### SGLT-2 Inhibitors and **Chronic Kidney** Disease

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### **SGLT Inhibitors 2023**

Empagliflozin 10mg, 25 mg

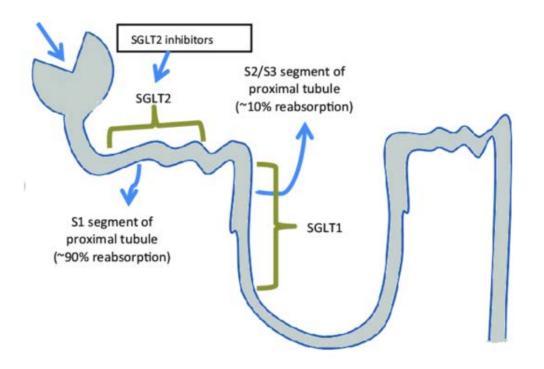
Dapagliflozin 5mg, 10 mg

• Canagliflozin 100mg, 300 mg





#### **SGLT-2 Inhibitors Mechanism of Action**







# Clinical Effects of SGLT-2 Inhibitors in Type 2 Diabetes Mellitus with CKD

- Reduce plasma glucose 25-40 mg/dL
- Reduce HGBA1c by 07-1.0%
- Weight loss 2-4 kg
- Reduce Systolic BP 3-6 mmHG
- Reduce proteinuria
- Stabilize GFR
- Reduce risk of ESKD
- Reduce hospitalizations for CHF
- Reduce CV deaths.





## Type 2 DM Candidates for SGLT-2 Inhibitors

- Type 2 DM and hyperglycemia
- Type 2 DM and albuminuria
- Type 2 DM and CKD (GFR 20-70)
- Type 2 DM and CHF
- Type 2 DM and ASHD





### SGLT-2 Inhibitors – Warnings and Precautions

- Hypotension
- Decline in GFR
- Hypoglycemia
- DKA (Euglycemic)
- Weight loss with sarcopenia
- UTI's
- Genital mycotic infections





#### Contraindications to SGLT-2 inhibitors

- Type 1 Diabetes Mellitus
- Type 2 DM and DKA
- Type 2 DM and foot ulcer
- Type 2 DM and amputation
- Type 2 DM and peripheral arterial disease
- Type 2DM and UTI's
- Type 2 DM with CKD (GFR< 20)</li>
- Hemodialysis
- Pregnancy or Nursing





### **SGLT-2 Inhibitors Summary**

- The balance of benefits and risks should be carefully considered when prescribing SGLT- inhibitors.
- Empagliflozin 10mg, Dapaglifozin 10mg and Canagliflozin 100mg recommended for CKD.
- Initiate SGLT- 2 inhibitors if GFR > 20.
- Discontinue SGLT-2 inhibitors when ESKD occurs.
- Hold SGLT- 2 inhibitors for illness, certain medical procedures and surgeries.
- Follow GFR closely.





#### SGLT-2 and CKD References

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