

## Glomerular Filtration Rate, Estimated (GFR or eGFR)

Beginning in July, a calculated Estimate of Glomerular Filtration Rate (GFR) will be included with every creatinine reported by Creighton Medical Laboratories (CML) and Creighton University Medical Center (CUMC) (including creatinines in the basic and complete metabolic profiles). A low or decreasing GFR is a good index of chronic kidney disease.

The National Kidney Disease Educational Program (NKDEP) recommends that a calculated estimate of the GFR be reported automatically with all creatinines to screen for chronic kidney disease when the patient is in a steady metabolic state. The estimated GFR is considered to provide a more easily recognized index of renal function than creatinine alone. This NKDEP initiative is to help health care providers better identify and treat chronic kidney disease in order to prevent or delay kidney failure and improve patient outcomes.

The formula recommended by the NKDEP from serum creatinine is the Modification of Diet in Renal Disease (MDRD) Study equation, for our Creighton laboratory instrumentation is:

$$\text{GFR (mL/min/1.73 m}^2\text{)} = 175 \times (\text{S}_{\text{cr}})^{-1.154} \times (\text{Age})^{-0.203} \times (0.742 \text{ if female}) \times (1.210 \text{ if African American})$$
 (conventional units)

The calculation will be performed and reported with the creatinine for males and females. The Glomerular Filtration Rate, Estimated is validated for the ages 18-70 years. The reference range is above 60 ml/min/1.73 m<sup>2</sup>. The formula is valid for the adult population only and is not intended for the pediatric age group. The GFR will be reported for both African American and non-African Americans and you will have to determine the appropriate application.

A GFR MDRD Calculator for Adults (Conventional units) for any creatinine is available at [http://nkdep.nih.gov/professionals/gfr\\_calculators/idms\\_con.htm](http://nkdep.nih.gov/professionals/gfr_calculators/idms_con.htm)

Please forward this to appropriate staff members within your facility. If you have any questions, please contact CML at (402) 280-4382.

*Creighton Medical Laboratories is proud to be your partner in providing effective and timely health care.*

