

Race & Estimated Glomerular Filtration Rate (eGFR)



Estimated glomerular filtration rate (eGFR) guides vital medical decisions such as dosing of medications, clinical trial enrollment, and use of pharmacotherapeutics. Common estimating equations for kidney filtration rely on serum creatinine, and assign a higher eGFR to Black patients.¹

History Of The Race Coefficient In eGFR¹



▶ Historically, methods to estimate glomerular filtration rate (GFR) were generated in research study cohorts with patients undergoing gold-standard measurement of “**true**” GFR by infusing iohalamate or another chemical into the blood and quantifying its urine clearance.



▶ **Prior methods include:**

1. **Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI)** equation
2. **Modification of Diet in Renal Disease Study (MDRD)** equation (predecessor to CKD-EPI)

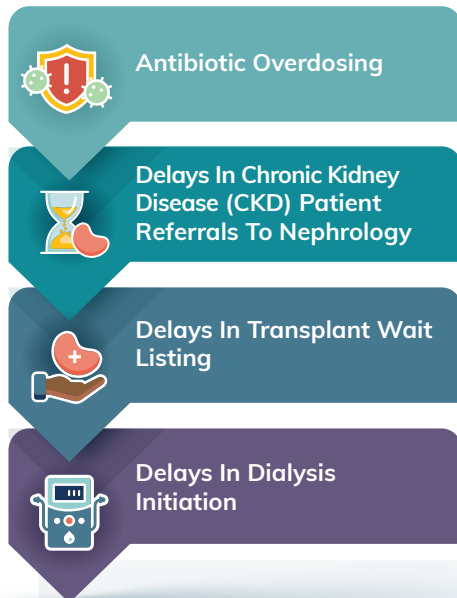
▶ Investigators recognized that the Black race cohort was independently associated with a **slightly higher GFR** at the same serum creatinine level.

▶ This association has been justified by the assertion that Black individuals release more creatinine into the blood, perhaps because of more muscle mass.

▶ Unfortunately, the use of the race coefficient in eGFR equations **resulted in Black patients being assigned an eGFR that is up to 20% higher** than their non-Black counterparts.

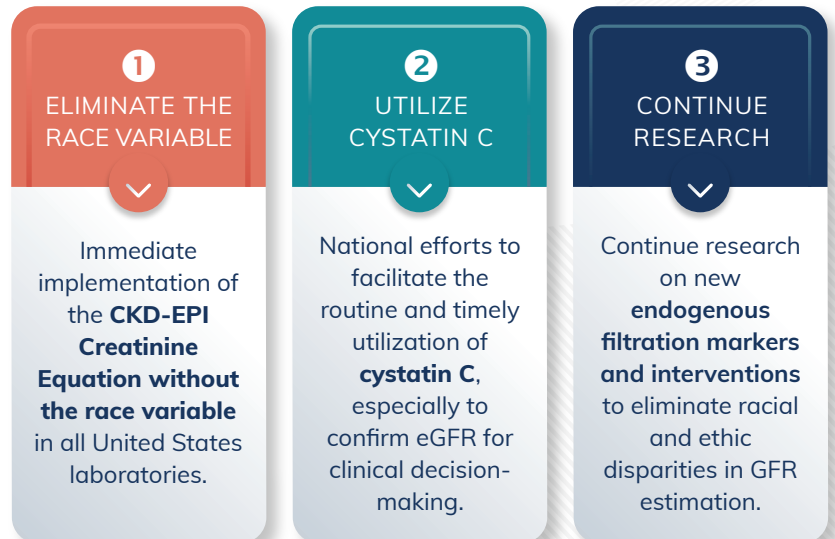
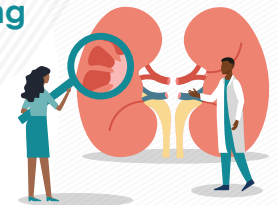
⚠ Potential Clinical Consequences Of The Use Of Race In eGFR Equations¹

The race coefficient used previously could result in higher eGFR for black individuals and cause these clinical consequences:



🧑‍⚕ Recommendations For Estimating GFR: A Unifying Approach²

The National Kidney Foundation and American Society of Nephrology Task Force on Reassessing the Inclusion of Race in Diagnosing Kidney Disease recommend the following:



Diverse stakeholders reviewed the evidence and provided their input on this recommendation.

References

1. Eneanya N, et al. JAMA. 2019; 322(2): 113-114.
2. Delgado, et al. AJKD. 2022; 79(2):268-289.

The information provided through NephU is intended for the educational benefit of health care professionals and others who support care for those with kidney disease and other related conditions. It is not intended as, nor is it a substitute for, medical care, advice, or professional diagnosis. Health care professionals should use their independent judgement when reviewing NephU's educational resources. Users seeking medical advice should consult with a health care professional.

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