

**Abstract Submission No.: A-0254**

## **Cardioprotective effect of SGLT2 inhibitor in diabetic kidney transplant recipients**

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**Objectives :** Kidney transplantation improves the cardiovascular outcomes of patients with end-stage kidney disease. However, cardiovascular disease remains the leading cause of premature death and graft loss in kidney transplant recipients (KTRs) with diabetes. We evaluated the cardioprotective effects of sodium-glucose cotransporter 2 inhibitors (SGLT2i) in KTRs with diabetes.

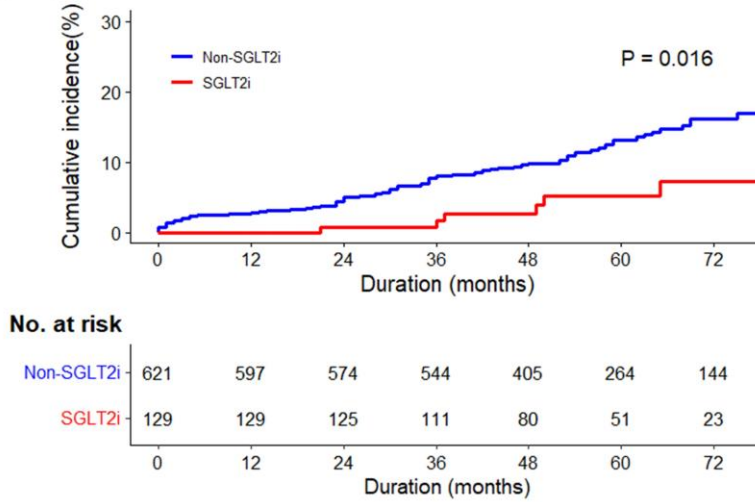
**Methods :** A total of 750 KTRs with diabetes were enrolled from six tertiary hospitals. Among them, 129 (17.2%) patients were prescribed SGLT2i. The primary outcome was the incidence of major adverse cardiovascular events (MACE), which comprised of myocardial infarction (MI), death from cardiovascular causes, hospitalization for heart failure, and stroke. Multivariable Cox regression analysis and propensity score matching were used to investigate the effect of SGLT2i on clinical outcomes.

**Results :** During a mean of 55.7 months, MACE occurred in 6 out of 129 (4.7%) and 78 out of 621 (12.6%) patients in the SGLT2i and non-SGLT2i groups, respectively. The incidence of MACE, MI, and death from cardiovascular causes was lower in the SGLT2i group than in the non-SGLT2i group ( $P < 0.05$ ). Multivariable analysis revealed that the SGLT2i group had a lower risk of MACE and MI than the non-SGLT2i group (adjusted hazard ratio, 0.40 and 0.18; 95% confidence interval, 0.17–0.92 and 0.04–0.73;  $P = 0.031$  and 0.016, respectively). The propensity score-matched analysis confirmed the decreased risks of MACE and MI in the SGLT2i group.

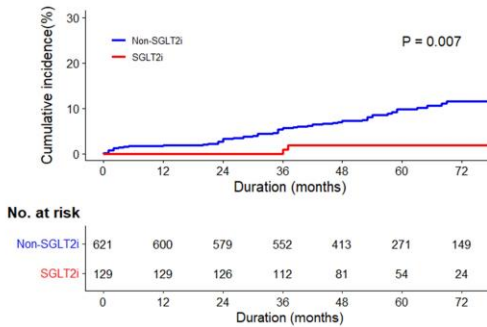
**Conclusions :** SGLT2i significantly decreased the risk of cardiovascular events in KTRs with diabetes, particularly lowering the incidence of MI and death from cardiovascular causes. Therefore, SGLT2i can be used to reduce the burden of cardiovascular disease in KTRs with diabetes.

Figure 1.jpg

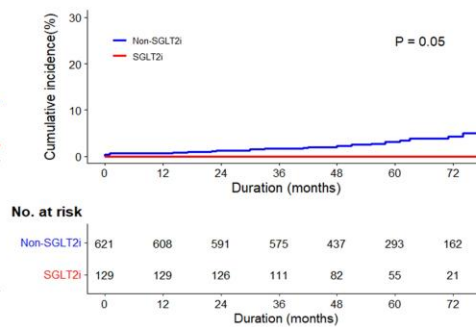
(A) Major Adverse Cardiovascular Events



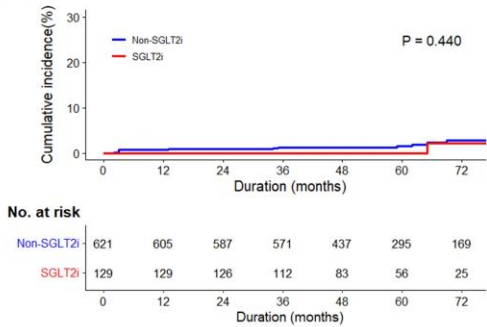
(B) Myocardial Infarction



(C) Death from Cardiovascular Causes



(D) Hospitalization for Heart Failure



(E) Stroke

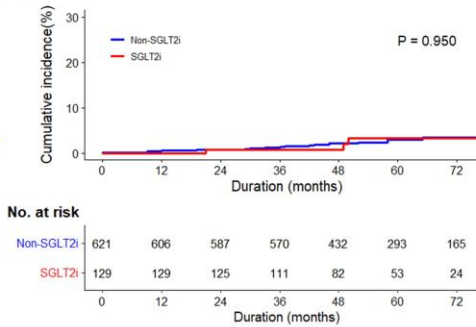
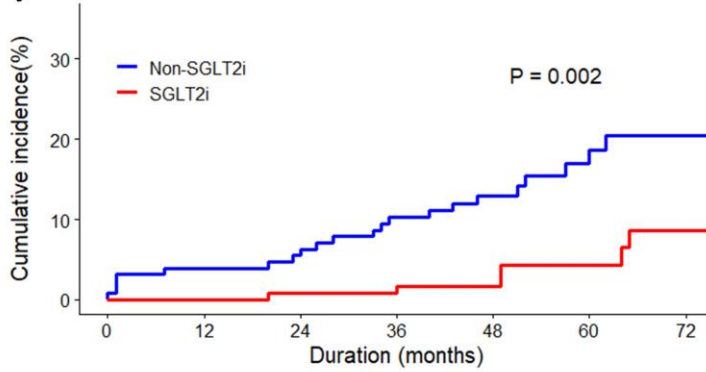


Figure 1.jpg

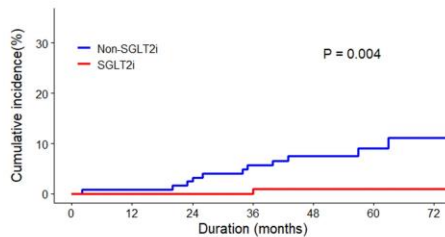
**(A) Major Adverse Cardiovascular Events**



**No. at risk**

Non-SGLT2i	127	122	120	112	81	49	27
SGLT2i	127	127	123	108	78	50	21
	0	12	24	36	48	60	72

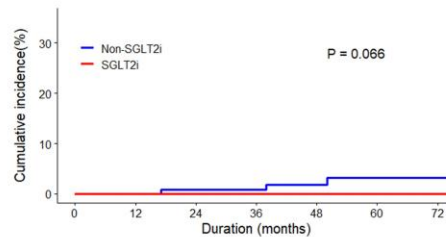
**(B) Myocardial Infarction**



**No. at risk**

Non-SGLT2i	127	122	120	114	83	51	28
SGLT2i	127	127	124	109	79	53	21
	0	12	24	36	48	60	72

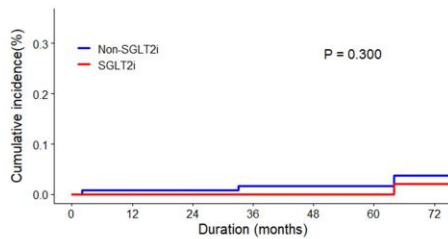
**(C) Death from Cardiovascular Causes**



**No. at risk**

Non-SGLT2i	127	123	116	104	76	61	54
SGLT2i	127	123	118	107	84	58	32
	0	12	24	36	48	60	72

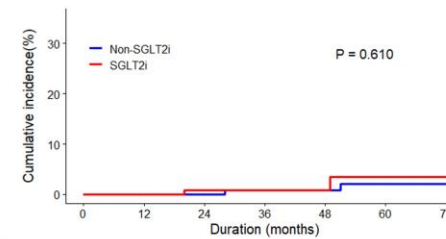
**(D) Hospitalization for Heart Failure**



**No. at risk**

Non-SGLT2i	127	122	121	118	88	55	32
SGLT2i	127	127	124	109	80	54	21
	0	12	24	36	48	60	72

**(E) Stroke**



**No. at risk**

Non-SGLT2i	127	122	121	118	88	55	31
SGLT2i	127	127	123	108	79	51	21
	0	12	24	36	48	60	72