

Table S1. Definition and detailed classification of underlying disease.

Disease	Definition and detailed classification
Hypertension	The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record
Diabetes mellitus	The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record.
Heart disease	<p>The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record.</p> <p>(Ischemic heart disease, myocardial infarction, angina, valvular heart disease, arrhythmia, congestive heart disease, myocardopathy, congenital heart disease, previous heart intervention record including stent, primary coronary intervention, coronary artery bypass grafting, and other heart disease)</p>
Chronic kidney disease	<p>The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record.</p> <p>(chronic renal failure, dialysis, kidney transplantation, and other chronic kidney disease)</p>
Chronic respiratory disease	The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record. (asthma, chronic obstructive pulmonary disease, pulmonary tuberculosis, other chronic respiratory disease.)
Stroke	<p>The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record.</p> <p>(cerebral infarction, cerebral haemorrhage, and unclassified stroke)</p>
Dyslipidemia	<p>The disease was diagnosed by the doctor prior to cardiac arrest and is clearly stated in the medical record.</p> <p>(hyperlipidaemia and unclassified dyslipidemia)</p>

Table S2. Demographic characteristics of the study population of two groups (non-CKD and CKD without RRT) after propensity score matching.

Variables	Non-CKD (N=1,401)	CKD without RRT (N=1,401)	<i>P-value</i>
Sex, n (%)			
Male	845 (60.3%)	844 (60.2%)	1.000
Age, years [median (IQR)]	75.0 [64.0-81.0]	75.0 [65.0-81.0]	0.681
Location of CA			
Residential CA	862 (61.5%)	865 (61.7%)	0.938
Non-residential CA	539 (38.5%)	536 (38.3%)	
Witnessed CA	823 (58.7%)	810 (57.8%)	0.646
Bystander CPR	298 (21.3%)	316 (22.6%)	0.438
Bystander AED use	1 (0.1%)	1 (0.1%)	1.000
Cause of cardiac arrest			
Cardiac origin	1,351 (96.4%)	1,340 (95.6%)	0.333
Non-cardiac origin	50 (3.6%)	61 (4.4%)	
Initial cardiac rhythm			
Shockable	123 (8.8%)	132 (9.4%)	0.599
None-shockable	1278 (91.2%)	1269 (90.6%)	
Prehospital ROSC	95 (6.8%)	92 (6.6%)	0.880
Underlying disease			
DM	689 (49.2%)	710 (50.7%)	0.450
HTN	780 (55.7%)	788 (56.2%)	0.790
Dyslipidemia	52 (3.7%)	56 (4.0%)	0.768
Heart disease	384 (27.4%)	436 (31.1%)	0.034
Resp. disease	110 (7.9%)	117 (8.4%)	0.678
Stroke	138 (9.9%)	160 (11.4%)	0.198
Post-cardiac arrest care			
PCI	78 (5.6%)	85 (6.1%)	0.628
TTM	52 (3.7%)	56 (4.0%)	0.768
Outcomes at hospital discharge			
Survival	80 (5.7%)	77 (5.5%)	0.870
Good neurological outcome	71 (5.1%)	46 (3.3%)	0.023

Abbreviations: CKD, chronic kidney disease; RRT, renal replacement therapy; IQR, interquartile range; CA, cardiac arrest; CPR, cardiopulmonary resuscitation; AED, automated external defibrillator; DM, diabetes mellitus; HTN, hypertension; PCI, primary coronary intervention; TTM, targeted temperature management; and ROSC, return of spontaneous circulation.

Table S3. Demographic characteristics of the study population of two groups (non-CKD and CKD with RRT) after propensity score matching.

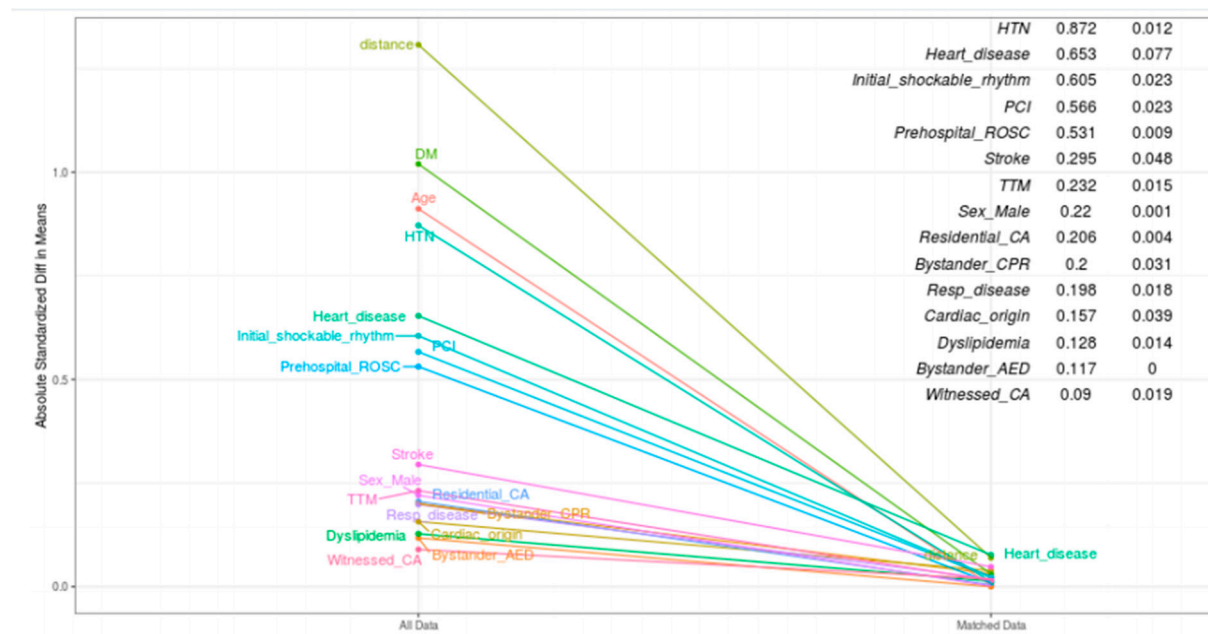
Variables	Non-CKD (N=1,541)	CKD with RRT (N=1,541)	<i>P-value</i>
Sex, n (%)			
Male	986 (64.0%)	956 (62.0%)	0.279
Age, years [median (IQR)]	69.0 [58.0-78.0]	66.0 [56.0-74.0]	< 0.001
Location of CA			
Residential CA	863 (56.0%)	871 (56.5%)	0.799
Non-residential CA	678 (44.0%)	670 (43.5%)	
Witnessed CA	928 (60.2%)	926 (60.1%)	0.971
Bystander CPR	278 (18.0%)	298 (19.3%)	0.380
Bystander AED use	2 (0.1%)	5 (0.3%)	0.453
Cause of cardiac arrest			
Cardiac origin	1,448 (94.0%)	1,428 (92.7%)	0.171
Non-cardiac origin	93 (6.0%)	113 (7.3%)	
Initial cardiac rhythm			
Shockable	152 (9.9%)	163 (10.6%)	0.552
None-shockable	1389 (90.1%)	1378 (89.4%)	
Prehospital ROSC	120 (7.8%)	123 (8.0%)	0.894
Underlying disease			
DM	750 (48.7%)	740 (48.0%)	0.746
HTN	758 (49.2%)	807 (52.4%)	0.084
Dyslipidemia	41 (2.7%)	32 (2.1%)	0.343
Heart disease	338 (21.9%)	378 (24.5%)	0.096
Resp. disease	76 (4.9%)	76 (4.9%)	1.000
Stroke	111 (7.2%)	132 (8.6%)	0.181
Post-cardiac arrest care			
PCI	100 (6.5%)	103 (6.7%)	0.885
TTM	76 (4.9%)	84 (5.5%)	0.570
Outcomes at hospital discharge			
Survival	108 (7.0%)	102 (6.6%)	0.721
Good neurological outcome	101 (6.6%)	68 (4.4%)	0.011

Abbreviations: CKD, chronic kidney disease; RRT, renal replacement therapy; IQR, interquartile range; CA, cardiac arrest; CPR, cardiopulmonary resuscitation; AED, automated external defibrillator; DM, diabetes mellitus; HTN, hypertension; PCI, primary coronary intervention; TTM, targeted temperature management; and ROSC, return of spontaneous circulation.

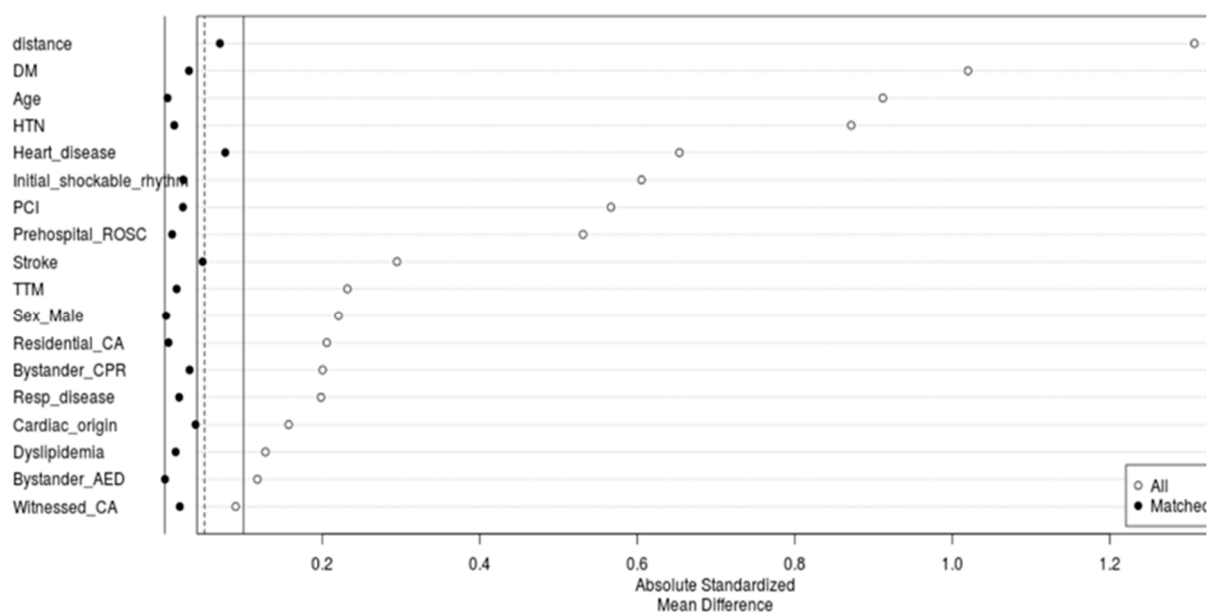
Table S4. Demographic characteristics of the study population of two groups (CKD without RRT and CKD with RRT) after propensity score matching.

Variables	CKD without RRT (N=1,444)	CKD with RRT (N=1,444)	<i>P-value</i>
Sex, n (%)			
Male	882 (61.1%)	890 (61.6%)	0.789
Age, years [median (IQR)]	72.0 [63.0-79.0]	70.0 [62.0-76.0]	< 0.001
Location of CA			
Residential CA	856 (59.3%)	864 (59.8%)	0.791
Non-residential CA	588 (40.7%)	580 (40.2%)	
Witnessed CA	853 (59.1%)	852 (59.0%)	1.000
Bystander CPR	282 (19.5%)	278 (19.3%)	0.888
Bystander AED use	1 (0.1%)	2 (0.1%)	1.000
Cause of cardiac arrest			
Cardiac origin	1373 (95.1%)	1377 (95.4%)	0.794
Non-cardiac origin	71 (4.9%)	67 (4.6%)	
Initial cardiac rhythm			
Shockable	132 (9.1%)	135 (9.3%)	0.898
None-shockable	1312 (90.9%)	1309 (90.7%)	
Prehospital ROSC	92 (6.4%)	91 (6.3%)	1.000
Underlying disease			
DM	866 (60.0%)	883 (61.1%)	0.542
HTN	906 (62.7%)	891 (61.7%)	0.591
Dyslipidemia	49 (3.4%)	36 (2.5%)	0.186
Heart disease	501 (34.7%)	492 (34.1%)	0.754
Resp. disease	89 (6.2%)	80 (5.5%)	0.526
Stroke	166 (11.5%)	149 (10.3%)	0.340
Post-cardiac arrest care			
PCI	77 (5.3%)	82 (5.7%)	0.744
TTM	64 (4.4%)	61 (4.2%)	0.855
Outcomes at hospital discharge			
Survival to hospital discharge	84 (5.8%)	80 (5.5%)	0.809
Good neurological outcome	67 (4.6%)	59 (4.1%)	0.524

Abbreviations: CKD, chronic kidney disease; RRT, renal replacement therapy; IQR, interquartile range; CA, cardiac arrest; CPR, cardiopulmonary resuscitation; AED, automated external defibrillator; DM, diabetes mellitus; HTN, hypertension; PCI, primary coronary intervention; TTM, targeted temperature management; and ROSC, return of spontaneous circulation.



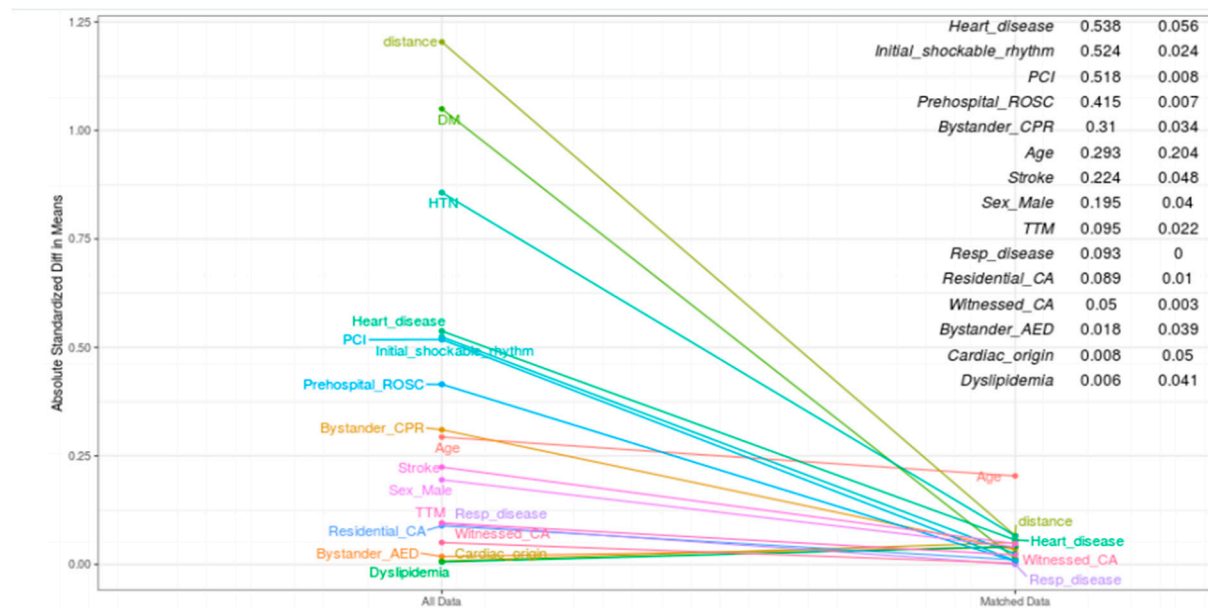
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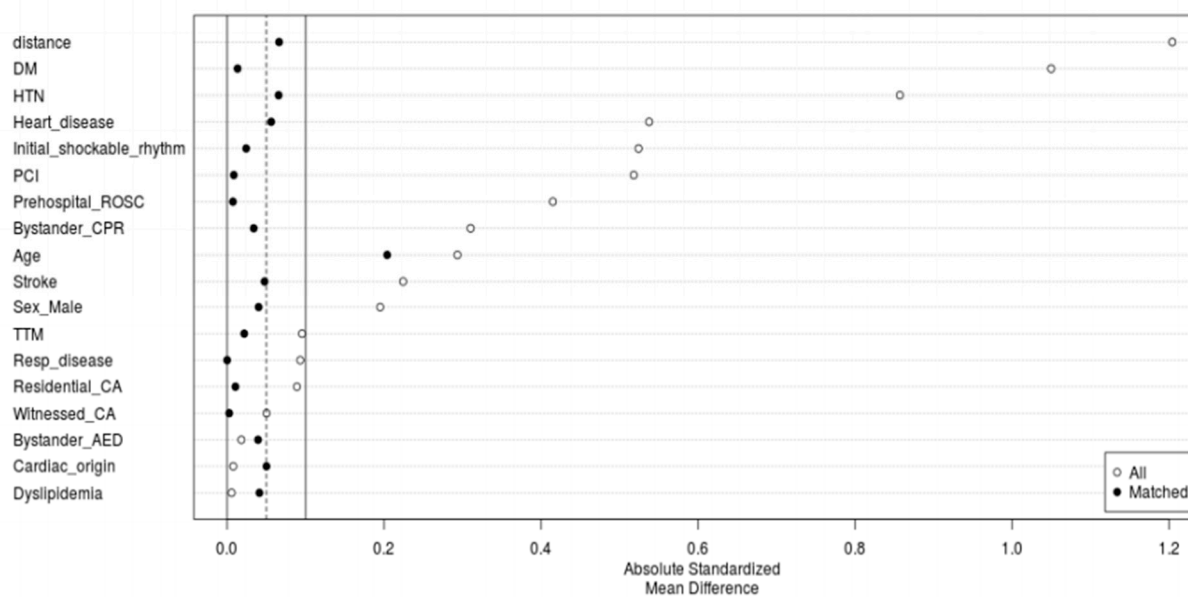
(B)

Figure S1. Change of absolute standardized difference in means (A) and dot plot of absolute standardized mean difference (B) in patients with Non-CKD and CKD without RRT before and after propensity score matching.

Abbreviations: CKD, chronic kidney disease; RRT, renal replacement therapy; CA, cardiac arrest; CPR, cardiopulmonary resuscitation; AED, automated external defibrillator; DM, diabetes mellitus; HTN, hypertension; PCI, primary coronary intervention; TTM, targeted temperature management; and ROSC, return of spontaneous circulation.



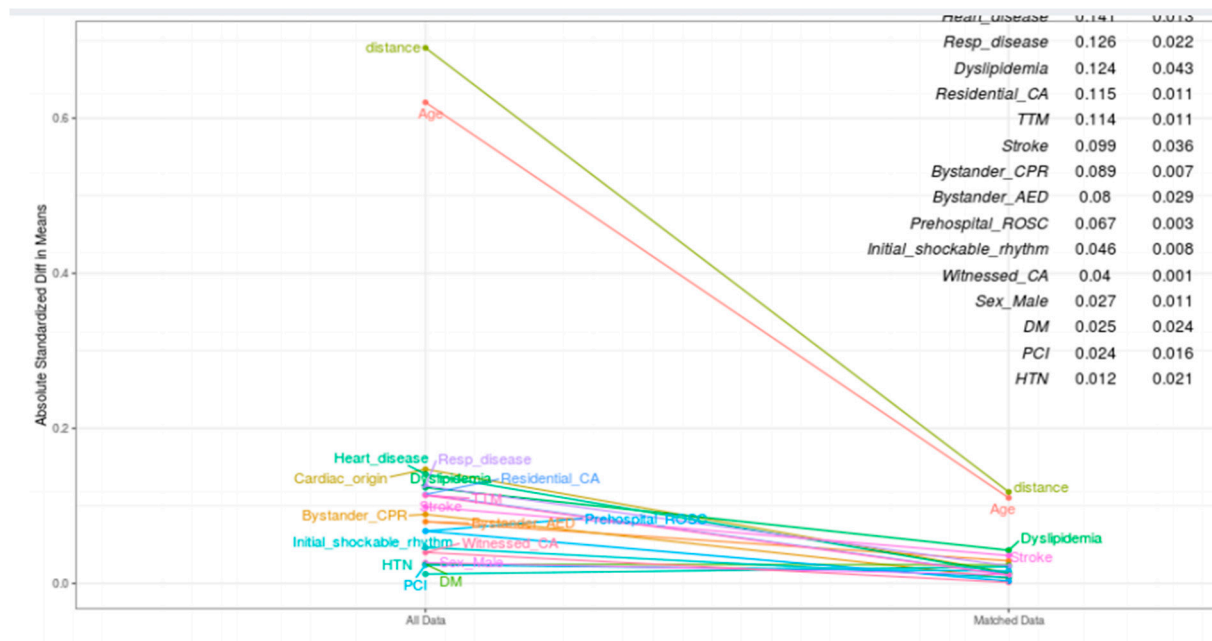
(A)



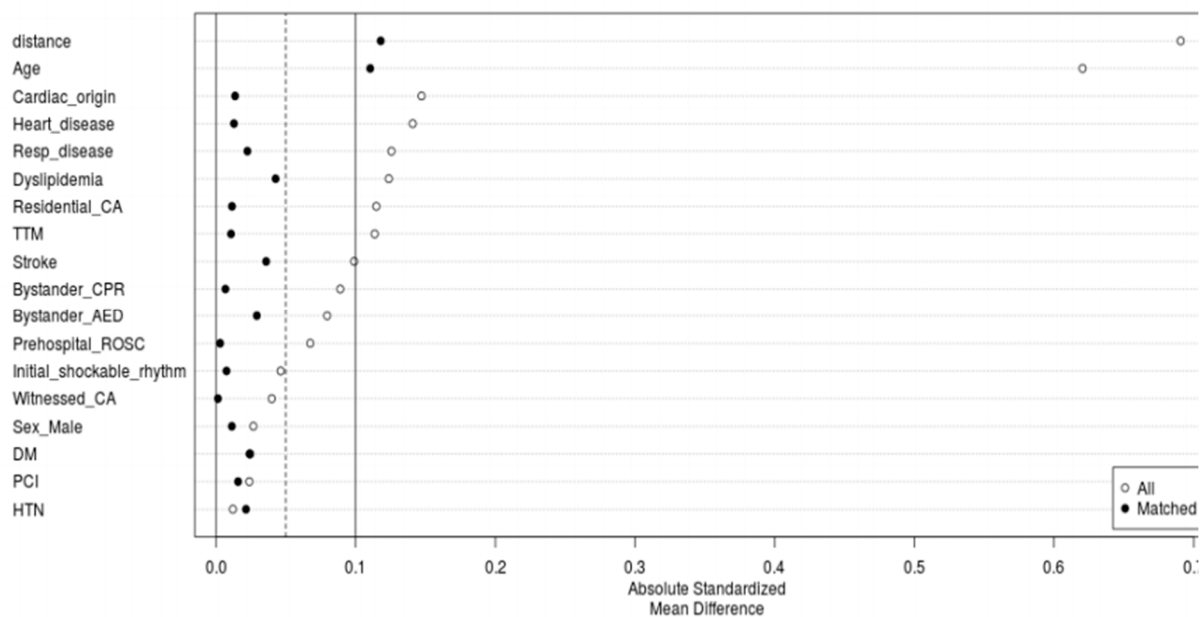
(B)

Figure S2. Change of absolute standardized difference in means (A) and dot plot of absolute standardized mean difference (B) in patients with Non-CKD and CKD with RRT before and after propensity score matching.

Abbreviations: CKD, chronic kidney disease; RRT, renal replacement therapy; CA, cardiac arrest; CPR, cardiopulmonary resuscitation; AED, automated external defibrillator; DM, diabetes mellitus; HTN, hypertension; PCI, primary coronary intervention; TTM, targeted temperature management; and ROSC, return of spontaneous circulation.



(A)



(B)

Figure S3. Change of absolute standardized difference in means (A) and dot plot of absolute standardized mean difference (B) in patients with CKD without RRT and CKD with RRT before and after propensity score matching.

Abbreviations: CKD, chronic kidney disease; RRT, renal replacement therapy; CA, cardiac arrest; CPR, cardiopulmonary resuscitation; AED, automated external defibrillator; DM, diabetes mellitus; HTN, hypertension; PCI, primary coronary intervention; TTM, targeted temperature management; and ROSC, return of spontaneous circulation.