

# Improved prognosis in renal transplant recipients by cancer screening

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**Introduction:** Renal transplant recipients are at increased risk for developing cancers, and cancer after transplantation is one of the most important prognostic factors. However, the effectiveness of cancer screening in improving the prognosis of renal transplant recipients remains unclear. The benefits and harms of cancer screening in this population are still under investigation, and more evidence is needed to guide informed decision-making.

**Methods:** We examined the benefit of cancer screening in 2339 kidney transplant recipients in Osaka University Kidney Transplant Group. Cancer screening at our institute was started in 2000 and included PSA, urine cytology, fecal occult blood, abdominal ultrasonography, chest and abdominal CT, and Pap test, mammography, and gastroscopy. We divided the recipients who developed malignancy into three groups: Group A: recipients whose cancer was detected before 2000, Group B: recipients whose cancer was detected between 2000 and 2009, and Group C: recipients whose cancer was detected after 2010.

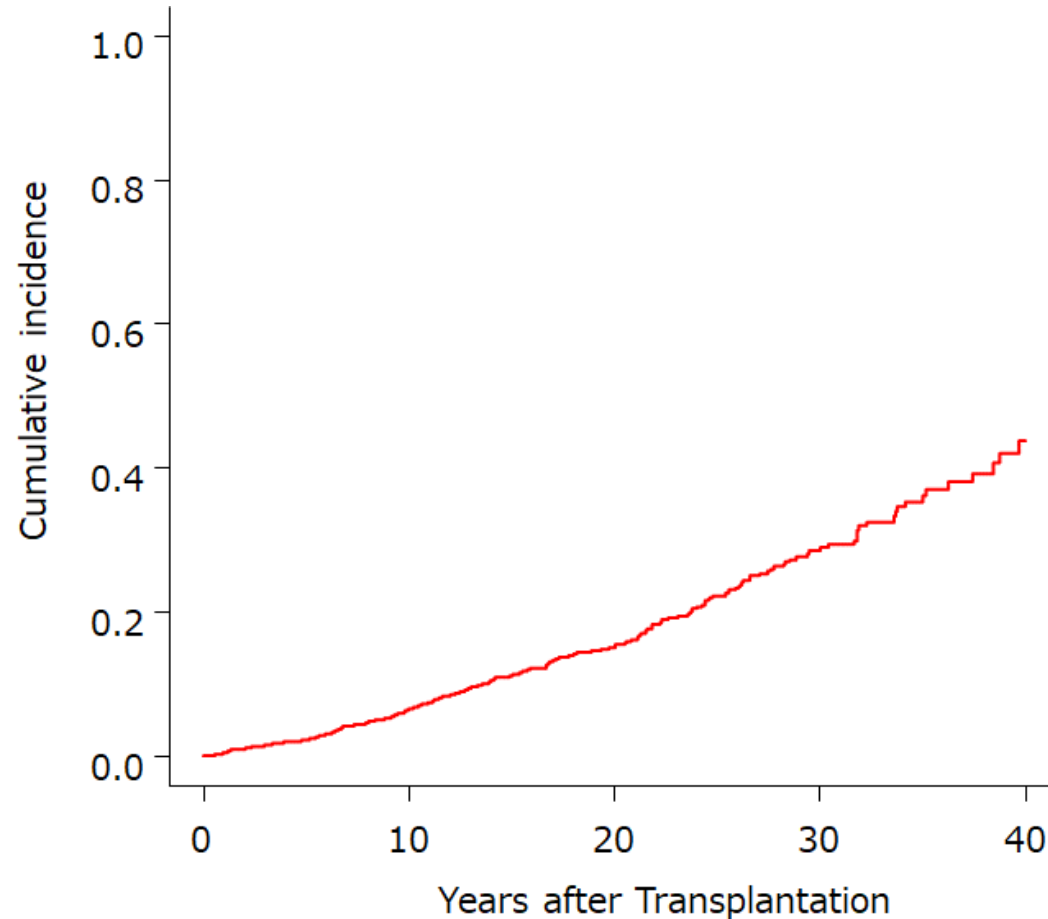
## Conflict of Interest Disclosure

Presenter: Yoichi Kakuta, M.D., Ph.D.

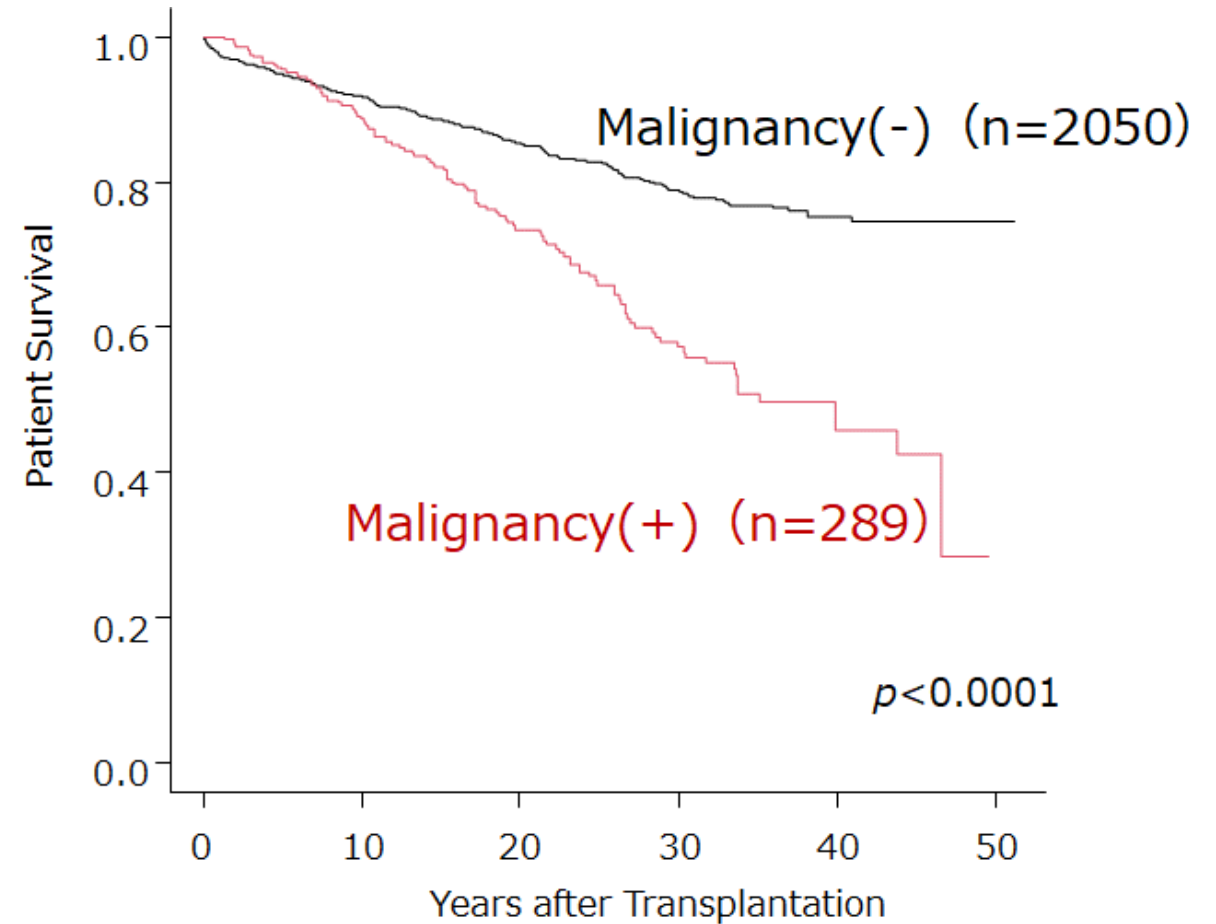
I declare that I have no relevant financial relationships to disclose

# Results: Cancer incidence and patient survival

## Cumulative incidence of malignancy

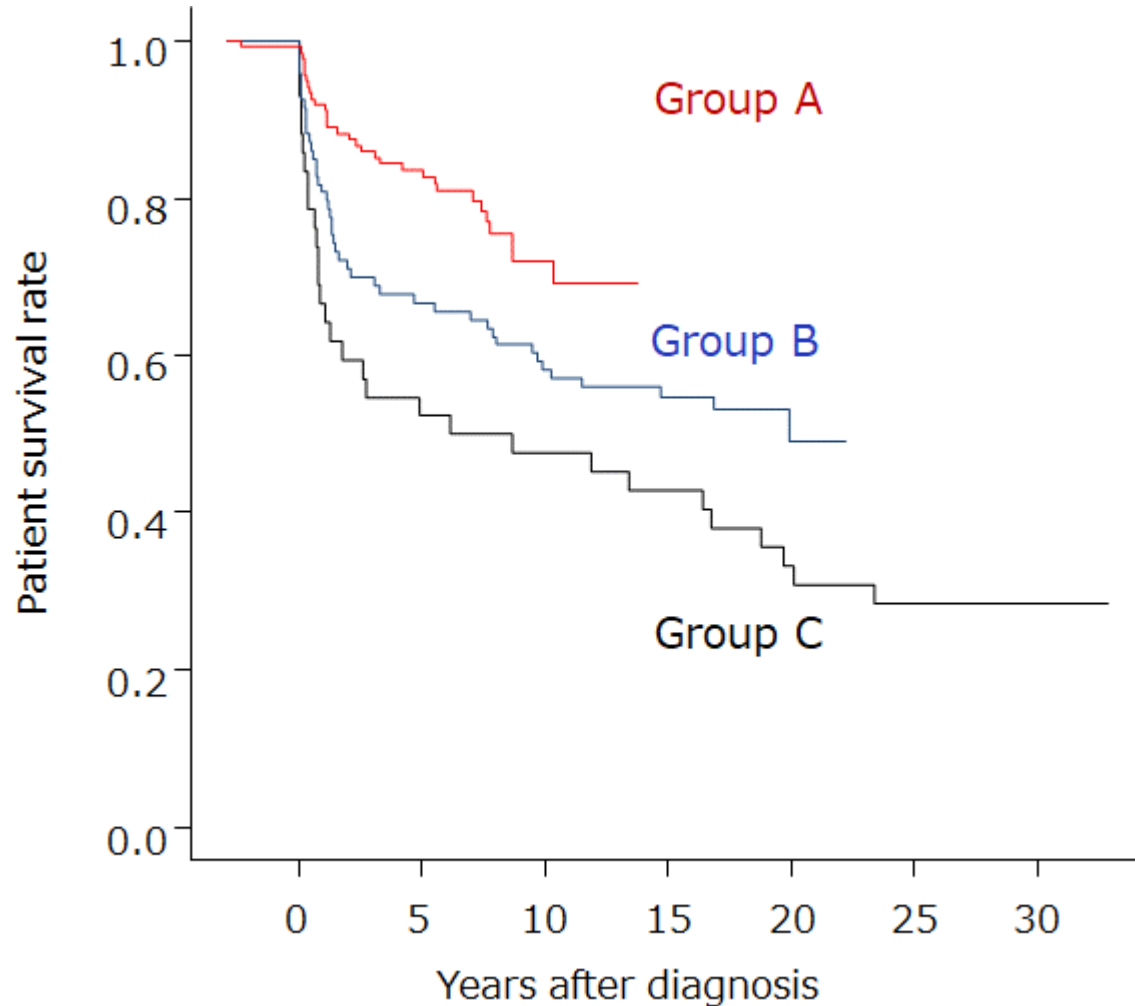


## Patient Survival

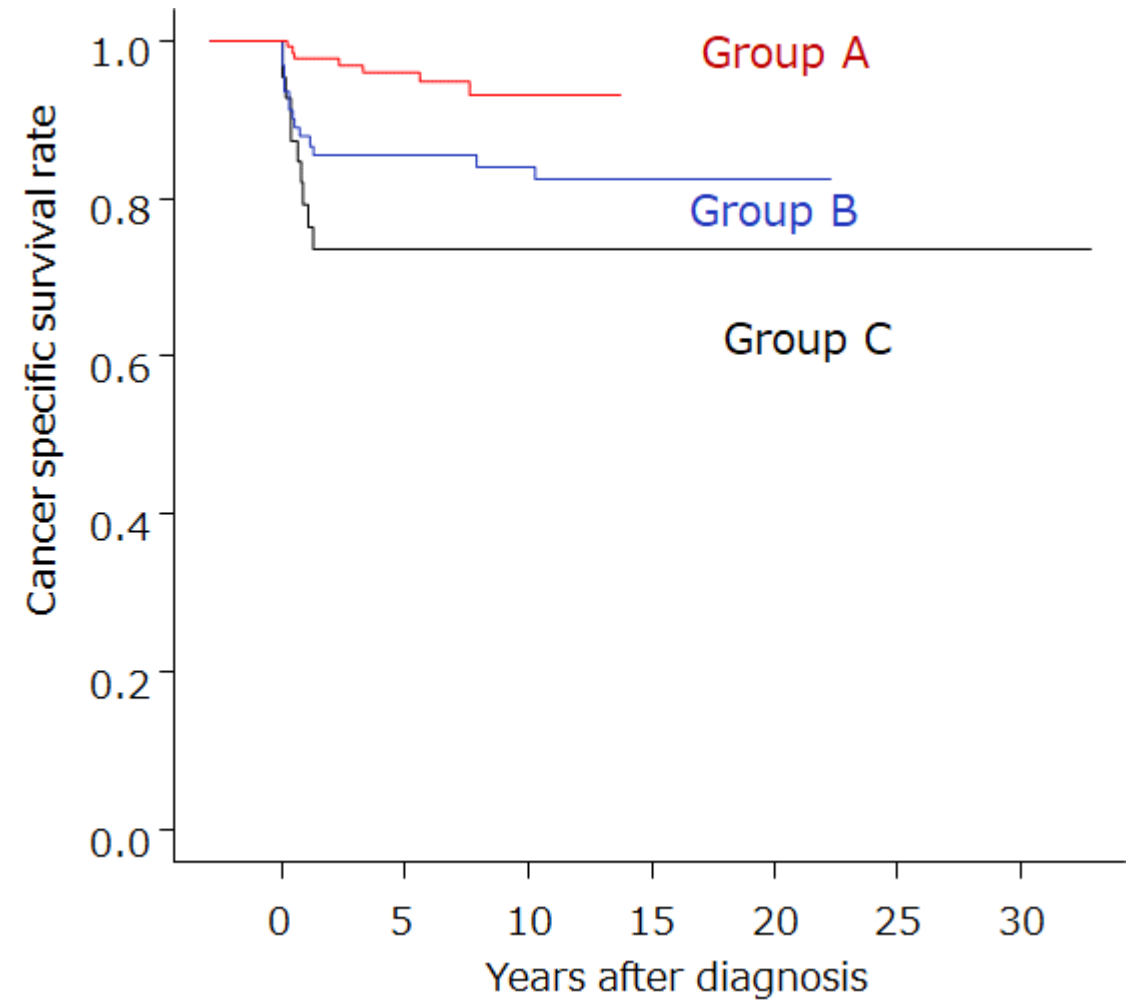


# Results: Survival rate after diagnosis of malignancy

## Overall Survival



## Cancer Specific Survival



# Result: Risk factor of malignancy after kidney transplantation

Factor	Univariate Analysis			Multivariate Analysis		
	Hazard Ratio	95% CI	p-value	Hazard Ratio	95% CI	p-value
Recipient Age	1.623	1.214 - 2.170	0.001	1.632	1.150 - 2.316	0.006
Recipient Gender	0.925	0.733 - 1.167	0.793			
Recipient BMI	0.987	0.919 - 1.060	0.141			
Duration of Dialysis	1.364	1.024 - 1.818	0.034	1.688	1.171 - 2.434	0.005
Hypertension	2.153	1.687 - 2.746	<0.001	1.804	1.300 - 2.503	<0.001
Diabetes	1.857	1.208 - 2.857	0.005	0.912	0.485 - 1.712	0.773
CNI Use (Yes vs. No)	0.973	0.693 - 1.368	0.876			
TACE-R vs. TAC	0.771	0.455 - 1.304	0.332			
Steroid Discontinuation	1.713	0.629 - 4.664	0.292			
With Antimetabolites vs. Without	2.459	1.153 - 5.244	0.020	2.225	1.034 - 4.787	0.04

# Limitations

One of the important limitations of this study is that it does not examine the cost-effectiveness of cancer screening. While the clinical benefits of screening are clear, the economic impact on the healthcare system and the patients themselves remains uncertain. Future research should aim to evaluate the costs of cancer screening in kidney transplant recipients and comprehensively understand its value. This includes not only the direct costs of screening procedures but also the potential savings from early detection and reduced treatment costs. Additionally, considering the psychological burden on patients is important in the context of cancer screening.

# Conclusions

While our study provides evidence that cancer screening improves the prognosis of renal transplant recipients, ongoing research is necessary to fully understand and optimize the benefits of these screening programs. By continuing to refine our approaches to cancer screening, we can better protect this vulnerable population and enhance their quality of life and survival.