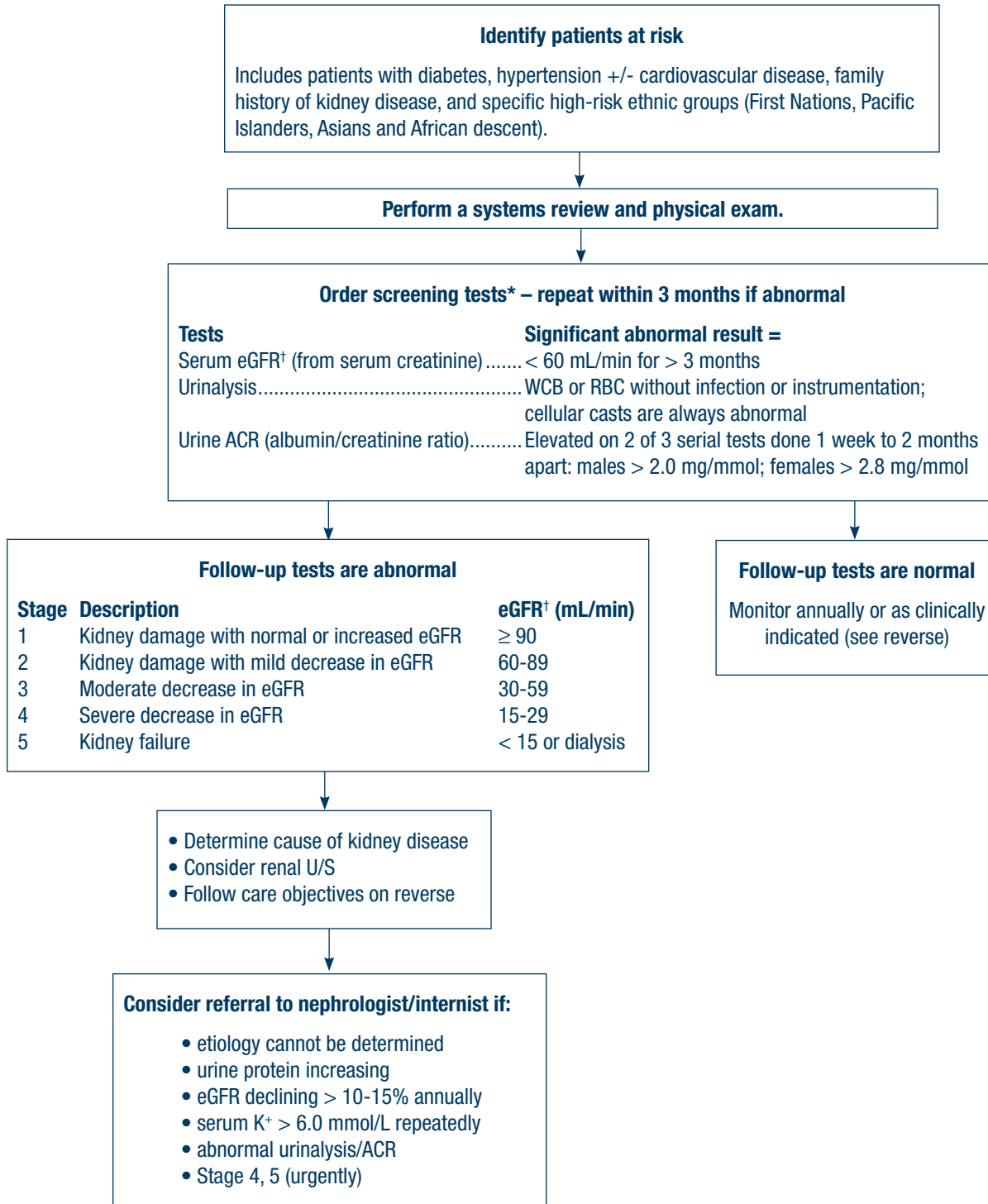


SUMMARY OF GUIDELINE

Effective Date: September 15, 2008

Chronic Kidney Disease – Identification, Evaluation and Management

For full Guideline please go to website: <http://www.BCGuidelines.ca>



*Occasionally a screening test will identify a serious systemic disease or early stages of an acute illness. In patients with active urine sediments (RBC casts or cellular casts +/- protein), constitutional symptoms, or unexplained severity of kidney dysfunction, prompt consultation with a specialist and/or re-evaluation of tests is indicated.

†For patients age > 75: accuracy of eGFR is questionable. A conservative approach is recommended for eGFR between 45-60 as it may reflect normal variation, especially if no other abnormalities. Exercise caution with respect to medications, dye & risk of acute kidney injury with severe illnesses. Correlation with clinical condition is recommended.

CHRONIC KIDNEY DISEASE – CARE OBJECTIVES AND TARGETS

Care	Objective	Target
BP	Measure and record at diagnosis and at every visit thereafter. See BC guideline: <i>Hypertension – Detection, Diagnosis and Management</i> at www.BCGuidelines.ca	<ul style="list-style-type: none"> BP < 130/80. ACEI/ARB recommended in addition to other drugs.**
Kidney function measurements	Obtain regular measurements of serum creatinine for eGFR (at least q 6 months) and after any change in medications, medical intervention, or clinical status.	Stability of kidney function or < 10-15% decline in eGFR annually.
Urine testing	ACR (microalbumin) every 6-12 months or as clinically indicated.	<ul style="list-style-type: none"> Reduce abnormal values by 50% or more from baseline. ACEI/ARBs recommended.**
Monitor serum electrolytes	<ul style="list-style-type: none"> Measure after change in medications, medical intervention, or clinical status with particular attention to K⁺. Check serum creatinine and K⁺ prior to starting ACEIs and ARBs, within 2 weeks of starting, and within 2 weeks after dose increase. Serum creatinine rise >20% or eGFR decrease >15% after dose increase should be followed by further measurements within 2 weeks. 	
CVD risk assessment & lipid profiles	<ul style="list-style-type: none"> Calculate & record CVD risk. Manage in accordance with relevant guidelines. Check fasting lipids yearly once target values are achieved & more frequently in patients on lipid lowering medication. 	<ul style="list-style-type: none"> Reduce risk in those at high risk. Lipid targets (<70 yrs): LDL < 2.5; TC/HDL ratio < 4.0.
Diabetes: Blood glucose control over time	<ul style="list-style-type: none"> Measure A1C q 3 months or as clinically indicated. See <i>Diabetes Care</i> guideline at www.BCGuidelines.ca Long-acting sulfonylureas may be associated with hypoglycemia with unstable eGFR, especially those below 45. If recurrent hypoglycemia, or unstable eGFR consider using short-acting sulfonylureas or non-sulfonylureas. In those with unstable eGFR or acute changes in clinical condition, metformin should be held. 	A1C: ≤ 7.0% (0.07).
Weight & nutrition	Record weight & BMI on each visit for comparison.	Adequate nutrition and BMI near ideal (18.5-24.9).††
Smoking	Encourage patient to stop smoking, enquire at every visit, support when receptive.	Complete smoking cessation.
Assessment of conditions associated with CKD	Measure at least yearly (more frequently with advanced CKD): <ul style="list-style-type: none"> CBC. Mineral metabolism (calcium, phosphorus, iPTH). Nutrition profile (albumin). 	<ul style="list-style-type: none"> Hgb within normal range for sex if not on ESA treatment, Hgb > 110- 125 g/L if on ESA treatment. Transferrin saturation > 20%. Calcium 2.2-2.5 mmol/L. Phosphorus 0.75-1.4 mmol/L. iPTH in normal range. Albumin in normal range.
Flu vaccine	Immunize annually.	Prevention of influenza.
Pneumococcal vaccine	Immunize every 10 years.	Prevention of pneumonia.
Awareness of Hepatitis B risk	Immunization at a higher level of eGFR more likely to result in seroconversion if patient is being considered for hemodialysis. Screening and vaccination in consultation with nephrology team.	Seroconversion, prevention of Hep B (seroconversion rate higher if immunized early).
Limit exposure to nephrotoxins/drug adjustments	<ul style="list-style-type: none"> Reduce risk of acute or chronic deterioration of kidney function. Adjust renally excreted drugs according to kidney function. 	Avoidance of aminoglycosides, NSAIDs, COX-2 inhibitors, intravenous or intra-arterial radiocontrast studies.
Psychosocial health	<ul style="list-style-type: none"> Depression and grief reaction may occur with chronic disease. Identify and address psychosocial problems that affect the illness. 	<ul style="list-style-type: none"> Providing support. Optimize self-management.

NOTES: ** Reduction of proteinuria can be facilitated by the use of ACEI/ARBs. This has been shown to reduce the rate of progression of chronic renal insufficiency in hypertensive patients with diabetes or chronic glomerulonephritis.

†† In severe CKD (eGFR < 15ml/min), weight loss may indicate a catabolic state and a possible need for dialysis.