

# Package ‘CenBAR’

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**Type** Package

**Imports** MASS, mvtnorm, glmnet, splines, survival, cvTools

**Depends** foreach, parallel

**Title** Broken Adaptive Ridge AFT Model with Censored Data

**Version** 0.1.1

**Description** Broken adaptive ridge estimator for censored data is used to select variables and estimate their coefficients in the semi-parametric accelerated failure time model for right-censored survival data.

**License** GPL-2

**RoxygenNote** 7.0.2

**NeedsCompilation** no

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CenBAR

*Broken Adaptive Ridge Estimator for Censored Data in AFT Model***Description**

Prints 'Broken adaptive ridge (BAR) method to the semi-parametric accelerated failure time (AFT) model for right-censored survival data by applying the Leurgan's synthetic data.'

**Usage**

```
CenBAR(X,Y,delta,lambda.path=NULL, enableScreening=FALSE)
```

**Arguments**

**X** input matrix, of dimension nobs x nvars; each row is an observation vector.

**Y** response variable.

**delta** The status indicator, normally 0=alive, 1=dead.

**lambda.path** A user supplied lambda sequence. One usage is to have the program compute its own lambda sequence based on nlambda and lambdaMax.  $\text{lamdMax} = \max((t(x)*Y)^2/(4*t(x)*x))$ . The other usage is use the sequence depend on user's data.

**enableScreening** If nobs > nvars, there is no need to do screening; If nobs <= nvars, it will do variable screening and then variable selection and estimate (default is FALSE).

**Value**

**beta** the coefficients estimation of the variables.

**Author(s)**

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**Examples**

```
X=matrix(rnorm(10*2),10,2)
Y=abs(rnorm(10))
delta=sample(0:1,10,replace=TRUE)
lambda.path <- seq(0.1, 10, l=5)
fit = CenBAR(X,Y,delta,lambda.path)
```

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