

Package ‘survmixer’

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Title Sample size and effect size calculations for mixture survival distributions

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Description What the package does (one paragraph).

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Encoding UTF-8

LazyData true

RoxygenNote 7.1.0

R topics documented:

survmixture_f	1
survw_effectsize	2
survw_samplesize	3

Index	5
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survmixture_f	<i>Mixture survival function</i>
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Description

The function ‘survmixture_f’ computes the survival distribution as a mixture of responders and non-responders. The responders and non-responders distributions are assumed to be Weibull distributions.

Usage

```
survmixture_f(t, lambda_r, lambda_nr, bet = 1, p)
```

Arguments

t	time at which the survival distribution is evaluated
lambda_r	scale parameter for the Weibull distribution for responders
lambda_nr	scale parameter for the Weibull distribution for non-responders
bet	shape parameter for the Weibull distribution
p	event rate for the response

Value

Mixture survival function evaluated at t

Author(s)

Marta Bofill Roig

survw_effectsize

Effect size calculation for mixture survival distributions

Description

The function 'survw_effectsize' calculates the effect size according to the information on responders and non-responders.

Usage

```
survw_effectsize(
  lambda0_r,
  lambda0_nr,
  delta_p,
  p0,
  beta0,
  beta1,
  lambda1_r,
  lambda1_nr,
  tau,
  Delta_r = NULL,
  Delta_0 = NULL,
  Delta_nr = NULL,
  anticipated_effects = FALSE
)
```

Arguments

lambda0_r	scale parameter for the Weibull distribution in the control group for responders
lambda0_nr	scale parameter for the Weibull distribution in the control group for non-responders
delta_p	effect size for the response rate
p0	event rate for the response
beta0	shape parameter for the Weibull distribution in the control group
beta1	shape parameter for the Weibull distribution in the intervention group
lambda1_r	scale parameter for the Weibull distribution in the intervention group for responders
lambda1_nr	scale parameter for the Weibull distribution in the intervention group for non-responders
tau	follow-up
Delta_r	survival effect size between intervention and control groups for responders
Delta_0	survival effect size between responders and non-responders in the control group

Delta_nr survival effect size between intervention and control groups for non-responders
 anticipated_effects Logical parameter. If it is TRUE then the effect size is computed based on previous information on the effect sizes on response rate and survival-by-responses (that is, based on Delta_r, Delta_0, Delta_nr); otherwise is based on the distributional parameters (lambda0_r, lambda0_nr, lambda1_r, lambda1_nr, beta0, beta1).

Value

Effect size for overall survival

Author(s)

Marta Bofill Roig

survw_samplesize	<i>Sample size calculation for mixture survival distributions</i>
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Description

The function 'survw_samplesize' calculates the sample size according to the distributional parameters of the responders and non-responders.

Usage

```
survw_samplesize(
  lambda0_r,
  lambda0_nr,
  delta_p,
  p0,
  beta0,
  beta1,
  lambda1_r,
  lambda1_nr,
  lambda_cens,
  tau,
  alpha = 0.025,
  beta = 0.2
)
```

Arguments

lambda0_r	scale parameter for the Weibull distribution in the control group for responders
lambda0_nr	scale parameter for the Weibull distribution in the control group for non-responders
delta_p	effect size for the response rate
p0	event rate for the response
beta0	shape parameter for the Weibull distribution in the control group
beta1	shape parameter for the Weibull distribution in the intervention group

<code>lambda1_r</code>	scale parameter for the Weibull distribution in the intervention group for responders
<code>lambda1_nr</code>	scale parameter for the Weibull distribution in the intervention group for non-responders
<code>lambda_cens</code>	distributional parameter for the exponential distribution for the censoring
<code>tau</code>	follow-up
<code>alpha</code>	type I error
<code>beta</code>	type II error

Value

Sample size for overall survival

Author(s)

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Index

survmixture_f, [1](#)
survw_effectsize, [2](#)
survw_samplesize, [3](#)