

Measuring eGFR based on cystatin C levels may be a more accurate assessment of kidney function in older adults

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A study of more than 82,000 older adults receiving outpatient measurements of estimated glomerular filtration rate (eGFR) found that



measuring eGFR based on creatinine and cystatin C levels (eGFRcr-cys) was more strongly associated with adverse outcomes than measuring eGFR with only creatinine levels (eGFRcr). The study is published in *Annals of Internal Medicine*.

Current guidelines define a GFR below 60 ml/min/ 1.73 m^2 for 3 months as <u>chronic kidney disease</u>, even in the absence of albuminuria. eGFRcr is usually used in routine practice, rather than measured GFR to define and stage chronic kidney disease.

An eGFRcr below 60 mL/min/1.73 m² is usually associated with adverse outcomes including kidney failure and all-cause mortality. However, this threshold is more common in <u>older adults</u> than in younger adults and less strongly associated with <u>adverse outcomes</u> in this population. This has created disagreement about the appropriateness of the threshold for these persons.

Researchers studied data from a Swedish cohort at or above age 65 years with simultaneous measurements of <u>creatinine</u> and cystatin C to evaluate associations in older adults between eGFRcr versus eGFRcr-cys and 8 outcomes. The authors found that eGFRcr-cys below 60 mL/min/1.73 m² had stronger associations with clinical outcomes including all-cause mortality, cardiovascular mortality, hospitalization, infection, stroke, heart failure, kidney failure with replacement therapy, and <u>acute kidney injury</u> than eGFRcr, even in the absence of albuminuria.

The weaker associations with eGFRcr are likely explained because of limitations of creatinine as a filtration marker rather than the GFR threshold, since eGFRcr-cys is a more accurate reflection of measured GFR than eGFRcr. They note that these data indicate that CKD stage G3+ (GFR



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