



كلية الصيدلة  
College of Pharmacy  
QATAR UNIVERSITY جامعة قطر  
Member of **HEALTH** الصحة عضوفي



## THESIS PRESENTATION: Master of Science in Pharmacy

Ms. Shahad Alhefel

### Thesis Title: Impact of SGLT2 Inhibitors on CKD Progression in Diabetic Patients in Qatar: A Retrospective Cohort Study

Supervisor:

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10:00 am - 12:00 pm

Ibn Al-Bitar Building (I06), G.CI.9

**Summary:** The risk of end-stage renal disease rises is based on the estimated glomerular filtration rate (eGFR) reduction. Even though multiple large-scale clinical trials have demonstrated the preventive benefits of sodium-glucose cotransporter 2 inhibitors (SGLT2i) on the reduction of eGFR, it is found overlapping and conflicting results of the use of SGLT2 inhibitors for chronic kidney disease (CKD) at stage G3b or less. Therefore, this study aimed to assess the impact of the SGLT2i on CKD Progression in Diabetic Patients with eGFR less than 45 mL/minute/1.73m<sup>2</sup>. We conducted a retrospective cohort study including patients with type 2 diabetes receiving SGLT2i treatment followed up from November 2015 to January 2022. Available serum creatinine levels were collected before the first SGLT2i dispense day and at least one result after 3 months of use. We categorize our sample according to the baseline eGFR into 3 groups. Inferential statistics at the alpha of 0.05 were applied to test the study hypothesis. We analyzed a total of 1402 participants with type 2 diabetes mellitus. In short-term use, SGLT2i increases the eGFR drop for patients with eGFR of 15-45 mL/min/1.73 m<sup>2</sup> compared to other included groups. However, Advanced CKD patients (eGFR 15-45 mL/min/1.73 m<sup>2</sup>) with SGLT2 on long-term use did not observe a significant difference between groups. This real-world study demonstrates the benefits of SGLT2is on CKD progression. SGLT2 inhibitors may be recognized as a component of the therapeutic plan for stage 4 CKD patients.

