<table>
<thead>
<tr>
<th></th>
<th>Alive</th>
<th>Dead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>38</td>
<td>14</td>
</tr>
<tr>
<td>Treatment</td>
<td>51</td>
<td>4</td>
</tr>
</tbody>
</table>

Fisher's Exact Test for Count Data

Data: tuberculosis

p-value = 0.008993

\[ \text{Pr}(Y=1 \mid X=x) = \frac{\exp(a + bx)}{1 + \exp(a + bx)} \]

\[ T = \frac{(O_1 - E_1)^2}{E_1} + \frac{(O_2 - E_2)^2}{E_2} \]
Using and Understanding Medical Statistics

5th, revised and extended edition

The fifth revised edition of this highly successful book presents the most extensive enhancement since Using and Understanding Medical Statistics was first published 30 years ago. Without question, the single greatest change has been the inclusion of source code, together with selected output, for the award-winning, open-source, statistical package known as R. This innovation has enabled the authors to de-emphasize formulae and calculations, and let software do all of the ‘heavy lifting’.

This edition also introduces readers to several graphical statistical tools, such as Q-Q plots to check normality, residual plots for multiple regression models, funnel plots to detect publication bias in a meta-analysis and Bland-Altman plots for assessing agreement in clinical measurements. New examples that better serve the expository goals have been added to a half-dozen chapters. In addition, there are new sections describing exact confidence bands for the Kaplan-Meier estimator, as well as negative binomial and zero-inflated Poisson regression models for over-dispersed count data. The end result is not only an excellent introduction to medical statistics, but also an invaluable reference for every discerning reader of medical research literature.

Fields of Interest: Medical Statistics, General Medicine, Communication, Epidemiology, Public Health, Social Medicine

Matthews, D.E. (Waterloo, Ont.); Farewell, V.T. (Cambridge)
Using and Understanding Medical Statistics
5th, revised and extended edition
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- Comparisons Based on the Normal Distribution
- Testing the Equality of Variances

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- Graphical Tools for Model Checking
- Correlation
- The Analysis of Variance

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- Logistic Regression
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- Understanding Two-Factor Interactions
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Data Analysis
- Quality Data
- Initial or Exploratory Analysis
- Primary Analysis
- Secondary Analyses

The Question of Sample Size
- General Aspects of Sample Size Calculations
- Two Examples of Sample Size Calculations
- Some Hazards of Small Studies

The Design of Clinical Trials
- General Considerations
- Trial Organization
- Randomized versus Historical Controls
- Intention to Treat
- Factorial Designs
- Repeated Significance Testing
- Sequential Analysis

Further Comments Regarding Clinical Trials
- Surrogate Endpoints
- Active Control or Equivalence Trials
- Other Designs
- Multiple Outcomes
- Multiple Treatment Arms
- Stochastic Curtailment
- Adaptive Trials

Meta-Analysis
- Background
- Study Heterogeneity
- An Illustrative Example
- Graphical Displays
- Using Funnel Plots to Detect Publication Bias
- Sensitivity

Epidemiological Applications
- Epidemiological Studies
- Relative Risk Models
- Odds Ratio Models
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- Some General Considerations
- Sensitivity, Specificity, and Post-Test Probabilities
- Likelihood Ratios and Related Issues

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- Intraclass Correlation Coefficient
- Assessing Agreement
- Bland-Altman Plots
- The Kappa Coefficient
- Weighted K
- Measures of Agreement for Discrete Data
- The Dependence of K on Prevalence

References
Subject Index

Sample R Codes included
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5th, revised and extended edition

<table>
<thead>
<tr>
<th>Control</th>
<th>Treatment</th>
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<td>38</td>
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\[
\text{sher.test(tuberculosis)}
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data: \text{tuberculosis} \\
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