Quest Diagnostics®

Cystatin C with eGFR

Cystatin C with eGFR is an accurate marker to assess kidney function

Test description

Cystatin C with Glomerular Filtration Rate, Estimated (eGFR): Cystatin C is formed at a constant rate and filtered by the kidneys. The amount of Cystatin C in serum, along with age and gender, is used in an algorithm to estimate the glomerular filtration rate (eGFR). The eGFR is used to detect, monitor therapy for, and monitor progression of chronic kidney disease (CKD) in adults. Serum Cystatin C is inversely related to the eGFR; high values correlate with a low eGFR, while low values indicate a high eGFR.

Clinical significance

The eGFR is an index of how well the kidneys are functioning. This can be calculated using serum creatinine ($eGFR_{creat}$) or serum Cystatin C ($eGFR_{cys}$). While an $eGFR_{creat}$ sees more use due to its measurement in common lab screening tests like the Kidney Profile, there are individuals where an $eGFR_{cys}$ may be more reliable, such as in those with:[1,2]

- Muscle mass extremes
- High- or low-meat diets
- Severe obesity (BMI >40)

If a patient is classified as stage 3a CKD ($eGFR_{creat}$ 45–59 mL/min/1.73 m^2 in the absence of albuminuria), an $eGFR_{cys}$ is recommended to confirm the results as outlined in the Kidney Disease: Improving Global Outcomes (KDIGO) guidelines.[3]

Confidence in the use of $eGFR_{cys}$ has increased since the 2012 KDIGO guideline was published. Results of a large meta-analysis indicate that $eGFR_{cys}$ detects increased risk of adverse outcomes that is not detected by $eGFR_{creat}$.[3,4]

Individuals suitable for testing

Patients with one or more of the following CKD risk factors:

- Hypertension, heart disease, and/or diabetes
- Age 60 or older
- Family history of kidney disease
- Race/U.S. ethnic minority status (Black, Hispanic, Asian/Pacific Islander, American Indian)

The use of Cystatin C alone or in combination with creatinine strengthens the association between the eGFR and the risks of death and end-stage renal disease across diverse populations.[4]

Cystatin C (eGFR) Chronic kidney disease indication

<60 mL/min/1.73 m²

Prognosis of chronic kidney disease based on eGFR values[a]

eGFR, mL/min/1.73 m²	Stage[5]
≥90[b]	**Stage 1** | Normal function
60–89[b]	**Stage 2** | Mild loss of function
45–59	**Stage 3a** | Moderate loss of function
30–44	**Stage 3b** | Severe loss of function
15–29	**Stage 4/5** | Kidney failure
<15	**End-stage renal disease**

eGFR, estimated glomerular filtration rate. [a]This table applies to creatinine-based and Cystatin C-based eGFR. [b]The National Kidney Disease Education Program (NKDEP) recommends that actual values above 60 mL/min/1.73 m² be reported only as >60 due to variability near the upper limit of the reference range.[5] A urine albumin/creatinine ratio (UACR) along with GFR testing is recommended for accurate staging of CKD.

Test Name	Test Code	CPT Code†	Specimen Type	Tube Type
Cystatin C (eGFR)	94588	82610	Serum, 1mL	Serum Separator Tube (SST)

† The CPT codes provided are based on American Medical Association guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed. Visit the Quest Diagnostics Test Directory for more information and guidelines.

Accurately detect, stage, and risk stratify for CKD with Cystatin C (eGFR).[6]

For more information, contact your Quest Diagnostics account executive.

References

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6. Chen DC, Potok OA, Rifkin D, Estrella, MM. Advantages, limitations, and clinical considerations in using cystatin C to estimate GFR. *Kidney360* 3(10):p 1807-1814, 2022. doi: 10.34067/KID.0003202022

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