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

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`survmixture_f` *Mixture survival function*

Description

The function 'survmixture_f' computes the survival distribution as a mixture of 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` *Sample size calculation for mixture survival distributions*

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

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
lambda_cens	distributional parameter for the exponential distribution for the censoring
tau	follow-up
alpha	type I error
beta	type II error

Value

Sample size for overall survival

Author(s)

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