

# Package ‘survmixer’

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**Title** Design of clinical trials with survival endpoints based on binary response.

**Version** 0.0.0.9000

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**Description** Sample size and effect size calculations for survival endpoints based on mixture survival-by-response model.

**License** GPL-3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.1.0

## R topics documented:

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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, ascale_r, ascale_nr, bshape = 1, p)
```

**Arguments**

t	time at which the survival distribution is evaluated
ascale_r	scale parameter for the Weibull distribution for responders
ascale_nr	scale parameter for the Weibull distribution for non-responders
bshape	shape parameter for the Weibull distribution
p	event rate for the response

**Value**

Mixture survival function evaluated at t

**Author(s)**

Marta Bofill Roig

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survw_effectsize	<i>Effect size calculation for mixture survival distributions</i>
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**Description**

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

**Usage**

```
survw_effectsize(
  ascale0_r,
  ascale0_nr,
  delta_p,
  p0,
  bshape0,
  bshape1,
  ascale1_r,
  ascale1_nr,
  tau,
  Delta_r = NULL,
  Delta_0 = NULL,
  Delta_nr = NULL,
  anticipated_effects = FALSE
)
```

**Arguments**

ascale0_r	scale parameter for the Weibull distribution in the control group for responders
ascale0_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
bshape0	shape parameter for the Weibull distribution in the control group

bshape1	shape parameter for the Weibull distribution in the intervention group
ascale1_r	scale parameter for the Weibull distribution in the intervention group for responders
ascale1_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 (ascale0_r, ascale0_nr, ascale1_r, ascale1_nr, bshape0, bshape1).

**Value**

Effect size for overall survival

**Author(s)**

Marta Bofill Roig

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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(
  ascale0_r,
  ascale0_nr,
  delta_p,
  p0,
  bshape0,
  bshape1,
  ascale1_r,
  ascale1_nr,
  ascale_cens,
  tau,
  alpha = 0.025,
  beta = 0.2
)
```

**Arguments**

ascale0_r	scale parameter for the Weibull distribution in the control group for responders
ascale0_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
bshape0	shape parameter for the Weibull distribution in the control group
bshape1	shape parameter for the Weibull distribution in the intervention group
ascale1_r	scale parameter for the Weibull distribution in the intervention group for responders
ascale1_nr	scale parameter for the Weibull distribution in the intervention group for non-responders
ascale_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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