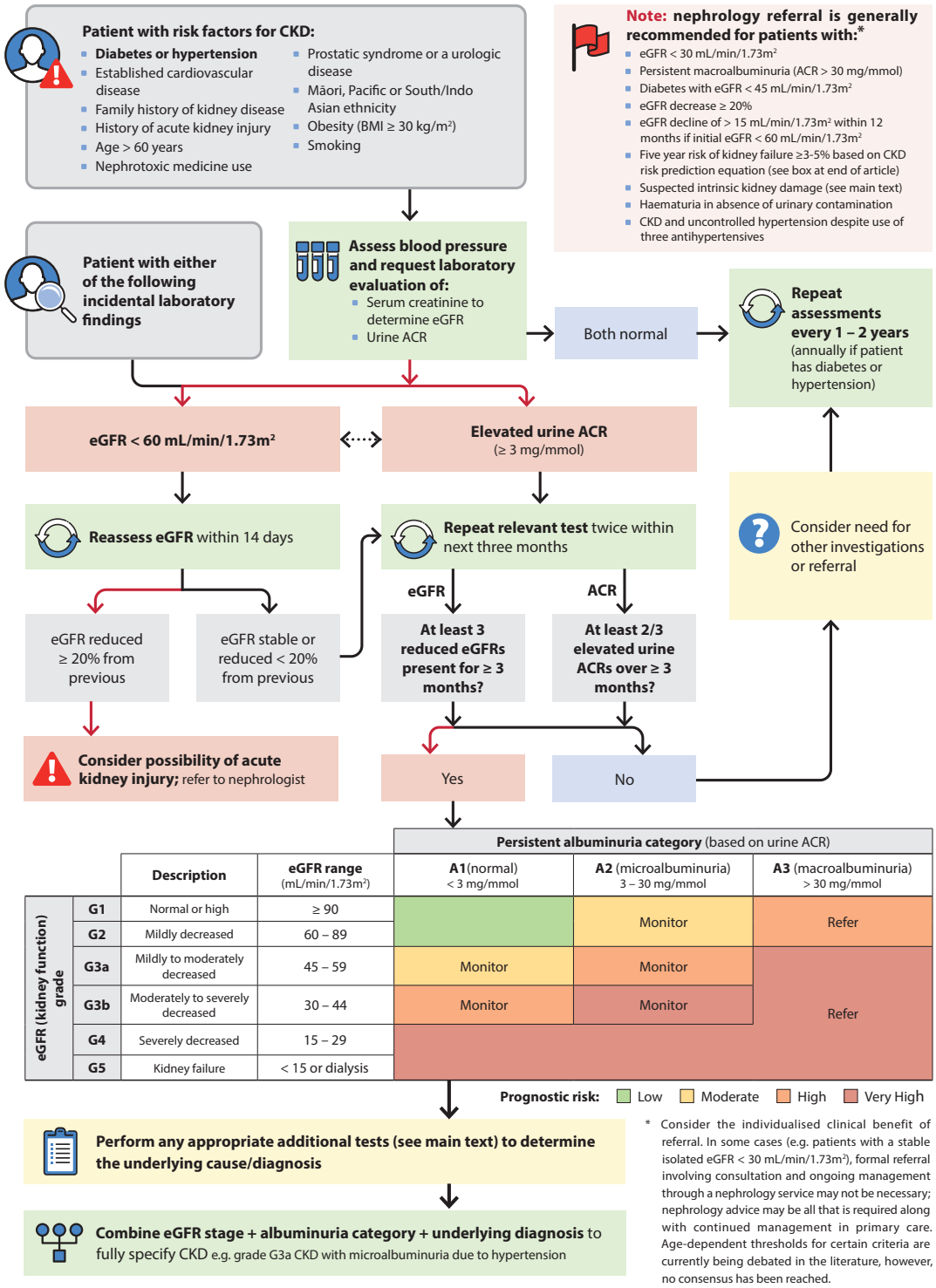
# B-QuiCK: Chronic kidney disease (CKD)

## Summary: detection and diagnosis of patients with CKD in primary care




* Consider the individualised clinical benefit of referral. In some cases (e.g. patients with a stable isolated eGFR < 30 mL/min/1.73m²), formal referral involving consultation and ongoing management through a nephrology service may not be necessary; nephrology advice may be all that is required along with continued management in primary care. Age-dependent thresholds for certain criteria are currently being debated in the literature, however, no consensus has been reached.

## Summary: management of patients with CKD in primary care

Discuss healthy lifestyle changes with consideration of individual or cultural barriers to achieving these.

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| **Weight loss** | ■ Reduce BMI to at least ≤ 30 kg/m$^2$ with an ideal target of ≤ 25 kg/m$^2$ |
| **Increase exercise participation** | ■ Tailor recommendation to the patient; general targets include 150–300 min/week moderate intensity exercise or 75–150 min/week vigorous exercise<br>■ Advise strength/resistance training on at least two days/week, if possible |
| **Nutrition** | ■ Recommend a balanced diet emphasising fruits, vegetables, nuts, low-fat dairy products, whole grains and fish (e.g. DASH diet); reduce sodium intake and avoid trans fats, processed meats, refined carbohydrates and sweetened beverages (N.B. water should be the main fluid but avoid over-consumption)<br>■ Avoid high levels of protein intake but do not advise a protein-restricted diet unless under dietician or nephrologist supervision |
| **Reducing alcohol intake** | ■ Advise a maximum of one or two standard drinks daily, with at least two alcohol free days per week, if applicable |
| **Smoking cessation** | ■ Encourage cessation, if applicable |

### Initiate and optimise blood pressure management

- Aim for a target systolic blood pressure of < 130 mmHg for most patients
- An ACE inhibitor or ARB is first line. Titrate to the maximum (approved) tolerated dose while monitoring for acute reductions in eGFR and hyperkalaemia (within one to two weeks initially, then less frequently once targets have been achieved). If hyperkalaemia becomes an issue, consider other options of controlling serum potassium before withholding or reducing dose of the ACE inhibitor/ARB, e.g. reducing dietary potassium intake, stopping/switching beta-blocker (if applicable).
- If treatment escalation is required, add another antihypertensive, e.g. calcium channel blocker or loop diuretic. Thiazide diuretics are less effective in patients with worsening eGFR.

### Initiate and optimise management of hyperglycaemia if the patient has diabetes

- Aim for a target $HbA_{1C}$ of < 53 mmol/mol for most patients
- Start with metformin; the maximum tolerated dose is dependent on kidney function (see NZF)
- Add a SGLT-2 inhibitor (empagliflozin) if treatment escalation is required (Special Authority criteria applies); also consider a SGLT-2 inhibitor in patients with CKD without diabetes (but this is **not** funded)
- If further glucose-lowering treatment is need, consider adding a GLP-1 receptor agonist (preferred, but dual SGLT-2 inhibitor/GLP-1 receptor agonist treatment is not funded), or other options, e.g. vildagliptin, pioglitazone (unless the patient has heart failure), a sulfonylurea or insulin

### Consider other pharmacological treatments

- Assess whether the patient is taking any other potentially nephrotoxic medicines and consider if dose adjustments, switching or discontinuation is required
- Discuss the benefits of statin treatment with all patients, particularly those with high triglyceride and low HDL-C levels
- Consider long-term aspirin treatment for patients with CKD and established CVD or in those with a high risk of atherosclerotic events (unless they have an increased bleeding risk)

### Provide advice about managing acute illness

- Advise patients with CKD to temporarily stop the following medicines if they experience acute illness (using the Mnemonic: SAD MANS): **s**ulfonylureas, **A**CE-inhibitors, **d**iuretics, **m**etformin, **A**RBs, **N**SAIDs and **S**GLT-2 inhibitors

### Establish a monitoring plan

- Patients with established CKD should have their eGFR, ACR and blood pressure reviewed at least annually, in addition to other relevant laboratory investigations, e.g. serum electrolytes, lipids, $HbA_{1C}$ (if diabetes present). More frequent review is appropriate for patients with greater eGFR impairment or proteinuric CKD, e.g. three to six monthly (see full text for specific criteria).
- Patients should be referred to nephrology if progressive CKD or other changes indicating significant kidney function deterioration are identified

**It is strongly recommended to review the original resource at your convenience for full details of recommendations and evidence.** See full article here: **bpac.org.nz/2022/ckd.aspx**