Online Biostatistics Calculators

Pantelis Bagos

2020

Overview

- Social Science Statistics
- OpenEpi
- StatPages
- MiniMeta
- metaDTA

Social Science Statistics

- A calculator with most commonly used statistical tests
- Includes: ANOVA, regression, correlation, t-test, Chi-square tests, 2x2 tables, p-values and CIs
- https://www.socscistatistics.com/tests/

https://www.socscistatistics.com/tests/

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{(N_1-1)s_1^2 + (N_2-1)s_2^2}{N_1+N_2-2}\right)\left(\frac{1}{N_1}+\frac{1}{N_2}\right)}}$$

Social Science Statistics

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{(N_1-1)s_1^2 + (N_2-1)s_2^2}{N_1+N_2-2}\right)\left(\frac{1}{N_1}+\frac{1}{N_2}\right)}}$$

Statistics Calculators

Here you'll find a set of statistics calculators that are intuitive and easy to use. Included are a variety of tests of significance, plus correlation, effect size and confidence interval calculators.

If you're not sure what statistics calculator you require, check out our Which Statistics Test? wizard.

Significance Tests

- One-Way ANOVA Calculator for Independent Measures
- One-Way ANOVA Calculator for Repeated Measures
- Binomial Test Calculator
- Chi-Square Calculator for 2 x 2 Contingency Table
- Chi-Square Calculator for 5 x 5 (or less) Contingency Table
- Chi-Square Calculator for Goodness of Fit
- Fisher Exact Test Calculator for 2 x 2 Contingency Table
- The Friedman Test for Repeated Measures
- The Kolmogorov-Smirnov Test of Normality

- The Friedman Test for Repeated Measures
- The Kolmogorov-Smirnov Test of Normality
- Kruskal-Wallis Test Calculator for Independent Measures
- Levene's Test of Homogeneity of Variance Calculator
- Mann-Whitney U Test Calculator
- Sign Test Calculator
- Standard Error Calculator
- T-Test Calculator for 2 Independent Means
- T-Test Calculator for 2 Dependent Means
- T-Test Calculator for a Single Sample
- Wilcoxon Signed-Rank Test Calculator
- Z Score Calculator for a Single Raw Value
- Z-Test Calculator for a Single Sample
- Z-Test Calculator for 2 Population Proportions

Prediction

- Linear Regression Calculator
- Multiple Regression Calculator

Tests of Correlation

- Pearson Correlation Coefficient Calculator
- Phi Coefficient Calculator
- Point-Biserial Correlation Coefficient Calculator
- Spearman's Rho (Correlation) Calculator

P Values

- P-value from Z score.
- P-value from t score.
- P-value from chi-square score.
- P-value from *F*-ratio score.
- P-value from Pearson (r) score.
- Critical Values Calculator

.

Confidence Intervals

- A Single Sample Confidence Interval Calculator (T Statistic)
- A Single-Sample Confidence Interval Calculator (Z Statistic)
- An Independent Samples Confidence Interval Calculator

Biostatistics

- Number Needed To Treat Calculator
- Relative Risk and Odds Ratio Calculator

Utilities

- A Baby Growth Percentile Calculator
- A Normal Distribution Generator
- A Rank Order Calculator

Not sure which statistics test you should use? Check out our wizard!

OpenEpi

- An online epidemiological package
- Includes: SMR, 2x2 tables, rates, ratios, t-test, ANOVA, sample size and power
- Can be downloaded
- https://www.openepi.com/Menu/OE_Menu.htm

https://www.openepi.com/Menu/OE_Menu.htm

Expand All | Collapse

- Home
- Info and Help
- Language/Options/Settings
- Calculator
- Counts
  - Std.Mort.Ratio
  - Proportion
  - Two by Two Table
  - Dose-Response
  - R by C Table
  - Matched Case Control
  - Screening
- Person Time
  - 1 Rate
  - Compare 2 Rates
- Continuous Variables
  - Mean CI
  - Median/%ile CI
  - t test
  - ANOVA
- Sample Size
- Power
- Random numbers
- Searches
  - Google--Internet
  - PubMed--MEDLARS
- Internet Links
- Download OpenEpi
- Development

OpenEpi Open Source Epidemiologic Statistics for Public Health

Now in English, French, Spanish, Italian, and Portuguese

Version 3.01 Updated 2013/04/06 ***Try it in a Smartphone browser!***

OpenEpi provides statistics for counts and measurements in descriptive and analytic studies, stratified analysis with exact confidence limits, matched pair and person-time analysis, sample size and power calculations, random numbers, sensitivity, specificity and other evaluation statistics, R x C tables, chi-square for dose-response, and links to other useful sites.

OpenEpi is free and **open source** software for epidemiologic statistics. It can be run from a web server or downloaded and run without a web connection. A server is not required. The programs are written in JavaScript and HTML, and should be compatible with recent Linux, Mac, and PC browsers, regardless of operating system. (If you are seeing this, your browser settings are allowing JavaScript.) The programs can be run in the browsers of many iPhone and Android cellphones

Test results are provided for each module so that you can judge reliability, although it is always a good idea to check important results with software from more than one source. Links to hundreds of Internet calculators are provided.

The programs have an open source license and can be downloaded, distributed, or translated. Some of the components from other sources have licensing statements in the source code files. Licenses referred to are available in full text at OpenSource.org/licenses. OpenEpi development was supported in part by a grant from the Bill and Melinda Gates Foundation to Emory University, Rollins School of Public Health.

A toolkit for creating new modules and for translation is included. Please let us know if you would like to collaborate in this way. Suggestions, comments, and expressions of interest in contributing to this effort should be sent by email to: andy.dean@gmail.com, cdckms@sph.emory.edu, and msoe@cdc.gov

Suggested citation: **Dean AG, Sullivan KM, Soe MM. OpenEpi: Open Source Epidemiologic Statistics for Public Health, Version. www.OpenEpi.com, updated 2013/04/06, accessed 2020/05/18.**

Enter New Data

Two-Sample Independent *t* Test

This module compares the means of two independent samples. Entering desired confidence interval, sample size, mean and standard deviation (or standard error) of each sample group will test for significant difference between two sample means. The mean difference with confidence interval would also be displayed.

Two-Sample Independent *t* Test

Confidence Interval (%) (two-sided)	95	Enter a value between 0 and 100, usually 95%		
	Sample Size	Mean	Std. Dev.	(or) Std. Error
Group 1	7	11.57	8.81	
Group 2	18	7.44	3.698	

Two-Sample Independent *t* Test

Input Data

Two-sided confidence interval	95%			
	Sample size	Mean	Std. Dev.	Std. Error
Group-1	7	11.57	8.81	
Group-2	18	7.44	3.698	

Result	*t* statistics	*df*	p-value[1]	Mean Difference	Lower Limit	Upper Limit
Equal variance	1.68286	23	0.105931	4.13	-0.946799	9.2068
Unequal variance	1.19986	7	0.269221	4.13	-4.00922	12.2692

	F statistics	df(numerator,denominator)	p-value[2]
Test for equality of variance[2]	5.67568	6,17	0.00429641

[1] p-value (two-tailed)
[2] Hartley's *F*-test for equality of variance

Author(s)

Statistics
Minn M. Soe and Kevin M. Sullivan, Emory University

Interface
Andrew G. Dean, EpiInformatics.com,
and Roger A. Mir

Select, copy, and paste results to other programs or print from browser with Ctrl-P.

Clear Calculate

Two-Sample Independent *t* Test					
Confidence Interval (%) {two-sided}			95	*Enter a value between 0 and 100, usually 95%*	
	Sample Size	**Mean**	**Std. Dev.**	(or)	**Std. Error**
Group 1	7	11.57	8.81		
Group 2	18	7.44	3.698		

Two-Sample Independent *t* Test

Input Data

Two-sided confidence interval 95%

	Sample size	Mean	Std. Dev.	Std. Error
Group-1	7	11.57	8.81	
Group-2	18	7.44	3.698	

Result	*t* statistics	*df*	p-value[1]	Mean Difference	Lower Limit	Upper Limit
Equal variance	1.68286	23	0.1059	4.13	-0.946799	9.2068
Unequal variance	1.19986	7	0.2692	4.13	-4.00922	12.2692

	F statistics	*df*(numerator,denominator)	p-value[1]
Test for equality of variance[2]	5.67568	6,17	0.004296

[1] p-value (two-tailed)

[2] Hartley's *f* test for equality of variance

Results from OpenEpi, Version 3, open source calculator--t_testMean
Print from the browser with ctrl-P
or select text to copy and paste to other programs.

Return to main menu

Download OpenEpi

Make it available when the Internet is down

Download File, Save and Unzip

Download
OpenEpi.zip
Zipped file for all systems.
15 megabytes

For All Operating Systems With Browsers

- Download the ZIP file on the left.
- Unzip to a folder on your hard disk (e.g., C:/OpenEpi/). Unzipping programs differ; be sure that yours will create the /OpenEpi/ folder.
- To use the programs, run index.htm in a JavaScript-enabled browser, or click on the OpenEpi folder.
- Output can be saved with the SAVE AS command in the browser.

StatPages

- A large collection of various online calculators
- Probability distribution functions: tables, graphs, random number generators
- Descriptive statistics, histograms, charts
- Confidence intervals, single-population tests
- Sample comparisons: t-tests, ANOVAs, non-parametric comparisons
- Contingency tables, cross-tabs, Chi-Square tests
- Can be useful in more advanced cases (logistic regression, survival analysis and so on)
- A downside is that, since it is a collection, some links may not work and there is variability in the interfaces
- https://statpages.info/

https://statpages.info/

Precision Consulting -- Offers dissertation help, editing, tutoring, and coaching services on a variety of statistical methods including ANOVA, Multiple Linear Regression, Structural Equation Modeling, Confirmatory Factor Analysis, and Hierarchical Linear Modeling. If you're stuck on your proposal, methodology, or statistical phase of your dissertation, you might want to contact them.

The web pages listed below comprise a powerful, conveniently-accessible, multi-platform statistical software package. There are also links to online statistics books, tutorials, downloadable software, and related resources.

These pages are located on servers all over the world, and are the result of much cleverness and hard work on the part of some very talented individuals. So if you find a page useful it would be nice to send the authors a short e-mail expressing your appreciation for their hard work and generosity in making this software freely accessible to the world.

Table of Contents for this page...

Descriptive Statistics, Histograms, Charts... [return to Table of Contents]

- Statiscope -- a beautifully-implemented page for calculating and displaying a large number of descriptive statistics from a set of numbers you enter (Java code)
- Xuru's page for single variable descriptive statistics: mean, median, sd, variance, mean abs deviation, geometric mean & sd, skewness, kurtosis, quartiles, standard errors, Anderson-Darling normality test, and some confidence intervals of the mean and sd. You can copy and paste data directly from a spreadsheet or a tabulated data file, or enter numbers manually.
- Descriptive Sampling Statistics -- Enter up to 80 numbers; this page will calculate the mean, variance, SD, CV, skewness and kurtosis.
- Descriptive statistics (mean, SD, SEM, and CI of mean). Can enter or paste raw data, or enter mean, SD or SEM, and N to get CI.
- Descriptive Statistics -- Enter up to 80 values; page calculates: N, mean, variance, SD, CV, skewness, kurtosis, SEM, median, min, max, range, 1^{st} & 3^{rd} quartiles, interquartile range, quartile deviation, coeff of quartile var, and absolute deviation.
- Measuring for Accuracy -- Given a set of observed and predicted values, this page calculates the SD of errors, mean absolute & relative error, and Durbin-Watson statistic.
- Arithmetic, Geometric, and Harmonic Means -- of up to 80 values.
- Rweb - extensive tabular and graphical descriptive summarization: mean, quartiles, histograms, scatterplot matrices (with smoothers), QQ plots (normal and pairwise), time series, box plots. (When you get to the **Rweb** page, scroll down to the **Analysis Menu** and select **Summary**.)
- The Data Applet provides descriptive statistics, histograms, boxplots, and scatterplots
- A variety of descriptive statistics and a stem and leaf display
- Detect Outliers -- this calculator performs Grubbs' test, also called the ESD method (extreme studentized deviate), to determine whether one of the values in the list you enter is a signficant outlier from the rest. Also contains an **excellent** discussion of what to do about outliers.
- Combine Subgroups -- calculate the mean and SD of a combination of groups from the N, mean and SD of each group.
- Basic descriptive statistics (mean, sum of squares, variance, standard deviation, minimum, 25^{th} percentile, median, 75^{th} percentile, and maximum for up to 500 numbers
- Empirical Distribution Function -- from up to 42 sets of [value, frequency].
- Multinomial Distributions -- Enter up to 12 values and their corresponding probabilities, and this page will calculate Expected Value, Variance, Standard Deviation, & Coefficient of Variation
- Paired Data Sets Statistics -- Enter up to 28 sample paired data sets, and this page will calculate means, variances, and covariance
- Histogram -- Enter up to 80 numbers, and this page will display a histogram.
- Histogram from a set of numbers, lets you dynamically alter the interval width and see the effect immediately
- Determination and Removal of Outliers -- Given a set of numbers, this page iteratively isolates potential outliers for removal.

Confidence Intervals, Single-Population Tests, Measurement Errors... [return to Table of Contents]

- Confidence Intervals...
  - Exact C.I.'s for Binomial (observed proportion) and Poisson (observed count). (Also available as an Excel spreadsheet, and as an Excel Add-In.)
  - Exact and "modified Wald" C.I.'s for observed proportion or count, with a good explanation
  - Bayesian "credible" intervals around an observed proportion. Somewhat comparable to the "classic" confidence intervals, but tend to be slightly narrower.
  - 95% or 99% C.I. for proportions for any specified sample size and population size
  - Confidence interval around an observed sample SD, assuming the data are sampled from a Normal distribution
  - Percentage: Estimation & Testing -- calculates exact binomial confidence intervals and tests of hypothesis for population proportion, from infinite or finite populations.
- Tolerance Intervals...
  - Tolerance Intervals for the Normal Distribution. (Don't confuse *tolerance* intervals with *confidence* intervals!) A *tolerance interval* for a measured quantity is the interval in which there is a specified likelihood that a specified *fraction of the population's values* lie. This page will calculate 1-sided and 2-sided tolerance intervals for any specified population fraction, and for any specified level of confidence, from the mean and standard deviation of a finite sample, under the assumption that the population is normally distributed. **These calculations are also available in a downloadable Excel spreadsheet: tolintvl.xls .**
- Single-Population Tests...
  - Sign and Binomial test -- test an observed proportion against a proposed population proportion
  - Mean, SD, confidence interval, etc. for a set of values
  - An excellent One-Sample Student t Test page -- enter or paste raw data, or enter mean, SD or SEM, and N
  - One-sample Student t test for Mean vs. a Specified Value -- for up to 80 observations, and a postulated population mean.
  - Another Student t-test of a single mean (vs specified value) from N, mean, SD
  - Test for Asymmetry around zero -- Enter a set of numbers (usually a mix of positive and negative numbers), and the program will apply a non-parametric test (originally created by R. A. Fisher) of whether the numbers are consistent with a population frequency distribution that is symmetrical around zero (but does not necessarily have to be normal). It is a frequentist test to work Darwin's experiment with matched pairs, and experiments like it.
  - Test for the mean being greater than some specified value. This unusual test is Bayesian *and* frequentist at the same time. The null hypothesis asserts some value for the mean of a population of positive numbers; the alternative hypothesis says the mean is higher than that. This test gives a Bayesian likelihood ratio that is also an upper bound on the p-value of the frequentist test.
  - Test observed vs. expected rates of occurrence of events, based on Poisson distribution; also includes confidence intervals and analysis of rate-ratios (such as Standardized Mortality Ratio, Morbidity Ratio, and Comparative Mortality Figure)
  - Similar to above, but used to study the distribution of accidents and events at the individual level
  - Exact confidence intervals around a rate-ratio, using Liddell's method (also contains a number of common approximations, for comparison)
  - Test observed vs expected proportions, based on the Binomial distribution
  - Binomial Test -- whether the number of "successes" differ from what was expected based on the number of trials and the probability of success.
  - Similar to above, but deals with the probability of a particular sample size, given an observed 'x' number positive (or white, or car crashes) vs. an expected 'U' proportion positive
  - Compatibility of Multi-Counts -- tests whether up to 14 observed event counts (each over the same amount of time) are consistent with a single expected event rate.
  - Runs Test for Randomness -- Enter up to 80 numbers, and this page will calculate a runs test to see if the numbers form a random sequence
  - Testing the Variance -- of up to 80 observations against a postulated population variance.
  - Analyze observed proportions in samples from finite populations, based on the Hypergeometric distribution
  - Test for Normality -- Enter up to 80 numbers, and this page will test for normality based on the Jarque-Bera statistic
  - Test for Homogeneity of a Population -- enter form 25 to 84 values; page provides information to test whether histogram is unimodal.
  - Shapiro-Wilk Test for Normality -- enter numbers into page, or read them from a text file. Performs normality test, also shows a histogram of the data. For a description of the test, along with the formulas and programming, click here.
  - Test for Normality -- enter up to 42 sets of [value, frequency]; page will calculate skewness, kurtosis, and Liliefors test for consistency with a normal distribution.
  - Test for Uniform Distribution -- enter up to 42 sets of [value, frequency]; page will calculate the Kolmogorov-Smirnov test for consistency with a uniform distribution.
  - Testing Poisson Process -- enter up to 14 sets of [value, frequency]; page will calculate a Chi square test for consistency with a Poisson distribution.
  - Lilliefors Test for Exponential Distribution -- tests whether a set of observed values are consistent with an exponential distribution.
- Chi-Square "Goodness of Fit" test for observed vs expected counts (NOT from Contingency Tables)...
  - Chi Square test -- takes observed values, and expected values that can be specified as expected occurrences, or percentages or fractions of the total. Data can be typed in or copied and pasted.
  - Chi-Square test
  - Chi-Square test
  - Goodness-of-Fit for Discrete Variables -- Chi square test for up to 14 sets of [Observed, Expected] frequencies.
- Measurement Errors and Error Propagation...
  - Calculate how the standard error of one or two variables propagates through any function of those variables
  - Compute confidence intervals of a sum, difference, quotient or product of two means, assuming both groups follow a Gaussian distribution.

Sample Comparisons: t-Tests, ANOVAs, Non-parametric Comparisons... [return to Table of Contents]

- Student t-test (for comparing two samples)...
  - a very general Student t-test web page -- paired or unpaired, equal- or unequal-variance, from individual observations (which can be key-entered or copy/pasted) or summary data (N, Mean, SD or SEM). Includes explanations and advice on carrying out this type of test.
  - a very polished calculator for two-group Student t test, with graphical display of means and confidence intervals, and an interpretation of the results. Can take individual values or summary statistics (N, mean, SD) for each group.
  - t-test, paired or unpaired
  - t-test, paired or unpaired
  - t-test, paired
  - Paired Student t test -- enter data into the page, or read it from a text file. This page also produces histograms of the data (each group, and paired differences). For a detailed description of the test, with formulas and examples, click here.
  - Paired Student t Test -- on up to 42 pairs of values, along with a postulated population mean difference.
  - Testing Two Populations -- Unpaired Student t test for up to 80 observations in each sample. Also accepts a postulated difference between the two population means, which can be different from 0.
  - Unpaired t-test from summary data (N, mean, SD)
  - Very general t-test program for comparing measured quantities, observed counts, and proportions between two unpaired samples; also produces risk ratio, odds ratio, number needed to treat, and population analysis.
  -
- ANOVA (Analysis of Variance) -- comparison of two **or more** samples ...
  - One-Way and Factorial ANOVA for uncorrelated samples (extension of **unpaired** Student t-test to more than 2 groups)...
    - One-way ANOVA, with graphical output
    - ANOVA: Testing the Means -- One-way ANOVA for three groups, each containing up to 40 subjects.
    - One-way ANOVA from summary data (N, mean and SD or SEM) -- Now also does Tukey HSD post-hoc test!
    - One-way ANOVA from summary data (N, mean and SD or SEM) -- As above but allows
      - copy/paste data
      - evaluate more than 10 groups
      - includes Tukey-Kramers post-hoc test
    - Another 1-way ANOVA from summary data
    - One-way ANOVA -- Also produces a post-hoc analysis (which groups are different from which others), and a scatterplot of all groups. For a description of the ANOVA, click here.
    - Two-Way ANOVA Test -- for blocked designs of up to 4 groups by 6 treatments.
    - Two-Way ANOVA with Replications -- for blocked designs of up to 4 groups by 6 treatments, with up to 4 replications.
    - Two-way ANOVA -- enter data into the web page, or read it from a text file. For an explanation, click here.
    - Two-way factorial ANOVA for 2 rows by 2 columns, from summary data (N, mean, SD)
    - ANOVA for Condensed Data Sets -- Enter up to 10 sets of (N, mean, SD); page calculates a one-way ANOVA.
    - Very general n-way factorial ANOVA, with interactions, means table, interaction plots, Bonferroni post-hoc multiple comparisons, and confidence intervals. (When you get to the **Rweb** page, scroll down to the **Analysis Menu** and select **ANOVA**.)
  - Repeated-Measures ANOVA for correlated samples (extension of **paired** Student t-test to more than 2 matched measurements)...
    - ANOVA for repeated-measures or matched measurements -- Enter three sets of matched measurements (up to 40 points each); page calculates a repeated-measures ANOVA.
  - Bartlett's Test for Equality of Multi-variances -- for up to 14 sets of [N, variance].
  - Bartlett's test for equality/homogeneity of variances for three or more groups. Also produces a scatter plot of all the groups. For a description of the test, along with the formulas and programming, click here.
  - Post-hoc Tests -- After doing a two-way (or other) ANOVA, post -hoc tests (also called post tests) compare individual pairs of groups. This calculator does not perform the ANOVA calculations, but takes the output from an ANOVA (residual means square error, degrees of freedom) performs a post-hoc test between any pairs of cells that you select (using cell means and N's), at whatever alpha you specify.
  - Tukey LSD (Least Significant Difference), using the standard table produced by an ANOVA
  - Scheffe Least Significant Difference, using data from a standard ANOVA table and the N's for the two groups being compared

- Non-parametric tests (use these when the data is not normally distributed)...
  - Sign test for matched pairs
  - Median test for unmatched pairs
  - Wilcoxon Signed-Ranks test for matched pairs -- a non-parametric substitute for the paired Student t test when the data is not normally distributed. This page also produces histograms of the data (each group, and paired differences). For a detailed description of the test, with formulas and examples, click here.
  - Another Wilcoxon Signed-Ranks test for matched pairs -- This page takes summarized, tabulated data: how many cases had differences of +1, +2, +3, etc., and -1, -2, -3, etc.
  - Comparing Two Random Variables -- by the Mann-Whitney U test, with up to 80 observations per sample.
  - Mann-Whitney U test -- a non-parametric substitute for the unpaired Student t test when the data is not normally distributed. This page also produces a dot-plot and a histogram of the data for each group. For a detailed description of the test, with formulas and examples, click here.
  - K-S Test for Equality of Two Populations -- Given two sets of frequencies (using the same grouping intervals), this page calculates the Kolmogorov-Smirnov test.
  - Two-sample Kolmogorov-Smirnov Test -- Enter numbers into the web page, or read them in from text files. Also graphs the cumulative distribution of the two samples.
  - Wilcoxon Sum-of-Ranks (Mann-Whitney) test for comparing two unmatched samples
  - Kruskal-Wallis test (non-parametric ANOVA) for 2 or more groups of unpaired data -- This page requires that you first cross-tabulate your data into a matrix, with a row for every group and a column for every different numeric value that any subject had; the cell of the matrix tell how many subjects (if any) in that group had exactly that numeric value.
  - Kruskal-Wallis test -- This page also produces a scatterplot of ranks for all groups.
  - Least Significant Difference between mean ranks (post-hoc test after a significant Kruskal-Wallis test)
  - Friedman test for comparing rankings (non-parametric)
  - Two-group ordinal comparisons to assess how probable it is that the two groups come from a single ordering, using Wald-Wolfowitz, Randomness Test, Mann-Whitney, and Kolmogorov-Smirnov
  - Two-group paired comparisons, using T-test, Wilcoxon, Signs test, and McNemar test
  - McNemar's test for the paired comparison of proportions (or for matched pairs of labels)
- Comparison of proportions between two groups...
  - Comparison of Binomial proportions
  - Comparison of two proportions between two groups (each given as # successes / # of trials). Shows confidence intervals, and interprets the results of the comparison.
  - Paired Preferences Test -- Enter the sample size, and the two percentages (preferring A and preferring B), and this program will calculate the T score and significance level. This page is based on a normal approximation to the binomial distribution, and should not be used if the sample size is less than 30.
- Comparison of Event Rates between two groups...
  - a very polished calculator for comparing two event rates (number of events in a certain amount of time). Shows confidence intervals around each event rate, and interprets the significance of the difference between the rates of the two groups.
- Sequential Analysis -- each subject's data (usually paired comparisons) is tested as it becomes available, and a decision is made to accept or to reject the null hypothesis or to keep testing.
  - by Paired Preferences -- Each pair of observations is compared and rated qualitatively as "preferring A" or "preferring B"
  - by Paired Differences -- Each pair of numbers is subtracted to obtain a difference

---

Contingency Tables, Cross-tabs, Chi-Square Tests... [return to Table of Contents]

- Chi-Square tests...
  - Quick Chi-Square -- Manual entry (tab or comma delimited) or Copy/paste Excel data directly. Calculates Expected Cell Values, Chi-Square and P-value for any 2D Contingency Table.
  - 2-by-2 table analysis (Chi-square, Fisher Exact Test, sensitivity, odds ratio, relative risk, difference in proportions, number needed to treat, etc.) **with confidence intervals**.
  - EpiMax Table Calculator -- similar to the above, but with a clearer screen layout.
  - for 2-by-2 table, by Fisher Exact, and by Chi Square (with and without Yates' correction), with a good explanation
  - for 2-by-2 table
  - 2-by-2 table analysis (Chi Square, Fisher Exact, difference in proportions, risk ratio, odds ratio, theta, log-odds ratio, Poisson test)
  - Diagnostic Test Evaluation -- from a 2x2 cross-tab of diagnostic test results (positive or negative) vs. true disease state (present or absent), calculates sensitivity, specificity, positive and negative likelihood ratios and predictive values, and disease prevalence, along with their 95% confidence intervals.
  - for 2-by-N table, where the two rows represent dichotomies like lived/died, present/absent, yes/no. This can test for a trend in the probability of an event when you have counts of the two categories over a set of time intervals.
  - Chi-square Test for Relationship -- for up to a 6-by-6 cross-tab.
  - for any-size table
  - another for any-size table
  - Exhaustive analysis of 2-by-2 tables, with Pearson Chi-square, Likelyhood Ratio Chi-Square, Yates Chi-square, Mantel Haenszel Chi-square, Odds Ratio, Log Odds Ratio, Yules-Q, Yules-Y, Phi-square, Pearson correlation, and McNemar Test
  - Paired Proportion Test -- for testing whether the proportion of subjects having some characteristic is the same in two matched groups or in one group before and after some intervention. (Also can test against a null hypothesis specifying some non-zero difference.)
  - Also see the Evidence-Based-Medicine (EBM) calculator in the "Biostatistical Calculators" section of the "Other Statistical Tests and Analyses" section of this page.
- Three-dimensional Tables (2x2x2)...
  - Three-dimensional 2x2x2 table
- Fisher Exact tests for contingency tables...
  - Fisher exact (2x2)
  - Fisher Exact, with good Help discussion
  - Fisher Exact (2x5)
  - Fisher Exact (2x2)
- Test differences between two observed proportions, based on the Binomial distribution
- Barnards Test (2x2) -- An exact test for 2x2 tables that is exact (like the Fisher test), but can be more powerful than the Fisher test (more likely to produce significance). For an explanation, click here.
- Contingency table for sequenced categories (Ordinal by Ordinal, 5-by-5 table or less)
- Contingency table for sequenced categories This is a re-implementation of John Pezullos original page above, accommodating for 2x2 or **more** (i.e. N-by-M) contingency tables
- Contingency table for sequenced categories, 5-by-2 table, with exact probability calculations
- Spearman's correlation from cross-tabbed data with sequenced row and column categories
- McNemar's test to analyze a matched case-control study, with a good explanation
- McNemar's test for paired contingency tables
- McNemar's test for 2x2 paired tables -- For a background explanation, with formulas and examples, click here.
- Cochrane's Q Test -- An extension of the McNemar test to 2xN tables. For an explanation, click here.
- Exact Bayes test for independence in r by c contingency tables -- Can also handle comparison of observed-vs-expected, and observed-vs-uniform situations.
- Comparison of ratings or rankings by different raters...
  - Quantify agreement with kappa -- assesses how well two or **more** observers, or methods, classify object/subjects into groups.
  - Friedman test for comparing rankings (Ordinal by Nominal)
  - Quantify agreement with kappa -- assesses how well two observers, or two methods, classify subjects into groups. For up to a 12-by-12 table.
  - Online Kappa Calculator -- calculates free-marginal and fixed-marginal variations of birater and multirater Kappas (chance-adjusted measures of interrater agreement).
  - Cohen's Kappa for comparing the way two raters scored each of a number of items, using case-by-case data entry
  - Another Cohen's Kappa, using already-tabulated data
  - Kappa for nominal data as concordance between multiple raters -- Each of several raters puts each of several entities into one of several categories
  - Intraclass correlation for concordance between multiple raters, using a data matrix that tells how each rater scored each case
- Chi-Square test for equality of distributions
- Chi-Square "Goodness of Fit" test for observed vs expected counts (NOT from Contingency Tables)...
  - Chi Square test -- takes observed values, and expected values that can be specified as expected occurrences, or percentages or fractions of the total. Data can be typed in or copied and pasted.
  - Chi-Square test
  - Chi-Square test

Regression, Correlation, Least Squares Curve-fitting, Non-parametric Correlation... [return to Table of Contents]

- Straight Lines and Correlation Coefficients...
  - Least squares regression. (nice interface)
  - Linear regression to data copy/pasted from a spreadsheet or tabular file.
  - Linear Regression -- enter X and Y into the web page, or read them in from a text file. Produces regression coefficients, coefficient of determination, and other quantities, along with a graph of the observed data points and fitted line. For a description of the concepts of linear regression, click here.
  - Several variations on 2-parameter linear regression (logarithmic regression, exponential regression, and power regression)
  - Simple Linear Regression -- for up to 84 points, with extensive output and residual analysis.
  - The Data Applet provides descriptive statistics, histograms, boxplots, and scatterplots
  - Scatter Diagram and Test for Outliers -- for up to 84 points.
  - Bivariate Sampling Statistics -- calculates means, variances, and covariance for up to 42 [x,y] measurements.
  - WebStat (an integrated (Java) applet) can perform simple regression analysis
- Correlation Tests...
  - Spearman's rank correlation (non-parametric)...
    - Spearman
    - Spearman's correlation from cross-tabbed data with sequenced row and column categories
  - Calculate Pearson, Spearman or Kendall Correlation Coefficient from a N × M 2D data matrix.
    - Write, copy/paste (Excel or other spreadsheet) or load data from a csv file.
    - First row may include column names. Specify which columns to test for correlation.
    - Optional specify: confidence level, continuity correction, exact p-value and alternative hypothesis.
  - Correlation test
  - Pearson Correlation Coefficient -- also produces a scatterplot of the data. For a description of correlation coefficients, click here.
  - Spearman Rank Correlation Coefficient -- a non-parametric substitute for the Pearson correlation coefficient. This page also produces a scatterplot of the data. For a description of correlation coefficients, click here.
  - Significance level corresponding to a correlation coefficient
  - Testing the Correlation Coefficient -- enter up to 42 r values, along with a postulated population r value.
  - Minimum significant correlation coefficient for a given sample size
  - Comparison of two correlation coefficients
  - Comparison of two or more correlation coefficients
  - Comparison of two sets of (X,Y) data to see if they are consistent with the same straight line (tests whether the slopes are different, and whether the lines are vertically distinct)
  - Comparing Two Linear Regressions -- Enter two sets of [x,y] values; page calculates two straight lines, then compares slopes and intercepts.
  - Test for Several Correlation Coefficients -- enter up to 14 sets of [N, r]; page will test whether all r's are consistent with a single population r value.
  - Biserial correlation coefficient from summary data (N, mean, SD) of the X and Y variables
  - Lin's "concordance correlation coefficient" -- first proposed by Lin (1989) for assessment of concordance in continuous data. A breakthrough in assessing agreement between alternative methods for continuous data. Seems to avoid the shortcomings of correlation coefficient r, paired t-tests, least squares analysis for slope and intercept, coefficient of variation, intraclass correlation coefficient.. It is robust on as few as 10 pairs of data.
  - Manipulation of a correlation matrix -- you enter the N-by-N correlation matrix, the page computes all Partial Correlation Coefficients, all Standardized Partial Regression Coefficients, and the Multiple Correlation Coefficient for each variable.
  - A versatile page for calculating the significance of a correlation (rho<>0), significance of the difference between two correlations, power and sample size requirements for correlations testing, and the inter-relationships between three partial correlation coefficients.

- Beyond Simple 2-parameter Curve-fitting...
  - Very general nonlinear least-squares curve fitter -- almost any function you can write-- up to 8 nonlinear parameters, up to 10 independent variables.
  - MyCurveFit.com -- an easy-to-use curve-fitting page. Offers 13 pre-defined functions (no initial guesses required), along with the ability to fit a general non-linear function you provide (along with initial guesses). Displays the results graphically, along with the formula of the fitted curve. Several types of unequal data-point weighting are provided. Lets you generate predicted values (interpolated and extrapolated) from the fitted curve. Lets you save results in Excel and PDF formats.
  - ZunZun non-linear least-squares curve-fitter -- with an enormous list of pre-defined 2-D and 3-D functions, and extensive graphical and statistical output.
  - Another non-linear least-squares curve fitter -- with graphical output! Choose one of 15 pre-defined nonlinear functions of one variable and up to three parameters.
  - 3-D Regression and Interactive Graph (by MiaBella LLC) -- a powerful web page that fits a linear function of two predictor variables (Z = a + b*X + c*Y), and displays a **very** elegant 3-D scatterchart of the {X,Y,Z} points and the fitted plane. You can rotate the graph in three dimensions using the mouse, and you can see the X, Y, and Z values of any point (say, an outlier) by clicking on the point.
  - Polynomial Regression -- fit polynomials of degree 2 through 10.
  - Multiple Linear Regression -- fit functions of more than one predictor variable.
  - Multiple Polynomial Regression -- fit functions of one or more predictors, each expressed as polynomials, up to the order you specify.
  - Nonlinear Regression -- Automatically fits over 100 of the most commonly-occurring non-linear functions (gaussians, sigmoidals, rationals, sinusoidals, etc.), and then ranks them according to goodness-of-fit.
  - Compare the fit of two models to your data. Which model fits better? Enter goodness-of-fit (SSQ, or weighted SSQ) and # of data points and # of parameters for each model. The calculator will compare the models using Akaike's method, , then the F test.
  - Fit "rational functions" (also called "Pade functions") to {X,Y} data. A rational function is a fraction whose numerator and denominator are both polynomials in X. They can fit a broader range of functions than polynomials alone can -- they can fit data where the Y value "levels off" to a horizontal line for very large or small X, and can fit functions that have "singularities" (Y shoots to infinity at some value of x). This curve-fitter is part of an extensive set of online calculators to solve problems in structural engineering (bending and buckling of beams and plates, etc.) at the Software for Structures web site.
  - Univariate and multiple regression, with **very** extensive graphical output (histograms, scatterplots, scatterplot matrices) and residual analysis (QQ, histogram, residuals vs dependent or predictors). Very intuitive point-and-click interface, dynamically customized for your data. (When you get to the **Rweb** page, scroll down to the **Analysis Menu** and select **Regression**.)
  - Multiple Linear Regression -- up to 16 data points and up to 4 independent variables; calculates fitted model, and a large number of residual analysis statistics.
  - Quadratic Regression -- Fits a least squares parabola to up to 84 data points, and provides extensive residual analysis.
  - Multiple regression, if you already have the correlation coefficient matrix between all independent and dependent variables...
  - Fit any of five families of curves (linear, polynomial, exponential, descending exponential, Gaussian) and draw a graph
  - Logistic Regression, if the dependent variable is restricted to two values (such as whether an event did or did not occur)
  - Logistic Regression -- extends John C Pezzullos page (above) to handle power models and let you calculate Predicted Probability for specific covariable patterns.
  - Cox Proportional Hazards Survival Regression Analysis
  - A faster version of Cox Proportional Hazards Analysis
  - CoxReg, advanced Cox Proportional Hazards Regression Analysis
  - Regression by Prevalence -- when you have data on the number of occurrences and non-occurrences of something over a set of time intervals. Tests whether the probability of the occurrence shows a trend over time.
  - Test Bias Assessment Program, computes statistics to help you decide if test scores predict a criterion differently across subgroups
- Time Series Analysis...
  - Autoregressive Time Series -- tools for the identification, estimation, and forecasting based on autoregressive order obtained from a time series.
  - Detecting Trend & Autocrrelation in Time Series -- Given a set of numbers, this page tests for trend by Sign Test, and for autocorrelation by Durbin-Watson test.
  - Plot of a Time Series -- generates a graph of a time series with up to 144 points.
  - Seasonal Index -- Calculates a set of seasonal index values from a set of values forming a time series. A related page performs a Test for Seasonality on the index values.
  - Forecasting by Smoothing -- Given a set of numbers forming a time series, this page estimates the next number, using Moving Avg & Exponential Smoothing, Weighted Moving Avg, and Double & Triple Exponential Smoothing.
  - Runs Test for Random Fluctuations -- in a time series.
  - Test for Stationary Time Series -- Given a set of numbers forming a time series, this page calculates the mean & variance of the first & second half, and calculates one-lag-apart & two-lag-apart autocorrelations. A related page: Time Series' Statistics calculates these statistics, and also the overall mean & variance, and the first & second partial autocorrelations.

Analysis of Survival Data... [return to Table of Contents]

- Kaplan-Meier Survival Plot and LogRank Test -- Type or copy/paste data, or read it in from a file. Prepares tables, graphs (with 95% confidence intervals), and statistical comparison output. Can accommodate two or more groups, and can perform stratified log-rank test. Uses the R statistical engine on the ShinyApps server to provide very high-quality output. Written by Soren Merser.
- Kaplan-Meier Survival Plot -- for one or more groups. Draws K-M curves with optional confidence bands (ordinary, log, or log-log type, at the 50, 80, 90, or 95% conf. level). This is part of Peter Rosenmai's EurekaStatistics web site (a blog about statistics and R).
- Kaplan-Meier Survival Plot and LogRank -- calculates survival curves (with confidence bands), and performs a LogRank test test to comparing survival curves between two groups.
- Life Table (Kaplan-Meier) -- Enter the number died and censored at each time period, and the page calculates the cumulative survival probability and 95% confidence intervals. Also graphs the survival curve, and exports the data, so you can create a better graph using another program.
- Cox Proportional Hazards Survival Regression Analysis -- specify each subject's observation time and status (last seen alive or dead), and any number of independent variables (predictors, confounders, and other covariates). This web page will perform a proportional-hazards regression analysis and return the regression coefficients, their standard errors, hazard (risk) ratio, and their confidence intervals, and the baseline survivor curve, along with goodness-of-fit information. You can also use a faster version by Ronald Brand (Leiden University), or an enhanced version by Kevin Sullivan (Emory University) that has illustrative examples and explanatory material.
- CoxReg -- performs Cox Proportional Hazards Regression. You can copy/paste data from Excel, or upload a CSV file. Produces a regression table report, survival plot, survival table, log-rank test, and a predicted survival plot for specified covariable patterns. Uses the R statistical engine on the ShinyApps server to provide very high-quality output. Written by Soren Merser.
- Compare Average Survival Time between two distributions -- Enter the number of events and the average time to event for each of two groups. The calculator will display the confidence interval around each mean time, and will compare the two mean times. (Assumes an exponential-shaped survival curve.)

Bayesian Methods... [return to Table of Contents]

- Bayesian Credibililty Analysis -- allows the credibility of a clinical trial finding to be assessed in the light of current knowledge. This page takes the odds ratio and its confidence interval from a clinical trial, and uses a newly-developed Bayesian method to calculate a quantity called the *critical odds ratio* (COR). If odds ratios *at least as impressive* as that indicated by the COR can be justified by existing knowledge, then the results of the clinical trial can be deemed *credible*.
- Etiologic Predictive Value (EPV) -- a new statistical method developed for determining the probability of symptoms being caused by a bacteriological finding, while taking carriers into consideration. To calculate EPV, one must know the number of positive and negative tests among patients and healthy controls as well as the sensitivity of the test. This enables calculating the positive and negative EPV with a 95% confidence interval.
- Exact Bayes test for independence in r by c contingency tables -- Can also handle comparison of observed-vs-expected, and observed-vs-uniform situations.
- Analysis of "1-degree of freedom" data -- performs interactive frequentist and Bayesian conditional tests for counts data having one degree of freedom. That is, it does hypergeometric, binomial, Poisson, Bessel, and related distributions (for double dichotomies, sign tests, a special kind of structural zero design, etc.).
- Bayes' theorem calculations -- takes prior probabilities and conditional probabilities, and calculates revised probabilities. (great for solving certain kinds of brain teaser puzzles)
- Interpret P values -- Compute post test probability to take into account the context of the experiment, as expressed by the prior probability that your hypothesis is true.
- Bayesian calculations for diagnostic tests -- computes interrelationships among true pos, true neg, false pos, false neg, prevalence, sensitivity, specificity, predictive values, and likelihood ratios (requires JavaScript).
- Sequential Experimental Design for testing the probability ratios
- 2-by-2 table analysis (Chi-Square, sensitivity, odds ratio, relative risk, etc. with confidence intervals
- Wald's Sequential Probability Ratio's -- for designing a sequential experiment in which a decision is made after each observation either to accept the null hypothesis, accept the alternate hypothesis, or acquire more observations.

Other Statistical Tests and Analyses... [return to Table of Contents]

- Diagnostic Test Calculator -- This calculator can determine diagnostic test characteristics (sensitivity, specificity, likelihood ratios) and/or determine the post-test probability of disease given given the pre-test probability and test characteristics. Given sample sizes, confidence intervals are also computed.
- ReliCheck -- an online reliability analysis tool that allows users to check the reliability of the scores on their survey. The free option provides reliability score, statistical strength of survey, general item analysis, and a statistical summary of the survey. Pay-for plans also provide an auto-optimizer, optimization comparison, manual optimizer, and control of survey analysis.
- Queueing Theory Calculator -- Performs classic calculations for single-server or multi-server queues (queue length, waiting time, etc.).
- Interactive Cross-Validation -- Performs the "leave-one-out" cross-validation inference for: central tendency, least-squares lines, one-dimensional multinomial tables, two-dimensional contingency tables with structural zeroes, k-sample problems, and block-and-treatment designs. The web page is well-documented, with about a dozen examples worked out and explained.
- Fittestmodel --an online forum, on which statistical evidence can be presented that is always replicable, testable and extendible at the 'click of a button'. The name *Fittestmodel* encompasses both the goal and the means of science, namely to find the fittestmodel by fitting, testing and modelling. Users may discuss statistical evidence online or query for results based on search criteria such as dataseries, methods or criteria that measure the 'quality' of results. Publicly available datasets from various sources may be combined into new statistical evidence and statistical techniques will be added on a continuous basis, by user request or otherwise.
- Bonferroni adjustment of critical p-values when performing multiple comparisons (has an excellent discussion of this topic)
- Multiple comparisons correction (Bonferroni adjustment)
- Number Needed to Treat, based on a 2-by-2 table
- Detect Outliers -- this calculator performs Grubbs' test, also called the ESD method (extreme studentized deviate), to determine whether one of the values in the list you enter is a signficant outlier from the rest.
- Selection Bias Calculator for Prevalence Estimates
- Calculate and plot an ROC Curve (for grouped predictor data)
- Clustering Calculator generates tree structures of data clustering, and much more
- Misclassification Bias in Prevalence Studies
- Predictive Value from Sensitivity, Specificity and Prevalence, (when analyzing a clinical test), with a nice explanation
- Selection Bias in Case-control Studies
- NetMul: a browser interface to a program that performs:
  - Principal Coordinate Analysis (PCO)
  - co-inertia analysis
  - discriminant analysis and within- or between-class analyses
  - analyses on distance matrices or neighboring graphs.
- Simultaneous Equations and Matrix Inversion -- up to 10 equations (or 10x10 matrix).
- Linear Optimization with Tools for Sensitivity Regions -- This page finds the optimal solution, and does a post-optimality analysis of small-size linear programming problems (constrained optimization).

---

https://thlytras.shinyapps.io/minimeta/

miniMeta

A simple tool to run meta-analyses,
with a focus on GRADE SoF tables

RCT module | Observational studies module | Tools

Import meta-analysis | Export meta-analysis | Export as source code | Settings

Load an Excel file with abstracted data

Browse... No file selected

or place your values here:

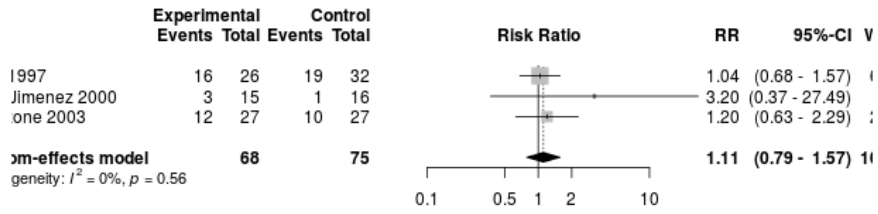
Study	events.Intervention	N.Intervention	events.Control	N.Control	Group
Oren 1997	16	26	19	32	
Mate-Jimenez 2000	3	15	1	16	
Ardizzone 2003	12	27	10	27	

Add rows | Clear empty rows | Save as Excel

Show analysis options

Forest plot | Plot options | GRADE output | Funnel plot | Help

Download plot



miniMETA

- A shiny R app that performs meta-analysis
- RCT and observational studies, funnel plot, forrest plot
- https://thlytras.shinyapps.io/minimeta/

miniMeta

A simple tool to run meta-analyses, with a focus on GRADE SoF tables

RCT module | Observational studies module | Tools

Import meta-analysis | Export meta-analysis | Export as source code | Settings

Load an Excel file with abstracted data

Browse... No file selected

or place your values here:

Study	Effect	95CI.LL	95CI.UL	SE	Group
Cheddani et al, 2016	0.70	0.20	2.60	0.6543	
Nowacki et al, 2015	0.90	0.20	3.60	0.7374	
Jess et al, 2013	0.82	0.28	2.42	0.5537	
van Schaik et al, 2012	0.56	0.22	1.40	0.4721	
Bernstein et al, 2011	1.17	0.80	1.72	0.1953	
Gupta et al, 2007	0.60	0.30	1.20	0.3537	
Lindberg et al, 2001	0.64	0.21	2.02	0.5779	
Lashner et al, 1997	0.95	0.34	2.70	0.5286	
Moody et al, 1996	0.08	0.02	0.39	0.8312	
Soon et al, 2011	0.25	0.06	1.02	0.7228	

Add rows | Clear empty rows | Save as Excel

☑ Auto-calculate SE

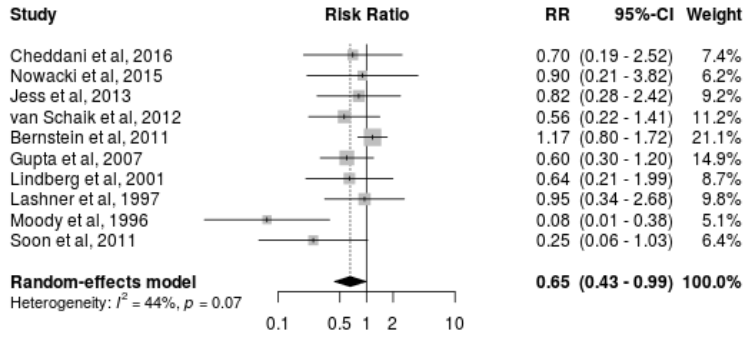
Effect measure

Relative Risk

Show analysis options

Forest plot | Plot options | GRADE output | Funnel plot | Help

Download plot



metaDTA

- A shiny R app for meta-analysis of DTA
- Bivariate meta-analysis, SROC analysis, sensitivity analysis
- https://crsu.shinyapps.io/dta_ma/

https://crsu.shinyapps.io/dta_ma/

MetaDTA: Diagnostic Test Accuracy Meta-analysis | Home | Load Data | Meta-Analysis | Sensitivity Analysis | References

Meta-Analysis of Diagnostic Test Accuracy Studies

Options for ROC Curve tab

- [x] Data Points
- [x] SROC curve
- [ ] Extrapolate SROC curve

Bivariate model options

- [x] Summary point
- [x] 95% Confidence region
- [x] 95% Predictive region

Display 95% study level confidence intervals

- [ ] Sensitivity
- [ ] Specificity

Options for Statistics tab

- [x] Sensitivity
- [x] Specificity
- [x] False Positive Rate
- [ ] Correlation
- [ ] HSROC parameters
- [ ] Diagnostic Odds Ratio
- [ ] Likelihood Ratios

Study-level Outcomes | ROC Curve | Statistics | Parameter Estimates | Parameters for RevMan

Note: Arrows to the right of the column headings can be used to sort data into ascending or decsending order.

Show 30 entries Search:

	Author	Year	TP	FN	FP	TN	N	Sensitivity	Specificity	FPR
1	Aalto	2006	47	9	101	738	895	0.839	0.880	0.120
2	Aertgeerts01	2001	126	51	272	1543	1992	0.712	0.850	0.150
3	Aertgeerts02	2002	19	10	12	192	233	0.655	0.941	0.059
4	Bradley03	2003	36	3	78	276	393	0.923	0.780	0.220
5	Bradley07	2007	130	19	211	959	1319	0.872	0.820	0.180
6	Bush	1998	84	2	68	89	243	0.977	0.567	0.433
7	Gomez	2006	68	0	112	423	603	1.000	0.791	0.209
8	Gordon	2001	752	0	3226	2977	6955	1.000	0.480	0.520
9	Gual	2002	59	5	55	136	255	0.922	0.712	0.288
10	Rumpf	2002	142	50	571	2788	3551	0.740	0.830	0.170
11	Seale	2006	137	24	107	358	626	0.851	0.770	0.230
12	Selin	2006	57	3	103	437	600	0.950	0.809	0.191
13	Tsai	2005	34	1	21	56	112	0.971	0.727	0.273
14	Tuunanen	2007	152	51	88	254	545	0.749	0.743	0.257

Showing 1 to 14 of 14 entries Previous 1 Next

Download Table

Meta-Analysis of Diagnostic Test Accuracy Studies

Options for ROC Curve tab

- [x] Data Points
- [x] SROC curve
- [ ] Extrapolate SROC curve

Bivariate model options

- [x] Summary point
- [x] 95% Confidence region
- [x] 95% Predictive region

Display 95% study level confidence intervals

- [ ] Sensitivity
- [ ] Specificity

Options for Statistics tab

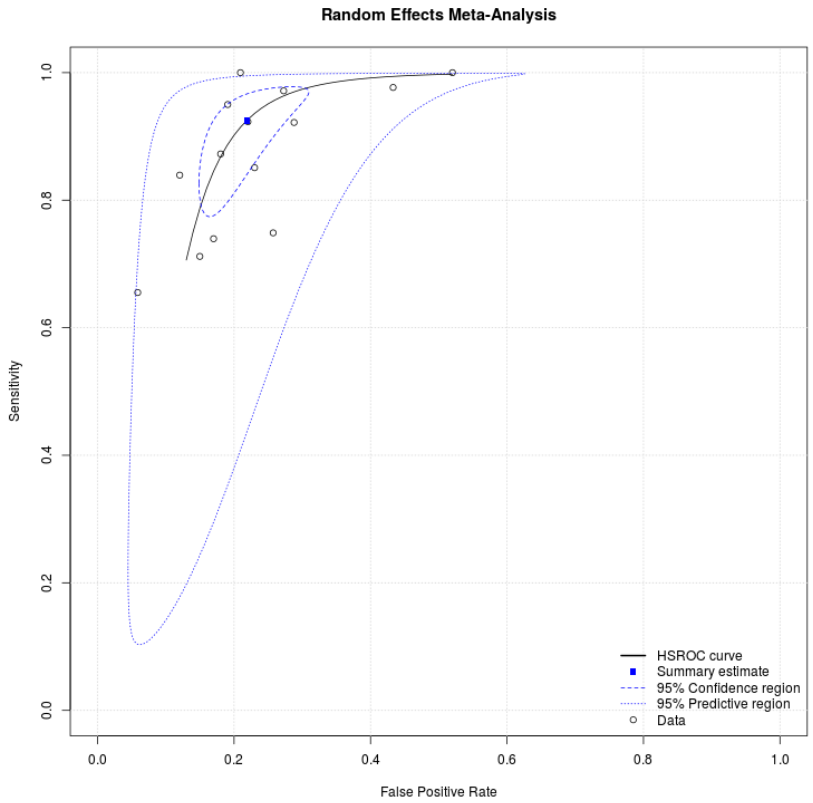
- [x] Sensitivity
- [x] Specificity
- [x] False Positive Rate
- [ ] Correlation
- [ ] HSROC parameters
- [ ] Diagnostic Odds Ratio
- [ ] Likelihood Ratios

Study-level Outcomes | ROC Curve | Statistics | Parameter Estimates | Parameters for RevMan

Note: At least one box under 'Options for ROC Curve tab' must be selected to avoid an error message

Plot title

Random Effects Meta-Analysis



Select plot format

- (•) png
- ( ) PDF

Download Plot

Click the middle of the data points for individual study summaries (an error message may occur if not selecting the middle of the pie chart when displaying risk of bias or acceptability concerns)