KSN 2019
Seoul, Korea · May 23 - 26

**Abstract Type : Oral**
**Abstract Submission No. : OR-1488**

# Statin may reduce adverse renal outcome in CKD patients: Result from KNOW-CKD study

**Gongmyung LEE[1]**, Young Su Joo[1], Hae-Ryong Yun[1], Jung Tak Park[1], Seung Hyeok Han[1], Kook-Hwan Oh[2], Shin-Wook Kang[1], Kyu Hun Choi[1], Curie Ahn[2], Tae-Hyun Yoo[1]
[1]Department of Internal Medicine-Nephrology, Severance Hospital, Korea, Republic of
[2]Department of Internal Medicine-Nephrology, Seoul National University College of Medicine, Korea, Republic of

**Objectives:** Statin therapy has beneficial effects on cardiovascular (CV) events and deaths in general population. However, it is unclear whether statin therapy protects against renal progression in chronic kidney disease (CKD) patients. We aimed to investigate whether 1) statin treatment can delay the renal progression and if effective, 2) which subgroup has a beneficial effect in non-dialysis CKD patients.

**Methods:** We analyzed the data from the Korean Cohort Study for Outcomes in Patients with Chronic Kidney Disease (KNOW-CKD), which is a national wide multi-center prospective observational cohort study. Primary endpoint was defined as a composite of 50% decline of eGFR compared to baseline level or initiation of renal replacement therapy. Multivariable Cox hazard models for renal outcomes implemented in study subjects.

**Results:** Among the 2,017 participants, who were available medication data, 1,050 (52.1%) participants were on statin therapy at enrollment. Mean age was 53.6 ± 12.3years and 630 participants were male. During a mean follow-up of 3.2 years, the composite renal outcomes occurred in 544 (26.9%) patients. Among them, 295(14.6%) were statin user and 249(12.3%) were non-statin user, respectively. In univariate analysis, non-statin user had a lower risk for composite renal outcome compared to that in statin user (Hazard ratio [HR], 0.82; 95% Confidence Interval, 0.69-0.97; P=0.02). In contrast to crude model, non-statin user was significantly associated with an increased risk of adverse renal outcome after adjustments were made for confounding factors (HR, 1.26; 95% CI, 1.03-1.54; P=0.02). There were significant interactions between statin use and age, eGFR, CCI, and BMI. Subgroup analysis revealed that statin non-user was associated with increased risk of CKD progression in patients with severe comorbid conditions, which was CCI ≥3.

**Conclusions:** This study suggests that statin therapy may have a beneficial role for adverse renal outcome particularly in CKD patients with multiple comorbidities.