

## Table of Contents

Supplemental Table 1: Incidence rates and hazard ratios of risk of hospitalization with infection treating death as a competing risk: CRIC 2003-2013. ....	2
Supplemental Table 2: Hazard ratios for the association of FGF23 with risk of hospitalization with type specific infections that were recorded as the primary diagnosis: CRIC 2003-2013. ....	3
Supplemental Table 3: Hazard ratios of risk of hospitalization with infection for FGF23 after additional adjustment for markers of inflammation and bone mineral metabolism: CRIC 2003-2013. ....	4
Supplemental Figure 1: Histograms and adjusted hazard ratios of risk of hospitalization with infection in a subset of participants who had repeated FGF23 measurements: CRIC 2003-2013. ....	5

**Supplemental Table 1: Incidence rates and hazard ratios of risk of hospitalization with infection treating death as a competing risk: CRIC 2003-2013.**

HR (95%CI) per log(SD) increase	FGF23 quartile (RU/mL)				Continuous, per SD increase
	< 95.3	95.3-144.2	144.2-235.9	≥ 235.9	
Model 1	1 [Reference]	1.24 (1.03-1.50)	1.58 (1.31-1.89)	2.05 (1.72-2.45)	1.33 (1.25-1.41)
Model 2	1 [Reference]	1.17 (0.97-1.41)	1.37 (1.12-1.67)	1.73 (1.41-2.11)	1.26 (1.18-1.35)
Model 3	1 [Reference]	1.07 (0.88-1.28)	1.15 (0.94-1.40)	1.32 (1.07-1.62)	1.17 (1.09-1.26)

\*The HR was per log(SD) increase in FGF23. Model 1 was adjusted for age, sex, and race. Model 2 additionally adjusted for estimated glomerular filtration rate, and urinary albumin-to-creatinine ratio. Model 3 additionally adjusted for body mass index, smoking status, alcohol consumption, hypertension, diabetes, and past medical history (chronic obstructive pulmonary disease, cancer, and cardiovascular disease). All models were stratified by clinical center.

**Supplemental Table 2: Hazard ratios for the association of FGF23 with risk of hospitalization with type specific infections that were recorded as the primary diagnosis: CRIC 2003-2013.**

Outcomes	Type-specific infection			
	Urinary tract infection	Cellulitis/osteomyelitis	Pneumonia	Bacteremia/septicemia
Events, n	122	238	183	136
HR (95%CI) per log(SD) increase				
Model 1	1.16 (0.96-1.39)	1.44 (1.27-1.62)	1.46 (1.27-1.68)	1.44 (1.21-1.72)
Model 2	1.07 (0.87-1.31)	1.43 (1.26-1.63)	1.36 (1.17-1.58)	1.35 (1.11-1.63)
Model 3	1.05 (0.85-1.29)	1.24 (1.08-1.43)	1.27 (1.09-1.49)	1.25 (1.03-1.52)

\*The HR was per log(SD) increase in FGF23. Model 1 was adjusted for age, sex, and race. Model 2 additionally adjusted for estimated glomerular filtration rate, and urinary albumin-to-creatinine ratio. Model 3 additionally adjusted for body mass index, smoking status, alcohol consumption, hypertension, diabetes, and past medical history (chronic obstructive pulmonary disease, cancer, and cardiovascular disease). All models were stratified by clinical center.

**Supplemental Table 3: Hazard ratios of risk of hospitalization with infection for FGF23 after additional adjustment for markers of inflammation and bone mineral metabolism: CRIC 2003-2013.**

Outcomes	FGF23 quartile (RU/mL)			
	<95.3	95.3-144.2	144.2-235.9	≥235.9
Model with covariates in Model 3	1 [Reference]	1.06 (0.88-1.29)	1.16 (0.95-1.41)	1.51 (1.23-1.85)
Additional adjustment for marker of inflammation				
+ log(IL-6)	1 [Reference]	1.03 (0.85-1.25)	1.11 (0.91-1.36)	1.36 (1.10-1.67)
+ log(TNF-alpha)	1 [Reference]	1.04 (0.86-1.26)	1.12 (0.92-1.37)	1.41 (1.15-1.74)
+ log(hs-CRP)	1 [Reference]	1.06 (0.88-1.29)	1.15 (0.94-1.40)	1.47 (1.20-1.81)
+ log(fibrinogen)	1 [Reference]	1.06 (0.87-1.28)	1.15 (0.94-1.40)	1.49 (1.22-1.84)
+ log(albumin)	1 [Reference]	1.07 (0.88-1.30)	1.18 (0.97-1.44)	1.48 (1.21-1.82)
+ all five markers above	1 [Reference]	1.04 (0.86-1.26)	1.13 (0.93-1.38)	1.37 (1.11-1.69)
Additional adjustment for marker of bone mineral metabolism				
+ log(25-hydroxyvitamin D)	1 [Reference]	1.12 (0.85-1.47)	1.21 (0.92-1.60)	1.49 (1.12-1.99)
+ log(phosphorus)	1 [Reference]	1.07 (0.88-1.30)	1.16 (0.95-1.42)	1.48 (1.20-1.82)
+ log(calcium)	1 [Reference]	1.07 (0.88-1.30)	1.15 (0.94-1.41)	1.52 (1.23-1.87)
+ log(PTH)	1 [Reference]	1.06 (0.87-1.29)	1.17 (0.96-1.42)	1.48 (1.20-1.82)
+ all four markers above	1 [Reference]	1.15 (0.87-1.52)	1.24 (0.93-1.65)	1.51 (1.12-2.04)

\*Model was adjusted for age, sex, race, estimated glomerular filtration rate, urinary albumin-to-creatinine ratio, body mass index, smoking status, alcohol consumption, hypertension, diabetes, and past medical history (chronic obstructive pulmonary disease, cancer, and cardiovascular disease). All models were stratified by clinical center.

**Supplemental Figure 1: Histograms and adjusted hazard ratios of risk of hospitalization with infection in a subset of participants who had repeated FGF23 measurements: CRIC 2003-2013.** The analytic sample was restricted to 1,135 participants who were enrolled in the ancillary study. The level of FGF23 was modeled as a restricted cubic spline with the knots at values corresponding to the 5th, 50th, and 95th percentiles. The value at the 5th percentile served as the referent point. Solid line represents point estimates. Dotted lines represent the corresponding 95% confidence intervals. Model was stratified by center and adjusted for age, sex, race, body mass index, smoking status, alcohol consumption, hypertension, diabetes, past medical history (chronic obstructive pulmonary disease, cancer, and cardiovascular disease), estimated glomerular filtration rate, and urinary albumin-to-creatinine ratio. Histograms show the distribution of FGF23 in the analytic sample.

