PharmaSUG 2024 - Paper XX- ###

Title for PharmaSUG 2024 Sample Paper

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# Abstract

Anyone that has produced a graph using ODS Statistical Graphics (ODS Graphics) has unknowingly used the Graph Template Language (GTL). The graphics that reside within a SAS® procedure that use ODS Graphics have pre-defined, behind the scenes templates that are built with GTL. GTL generates graphs using a template definition which allows you to control the format and appearance. Although a majority of the graphs produced within a procedure are adequate and meet the standards they may not have those extra one or two features that you need to make your graphs stand out and impress your clients. GTL, as an extension of ODS Graphics, additionally allows users to create specialized graphs. For example, you may wish to change the colors or embed a table of summary statistics within the graph. You may have a need to customize the output or build a graph that is not produced within a SAS procedure. It is not always easy to know how to tailor an existing graph to your needs, let alone produce custom graphs. GTL makes customizing graphs easier and once you learn some of the basic concepts it becomes easy to implement. In this half day course, you will learn about the different types of layouts provided by GTL as well as various types of plots. Through the use of detailed examples, you will learn how to build your own template to make customized graphs and how to create that one highly desired, unique graph that at first glance seems impossible.

# Introduction

The easiest way to build these complex plots is to start with the basics. Plot what you know how to do, which is typically a single cell graph. Once you have the basic graph, you can then add one piece at a time. In some cases, it may be easiest to build each piece of the graph individually to make sure it will produce the desired results and then you can start combining the different pieces.

# Embedding a Table Within a Graph

# There are different ways to embed a table within a graph. Although an inset table can be embedded using GCHART procedure, this requires that SAS/GRAPH be installed. However, the SG procedures are available in Base SAS. Within the suite of SG procedures are SGPLOT and SGRENDER. SGPLOT procedure can stand alone while the SGRENDER procedure requires that you design the structure of the graph within the TEMPLATE procedure and then render it.

<<NEED TO ADD SOMETHING ABOUT SGPLOT>>Within GTL there are several approaches to embedding tables into a chart.

The goal is to produce a graph that contains a bar chart by treatment with the statistics displayed above each bar. In addition, the graph should contain comparison statistics as well as trend test statistics. Figure 1 illustrates the graph that needs to be produced.

A graph of a patient's test results

Description automatically generated

Figure : Bar Chart by Treatment with Embedded Table

## Create the Basic Bar Chart

#### PROC SGPLOT

<< Introduction statement >>

#### PROC TEMPLATE with PROC SGRENDER

<< Introduction statement >>

## Add Titles and Footnotes inside and outside Graph Area

#### PROC SGPLOT

<< Introduction statement >>

#### PROC TEMPLATE with PROC SGRENDER

<< Introduction statement >>

# Second Main Topic

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Output 1 shows an example of how to present output.

## Subhead A Level

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### Subhead B Level

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# Conclusion

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# References

# Acknowledgments

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# Recommended Reading

* *Base SAS® Procedures Guide*
* *SAS® For Dummies®*

# Contact Information

Your comments and questions are valued and encouraged. Contact the author at:

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