

# Package ‘AdjCOXPH’

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**Type** Package

**Title** A Novel Adjustment for Cox Proportional Hazards Model in Data with Long-term Survival

**Version** 1.0.0

**Depends** R (>= 3.5.0)

**Imports** stats

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**Description** Estimation for hazard ratio and difference in proportions in proportional cure model through KM curves and Cox hazard ratio.

**License** GPL-2 | GPL-3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 6.1.1

## R topics documented:

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adjustment	<i>An adjustment for Cox hazard ratio and an estimation for difference in proportions.</i>
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## Description

A novel adjustment method for Cox proportional hazards model in data with long-term survival.

## Usage

```
adjustment(HR_cox, HR_cox_CI, s1mix.chosen, s0mix.chosen, pi1.est, pi0.est,  
           m = NULL)
```

**Arguments**

HR_cox	Input. Hazard ratio obtained from Cox PH model.
HR_cox_CI	Input. Confidence interval of the hazard ratio obtained from Cox PH model.
s1mix.chosen	Input. Survival probabilities of Arm 1 estimated by KM at the chosen time.
s0mix.chosen	Input. Survival probabilities of Arm 0 estimated by KM at the chosen time.
pi1.est	Input. Proportion of poor-responders (uncured proportion) in Arm 1.
pi0.est	Input. Proportion of poor-responders (uncured proportion) in Arm 0.
m	Input (Optional). The polynomial order used in Taylor approximation. The default value is NULL that means $m$ is selected automatically.

**Value**

HR_cox	Cox hazard ratio you inputed.
HR_cox_CI	Confidence interval of the Cox hazard ratio you inputed.
HR_adj	Hazard ratio after adjustment.
HR_adj_CI	Confidence interval of the hazard ratio after adjustment.
DP_adj	Difference in proportions of the true responders.
DP_adj_CI	Confidence interval of the difference in proportions of the true responders.

**Examples**

```
library(AdjCOXPH)
s1mix.chosen <- c(0.48,0.39,0.35,0.35)
s0mix.chosen <- c(0.36,0.28,0.26,0.25)
pi1.est <- 0.65; pi0.est <- 0.75
HR_cox <- 0.71; HR_cox_CI <- c(0.51, 0.91)
adjustment(HR_cox, HR_cox_CI, s1mix.chosen, s0mix.chosen, pi1.est, pi0.est)
```

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