



Relation of Age to Risk of Major Rejections, Allograft Vasculopathy, and Long-Term Mortality in a Contemporary Cohort of Patients Undergoing Heart Transplantation



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BACKGROUND

- In 2006, the ISHLT guidelines liberated the upper age limit of heart transplantation (HTx) from 55-years to 70-years, and beyond for carefully selected patients.
- However, the relationship of age to outcomes following HTx has not been well studied and results remain inconsistent .
- We aimed to investigate the impact of recipient’s age on rejection, vasculopathy and mortality recurrence during long-term follow-up after HTX.

METHODS

Study population comprised all consecutive 291 patients who underwent HTx between 1991-2016 and are followed-up at our center.

Patients were categorized by age tertiles:

- <46-years
- 46 to 57-years
- ≥57-years

Primary-endpoints:

- Mortality
- Cardiac allograft vasculopathy (CAV)
- Major rejections

RESULTS

Study Population

291 HTx patients
1991-2016

<46-years
mean 31.4
range 16-45
n=90

46-57-years
mean 51.4
range 46-56
n=92

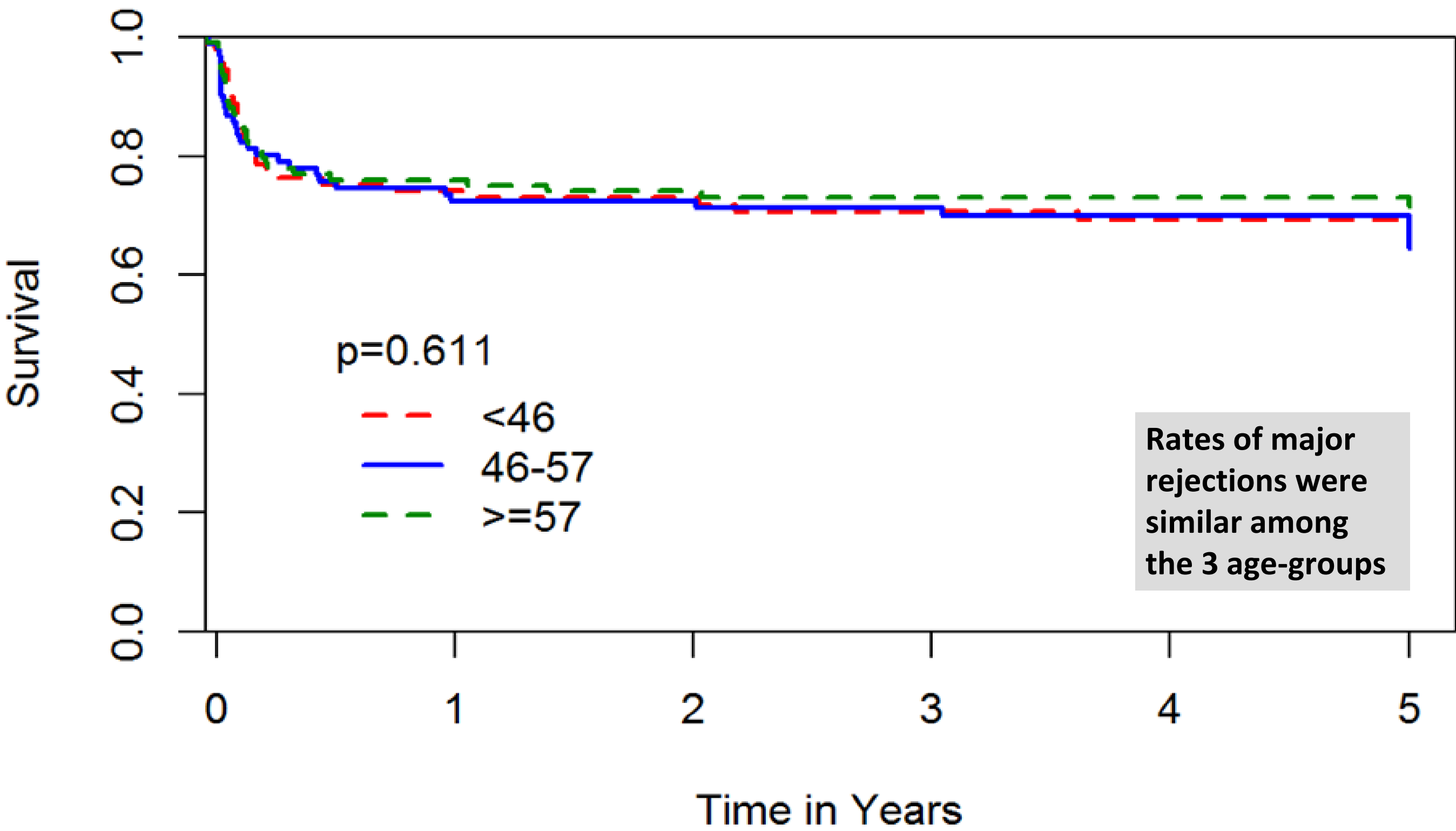
≥57-years
mean 61.6
range 57-73
n=109

Descriptive of the cohort by age tertiles

	Age Group <46 n =90	Age Group 46-57 n =92	Age Group ≥57 n =109	P value
Recipient Age (SD)	31 (11)	51 (3)	61 (3)	<0.001
Male (%)	64 (71)	81 (88)	97 (89)	0.001
Pre HTN (%)	14 (15)	38 (43)	61 (56)	<0.001
Pre DM (%)	8 (9)	16 (18)	35 (32)	<0.001
Pre smoker (%)	16 (18)	45 (51)	66 (61)	<0.001
Pre Dyslipidemia (%)	20 (22)	47 (53)	68 (63)	<0.001
Late Period ≥2000 (%)	60 (67)	56 (61)	74 (68)	0.55
Tacrolimus based(%)	36 (42)	28 (34)	34 (37)	0.54

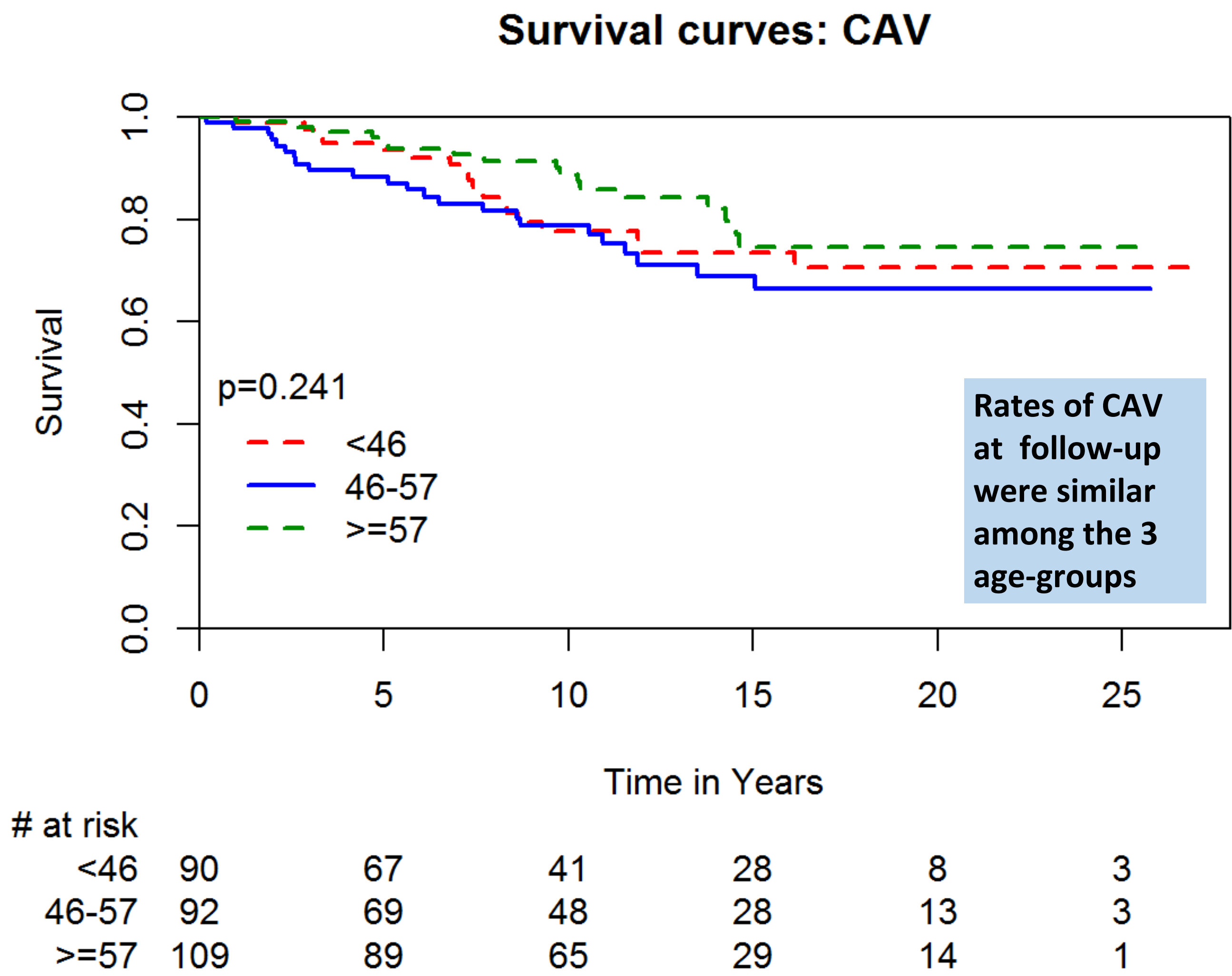
Kaplan–Meier Estimates of Major Rejections According to Recipient’s Age

Survival curves:Major Rejection



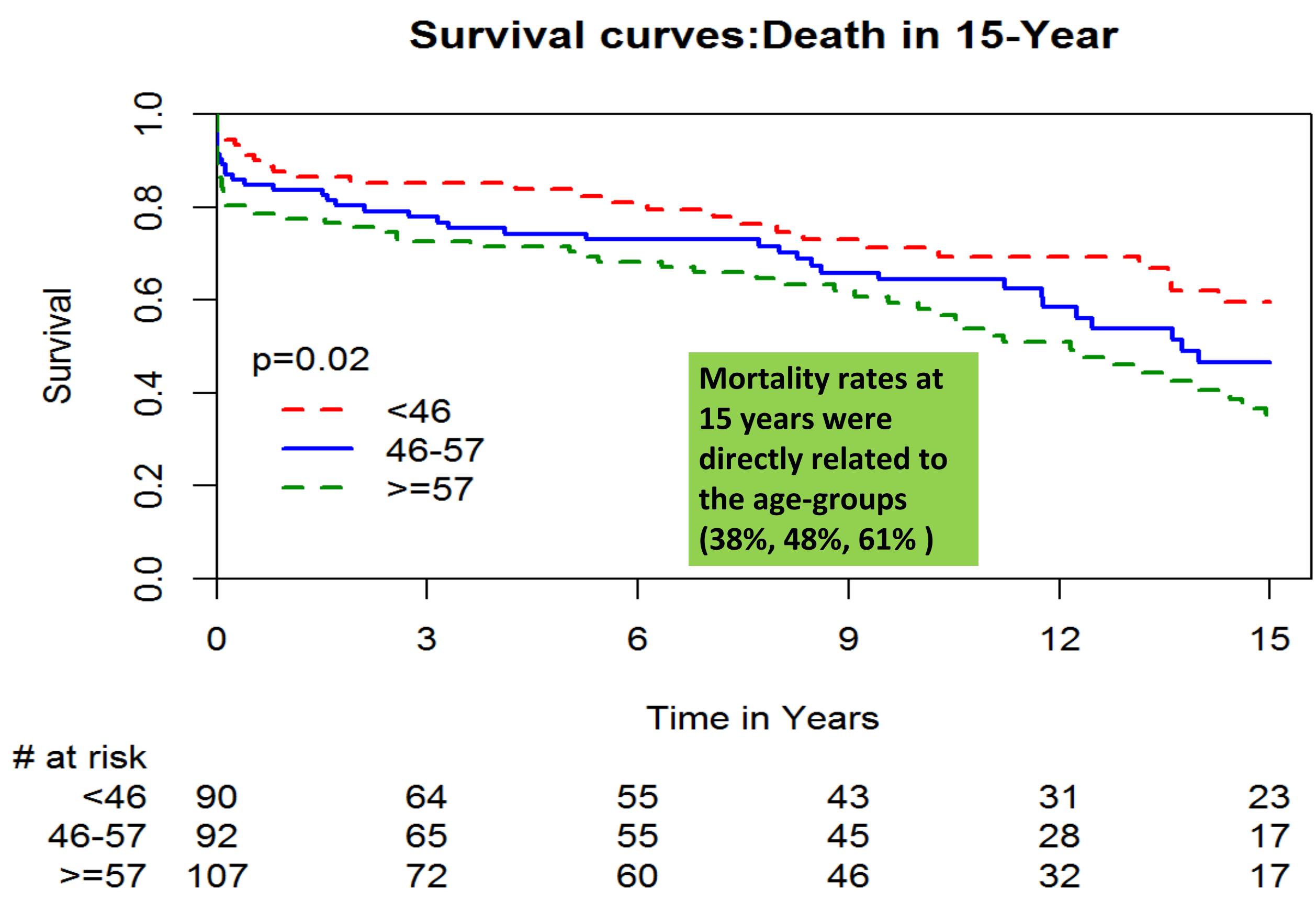
Kaplan–Meier Estimates of CAV According to Recipient’s Age

Survival curves: CAV

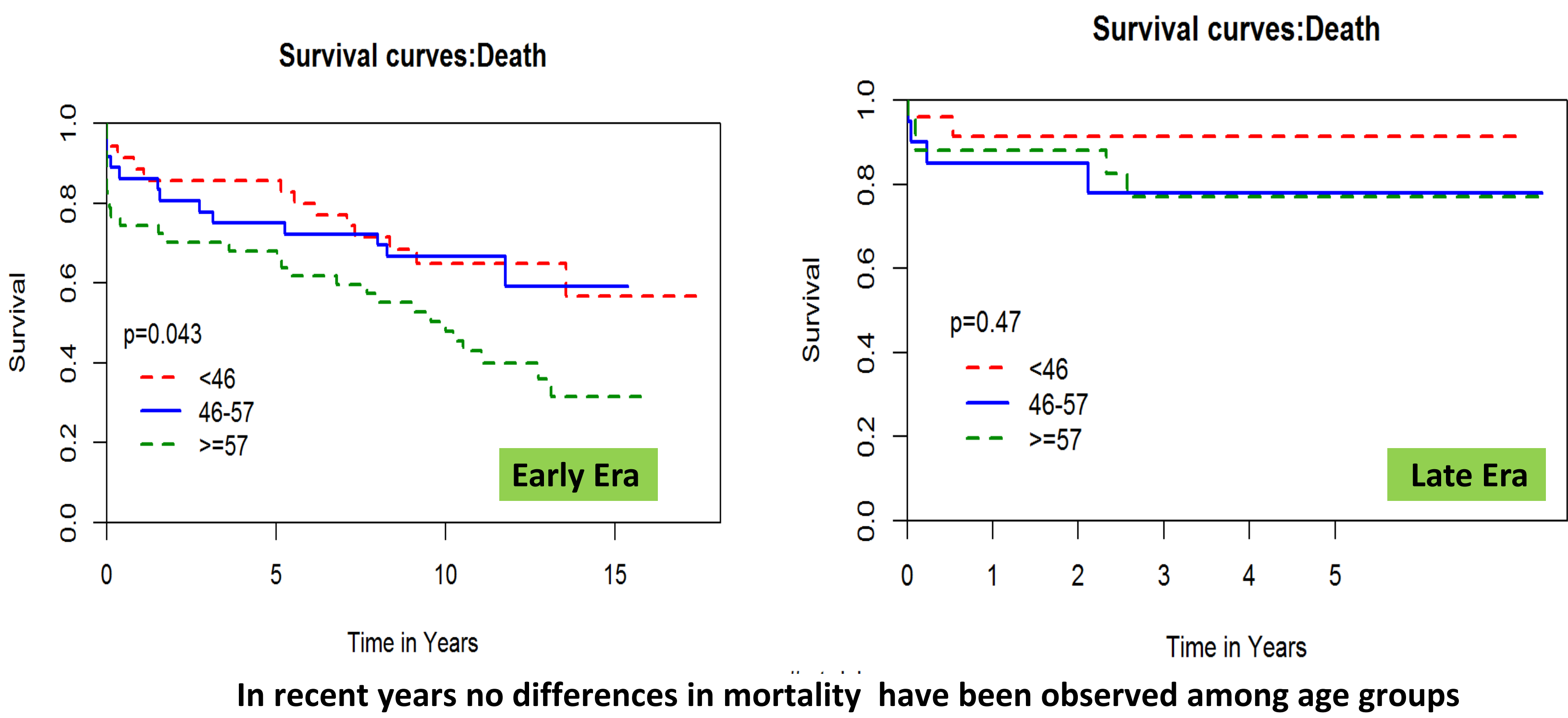


Kaplan Meier Mortality by age tertiles

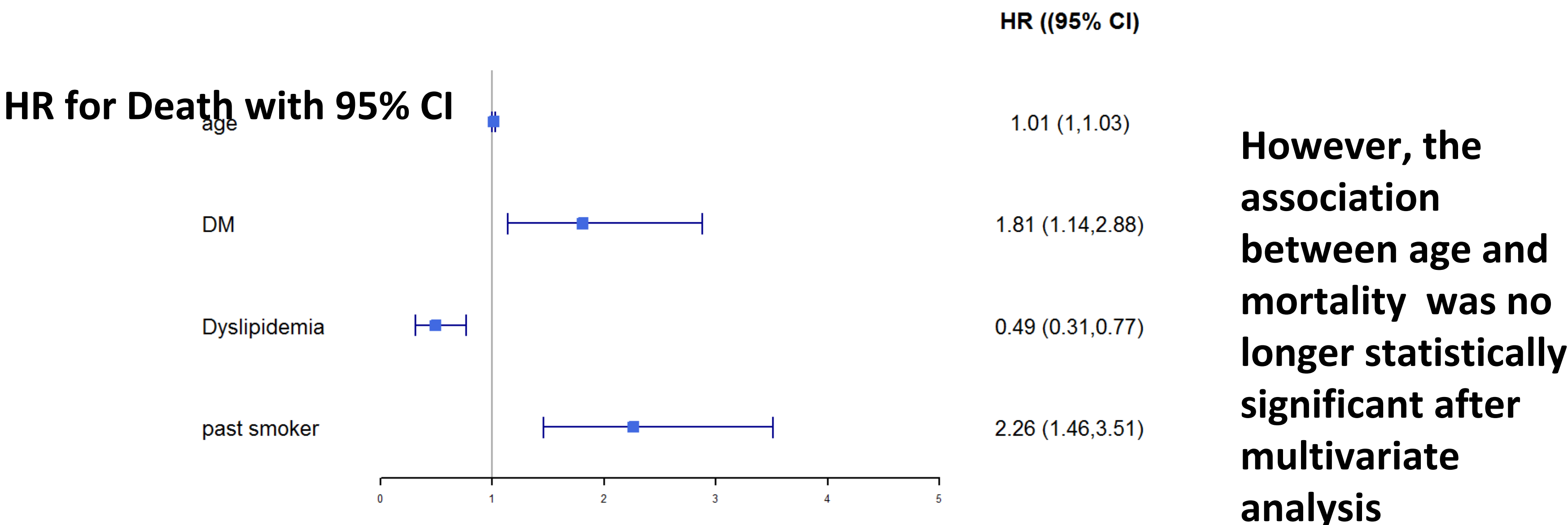
Survival curves:Death in 15-Year



Death by Age & Eras



Multivariate Analysis for Mortality



CONCLUSIONS

- ❖ Our findings suggest that, in a contemporary cohort of patients undergoing HTx, the recipient’s age does not significantly impact the **risk of major rejections, CAV, and long-term mortality.**
- ❖ As life expectancy continues to increase, it will be necessary to continually redefine what is considered elderly.