

**Abstract Type : Oral Presentation**  
**Abstract Submission No. : F-008390**

## **Outcomes of kidney transplantation from donors with acute kidney injury: A nationwide registry study in Korea**

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**Introduction:** Because organ shortage is an important issue in kidney transplantation (KT), the use of kidneys with risk factors has increased to meet the demands of the waiting list. Most studies support to transplant kidneys from deceased donors (DD) with acute kidney injury (AKI), but few of those have focused on Asian population. Thus, we investigated to evaluate outcomes after KTs from DDs with AKI compared to matched KTs from DDs without AKI using a nationwide cohort in Korea.

**Methods:** We analyzed the data of 6,415 adult patients who underwent DDKT between 2008 and 2018 using the KONOS (Korean Network for Organ Sharing) data. KTs from AKI DDs (defined by AKIN criteria; AKI group; n=3,243) and non-AKI DDs (non-AKI group; n=3,172) were enrolled using an inverse probability of treatment weighting. The primary outcome was a composite of all-cause mortality or graft failure.

**Results:** The AKI group was associated with worse all-cause death/graft failure as well as lower survival rate compared with the non-AKI group (Inverse Probability Weighted hazard ratio [IPW-HR] 1.348; 95% confidence interval [CI] 1.168-1.556; p<0.001; IPW-HR 1.699; 95% CI 1.346-2.013; p<0.001, respectively). However, comparable risk was noted to the subgroup with kidney donor risk index (KDPI) < 80% (IPW-HR 1.172; 95% CI 0.946-1.452; p = 0.147) and decreasing-creatinine trend (defined the difference between peak creatinine and final creatinine as lower than -0.3mg/dL) (IPW-HR 1.020; 95% CI 0.798-1.302; p = 0.878).

**Conclusion:** Although KTs from AKI donors showed worse all-cause death/graft failure than KTs from non-AKI donors, outcomes of KT from AKI donor with KDPI < 80% or decreasing-creatinine trend showed comparable with KT from non-AKI donors. This suggests that kidneys from AKI donors as a good option for patients with end-stage kidney disease in countries with prolonged waiting times for DDKT.