

Forest Plot Viewer User's Manual

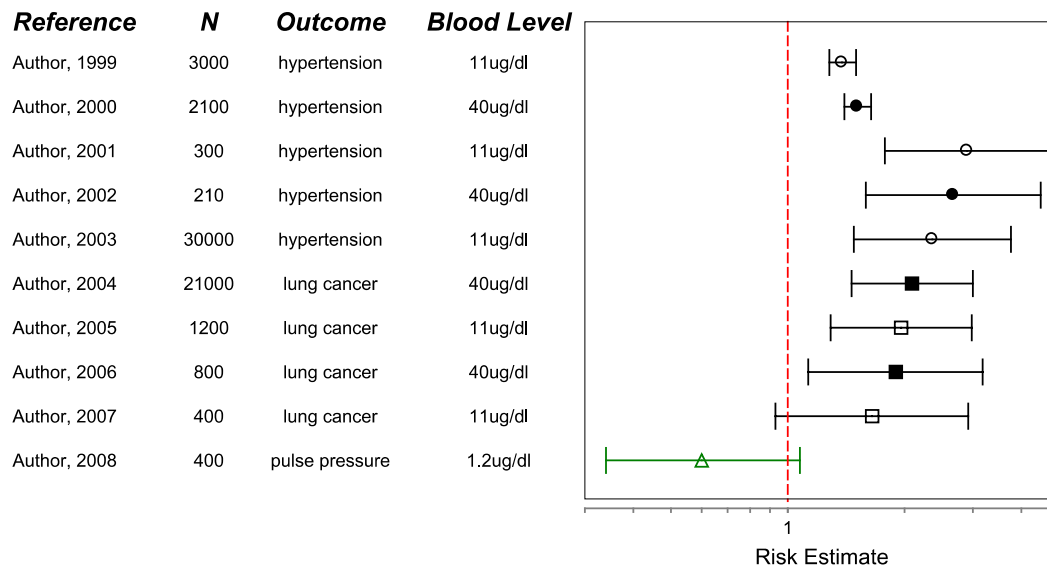
based on version 1.00 – March 10, 2011

Brief Description:

The Forest Plot Viewer program is used for horizontally plotting a point estimate and confidence interval and 1 or more columns of text for several rows of data (multiple studies or multiple findings from one study). This type of “forest plot” is typically used in epidemiological studies to summarize previously published findings in a subject area. The statistical significance of an individual point and whiskers is reflected by whether the whiskers cross a vertical reference line at the null hypothesis (0 for regression or 1 for ratio estimates). If each study contributes one “tree” the deviation of the “forest” from the null hypothesis can indicate a trend even if the individual studies are not all statistically significant. A formal evaluation of this would be accomplished by a meta-analysis, which Forest Plot Viewer does not perform.

QuickStart Example:

QuickStart Forest Plot



Download (http://ntp.niehs.nih.gov/go/tools_forestplotviewer):

In the .zip file you will find the files:

1. ForestPlotViewer.jar (the main program file)
2. A lib folder containing 17 .jar files (if your computer extracts all these files individually from the .zip file, create a folder named “lib” and move all .jar files except ForestPlotViewer.jar into that folder.
3. Example data sets: QuickStart_Example.xls and ExampleData_POPsSubset.xls
4. Example Settings File: QuickStart_Settings.txt and ExampleSettings_POPs.txt
5. This User's Manual: Forest Plot Viewer Manual_v1.00.pdf

If you don't already have it, you will need to install Java version 5.0 or later on your machine. You can download the latest Java version at <http://www.java.com>.

QuickStart with example data:

1. Double click to launch the ForestPlotViewer.jar program.
2. You will automatically be prompted to select a data file to open.
3. Select the QuickStart_Example.xls file.
4. The screen will display using the settings from the last time Forest Plot Viewer was used (or the default settings if this is the first time running the program).
5. Click the "Settings" menu from the upper left corner and choose the "Read Settings File..." option from the drop down menu.
6. Choose the QuickStart_Settings.txt file.
7. The example display will now change based on the new display settings (see figure above).
8. You can explore the options for customizing the display by clicking the "Edit Settings..." option from the "Settings" menu. (You can also use the Ctrl+E shortcut.)
9. Save the refined image to a file by selecting the "Save Screen Image" option from the "File" menu.
10. The other Example data and settings files are actual information on studies of persistent organic pollutants (POPs) and diabetes and obesity related outcomes. For more information see: <http://cerhr.niehs.nih.gov/evals/diabetesobesity/Wkshp/POPsAppendixEpiTableFormatted.pdf>

Input File Format:

The required format for the input file is shown in the table below. This can either be an Excel file or a tab-delimited text file. This format description can also be read by selecting the "Input Format..." option from the Help menu.

The first row of the input file is assumed to be a header row for default figure column headings.

The first column is not used by Forest Plot Viewer, but there must be some text in each cell.

Header 1	Header 2	Header 3	Header 4	Header 5,6,7,...
(Not used)	Lower Limit	Upper Limit	Mean Value	Description columns 1,2,3,...

- Columns 5+ can be displayed or hidden (these hidden columns can be used for Forest Plot Viewer Options).
- The program is designed to display up to 15 columns of text to the left of the figure.
- An unlimited number of hidden columns can be used to format other features of Forest Plot Viewer such as colors, shape types, and sizes.

Menu Options

File Menu:

Open - [Ctrl+O]

- This tab will automatically open upon startup of the program.
- Navigate to select the file containing the data you wish to open (formatted as described above).

Save Screen Image - [Ctrl+S]

- Saves the screen image (see Tip below)
- Several file type options (pull down menu): GIF, PNG, BMP, JPG, SVG, EMF, or PDF
- JPG is a good quality, low file size option for screen displays.
- For print quality figures we recommend saving in a scalable vector format (SVG or EMF) and using an image editing program for further manipulations. Inkscape, a free software package (www.inkscape.org), handles these formats, as does Adobe Illustrator.

Tip: If your window is maximized to fill the screen, the image saved may not keep the same proportion as displayed. If you make the window smaller (“Restore Down” button in the upper right corner, between _ and X) and adjust the dimensions by dragging the corner the saved image will keep those proportions.

Exit - [Ctrl+Q]

- The program does not prompt you to save before exiting. However, the latest set of settings is saved automatically, so if you re-enter the program and select the same data file the image will look the same.

Settings Menu:

Edit Settings- [Ctrl+E]

The Edit Settings dialog contains 6 tabs for customizing the display:

1. **Description Columns** – Adjust the displayed text columns, including sorting
 - Number of Description columns: Select the number of description columns to display. You can choose up to 7 descriptive columns which can be edited as described below.
 - Default Column Header: Select which columns to display. If the checkbox under Custom Header Text is not checked, the values shown here will be the headers shown on the display.
 - Custom Header Text: Check the checkbox then edit the text to enter a custom header.
 - Header Angle: Enter the angle in degrees to rotate the header text from horizontal. Suggested values are between -90 and 90.
 - Column Width: Set the width of each column (in pixels). Adjust the width of each column to fit the text.
 - Align: Center, left, or right justify the column text.

- Primary Sort: Sort by 1 or 2 displayed or hidden columns (if no box is checked, the default sorting is as entered in the input file).
2. **Shapes and Whiskers** – Change display options related to the point estimate (shape) and CI (whiskers)
 - Changes the style based on a column in the input file (pull down to select a header).
 - Select “---None---” (topmost selection) to select options from the Default Value column for all entries
 - Shape Color: 15 color options (*use all lowercase letters in the input file)
 - Shape Size: A relative size based on the number of studies displayed.
 - Shape Fill: True/False for a solid or outline shape
 - Shape Type: 5 shape options (*use all lowercase letters in the input file)
 - Whisker Color: 15 color options for CI (*use white to only display the point estimate)

 3. **Filter** – Limit the studies displayed by applying a filter to the underlying data. Only those studies that meet the filter criteria will be shown.
 - Number of Filter Columns: Select up to 5 filters can be used
 - Filter Match Type: Any Part of String, or Exact Match (partial or perfect match)
 - Filter Logic: Specifies the logic used to combine multiple filters (AND or OR).
 - Filter Column: Selection box for all the column headings (after the data columns)
 - Filter Value: Text string to match (* = no filter). Use the “|” character for multiple options.
 - Build Filter: Use instead of typing in the Filter Value Column
 - Displays all of the options for a column
 - Choose multiple values by holding down Ctrl while selecting
 - Build Filter values then displays in the Filter Value column

Tip: If you ever see a display where there is no text and no graphical elements, you have probably made an error setting up the filter.

 4. **Graph Scaling** – Control the x-axis scaling
 - X-axis Log Scale: Check box for log scale
 - X-axis Auto Scale: Check box to auto scale or uncheck and enter Min/Max values for range

 5. **Titles and Fonts** – Edit the text, including the title and x-axis
 - Chart: Figure title text (user entered), font, size, font type, and margins
 - Column Header: Column headings font, size, and font type
 - Column Values: Column content font, size, and font type
 - X-Axis Label: X-axis text (user entered), font, size, and font type

 6. **Reference Lines** – Displays 1 or 2 vertical lines at specified x-values
 - Enabled: Check to display the line
 - Value: The point the line will cross the x-axis
 - Color: 15 options
 - Line Thickness: Width of the line
 - Line Type: 3 styles of line available

Edit Advanced Settings – This are mostly the same settings as Edit Settings, listed in alphabetical order by variable name. The values are as follows:

chart.title: text, font, size, margins
desc.column: alignment, headers (“auto” uses input file), widths,
desc.font: font, size, and style of description column content
desc.header.rotate: rotation angle for header text (0 = horizontal)
filter.column: which column to display if it contains the string of text in it
filter.logic: Boolean operators between filters (AND/OR)
filter.match.type: “contains” for matching any part of string, or “exact” for an exact match
filter.value: text to match, | to connect several in one column with OR, * = no filtering string
header.font: text font, size and style for the column headers
num.desc.columns: number of columns to display
num.filter.columns: number of columns to filter on
ref.line: color, enabled (true/false), thickness, line type, value (where to draw it)
ref.line2: can draw a 2nd one as above
settings.selected.tab: for internal program use
shape: point estimate color, fill, size, type (or link to a column in the data file for this)
sort.column: reorder based on 1 or 2 data columns
whisker: confidence interval color, or a column in the data file for color, and thickness,
xaxis: auto scale (true/false), log scale (true/false), max and min values, title, and title text

Read Settings File...

- Displays the current data based on previously saved settings

Save Settings to File...

- Saves a text file with all of the current figure settings.
- This is especially useful when producing multiple figures from the same dataset or applying settings from one dataset to another.

Help Menu:

Input Format...

- Information on how to format the input file

About...

- Shows version and other information