

# Study compares different assessments of kidney function

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To determine an individual's kidney function, clinicians evaluate what's known as the glomerular filtration rate (GFR), with a GFR above 60 mL/min/1.73 m<sup>2</sup> being in the normal range. GFR can be measured (mGFR) or calculated from creatinine and cystatin C blood levels, using estimating equation (eGFR). New research indicates that substantial discrepancies exist between eGFR and mGFR, even in an individual patient. The findings will be presented online at ASN Kidney Week 2021 November 4–November 7.

For the study, investigators analyzed data from 4 community-based groups where GFR was assessed as part of research protocols. "We found that there was a very wide range of mGFR at each eGFR level. For an individual with eGFR calculated as 45 mL/min/1.73 m<sup>2</sup>, the mGFR ranged from 28 to 72 mL/min/1.73 m<sup>2</sup>," said the corresponding author Tariq Shafi, MD, MHS of the University of Mississippi Medical Center. This discrepancy was present at all levels of eGFR. At an eGFR level of 30 mL/min/1.73 m<sup>2</sup>, the mGFR ranged from 19 to 56 mL/min/1.73 m<sup>2</sup>.

Therefore, some individuals with normal [kidney function](#) may be diagnosed with [kidney disease](#) based on eGFR, while severe kidney dysfunction may be missed in others.

The discrepancy in eGFR and mGFR within [racial groups](#) was also substantially higher than between-group differences. For example, at a calculated eGFR of 60 mL/min/1.73 m<sup>2</sup>, the mGFR ranged from 32 to

91 mL/min/1.73 m<sup>2</sup> for Blacks and 37 to 86 mL/min/1.73 m<sup>2</sup> for Whites, substantially larger and overlapping ranges than the 5 mL/min/1.73 m<sup>2</sup> group difference between Blacks and Whites.

"Our results suggest that the eGFR calculation should be reported with the associated range of uncertainty," said Dr. Shafi. "Our results also indicate that in some instances, clinical decisions may need to be based on measured rather than estimated GFR."

Provided by American Society of Nephrology

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