pathlab



March 2013

Change in eGFR Calculation

From Monday 25th March 2013, laboratories in this region are planning to change the calculation for eGFR from the current MDRD equation to the CKD-EPI equation.

The MDRD equation underestimates GFR in patients with "normal or near normal" renal function (i.e. 60-90 ml/min range); the CKD-EPI equation provides a more accurate estimate of GFR in this population. Both equations use Sex, Age and Creatinine to calculate an eGFR.

From the 25th of March, a small increase in eGFR of 5-10 ml/min will be noticed in younger patients with a current eGFR (MDRD) of 60 – 90 ml/min. In patients with an eGFR of < 60 ml/min, and in the elderly, the difference is much smaller. See the table below for examples.

Age	Sex	Creatinine	MDRD	CKD-EPI
		umol/L	ml/min	ml/min
40	F	75	74	86
60	F	75	68	75
80	F	75	65	65
60	F	90	55	60
40	M	95	76	86
60	M	95	70	75
80	M	95	66	65
60	M	120	54	56

All the limitations of the MDRD formula still apply and the formula is also unreliable in some groups, e.g. pregnant patients, dialysis patients or patients with acute changes in renal function.

Results greater than 90 ml/min will continue to be reported as >90 ml/min

This change is supported by recent Australasian recommendations and is being coordinated throughout New Zealand, after consultation with renal physicians.

Johnson DW et al. for the Australasian Creatinine Consensus Working Group. Chronic kidney disease and automatic reporting of estimated glomerular filtration rate: new developments and revised recommendations. (2012) MJA 197(4) 224-8
Levey AS et al. A New Equation to Estimate Glomerular Filtration Rate. (2009) Ann Intern Med. 150:604-12.

Stephen du Toit
Chemical Pathologist
Pathology Associates

John Woodford
Charge Scientist
Tel: 07 858 0795 ext. 7828

CLINICAL UPDATE