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New Formula for Calculating eGFR

Bronson Laboratory will implement a new formula for calculating estimated glomerular filtration rate (eGFR) on 1/5/22. The new formula has been endorsed by the National Kidney Foundation (NKF) and the American Society of Nephrology (ASN) following the work of their joint task force to reassess the inclusion of race in diagnosing kidney disease. The new formula has been adjusted to be inclusive for all populations. It no longer includes race-based coefficients.

The new equation, expressed below, may report a different eGFR and could alter the classification of the kidney disease stage for some people.

CKD-EPI Creatinine Equation (2021), expressed as a single equation:

$$eGFR = 142 \times \min(S_{cr}/K, 1)^{\alpha} \times \max(S_{cr}/K, 1)^{-1.200} \times 0.9938^{Age} \times 1.012 \text{ [if female]}$$

Abbreviations / Units

- eGFR (estimated glomerular filtration rate) = mL/min/ 1.73 m^2
- S_{cr} (serum creatinine) = mg/dL
- K = 0.7 (females) or 0.9 (males)
- α = -0.241 (females) or -0.302 (males)
- min = indicates the minimum of S_{cr}/K or 1
- max = indicates the maximum of S_{cr}/K or 1
- age = years

References:

A Unifying Approach for GFR Estimation: Recommendations of the NKF-ASN Task Force on Reassessing the Inclusion of Race in Diagnosing Kidney Disease - PubMed (nih.gov)