Package ‘PTwins’
November 19, 2019

Type Package
Title Percentile Estimation of Fetal Weight for Twins by Chorionicity
Version 0.1.1
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Description Package to Percentile estimation of fetal weight for twins by chorionicity (dichorionic-diamniotic or monochorionic-diamniotic).
License GPL-3
Encoding UTF-8
LazyData true
NeedsCompilation no
Repository CRAN
Date/Publication 2019-11-19 13:00:02 UTC

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PTwins Percentile Estimation of Fetal Weight for Twins by Chorionicity

Description

The PTwins function estimates the fetus weight percentile using a multilevel linear model developed from a Spanish twin cohort.
Usage

PTwins(weight, week, day=3, dichorionic=TRUE)

Arguments

weight  The fetus weight estimated by ultrasound at a gestational age (weeks) using
        Hadlock formula:
        \[
        \log_{10}(FW) = 1.3596 - 0.00386(AC) x (FL) + 0.0064(HC) + 0.0006(BPD) x (AC) +
        0.0424(AC) + 0.174(FL)
        \]
        FW: fetal weight, AC: abdominal circumference, FL: femur length,
        HC: head circumference, BPD: biparital diameter
week  The gestational age in weeks for which the Fetus weight where estimated
day  The exact day in the gestational week at which the fetus weight were estimated.
        For the percentile calculation, if we choose for example: week=23, day=2, this
        is equivalent to 163 days of GA
dichorionic  This parameter indicates if the fetus is dichorionic-diamniotic (dichorionic=TRUE)
        or monochorionic-monoamniotic (dichorionic=FALSE)

Details

The inputs weight, week, day or dichorionic can be a number or a vector to include several cases

Value

The returned fit object of PTwins contains the following components.

Percentile  Percentile of the fetus weight
weight  fetus weight
GA  Gestational age in exact weeks

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Examples

#Percentile estimation of a dichorionic-diamniotic fetus of 2300 grams
#of weight estimated at the 22nd week (+2 days) of gestational age.
PTwins(weight=2300, week=22, day=2, dichorionic=TRUE)

#Percentile estimation of a monochorionic-diamniotic fetus of 2300 grams
#of weight estimated at the 22nd week (+2 days) of gestational age.
PTwins(weight=2300, week=22, day=2, dichorionic=FALSE)

#Percentile estimation of a dataframe that includes 10 cases
WEIGHT<-round(rnorm(10,2100,125),digits=0)
```r
WEEK<-sample(seq(18,36),10)
DAY<-sample(seq(0,7),10,replace=TRUE)
dichorionic<-sample(c("TRUE","FALSE"),10,replace=TRUE)
DT<-data.frame(WEIGHT,WEEK,DAY,dichorionic)

PTwins(weight=DT$WEIGHT, week=DT$WEEK, day=DT$DAY, dichorionic=DT$dichorionic)
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