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## GLOMERULAR FILTRATION RATE, ESTIMATED, PROFILE

**Synonym(s):**

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| <p><b>Lab Section Category</b></p> | <p><b>Clinical Biochemistry</b><br/>                 Click here to find out more about the <b>write-up</b> (<a href="/clinical-departments-centers/pathology/pathology-handbook/lab-discipline-special-instructions/pages/clinical-biochemistry.aspx">/clinical-departments-centers/pathology/pathology-handbook/lab-discipline-special-instructions/pages/clinical-biochemistry.aspx</a>).</p> |
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| <b>Indications</b>       | <p>Estimated Glomerular Filtration Rate (eGFR) results are reported based on the following available options in SGH:</p> <ol style="list-style-type: none"><li>1. <b>Cockcroft-Gault equation</b> (normalised for standard body surface area of 1.73 m<sup>2</sup>)</li><li>2. <b>Modification of Diet in Renal Disease (MDRD) equation</b></li><li>3. <b>Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) Equation</b></li></ol>                       |
| <b>Specimen Required</b> | <p>3 mL plain blood.</p> <p>Required parameters:</p> <ol style="list-style-type: none"><li>1. <b>For Cockcroft-Gault Equation:</b> Serum Creatinine (<math>\mu\text{mol/L}</math>), weight (kg), height (cm), age (years), gender</li><li>2. <b>For MDRD Equation:</b> Serum Creatinine (<math>\mu\text{mol/L}</math>), age (years), gender</li><li>3. <b>For CKD-EPI Equation:</b> Serum Creatinine (<math>\mu\text{mol/L}</math>), age (years), gender</li></ol> |

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| <p><b>Reference Interval/Value</b></p> | <p>Classification of Chronic Kidney Disease based on NKF Kidney Disease Outcome Quality Initiative (KDOQI):</p> <p>Stage 1. Normal GFR &gt;90ml/min/1.73 m<sup>2</sup></p> <p>Stage 2. Mildly impaired GFR 60-89ml/min/1.73 m<sup>2</sup></p> <p>Stage 3. Moderately impaired GFR 30-59 ml/min/1.73 m<sup>2</sup></p> <p>Stage 4. Severely impaired GFR 15-29 ml/min/1.73 m<sup>2</sup></p> <p>Stage 5. Established renal failure &lt;15ml/min/1.73 m<sup>2</sup></p> |
| <p><b>Turnaround Time</b></p>          | <p>Mean = 4 hrs, Range: 3 – 5 hrs</p>   |
| <p><b>Day(s) Test Set up</b></p>       | <p>Daily</p>  |
| <p><b>Remarks</b></p>                  | <p>Lab Measured Parameter: Creatinine (serum)</p> <p>Cockcroft-Gault, MDRD, CKD-EPI equation option(s) must be clearly indicated on laboratory requests for estimated Glomerular Filtration Rate (eGFR).</p>  |

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### Change History Notes

- 21 Jan 2015 09:47 AM**  
 New MDRD equation option available w.e.f 19 Jan 2015

- **03 Oct 2016 10:37 AM**

New CKD-EPI equation option available w.e.f 03 Oct 2016

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