

**Consensus Statement on how to calculate the Creatinine Clearance (CrCl) which is necessary when assessing the Dose of Direct-Acting Oral Anticoagulants (DOACs)**

- Where creatinine clearance is calculated to determine DOAC dose this should be done using the Cockcroft and Gault formula and **ACTUAL** body weight <sup>1</sup>.
- Ideal body weight should not be used for this purpose as it can result in inappropriate dose reductions and an increased risk of stroke/systemic embolus.
- eGFR should not be used in place of creatinine clearance when determining renal function for the purpose of dose adjustment <sup>2</sup>.
- Some Creatinine Clearance calculators embedded within GP IT systems do not give a reliable estimate of creatinine clearance for the adjustment of DOAC doses and should not be used. Some systems automatically calculate creatinine clearance using ideal body weight if the actual body weight is >120% ideal body weight. Therefore, in patients whose actual body weight is >120% IBW, these digital systems should not be used to calculate a creatinine clearance which will be used to adjust the DOAC dose.
- This statement applies to all indications for DOACs
- This statement has been approved by Dr Joe Mills, the Cardiac Network Clinical Lead and the NWSCN Cardiology and Stroke Pharmacist Forum

**Cockcroft and Gault formula**

$$\text{CrCl mls/min} = \frac{(140 - \text{age}) \times \text{weight} \times \text{constant}}{\text{Serum creatinine}}$$

- Age in years
- Weight in kilograms (use actual body weight in DOACs)
- Serum creatinine in micromole/litre
- Constant = 1.23 for men; 1.04 for women

1. John Fanikos, RPh, MBA, Allison E. Burnett, PharmD, Charles E. Mahan, PharmD, Paul P. Dobesh, PharmD. Renal Function Considerations for Stroke Prevention in Atrial Fibrillation. The American Journal of Medicine 2017
2. MacCallum PK, Rohini M, *et al.* Patient safety and estimation of renal function in patients prescribed new oral anticoagulants for stroke prevention in atrial fibrillation: a cross-sectional study <http://bmjopen.bmj.com/content/3/9/e003343>