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## **Malignancy in Children with Kidney Transplantation: A single-center experience**

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**Objectives:** We aimed to investigate the incidence, manifestations, and outcomes of malignancy after pediatric kidney transplantation in Asan Medical Center.

**Methods:** We retrospectively reviewed medical records of 143 patients aged under 18 years old who had kidney transplantation between January 1990 and January 2019 at a single center.

**Results:** Patients had kidney transplantation at an average age of 14.3 (interquartile range (IQR) 10.7 – 16.5) years, with mean follow up period of 10.6 (IQR 4.7 – 18.0) years. In total, 11 patients (7.7 % of kidney transplant recipients) had malignancy after kidney transplantation. Malignancy was diagnosed at an average age of 19.5 (IQR 18.6 – 21.3) years, with a mean period of 5.1 (IQR 3.0 – 10.1) years after transplantation. Eight patients (72.7 % of patients diagnosed with malignancy) were diagnosed as post-transplant lymphoproliferative disease(PTLD), and other 3 patients had papillary thyroid cancer, mucoepidermoid cancer of hard palate, and T-cell acute lymphoblastic leukemia(ALL), respectively. PTLD was diagnosed at a mean period of 3.9 (IQR 1.9 - 5.9) years after transplantation, at an average age of 19.3 (IQR 17.1 - 19.5) years. Three patients with PTLD (37.5 % of the patients diagnosed with PTLD) expired; two patients within 3 months and one patient within 1 year from diagnosis. Among 3 patients with malignancy other than PTLD, one patient with mucoepidermoid cancer showed progression despite resection and chemotherapy. Other two patients were cured without recurrence. Four patients (50.0 %, 4/8) among the survivors are currently showing normal glomerular filtration rate which did not deteriorate during the treatment of malignancy.

**Conclusions:** PTLD was the most common malignancy after kidney transplantation in children, occurring at 5.6 % of patients within average of 3.9 years (IQR 1.9 - 5.9) after transplantation in our center.