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## Introduction

Malignancy is a serious complication post kidney transplant. Kidney transplant recipients have a 3- to 5-fold increased risk in the incidence of malignancy compared to the general population. Observational data in most Western countries have shown the standard mortality ratios for all cancer types are at least 1.8–1.9 times higher compared with the age- and sex-matched general population.

## Objectives

The objectives are to determine the types of malignancies seen post kidney transplant and the outcomes of the graft and the malignancies.

## Methodology

This is retrospective study on kidney transplant patients whom are currently alive as of date 15<sup>th</sup> April 2022 and under HKL follow up. Data were collected from the patients' records. These include age, gender, race, primary disease, types of transplants, types of malignancies, date of diagnosis of malignancy, types of immunosuppression used before and after diagnosis of malignancy and outcome of the graft and malignancy. The data analysed using SPSS version 26.0

## Results

There were total of 24 (6.1%) out of 394 kidney transplant patients had been diagnosed to have malignancy through out this study. The demographic data as shown in Table 1. Among 24 patients underwent kidney transplant, 50.0% (n=12) had preemptive commercial transplant (Fig 1).

Characteristic	n = 24
Age, mean (SD) years	56 (14.46)
Gender	
Male	7 (29.2%)
Female	17 (70.8%)
Race	
Malay	6 (25.0%)
Chinese	15 (62.5%)
Indian	2 (8.3%)
Others	1 (4.2%)
Primary disease	
Hypertension	6 (25.0%)
Unknown	6 (25.0%)
IgA nephropathy	4 (16.7%)
Diabetes mellitus type II	2 (8.3%)
Lupus nephritis	2 (8.3%)
Reflux nephropathy	2 (8.3%)
Congenital disease	1 (4.2%)
Types of dialysis before transplant	
Preemptive	12 (50.0%)
Hemodialysis	8 (33.0%)
Peritoneal dialysis	3 (12.5%)
HD subsequently PD	1 (4.2%)
Dialysis Vintage, mean (SD)	3 (0.8)
Onset of malignancy post renal transplant, mean(SD) years	15 (8.71)

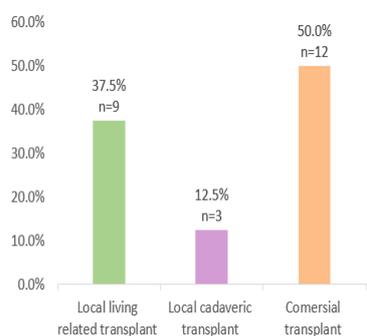


Figure 1 Types of kidney transplant

## Results

There were five (20.8%) patients had skin cancer, five (20.8%) patients had post transplant lymphoproliferative disease followed by four (16.7%) breast cancer, four (16.7%) cervical, two (8.3%) colon, two (8.3%) prostate, one (4.2%) thyroid cancer and one (4.2%) subependymoma of 4<sup>th</sup> ventricle (Fig 2). Their immunosuppression were prednisolone, mycophenolic acid and tacrolimus or cyclosporine at diagnosis of malignancy, fifteen (62.5%) were substitute to everolimus post malignancy. The median follow up post onset malignancy was 4 years ± 2 to 7.7 years. Only one (4.2%) had impaired graft function due to the malignancy. Nine (37.5%) patients had cured from the cancer, thirteen (54.2%) had stable cancer and two (8.3%) patients had recurrence cancer.

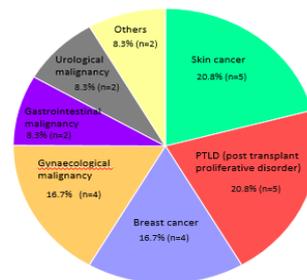


Figure 2:Types of post kidney transplant malignancy

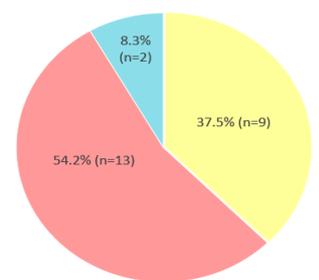


Figure 3: Outcome of the malignancy among post kidney transplant patients

## Conclusion

Malignancy is an important complication in post kidney transplant patients.

## References

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