

## BlueSky Statistics 7.2 Release Notes

1. We have made the following improvements to scoring models (select a model created and click the Score button on the right-hand top of the main application window)
  - a. The ROC table generated displays the Youden's Index in the ROC table
  - b. The maximum value of Youden's Index (this can be considered an "optimal" cut-off for a classification rule, assuming sensitivity and specificity are equally important) is marked with an asterisk (\*\*)
  - c. A sensitivity-specificity plot is displayed
  - d. When generating a confusion matrix for dependent variables with 2 levels, the 2<sup>nd</sup> level is treated as the positive level. This is documented in the scoring dialog and in the title of the confusion matrix displayed in the output. See Data > Factor Levels > Reorder Levels Manually to change the order of levels if needed.
  - e. The confidence interval checkbox now works correctly and allows you to specify confidence intervals for predictions with linear models.
2. New Dialogs
  - a. Data>Move Variables
  - b. Analysis>Survival Analysis>Competing Risks, one group
  - c. Analysis>Survival Analysis>Competing Risks, compare groups
  - d. Model Fitting>Cox Proportional Hazards Model>Cox Fine-Gray
  - e. Analysis > Non Parametric Tests > Wilcoxon Signed-Rank Test, one sample
  - f. Data > Add ID Variable
  - g. Data > Find Duplicates
  - h. Data > Select First or Last Observations Within Groups
3. Model Fitting>Linear Regression has the option to ignore the intercept.
4. The Data>Recode has the option to not make the recoded variable a factor.
5. Help text has been added to the Data>Sort and Data>Sort to Output dialogs to assist users when sorting multiple variables with ascending and descending order.
6. Fixed a defect with Data>Missing Values>Remove NAs
7. Data>Dates>Convert Date to String and Convert String to Date has support for more date formats
8. Better support for NA handling. If we have NA (say North America) as one of the levels in a factor variable it will now display correctly as NA in the UI (instead of <NA> while the missing value NA will be represented as <NA> in the UI.
9. Fixed minor issues (spelling mistakes and made labels clearer) with the following dialogs
  - a. Data>Factor Levels>Drop Unused Levels
  - b. Data>Factor Levels>Add New Levels
  - c. Data>Factor Levels>Lumping into Other
  - d. Data>Factor Levels>Display levels
  - e. Data>Missing values>Missing Values, basic
  - f. Analysis>Cluster Analysis>Kmeans
  - g. Analysis>Cluster Analysis>Hierarchical Cluster
  - h. Graphics>BoxPlot
  - i. Graphics>Frequency Charts, numeric
  - j. Graphics>Frequency Charts, factor

- k. Graphics>Maps>US County Map, US State Map, World map
- l. Adjusted required packages for Data>Compute Dummy variables, Model Fitting>Logistic Regression>Logistic Regression, multiple models
- m. Added a new dataset melanoma.RDATA from the MASS package to the BlueSky Statistics\Sample Datasets and Demos\Sample R Datasets (RData) folder. This dataset can be used for survival analysis.