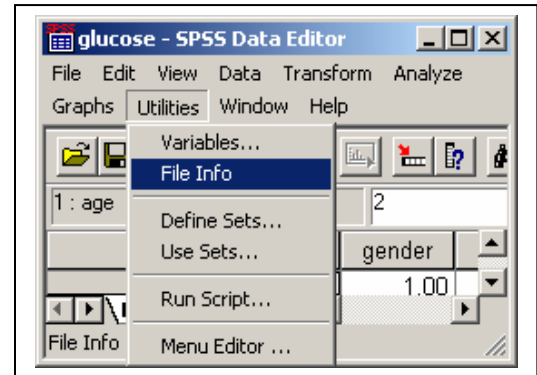


Which procedure provides more accurate blood glucose level?

The data in the file [glucose.sav](#) were collected for studying blood-sampling procedures to see which procedure provide more accurate information on the serum blood glucose level. Use SPSS to open this data file and click through the following selections to view the file information: **Utilities/File Info**

The age, gender, and last oral intake of food are all categorical variables. The variables: capillar, whole and serum are quantitative variables.



People who provide health care wish to know whether there is significant difference between the two procedures of blood sampling for obtaining blood glucose level from patients. Venous Serum Blood Glucose Level (BGL) is a more accurate blood glucose measure and serves as the standard in this research. In practice, sometimes Venous Whole Blood BGL or Capillary Whole Blood BGL is measured. The purpose of this project is to determine which of the procedures is more accurate. That means which of the two procedures would provide measures that are closest to the Venous Serum GBL. Use SPSS to perform the following analysis.

1. First, perform simple linear regression analysis using Capillary Whole Blood BGL as the response variable and Venous Serum BGL as independent variable. Second, perform simple linear regression analysis using Venous Whole Blood BGL as the response variable and Venous Serum BGL as independent variable. Use the statistics from the two regression analysis to determine which of the two procedures is better for obtaining BGL that are closest to Venous Serum BGL. (Attached the SPSS coefficient estimation tables.)
2. Add the age, gender and last oral intake of food variables to both of the model and evaluate the two procedures again to see which procedure produces more accurate results. The purpose of adding these variables is to adjust the difference due the age, gender and last oral intake. (Attached the SPSS coefficient estimation tables.)
3. Use your own judgment to conclude your own analysis on this data to provide a recommendation after based on your analysis. (Attached the SPSS coefficient estimation tables and any charts you wish to present.)

