

Supplementary Table 1: Risk of LVH or ESRD and model discrimination by different systolic BP index parameters in adjusted analyses using CKiD equation.*

Metric N=471	Adjusted OR** for LVH¹ (95% CI)	Adjusted C- statistic (95% CI)	Adjusted HR** of ESRD¹ (95% CI)	Adjusted C- statistic (95% CI)
Clinic systolic BP index at a single visit	1.8 (1.3-2.5)	0.79 (0.74-0.85)	1.2 (1.0-1.5)	0.89 (0.86-0.91)
Mean of all systolic BP indices at up to two visits	2.1 (1.4-3.0)	0.80 (0.74-0.86) Reference	1.2 (1.0-1.5)	0.89 (0.86-0.92)
Mean ABP wake systolic BP index	2.1 (1.4-3.1)	0.80 (0.75-0.86)	1.3 (1.0-1.6)	0.89 (0.85-0.91)
Mean ABP sleep systolic BP index	1.7 (1.2-2.4)	0.80 (0.74-0.86)	1.2 (1.0-1.5)	0.89 (0.84-0.91)
Mean of all systolic BP indices at up to two visits + ABP mean wake systolic BP index	Clinic: 1.5 (1.0-2.1) Ambulatory: 1.6 (1.0-2.6)	0.81 (0.76-0.87)	Clinic: 1.1 (0.8-1.4) Ambulatory: 1.2 (0.9-1.7)	0.89 (0.86-0.91)

¹Adjusted for age, sex, race, cause of CKD, BMI z-score, duration of CKD, urine protein/creatinine ratio, serum albumin, hemoglobin, anti-hypertensive use, and baseline eGFR (by bedside Schwartz)

*No differences were noted in the c-statistic of any metric compared to that for the reference group, which is mean of clinic systolic BPs taken at up to two visits

** OR = odds ratio; HR = hazard ratio, all reported per 0.1 increase in SBP index

Supplementary Table 2: Association between BP parameters at Year 1 and risk of LVH at Year 3 with model discrimination in unadjusted and adjusted analyses.

Metric N=272	Unadjusted OR** for LVH¹ (95% CI)	Unadjusted C- statistic (95% CI)	Adjusted OR** of LVH¹ (95% CI)	Adjusted C- statistic (95% CI)
Clinic systolic BP index at a single visit	1.8 (1.2-2.6)	0.66 (0.56-0.77)	1.7 (1.1-2.6)	0.83 (0.76-0.91)
Mean of all systolic BP indices at up to two visits	1.7 (1.1-2.6)	0.62 (0.51-0.73) Reference	1.5 (0.9-2.5)	0.83 (0.75-0.90)
Mean ABP wake systolic BP index	0.9 (0.6-1.5)	0.52 (0.42-0.63)	1.0 (0.6-1.8)	0.82 (0.75-0.89)
Mean ABP sleep systolic BP index	0.9 (0.6-1.4)	0.51 (0.41-0.62)	1.1 (0.7-1.7)	0.82 (0.74-0.89)
Mean of all systolic BP indices at up to two visits + ABP mean wake systolic BP index	Clinic: 2.1 (1.3-3.4) Ambulatory: 0.6 (0.4-1.1)	0.64 (0.52-0.75)	Clinic: 1.8 (1.0-3.3) Ambulatory: 0.7 (0.4-1.4)	0.83 (0.75-0.91)

¹Adjusted for age, sex, race, cause of CKD, BMI z-score, duration of CKD, urine protein/creatinine ratio, serum albumin, hemoglobin, anti-hypertensive use, and baseline eGFR (by bedside Schwartz); N=264 included due to missing co-variates

*No differences were noted in the c-statistic of any metric compared to that for the reference group, which is mean of clinic systolic BPs taken at up to two visits

** OR = odds ratio; HR = hazard ratio, all reported per 0.1 increase in systolic BP index