



THE EFFECT OF HIV INFECTION ON SHORT TERM OUTCOMES AMONG PATIENTS UNDERGOING PERITONEAL DIALYSIS

KCZ Ndlovu^{1,2}, A Assounga^{1,2}

1. Inkosi Albert Luthuli Central Hospital
2. University of KwaZulu-Natal, Department of Nephrology

INTRODUCTION

Management of Renal failure in the setting of HIV infection has been scarcely studied particularly in low resource settings where access to renal replacement therapy is not widely available. This study aims to evaluate the short term outcomes of Continuous Ambulatory Peritoneal Dialysis (CAPD) in the management of renal failure associated with HIV infection

METHODS

This is an ongoing prospective cohort study carried out on dialysis requiring renal failure patients newly inserted a tenckhoff catheter in our unit started on 1 September 2012. Fifty-two HIV positive patients and 69 HIV negative controls were enrolled into groups 1 and 2, respectively, by 30 June 2014. Monthly follow-up data over 6 months was used to assess primary outcomes of mortality and catheter failure as well as secondary outcomes of hospital admissions and catheter associated complication rates.

RESULTS

Table 1: Baseline characteristics

	HIV Negative (n=69)	HIV Positive (n=52)	p-value
Age	39.8 ± 11.6	37.8 ± 10.1	0.330#
Gender female	30 43.5%	27 51.9%	0.357*
male	39 56.5%	25 48.1%	
Race African	58 84.1%	52 100.0%	0.004**
Indian	9 13.0%	0 0.0%	
Coloured	2 2.9%	0 0.0%	
Hypertension	61 89.7%	37 75.5%	0.040*
Diabetes	4 5.8%	5 9.8%	0.493**
SLE	4 5.8%	1 1.9%	0.390**
Hepatitis B	7 10.45%	5 10.2%	1.000**

- t-test comparison of means * - Pearson chi2 test ** - Fisher's exact test

Figure 1: Catheter Primary Outcomes

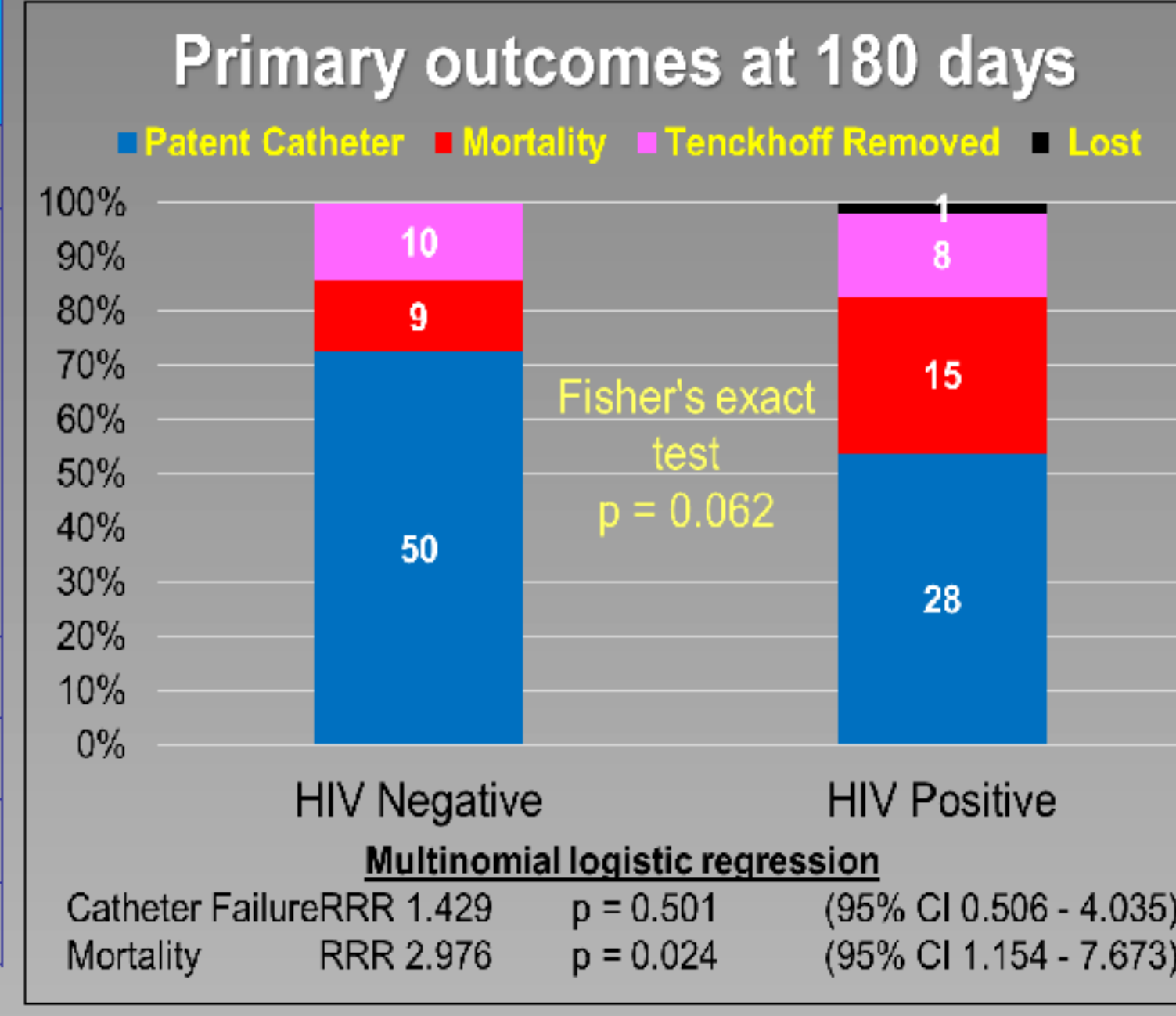


Figure 2: Indications for removal of tenckhoff catheter

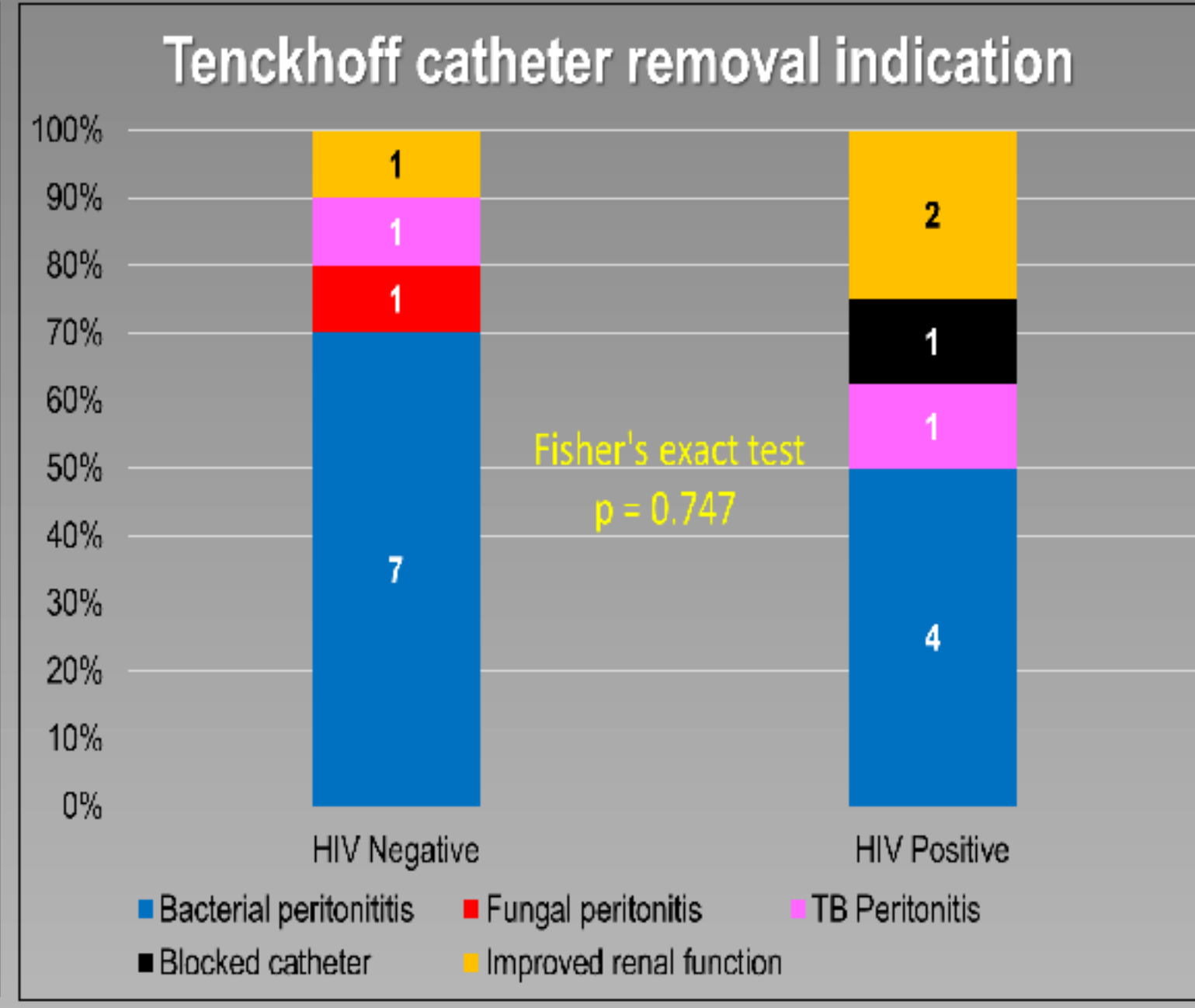


Figure 3: Catheter patency rates

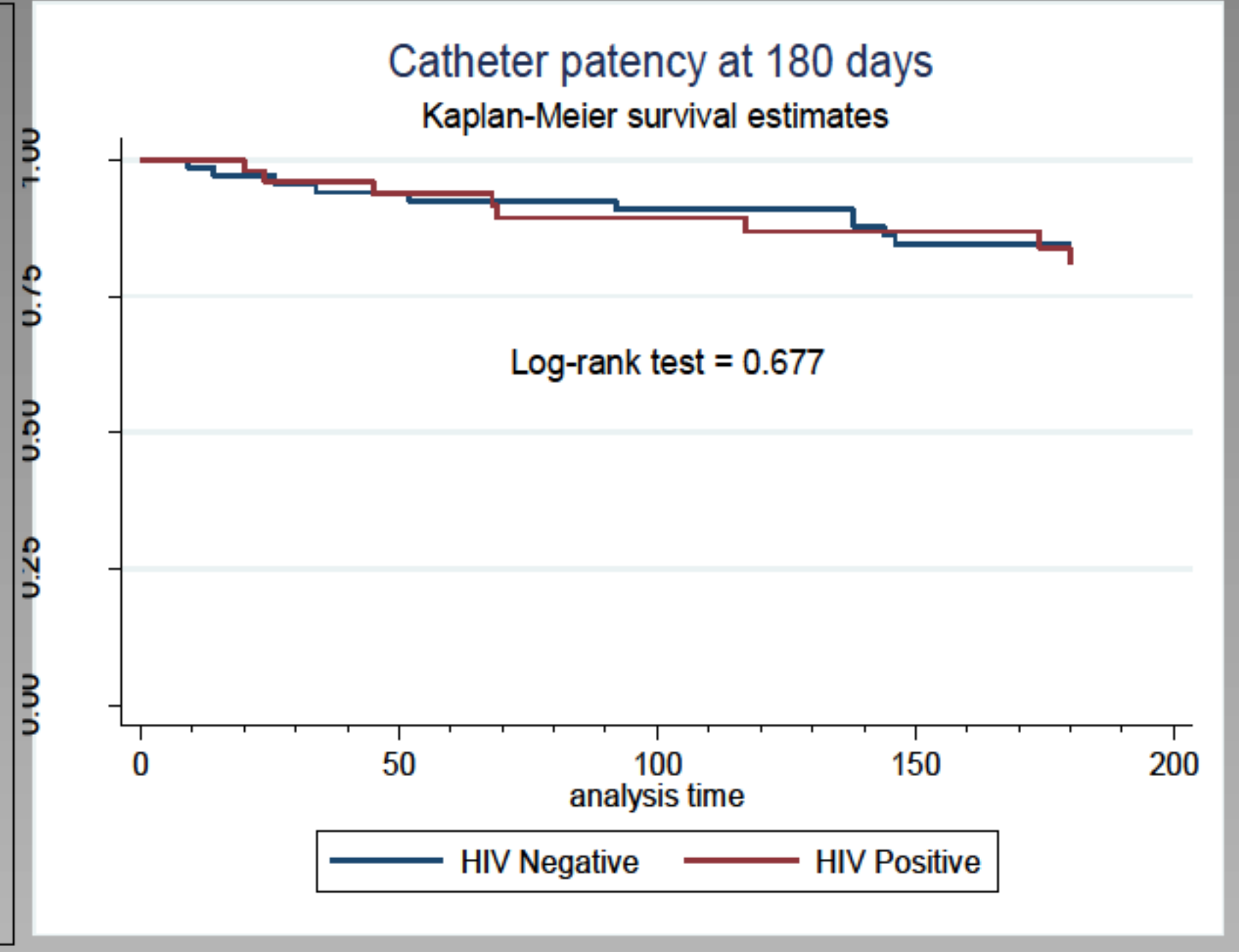


Table 2: Catheter failure, Morbidity and Mortality rates

Rates per person years	HIV Negative (N = 69)	HIV Positive (N = 52)	RR	p-value
Catheter failure rate	0.345	0.423	1.23	0.666
Mortality rate	0.310	0.793	2.56	0.025
All-cause admissions rate	2.09	3.47	1.66	0.031
Accumulative hospital admission days	36.3	47.2	1.13	<0.001
Catheter related admissions	1.16	1.90	1.63	0.089
Catheter related operations	0.585	0.887	1.52	0.285

Figure 4: Mortality free days

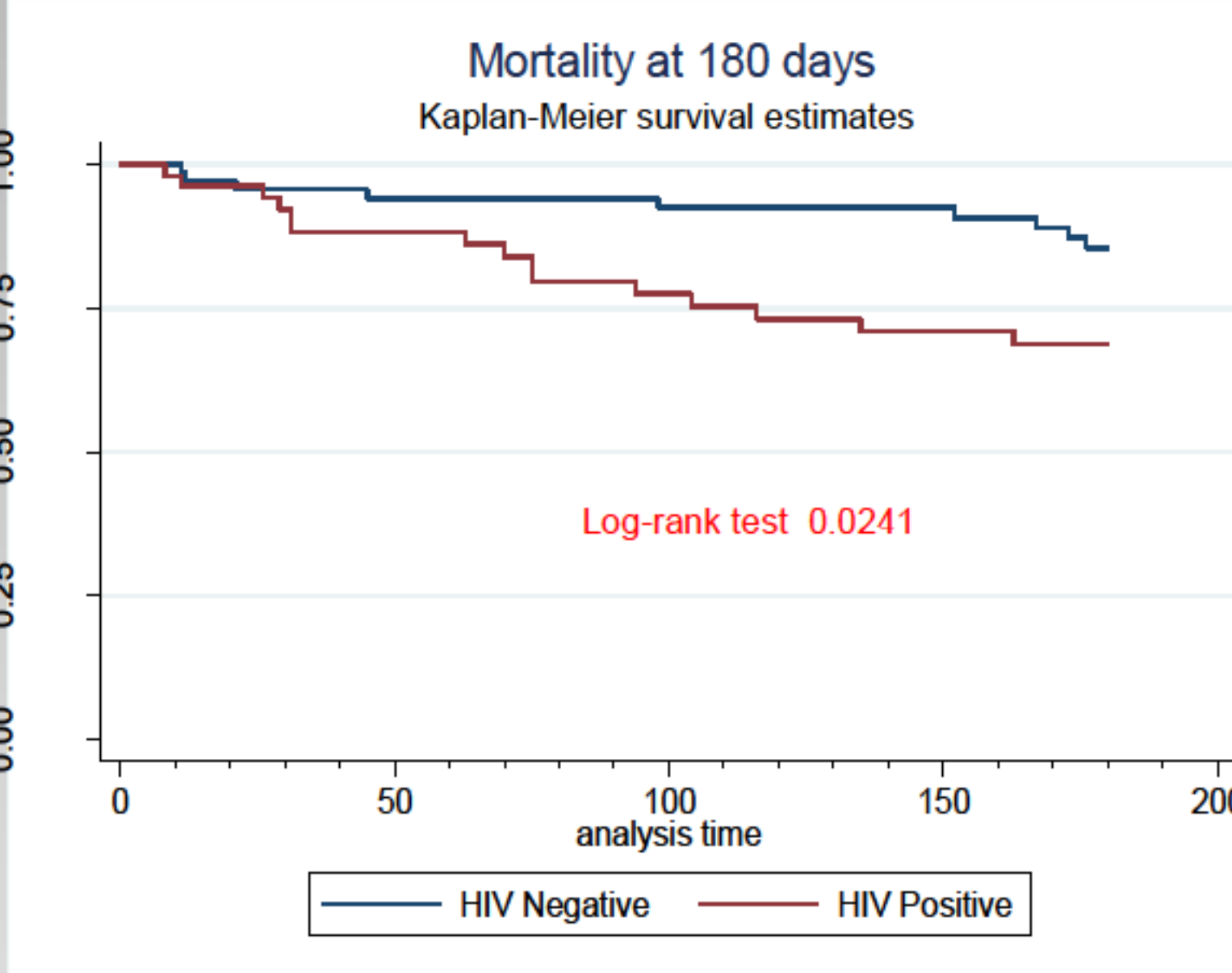


Figure 5: Mortality free days by CD4 count

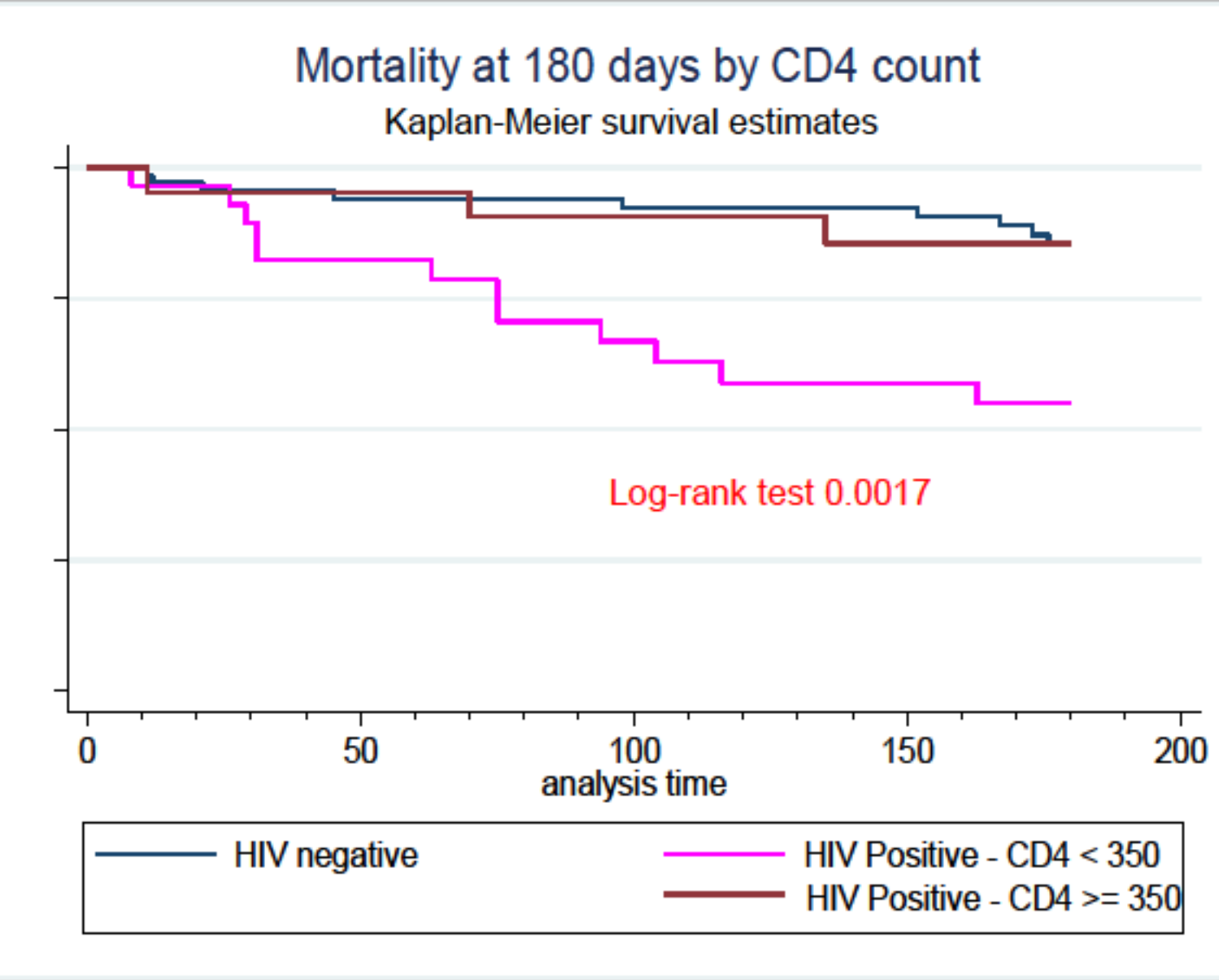


Table 3: Cox regression analysis - Mortality

HIV Positive groups	Hazard Ratio	P-value	95% Conf. Interval
ALL	2.51	0.030	1.10 5.73
CD4 < 200	3.84	0.011	1.36 10.87
CD4 >= 200	2.04	0.130	0.81 5.15
ARV Duration < 6 months	2.68	0.042	1.03 6.97
ARV Duration > 6 months	2.32	0.096	0.86 6.23
Viral Load unsuppressed*	3.47	0.011	1.33 9.03
Viral Load suppressed*	1.89	0.207	0.70 5.07

* Suppressed mean lower than local laboratory Roche PCR assay limit of 150 copies/μl

Figure 6: All-cause hospital admission free days

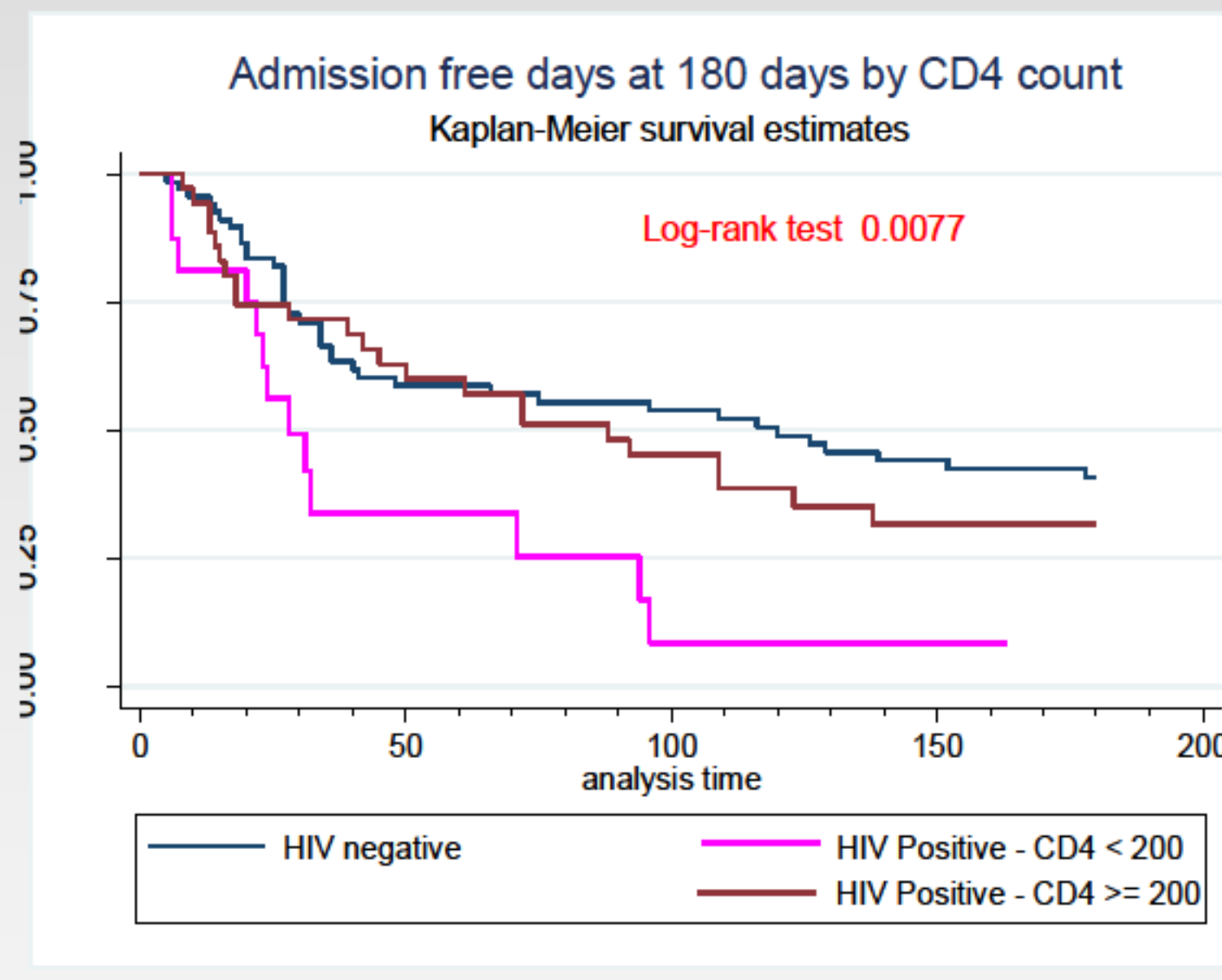


Figure 7: All-cause multiple hospital admissions

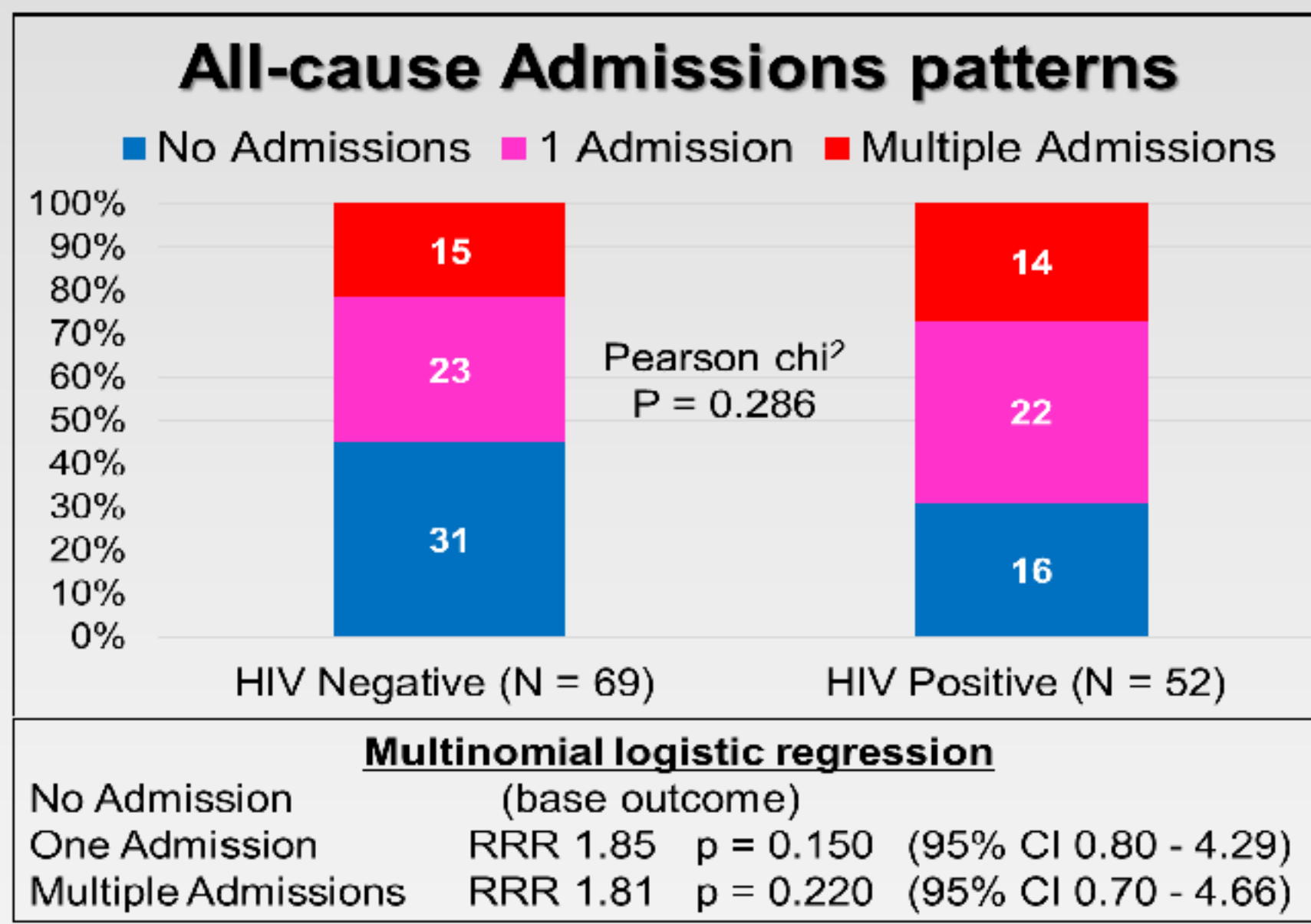


Figure 8: Catheter associated hospital admissions

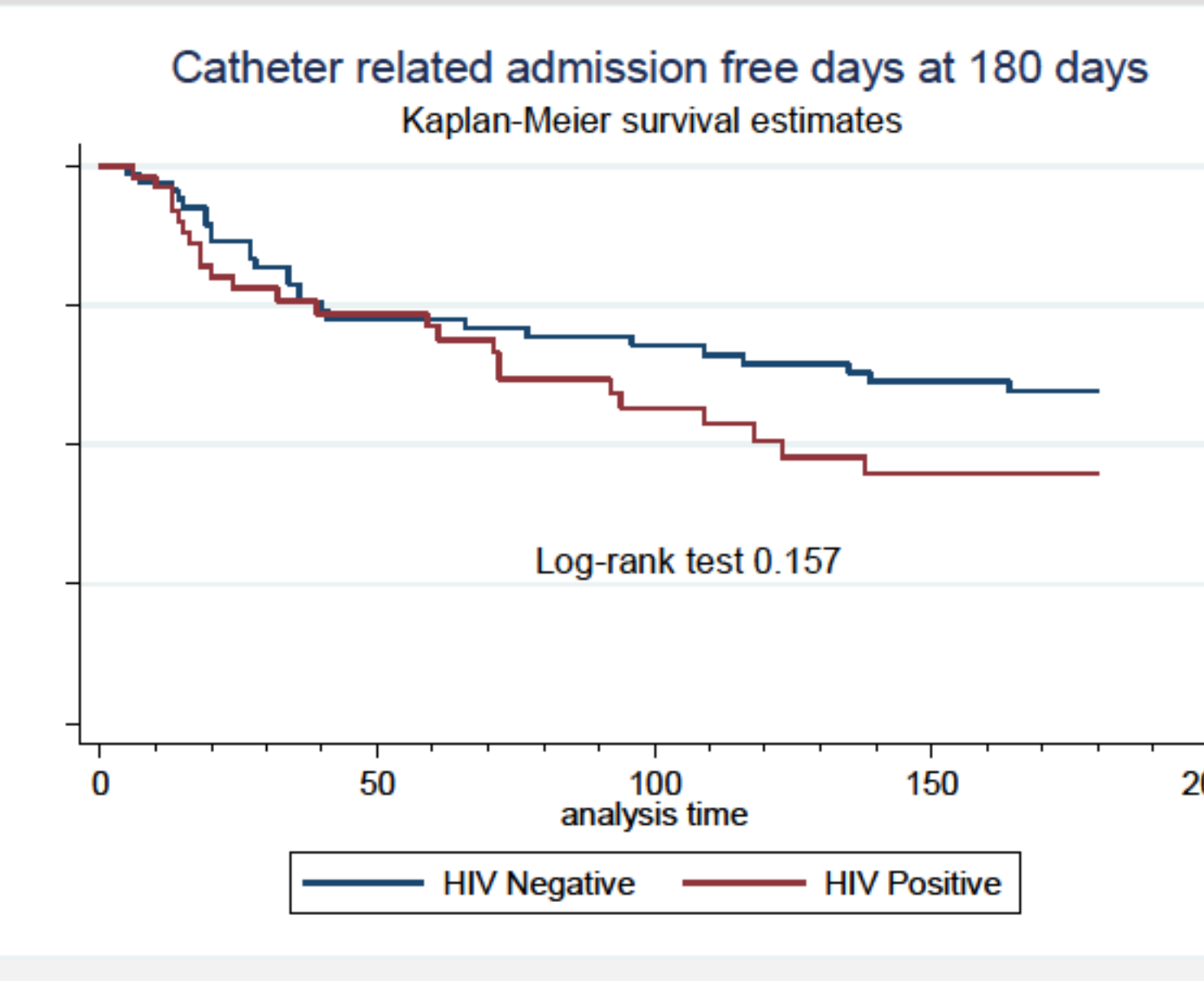
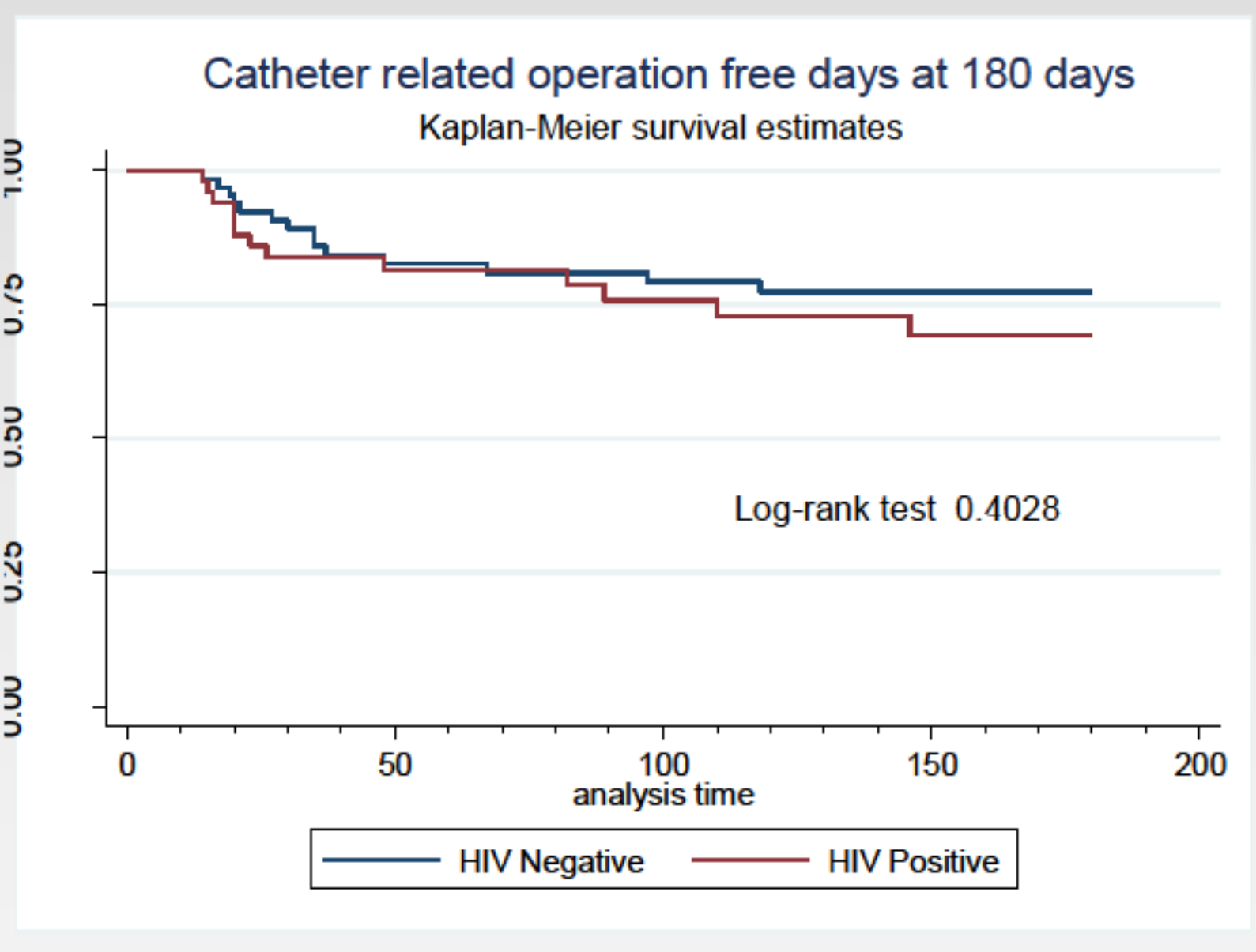


Figure 9: Catheter-associated operation free days



CONCLUSIONS

This study suggests that HIV infection in patients on CAPD does not adversely influence short term catheter failure rates, however, uncontrolled HIV infection may be associated with increased morbidity and mortality relative risk

REFERENCES:

- Rivera Gorriñ M, Merino Rivas JL, Alarcon Garcelan MC, Galeano Alvarez C, Manuel O, Teruel Briones JL, et al. [Outcome of HIV-infected patients of peritoneal dialysis: experience in a center and literature review]. Nefrologia. 2008; 28(5): 505-10.
- Tebben JA, Rigsby MO, Selwyn PA, Brennan N, Klinger A, Finkelstein FO. Outcome of HIV infected patients on continuous ambulatory peritoneal dialysis. Kidney Int. 1993; 44(1): 191-8.
- Khanna R, Tachopoulou OA, Fein PA, Chattopadhyay J, Avram MM. Survival experience of peritoneal dialysis patients with human immunodeficiency virus: a 17-year retrospective study. Advances in peritoneal dialysis Conference on Peritoneal Dialysis. 2005; 21: 159-63.

