.53)	0.59 [‡]	0.4424
Kidney disease	13(5.02)	55(4.62)	0.08 [‡]	0.7840	11(4.66)	11(4.66)	0.00 [‡]	1.0000
COPD	2(0.77)	22(1.85)	1.51 [*]	0.2186	2(0.85)	2(0.85)	0.00 [*]	1.0000
Cancer	1(0.39)	14(1.18)	1.30 [*]	0.2548	1(0.42)	0(0.00)	0.00 [*]	1.0000
Antihypertensive treatment								
RAAS inhibitors	193(74.52)	885(74.37)	0.00 [‡]	0.9607	175(74.15)	180(76.27)	0.28 [‡]	0.5940
Beta-blockers	100(38.61)	277(23.28)	25.98 [‡]	<0.0001	79(33.47)	83(35.17)	0.15 [‡]	0.6982
Diuretics	59(22.78)	141(11.85)	21.36 [‡]	<0.0001	40(16.95)	48(20.34)	0.89 [‡]	0.3444
Others	17(6.56)	44(3.70)	4.33 [‡]	0.0374	11(4.66)	11(4.66)	0.00 [‡]	1.0000
Treatment								
Antiviral therapy	158(61.00)	689(57.90)	0.84 [‡]	0.3582	143(60.59)	147(62.29)	0.14 [‡]	0.7052
Antibacterial	121(46.72)	432(36.30)	9.78 [‡]	0.0018	101(42.80)	103(43.64)	0.03 [‡]	0.8526
Antifungal	3(1.16)	17(1.43)	0.00 [*]	0.9649	3(1.27)	4(1.69)	0.15 [*]	0.7034
Immunoglobulin	60(23.17)	225(18.91)	2.44 [‡]	0.1182	53(22.46)	41(17.37)	1.91 [‡]	0.1666
Glucocorticoid	27(10.42)	189(15.88)	4.99 [‡]	0.0254	26(11.02)	31(13.14)	0.50 [‡]	0.4800
Plasma	0(0.00)	1(0.08)	0.00 [*]	1.0000	0(0.00)	0(0.00)	NA	NA

Data are presented as median (interquartile) or *n* (%). CCBs: Calcium channel blockers; COPD: Chronic obstructive pulmonary disease; IQR: interquartile range; NA: not applicable; RAAS: Renin-angiotensin-aldosterone system. * *F*-statistics; [†] *Z*-statistics; [‡] χ^2 -statistics.

Supplementary Table 2: The basic clinical characteristics of hypertensive patients with or without beta-blockers.

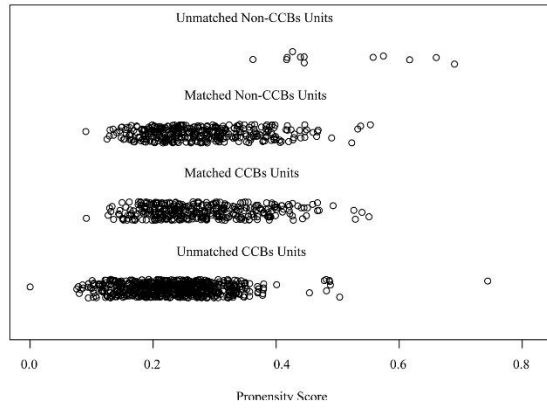
Items	Beta-blockers	Non-beta-blockers	Statistics		Beta-blockers	Non-beta-blockers	Statistics	
	(unmatched; <i>n</i> = 377)	(unmatched; <i>n</i> = 1072)	(<i>F/Z/χ</i> ²)	<i>P</i> value	(matched; <i>n</i> = 340)	(matched; <i>n</i> = 340)	(<i>F/Z/χ</i> ²)	<i>P</i> value
General condition								
Age, years	67(58,73)	66(58,72)	1.11 [†]	0.2676	66(58,73)	65(57,72)	-1.13 [†]	0.2593
Gender, male	185(49.07)	518(48.32)	0.06 [‡]	0.8019	160(47.06)	178(52.35)	1.91 [‡]	0.1674
Temperature, degree centigrade	36.5(36.3,36.7)	36.5(36.3,36.7)	1.02 [†]	0.3077	36.5(36.3,36.7)	36.5(36.3,36.7)	-0.04 [†]	0.9701
Respiratory rate, breaths per min	20(19,20)	20(19,20)	1.19 [†]	0.2328	20(19,20)	20(18,20)	-1.11 [†]	0.2665
Pulse rate	86(78,96)	84(78,95)	1.46 [†]	0.1456	85(78,96)	85(78,94)	-0.35 [†]	0.7261
Disease severity			11.71 [‡]	0.0006			0.16 [‡]	0.6891
Mild type	15(3.98)	27(2.52)			15(4.41)	6(1.76)		
Ordinary type	238(63.13)	781(72.85)			228(67.06)	238(70.00)		
Severe type	97(25.73)	240(22.39)			85(25.00)	86(25.29)		
Critical type	27(7.16)	24(2.24)			12(3.53)	10(2.94)		
Blood pressure, mmHg								
Systolic	138(126,150)	134(124,147)	0.13 [†]	0.8945	136.50(126,149.50)	136(125,149)	-0.55 [†]	0.5821

Diastolic	83(76,91)	81(74,90)	0.53 [†]	0.5993	84(77,90)	82(76,90)	-0.49 [†]	0.6250
Medical history								
Diabetes	91(24.14)	265(24.72)	0.05 [‡]	0.8213	82(24.12)	84(24.71)	0.03 [‡]	0.8583
Coronary heart disease	92(24.40)	104(9.70)	51.54 [‡]	<0.0001	73(21.47)	78(22.94)	0.21 [‡]	0.6446
Kidney disease	22(5.84)	46(4.29)	1.49 [‡]	0.2226	12(3.53)	12(3.53)	0.00 [‡]	1.0000
COPD	7(1.86)	17(1.59)	0.13 [‡]	0.7229	4(1.18)	7(2.06)	0.83 [‡]	0.3618
Cancer	2(0.53)	13(1.21)	0.69 [*]	0.4066	2(0.59)	2(0.59)	0.00 [*]	1.0000
Antihypertensive treatment								
ACE	100(26.53)	159(14.83)	25.98 [‡]	<0.0001	84(24.71)	84(24.71)	0.00 [‡]	1.0000
CCBs	298(79.05)	780(72.76)	5.78 [‡]	0.0162	266(78.24)	267(78.53)	0.01 [‡]	0.9258
Diuretics	88(23.34)	112(10.45)	38.98 [‡]	<0.0001	61(17.94)	53(15.59)	0.67 [‡]	0.4115
Others	37(9.81)	24(2.24)	39.69 [*]	<0.0001	18(5.29)	16(4.71)	0.12 [‡]	0.7249
Treatment								
Antiviral therapy	214(56.76)	633(59.05)	0.60 [‡]	0.4388	188(55.29)	191(56.18)	0.05 [‡]	0.8168
Antibacterial	158(41.91)	395(36.85)	3.03 [‡]	0.0818	131(38.53)	138(40.59)	0.30 [‡]	0.5830
Antifungal	15(3.98)	5(0.47)	25.28 [‡]	<0.0001	2(0.59)	3(0.88)	0.00 [*]	1.0000
Immunoglobulin	97(25.73)	188(17.54)	11.85 [‡]	0.0006	75(22.06)	76(22.35)	0.00 [‡]	0.9265
Glucocorticoid	81(21.49)	135(12.59)	17.39 [‡]	<0.0001	60(17.65)	57(16.76)	0.01 [‡]	0.7605
Plasma	1(0.27)	0(0.00)	0.30 [*]	0.2602	0(0.00)	0(0.00)	NA	NA

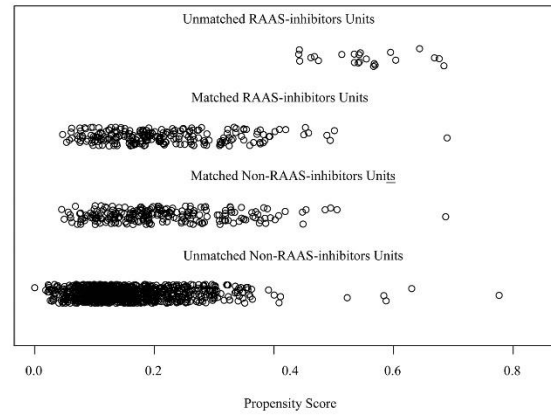
Data are presented as median (interquartile) or *n* (%). ACE: Angiotensin-converting enzyme. CCBs: Calcium channel blockers; COPD: Chronic obstructive pulmonary disease; IQR: interquartile range; NA: not applicable.* *F*-statistics; [†] *Z*-statistics; [‡] χ^2 -statistics.

Supplementary Figure 1 The distribution of propensity scores.

(A) Distribution of Propensity Scores



(B) Distribution of Propensity Scores



(C) Distribution of Propensity Scores

