

DATA SUPPLEMENT

Association of Blood Pressure Variability and Diuretics with Cardiovascular Events in Patients with CKD Stages 1-5

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Table S1. List of included anti-hypertensive medications by class

Table S2. Propensity score model variable definitions

Table S3. Outcome variable definitions

Table S4. Definitions of proteinuria and albuminuria variables

Table S5. Baseline characteristics of the unmatched cohort

Table S6. Systolic coefficient of variation after second anti-hypertensive medication by subgroups

Table S7. Association of quintile of systolic blood pressure ARV and SD with time to CV event

Table S8. Association of quintile of systolic BPV prior to the index date and change in BPV with time to CV events

Table S9. Subgroup analyses of the association of the coefficient of variation of systolic blood pressure, taken continuously, with time to CV events

Figure S1. BPV before and after the index date by diuretic treatment group

Table S1. List of included anti-hypertensive medications by class

Diuretics:

- Loop Diuretics
 - Bumetanide
 - Furosemide
 - Torsemide
- Thiazide Diuretics
 - Chlorothiazide
 - Chlorthalidone
 - Hydrochlorothiazide
 - Indapamide
 - Metolazone

Non-Diuretics:

- Angiotensin Converting Enzyme Inhibitors
 - Benazepril
 - Captopril
 - Enalapril
 - Fosinopril
 - Lisinopril
 - Moexipril
 - Perindopril
 - Quinapril
 - Ramipril
 - Trandolapril
- Angiotensin Receptor Blockers
 - Azilsartan
 - Candesartan
 - Eprosartan
 - Irbesartan
 - Losartan
 - Olmesartan
 - Telmisartan
 - Valsartan

- Beta Blockers
 - Atenolol
 - Carvedilol
 - Esmolol
 - Labetalol
 - Metoprolol
 - Nadolol
 - Nebivolol
 - Propranolol
- Calcium channel blockers
 - Amlodipine
 - Diltiazem
 - Felodipine
 - Nicardipine
 - Verapamil
- Other
 - Aliskiren
 - Amiloride
 - Clonidine
 - Hydralazine
 - Minoxidil
 - Spironolactone

Table S2. Propensity score model variable definitions

Variable	Definition
Demographics	
Age	Age in years at the index date
Sex	Male or female sex
Race	Self-identified race
Baseline Laboratory Values	
Estimated GFR	Calculated from baseline laboratory and demographic values using the CKD-EPI equation
Serum potassium	Most recent serum potassium measurement prior to the index date
Serum albumin	Most recent serum albumin measurement prior to the index date
Albuminuria or proteinuria	Binary variable indicating one of the following baseline albuminuria measures: urine albumin/creatinine ≥ 30 mg/g, urine protein/creatinine ≥ 0.15 g/g, 24-hour urine albumin > 30 mg, 24-hour urine protein > 150 mg, dipstick urinalysis protein ≥ 30 mg/dL.
Comorbidities	
	Diagnosis code within 1 year prior to the index date
Myocardial Infarction	ICD-9-CM 410.x, 412.x ICD-10 I21.x, I22.x, I25.2
Cerebrovascular Disease	ICD-9-CM 430.x-438.x, 362.34 ICD-10 G45.x-46.x, H34.0, I60.x-69.x
Congestive Heart Failure	ICD-9-CM 428.x, 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.4-9, 428.x ICD-10 I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5-9, I43.x, I50.x, P29.0
Peripheral Vascular Disease	ICD-9-CM 093.0, 437.3, 440.x, 441.x, 443.1-9, 447.1, 557.1, 557.9, 785.4, V43.4, Procedure 38.48 ICD-10 I70.x, I71.x, I73.x1, I73.8-9, I77.1, I79.0, I79.2, K55.1, K55.8-9, Z95.8-9
Liver Disease	ICD-9-CM 456.0-21, 571.2, 571.4-6, 572.2-8, 070.22-23, 070.32-33, 070.44, 070.54, 070.6, 070.9, 570.x, 571.x, 573.3-4, 573.8-9, V42.7 ICD-10 B18.x, I85.0, I85.9, I86.4, I98.2, K70.0-4, K70.9, K 71.1, K71.3-5, K71.7, K72.9, K73.x, K74.x, K76.0, K76.2-9, Z94.4
Diabetes Mellitus	ICD-9-CM 250.0-9 ICD-10 E10.0-9, E11.0-9, E12.0-9, E13.0-9, E14.0-9
Chronic pulmonary disease	ICD-9-CM 416.8-9, 490.x-505.x, 506.4, 508.1, 508.8 ICD-10 I27.8-9, J40.x-47.x, J60.x-67.x, J68.4, J70.1, J70.3
Human Immunodeficiency Virus	ICD-9-CM 042.x-044.x ICD-10 B20.x-22.x, B24.x
Malignancy	ICD-9-CM 140.x-172.x, 174.x-195.8, 196.x-208.x, 238.6 ICD-10 C00.x-26.x, C30.x-34.x, C37.x-41.x, C43.x, C45.x, C58.x, C60.x-85.x, C88.x, C90.x-97.x
Hemiplegia or Paraplegia	ICD-9-CM 344.1, 342.x-343.x, 344.0-6, 344.9; ICD-10 G04.1, G11.4, G80.1-2, G81.x-82.x, G83.0-4, G83.9
Dementia	ICD-9-CM 290.x, 294.1, 331.2; ICD-10 F00.x-03.x, F05.1, G30.x-31.1
Rheumatic Disease	ICD-9-CM 710.0-1, 710.4, 714.0-2, 714.81, 725.x; ICD-10 M05.x-06.x, M31.5, M32.x-34.x, M35.1, M35.3, M36.0
Peptic Ulcer Disease	ICD-9-CM 531.x-534.x; ICD-10 K25.x-28.x

Smoking	ICD-9 codes 305.1 and V15.82 Smoking cessation clinic use, and/or Use of medications for the treatment of nicotine dependence such as Zybanbupropion, nicotine replacement, or varenicline
Medications	
Angiotensin converting enzyme inhibitor	Outpatient prescription for benazepril, captopril, enalapril, fosinopril, lisinopril, moexipril, perindopril, quinapril, ramipril, or trandolapril within 12 months prior to the index date
Angiotensin receptor blocker	Outpatient prescription for azilsartan, candesartan, eprosartan, irbesartan, losartan, olmesartan, telmisartan, or valsartan within 12 months prior to the index date
Calcium channel blocker	Outpatient prescription for amlodipine, diltiazem, felodipine, nicardipine, or verapamil within 12 months prior to the index date
Beta blocker	Outpatient prescription for atenolol, carvedilol, esmolol, labetalol, metoprolol, nadolol, nebivolol, or propranolol within 12 months prior to the index date
Clonidine	Outpatient prescription within 12 months prior to the index date
Hydralazine	Outpatient prescription within 12 months prior to the index date
Minoxidil	Outpatient prescription within 12 months prior to the index date
Spirolactone	Outpatient prescription within 12 months prior to the index date
Aliskiren	Outpatient prescription within 12 months prior to the index date
Amiloride	Outpatient prescription within 12 months prior to the index date
Nitrates	Outpatient prescription within 12 months prior to the index date
Statins	Outpatient prescription for atorvastatin, fluvastatin, lovastatin, pravastatin, rosuvastatin, or simvastatin within 12 months prior to the index date
Aspirin	Outpatient prescription or listed on non-VA medications table within 12 months prior to the index date
Other Characteristics	
Body Mass Index	Calculated from baseline weight and height
Systolic and Diastolic Blood Pressures	Most recent systolic and diastolic blood pressure readings prior to the index date
Number of Outpatient Health Contacts	Total number of primary care or specialist outpatient stop codes in 1 year prior to the index date
Total Number of Specialists	Number of different medical or surgical sub-specialist stop codes in 1 year prior to the index date

Abbreviations: GFR, glomerular filtration rate; ICD-9-CM, International Classification of Disease, Ninth Revision, Clinical Modification; ICD-10, International Classification of Disease, Tenth Revision

Table S3. Outcome variable definitions

Variable	Definition	Data Source
All-Cause Death	Death indicator in the CDW data (derived from the National Death Index, CMS, and VA data)	Outpatient data
CV Death	Death within 31 days of a CV Event (myocardial infarction, hospitalization for heart failure, or ischemic stroke)	Outpatient data, inpatient discharge data
Myocardial Infarction	ICD-9 discharge diagnosis codes 410.00, 410.001, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91 ICD-10 discharge diagnosis codes I21.x, I22.x	Outpatient data, inpatient discharge data
Hospitalization for Heart Failure	ICD-9 discharge diagnosis codes 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.x, 428.x ICD-10 discharge diagnosis codes I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5-I42.9, I43.x, I50.x, P29.0	Inpatient discharge data
Ischemic Stroke	ICD-9 discharge diagnosis codes 430, 431, 432.9, 433.01, 433.11, 433.81, 433.91, 434.01, 434.11, 434.91, 436 ICD-10 discharge diagnosis codes I61.x, I62.x, I63.x	Outpatient data, inpatient discharge data
ESKD	Identified fromUSRDS data	USRDS

Abbreviations: CDW, Corporate Data Warehouse; CMS, Centers for Medicare and Medicaid Services; CPT, Current Procedural Terminology; CV, cardiovascular; ESKD, end-stage kidney disease; ICD-9-CM, International Classification of Disease, Ninth Revision, Clinical Modification; ICD-10, International Classification of Disease, Tenth Revision; USRDS, United States Renal Data System; VA, Veterans Affairs

Table S4. Survival analysis covariate definitions (where different from propensity model definitions)

Variable	Definition
Albuminuria	LOINC codes 13705-9, 14958-3, 14959-1, 9318-7, 30000-4, 14585-3, 32294-1, 34535-5, 6941-9, 14956-7, 1755-8 LOINC codes 14957-5, 21059-1, 6942-7, 1754-1, or 30003-8 divided by LOINC codes 35207-7, 20624-3, 2161-8, or 35674-1 if these were measured on a sample with the same date and time.
Proteinuria	LOINC codes 13801-6, 34366-5, 2890-2, 2889-4 LOINC codes 27298-9, 2888-6, 35663-4, 21482-5, or 50561-0 divided by LOINC codes 35207-7, 20624-3, 2161-8, or 35674-1 if these were measured on a sample with the same date and time.

Albuminuria and proteinuria taken continuously were divided into deciles with an 11th category created for missing values. This allowed for inclusion of missing values, which were not missing at random, without imputing numbers for missing data. This also removed any outlier effect from some participants with extreme albuminuria or proteinuria, who were classified in the 10th decile.

Table S5. Baseline characteristics of the unmatched cohort

Variable	Non-Diuretic Exposed N=263,662	Diuretic Exposed N=68,739	Standardized Difference
Age, years, mean (SD)	72.6 (10.6)	73.4 (11.2)	0.08
Female Sex, N (%)	8,200 (3.1)	2,641 (3.8)	0.04
Race, N (%)			0.01
White	204,865 (77.7)	52,186 (75.9)	
Black	32,421 (12.3)	9,656 (14.1)	
Native Hawaiian or Pacific Islander	2,592 (1.0)	655 (0.9)	
American Indian or Alaska Native	1,611 (0.6)	419 (0.6)	
Asian	1,594 (0.6)	322 (0.5)	
Multi-race	7 (0.0)	1 (0.0)	
Unknown	20,572 (7.8)	5,500 (8.0)	
Comorbidities*, N (%)			
COPD	49,517 (18.8)	15,001 (21.8)	0.08
Diabetes mellitus	128,768 (48.8)	31,934 (46.5)	0.05
HIV	1,523 (0.6)	341 (0.5)	0.01
Peripheral vascular disease	31,519 (12.0)	7,464 (10.9)	0.03
Liver disease	4,380 (1.7)	1,540 (2.2)	0.04
Malignancy	40,794 (15.5)	10,448 (15.2)	0.008
Vascular disease	56,397 (21.4)	13,229 (19.3)	0.05
Hemiplegia or paraplegia	1,082 (0.4)	250 (0.4)	0.008
Myocardial infarction	10,048 (3.8)	1,896 (2.8)	0.06
Congestive heart failure	23,404 (8.9)	10,222 (14.9)	0.19
Dementia	4,113 (1.6)	1,024 (1.5)	0.006
Rheumatic disease	4,526 (1.7)	1,216 (1.8)	0.004
Peptic ulcer disease	3,211 (1.2)	797 (1.2)	0.005
Smoking, N (%)	4,213 (1.6)	1,140 (1.7)	0.005
Medications†, N (%)			
Nitrates	29,878 (11.3)	6,622 (9.6)	0.06
Statins	130,378 (49.5)	31,654 (46.1)	0.07
Aspirin	46,923 (17.8)	11,885 (17.3)	0.01
ACE inhibitors	154,953 (58.8)	30,827 (44.9)	0.28
ARBs	50,842 (19.3)	8,749 (12.7)	0.18
Beta blockers	176,209 (66.8)	30,442 (44.3)	0.47
Calcium channel blockers	126,443 (48.0)	18,087 (26.3)	0.46
Spironolactone	11,216 (4.3)	2,566 (3.7)	0.03
Hydralazine	9,860 (3.7)	1,386 (2.0)	0.10
Clonidine	9,454 (3.6)	1,037 (1.5)	0.13
Minoxidil	671 (0.3)	112 (0.2)	0.02
Aliskiren	40 (0.0)	1 (0.0)	0.02
Amiloride	268 (0.1)	22 (0.0)	0.03
Laboratory and clinical variables			

Estimated GFR, mL/min/1.73 m ² , median (IQR)	51.4 (42.7, 57.6)	50.9 (41.5, 58.1)	0.007
Albuminuria, mg/g, median (IQR)	30.9 (9.7, 106.9)	30.7 (9.7, 114.3)	0.004
Proteinuria, g/g, median (IQR)	0.2 (0.1, 0.7)	0.3 (0.1, 0.8)	0.004
Serum potassium, mmol/L, mean (SD)	4.4 (0.5)	4.4 (0.5)	0.12
Serum albumin, g/dL, mean (SD)	3.9 (0.4)	3.9 (0.5)	0.13
Systolic blood pressure, mmHg, mean (SD)	137.3 (21.6)	137.9 (22.3)	0.03
Diastolic blood pressure, mmHg, mean (SD)	74.9 (13.0)	75.2 (13.6)	0.02
Body mass index, kg/m ² , mean (SD)	29.7 (5.8)	30.5 (6.4)	0.13
Number of visits in 1 year prior to the index date, mean (SD)	11.3 (10.6)	11.3 (10.7)	0.001
Number of specialists in 1 year prior to the index date, mean (SD)	1.9 (2.0)	1.9 (2.0)	0.04

Abbreviations: ACE inhibitors, angiotensin converting enzyme inhibitors; ARBs, angiotensin receptor blockers; COPD, chronic obstructive pulmonary disease; GFR, glomerular filtration rate; HIV, human immunodeficiency virus

*Defined by International Classification of Diseases codes

†Defined as exposure in pharmacy records within 1 year prior to the index date

Table S6. Systolic coefficient of variation after second anti-hypertensive medication by subgroups

Subgroup, mean (SD)	Non-Diuretic Exposed N=31,394	Diuretic Exposed N=31,394
All Participants	10.9 (5.2)	10.9 (5.3)
Age, years		
<65	10.8 (4.8)	11.0 (5.0)
≥65	10.9 (5.4)	10.8 (5.3)
Race		
White	10.8 (5.2)	10.8 (5.2)
Black	11.2 (5.2)	11.2 (5.3)
Native Hawaiian or Pacific Islander	11.1 (5.1)	9.8 (4.8)
American Indian or Alaska Native	11.0 (5.0)	11.2 (4.8)
Asian	9.8 (4.8)	10.8 (5.0)
Unknown	10.7 (5.6)	10.8 (5.6)
CKD stage		
Stage 1	11.3 (5.1)	11.3 (5.0)
Stage 2	10.6 (4.9)	10.9 (5.0)
Stage 3	10.8 (5.3)	10.8 (5.3)
Stage 4	11.8 (5.5)	11.5 (5.2)
Stage 5	12.7 (5.4)	12.5 (5.4)
No. BP measurements in BPV calculation		
<4	9.3 (6.7)	9.3 (6.6)
4-6	10.7 (4.9)	10.8 (5.1)
7-9	11.4 (4.3)	11.6 (4.4)
10-12	11.9 (4.0)	11.8 (3.9)
13-15	12.3 (3.9)	12.1 (3.7)
≥16	12.4 (3.5)	12.4 (3.5)
Concomitant medications		
ACE inhibitor	11.0 (5.3)	11.1 (5.4)
No ACE inhibitor	10.7 (5.2)	10.7 (5.1)
ARB	10.3 (5.1)	10.9 (5.3)
No ARB	10.9 (5.2)	10.9 (5.2)
Spironolactone	10.7 (4.9)	11.1 (5.1)
No spironolactone	10.9 (5.2)	10.9 (5.3)
Calcium channel blocker	10.5 (5.0)	10.4 (5.1)
No calcium channel blocker	11.0 (5.3)	11.1 (5.3)
Beta blockers	11.1 (5.2)	11.2 (5.4)
No beta blockers	10.6 (5.2)	10.5 (5.1)
Hydralazine	11.6 (5.5)	12.4 (5.8)
No hydralazine	10.8 (5.2)	10.8 (5.2)
Clonidine	12.4 (5.6)	12.4 (5.7)

No clonidine	10.8 (5.2)	10.8 (5.2)
Comorbid medical conditions		
Congestive Heart Failure	11.4 (5.0)	11.5 (5.1)
No congestive heart failure	10.8 (5.2)	10.8 (5.3)
Liver disease	11.1 (4.8)	11.3 (5.0)
No liver disease	10.8 (5.2)	10.9 (5.3)
Diabetes mellitus	10.9 (5.1)	11.0 (5.2)
No diabetes mellitus	10.8 (5.3)	10.8 (5.3)
Vascular disease	11.7 (5.4)	11.6 (5.3)
No vascular disease	10.6 (5.2)	10.7 (5.2)
Malignancy	11.3 (5.0)	11.1 (4.9)
No malignancy	10.8 (5.3)	10.8 (5.3)
Smoking	12.0 (5.1)	11.7 (4.9)
No smoking	10.8 (5.2)	10.9 (5.3)
Number of visits in 1 year prior to the index date		
0-5	9.9 (5.9)	10.3 (5.9)
6-10	10.6 (5.3)	10.6 (5.4)
11-15	11.1 (5.0)	11.0 (5.2)
16-20	11.4 (5.0)	11.2 (4.9)
21-25	11.5 (4.7)	11.4 (4.6)
≥26	11.6 (4.5)	11.6 (4.4)
Number of specialists seen in 1 year prior to the index date		
0-2	10.4 (5.5)	10.6 (5.6)
3-5	11.4 (4.9)	11.2 (4.8)
6-8	11.6 (4.5)	11.6 (4.4)
≥9	11.8 (4.1)	11.8 (3.8)

Table S7. Association of quintile of systolic blood pressure average real variability and standard deviation with time to CV event

Model	Main Effects HR (95% CI) N=62,788	Non-Diuretic Exposed HR (95% CI) N=31,394	Diuretic Exposed HR (95% CI) N=31,394	Treatment group x BPV interaction P value
Average Real Variability				
Q1	Ref	Ref	Ref	
Q2	1.58 (1.38, 1.80)	1.59 (1.39, 1.82)	1.40 (1.25, 1.58)	0.25
Q3	1.76 (1.55, 2.01)	1.78 (1.57, 2.03)	1.58 (1.41, 1.77)	0.27
Q4	2.00 (1.76, 2.27)	2.01 (1.77, 2.29)	1.62 (1.44, 1.81)	0.02
Q5	2.05 (1.80, 2.34)	2.05 (1.80, 2.34)	1.67 (1.48, 1.88)	0.03
Standard Deviation				
Q1	Ref	Ref	Ref	
Q2	1.68 (1.45, 1.96)	1.72 (1.48, 2.00)	1.57 (1.38, 1.79)	0.59
Q3	2.02 (1.75, 2.33)	2.07 (1.79, 2.39)	1.82 (1.60, 2.06)	0.39
Q4	2.34 (2.03, 2.70)	2.39 (2.08, 2.76)	1.92 (1.69, 2.18)	0.07
Q5	2.77 (2.40, 3.19)	2.81 (2.44, 3.25)	2.35 (2.07, 2.66)	0.11

Adjusted for the total number of blood pressure measurements in the BPV calculation, the total number of clinic stops in 1 year prior to the index date, age, sex, race, eGFR, systolic blood pressure, BMI, albuminuria, proteinuria, smoking, diabetes mellitus, congestive heart failure, vascular disease, malignancy, and treatment in 1 year prior to the index date with an ACEi or ARB, spironolactone, a beta blocker, a calcium channel blocker, clonidine or hydralazine, or a statin

Table S8. Association of quintile of systolic BPV prior to the index date and change in BPV with time to CV events

Model	Main Effects HR (95% CI)	Non-Diuretic Exposed HR (95% CI)	Diuretic Exposed HR (95% CI)	Treatment group x BPV interaction <i>P</i> value
BPV for 6 months prior to the index date				
Q1	Ref	Ref	Ref	
Q2	1.23 (1.07, 1.41)	1.26 (1.10, 1.45)	1.09 (0.97, 1.23)	0.24
Q3	1.39 (1.22, 1.58)	1.42 (1.25, 1.62)	1.22 (1.09, 1.37)	0.23
Q4	1.43 (1.26, 1.63)	1.47 (1.29, 1.68)	1.35 (1.21, 1.51)	0.65
Q5	1.64 (1.45, 1.86)	1.69 (1.49, 1.92)	1.39 (1.25, 1.56)	0.09
Change in BPV from 6 months prior to the index date to 6 months following the index date				
Q1	Ref	Ref	Ref	
Q2	1.03 (0.91, 1.16)	1.04 (0.92, 1.18)	1.18 (1.06, 1.32)	0.06
Q3	1.04 (0.92, 1.17)	1.07 (0.94, 1.20)	1.08 (0.97, 1.21)	0.53
Q4	1.07 (0.95, 1.21)	1.08 (0.96, 1.22)	1.12 (1.01, 1.26)	0.45
Q5	1.20 (1.07, 1.35)	1.20 (1.07, 1.35)	1.23 (1.10, 1.37)	0.71

Adjusted for the total number of blood pressure measurements in the BPV calculation, the total number of clinic stops in 1 year prior to the index date, age, sex, race, eGFR, systolic blood pressure, BMI, albuminuria, proteinuria, smoking, diabetes mellitus, congestive heart failure, vascular disease, malignancy, and treatment in 1 year prior to the index date with an ACEi or ARB, spironolactone, a beta blocker, a calcium channel blocker, clonidine or hydralazine, or a statin

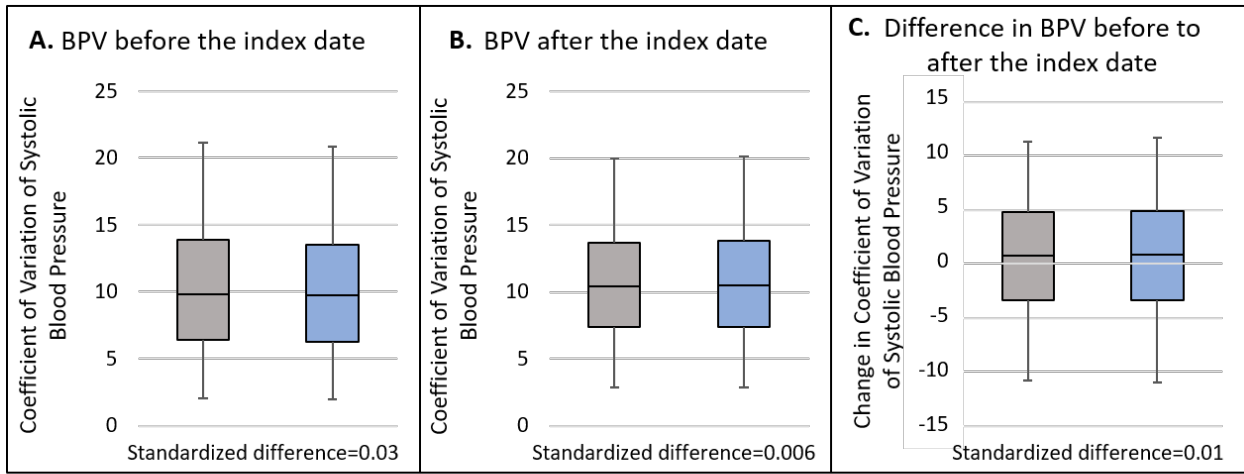
Table S9. Subgroup analyses of the association of the coefficient of variation of systolic blood pressure, taken continuously, with time to CV events

Model	Main Effects aHR (95% CI) per increase of 1% in BPV	Non-Diuretic Exposed aHR (95% CI)	Diuretic Exposed aHR (95% CI)	Treatment group x BPV interaction <i>P</i> value
CKD Stages 1-2	1.06 (1.05, 1.08)	1.07 (1.05, 1.09)	1.05 (1.03, 1.07)	0.29
CKD Stages 3-5	1.05 (1.04, 1.06)	1.05 (1.04, 1.06)	1.05 (1.04, 1.05)	0.54
Black	1.05 (1.04, 1.07)	1.05 (1.04, 1.07)	1.04 (1.02, 1.06)	0.47
Not Black	1.05 (1.05, 1.06)	1.06 (1.05, 1.06)	1.05 (1.04, 1.06)	0.44
Male	1.05 (1.05, 1.06)	1.05 (1.05, 1.06)	1.05 (1.04, 1.05)	0.23
Female	1.06 (1.01, 1.10)	1.05 (1.00, 1.10)	1.09 (1.05, 1.14)	0.18
Diabetes	1.06 (1.05, 1.07)	1.06 (1.05, 1.07)	1.05 (1.04, 1.06)	0.33
No Diabetes	1.05 (1.04, 1.06)	1.05 (1.04, 1.06)	1.05 (1.04, 1.06)	0.61
RAAS Blockade*	1.05 (1.04, 1.06)	1.05 (1.04, 1.06)	1.05 (1.04, 1.06)	0.54
No RAAS Blockade	1.06 (1.05, 1.07)	1.06 (1.05, 1.07)	1.05 (1.04, 1.06)	0.05
Heart Failure	1.04 (1.03, 1.05)	1.04 (1.03, 1.05)	1.04 (1.03, 1.05)	0.84
No Heart Failure	1.06 (1.05, 1.07)	1.06 (1.05, 1.07)	1.05 (1.04, 1.07)	0.31

*Defined as exposure to an ACEi or ARB in 1 year prior to the index date

Adjusted for the total number of blood pressure measurements in the BPV calculation, the total number of clinic stops in 1 year prior to the index date, age, sex, race, eGFR, systolic blood pressure, BMI, albuminuria, proteinuria, smoking, diabetes mellitus, congestive heart failure, vascular disease, malignancy, and treatment in 1 year prior to the index date with an ACEi or ARB, spironolactone, a beta blocker, a calcium channel blocker, clonidine or hydralazine, or a statin

Figure S1. BPV before and after the index date by diuretic treatment group



■ Non-diuretic exposed ■ Diuretic exposed