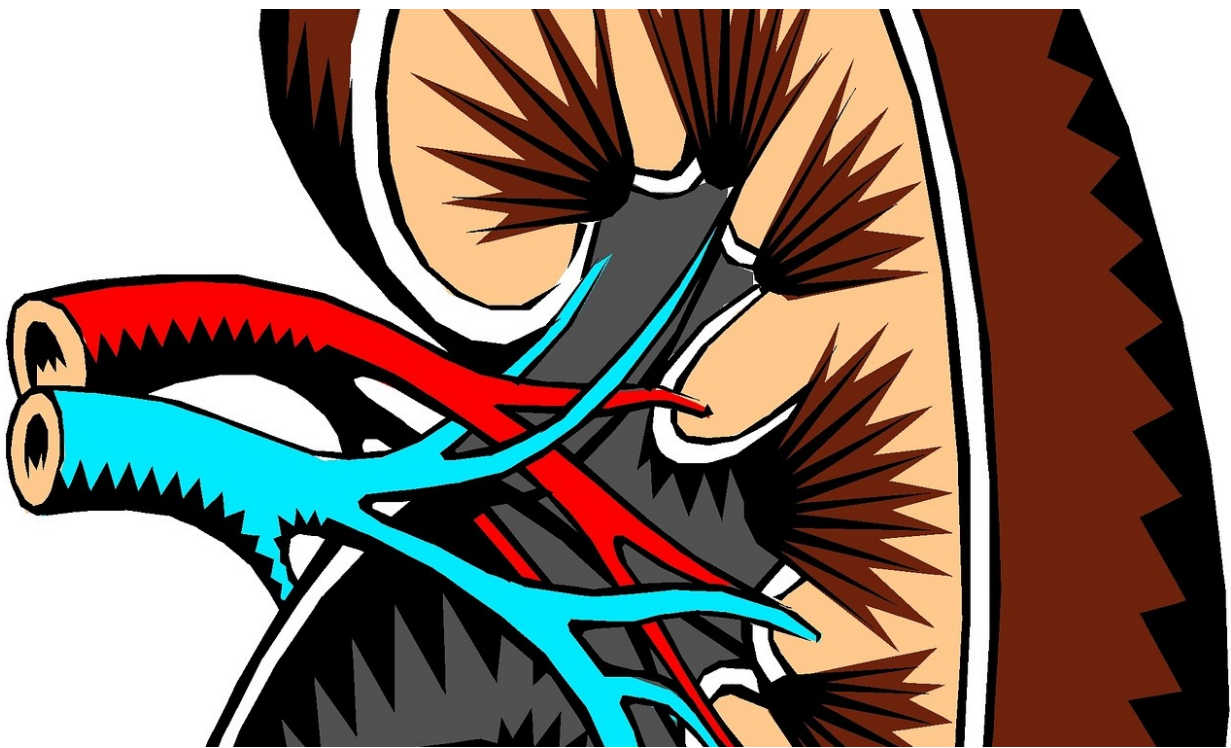


# New method for estimating kidney function improves accuracy and precision compared with commonly used methods

November 10 2020

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A new equation for estimating glomerular filtration rate, or GFR, a measure of kidney function, shows improved accuracy and precision compared with commonly used equations. Developed and tested by the

European Kidney Function Consortium (EKFC), the new equation addresses the limitations of currently recommended equations designed to target specific populations. Findings from a cross-sectional analysis are published in *Annals of Internal Medicine*.

Creatinine-based equations are commonly used in daily clinical practice to estimate GFR and many of them are refined to target specific populations. The most commonly used among them are the Chronic Kidney Disease in Children Study (CKiD) equation for children and the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation for adults. Both of these equations have limitations, and the full age spectrum (FAS) equation was designed to overcome some of them. However, that method also overestimates GFR at low serum creatinine values and in patients with [chronic kidney disease](#).

Researchers from KU Leuven Kulak, Belgium developed and sought to validate a modified FAS serum creatinine-based equation combining design features of the FAS and CKD-EPI equations. The equation was developed in a study population of 11,251 participants in 7 studies and was validated in a separate study population of 8,378 participants in 6 studies. All of the study participants were white. The EKFC equation was found to be unbiased across all age groups, and accuracy was high in both children and adults. Performance was better for the EKFC than the CKiD equation in children and the CKD-EPI equation in [young adults](#) and [older adults](#), but not in middle-aged adults.

The authors of an accompanying editorial from Tufts Medical Center suggest that the EKFC equation is a conceptual advance over the FAS equation and say that the development of an estimated GFR equation that can be used in children and adults is a worthy goal. As the authors noted, the performance of such equations should also be evaluated in a population that is more racially and ethnically diverse.

**More information:** Study:

<https://www.acpjournals.org/doi/10.7326/M20-4366>

Editorial: <https://www.acpjournals.org/doi/10.7326/M20-6983>

Provided by American College of Physicians

Citation: New method for estimating kidney function improves accuracy and precision compared with commonly used methods (2020, November 10) retrieved 2 May 2024 from

<https://medicalxpress.com/news/2020-11-method-kidney-function-accuracy-precision.html>

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