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SOCIETAT
CATALANA DE
TRASPLANTAMENT

Cancer relative survival in dialysis and kidney transplant recipients: a population study in Australia and New Zealand 1980-2019

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Introduction

- Cancer survival has **improved** in general population.
- **Higher incidence** of cancer in CKD population and **higher mortality risk** (2 to 4 times).

Study objective

Estimate and compare **cancer relative survival** in dialysis patients, kidney transplant recipients and the general population.

Methods

$$\text{Relative survival} = \frac{\text{Observed survival}}{\text{Expected survival}}$$

Poisson regression: estimate excess mortality rate

Kidney failure population with de novo cancers

- Dialysis patients
- Kidney transplant recipients

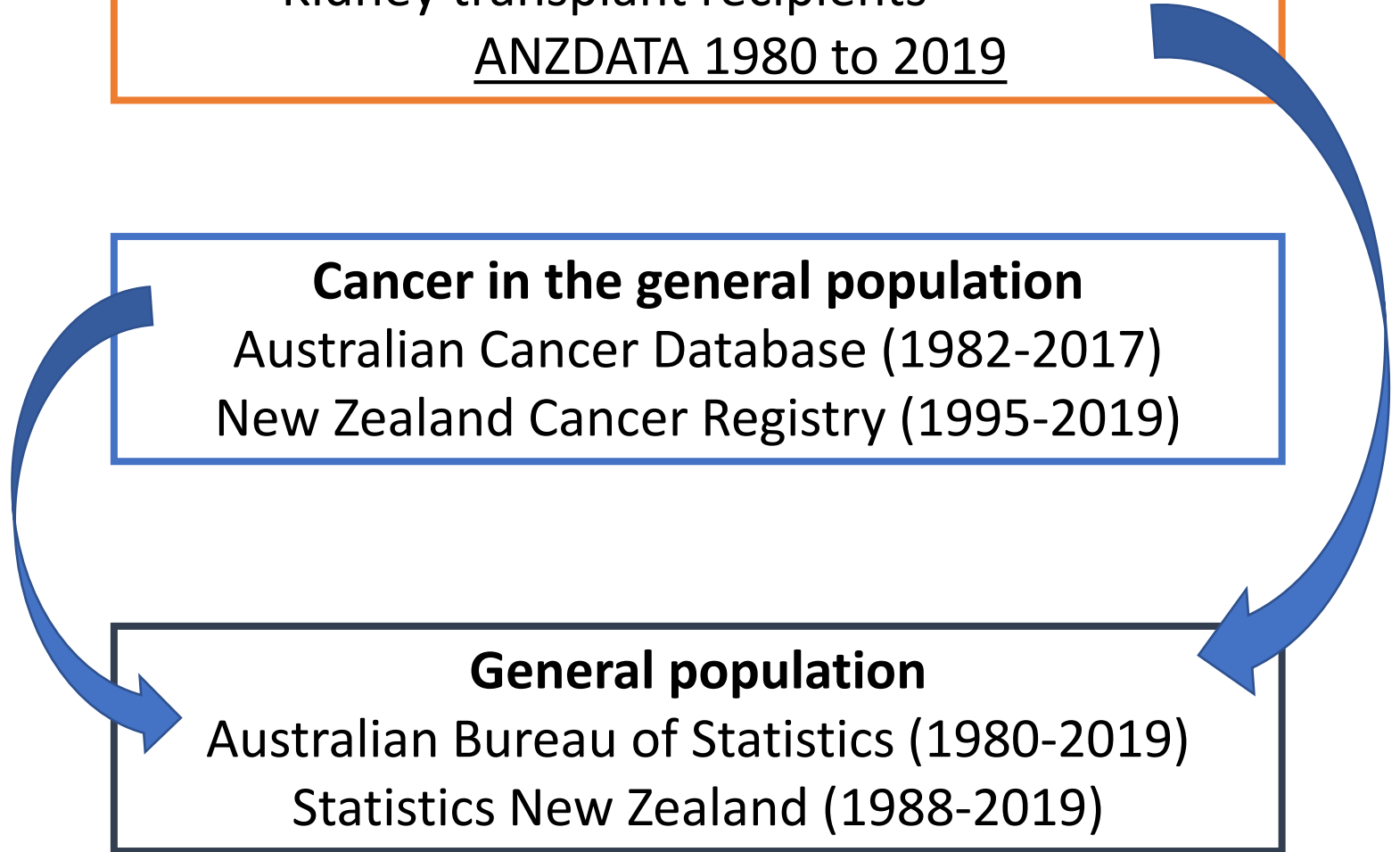
ANZDATA 1980 to 2019

Cancer in the general population

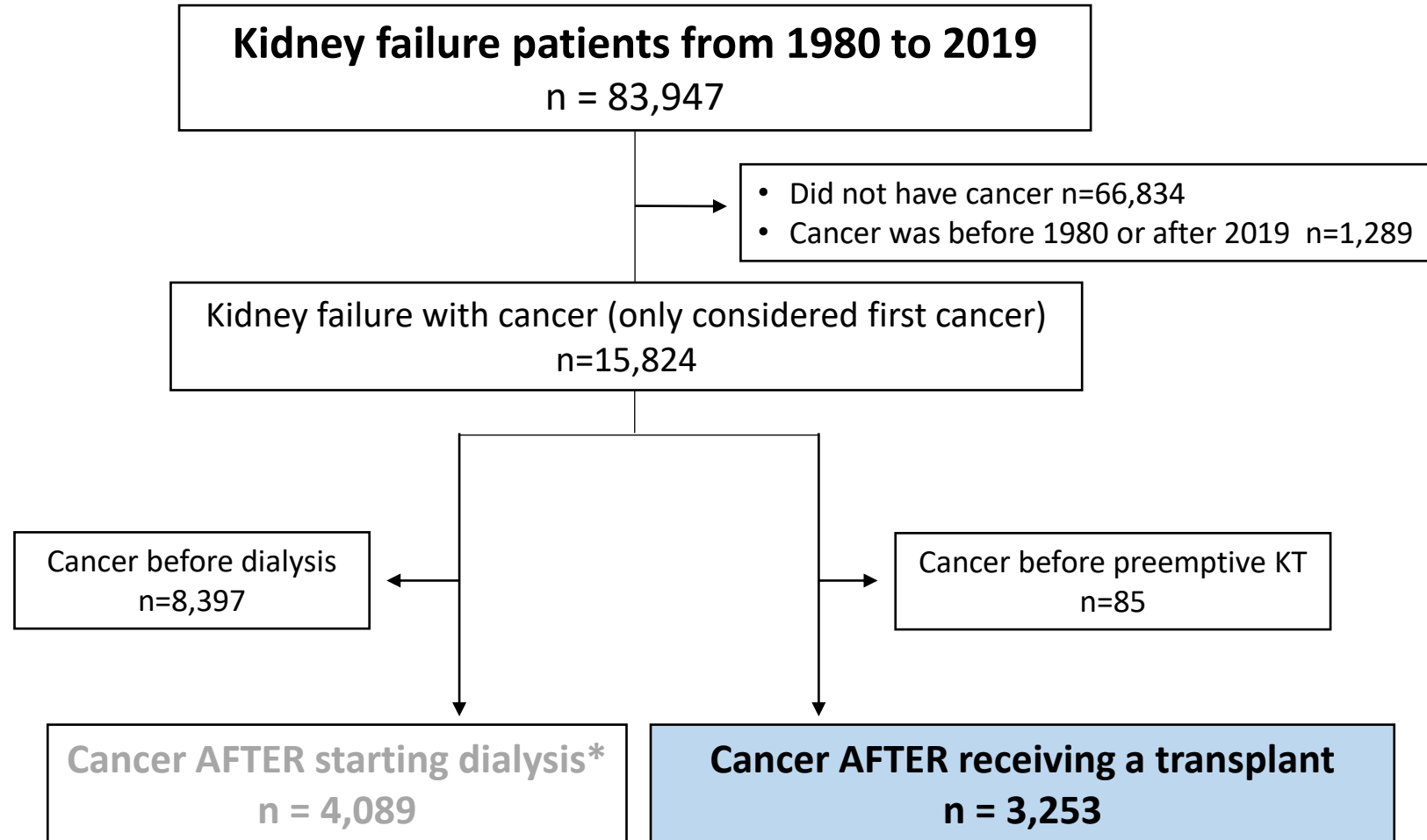
Australian Cancer Database (1982-2017)
New Zealand Cancer Registry (1995-2019)

General population

Australian Bureau of Statistics (1980-2019)
Statistics New Zealand (1988-2019)



Results



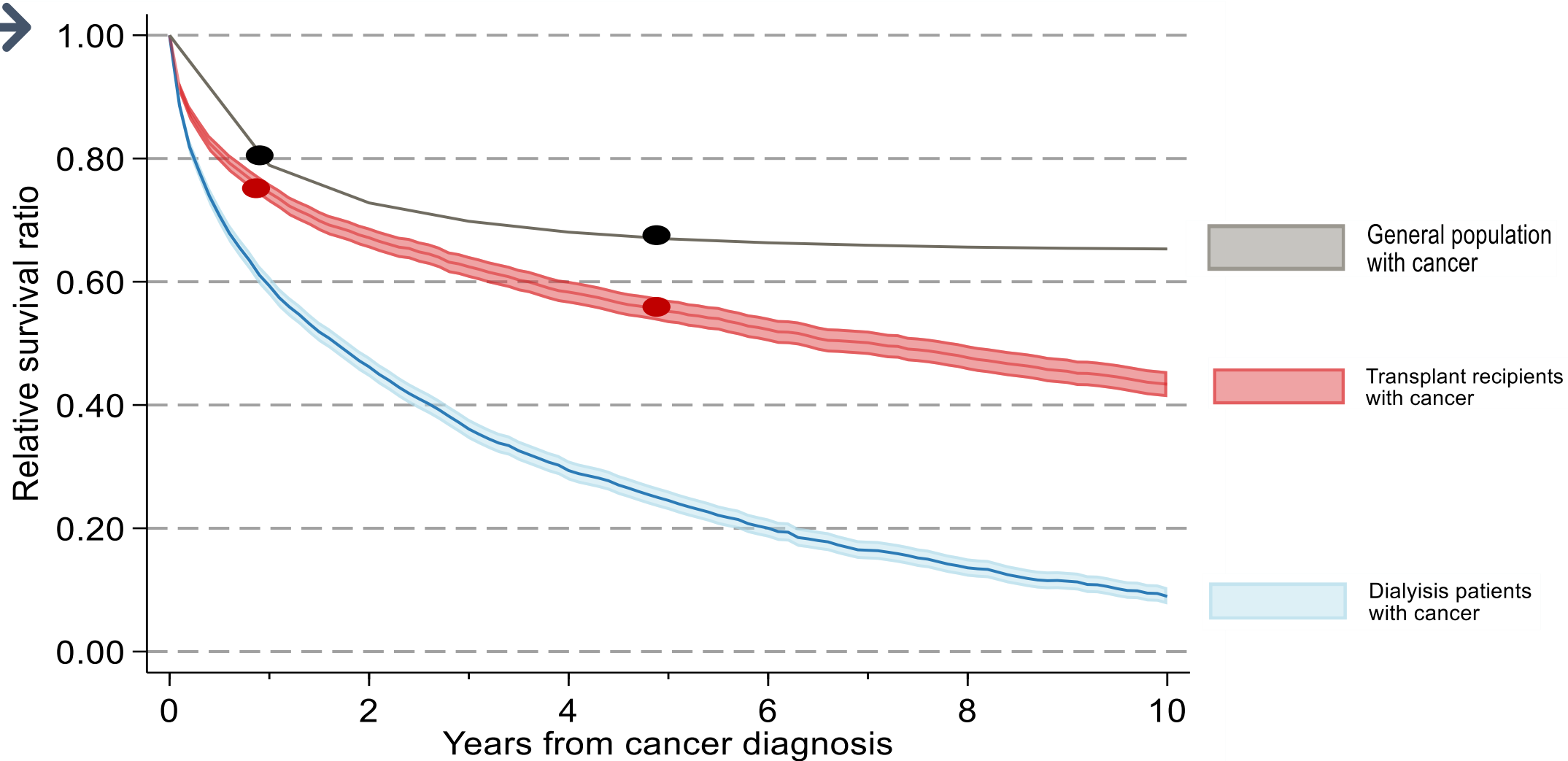
*censored for KT

Relative survival in all-site cancer

Similar to
general
population



Poorer
survival
than
expected



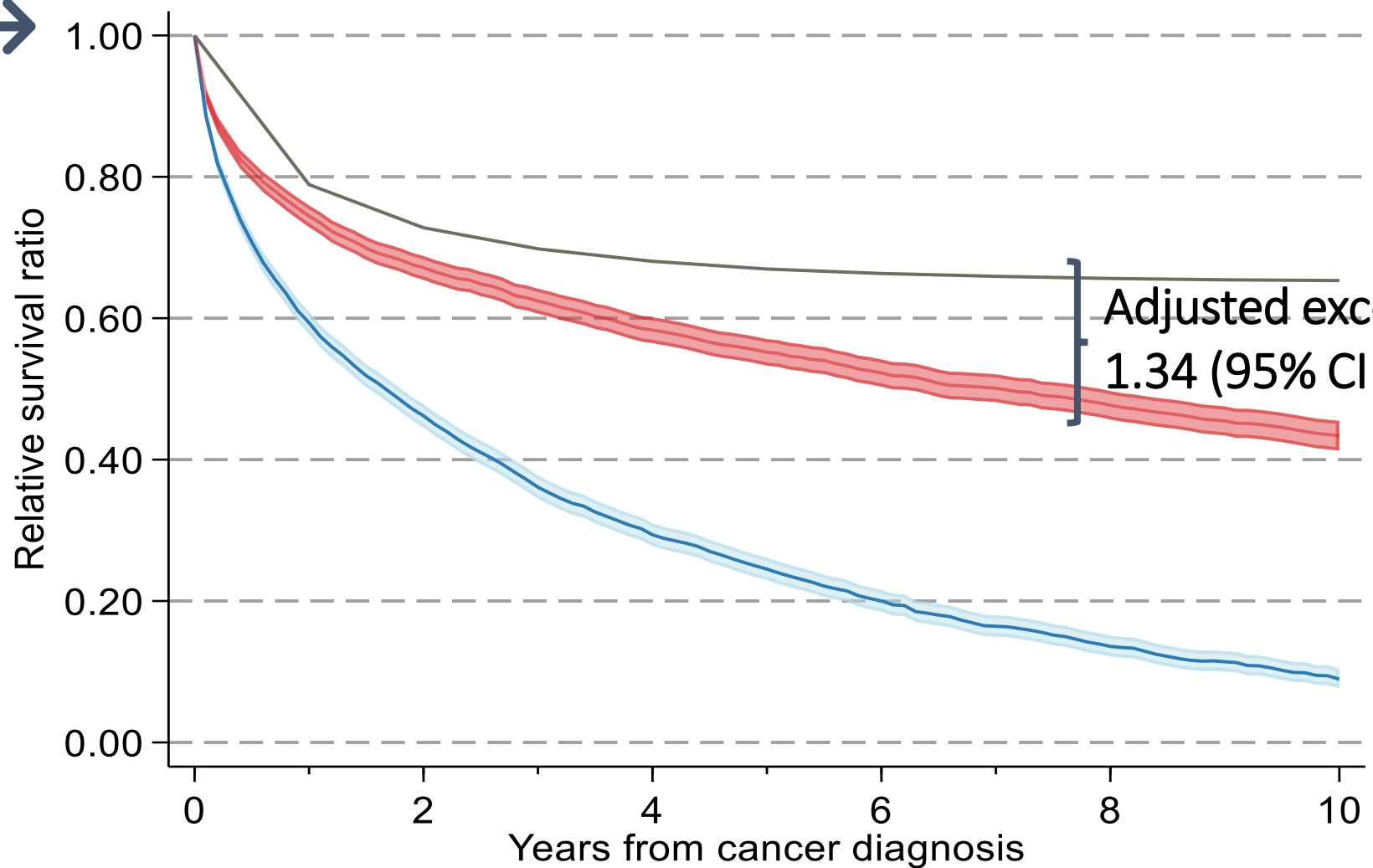
Relative survival in all-site cancer

- General population with cancer
- Transplant recipients with cancer
- Dialysis patients with cancer

Similar to general population



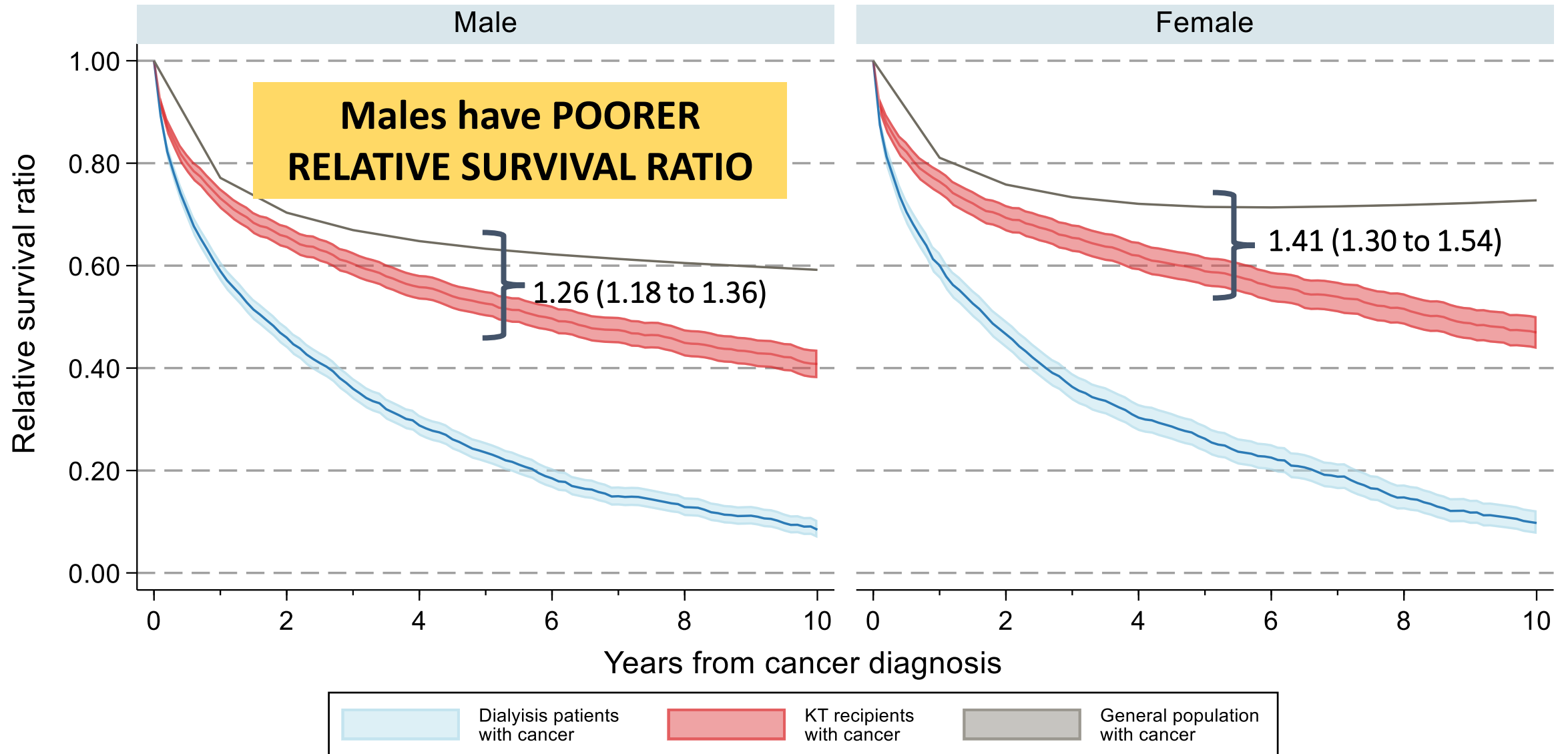
Poorer survival than expected



Adjusted excess mortality ratio:
1.34 (95% CI 1.27 to 1.41)

Survival differences by sex

Women have GREATER EXCESS MORTALITY



Cancer-type survival

NO excess mortality risk

Colorectal

Lung

Relative survival ratio

1.00
0.80
0.60
0.40
0.20
0.00

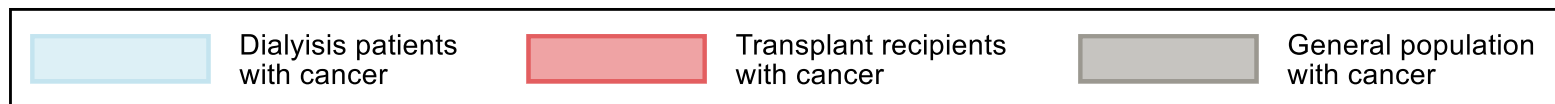
EMR transplant: 1.73 (1.46 to 2.04)

EMR transplant: 0.92 (0.79 to 1.06)

0 2 4 6 8 10

0 2 4 6 8 10

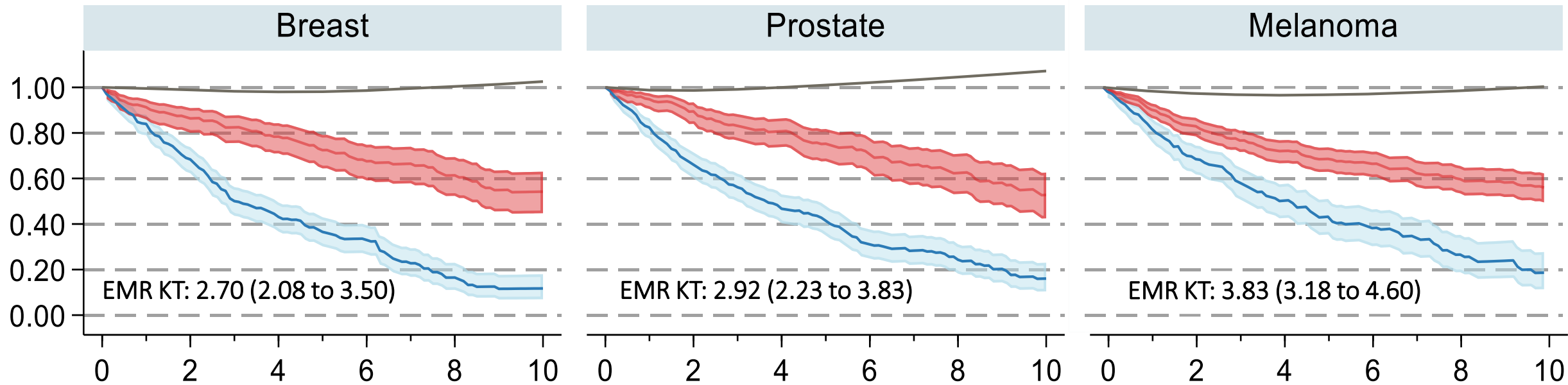
Years from cancer diagnosis



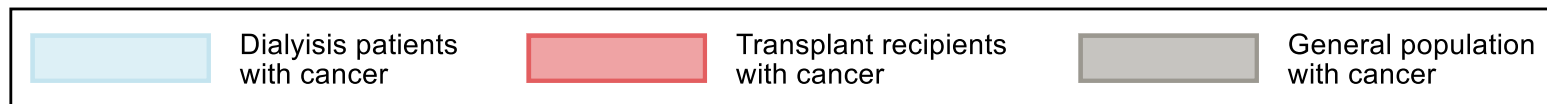
Cancer-type survival

Best relative survival rates
GREATEST EXCESS MORTALITY

Relative survival ratio



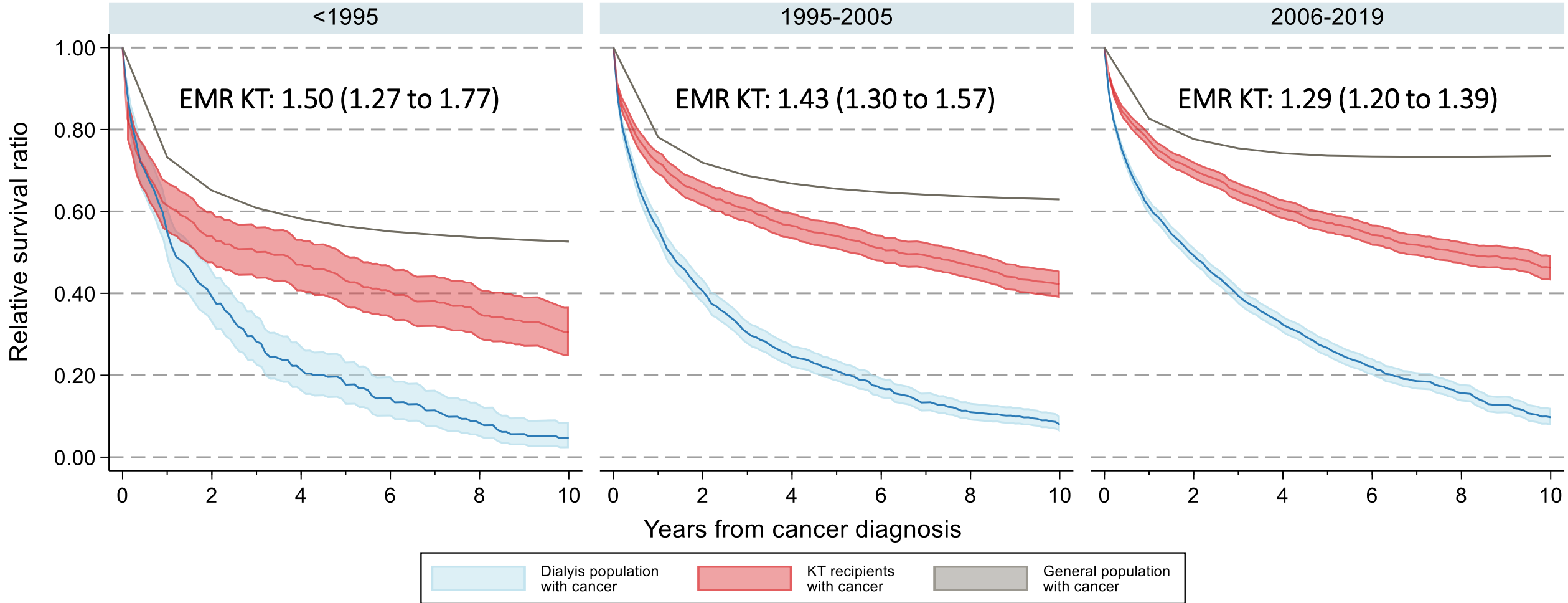
Years from cancer diagnosis



Survival differences in year of cancer diagnosis

**Relative survival rates
HAVE IMPROVED over time**

**Excess mortality has
DECREASED in KT**



Conclusions

- Overall KT have poorer relative survival ratios and higher excess mortality.
- Different patterns depending on cancer-type.
- Females have greater relative survival rates but higher excess mortality.
- Relative survival rates and excess mortality improve through time.



- What happens with cancers before starting RRT?
- Excess mortality because of cancer or kidney failure?

Gràcies!
