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519-P: Comparison of Chronic Kidney Disease Risk Factors between Normoalbuminuric and Albuminuric Patients with Diagnosed Diabetes and Reduced Kidney Function FREE

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The prevalence of normoalbuminuric diabetic kidney disease (DKD) has increased in the past 20 years in the U.S. While previous studies reported the significance of nonalbuminurics pathway to kidney function loss in DKD, the factors associated with the nonalbuminuric kidney function decline remains to be elucidated. This study aimed to compare the CKD risk factors between nonalbuminuric and albuminuric DKD. Among NHANES participants (1999-2016) with diagnosed diabetes and reduced eGFR (< 60), we compared CKD risk factors (including demographics and CKD diagnosis status) between patients with normoalbuminuria (ACR<30) and albuminuria (ACR ≥ 30) using univariate and multivariable analyses. In our DKD cohort, there were 1479 (63%) normoalbuminuric and 1027 (37%) albuminuric cases. Risk factors that significantly differed between albuminuric statuses are presented in Table [Table]. In the multivariable model, age, gender, and DBP were not significantly associated with albuminuric status, while CKD diagnosis status was the strongest predictor followed by eGFR. Normoalbuminuria in patients with diabetes and reduced eGFR is associated with a seemingly healthier lab profile and lower odds of being diagnosed with CKD. Future studies should examine novel markers for detection of and protection against kidney function decline in nonalbuminuric DKD.

... **Table:** Multivariate regression model for variables associated with normoalbuminuric reduced eGFR (vs. albuminuric) among patients with diagnosed diabetes

Variables ¹	Prevalent normoalbuminuric reduced eGFR ²	
	Odds Ratio (95% CI)	P-Value
Age (per SD ³)	0.93 (0.72, 1.19)	0.5574
Gender		
(Female vs. Male)	0.90 (0.70, 1.16)	0.4221
Race		
(Black vs. White)	1.15 (0.84, 1.57)	0.1060
(Hispanic vs. White)	0.57 (0.41, 0.78)	0.0001
Diabetes diagnosis age	1.33 (1.09, 1.61)	0.0042
CKD diagnosis status		
(Undiagnosed vs. Diagnosed)	4.15 (2.81, 6.11)	<.0001
HbA1c (per SD)	0.65 (0.56, 0.76)	<.0001
eGFR (per SD)	0.28 (0.23, 0.35)	<.0001
Uric Acid (per SD)	0.81 (0.70, 0.95)	0.0083
Systolic blood pressure (per SD)	0.48 (0.42, 0.56)	<.0001
Diastolic blood pressure (per SD)	1.02 (0.87, 1.20)	0.8158

¹ Only the factors that were nominally different at $p \leq 0.05$ between normoalbuminuria and albuminuric group are shown. The remaining factors investigated were: Homeostatic Model Assessment-Insulin Resistance (HOMA-IR), high sensitivity C-Reactive Protein (hsCRP), Body Mass Index (BMI), and Diabetes duration.

² The dependent variable in these analyses is albuminuric status coded so that normoalbuminuria=1 and albuminuria=0.

³ Standard Deviations (SD) for age were 18.1 years, diabetes diagnosis age 23.2 years, HbA1c 2.4%, eGFR 32.7 mL/min/1.73m², uric Acid 2.3 mg/dL, systolic blood pressure 30.2 mm/Hg, diastolic blood pressure 19.1 mm/Hg.

Abbreviations: CI: Confidence Interval; SD: Standard Deviations, eGFR: estimated Glomerular Filtration Rate; HbA1c: Glycated Hemoglobin

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Disclosure

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