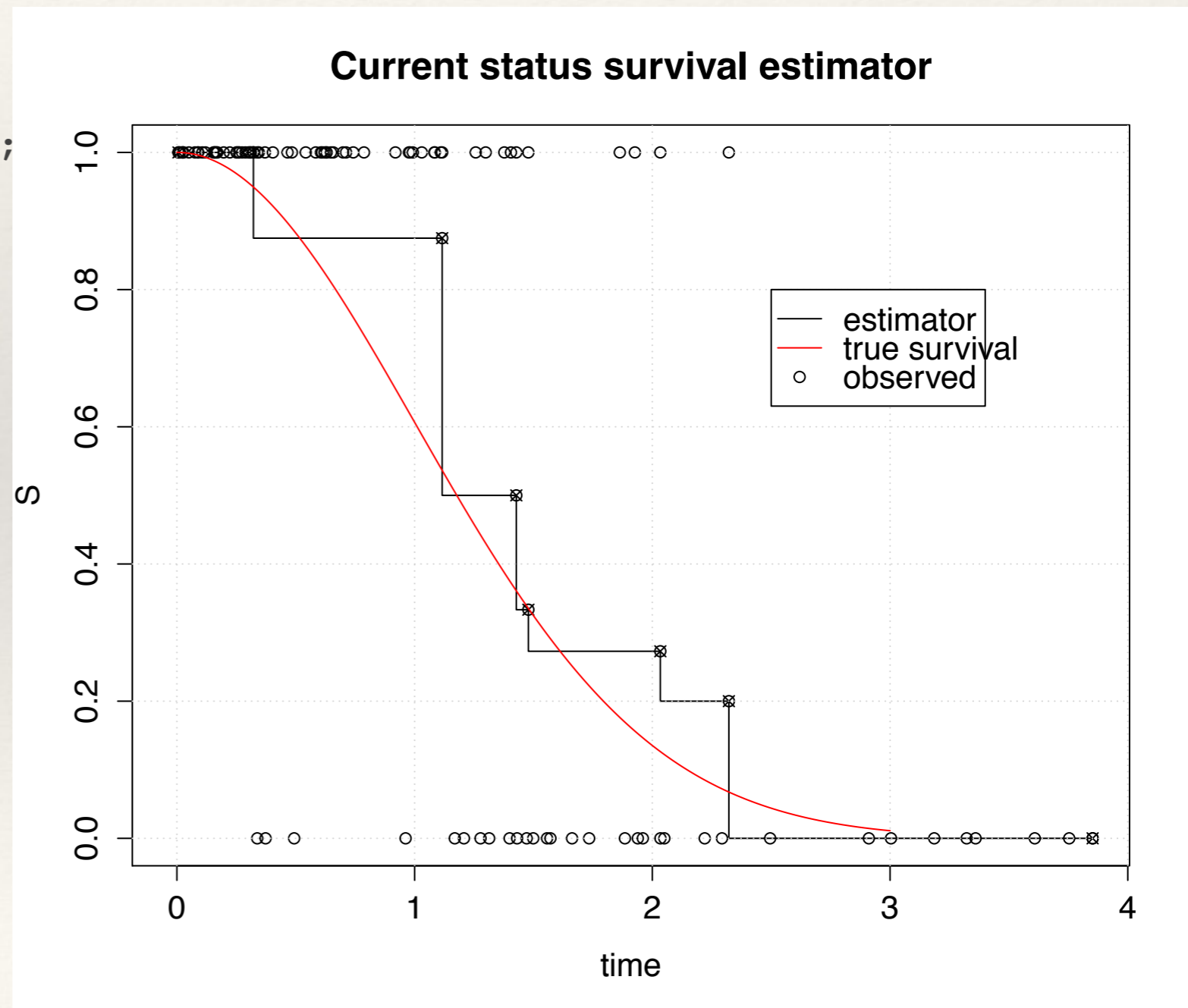

Current status, dependent censoring

30 November, 2015

Current status

```
n=100
t0=rexp(n)
t=sqrt(2*t0)
C=rexp(n)
delta=(t>C)
## gpava computes increasing solutions;
## we need to reverse it, then reverse
gp=gpava(C,-delta)
gp$x=-gp$x
gp$y=-gp$y
plot(gp,main='Current status survival
  estimator',ylab='S',xlab='time',
  col=1,xlim=c(0,4))
tt=(0:300)/100
lines(tt,exp(-tt^2/2),col=2)
```

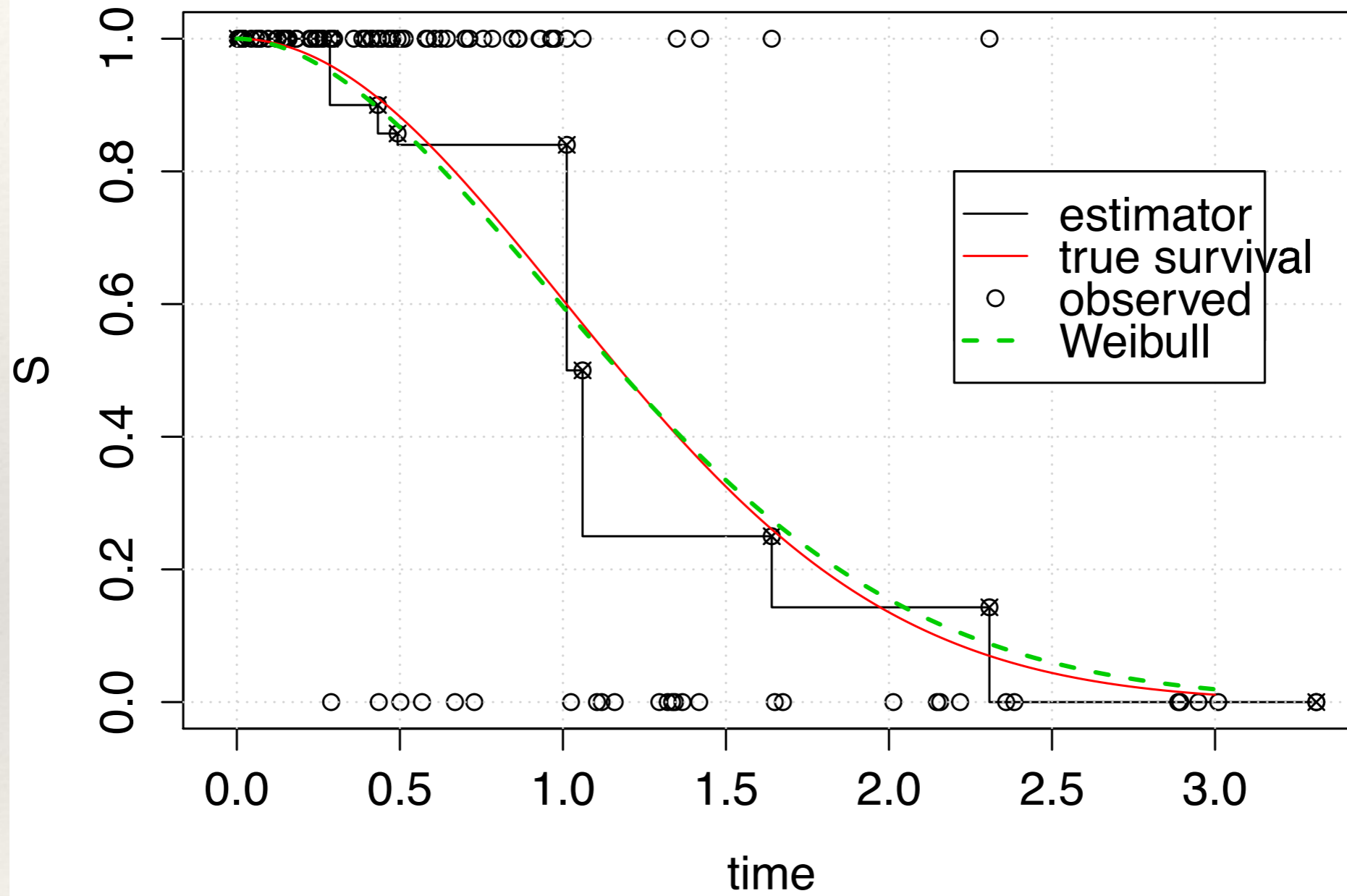
n=100



true hazard $\lambda(t)=t/2$

n=100

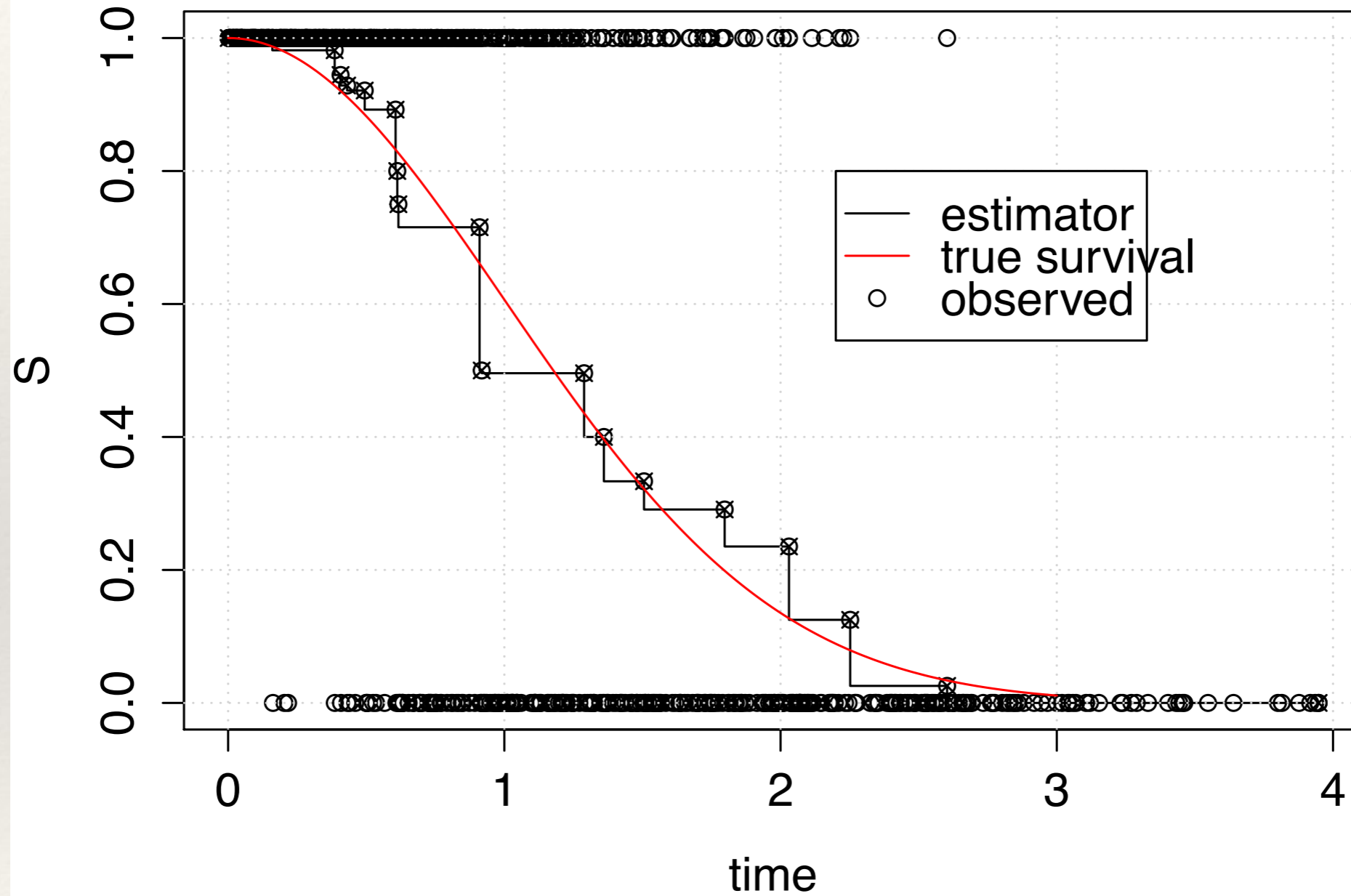
Current status survival estimator



true hazard $\lambda(t)=t/2$

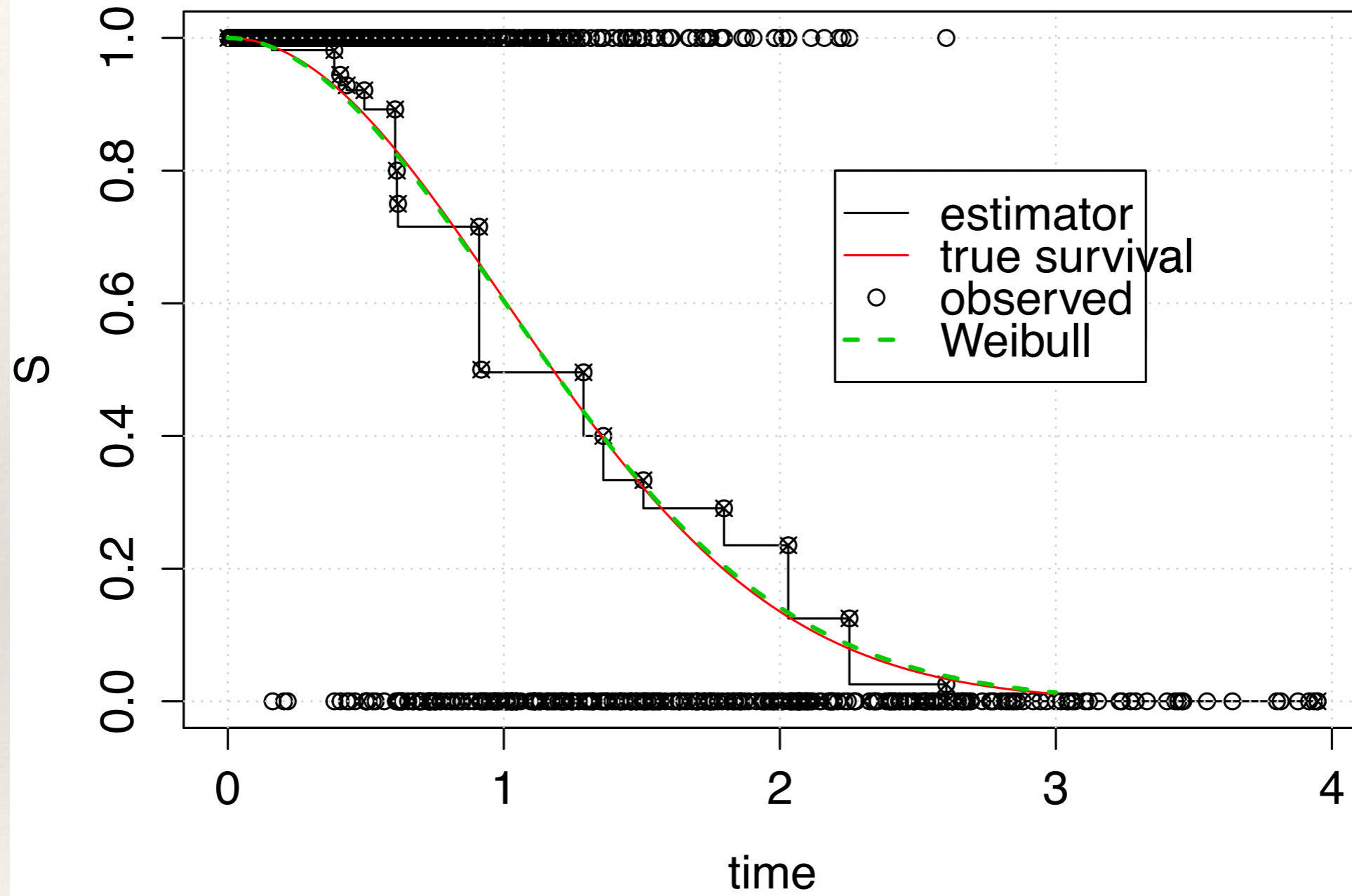
n=1000

Current status survival estimator



true hazard $\lambda(t)=t/2$

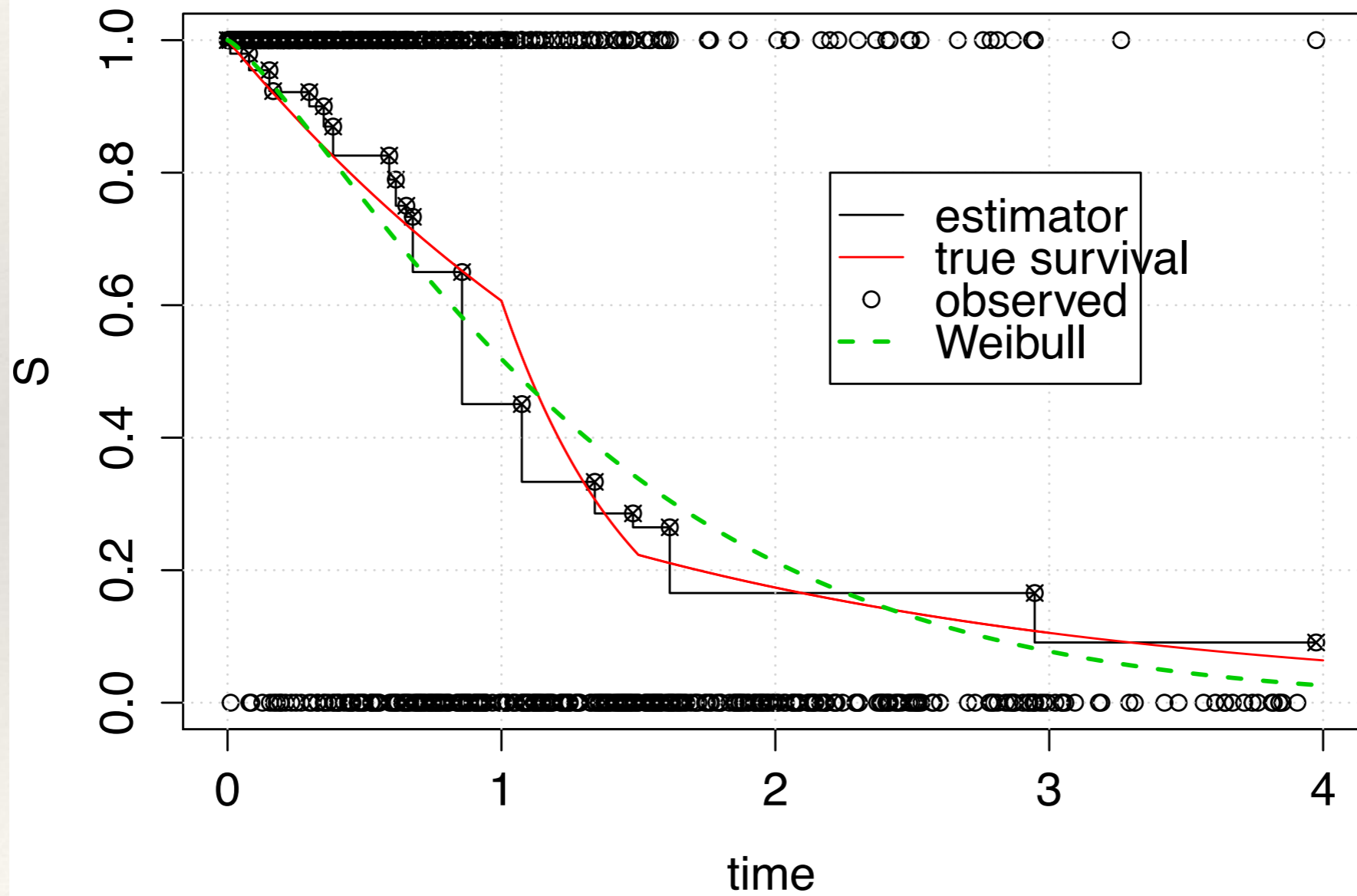
Current status survival estimator

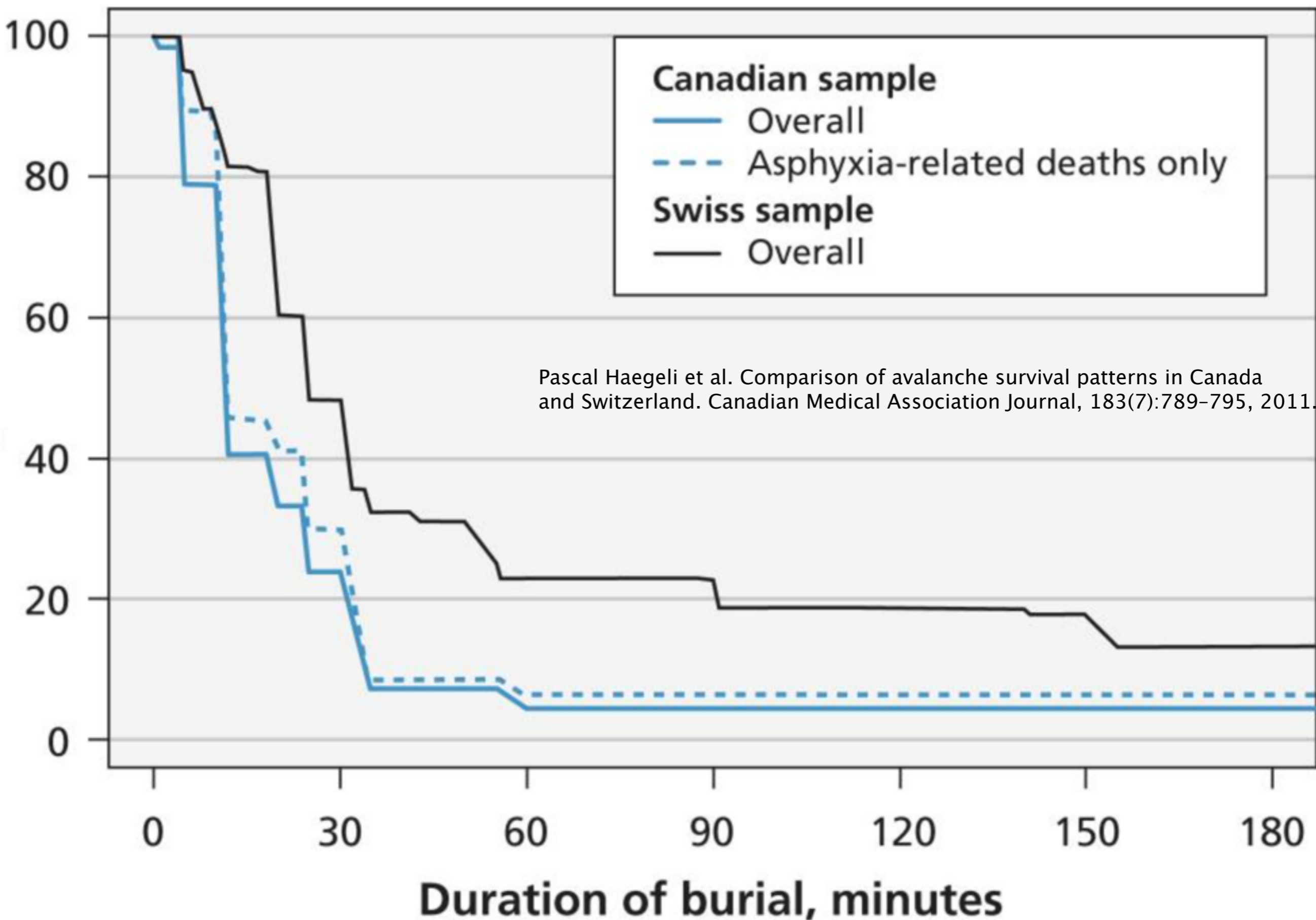


true hazard

$$\lambda(t) = \begin{cases} .5 & \text{if } t \leq 1, \\ 2 & \text{if } 1 < t \leq 1.5, \\ .5 & \text{if } t > 1.5. \end{cases}$$

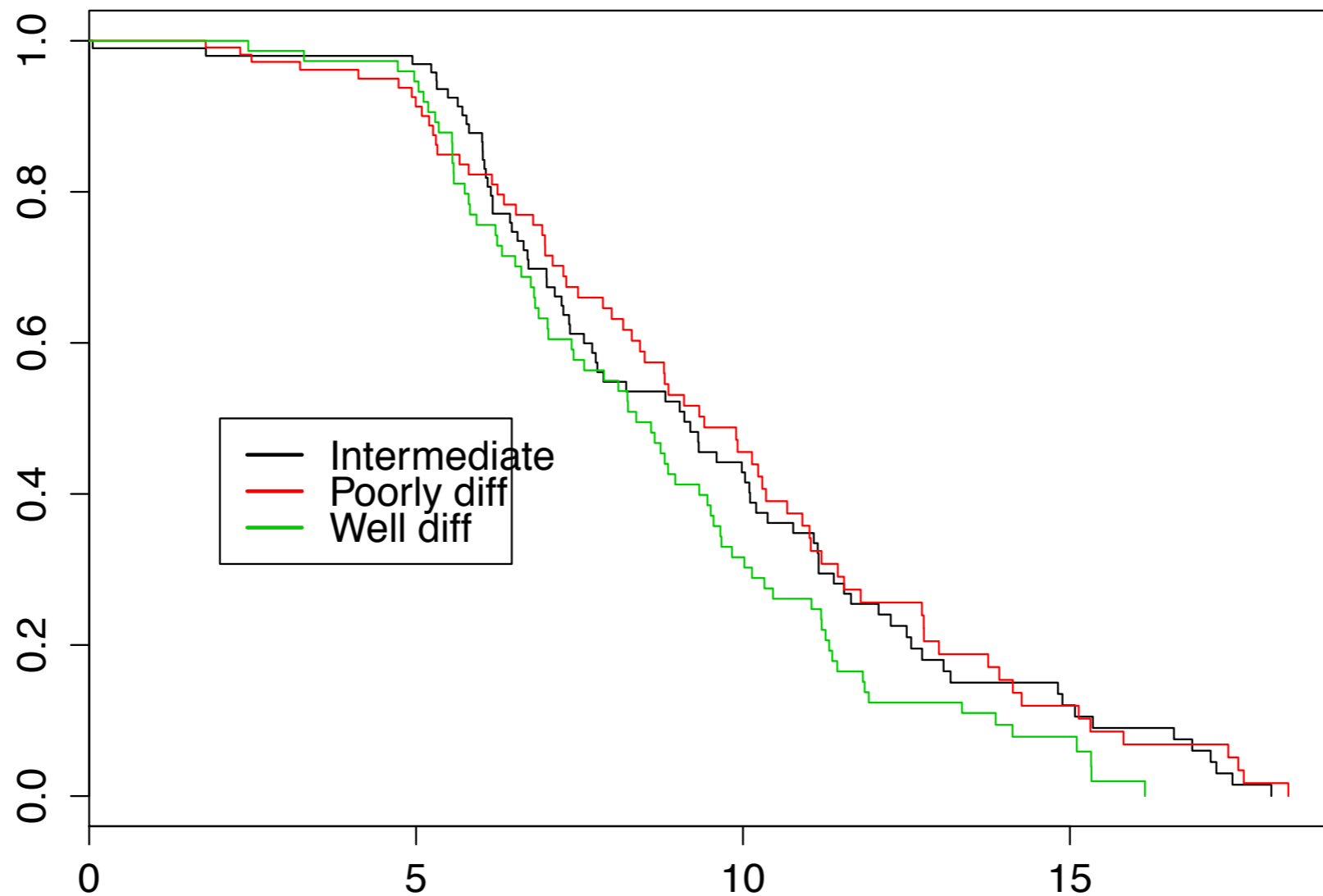
Current status survival estimator



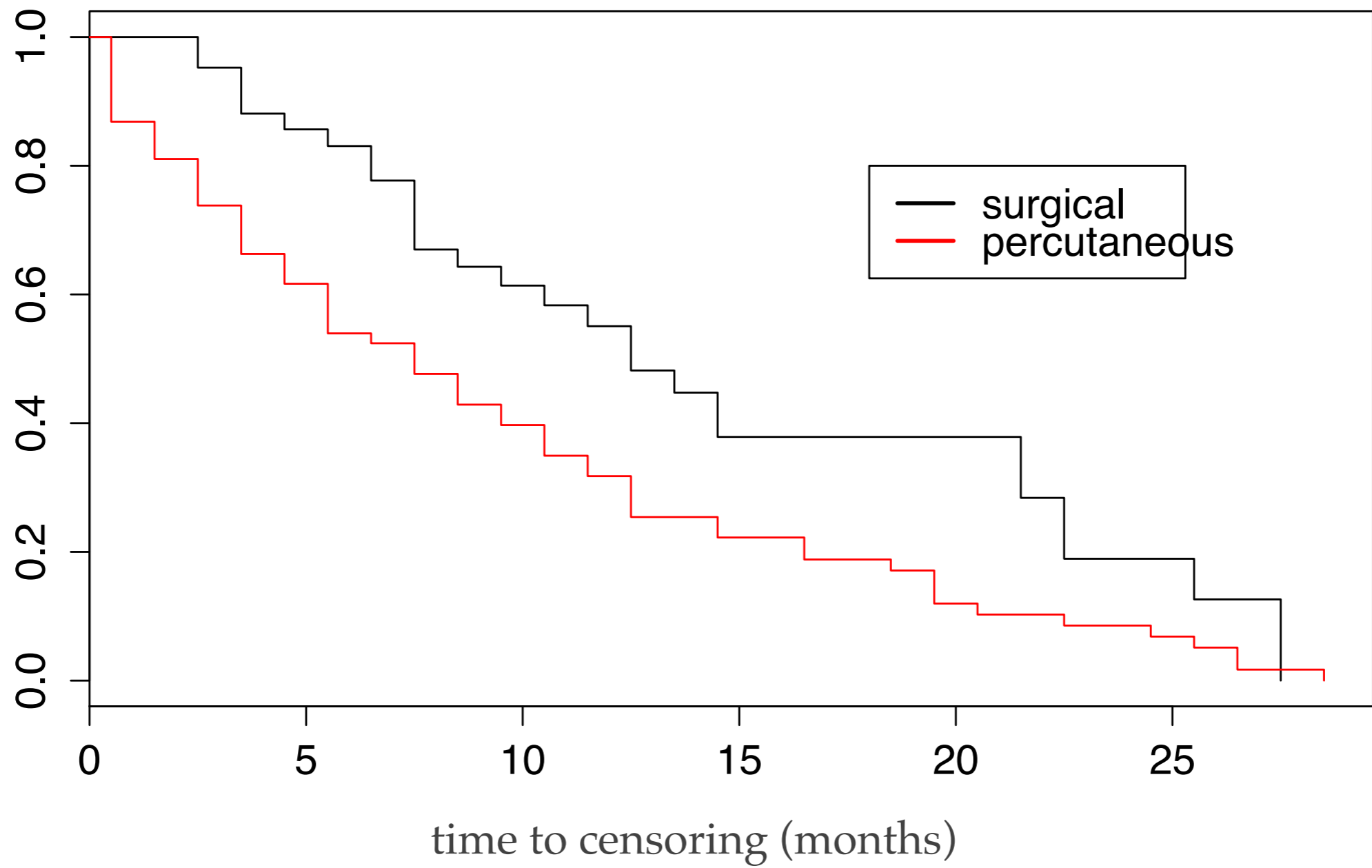


Informative censoring

Noncensoring for NKI data (histolgrade variable)



Kidney data censoring plot



NKI data: additive hazards regression for censoring times



Primary biliary cirrhosis

Clinical trial, drug vs. placebo

312 patients in trial, 106 additional, 10-year follow-up

some patients removed from trial when they had an organ transplant:
informative censoring

