

# Are doctors using unnecessary tests to diagnose chronic kidney disease?

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Chronic Kidney Disease (CKD) affects 13 percent of adults in the U.S. and is associated with significant morbidity, mortality and costs. Researchers at Brigham and Women's Hospital (BWH) in Boston have found that many of the tests frequently conducted to screen for CKD have little clinical benefit on diagnosis and therapeutic management. These findings are published in a research letter in *JAMA Internal Medicine* on March 2, 2015.

"To our knowledge, there has been no comprehensive assessment of the tests used to assess if someone has CKD," explained Mallika Mendu, MD, MBA, a physician in the Division of Renal Medicine at BWH and lead author of this study. "In our study, we tallied the number and frequency of laboratory and imaging tests that were obtained in the initial evaluation of CKD, and then determined whether or not these tests were useful and affected diagnosis and management of the disease."

The researchers conducted a retrospective cohort study of 1487 patients referred for initial evaluation of CKD from 2010 to 2013. They then reviewed nephrology progress notes to ascertain the presumed cause of CKD and whether a specific test was documented that specifically contributed to, confirmed, or established the underlying diagnosis and or any management decision related to CKD. Frequently obtained tests included measurement of calcium, hemoglobin, phosphate, urine sediment, parathyroid hormone levels, and many others.

The researchers found that tests such as serum protein electrophoresis

and screening for antinuclear antibody, C3, C4, hepatitis C, hepatitis B and antineutrophil cytoplasmic antibody were obtained frequently, up to 68 percent of the time, despite infrequently affecting disease diagnosis or management. Urine protein quantification and hemoglobin A1c had the highest rates of impact on diagnosis and/or management among all of the tests obtained.

"This study suggests that reflexively ordering several tests for CKD evaluation and management may be unnecessary," explained Mendu. "An evidence-based, targeted approach based on pretest probabilities of disease for diagnosis and management may be more efficient and reduce cost."

The researchers say that next steps will be to make clinical recommendations on what specific tests to avoid and which ones are needed in CKD evaluation.

Provided by Brigham and Women's Hospital

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