

Supplementary Table S2; Warnock et al, AJKD, Kidney Function, Albuminuria, and All-Cause Mortality in the REGARDS (Reasons for Geographic and Racial Differences in Stroke) Study"

Table S2. Analysis of Maximum Likelihood Estimates: 5 x 4 Table; eGFR and ACR Categorical Analysis* (January 2010 Data Freeze)

Parameter	β Coefficient	Standard Error	Chi Square	Probability > Chi Square	Hazard Ratio	Lower 95% CI Limit	Upper 95% CI Limit	Trend P Values
GFR1_ACR1	0				1			0.405 (GFR1_ACR1...GFR5_ACR1)
GFR2_ACR1	0.0486	0.1627	0.089	7.651E-01	1.050	0.763	1.444	
GFR3_ACR1	0.1162	0.2677	0.188	6.643E-01	1.123	0.665	1.898	
GFR4_ACR1	0.2482	0.4344	0.326	5.678E-01	1.282	0.547	3.003	
GFR5_ACR1	0.1739	1.0121	0.030	8.636E-01	1.190	0.164	8.650	
ACR2_GFR1	0.3611	0.1683	4.601	3.200E-02	1.435	1.032	1.996	
ACR3_GFR1	0.5874	0.2055	8.172	4.300E-03	1.799	1.203	2.692	
ACR4_GFR1	1.1782	0.3444	11.707	6.000E-04	3.249	1.654	6.380	
Joint Probabilities Across Categories								
GFR ₂ _ACR ₂	0.4110	0.1620	2.537	5.59E-03	1.508	1.029	1.986	<0.001 (GFR2_ACR1...GFR2_ACR4) 0.013 (GFR1_ACR2...GFR5_ACR2)
GFR ₂ _ACR ₃	0.6410	0.1800	3.555	1.89E-04	1.899	1.228	2.571	
GFR ₂ _ACR ₄	1.1390	0.2550	4.474	3.83E-06	3.124	1.565	4.682	
GFR ₃ _ACR ₂	0.7140	0.2260	3.154	8.04E-04	2.041	1.136	2.946	
GFR ₃ _ACR ₃	0.9540	0.2180	4.383	5.84E-06	2.596	1.489	3.703	
GFR ₃ _ACR ₄	1.5130	0.2830	5.351	4.38E-08	4.540	2.024	7.055	
GFR ₄ _ACR ₂	0.8600	0.2980	2.881	1.98E-03	2.362	0.981	3.743	
GFR ₄ _ACR ₃	1.2560	0.2560	4.902	4.73E-07	3.510	1.748	5.273	
GFR ₄ _ACR ₄	1.5150	0.3470	4.359	6.53E-06	4.548	1.451	7.645	
GFR ₅ _ACR ₂	1.6800	0.4380	3.833	6.33E-05	5.364	0.757	9.971	0.224 (GFR 5_ACR1... GFR5_ACR4)
GFR ₅ _ACR ₃	2.4000	0.3250	7.383	7.74E-14	11.021	4.000	18.041	
GFR ₅ _ACR ₄	1.4380	0.3150	4.567	2.47E-06	4.212	1.613	6.812	
Cross Product Terms								
gfr ₂ *acr ₂	0.0010	0.2139	0.000	0.996	1.001	0.658	1.522	
gfr ₂ *acr ₃	0.0054	0.2533	0.001	0.983	1.005	0.612	1.652	
gfr ₂ *acr ₄	-0.0878	0.4139	0.045	0.832	0.916	0.407	2.061	
gfr ₃ *acr ₂	0.2363	0.3333	0.503	C67	1.267	0.659	2.434	
gfr ₃ *acr ₃	0.2502	0.3459	0.523	0.470	1.284	0.652	2.530	
gfr ₃ *acr ₄	0.2184	0.4783	0.209	0.648	1.244	0.487	3.176	
gfr ₄ *acr ₂	0.2502	0.5116	0.239	0.625	1.284	0.471	3.501	
gfr ₄ *acr ₃	0.4201	0.5026	0.699	0.403	1.522	0.568	4.077	
gfr ₄ *acr ₄	0.0882	0.6200	0.020	0.887	1.092	0.324	3.682	
gfr ₅ *acr ₂	1.14474	1.09585	1.091	0.2962	3.142	0.367	26.91	
gfr ₅ *acr ₃	1.63849	1.06396	2.3716	0.1236	5.147	0.640	41.42	
gfr ₅ *acr ₄	0.08589	1.0952	0.0062	0.9375	1.090	0.127	9.32	

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	β Coefficient	Standard Error	Chi Square	Probability > Chi Square	Hazard Ratio	Lower 95% CI Limit	Upper 95% CI Limit	
Covariates								
Age	0.06588	0.0050	173.843	<.0001	1.068	1.058	1.079	
Male	0.8742	0.0844	107.212	<.0001	2.397	2.031	2.828	
White Race	0.06218	0.0872	0.508	4.760E-01	1.064	0.897	1.263	
>HSE	-0.35559	0.0984	13.056	3.000E-04	0.701	0.578	0.850	
Curr Smok	0.86806	0.1015	73.175	<.0001	2.382	1.953	2.907	
BMI	0.00171	0.0072	0.057	8.117E-01	1.002	0.988	1.016	
Hypertension	0.58067	0.1902	9.317	2.300E-03	1.787	1.231	2.595	
Hypertension * log(follow-up time in days)	-0.0004	0.0002	5.591	0.018	1.000	0.999	1.000	
Diabetes	0.28491	0.0897	10.082	1.500E-03	1.330	1.115	1.585	
Dyslipidemia	-0.04926	0.0806	0.374	5.411E-01	0.952	0.813	1.115	
Hemoglobin	-0.18212	0.0291	39.057	<.0001	0.833	0.787	0.882	

17,393 REGARDS participants with 710 deaths as of January 2010. The hazard ratios were obtained with Cox's proportional hazards regression, and were adjusted for age, gender, race, >HSE (greater than high school educational status), Curr Smok (current smoking status), BMI (body mass index), hypertension, diabetes, dyslipidemia and hemoglobin.

GFR1 refers to eGFR 90 to <120 mL/min/1.73 m² (reference 1.00), and GFR2...GFR5 refer to the other eGFR categories. The ACR categories were defined as: ACR1 <10 mg/g (reference 1.00); ACR2 10 to <30 mg/g; ACR3 30 to 300 mg/g; and ACR4 >300 mg/g

The cross-product terms ($gfr_i \cdot acr_j$) refer to the interaction terms in the linear regression model.

The coefficient of the Joint Probability terms ($GFR_i \cdot ACR_j$) refers to the sum of the coefficients of $GFR_i + ACR_j + gfr_i \cdot acr_j$.

†There were significant additive interactions for the GFR5_ACR3 probability of joint exposure: relative excess risk of interaction, 8.910, 95% CI (1.837 to 15.983, P = 0.007); proportion of excess risk attributable to the joint exposure, 0.818, 95% CI (0.181 to 1.454, P = 0.006). The biologic significance of this single interaction is unknown, especially in view of the relative small number of participants in this category.