EMPA

Empagliflozin 10-25

Kidney From Victim to Ally

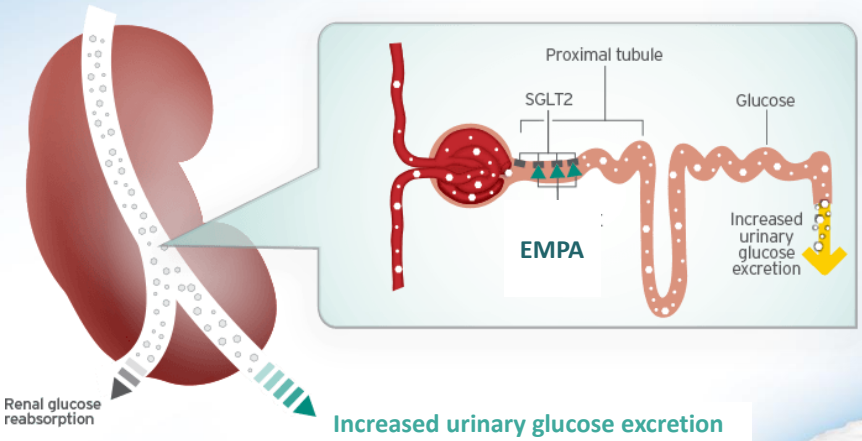
UNIPHARMA

Pull Sugar away


EMPA
Empagliflozin 10 - 25 mg


EMPA 10
Empagliflozin 10 mg
30 F.c Tablets
EMPA 25
Empagliflozin 25 mg
30 F.c Tablets
Any Relationship??
Pull Sugar away

Mechanism of action

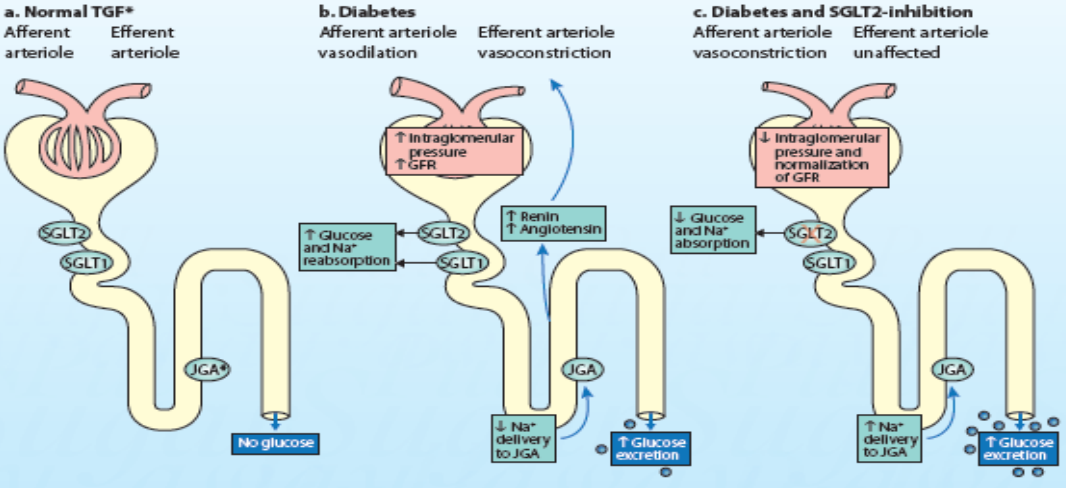


Increased urinary glucose excretion

Pull Sugar away

EMPA

Counteracts the Hyperfiltration State in Diabetic Kidney



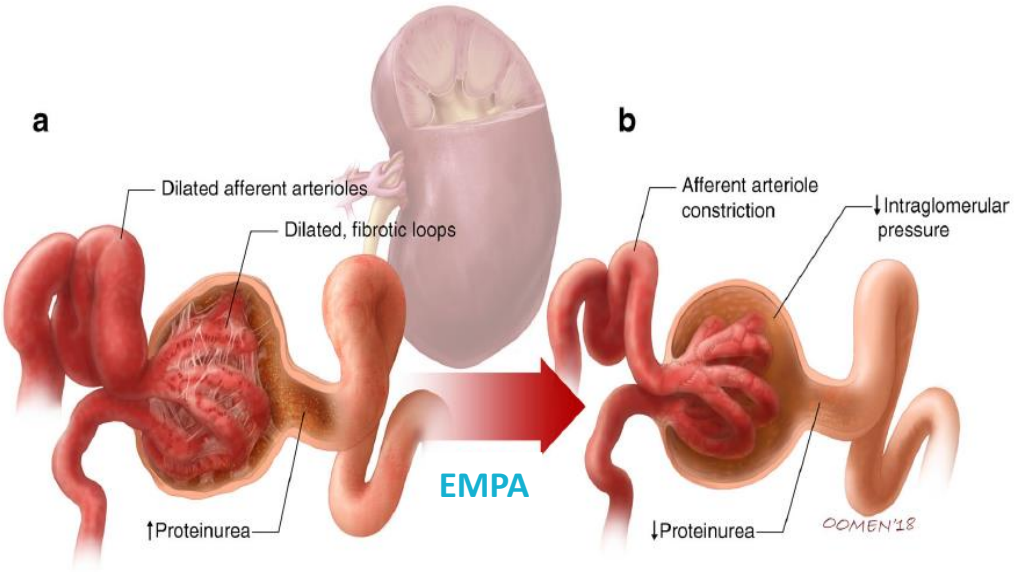
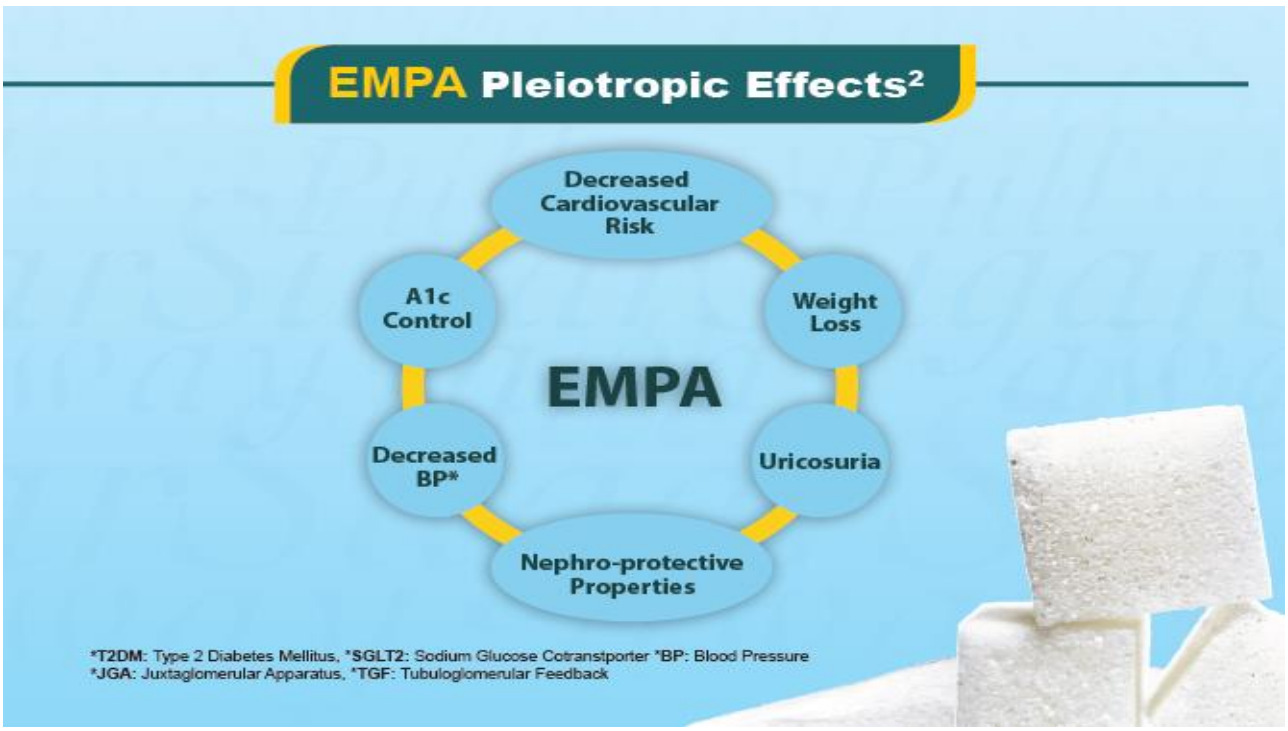
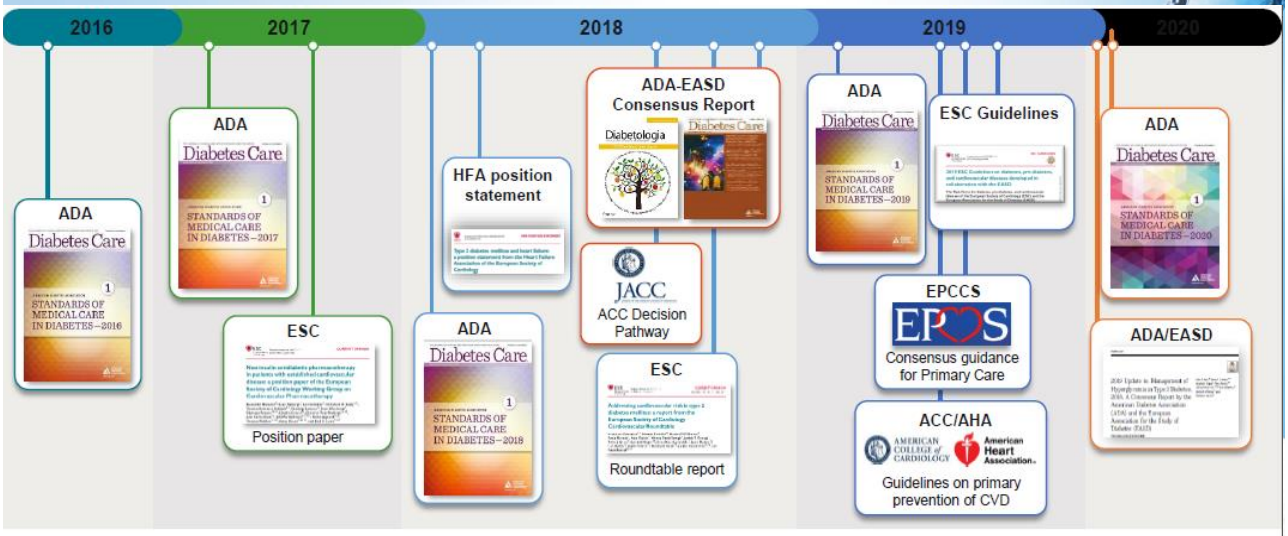


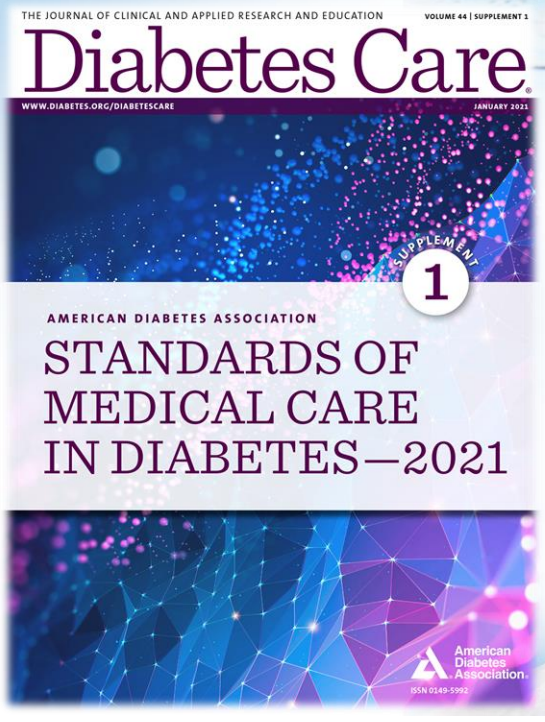
Fig. 3 Diabetes is associated with afferent arteriolar dilatation, which leads to high intraglomerular pressure and hyperfiltration. Ongoing barotrauma to the glomerulus may lead to proteinuria (**a**). SGLT2 inhibitors, through tubuloglomerular feedback, promote afferent arteriolar vasoconstriction. This in turn serves as a mechanism to reduce intraglomerular hypertension and provide nephroprotection (**b**). © G. Oomen 2018. This figure is available as part of a downloadable slideset

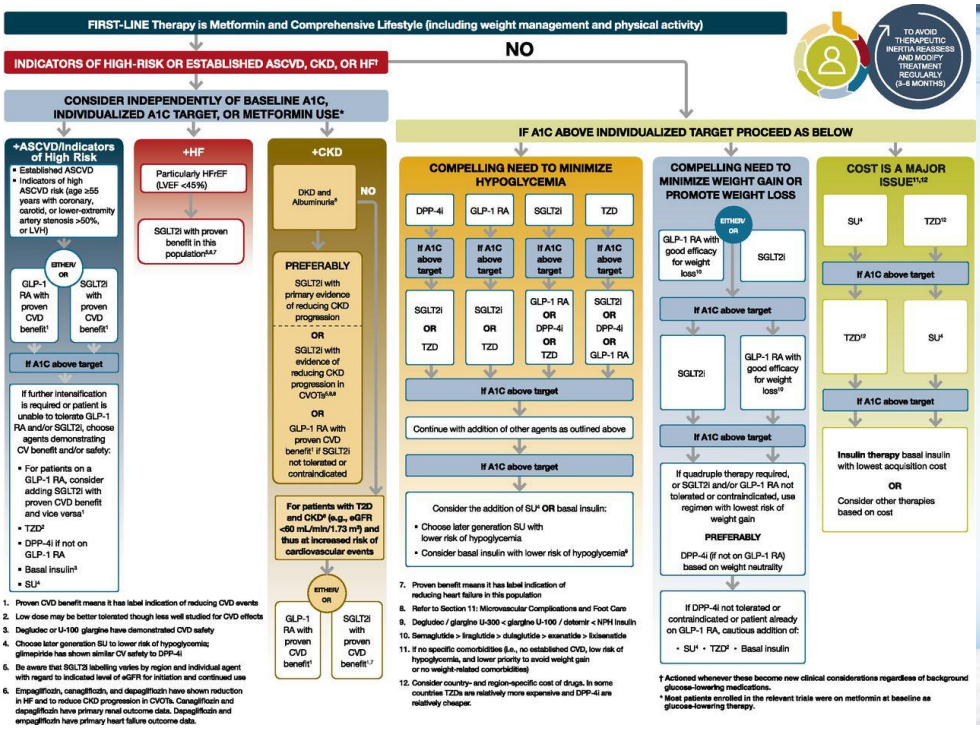


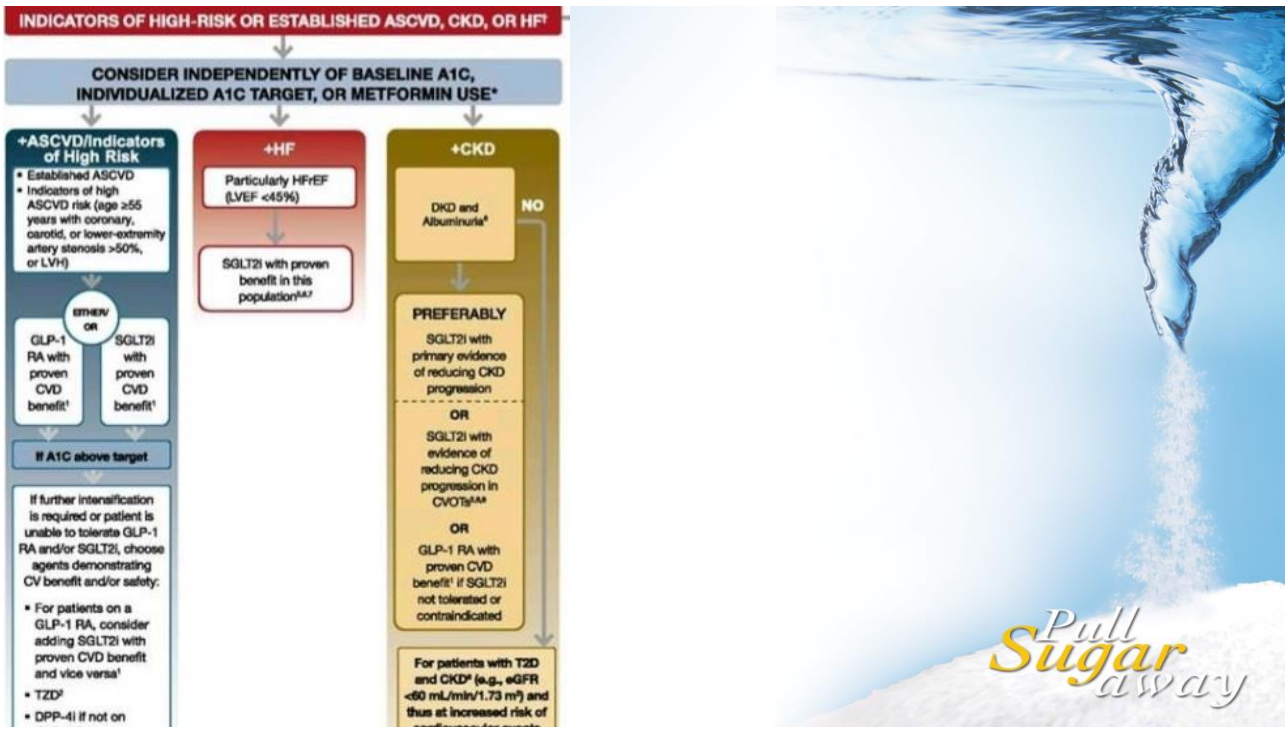
International Guidelines, SGLT2i ERA



ADA, American Diabetes Association; ACC, American college of cardiology; AHA, American heart association; CVD, cardiovascular disease; CVOT, cardiovascular outcomes trial; EASD, European Association for the Study of Diabetes; EPCCS, European Primary Care Cardiovascular Society; ESC, European Society of Cardiology; HFA, heart failure association; JACC, Journal of the American College of Cardiology




FIRST-LINE Therapy is Metformin and Comprehensive Lifestyle (including weight management and physical activity)
INDICATORS OF HIGH-RISK OR ESTABLISHED ASCVD, CKD, OR HF†
NO
TO AVOID THERAPEUTIC INERTIA REASSESS AND MODIFY TREATMENT REGULARLY (3–6 MONTHS)
CONSIDER INDEPENDENTLY OF BASELINE A1C, INDIVIDUALIZED A1C TARGET, OR METFORMIN USE*
+ASCVD/Indicators of High Risk
• Established ASCVD
• Indicators of high ASCVD risk (age ≥55 years with coronary, carotid, or lower-extremity artery stenosis >50%, or LVH)
EITHER/ OR
GLP-1 RA with proven CVD benefit[1]
SGLT2i with proven CVD benefit[1]
If A1C above target
If further intensification is required or patient is unable to tolerate GLP-1 RA and/or SGLT2i, choose agents demonstrating CV benefit and/or safety:
• For patients on a GLP-1 RA, consider adding SGLT2i with proven CVD benefit and vice versa[1]
• TZD[2]
• DPP-4i if not on GLP-1 RA
• Basal insulin[3]
• SU[4]
+HF
Particularly HFrEF (LVEF <45%)
SGLT2i with proven benefit in this population[5,6,7]
+CKD
DKD and Albuminuria[8]
NO
PREFERABLY
SGLT2i with primary evidence of reducing CKD progression
OR
SGLT2i with evidence of reducing CKD progression in CVOTs[5,6,9]
OR
GLP-1 RA with proven CVD benefit[1] if SGLT2i not tolerated or contraindicated
For patients with T2D and CKD[8] (e.g., eGFR <60 mL/min/1.73 m²) and thus at increased risk of cardiovascular events
EITHER/ OR
GLP-1 RA with proven CVD benefit[1]
SGLT2i with proven CVD benefit[1,7]
IF A1C ABOVE INDIVIDUALIZED TARGET PROCEED AS BELOW
COMPELLING NEED TO MINIMIZE HYPOGLYCEMIA
DPP-4i
GLP-1 RA
SGLT2i
TZD
If A1C above target
SGLT2i OR TZD
SGLT2i OR TZD
GLP-1 RA OR DPP-4i OR TZD
SGLT2i OR DPP-4i OR GLP-1 RA
If A1C above target
Continue with addition of other agents as outlined above
If A1C above target
Consider the addition of SU[4] OR basal insulin:
• Choose later generation SU with lower risk of hypoglycemia
• Consider basal insulin with lower risk of hypoglycemia[3]
COMPELLING NEED TO MINIMIZE WEIGHT GAIN OR PROMOTE WEIGHT LOSS
EITHER/ OR
GLP-1 RA with good efficacy for weight loss[10]
SGLT2i
If A1C above target
SGLT2i
GLP-1 RA with good efficacy for weight loss[10]
If A1C above target
If quadruple therapy required, or SGLT2i and/or GLP-1 RA not tolerated or contraindicated, use regimen with lowest risk of weight gain
PREFERABLY
DPP-4i (if not on GLP-1 RA) based on weight neutrality
If DPP-4i not tolerated or contraindicated or patient already on GLP-1 RA, cautious addition of:
• SU[4] • TZD[2] • Basal insulin
COST IS A MAJOR ISSUE[11,12]
SU[4]
TZD[12]
If A1C above target
TZD[12]
SU[4]
If A1C above target
Insulin therapy basal insulin with lowest acquisition cost
OR
Consider other therapies based on cost
1. Proven CVD benefit means it has label indication of reducing CVD events
2. Low dose may be better tolerated though less well studied for CVD effects
3. Degludec or U-100 glargine have demonstrated CVD safety
4. Choose later generation SU to lower risk of hypoglycemia; glimepiride has shown similar CV safety to DPP-4i
5. Be aware that SGLT2i labelling varies by region and individual agent with regard to indicated level of eGFR for initiation and continued use
6. Empagliflozin, canagliflozin, and dapagliflozin have shown reduction in HF and to reduce CKD progression in CVOTs. Canagliflozin and dapagliflozin have primary renal outcome data. Dapagliflozin and empagliflozin have primary heart failure outcome data.
7. Proven benefit means it has label indication of reducing heart failure in this population
8. Refer to Section 11: Microvascular Complications and Foot Care
9. Degludec / glargine U-300 < glargine U-100 / detemir < NPH insulin
10. Semaglutide > liraglutide > dulaglutide > exenatide > lixisenatide
11. If no specific comorbidities (i.e., no established CVD, low risk of hypoglycemia, and lower priority to avoid weight gain or no weight-related comorbidities)
12. Consider country- and region-specific cost of drugs. In some countries TZDs are relatively more expensive and DPP-4i are relatively cheaper.
† Actioned whenever these become new clinical considerations regardless of background glucose-lowering medications.
* Most patients enrolled in the relevant trials were on metformin at baseline as glucose-lowering therapy.
Pull Sugar away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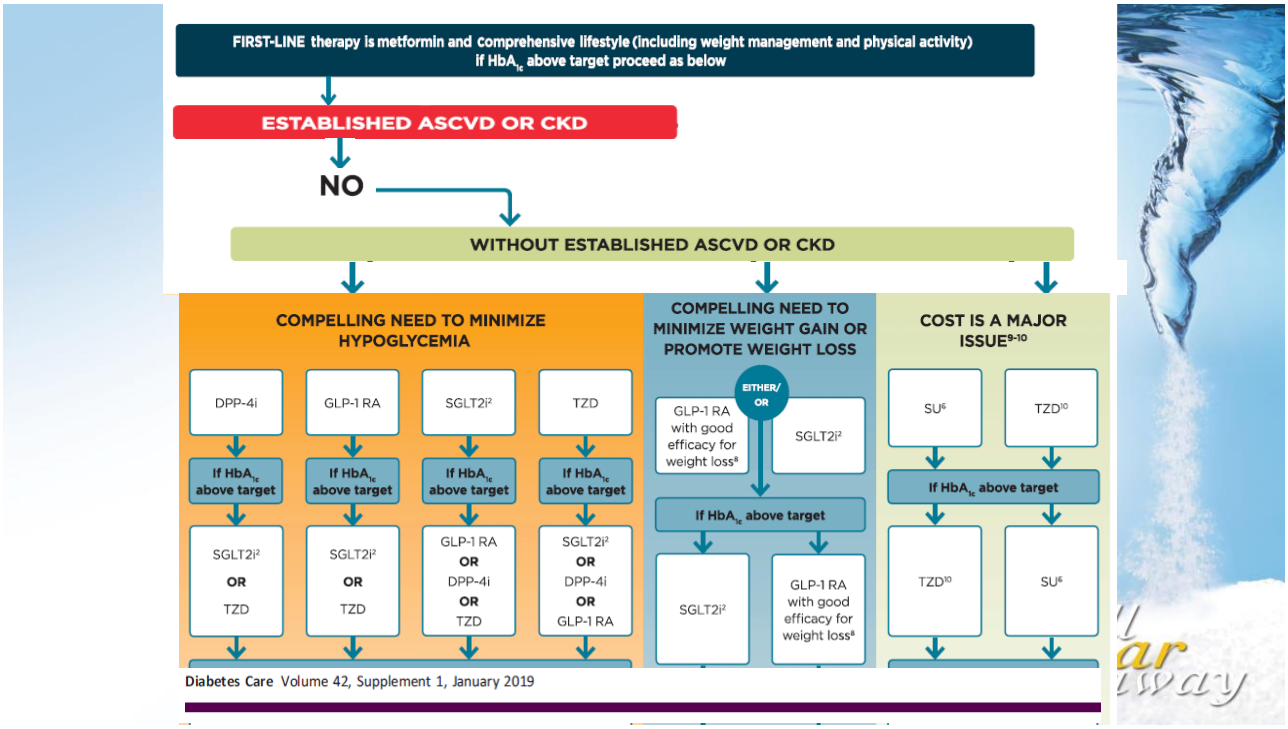
Pull Sugar away



EMPA in Nephro Guidelines

KDIGO Clinical Practice Guideline On Diabetes Management In CKD 2021

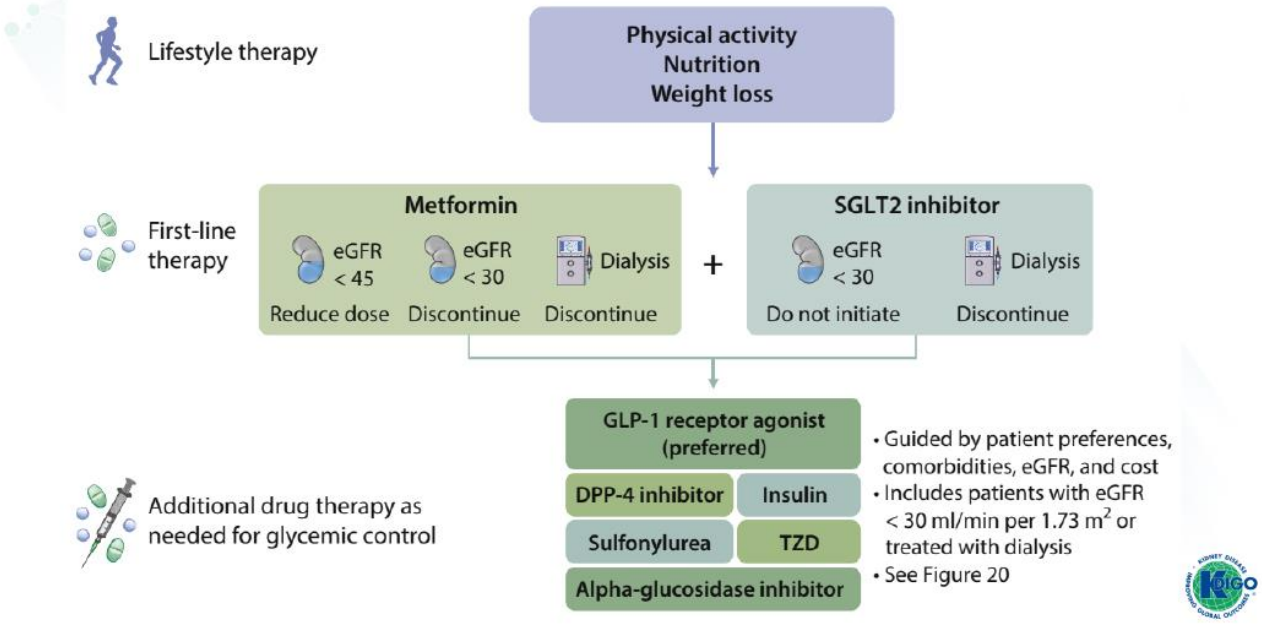
Comprehensive Diabetes and CKD management

- Patients with diabetes and CKD should be treated with a comprehensive strategy to reduce risks of kidney disease progression and cardiovascular disease.

Diabetes with CKD: cardio-kidney treatment

- Glycemic control including SGLT2 inhibitors
- RAAS blockade
- Blood pressure control
- Lipid management
- Lifestyle/physical activity
- Smoking cessation
- Nutrition
- Aspirin for prevalent cardiovascular disease

Treatment Algorithm for Selecting Antihyperglycemic Drugs for Patients with T2D and CKD



Anti-hyperglycemic Therapies in Patients with Diabetes and CKD

- Glycemic management for patients with Type 2 diabetes and CKD should include lifestyle therapy, base drug therapy with metformin and a sodium-glucose cotransporter-2 (SGLT-2) inhibitor

- Most patients with Type 2 diabetes, CKD, and eGFR ≥30 ml/min/1.73 m2 would benefit from treatment with both metformin and an SGLT2i.

EMPA.. Varied Choices for your Patients

Pull Sugar away

EMPA.. Varied Choices for your Patients

EMPA PLUS XR

Empagliflozin 5, 10, 12.5, 25 mg
Metformin XR **1000** mg

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EMPA.. Varied Choices for your Patients

EMPALINA

Empagliflozin / Linagliptin 10/5 25/5

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