



U.S. PATHOLOGY AND LABORATORY SOCIETY LEADERSHIP ENDORSES USE OF THE CKD-EPI 2021 RACE-FREE EQUATIONS FOR CALCULATING ESTIMATED GLOMERULAR FILTRATION RATE

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Serum creatinine with estimated glomerular filtration rate (eGFR_{cr}) is frequently measured and reported by United States clinical laboratories. This test is included in the basic metabolic, comprehensive metabolic, renal function panels, and the Kidney Profile.¹ The eGFR_{cr} and urine albumin to creatinine ratio (uACR) are currently the primary tests used in clinical practice to assess kidney function, diagnose kidney disease, determine the severity of kidney disease, and monitor progression. The eGFR_{cr} is also used to inform treatment decisions, including medication dosing, timing of referral to nephrology, and preparing for kidney replacement therapies.

More than 37 million adults in the U.S. have kidney disease. Of these, almost 90% are unaware that they have it. A disproportionate number of people living with kidney disease are from groups that routinely face health disparities and inequities in healthcare delivery, including Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Asian Americans, and Native Hawaiians or other Pacific Islanders.

The two equations most used to calculate eGFR_{cr} in the United States, the Modification of Diet in Renal Disease (MDRD) Study and the 2009 Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) creatinine equations, include a race coefficient. As race is a subjective, social construct, the National Kidney Foundation (NKF) and the American Society of Nephrology (ASN) established a Task Force in 2020 to reassess the inclusion of race in diagnosing kidney diseases in the United States. The NKF-ASN Task Force employed a holistic approach incorporating input from the medical community and patients to identify an approach that balanced social justice with scientific rigor.

The final NKF-ASN Task Force report recommends:

- The use of the CKD-EPI 2021 eGFR creatinine equation for calculating eGFRcr in adults.^{2,3}
This new equation is recommended because a race coefficient is not included in its computation and reporting. The CKD-EPI 2021 eGFR creatinine equation included diversity in its development and does not disproportionately affect any one group.³
- National efforts are also underway to facilitate increased, routine, and timely use of cystatin C (CPT 82610), especially to further evaluate eGFRcr in adults who are at risk for or have chronic kidney disease, or in individuals with abnormally high or low muscle mass. The CKD-EPI 2021 eGFR using creatinine and cystatin C (eGFRcr-cys) is more accurate, more closely approximates measured GFR and supports better clinical decisions than either marker alone.^{2,3}

The nation's laboratories are working to employ a consistent, standardized approach for estimating GFR to improve testing for kidney diseases. Together the laboratory organizations below endorse the national implementation of the CKD-EPI 2021 creatinine and creatinine-cystatin C equations for the estimation of glomerular filtration rate.

Laboratory Organizations

Academy of Clinical Laboratory Physicians and Scientists (ACLPS)

American Association for Clinical Chemistry (AACC)

American Association of Bioanalysts (AAB)

American Society for Clinical Pathology (ASCP)

Association of Pathology Chairs (APC)

Clinical Laboratory Management Association (CLMA)

College of American Pathologists (CAP)

National Independent Laboratory Association (NILA)

Society of American Federal Medical Laboratory Scientists (SAFMLS)

The views of the SAFMLS organization do not represent the views of the US Government.

References:

1. Choosing Wisely, an initiative of the ABIM Foundation. American Society of Clinical Pathology. Recommendation for Chronic Kidney Disease Testing. 2018. at bit.ly/2SFSz3u
2. Delgado C, Baweja M, Crews DC, et al. A Unifying Approach for GFR Estimation: Recommendations of the NKF-ASN Task Force on Reassessing the Inclusion of Race in Diagnosing Kidney Disease. American Journal of Kidney Diseases. DOI: 10.1053/j.ajkd.2021.08.003.
3. Inker LA, Eneanya ND, Coresh J, et al. New Creatinine- and Cystatin C–Based Equations to Estimate GFR without Race. New England Journal of Medicine 2021. DOI: 10.1056/NEJMoa2102953.