THE eGFR – A BRIEF GUIDE

The estimated glomerular filtration rate (eGFR) is calculated from the serum creatinine level on all adult urea/electrolyte requests. The calculation uses the formula from the modification of diet in renal disease (MDRD) study. It is age and sex dependant, and is adjusted specifically for local laboratory results.

The eGFR is intended to give a more sensitive early warning of renal impairment in chronic kidney disease (CKD); it is not appropriate in acute renal failure.

The calculation is only suitable for adults. It assumes a standard body surface area of 1.73m^2, so may deviate from true GFR in extremes of size; amputees; gross oedema; abnormal diet; or severe liver disease. It does not apply during pregnancy.
For African/Caribbean patients, eGFR needs correction (multiply by 1.21)

- For all CKD patients, control of cardiovascular risk factors (hypertension, smoking, weight, exercise, diet, lipids, etc) is crucial.

CKD Stage	eGFR	Renal Impairment	Action
1/2 *	>60	None/mild	None, unless other indicators of kidney disease: ~ Proteinuria, haematuria ~ Hypertension, systemic illness (e.g. SLE) ~ Genetic or structural kidney disease Routine referral if: Proteinuria >100 mg/mmol, haematuria with proteinuria, or when there is suspected systemic illness
* ONLY if other indicators of renal disease, otherwise normal			
3A 3B	45-59 30-44	Moderate	Is this a stable result? If new, repeat within 3 months (5 days if unwell), with Ca^{++}, PO_4, CRP, FBC, and urinalysis *(across Essex, it has been agreed that PTH ± Vit. D assay will be the responsibility of secondary care)* as well as clinical assessment and medication review. Falling eGFR should be monitored. Routine referral as for CKD 1/2, or unexplained anaemia, abnormal Ca^{++}, PO_4, or resistant BP
4	15-29	Severe	Urgent referral or discussion (routine referral if known to be stable). Exceptions are where renal failure is part of another terminal illness; where investigations have been performed and there is an agreed care pathway; and where more investigations are clearly inappropriate.
5	<15	Very severe	Immediate referral or discussion if new. Exceptions as above.

- Other reasons for urgent renal referrals, regardless of eGFR, are malignant hypertension, hyperkalaemia (serum K^+ >7 mmol/L), and nephrotic syndrome.

Full information on initial assessment, referral guidelines, and subsequent management is available at www.basildonandthurrock.nhs.uk/ckd