

Model predicts development of chronic kidney disease

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(HealthDay)—A multivariable model that uses routine laboratory data is

able to predict advanced chronic kidney disease after hospitalization with acute kidney injury, according to a study published online Nov. 14 in the *Journal of the American Medical Association*.

In order to derive and validate multivariable prediction models, Matthew T. James, M.D., Ph.D., from Foothills Medical Center in Canada, and colleagues used data from two population-based cohorts of patients with a prehospitalization estimated [glomerular filtration rate](#) of ≥ 45 mL/min/1.73m² who had survived hospitalization with [acute kidney injury](#). Risk models were derived from 9,973 patients hospitalized in Alberta and externally validated with data from 2,761 patients hospitalized in Ontario.

The researchers found that six variables were independently associated with progression of acute [kidney injury](#) to advanced [chronic kidney disease](#): older age, female sex, higher baseline serum creatinine value, albuminuria, greater severity of acute kidney injury, and higher serum creatinine value at discharge. Inclusion of these factors in a multivariable model had a C statistic of 0.81 and improved discrimination and reclassification in the external validation cohort compared with reduced models that included age, sex, and discharge serum creatinine value alone or age, sex, and acute kidney injury stage alone.

"This model was able to predict advanced chronic kidney disease following hospitalization with acute kidney injury but requires evaluation of its utility in a clinical setting," conclude the authors.

One author disclosed financial ties to the pharmaceutical industry.

More information: [Abstract/Full Text \(subscription or payment may be required\)](#)

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