

Package: diagcounts (via r-universe)

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Type Package

Title Recover Diagnostic Test Accuracy Counts from Reported Accuracy Measures

Version 0.1.0

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Description Implements a system of linear equations to recover unreported diagnostic test accuracy cell counts from commonly reported measures such as sensitivity, specificity, predictive values, prevalence, and sample size. The package is intended for applied researchers who require complete 2x2 table counts for downstream analyses.

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Encoding UTF-8

RoxygenNote 7.3.3

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

NeedsCompilation no

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Repository <https://cran.r-universe.dev>

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derive_counts *Derive Unreported Diagnostic Test Counts*

Description

Recovers unreported true positive (TP), false negative (FN), false positive (FP), and true negative (TN) counts using a system of linear equations.

Usage

```
derive_counts(
  n,
  sensitivity = NULL,
  specificity = NULL,
  ppv = NULL,
  npv = NULL,
  prevalence = NULL,
  tol = 1e-06
)
```

Arguments

n	Total sample size.
sensitivity	Test sensitivity.
specificity	Test specificity.
ppv	Positive predictive value.
npv	Negative predictive value.
prevalence	Pretest probability.
tol	Numerical tolerance for validation.

Value

An object of class `diagcounts` with elements TP, FN, FP, TN.

References

Xie X, Wang M, Antony J, Vandersluis S, Kabali CB (2025). System of Linear Equations to Derive Unreported Test Accuracy Counts. *Statistics in Medicine*. <https://doi.org/10.1002/sim.70336>

Examples

```
# Recover unreported diagnostic counts from published accuracy measures
derive_counts(
  n = 105,
  sensitivity = 0.6,
  specificity = 0.893,
```

```
prevalence = 0.733
)

# Recover counts using predictive values
derive_counts(
  n = 160,
  sensitivity = 0.75,
  ppv = 0.75,
  npv = 0.75
)
```

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