

# Top 10

# Takeaways for Clinicians from the KDIGO 2020 Clinical Practice Guideline for Diabetes Management in CKD



1

## Comprehensive care

Patients with diabetes and CKD have multisystem disease that requires treatment including a foundation of lifestyle intervention (healthy diet, exercise, no smoking) and pharmacologic risk factor management (glucose, lipids, blood pressure).

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## Nutrition intake

Patients should consume a balanced, healthy diet that is high in vegetables, fruits, whole grains, fiber, legumes, plant-based proteins, unsaturated fats, and nuts; and lower in processed meats, refined carbohydrates, and sweetened beverages. Sodium (<2 g/day) and protein intake (0.8 g/kg/day) in accordance with recommendations for the general population.

3

## Glycemic monitoring

It is advised to monitor glycemic control with HbA1c in patients with diabetes and CKD. For patients with advanced CKD (particularly those on dialysis), reliability of HbA1c decreases and results should be interpreted with caution. CGM or SMBG may also be useful, especially for treatment associated with risk of hypoglycemia.

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## Glycemic targets

Targets for glycemic control should be individualized ranging from <6.5% to <8.0%, taking into consideration risk factors for hypoglycemia, including advanced CKD and type of glucose-lowering therapy.

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## SGLT2i

SGLT2i should be initiated for patients with T2D and CKD when eGFR is  $\geq 30$  ml/min/1.73 m<sup>2</sup> and can be continued after initiation at lower levels of eGFR. SGLT2i markedly reduce risks of CKD progression, heart failure, and atherosclerotic cardiovascular diseases, even when blood glucose is already controlled.

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## Metformin

Metformin should be used for patients with T2D and CKD when eGFR is  $\geq 30$  ml/min/1.73 m<sup>2</sup>. For such patients, metformin is a safe, effective, and inexpensive drug to control blood glucose and reduce diabetes complications.

7

## GLP-1 RA

In patients with T2D and CKD who have not achieved individualized glycemic targets despite use of metformin and SGLT2i, or who are unable to use those medications, a long-acting GLP-1 RA is recommended as part of the treatment.

8

## RAS blockade

Patients with T1D or T2D, hypertension, and albuminuria (persistent ACR >30 mg/g) should be treated with a RAS inhibitor (ACEi or ARB), titrated to the maximum approved or highest tolerated dose. Serum potassium and creatinine should be monitored.

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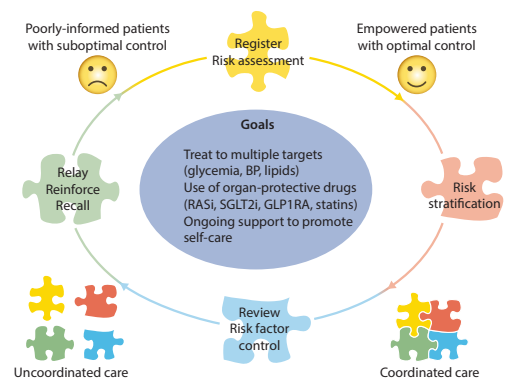
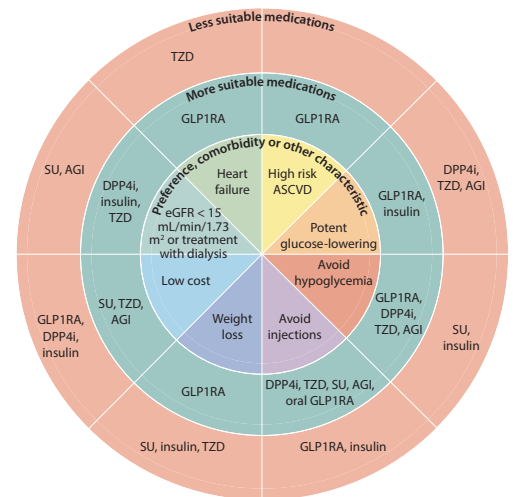
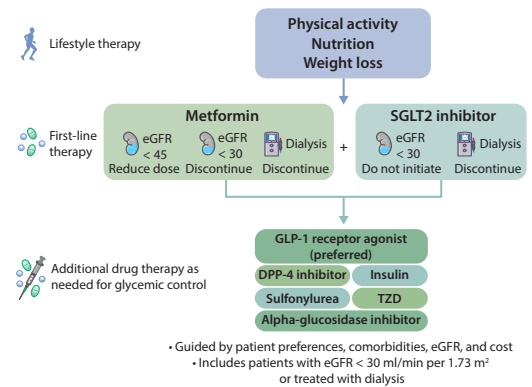
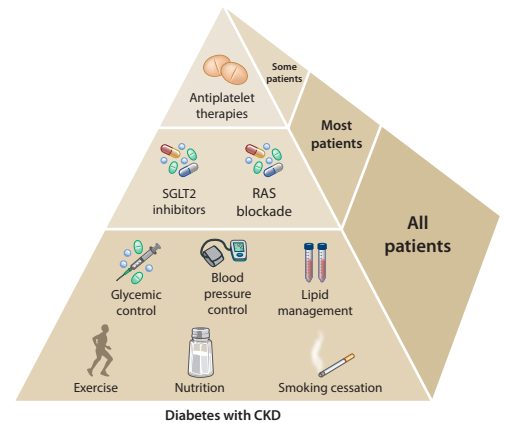
## Approaches to management

A team-based and integrated approach to manage these patients should focus on regular assessment, control of multiple risk factors, and structured education in self-management to protect kidney function and reduce risk of complications.

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## Research recommendations

There is a paucity of data on optimal management of diabetes in kidney failure, including dialysis and transplantation, which should be a focus for future studies.



ACEi, angiotensin-converting enzyme inhibitor; ACR, albumin-creatinine ratio; ARB, angiotensin II receptor blocker; CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; GLP-1 RA, glucagon-like peptide-1 receptor agonist; HbA1c, hemoglobin A1c (glycated hemoglobin); RAS, renin-angiotensin system; SGLT2i, sodium-glucose cotransporter-2 inhibitor; SMBG, self-monitoring blood glucose; T1D, type 1 diabetes; T2D, type 2 diabetes