Renal Guidelines 2008

Adult Chronic Kidney Disease Management and Referral Guidelines

Dartford & Gravesham NHS Trust

NHS

Chronic Kidney Disease (CKD) is now staged (**Risk Stratified**) according to the estimated glomerular filtration rate (eGFR) which derives from the patient's age, sex and serum creatinine level and is routinely reported alongside any creatinine measurements. For African, Afro-Caribbean & Black American patients the result needs to be multiplied by 1.2. Patients without renal disease have normal distributions of results with means 70-80ml/min and **Low eGFR is conventionally defined as <60 ml/min**. Over the age of forty a decline in eGFR of ≤1ml/min/year is acceptable. All abnormal and deteriorating results should be re-checked after a short interval, away from any intercurrent illness.

Stage	GFR (ml/min)	Description	Population (%)	5 YEAR RISK OF RRT (%)	5 YR risk OF DEATH (%) (mainly CardioVasc)
1	≥90	Normal kidney function but urine findings, structural abnormalities or genetic trait point to kidney disease	3.3	-	-
2	60-89	Mildly reduced kidney function, and other findings (as for stage 1) point to kidney disease	3.0	1.1	19.5
3	30-59	Moderately reduced kidney function	4.3	1.3	24.3
4	15-29	Severely reduced kidney function	0.2	19.9	45.7
5	<15	Very severe, or **end stage** kidney failure (sometimes called **established renal failure**)	0.2	-	-

Screening for Renal Disease

eGFR should be assessed at least annually in all patients in the following at risk groups:

- Vascular disease (coronary heart disease, Cerebrovascular disease, peripheral vascular disease)
- Heart failure
- Patients taking ACE inhibitors (ACEIs) or angiotensin receptor blockers (ARBs)
- Hypertension
- Diabetes
- Bladder outflow obstruction
- Recurrent urinary tract infection (more than 3/year)
- Metabolic disorders causing recurrent kidney stones
- Neurogenic bladder and patients with surgical urinary diversion
- Patients maintained on continuous long-term NSAIDs (>12 months), lithium, mesalazine
- Patients with family history/genetic risk of kidney disease.
- Previous nephrectomy

Measurement of urinary protein excretion

24 hour collections are no longer required. The total daily protein excretion (in mg) can be estimated simply by multiplying the protein / creatinine ratio (PCR) from a spot urine sample, (preferably early morning measured in mg/mmol) by a factor of 10.
e.g. UPCR 100 mg/mmol = 1g/day

Use of ACEI and ARB

- Check potassium / eGFR within 2 weeks of starting / dose change / increasing diuretics
- A fall in eGFR <15% is acceptable
- If eGFR falls by >15% stop the ARB or ACEI and consider referral
- If eGFR falls by 5-15% recheck in 2-3weeks to exclude progression
- If K^+ > 6.0mmol/L stop ACEI and arrange low potassium diet before reinstituting and recheck

Desired minimal referral information or letter of advice

We would ask that, as a minimum, the following information is provided at time of referral:

- List of dates and results of previous serum creatinine measurements to assess stability / rate of deterioration
- Past medical and drug history
- Blood pressure
- Dipstick results, and protein-creatinine ratio if more than trace protein present
- Renal Ultrasound performed or requested
- Hb, Ca^+, P04, albumin, bicarbonate

Renal Anaemia

If Hb <11g/dl & eGFR <45ml/min, (esp. if DM) check Ferritin, Fe & %IBC, B_{12} & Folate, exclude other obvious causes and replace as necessary. These Pts can only be considered definitely Iron replete if Ferritin >200 & %IBC >20%. In practice this may require referral for IV Iron. If Hb consistently <10.5 despite this, consider referral for ESA therapy.

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Web Links and Contacts

www.renal.org

www.renal.org/eGFR/eguide.html

http://guidance.nice.org.uk/cg39

Glossary

eGFR Estimated Glomerular Filtration Rate
UPCR Urine Protein / Creatinine Ratio
DM Diabetes mellitus
%IBC %Iron Binding Capacity (same as TSAT =Transferrin saturation)
ESA Erythropoesis Stimulating Agent
RRT Renal replacement therapy
Microscopic haematuria implies 2 positive test results in a 2 month period

Requesting a '**Renal Unit Profile**' on the pathology request form will give you urea, creatinine, electrolytes, Ca^+, P04, and albumin

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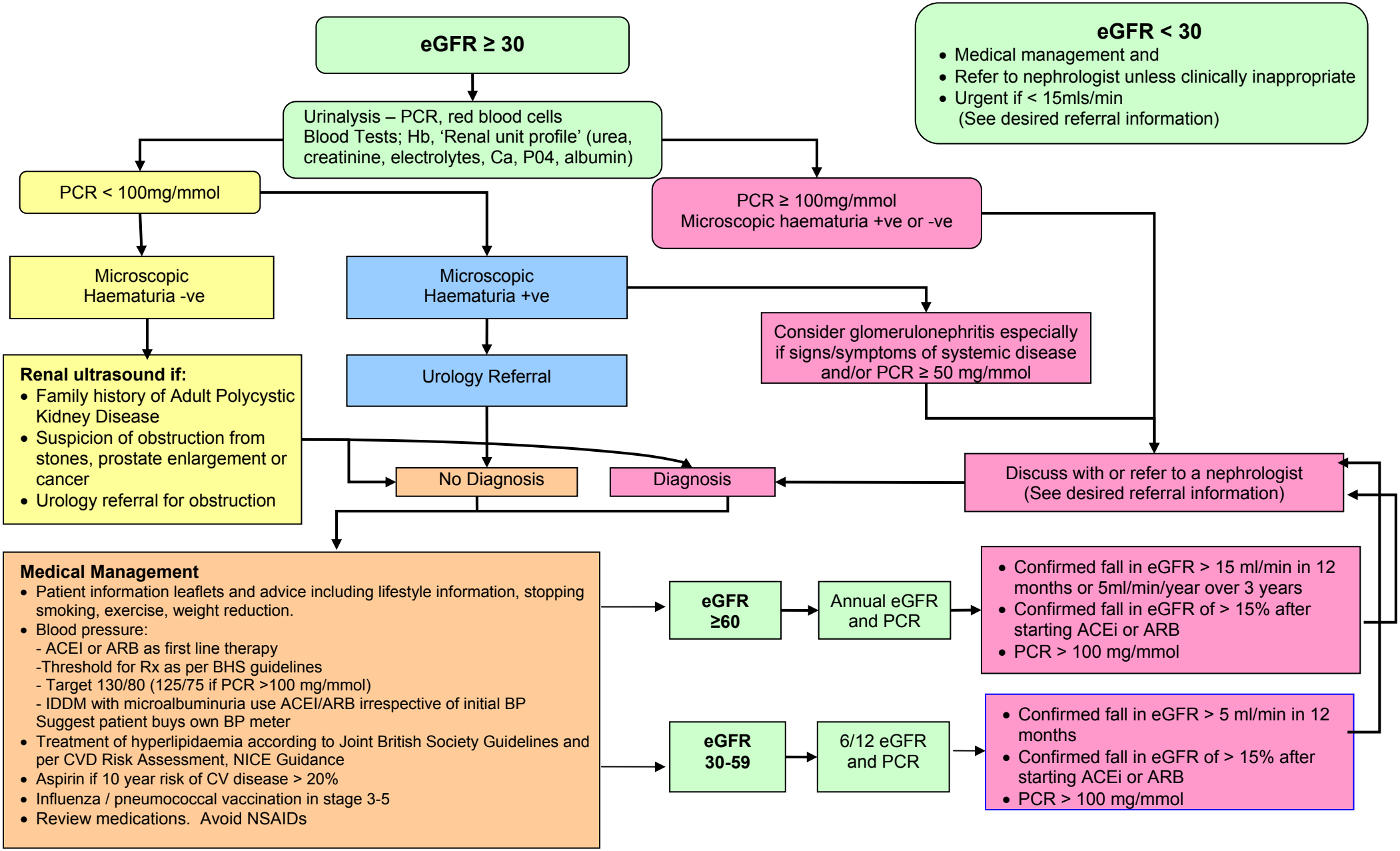
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