



# Assessing cardio-renal-metabolic risk in people with type 2 diabetes

Life forward

## In people with type 2 diabetes, what is the effect of additional cardio-renal-metabolic (CRM) conditions?



- An average person aged 55 years living with diabetes will die 6 years or more earlier than an individual without diabetes\*<sup>1</sup>



- However, a person living with diabetes who also has cardiovascular disease (CVD) will die 13 years or more earlier than an individual without diabetes and CVD\*\*<sup>1</sup>

## What is the impact of diabetes on vascular disease risk and the effect of blood glucose lowering?



- Type 2 diabetes is a major risk factor for the development of small- and large-vessel vascular diseases<sup>2</sup>



- Reducing HbA1c in people with type 2 diabetes has been shown to decrease the risk of micro- and macrovascular complications<sup>3-4</sup>

### Patient case vignette:

#### 48-year-old male with type 2 diabetes



- HbA1c: 56 mmol/mol
- Blood pressure (BP): 142/92 mm Hg
- Body mass index (BMI): 32 kg/m<sup>2</sup>
- Estimated glomerular filtration rate (eGFR): 70 mL/min/1.73 m<sup>2</sup>

### Which vital test to assess cardiovascular (CV) risk should also be performed in this person?

Urine albumin-to-creatinine ratio (uACR)<sup>5</sup>

### uACR categories in chronic kidney disease (CKD)<sup>6</sup>

Category	uACR	Terms
A1	<3 mg/mmol	Normal to mildly increased
A2	3–30 mg/mmol	Moderately increased**
A3	>30 mg/mmol	Severely increased

uACR is not just a marker for kidney disease, it also indicates CV risk; a higher uACR predicts a higher risk.<sup>6,7</sup>

Based on a fictional case study.

### Additional risk factors associated with CVD development in people with type 2 diabetes



Obesity



Hypertension



Dyslipidaemia

Hypertension, dyslipidaemia and obesity also contribute to increased risk and should be factored into risk assessments<sup>2</sup>

### Why are uACR and eGFR such vital measures in people with CKD?<sup>6,8</sup>

- Guidelines recommend that people at risk of CKD should be tested using uACR measurement to detect CKD earlier and enable treatment early in the disease course (before significant eGFR decline) to slow disease progression
- uACR and eGFR levels help guide clinical decisions beyond initiating treatments specifically for CKD
- Guidelines also recommend that uACR and eGFR are assessed at least annually to monitor for progression of CKD and to enable management to be adapted, should it be required, e.g. targeting BP thresholds<sup>6,8</sup>

### The uACR was measured at 2.3 mg/mmol – What do these test results tell us?

- HbA1c confirms type 2 diabetes diagnosis
- BP is above target thresholds systolic BP <120 mmHg<sup>6</sup>
- BMI indicates obesity
- eGFR is mildly decreased
- uACR is within normal range (optimise risk factors and monitor)

### Even in the absence of major red flags, communicating the implications of elevated CV risk remains crucial

- Further assessment should include determination of CV risk using tools such as QRISK<sup>®3</sup>
- The patient's CV risk calculated using QRISK<sup>®3</sup> is 12.5% – indicating they have a moderate risk of developing a heart attack or stroke within 10 years

Key aspects of effective communication include empowering and educating patients about CV risk to enable greater shared decision-making throughout their management pathway. Language matters—providing clear and non-technical explanations can help people better understand risk and its implications

A CRM clinic employs a comprehensive approach that recognises the interconnectedness of type 2 diabetes, kidney and cardiovascular disease, and applies individualised, patient-centred, holistic, long-term management strategies to optimise outcomes – taking into consideration factors such as disease progression, age, frailty and quality of life



### Assess people with type 2 diabetes for their CKD and CV risk.

How many people with type 2 diabetes in your practice have CKD but have not had a uACR and/or an eGFR test within the past 12 months? In those with CKD who have not had a uACR or eGFR test in the past year, will you commit to routinely carrying out annual uACR and eGFR tests in these people?



Abbreviations: BMI, body mass index; BP, blood pressure; CKD, chronic kidney disease; CVD, cardiovascular disease; eGFR, estimated glomerular filtration rate; HbA1c, glycated haemoglobin; uACR, urine albumin-to-creatinine ratio.

\*Estimate based on a cumulative survival by applying calculated age-specific hazard ratios for mortality to contemporary US age-specific death rates. Data based on the analysis of Emerging Risk Factors Collaboration results from 689,300 participants compared with UK Biobank, a prospective cohort study of 499,808 participants.<sup>1</sup> \*\*Relative to the young adult level.<sup>6</sup>  
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