Table S1. Summary of Key Variables by Quartiles of Factor Scores

Factor Scores	Q1	Q2	Q3	Q4
Tubule Injury/Repair Score				
Age, years (SD)	71 (9)	74 (9)	74 (9)	74 (9)
Female, n (%)	94 (16)	156 (27)	254 (44)	421 (73)
Race, n (%)				
Non-Hispanic White	423 (73)	443 (77)	424 (74)	391 (68)
Non-Hispanic Black	147 (26)	126 (22)	144 (25)	170 (30)
Hispanic and other	6 (1)	7 (1)	8 (1)	14 (2)
Intensive arm, n (%)	295 (51)	290 (50)	292 (51)	300 (52)
Mean baseline SBP, mm Hg (SD)	137 (15)	139 (16)	141 (16)	142 (17)
Mean baseline # BP meds, n (SD)	2.2 (0.96)	2.1 (1.0)	2.1 (1.0)	2.2 (1.0)
Mean eGFR, ml/min/1.73m2 (SD)	46 (10)	47 (10)	46 (11)	45 (11)
Median urine ACR, mg/g (IQR)	10 [5, 32]	13 [6, 40]	15 [7, 44]	24 [11, 81]
Tubule Injury/Fibrosis Score				
Age, years (SD)	71 (9)	73 (9)	74 (9)	75 (9)
Female, n (%)	238 (41)	219 (38)	224 (39)	244 (42)
Race, n (%)				
Non-Hispanic White	375 (65)	403 (70)	443 (77)	460 (80)
Non-Hispanic Black	194 (34)	165 (29)	122 (21)	106 (18)
Hispanic and other	7 (1)	8 (1)	11 (2)	9 (2)
Intensive arm, n (%)	303 (53)	290 (50)	284 (49)	300 (52)
Mean baseline SBP, mm Hg (SD)	139 (16)	140 (16)	139 (16)	141 (18)
Mean baseline # BP meds, n (SD)	2.2 (1.0)	2.2 (1.0)	2.1 (1.0)	2.1 (1.0)
Mean eGFR, ml/min/1.73m2 (IQR)	46 (10)	46 (10)	46 (10)	45 (11)
Median urine ACR, mg/g (IQR)	11 [5, 29]	13 [6, 37]	16 [8, 64]	21 [10, 71]
Tubule Reabsorption Score				
Age, years (SD)	71 (8)	73 (9)	74 (9)	74 (10)
Female, n (%)	251 (44)	251 (44)	216 (38)	207 (36)
Race, n (%)				
Non-Hispanic White	380 (66)	425 (74)	444 (77)	432 (75)
Non-Hispanic Black	190 (33)	142 (25)	124 (22)	131 (23)
Hispanic and other	6 (1)	9 (2)	8 (1)	12 (2)
Intensive arm, n (%)	289 (50)	298 (52)	298 (52)	292 (51)
Mean baseline SBP, mm Hg (SD)	136 (15)	139 (15)	141 (16)	144 (17)
Mean baseline # BP meds, n (SD)	2.1 (1.0)	2.2 (1.0)	2.1 (1.0)	2.2 (1.1)
Mean eGFR, ml/min/1.73m2 (IQR)	49 (8)	48 (9)	46 (10)	40 (12)
Median urine ACR, mg/g (IQR)	8 [5, 16]	11 [6, 29]	16 [7, 54]	45 [16, 147]
Tubule Reseve Score				
Age, years (SD)	74 (9)	74 (9)	73 (9)	72 (10)
Female, n (%)	260 (45)	220 (38)	215 (37)	230 (40)
Race, n (%)				
Non-Hispanic White	479 (83)	453 (79)	408 (71)	341 (59)
Non-Hispanic Black	87 (15)	113 (20)	163 (28)	224 (39)
Hispanic and other	10 (2)	10 (2)	5 (1)	10 (2)
Intensive arm, n (%)	318 (55)	283 (49)	275 (48)	301 (52)
Mean baseline SBP, mm Hg (SD)	140 (15)	140 (17)	140 (17)	138 (16)
Mean baseline # BP meds, n (SD)	2.0 (1.0)	2.1 (1.0)	2.1 (1.0)	2.4 (1.0)
Mean eGFR, ml/min/1.73m2 (IQR)	51 (7)	49 (8)	45 (10)	38 (12)
Median urine ACR, mg/g (IQR)	10 [6, 21]	13 [6, 39]	17 [7, 59]	24 [11, 111]

Table S2. Interactions of Factor Scores with Randomization Arm on Risk of AKI

Factor Score	Interaction p-value
Tubule Injury/Repair (NGAL, IL-18, and YKL-40)	0.91
Tubule Injury/Fibrosis (KIM-1 and MCP-1)	0.61
Tubule Reabsorption (α1m, β2m)	0.67
Tubule Reserve/Mineral Metabolism (UMOD, iPTH, iFGF23)	0.31
Albumin-creatinine ratio	0.35

*Adjusted for age, sex, race, randomization arm, SBP, DBP, number of antihypertensive meds, ACEi or ARB use, diuretic use, history of CVD or HF, current smoker, BMI, LDL, total cholesterol, baseline eGFR and UACR

Each factor is modeled per SD higher. ACR was log transformed and represents a SD higher on the log scale, to provide a reference for comparison of strengths of association.

Table S3. Association of Factor Scores with 50% kidney function decline or ESRD or Transplantation

Incident events = 82	Unadjusted β (95% CI)	Model 1* β (95% CI)	Model 2** β (95% CI)
Tubule Injury/Repair	1.37 (1.13, 1.64)	1.36 (1.11, 1.67)	1.14 (0.93, 1.40)
Tubule Injury/Fibrosis	1.36 (1.04, 1.78)	1.29 (0.99, 1.89)	1.10 (0.83, 1.45)
Tubule Reabsorption	1.95 (1.57, 2.41)	1.85 (1.48, 2.31)	1.21 (0.95, 1.56)
Tubule Reserve/Mineral Metabolism	1.78 (1.47, 2.17)	1.65 (1.35, 2.01)	1.04 (0.81, 1.35)
Albumin-creatinine ratio	2.26 (1.88, 2.72)	2.10 (1.73, 2.56)	1.75 (1.41, 2.17)

* model 1: age, sex, race, randomization arm, SBP, DBP, number of antihypertensive meds, ACEi or ARB use, diuretic use, history of CVD or HF, current smoker, BMI, LDL, total cholesterol.
** model 2: model 1 + baseline eGFR and UACR
Each factor is modeled per SD higher. ACR was log transformed and represents a SD higher on the log scale.