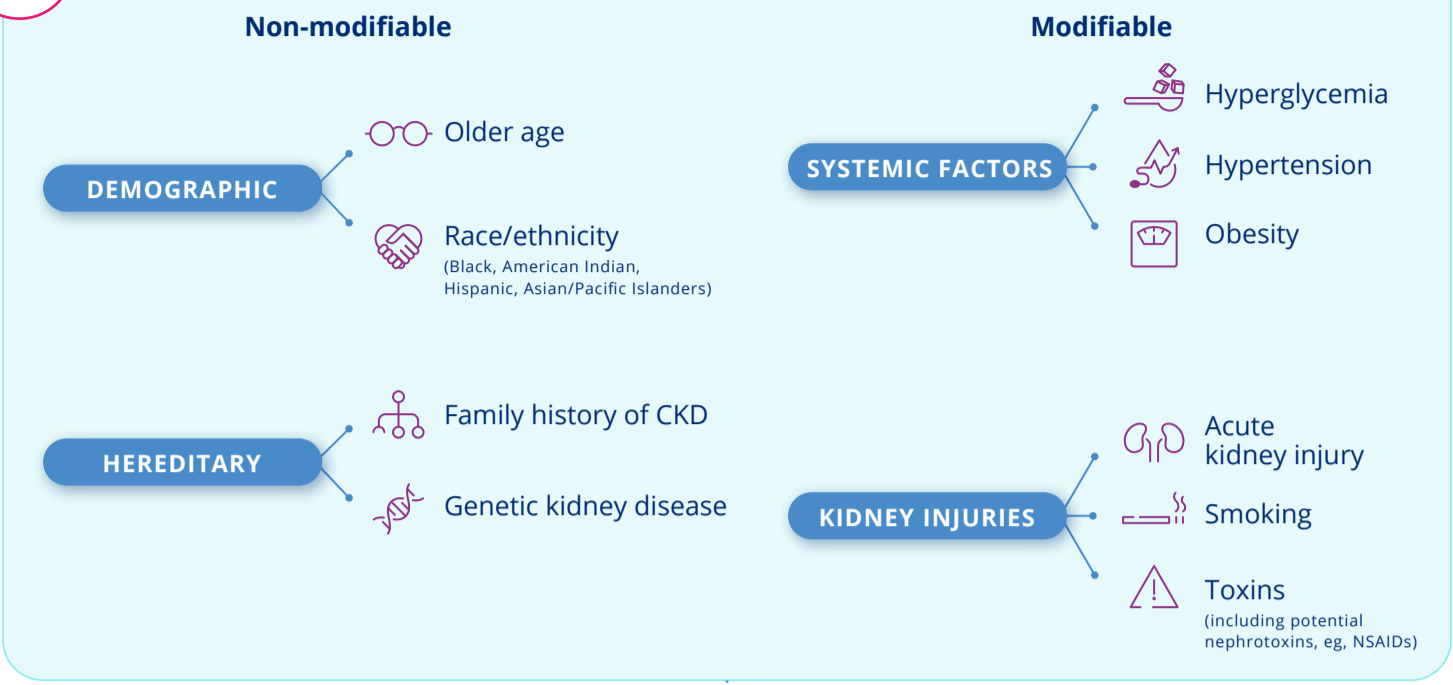


# CKD Evaluation and Management in patients with T2D

## Identify risk factors for development and progression of CKD in T2D<sup>1</sup>



## When to screen?<sup>2</sup>

- At diagnosis of T2D
- Annually thereafter

## Identify CKD in patients with T2D<sup>2</sup>

- Present for >3 months**
- eGFR <60 mL/min/1.73 m<sup>2</sup>
  - and/or**
  - Urine albumin excretion of >30 mg/24 hours
  - or**
  - UACR >30 mg/g

## Determine CKD stage<sup>3</sup>

		Albuminuria category (mg/g)			
		A1 <30	A2 30-300	A3 >300	
eGFR category (mL/min/1.73 m <sup>2</sup> )	G1 (≥90)	Low risk	Moderately increased risk	High risk	<b>Risk for progression, morbidity, and mortality</b> Low risk (Light blue)    High risk (Purple) Moderately increased risk (Dark blue)    Very high risk (Red)
	G2 (60-89)	Low risk	Moderately increased risk	High risk	
	G3a (45-59)	Moderately increased risk	High risk	Very high risk	
	G3b (30-44)	High risk	Very high risk	Very high risk	
	G4 (15-29)	Very high risk	Very high risk	Very high risk	
	G5 (<15)	Very high risk	Very high risk	Very high risk	

## Monitor CKD in T2D<sup>2</sup>

- Monitor eGFR and urine albumin excretion at least annually
- Monitor twice annually if UACR >30 mg/g and/or eGFR <60 mL/min/1.73 m<sup>2</sup>

## Manage risk factors for progression<sup>4,5</sup>

- Lifestyle: smoking cessation, dietary modification, weight management
- Consider statins for lipid management (additional lipid-lowering therapy if LDL ≥70 mg/dL)
- BP <130/80 mm Hg; if appropriate ACEIs and ARBs are drugs of choice
- Hyperglycemia: A1c <6.5% to <8.0% (general goal); <8.0% (advanced CKD)

## Select appropriate glucose-lowering therapies<sup>5-7</sup>

**Metformin**

- eGFR ≥45 mL/min/1.73 m<sup>2</sup>  
Continue treatment
- eGFR 30-44 mL/min/1.73 m<sup>2</sup>  
Reduce dose
- eGFR <30 mL/min/1.73 m<sup>2</sup>  
Discontinue

**Consider independently of A1c if CKD predominates + SGLT2 inhibitor (preferred\*)**

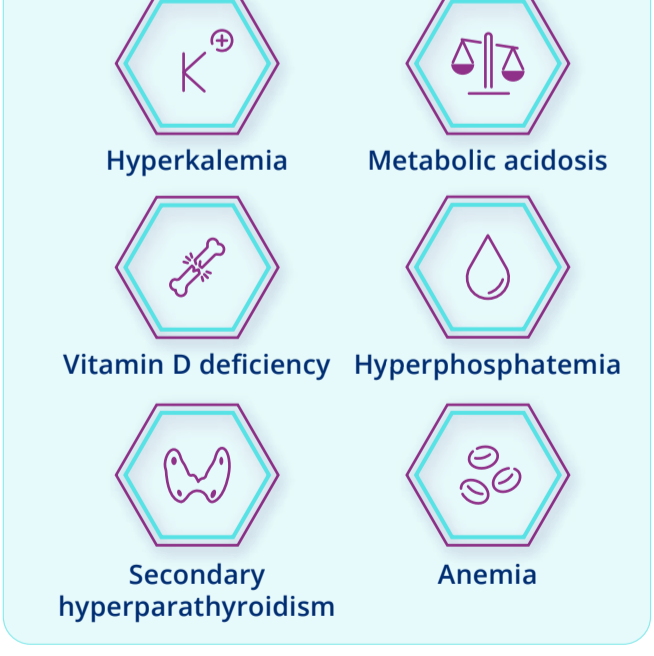
- eGFR 30-60 mL/min/1.73 m<sup>2</sup> or UACR >30 mg/g, particularly UACR >300 mg/g  
Initiate treatment
- eGFR <30 mL/min/1.73 m<sup>2</sup>  
Discontinue or do not initiate

**+/- GLP-1 RA<sup>†</sup>**

- If SGLT2 inhibitor not tolerated or contraindicated, or if eGFR not adequate  
If A1c above target, and patient on SGLT2 inhibitor, consider adding
- eGFR <60 mL/min/1.73 m<sup>2</sup>  
No adjustment required (dulaglutide, liraglutide, or semaglutide)
- ESKD  
Limited experience with use

\*SGLT2 inhibitor with evidence of reducing CKD progression  
†GLP-1 RA with proven CVD benefit<sup>6</sup>

## Manage complications in consultation with nephrologist<sup>8</sup>



## When to consider nephrologist referral

- Uncertainty about CKD etiology
- Management challenges (eg, anemia, secondary hyperparathyroidism, metabolic bone disease, resistant hypertension, electrolyte disturbances)
- Advanced CKD (eGFR <30 mL/min/1.73 m<sup>2</sup>) with possibility of renal replacement therapy<sup>2</sup>

### ABBREVIATIONS

A1c, glycated hemoglobin; ACEI, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; BP, blood pressure; CKD, chronic kidney disease; CVD, cardiovascular disease; eGFR, estimated glomerular filtration rate; ESKD, end-stage kidney disease; GI, gastrointestinal; GLP-1 RA, glucagon-like peptide-1 receptor agonist; LDL, low-density lipoprotein; NSAID, nonsteroidal anti-inflammatory drug; SGLT2, sodium-glucose co-transporter 2; T2D, type 2 diabetes; UACR, urinary albumin-to-creatinine ratio

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