Medical Statistics: A Textbook for the Health Sciences, Fourth Edition:

Provides students and practitioners with a clear, concise introduction to the statistics they will come across in their regular reading of clinical papers.

Written by three experts with wide teaching and consulting experience, ***Medical Statistics: A Textbook for the Health Sciences, Fourth Edition:***

- Assumes no prior knowledge of statistics
- Covers all essential statistical methods
- Completely revised, updated and expanded
- Includes numerous examples and exercises on the interpretation of the statistics in papers published in medical journals

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Known errata (please let the authors know of any others)

March 2010

Page	Location	Problem an d solution
v	Line-4 TOC entry 3.2	"data" is mis-spelled "daa"
2	Line 17	"Evidence-based health care" should be abbreviated as "EBHC" rather than "EHBC".
54	Line 10 Line -11	Replace 0.05 by 50.95 The line should read "The probability is 50.95/1000 = 0.0595" rather than "..."0.95/1000...". Delete second 'of' . The line should read 'the prevalence of heart failure'

57	Table 4.5	Row labels in Table 4.5 are wrong. In the APACHE-II column replace the first row "<8" with ">8" and the 2nd row of "'≥8' by '≤8'.
111	Figure 7.1	Add "and not clinically important" to confidence interval label on the y-axis which is closest to the horizontal x-axis; so it should now read "Not statistically significant and not clinically important".
170	Line 12	Replace 95% CI '0.1 to 169.9' with '0.4 to 44.4'. The sentence should now read "For example, from Table 9.4 , the OR for 'anaemia' for a women aged under 30 years is 4.3, with 95% CI of 0.4 to 44.4.".
196	Line 22	Replace 'log' by 'exp'. Sentence should now read " ... and the effect substantial with HR = exp (0.5008) = 1.65 (95% CI 1.1.6 to 2.36) in favour of.....".
235	Line 9	Replace "(see section 12.11)" with (details beyond this book but available in Altman et al (2000)
237	Table 12.8	Table 12.8 last column of data, 4th row of table, line 7 replace percentage dead of 60% by 29%.
260	Line 14	replace "but" by "put". The sentence should now read "We suggest as an exercise for the reader in judging how well we as authors put into practice what we have advocated in this chapter,..."
283	Line 1	Replace 'dependent by 'independent' so the sentence should read: "The dependent variable is the outcome, and the independent variables include the baseline and a dummy variable for the intervention."
302	Line 9 Line 15/16 Line-5 Line-4	(i) (95-70)/10 = 2.5, not 2. Add "(iii) 1 - (0.0062 + 0.0668) = 0.9270" replace (a)T by (a) F . replace (c) F by (c) T
315	Statistical tables	The title of Table 3 is wrong in the table of contents, so replace with "Table T3 Student's *t*-distribution".
316	Table T1 heading	Change title and heading of Table 1 to read. "Table T1. The Normal distribution. The value tabulated is the probability that a Normally distributed random variable with mean zero and standard deviation one will be greater than z or less than -z."

Reviews

Medical Statistics: A Textbook for the Health Sciences (4th ed.).
Michael J. CAMPBELL, David MACHIN, and Stephen J. WALTERS. Chichester, West Sussex, U.K.:Wiley, 2007, xii+331 pp., $37.50 (H), ISBN: 978-0-470-02519-2.

This venerable text is now in its fourth edition in 17 years. A new co-author, Stephen J. Walters, has been added and the book has seen significant changes since the third edition was published in 1999. The book still aims to explain "medical statistics with as little technical detail, so as to make the textbook as accessible to a wide audience," and the authors certainly achieve this. It is intended for both *consumers* of statistics—those whose primary need of statistical knowledge is for critical evaluation of published research, and for *doers* of statistics—those who need to know how to conduct basic statistical analyses. The first half of the text is targeted at the consumers, while the remainder is aimed at the doers.

The new edition is much longer (more than 100 pages) than the previous edition. Several new chapters have been added: "Survival analysis," "Reliability and method comparison studies," and "Sample size issues." Each chapter is now laid out so that more mathematical details are given their own section ("Technical details") rather than being relegated to an appendix. Most of the examples are motivated by journal articles published in the last five years, and some generic computer output is included. These two improvements lend the book a fresher, more modern feel. The chapter of multiple choice exercises found in the previous edition has been replaced with a variety of in-chapter exercises with detailed solutions provided at the end of the text. Finally, the new edition has a more logical layout of chapter topics that students will unknowingly appreciate. Given these substantial changes, I agree with the authors' that this fourth edition is "essentially a new textbook." Outside of the fact that the text is now quite a bit longer, I think that all of the changes are for the better. This an excellent text for teaching a introductory course in biostatistics and for those interested in self-study.

J. Wade DAVIS
University of Missouri

The American Statistician, November 2008, Vol. 62, No. 4 363

"…this reviewer recommends without any reservation this book for an introductory course in medical statistics." (*MAA Reviews*, December 28, 2007)

Biometrics 2008 , 64, 1309-10
Ed Thomas M Loughin

CAMPBELL, M. J., MACHIN, D., and WALTERS, S. J.
Medical Statistics: A Textbook for the Health Sciences, 4th edition. John Wiley and Sons, Chichester, England, 2007. ix + 331 pp. $37.50/€24.90. ISBN 9780470025192.
Previous editions of this book were reviewed in *Biometrics* **47,** p. 348 (1st edition) and *Biometrics* **49,** p. 1286 (2nd edition).
The book is intended for a target audience of students (and some professionals) in the health sciences. The authors obviously do not intend their readers to become self-sufficient statisticians just by reading this book: Chapter 1 includes a section entitled, “Howa statistician can help.” Instead the authors apparently hope for their readers to be able to think statistically in the contexts of their own work. This is a far more sensible goal, with a far greater chance of success.
The authors state that this new edition is a “total revamp” of the textbook, although it is intended to retain the low technical level of its predecessors. Indeed, I found that the book places very little emphasis on calculations. The authors instead stress general statistical understanding, appropriate uses of techniques, and interpretation of results. For example, there is a “Points when reading the literature” section in most chapters, a great idea that recognizes that the most common opportunity for their target audience to use statistical thinking is in the interpretation of someone else’s published analysis.
Coverage of individual statistical methods is brief and shallow, but considering the scope of topics introduced within the book, the alternative would be an 800-page tome. The authors focus on the most simplified forms of analysis of categorical and numerical data, including touching on linear and logistic regression, survival analysis, and reliability of diagnostic tests. I suspect that individual instructors will often have a quibble with one or another of these simplified presentations, but again, the authors would have that the readers understand the principles of an analysis rather than the details. Chapters on observational studies, randomized trials, and sample size issues similarly give readers something to think about, without providing a wealth of solutions. Provided that the lesson on “How a statistician can help” is repeated often throughout a course, this book seems to me to be a very useful course text for an audience of students in the health sciences.

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Comment from the Stata technical group

Medical Statistics: A Textbook for the Health Sciences, Fourth Edition, by Michael J. Campbell, David Machin, and Stephen J. Walters, is one of many texts suitable for a semester-long statistics course for health professionals. However, it is both thorough and easy to read, setting it apart from other texts. The authors include the standard tools relevant to health professionals: odds ratios, survival analysis, observational studies, and more. Another helpful feature in this text is a section at the end of each chapter listing points the reader should consider when reading research publications about the use of the discussed methods.