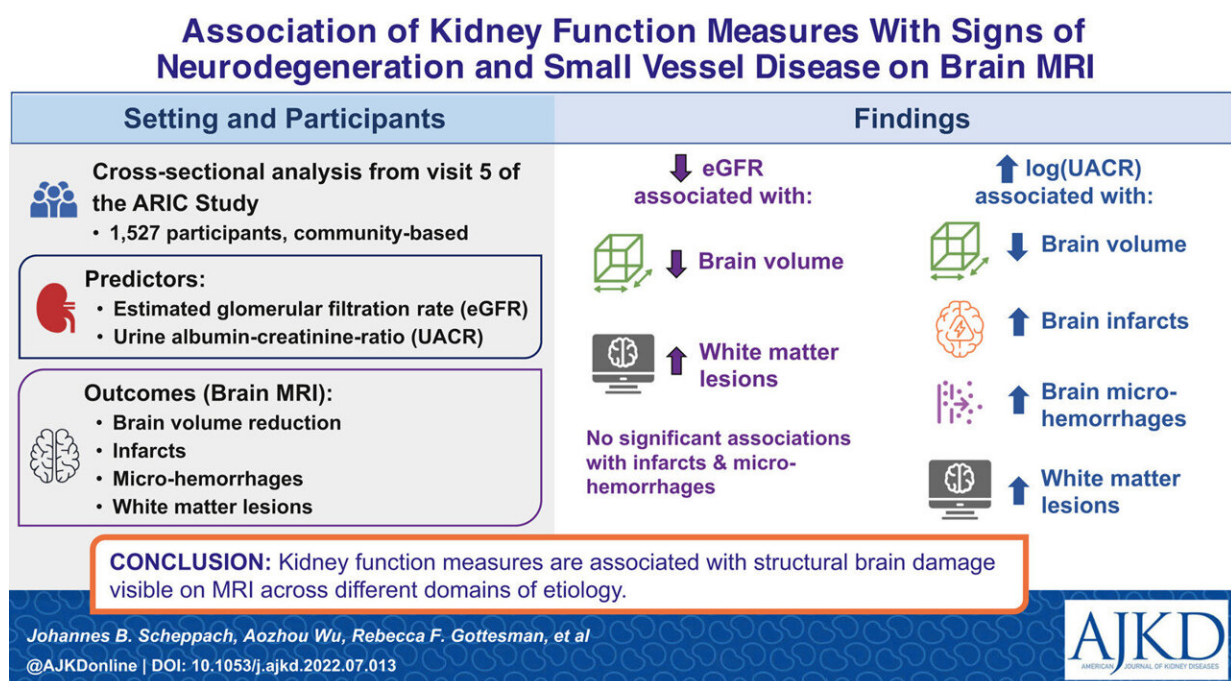


Kidney disease measures are associated with structural brain damage across different domains of etiology

September 28 2022



Visual Abstract for "Association of Kidney Function Measures With Signs of Neurodegeneration and Small Vessel Disease on Brain Magnetic Resonance Imaging: The Atherosclerosis Risk in Communities (ARIC) Study" by Johannes B. Scheppach et al (AJKD, 2022). Credit: Scheppach et al (AJKD, 2022)

Cross-sectional analysis shows association of reduced kidney function and increased urine albumin excretion with brain volume reduction in

regions typically affected by Alzheimer's disease and other dementia etiologies.

Cognitive decline is a major public health issue and common in patients with kidney disease. To better understand this condition, researchers measured kidney function and albuminuria in 1,527 study participants from the Atherosclerosis Risk in Communities (ARIC) Study. The participants were also scanned for different types of brain damage using magnetic resonance imaging (MRI).

In results published in the *American Journal of Kidney Diseases (AJKD)*, they found that low kidney function and albuminuria are associated with various structural brain pathologies such as brain atrophy, microvascular damage, and white matter defects.

These results confirm the connection between [kidney function](#) and albuminuria with brain damage and provide new information about its etiology and localization in the brain.

More information: Johannes B. Scheppach et al, Association of Kidney Function Measures With Signs of Neurodegeneration and Small Vessel Disease on Brain Magnetic Resonance Imaging: The Atherosclerosis Risk in Communities (ARIC) Study, *American Journal of Kidney Diseases* (2022). [DOI: 10.1053/j.ajkd.2022.07.013](https://doi.org/10.1053/j.ajkd.2022.07.013)

Provided by National Kidney Foundation

Citation: Kidney disease measures are associated with structural brain damage across different domains of etiology (2022, September 28) retrieved 5 February 2024 from <https://medicalxpress.com/news/2022-09-kidney-disease-brain-domains-etiology.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.