Assessing Renal Function

> **!** A low absolute creatinine level is of no concern and needs no intervention. It may be an indication of low muscle mass. However, a low creatinine clearance (eGFR) is of concern and indicates reduced renal function.

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Age/pregnancy Status	What must be measured?	Acceptable level for TDF use
≥ 10 and < 16 years of age	eGFR using Counahan Barratt formula	> 80 mL/min/1.73 m^2
Adults and adolescents ≥ 16 years	eGFR using MDRD equation[1]	> 50 mL/min/1.73m^2
Pregnant women	Absolute serum creatinine level	< 85 µmol/L

Counahan Barratt formula

$$\text{eGFR (mL/min/1.73 m}^2\text{)} = \frac{\text{height [cm] x 40}}{\text{creatinine [µmol/L]}}$$

DTG is known to decrease tubular secretion of creatinine without affecting glomerular filtration. Serum creatinine concentrations increase early in treatment (by less than 15%), remain stable throughout therapy, and are not an indication to stop DTG. A creatinine level that keeps on rising, is however a cause for concern and could indicate TDF toxicity or other underlying pathology.

[1] Modification of Diet in Renal Disease Study (MDRD) equation. The MDRD formula is automatically calculated by the laboratory for those 18 years and older. For assistance in manually calculating the eGFR for adolescents between 16 and 18 years of age, please contact one of the ***"Helplines"*** Alternatively, use the calculator provided at https://www.mdcalc.com/mdrd-gfr-equation, or one of numerous smartphone applications available for this purpose. Ensure that the website/application uses the correct unit of measurement (i.e. µmol/L) for the creatinine level