Chronic Kidney Disease

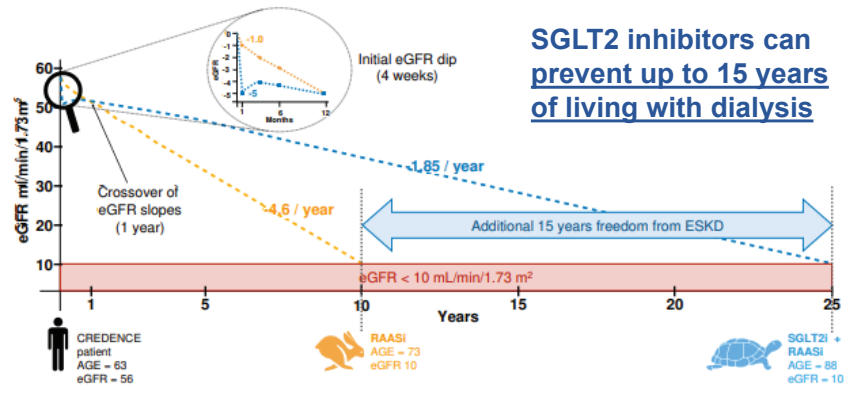
CKD is a stronger risk factor than diabetes for CVS disease & mortality

1:10 New Zealanders have CKD (and <1:6 Pacific Islanders in NZ)

1:25 people have high-risk CKD *i.e. ~200,000 people In New Zealand*

CKD diagnosis is missing from long-term condition lists in 75-90% cases

Early CKD is treatable



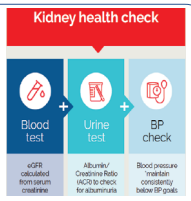
Kidney Health NEW ZEALAND

People with CKD & **BP <140/90 have an extra 10 years** before dialysis

8 Key elements of CKD management

1)Detect 2)Diagnose 3) Record as LTC 4)Assess risk 5)Consider referral 6)Treat 7)Monitor 8)Prevent complications

1) Screen for CKD with **CVS risk**, **diabetes** and **ACEinh/ARB users**



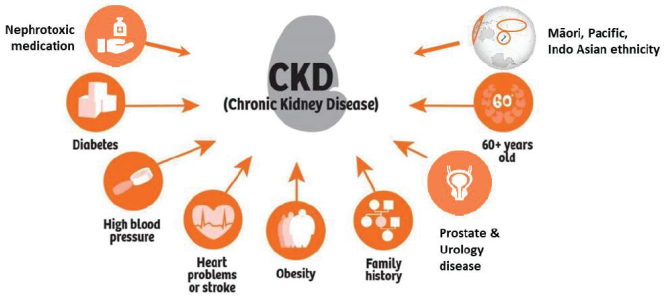
CVS Risk: urine albumin:creatinine ratio advised (PREDICT) & eGFR advised (if eGFR <30 then CVS risk = high)
Diabetes: annual check for urine albumin:creatinine ratio and eGFR
ACEinh/ARB users: NZF -> eGFR & electrolyte check before treatment, when titrating and monitor on therapy

2) **Diagnose CKD** and then 3) **Record CKD in Long Term Conditions List**

Chronic Kidney Disease = **abnormalities of kidney structure or function, present for >3 months, with implications for health**
(e.g. low eGFR, high urine ACR, persistent invisible haematuria, structural abnormality e.g. polycystic kidneys)

4) **Assess Risk** and then 5) **Refer** *according to local guidelines*

Consider rate of eGFR decline: >5ml/min/1.73m²/year = rapid = high risk *…and…* ***Consider causes*** *(e.g. vasculitis: high risk)*



Kidney Function Stage	GFR (mL/min/1.73m²)	Albuminuria Stage: Normal (urine ACR mg/mmol) Male: <2.5 Female: <3.5	Microalbuminuria (urine ACR mg/mmol) Male: 2.5-25 Female: 3.5-35	Macroalbuminuria (urine ACR mg/mmol) Male: >25 Female: >35
1	≥90	Not CKD unless haematuria, structural or pathological abnormalities present		
2	60-89			
3a	45-59			
3b	30-44			
4	15-29			
5	<15 or on dialysis			

low risk
medium risk
high risk
very high risk

6) **Treat**

1. **BP to consistently <130/80mmHg**
2. **ACE inhibitors / ARBs**
3. **Empagliflozin** / SGLT2 inhibitors (*funded for diabetic CKD; evidence also for non-diabetic CKD*)
4. **Glycaemic control**
5. **Lifestyle factors**
    1. e.g. Reduce dietary salt
    2. E.g. Smoking cessation

...all tailored to the individual

7) **Monitor** (*LTC funding*)

- "medium risk" CKD at least annually;
- "high risk" CKD at least twice yearly;
- "very high risk" CKD 3, 4 or more times per year
- eGFR decline >5ml/min/1.73m²/year is "rapid progression"

- Consider enrolling in funded, nurse-led long-term conditions management programme

8) **Prevent complications**

1. **Assess/manage cardiovascular risk** (*eGFR <30 = equivalent risk to established cardiovascular disease*)
2. **Vaccinations**
3. **Avoid nephrotoxins** e.g. NSAIDs
4. **"Sick Day Rules"** for acute kidney injury (AKI) e.g. swift medical review if intercurrent illness, esp. with dehydration, for kidney health check +/- temporary omit ACEinh / ARB / diuretics until recovered