Package: crc (via r-universe)

August 31, 2024

Title Competing Risks Combined

Version 0.0.0.9000

Description Use two independently estimated risks of death from other
causes and death from disease to get a corrected estimate of
risk of death from disease. For example, given a patient's
risk of death from cancer based on their oncologic burden and
their risk of death from other causes based on their
comorbidities, we calculate an adjusted risk of death from
cancer. To illustrate the importance of this correction, image
two patients with identical disease burden, and therefore,
identical predicted risk of death from disease. Now imagine,
that one of these patients also has sever heart disease and it
likely we pass away from hear disease before they would succumb
to the cancer. Our correction makes the appropriate update to
the risk of death from disease incorporating the risk of death
from other causes.

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Depends R (>= 4.0.0)

Suggests covr, dplyr, ggplot2, knitr, rmarkdown, spelling, testthat
(>= 3.0.0)

VignetteBuilder knitr

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.2.1

Language en-US

URL http://www.danieldsjoberg.com/crc/

Config/testthat/edition 3

Repository https://ddsjoberg.r-universe.dev

RemoteUrl https://github.com/ddsjoberg/crc

RemoteRef HEAD

RemoteSha e9cd979e630255d9c5a2d9dda6d68adb3d320ef0

Contents

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  prob_to_exp_lambda   *Convert Prob. to an Exponential lambda Parameter*

Description

Function takes a vector of probability estimates and a time frame, e.g. probability of death within 10 years, and converts the probability into an exponential distribution lambda parameter. The lambda parameter is the *rate* parameter, e.g. `f(x) = lambda * exp(-lambda * x)`

Usage

```
prob_to_exp_lambda(p, time = 1)
```

Arguments

p	numeric vector of probability estimates
time	a single numeric time that is the time frame for the probability in p=

Value

numeric lambda greater than zero

Examples

```
prob_to_exp_lambda(0.5)
```

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  update_cancer_death_risk
                                    Combine Risk Estimates

Description

Provided a risk estimate of death from cancer and an estimate for death from other causes, this function will combine the two risks assuming an exponential distribution for both.

Usage

```
update_cancer_death_risk(risk_cancer_death, risk_other_cause, time)
```

Arguments

risk_cancer_death

          risk of death from cancer within time `t=`

risk_other_cause

          risk of death from other causes within time `t=`

time   time frame associated with the risk predictions above.

Value

numeric probability between zero and one

Examples

```
update_cancer_death_risk(0.5, 0.5, time = 10)
```

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