

GFR (GLOMERULAR FILTRATION RATE), MDRD

(Compensated Jaffe's reaction, IDMS traceable)

Creatinine, Serum

mg/dL

GFR, Estimated

mL/min/1.73m²

Interpretation

AGE IN YEARS	GFR IN mL/min/1.73m ²
20-29	116
30-39	107
40-49	99
50-59	93
60-69	85
>=70	75

Note: 1. National Kidney Disease Education program recommends the use of MDRD equation to estimate or predict GFR in adults (>=20 years) with Chronic Kidney Disease (CKD)

2. MDRD equation is most accurate for GFR <=60 mL/min/1.73m².

3. Recalculation of estimated GFR is required for African American race.

Interpretation

CKD STAGE	DESCRIPTION	GFR (mL/min/1.73m ²)	ASSOCIATED FINDINGS
0	Normal kidney function	>90	No proteinuria
1	Kidney damage with normal or high GFR	>90	Presence of Protein, albumin, cells or casts in urine
2	Mild decrease in GFR	60-89	-
3	Moderate decrease in GFR	30-59	-
4	Severe decrease in GFR	15-29	-
5	Kidney failure	<15	-

Comments

Modification of diet in renal disease (MDRD) equation is most thoroughly validated and superior to all the other methods for estimation of GFR. It does not require weight as a variable and yields an estimated GFR normalized to 1.73m² body surface area. Using serum creatinine alone gives a poor inference of GFR because they are inversely related and effects of age, sex and race on creatinine production complicate interpretation. For African American races a modified formula is used for calculation of GFR.