

eGFR Calculation (Removal of Race-Based Adjustment) Test Update

In response to recommendations from the National Kidney Foundation and American Society of Nephrology (NKF-ASN) Task Force on estimated glomerular filtration rate (eGFR), effective **December 12, 2021**, Clinical Labs of Hawaii will adopt the single refitted CKD-EPI equation to replace the separately reported eGFR – African-American and eGFR – non-African-American calculations for all serum creatinine measures.

The Task Force (TF) was established in July 2020 to consider inequity in diagnosis, management and outcomes of chronic kidney disease in African-American patients including recognition and management of kidney-disease risk factors, comorbidities, and progression to kidney failure. Additionally, the deliberations were informed by the significantly higher prevalence of hypertension and decline in measured GFR at an earlier age and steeper slope for African-Americans vs. non-African-Americans associated with lower rates of nephrology referral, dialysis options and transplantation. The NKF-ASN TF committed to a GFR estimate approach that recognized the ambiguity of racial distinction and the substantial diversity in the US and that promoted equity without creating new or worsening preexisting disparities.

As a part of the TF, the CKD Epidemiology Collaboration conducted a meta-analysis of 10 previously published studies and validated a new single equation for eGFR based on creatinine, the CKD-EPI Creatinine equation refit without the race variable (CKD-EPI_{cr_R}) in a dataset of 12 studies. The new equation balanced performance equally between African-American and non-African-American study participants. With input from more than 90 experts in the field and public members, the Task Force recommended:

1. **Immediate implementation of the new 2021 CKD-EPI_{cr_R} calculation for eGFR based on creatinine, to replace separately reported race-based eGFR's.**
2. **National efforts to facilitate routine and timely use of cystatin C, to confirm eGFR in adults who are at risk for or have CKD. Cystatin C can be used alone or paired with simultaneous creatinine measure for the most accurate eGFR (eGFR_{cr-cys R}).**

The TF notes that measured GFR (usually creatinine clearance) may have a certain degree of inaccuracy (incomplete collection, medications, etc) and recommends that clinical decision-making be based on trends in eGFR values. Assessment for albuminuria, as recommended in the Kidney Disease Improving Global Outcomes (KDIGO) guidelines should be considered essential to assessment of kidney disease.

To facilitate transition and inform patients, NKF offers an eGFR Summary for Ordering Clinicians (https://www.kidney.org/sites/default/files/02-10-8361_icb_egfr_summary_flyer.pdf).

Additional references are given below:

- Delgado C 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. *Am J Kidney Dis.* 2021 Sep 22:S0272-6386(21)00828-3.
- Inker LA, Eneanya ND, Coresh J, et al. New creatinine- and cystatin C–based equations to estimate GFR without race. *N Engl J Med.* 2021 Sep 23. doi: 10.1056/NEJMoa2102953. Online ahead of print.

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