Package 'cfmortality'

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Type Package

Title Cystic Fibrosis Survival Prediction Model Based on Stanojevic Model

Version 0.3.0

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Description Allows clinicians to predict survival probabilities over the next two years for cystic fibrosis patients, based on the clinical prediction models published in Stanojevic et al. (2019) <doi:10.1183/13993003.00224-2019>.

License GPL-3

Encoding UTF-8

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`predictcfmortality` *Predicts 1- and 2- year Mortality Prediction Models in Cystic Fibrosis (CF)*

Description

Predicts 1- and 2- year Mortality Prediction Models in Cystic Fibrosis (CF)

Usage

```
predictcfmortality(
  age,
  male,
  fvc,
  fev1,
  fev1LastYear,
  bcepacia,
  underweight,
  nHosp,
  pancreaticInsufficient,
  CFRelatedDiabetes,
  ageAtDiagnosis
)
```

Arguments

`age`	Patient age, in years
`male`	A binary variable with 0 for females and 1 for males
`fvc`	FVC percent predicted in the current year (0-150)
`fev1`	FEV1 percent predicted in the current year (0-150)
`fev1LastYear`	FEV1 percent predicted in the preceding year (0-150)
`bcepacia`	A binary with 0 for no B. cepacia complex and 1 for B. cepacia complex
`underweight`	A binary with 1 for underweight (BMI < 18.5 if age >= 19 or BMI percentile <= 12% if age < 19)
`nHosp`	An integer number of hospitalizations in preceding year
`pancreaticInsufficient`	A binary taking 1 for pancreatic insufficient status and 0 otherwise
`CFRelatedDiabetes`	A binary variable for CF related diabetes
`ageAtDiagnosis`	A number for age at CF diagnosis in years

Value

1- and 2-year predicted mortality risk

Source

https://erj.ersjournals.com/content/early/2019/05/08/13993003.00224-2019

Examples

```
predictcfmortality (age = 16, male = 0, fvc = 66.7, fev1 = 47.4, fev1LastYear = 80.5,
                    bcepacia = 0, underweight = 0, nHosp = 0, pancreaticInsufficient = 1,
                     CFRelatedDiabetes = 0, ageAtDiagnosis = 0.9)
predictcfmortality (age = 40.4, male = 1, fvc = 25.7, fev1 = 19.2, fev1LastYear = 20,
                    bcepacia = 1, underweight = 1, nHosp = 6, pancreaticInsufficient = 0,
                     CFRelatedDiabetes = 0, ageAtDiagnosis = 27.2)
predictcfmortality (age = 44, male = 1, fvc = 72.95, fev1 = 55.5, fev1LastYear = 52.5,
                    bcepacia = 0, underweight = 1, nHosp = 0, pancreaticInsufficient = 0,
                     CFRelatedDiabetes = 0, ageAtDiagnosis = 29)
```

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