

### New Cystatin C Assay

**Effective Date: April 5, 2022**

In 2021, the National Kidney Foundation (NKF) and American Society of Nephrology (ASN) Task Force recommended increased use of cystatin C combined with serum creatinine, as a confirmatory assessment of glomerular filtration rate (GFR) or kidney function. Effective March 1st, the cystatin C assay will be performed by Beaumont Laboratory instead of being sent to Mayo Clinic Laboratories. Estimated GFR (eGFR) will be calculated utilizing the CKD-EPI cystatin C equation and will be included in the report.

The in-house test uses a different platform and vendor. There are changes in specimen requirement, reference range, and expected results due to the difference between the in-house and Mayo cystatin C assays.

Based on a comparison study between the Mayo and Beaumont assays:

- For eGFR, determined by cystatin C  $\geq 40$  mL/min/1.73m<sup>2</sup>, the two assays have good agreement.
- For eGFR, determined by cystatin C  $< 40$  mL/min/1.73m<sup>2</sup>, eGFR results based on the Beaumont assay were 17% lower compared with that based on the Mayo assay.

Ordering information

Epic Test Code: LAB8551

Test Name: Cystatin C

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**Date submitted: Feb 17, 2022**

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### Test Information:

<b>Synonyms</b>	CYSC
<b>Specimen Collection Criteria</b>	Collect: One Gold-top SST tube. Also Acceptable: Lithium Heparin PST
<b>Physician Office/Draw Site Specimen Preparation</b>	Let specimen clot 30-60 minutes then centrifuge to separate serum from cells.
<b>Specimen Preparation for Courier Transport</b>	Refrigerated (2-8°C or 36-46°F). (Minimum: 0.5 mL)
<b>Rejection Criteria</b>	Grossly hemolyzed specimens
<b>Performed</b>	Royal Oak Automated Chemistry
<b>Reference Range</b>	0.51 - 1.05 mg/L for ages 19 years and older. Reference range has not been established for patients 0-19 years
<b>Test Methodology</b>	Immunturbidometric
<b>Interpretation</b>	<p>Cystatin C is a low molecular weight cysteine proteinase inhibitor that is produced by all nucleated cells and found in body fluids, including serum. Since it is formed at a constant rate and freely filtered by the kidneys, its serum concentration is inversely correlated with the glomerular filtration rate (GFR); that is, high values indicate low GFRs while lower values indicate higher GFRs similar to creatinine.</p> <p>Cystatin C can be useful in monitoring GFR in patients where serum creatinine may be misleading such as very obese, elderly and malnourished patients.</p>
<b>Epic Test Code</b>	LAB8551
<b>CPT Code</b>	82610