



Technical Bulletin - updated

eGFR Calculation Update

TO: Medical Staff and Clients

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SUBJECT: Remove race from eGFR Calculation

Effective December 12, 2021 DLS will be updating the estimated Glomerular Filtration Rate (eGFR) calculation equation to the 2021 CKD-EPI equation. This formula does NOT include race as a coefficient in the calculation.

Since 1999, eGFR equations have included race (Black or non-Black) as a coefficient amongst other factors. However, recently, there has been a lot of discussion and debate within the medical community in regards to the appropriateness of using race as a factor in the calculation. As we know, race is often self-ascribed or socially ascribed on the basis of physical characteristics, and may not directly correlate to the diverse genetic ancestry of communities in the population. In September 2021, the National Kidney Foundation and the American Society of Nephrology issued a statement recommending that labs in the US no longer use an eGFR equation that utilizes race as a factor in the calculation.

After review of the Final Report of the NKF-ASN Task Force to Reassess the Inclusion of Race in Diagnosing Kidney Diseases, and following discussions with the local chapter of the National Kidney Foundation, the nephrologists in the community, and the other local labs in the community, DLS will be adopting the new recommended equation for the race-free estimation of GFR:

$$eGFR\text{ CKD-EPI Cr }2021 = 142 \times \min(\text{Scr} / \kappa, 1)^\alpha \times \max(\text{Scr} / \kappa, 1)^{-1.200} \times 0.9938^\text{Age} \times 1.012 \text{ [if female]}$$

Standard Values:

Scr is serum creatinine in mg/dL

κ is 0.7 for females and 0.9 for males

α is -0.241 for females and -0.302 for males

Min indicates the minimum of Scr / κ or 1

Max indicates the maximum of Scr / κ or 1

Age is years

Interpretive Normal eGFR CKD-EPI 2021 Range	
Age \geq 19 years old	$\geq 90 \text{ mL}/\text{min}/1.73\text{m}^2$
Age < 19 years old	eGFR CKD-EPI 2021 equation is not recommended for age less than 19 years. For patients less than the age of 19, consider using the NKF Pediatric eGFR calculator.

As the new equation is slightly different, it is possible that some of your patients will have slightly different eGFR results going forward which may require additional education and discussions. Please correlate results with your clinical findings.

For questions, please call DLS Client Services (808-589-5101), Dr. Wesley Kim (808-589-5131), or Dr. Ana Ortega-Lopez (808-691-4470).