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Increased Risk of Genitourinary Cancer in Kidney Transplant Recipients: A Large-Scale National Cohort Study and Its Clinical Implications

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Objectives : This study aims to investigate the risk of genitourinary (GU) cancer in kidney transplant recipients (KTRs) compared to the general population, focusing on potential risk factors and clinical implications.

Methods : Utilizing a national cohort of approximately 360,000 individuals, including 31,542 KTRs, we conducted a retrospective analysis from 2007 to 2018. Propensity score matching was employed to compare KTRs with a healthy population, adjusting for age, sex, diabetes, hypertension, and hypercholesterolemia.

Results : Our study identified a significantly increased risk of GU cancer, particularly bladder and kidney cancer, in KTRs. The multivariate analysis revealed a higher risk of GU cancer associated with kidney transplantation (HR 2.133, 95% CI 1.641-2.772) and hypercholesterolemia (HR 1.725, 95% CI 1.227-2.425), with older age and male gender also being significant risk factors.

Conclusions : This national cohort-based study indicates an increased risk of GU cancers in kidney transplant recipients, underscoring the need for targeted cancer surveillance and pre- and post-transplant counseling.