

**Abstract Type : Oral**

**Abstract Submission No. : OR-1359**

## **Risk of graft failure in the kidney transplant recipients with cured post-transplant cancer**

**Ji Eun Kim**<sup>1</sup>, Sang-il Min<sup>2</sup>, Hajeong Lee<sup>1</sup>, Jongwon Ha<sup>2</sup>, Yon Su Kim<sup>1</sup>, Seung Seok Han<sup>1</sup>

<sup>1</sup>Department of Internal Medicine-Nephrology, Seoul National University Hospital, Korea, Republic of

<sup>2</sup>Department of Surgery, Seoul National University Hospital, Korea, Republic of

**Objectives:** Post-transplant cancer is a critical complication after kidney transplantation. However, it is unknown that successfully cured post-transplant cancer (PTC) affects the long term graft outcomes.

**Methods:** A total of 1,630 kidney transplant recipients (aged  $\geq 18$  years) were retrospectively reviewed from 1995 to 2017 years, after excluding patients with post-transplant hematologic or advanced non-curable cancers and who received allograft nephrectomy because of cancer. The risks of graft failure and all-cause mortality in the patients whose PTCs were successfully cured and did not recur were compared with the patients without history of PTC by calculating hazard ratio (HR) after adjustment of multiple covariates.

**Results:** During the median period of 6.6 years (maximum 23.3 years), 71 patients (4.4%) had PTCs, all of them were cured by surgery with or without adjuvant chemotherapy. In multivariate Cox regression analysis with PTC as a time dependent variable, the PTC group showed an elevated risk of death-censored graft failure (adjusted HR 2.84 [1.34-6.01],  $p=0.006$ ) and all-cause mortality (adjusted HR 7.97 [4.16-15.28],  $p<0.001$ ) compared with the non-cancer group. According to the cancer type, urogenital and gastrointestinal cancers had a more prominent relationship with graft failure than other cancer type.

**Conclusions:** Appropriate monitoring and prevention of PTC are necessary in kidney transplant recipients because it is related with worse graft outcome and high mortality despite curability.