Racial differences in albuminuria, kidney function, and risk of stroke.

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Abstract BACKGROUND: The objective of this study was to examine the joint associations of estimated glomerular filtration rate (eGFR) and urinary albumin excretion with incident stroke in a large national cohort study.

METHODS: Associations of urinary albumin to creatinine ratio (ACR) and eGFR with incident stroke were examined in 25,310 participants of the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study, a prospective study of black and white US adults ≥45 years of age.

RESULTS: A total of 548 incident strokes were observed over a median of 4.7 years of follow-up. Higher ACR values were associated with lower stroke-free survival in both black and white participants. Among black participants, as compared to an ACR <10 mg/g, the hazard ratios of stroke associated with an ACR of 10-29.99, 30-300, and >300 mg/g were 1.41 (95% confidence interval [CI] 1.01-1.98), 2.10 (95% CI 1.48-2.99), and 2.70 (95% CI 1.58-4.61), respectively, in analyses adjusted for traditional stroke risk factors and eGFR. In contrast, the hazard ratios among white subjects were only modestly elevated and not statistically significant after adjustment for established stroke risk factors. eGFR <60 mL/min/1.73 m(2) was not
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associated with incident stroke in black or white participants after adjustment for established stroke risk factors.

**CONCLUSIONS:** Higher ACR was independently associated with higher risk of stroke in black but not white participants from a national cohort. Elucidating the reasons for these findings may uncover novel mechanisms for persistent racial disparities in stroke.

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