Package ‘powerCompRisk’

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Type Package

Title Power Analysis Tool for Joint Testing Hazards with Competing Risks Data

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Depends R (>= 3.1.0), mvtnorm, stats

Description A power analysis tool for jointly testing the cause-1 cause-specific hazard and the any-cause hazard with competing risks data.

License GPL-2

Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

NeedsCompilation no

Repository CRAN

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Description
Power Analysis Tool for Joint Testing Hazards with Competing Risks Data.

Usage
powerCompRisk(alpha, beta, lambda_11, RR, HR_1, HR_all, attrition, r, f, a1)

Arguments
alpha Type I error.
beta Type II error.
lambda_11 Cause-1 cause-specific hazard in group 1.
RR Relative risk of cause-1 failure versus the any-cause failure in group 1.
HR_1 Pre-specified cause-1 cause-specific hazard ratio between groups 1 and 2.
HR_all Pre-specified any-cause hazard ratio between groups 1 and 2.
attrition Attrition rate due to lost to follow-up.
r Length of patient accrual period.
f Maximum follow-up period.
a1 Sample allocation proportion for group 1.

Value
A dataframe with variables Chi2 Joint, Maximum Joint, Bonferroni methods. The first entry is the required number of cause-1 failures and the second entry is the required total number of patients.

References

Examples
library(powerCompRisk)
powerCompRisk(alpha = 0.05, beta = 0.2, lambda_11 = 0.3, RR = 0.8,
HR_1 = 1.44, HR_all = 1.33, attrition = 0.1, r = 1, f = 8, a1 = 0.5)
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