

Supplemental Table 1. Relative risk for *transition to each subsequent stage of CKD* by characteristics determined at the beginning of each stage of CKD.

Characteristic**	Hazard ratio (95% CI)			
	Stage 3a (N=1432)	Stage 3b (N=2142)	Stage 4 (N=1695)	Stage 5 (N=741)
Age ≥60 years	1.20 (1.02-1.41)	0.73 (0.64-0.83)*	0.64 (0.55-0.74)	0.76 (0.65-0.90)*
Female (vs. male)	1.08 (0.91-1.27)	0.85 (0.75-0.96)	0.85 (0.73-0.98)	0.80 (0.69-0.94)
Race (vs. white)				
Black	1.24 (1.03-1.49)	1.43 (1.24-1.64)	1.90 (1.58-2.29)	1.00 (0.82-1.21)
Hispanic	1.61 (1.21-2.15)	1.31 (1.08-1.59)	1.80 (1.42-2.27)	0.86 (0.67-1.09)*
Other	1.51 (1.04-2.17)	1.15 (0.83-1.59)	1.75 (1.20-2.56)	1.21 (0.81-1.81)
Diabetes	1.59 (1.34-1.88)	1.20 (1.05-1.36)*	1.10 (0.93-1.29)*	1.25 (1.06-1.49)*
Proteinuria ≥ 1g/g	2.95 (2.43-3.57)	2.92 (2.55-3.35)	3.16 (2.69-3.73)*	1.67 (1.40-1.99)*
Obese (BMI ≥30 kg/m ²)	1.01 (0.85-1.19)	0.95 (0.84-1.08)	0.98 (0.84-1.15)	0.91 (0.77-1.07)*
Current smoker	1.05 (0.82-1.35)	1.09 (0.91-1.29)	1.25 (1.03-1.52)	1.17 (0.93-1.46)
Systolic blood pressure ≥140 mmHg	1.47 (1.23-1.77)	1.41 (1.23-1.60)	1.44 (1.23-1.69)	1.20 (1.02-1.42)
ACE/ARB use	1.17 (0.97-1.41)	0.94 (0.82-1.09)*	0.94 (0.79-1.10)	1.15 (0.98-1.36)

*Statistically significant difference (p<0.05 for interaction) across CKD stages; Stage 3a is used as the reference in tests for interaction.

**Missing covariates in N=5 for stage 3a; N=18 in CKD stage 3b; N=8 in CKD stage 4

Appendix. Prediction equations for median time to transition to each subsequent stage of CKD.

Median time to transition from CKD stage 3a to 3b:

$$A = 0.5336909 * \text{diabetes} + 1.133394 * \text{proteinuria} + 0.0048407 * \text{age} + 0.0724414 * \text{sex} + 0.4622898 * (\text{sbp}) - 2.819153$$

$$\text{Median time spent in CKD stage 3a} = (-\ln(0.5)) * e^{(-A)} * 1.272523$$

Median time to transition from CKD stage 3b to 4:

$$A = 0.2174867 * \text{diabetes} + 1.062451 * \text{proteinuria} - 0.0177396 * \text{age} - 0.1318289 * \text{sex} + 0.4512464 * (\text{sbp}) - 1.312139$$

$$\text{Median time spent in CKD stage 3b} = (-\ln(0.5)) * e^{(-A)} * 1.055524$$

Median time to transition from CKD stage 4 to 5:

$$A = 0.2039766 * \text{diabetes} + 1.235812 * \text{proteinuria} - 0.0241392 * \text{age} - 0.1096564 * \text{sex} + 0.5088881 * (\text{sbp}) - 2.513896$$

$$\text{Median time spent in CKD stage 4} = (-\ln(0.5)) * e^{(-A)} * 0.5198475$$

Median time to transition from CKD stage 5 to ESRD:

$$A = 0.2484453 * \text{diabetes} + 0.4460576 * \text{proteinuria} - 0.0191924 * \text{age} - 0.2310535 * \text{sex} + 0.2427223 * (\text{sbp}) + 0.5750078$$

$$\text{Median time spent in CKD stage 5} = (-\ln(0.5)) * e^{(-A)} * 0.9402173$$

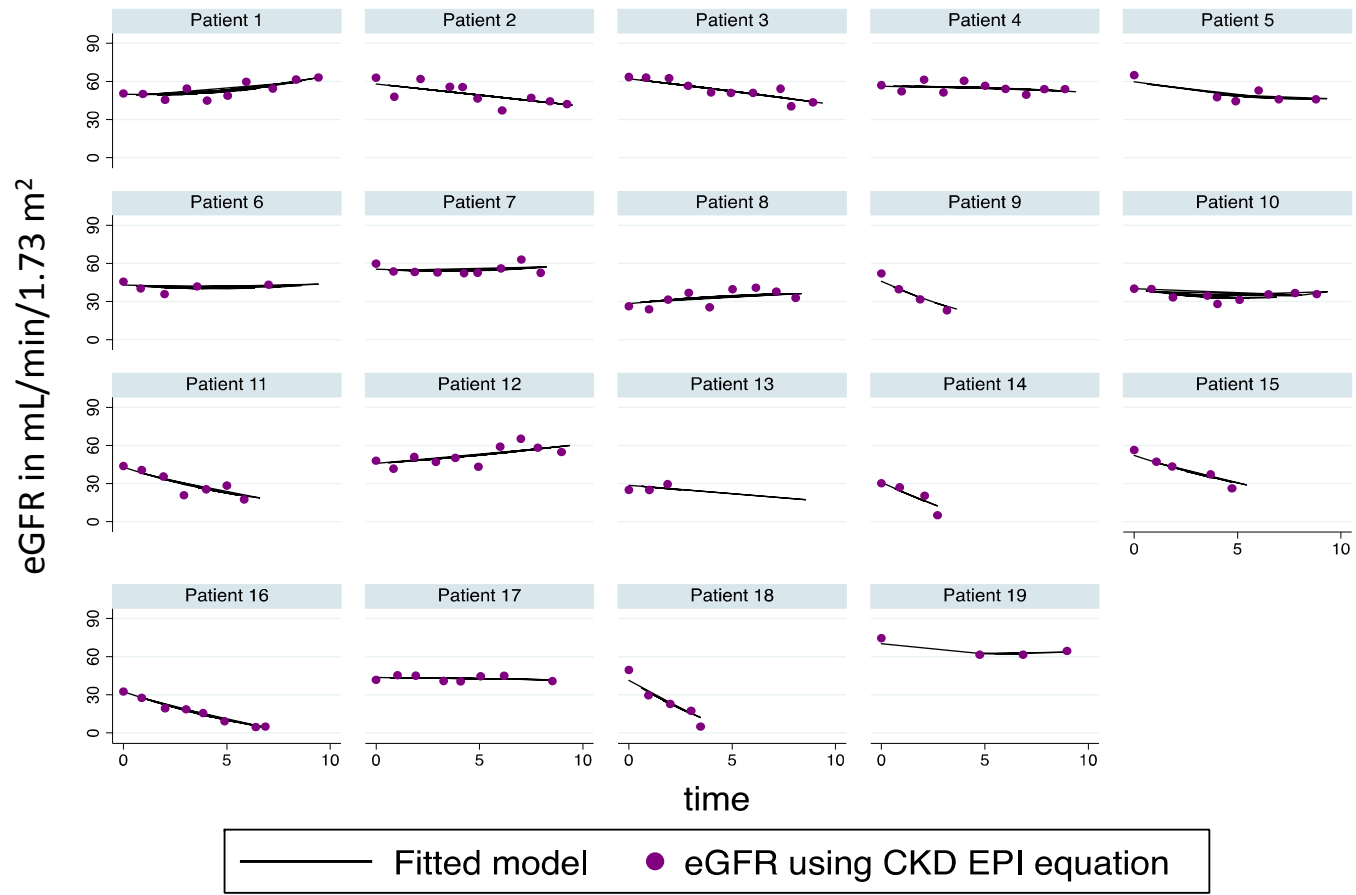
diabetes = 1 if patient has diabetes; 0 if patient does not have diabetes

proteinuria = 1 if pro/cre ratio \geq 1 g/g or 0 if pro/cre ratio $<$ 1 g/g

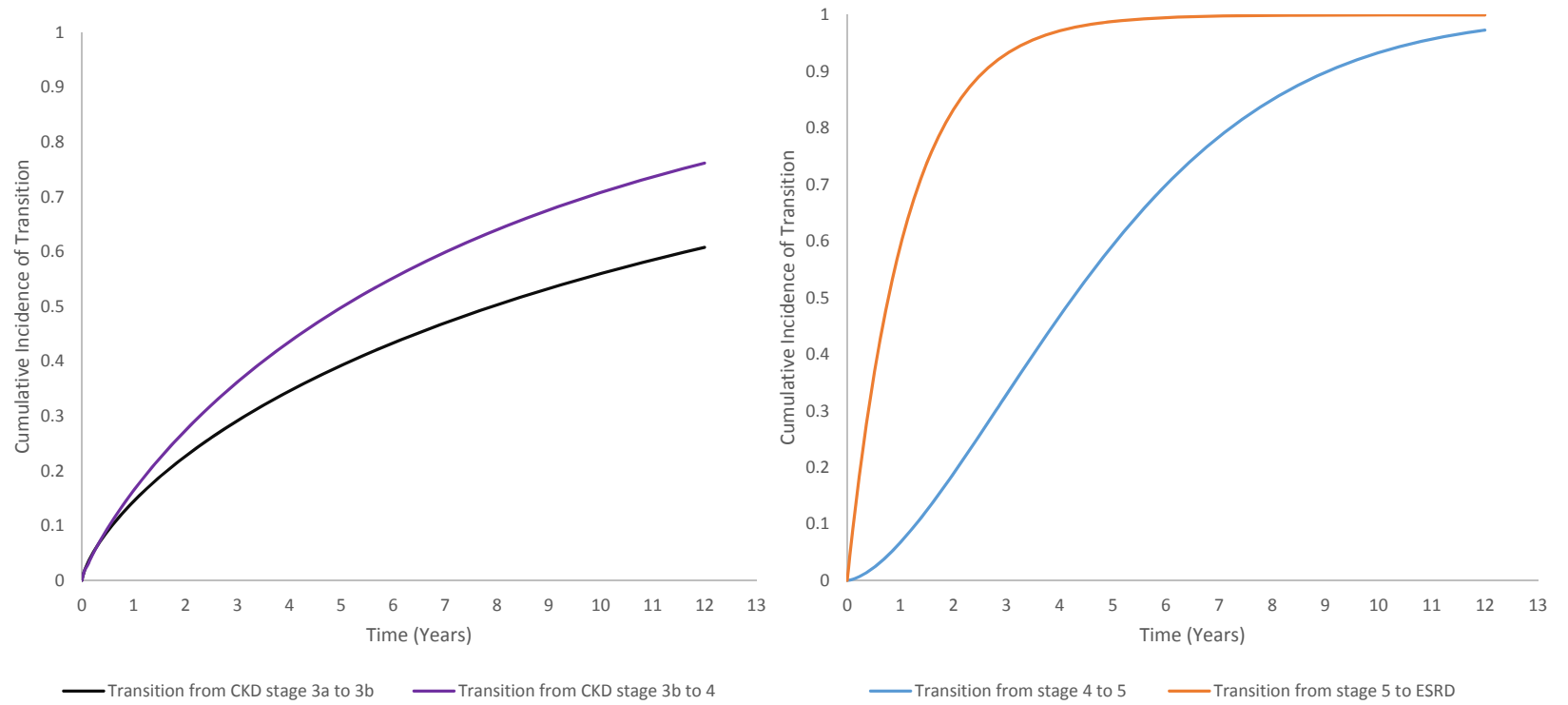
sex = 1 if female and 0 if male

sbp = 1 if systolic BP \geq 140 mm Hg or 0 if systolic BP $<$ 140 mm Hg

Supplemental Figure 1. Fit of mixed models for eGFR trajectory in a subset of randomly selected CRIC participants.



Supplementary Figure 2. Survival curves for various stages of CKD transitions among CRIC participants using Weibull parametric models.



Supplementary Figure 3. Median time spent in each CKD stage based on Weibull parametric models.

