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CLINICAL PATHOLOGY
LABORATORIES

A Sonic Healthcare Clinical Laboratory

Client Communication

Changes in Estimated Glomerular Filtration Rate (eGFR) Calculation: Removal of Race-Based Adjustment

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 12/13/2021, CPL will adopt the single CKD-EPI Refit equation to replace the separately reported eGFR – Black and eGFR – non-Black calculations for all serum creatinine measures.

The Task Force (TF) was established in 7/2020 to consider inequity in diagnosis, management and outcomes of chronic kidney disease (CKD) in Black 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 associated with lower rates of nephrology referral, dialysis options and transplantation for Black vs. non-Blacks. *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 one 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 in a dataset of 12 studies. This new equation is the CKD-EPI Creatinine Refit Equation (CKD-EPI_{cr}_R). The equation balances performance equally between Black and non-Black 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).

Note: Effective 02/21/2021, the creatinine method will be updated to the enzymatic method, recommended by NKF guidelines to improve precision and accuracy, particularly at medical decision points. Reference intervals are not affected. Referred and local STAT testing may retain the Jaffee method.

Please contact your Account Representative should you have any questions regarding the changes described above.



Affected Tests and Order Codes:

Test Name	Order Code
Basic Metabolic Panel	142
Basic Metabolic Profile + e-GFR	145
Basic Metabolic Panel with Calc Anion Gap	148
Bun/Creatinine Ratio	9319
Comprehensive Metabolic Panel	9179
Comprehensive Metabolic Panel + e-GFR	9180
Comprehensive Metabolic Panel with Calc Anion Gap	9182
Comprehensive Metabolic Panel with Corrected Calcium	9183
Creatinine	2214
Creatinine Clearance, 24 HR	2079
General Health Panel	9329
NKF Kidney Profile	9332
PTH, Intact with Calcium, Phosphorus, Creatinine	902
Renal Function Panel	9324
Renal Function Panel + e-GFR	9326

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.