Package 'diagcounts'

January 14, 2026

Type Package

Title Recover Diagnostic Test Accuracy Counts from Reported Accuracy Measures

Version 0.1.0

Date 2026-01-09

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 CRAN

Date/Publication 2026-01-14 18:00:09 UTC

Contents

`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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