

### S1 Appendix Cumulative incidence function.

Define the all-cause survival function at time  $t$  by

$$S(t) = \exp\left(-\int_0^t \{h_R(s) + h_D(s)\} ds\right),$$

i.e. the probability that neither event occurs until time  $t$ . For cause-specific hazards of recovery  $h_R$  and death  $h_D$  the cumulative incidence function at time  $t$  is given by

$$\text{CIF}(t) = \int_0^t h_D(s)S(s)ds.$$

The case fatality rate at Day 14 is then simply  $p = \text{CIF}(14)$ . A non-parametric estimator of the CIF is given by

$$\hat{\text{CIF}}(t) = \int_0^t \hat{S}(s)d\hat{\Lambda}_D(s),$$

where  $\hat{S}$  is the Kaplan-Meier estimator of  $S$  and  $\hat{\Lambda}_D$  is the Nelson-Aalen estimator of the cause-specific hazard of death. We have used the R package *etm* [25] to calculate the estimator.