SUPPLEMENT TABLEOF CONTENTS 1

Supplement Table 1. Baseline characteristics of study cohort stratified by diurnal profile of blood pressure

		Reverse Dipper (n=235)	*Non-Dipper (n=708)*	*Dipper (n=559)*	*P-Value*
Age, years, mean (SD)		65.0 (9.4)	63.6 (10.2)	61.6 (10.5)	<.0001
Gender n (%)	Male	142 (60.4%)	392 (55.4%)	307 (54.9%)	0.33
Race/ethnicity n (%)	Non-Hispanic White	89 (37.9%)	301 (42.5%)	291 (52.1%)	0.0006
	Non-Hispanic Black	110 (46.8%)	296 (41.8%)	176 (31.5%)	0.0006
	Hispanic	29 (12.3%)	85 (12%)	68 (12.2%)	0.0006
	Other	7 (3%)	26 (3.7%)	24 (4.3%)	0.0006
Diabetes n (%)		139 (59.1%)	375 (53%)	230 (41.1%)	<.0001
Body Mass Index (kg/m^2) mean (SD)		31.8 (7.3)	31.8 (6.7)	31.0 (7.1)	0.15
Current smoker n (%)		25 (10.6%)	65 (9.2%)	41 (7.3%)	0.27
History of Cardiovascular disease n (%)		128 (54.5%)	293 (41.4%)	164 (29.3%)	<.0001
Hypertension n (%)		225 (95.7%)	671 (94.8%)	501 (89.8%)	0.0005
Use of antihypertensive drugs n (%)		224 (95.3%)	660 (93.5%)	490 (87.8%)	0.0001
Number of antihypertensive drugs mean (SD)		3.2 (1.4)	2.6 (1.5)	2.2 (1.4)	<.0001
Statin use n (%)		164 (69.8%)	456 (64.6%)	341 (61.1%)	0.06
Estimated GFR ($ml/min/1.73m^2$) mean (SD)		40.1 (19.2)	45.1 (20.9)	49.6 (19.2)	<.0001

Urine Protein/Creatinine Ratio,(24Hour and Spot measure combined) Median (25% - 75%)		0.3(0.1 - 1.1)	0.2(0.1 - 0.6)	0.1(0.1 - 0.4)	<.0001
Clinic Systolic BP (mmHg) mean (SD)		128.0 (21.8)	127.1 (20.8)	124.4 (18.9)	0.0195
Clinic Diastolic BP (mmHg) mean (SD)		68.2 (13.3)	68.8 (12.0)	70.3 (11.7)	0.0399
24HR Average Systolic BP mean (SD)		135.5 (17.2)	129.8 (16.1)	123.6 (13.5)	<.0001
24HR Average Diastolic BP mean (SD)		74.4 (10.3)	72.6 (9.8)	71.4 (8.9)	0.0002
Night-time Systolic BP mean (SD)		140.1 (18.7)	124.4 (16.1)	109.0 (13.0)	<.0001
Night-time Diastolic BP mean (SD)		75.1 (11.1)	68.1 (9.9)	61.3 (8.5)	<.0001
Average Daytime Systolic BP mean (SD)		134.0 (17.0)	131.5 (16.2)	128.4 (14.1)	<.0001
Average Daytime Diastolic BP mean (SD)		74.2 (10.3)	74.1 (10.0)	74.7 (9.4)	0.59

Supplement table 2. Clinical and demographic characteristics of CRIC participants enrolled in phase 2 stratified by ABPM data

Variable		*Participants with available ABPM data (n=1502)*	*Participants enrolled in Phase 2, but not selected for ABPM (n=1399)*	*Standardized Difference †*
Age, years, mean (SD)		63.1 (10.3)	61.9 (11.4)	0.11
Gender n (%)	Male	841 (56%)	734 (52.5%)	0.07
Race/ethnicity n (%)	Non-Hispanic White	182 (12.1%)	182 (13%)	0.06
	Non-Hispanic Black	582 (38.7%)	572 (40.9%)	
	Hispanic	681 (45.3%)	594 (42.5%)	
	Other	57 (3.8%)	51 (3.6%)	
Diabetes n (%)		744 (49.5%)	775 (55.4%)	0.12
Body Mass Index (kg/m^2) mean (SD)		31.5 (6.9)	32.1 (8.5)	0.08
Current smoker n (%)		131 (8.7%)	126 (9%)	0.01
History of Cardiovascular disease n (%)		585 (38.9%)	640 (45.7%)	0.14
Hypertension n (%)		1397 (93.1%)	1303 (93.9%)	0.03
Use of antihypertensive drugs n (%)		1374 (91.7%)	1206 (90.7%)	0.03
Number of antihypertensive drugs mean (SD)		2.5 (1.5)	2.6 (1.5)	0.005
Statin use n (%)		961 (64.1%)	828 (62.3%)	0.04
Estimated GFR ($ml/min/1.73m^2$) mean (SD)		46.0 (20.3)	44.0 (19.7)	0.098
Urine Protein/Creatinine Ratio,(24Hour and Spot measure combined) Median (25% - 75%)		0.1(0.1 - 0.5)	0.2(0.1 - 0.7)	0.098

Clinic Systolic BP (mmHg) mean (SD)	Systolic BP (mmHg)	126.2 (20.3)	127.7 (22.3)	0.069
Clinic Diastolic BP (mmHg) mean (SD)	Diastolic BP (mmHg)	69.2 (12.2)	68.1 (12.8)	0.09

† Standardized difference =absolute difference in means or proportions divided by standard error; [38]

Supplement Table 3. Association of ABPM profiles with cardiovascular mortality and components of the composite cardiovascular outcome

		Number of events/unadjusted event rate(Rate/100 pt yrs)	Unadjusted HR (95% CI)	Overall P-Value for the model	Model A* HR (95% CI)	Overall P-Value for the model	Model B* HR (95% CI)	Overall P-Value for the model
Cardiovascular Mortality				0.006		0.77		0.47
	White coat effect	1/0.251	0.37 (0.05, 2.69)		0.42 (0.06, 3.1)		0.62 (0.08, 4.92)	
	Masked uncontrolled hypertension	28/1.122	1.65 (1, 2.73)		1.11 (0.65, 1.92)		1.19 (0.68, 2.07)	
	Sustained hypertension	26/1.564	2.31 (1.38, 3.87)		1.18 (0.62, 2.24)		1.84 (0.76, 4.43)	
	Controlled blood pressure	33/0.675	REF		REF		REF	
Myocardial Infarction				<.0001		0.06		0.10
	White coat effect	5/1.23	1.36(0.54, 3.44)		0.91(0.32, 2.57)		1.14(0.37, 3.55)	
	Masked uncontrolled hypertension	36/1.418	1.57(1.01, 2.44)		1.13(0.69, 1.84)		1.16(0.7, 1.92)	
	Sustained hypertension	43/2.635	2.91(1.91, 4.43)		1.88(1.14, 3.11)		2.28(1.12, 4.63)	
	Controlled blood pressure	44/0.913	REF		REF		REF	
Heart Failure				<.0001		0.86		0.33

	White coat effect	7/1.759	1.09(0.5, 2.37)		0.7(0.28, 1.77)		1.1(0.41, 2.98)	
	Masked uncontrolled hypertension	62/2.485	1.54(1.1, 2.15)		1.04(0.71, 1.5)		1.13(0.77, 1.66)	
	Sustained hypertension	57/3.557	2.21(1.57, 3.11)		1.06(0.69, 1.62)		1.71(0.94, 3.09)	
	Controlled blood pressure	76/1.602	REF		REF		REF	
Stroke				0.03		0.49		0.55
	White coat effect	1/0.243	0.55(0.07, 4.07)		0.51(0.07, 3.9)		0.45(0.05, 3.77)	
	Masked uncontrolled hypertension	20/0.771	1.72(0.94, 3.15)		1.48(0.77, 2.84)		1.43(0.74, 2.79)	
	Sustained hypertension	18/1.049	2.35(1.26, 4.38)		1.47(0.7, 3.08)		1.25(0.43, 3.61)	
	Controlled blood pressure	22/0.453	REF		REF		REF	
Peripheral Arterial Disease				0.006		0.01		0.02
	White coat effect	1/0.242	0.89(0.12, 6.84)		0.93(0.12, 7.37)		1.25(0.13, 11.76)	
	Masked uncontrolled hypertension	23/0.902	3.29(1.67, 6.5)		2.69(1.27, 5.68)		2.89(1.33, 6.28)	
	Sustained hypertension	9/0.518	1.9(0.81, 4.44)		0.79(0.27, 2.33)		1.11(0.27, 4.63)	
	Controlled blood pressure	13/0.267	REF		REF		REF	

HR –Hazard ratio, CI –confidence interval, REF – reference group

* Covariates adjusted for in Model A – clinical center, age, gender, race, diabetes, glomerular filtration rate, Urinary Protein/Creatinine Ratio, prior cardiovascular disease.

[$] Covariates adjusted for in Model B -– clinical center, age, gender, race, diabetes, glomerular filtration rate, Urinary Protein/Creatinine Ratio, prior cardiovascular disease, clinic systolic blood pressure and clinic diastolic blood pressure

Supplement table 4. Association between ABPM profiles (defined by 2017 ACC/AHA guidelines)* and clinical outcomes

Outcome		Number of events/ unadjusted event rate per 100 patient years	Unadjusted HR (95% CI)	Overall P-Value for the model	Model A HR (95% CI)	Overall P-Value for the model	Model B HR (95% CI)	Overall P-Value for the model
Composite of MI, stroke, PAD, and CHF				<.0001		0.03		0.01
	White coat effect	23/2.75	1.12(0.7, 1.77)		1(0.61, 1.65)		1.23(0.72, 2.11)	
	Masked uncontrolled hypertension	76/4.79	1.94(1.42, 2.65)		1.58(1.12, 2.21)		1.61(1.15, 2.27)	
	Sustained hypertension	151/5.07	2.04(1.56, 2.67)		1.39(1.02, 1.9)		1.78(1.19, 2.66)	
	Controlled blood pressure	83/2.45	REF		REF		REF	
Kidney Outcome: 50% decrease in eGFR or ESRD				<.0001		<.0001		0.003
	White coat effect	27/3.83	1.65(1.06, 2.58)		1.86(1.14, 3.02)		1.31(0.78, 2.2)	
	Masked uncontrolled hypertension	76/5.38	2.33(1.68, 3.23)		2.12(1.49, 3.02)		1.94(1.36, 2.78)	
	Sustained hypertension	191/7.79	3.38(2.57, 4.46)		2.48(1.79, 3.43)		1.6(1.06, 2.4)	
	Controlled blood pressure	69/2.31	REF		REF		REF	
All-cause mortality				0.0002		0.03		0.009
	White coat effect	29/3.1	1.51(0.98, 2.32)		1.77(1.11, 2.82)		2.11(1.26, 3.53)	
	Masked uncontrolled hypertension	58/3.13	1.53(1.09, 2.16)		1.39(0.95, 2.03)		1.43(0.98, 2.09)	

Outcome		Number of events/ unadjusted event rate per 100 patient years	Unadjusted HR (95% CI)	Overall P-Value for the model	Model A HR (95% CI)	Overall P-Value for the model	Model B HR (95% CI)	Overall P-Value for the model
	Sustained hypertension	138/3.84	1.87(1.42, 2.48)		1.58(1.13, 2.22)		1.99(1.29, 3.06)	
	Controlled blood pressure	76/2.06	REF		REF		REF	
Cardiovascular Mortality				0.11		0.93		0.73
	White coat effect	5/0.58	0.82(0.31, 2.13)		1.08(0.41, 2.89)		1.37(0.48, 3.91)	
	Masked uncontrolled hypertension	22/1.26	1.78(1, 3.15)		1.24(0.66, 2.31)		1.25(0.67, 2.34)	
	Sustained hypertension	36/1.1	1.57(0.94, 2.61)		1.12(0.62, 2.02)		1.54(0.72, 3.28)	
	Controlled blood pressure	25/0.7	REF		REF		REF	

HR –Hazard ratio, CI –confidence interval, REF – reference group

* Covariates adjusted for in Model A – clinical center, age, gender, race, diabetes, glomerular filtration rate, Urinary Protein/Creatinine Ratio, prior cardiovascular disease.

$ Covariates adjusted for in Model B -– clinical center, age, gender, race, diabetes, glomerular filtration rate, Urinary Protein/Creatinine Ratio, prior cardiovascular disease, clinic systolic blood pressure and clinic diastolic blood pressure

*white-coat effect (clinic systolic blood pressure ≥130 mm Hg or diastolic ≥80 mm Hg and daytime systolic pressure <130 mm Hg and diastolic <80 mm Hg),
masked uncontrolled hypertension (clinic systolic pressure <130 mm Hg and diastolic <80 mm Hg and daytime systolic pressure ≥130 mm Hg or diastolic ≥80 mm Hg),
sustained hypertension (clinic systolic pressure ≥130 mm Hg or diastolic ≥80 mm Hg and ambulatory daytime systolic pressure ≥130 mm Hg or diastolic ≥80 mm Hg),
controlled blood pressure (clinic systolic pressure <130 mm Hg and diastolic <80 mm Hg and daytime systolic pressure <130 mm Hg and diastolic <80 mm Hg).

Supplement table 5. Association of ABPM profile with composite cardiovascular outcome, kidney outcome and mortality (Definition of ABPM based on daytime blood pressure*)

Outcome		HR (95% CI)	Overall P-Value for the model
Composite of MI, stroke, PAD, and CHF	White coat effect	1.1(0.59, 2.05)	0.02
	Masked uncontrolled hypertension	1.43(1.06, 1.93)	
	Sustained hypertension	1.82(1.15, 2.87)	
	Controlled blood pressure	REF	
Kidney Outcome: 50% decrease in eGFR or ESRD	White coat effect	1.05(0.61, 1.83)	0.002
	Masked uncontrolled hypertension	1.78(1.31, 2.4)	
	Sustained hypertension	1.46(0.92, 2.31)	
	Controlled blood pressure	REF	
All-cause mortality	White coat effect	0.83(0.4, 1.72)	0.04
	Masked uncontrolled hypertension	1.42(1.02, 1.96)	
	Sustained hypertension	1.65(1.02, 2.68)	
	Controlled blood pressure	REF	

HR –Hazard ratio, CI –confidence interval, REF – reference group, MI- myocardial infarction, PAD-peripheral arterial disease, CHF – congestive heart failure

Covariates adjusted for – clinical center, age, gender, race, diabetes, glomerular filtration rate, Urinary Protein/Creatinine Ratio, prior cardiovascular disease, clinic systolic blood pressure and clinic diastolic blood pressure

*masked uncontrolled hypertension (clinic systolic pressure <140 mm Hg and diastolic <90 mm Hg and daytime systolic pressure ≥135 mm Hg or diastolic ≥85 mm Hg), (n=287)

sustained hypertension (clinic systolic pressure ≥140 mm Hg or diastolic ≥90 mm Hg and ambulatory daytime systolic pressure ≥135 mm Hg or diastolic ≥85 mm Hg), (n=226)

white-coat effect (clinic systolic blood pressure ≥140 mm Hg or diastolic ≥90 mm Hg and daytime systolic pressure <135 mm Hg and diastolic <85 mm Hg), (n=71)

controlled blood pressure (clinic systolic pressure <140 mm Hg and diastolic <90 mm Hg and daytime systolic pressure <135 mm Hg and diastolic <85 mm Hg). (n=714)

Supplement table 6. Association between ABPM profiles and kidney outcomes stratified by GFR

ABPM profiles	**HR (95% CI)**
GFR <30 ml/min/1.73 m^2 (n=314)	
Masked uncontrolled hypertension	2.66(1.74, 4.06)
Sustained hypertension	1.26(0.68, 2.34)
White coat effect	2.84(1.22, 6.58)
Controlled blood pressure	REF
GFR 30-60 ml/min/1.73 m^2 (n=687)	
Masked uncontrolled hypertension	1.06(0.67, 1.68)
Sustained hypertension	1.2(0.71, 2.01)
White coat effect	0.69(0.29, 1.66)
Controlled blood pressure	REF
GFR 60-90 ml/min/1.73 m^2 (n=300)	
Masked uncontrolled hypertension	0.59(0.17, 2.04)
Sustained hypertension	1.19(0.37, 3.76)
White coat effect	2.24(0.45, 11.11)
Controlled blood pressure	REF

Adjusted for clinical center, age, gender, race,diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic SBP, clinic DBP

Supplement Table 7. Association of blood pressure as a continuous variable and clinical outcomes

		Unadjusted Model		Model A		Model B	
		HR (95% CI) (Per each standard deviation)	**P-Value**	**HR (95% CI) (Per each standard deviation)**	**P-Value**	**HR (95% CI) (Per each standard deviation)**	**P-Value**
Cardiovascular Mortality	Clinic Systolic BP	1.17(0.96, 1.42)	0.12	0.91(0.73, 1.14)	0.41	0.79(0.61, 1.02)	0.07
	Clinic Diastolic BP	0.67(0.53, 0.84)	0.0005	0.9(0.7, 1.16)	0.42	0.81(0.6, 1.1)	0.18
	24 hour Systolic BP	1.69(1.41, 2.02)	<.0001	1.17(0.93, 1.48)	0.18	1.34(1.02, 1.76)	0.03
	24 hour Diastolic BP	0.96(0.77, 1.18)	0.69	1.07(0.83, 1.37)	0.60	1.2(0.89, 1.62)	0.23
	Night-time Systolic BP	1.79(1.5, 2.12)	<.0001	1.22(0.98, 1.53)	0.08	1.23(0.84, 1.8)	0.29
	Night-time Diastolic BP	1.2(0.98, 1.47)	0.08	1.18(0.94, 1.5)	0.16	1.45(0.97, 2.16)	0.07
	Daytime Systolic BP	1.62(1.35, 1.95)	<.0001	1.15(0.91, 1.45)	0.24	1.1(0.71, 1.72)	0.66
	Daytime diastolic BP	0.89(0.72, 1.1)	0.29	1.03(0.8, 1.33)	0.81	0.83(0.52, 1.33)	0.43
Myocardial Infarction	Clinic Systolic BP	1.4(1.21, 1.62)	<.0001	1.13(0.94, 1.36)	0.20	0.95(0.76, 1.19)	0.67
	Clinic Diastolic BP	0.8(0.66, 0.96)	0.01	0.91(0.73, 1.14)	0.42	0.93(0.71, 1.21)	0.58
	24 hour Systolic BP	1.67(1.43, 1.94)	<.0001	1.32(1.09, 1.59)	0.004	1.36(1.08, 1.71)	0.009
	24 hour Diastolic BP	0.88(0.74, 1.05)	0.17	0.93(0.75, 1.16)	0.53	0.97(0.75, 1.26)	0.81
	Night-time Systolic BP	1.61(1.37, 1.88)	<.0001	1.21(1.01, 1.46)	0.04	0.85(0.61, 1.17)	0.31
	Night-time Diastolic BP	0.98(0.82, 1.17)	0.79	0.92(0.75, 1.13)	0.43	0.88(0.64, 1.22)	0.44
	Daytime Systolic BP	1.67(1.43, 1.95)	<.0001	1.35(1.12, 1.63)	0.002	1.64(1.14, 2.36)	0.007
	Daytime diastolic BP	0.87(0.73, 1.04)	0.12	0.95(0.77, 1.18)	0.66	1.11(0.76, 1.62)	0.58
Heart Failure	Clinic Systolic BP	1.23(1.08, 1.39)	0.002	0.89(0.76, 1.05)	0.16	0.78(0.65, 0.95)	0.01
	Clinic Diastolic BP	0.69(0.6, 0.81)	<.0001	0.85(0.71, 1.01)	0.07	0.75(0.61, 0.92)	0.006
	24 hour Systolic BP	1.58(1.4, 1.79)	<.0001	1.13(0.97, 1.33)	0.12	1.28(1.07, 1.54)	0.008
	24 hour Diastolic BP	0.97(0.84, 1.12)	0.65	1.09(0.92, 1.3)	0.33	1.27(1.04, 1.56)	0.02

		Unadjusted Model		Model A		Model B	
		HR (95% CI) (Per each standard deviation)	P-Value	HR (95% CI) (Per each standard deviation)	P-Value	HR (95% CI) (Per each standard deviation)	P-Value
	Night-time Systolic BP	1.66(1.47, 1.88)	<.0001	1.12(0.97, 1.31)	0.13	1.01(0.77, 1.32)	0.97
	Night-time Diastolic BP	1.18(1.03, 1.35)	0.02	1.16(0.98, 1.36)	0.08	1.24(0.95, 1.62)	0.11
	Daytime Systolic BP	1.54(1.36, 1.75)	<.0001	1.14(0.97, 1.33)	0.11	1.3(0.96, 1.78)	0.09
	Daytime diastolic BP	0.91(0.79, 1.05)	0.21	1.07(0.9, 1.28)	0.44	1.04(0.76, 1.43)	0.81
Stroke	Clinic Systolic BP	1.32(1.06, 1.65)	0.01	1.09(0.84, 1.43)	0.52	0.89(0.64, 1.23)	0.48
	Clinic Diastolic BP	0.99(0.77, 1.28)	0.93	1.05(0.78, 1.41)	0.74	0.85(0.6, 1.22)	0.39
	24 hour Systolic BP	1.63(1.3, 2.03)	<.0001	1.38(1.05, 1.82)	0.02	1.48(1.06, 2.06)	0.02
	24 hour Diastolic BP	1.23(0.96, 1.57)	0.10	1.33(0.98, 1.81)	0.07	1.46(1.01, 2.13)	0.047
	Night-time Systolic BP	1.62(1.3, 2.02)	<.0001	1.31(1, 1.71)	0.0533	1.03(0.64, 1.65)	0.91
	Night-time Diastolic BP	1.3(1.02, 1.66)	0.03	1.24(0.92, 1.66)	0.15	1.02(0.64, 1.6)	0.94
	Daytime Systolic BP	1.59(1.27, 1.99)	<.0001	1.37(1.04, 1.81)	0.02	1.45(0.85, 2.46)	0.17
	Daytime diastolic BP	1.18(0.92, 1.51)	0.19	1.32(0.97, 1.81)	0.08	1.45(0.84, 2.49)	0.18
Peripheral Arterial Disease	Clinic Systolic BP	1.12(0.85, 1.47)	0.43	0.79(0.56, 1.1)	0.16	0.65(0.43, 0.96)	0.03
	Clinic Diastolic BP	0.75(0.55, 1.02)	0.06	0.89(0.62, 1.26)	0.50	0.9(0.59, 1.39)	0.64
	24 hour Systolic BP	1.55(1.2, 2)	0.0008	1.16(0.84, 1.62)	0.37	1.46(0.99, 2.15)	0.05
	24 hour Diastolic BP	0.94(0.7, 1.27)	0.70	0.91(0.64, 1.3)	0.60	0.96(0.63, 1.48)	0.86
	Night-time Systolic BP	1.75(1.37, 2.23)	<.0001	1.33(0.97, 1.82)	0.08	1.81(1.05, 3.12)	0.03
	Night-time Diastolic BP	1.26(0.96, 1.66)	0.10	1.14(0.82, 1.59)	0.42	1.98(1.16, 3.36)	0.01
	Daytime Systolic BP	1.44(1.11, 1.87)	0.006	1.08(0.77, 1.51)	0.65	0.8(0.43, 1.5)	0.49
	Daytime diastolic BP	0.84(0.63, 1.13)	0.26	0.82(0.57, 1.19)	0.29	0.47(0.25, 0.88)	0.01

HR –Hazard ratio, CI –confidence interval

Covariates adjusted for in Model A for all BP variables – clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD

Model B –For Clinic systolic BP – adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD and 24 hour systolic BP;
Model B –For Clinic diastolic BP- adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD and 24 hour diastolic BP;
Model B-For 24 hour systolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD and clinic systolic BP;
Model B-For 24 hour diastolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD and clinic diastolic BP;
Model B-For daytime systolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic systolic BP and nighttime systolic BP;
Model B-For daytime diastolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic diastolic BP and nighttime diastolic BP;
Model B-For night-time systolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic systolic BP and daytime systolic BP;
Model B-For night-time diastolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic diastolic BP and daytime diastolic BP;

Supplementary table 8. Association between ambulatory blood pressure (mm Hg) and the composite cardiovascular outcome stratified by GFR (ml/min/1.73m^2)

BP parameter	HR (95% CI) (Per each standard deviation)
24 hour Systolic BP GFR <30	1.28(1.05, 1.56)
24 hour Systolic BP GFR <30-60	1.5(1.25, 1.8)
24 hour Systolic BP GFR >60	1.96(1.3, 2.95)
Night-time Systolic BP GFR <30	0.99(0.78, 1.26)
Night-time Systolic BP GFR 30-60	1.1(0.87, 1.41)
Night-time Systolic BP >60	1.71(1.07, 2.71)
Daytime Systolic BP GFR <30	1.18(0.89, 1.56)
Daytime Systolic BP GFR 30-60	1.41(1.09, 1.82)
Daytime Systolic BP >60	1.7(1.1, 2.64)

HR –Hazard ratio, CI –confidence interval . For 24 hour systolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD and clinic systolic BP.
For night-time systolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic systolic BP and daytime systolic BP
For daytime systolic BP - adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic systolic BP and nighttime systolic BP;

Supplementary table 9. Association between day time blood pressure (defined between 0900 and 2100) and clinical outcomes

Outcome		HR (95% CI) (Per each standard deviation)	P-Value
Composite of MI, stroke, PAD, and CHF	Average daytime SBP	1.36(1.12, 1.66)	0.002
	Average daytime DBP	1.06(0.86, 1.31)	0.59
Renal: 50% decrease in eGFR or end-stage renal disease	Average daytime SBP	0.97(0.8, 1.19)	0.78
	Average daytime DBP	0.96(0.79, 1.17)	0.7
All-cause mortality	Average daytime SBP	1.33(1.08, 1.63)	0.006
	Average daytime DBP	1.13(0.91, 1.41)	0.28

Adjusted for clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic and night time BP;

Supplement Table 10. Association of Diurnal profile of blood pressure with cardiovascular outcomes and CV mortality

Outcome	Number of events/unadjusted event rate per 100 patient years	Unadjusted HR (95% CI)	Overall P-Value for the model	Model A* HR (95% CI)	Overall P-Value for the model	Model B HR (95% CI)	Overall P-Value for the model
Cardiovascular Mortality			<.0001		0.32		0.39
Reverse dipper	27/2.088	3.46 (1.97, 6.08)		1.56 (0.83, 2.94)		1.51 (0.8, 2.87)	
No dipper	39/0.878	1.48(0.88, 2.5)		1.1(0.64, 1.92)		1.09(0.63, 1.9)	
Dipper	22/0.593	REF		REF		REF	
Myocardial Infarction			0.55		0.41		
Reverse dipper	22/1.631	1.33(0.8, 2.21)		0.76(0.43, 1.34)		0.74(0.42, 1.31)	
No dipper	61/1.372	1.1(0.75, 1.62)		0.76(0.5, 1.16)		0.73(0.48, 1.12)	
Dipper	45/1.249	REF		REF		REF	
Heart Failure			<.0001		0.54		0.62
Reverse dipper	53/4.093	2.63(1.8, 3.84)		1.14(0.74, 1.75)		1.11(0.72, 1.7)	
No dipper	94/2.155	1.4(1, 1.95)		0.93(0.64, 1.33)		0.92(0.64, 1.33)	
Dipper	55/1.535	REF		REF		REF	
Stroke			0.04		0.09		0.09
Reverse dipper	11/0.791	2.15(0.98, 4.75)		1.18(0.47, 2.96)		1.19(0.47, 3)	
No dipper	36/0.799	2.13(1.15, 3.95)		1.98(1.02, 3.86)		1.98(1.02, 3.85)	
Dipper	14/0.38	REF		REF		REF	
Peripheral Arterial Disease			0.002		0.07		0.08
Reverse dipper	13/0.952	5.68(2.16, 14.95)		3.31(1.13, 9.67)		3.2(1.09, 9.39)	

Outcome	Number of events/unadjusted event rate per 100 patient years	Unadjusted HR (95% CI)	Overall P-Value for the model	Model A* HR (95% CI)	Overall P-Value for the model	Model B HR (95% CI)	Overall P-Value for the model
No dipper	27/0.6	3.67(1.51, 8.88)		2.83(1.07, 7.51)		2.83(1.07, 7.51)	
Dipper	6/0.162	REF		REF		REF	

HR –Hazard ratio, CI –confidence interval, REF – reference group
Covariates adjusted for in Model A – clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD
Covariates adjusted for in Model B -, clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic systolic BP and clinic diastolic BP

Supplementary table 11. Association between ABPM profiles and outcomes adding 24 hour systolic blood pressure as a covariate.

Outcome		**HR (95% CI)**	**Overall P-Value for the model**
Composite of MI, stroke, PAD, and CHF	Masked uncontrolled hypertension	1.03(0.71, 1.48)	0.8
	Sustained hypertension	1.25(0.74, 2.09)	
	White coat effect	1.04(0.48, 2.27)	
	Controlled Blood Pressure	REF	
Kidney Outcome: 50% decrease in eGFR or ESRD	Masked uncontrolled hypertension	1.24(0.87, 1.77)	0.067
	Sustained hypertension	0.96(0.58, 1.58)	
	White coat effect	1.72(0.93, 3.18)	
	Controlled Blood Pressure	REF	
All-cause mortality	Masked uncontrolled hypertension	0.96(0.66, 1.41)	0.96
	Sustained hypertension	1.06(0.61, 1.84)	
	White coat effect	0.91(0.39, 2.08)	
	Controlled Blood Pressure	REF	

HR –Hazard ratio, CI –confidence interval, REF – reference group

(Covariates adjusted for -clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic SBP and clinic DBP and 24 hour systolic BP)

Supplementary table 12. Association between diurnal profiles and outcomes adding 24 hour systolic blood pressure as a covariate **22**

Outcome		**HR (95% CI)**	**Overall P-Value for the model**
Composite of MI, stroke, PAD, and CHF	Reverse dipper	1(0.76, 1.33)	0.99
	No dipper	1.03(0.72, 1.47)	
	Dipper	REF	
Kidney Outcome: 50% decrease in eGFR or ESRD	Reverse dipper	1.18(0.9, 1.57)	0.0096
	No dipper	1.71(1.2, 2.44)	
	Dipper	REF	
All-cause mortality	Reverse dipper	0.85(0.63, 1.15)	0.55
	No dipper	0.95(0.65, 1.38)	
	Dipper	REF	

HR –Hazard ratio, CI –confidence interval, REF – reference group (Covariates adjusted for -clinical center, age, gender, race, diabetes, GFR, Urinary Protein/Creatinine Ratio, prior CVD, clinic SBP and clinic DBP and 24 hour systolic BP**)**

Table 13. Blood pressure and antihypertensive drug therapy stratified by ABPM profile over the course of the study. **23**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	year 8	year 9
White coat Effect	57	54	51	57	51	48	33	3	0
Masked Uncontrolled Hypertension	391	372	338	314	303	275	172	75	3
Sustained Hypertension	269	246	222	212	189	173	117	49	2
Controlled Blood Pressure	693	664	618	600	573	524	356	165	5

Table -13a Number of patients in each category over time

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	year 8	year 9
White coat Effect	135	137	134	132	128	130	126	126	0
Masked Uncontrolled Hypertension	128	128	128	130	127	127	126	125	112
Sustained Hypertension	143	142	141	138	139	137	136	143	138
Controlled Blood Pressure	118	118	118	120	121	121	119	121	117

Table 13b Mean systolic BP (mm Hg) over time

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	year 8	year 9
White coat Effect	68	69	68	66	66	66	66	69	0
Masked Uncontrolled Hypertension	70	69	69	69	68	67	67	66	56
Sustained Hypertension	72	71	71	68	68	68	68	71	74
Controlled Blood Pressure	66	66	66	67	66	66	65	65	70

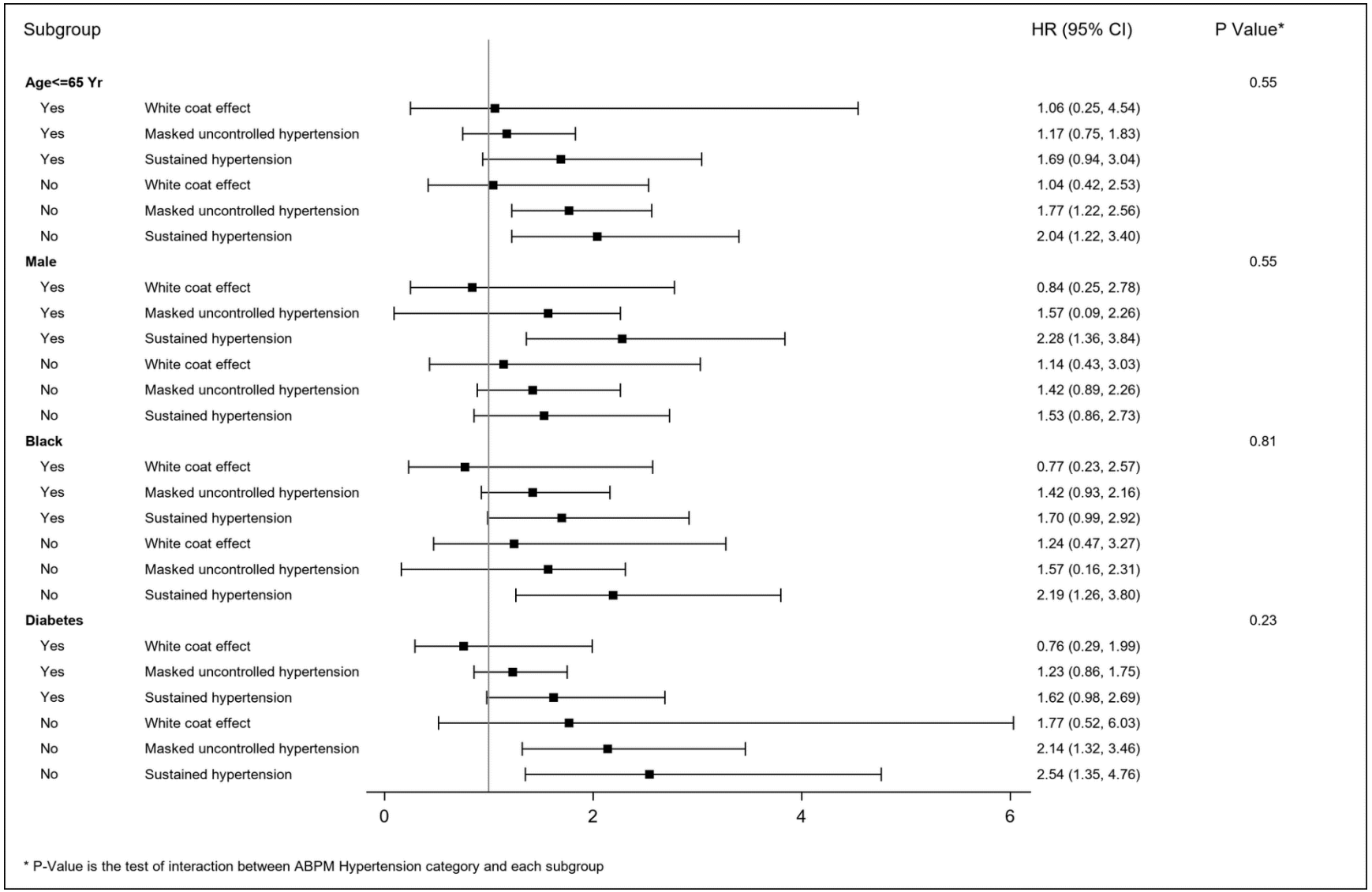
Table 13c Mean diastolic BP (mm Hg) over time

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	year 8	year 9
White coat Effect	2.4	2.6	2.5	2.6	2.4	2.4	2.4	2.3	0
Masked Uncontrolled Hypertension	2.7	2.7	2.7	2.6	2.6	2.5	2.3	2.1	3
Sustained Hypertension	2.9	3	2.8	2.9	2.8	2.8	2.9	2.8	2
Controlled Blood Pressure	2.2	2.2	2.1	2.1	2	2	2	2	1.2

Table 13d.–Mean number of antihypertensive medications over time

Supplement figure 1. **25**

Association between ABPM phenotypes and the composite cardiovascular outcomes in sub groups of age, gender, race and diabetes



* P-Value is the test of interaction between ABPM Hypertension category and each subgroup

Supplement figure 2. Association between ABPM profiles and kidney outcome (ESRD or 50% decline in GFR) sub groups of age, gender, race and diabetes