

Clinical Graphs using ODS Graphics Garage Malarga, SAS Institute, Cary, NC

ABSTRACT

Safety data for clinical trials is often collected in tabular form. The process of interpretation and analysis that we make using software for the design of graphical display of this data starts with the advanced statistical techniques such as Least Squares Test Functions and Methods, Standard Function Tests, Pattern Functions, Advanced Graph Tests, Life Tests for Hazard Differentiation and Homogeneity are commonly used in the Health and Life Sciences domain. Many of these graphs are easy to do using one of the many tools available in the ODS Graphics tool set. This paper will describe in detail how to create these standard graphs for the Health and Life Sciences industry using ODS Graphics.

INTRODUCTION

High quality graphs are essential for analysis of data in the Health and Life Sciences domain. Large volumes of safety data are generated in the duration of a clinical trial, and visualizing this data along with the derived statistics is essential for the analysis of such data. Some of the key features of the graphs include:

- Evaluation of the raw data and the statistics in the same display.
- Evaluation of other indicators such as identifiable events, adverse events, etc.
- Comparison of the results for a drug with the corresponding results for other drugs or placebo.
- Classification of the results by multiple variables.
- Display of the results over time.

The goal of this paper is to show how to create graphs commonly used in the Health and Life Sciences domain using ODS Graphics. In this paper, we will take various graphs commonly used for analysis of safety data for Clinical Trials, Pattern Function graphs, graphs for testing laboratory tests, etc., and show the code needed to build such graphs in detail. These graphs have been developed by professionals in the field who have the necessary domain expertise to design the right graphs. It is not the intent of this paper to substitute the effectiveness of such graphs. So, the design of the graphs used is beyond the scope of this paper. In this paper, we will cover various techniques that can be used to build such graphs that providing the information you need to customize them to your needs.

GRAPHS FOR HEALTH AND LIFE SCIENCES

We will review and build some common graphs that have been frequently used in the Health and Life Sciences domain. We will start with some graphs discussed in the paper "Graphical Approaches to the Analysis of Safety Data from Clinical Trials" (John Aron, et. al., Pharmaceutical Statistics, SAS). Additionally, we will cover other popular graphs in the field. These are:

1. Empirical distribution function for maximum change in QTc.
2. Box Plot of change from baseline in QTc by time and treatment.
3. Mean change from baseline in QTc by time and treatment.
4. Distribution of ADAT by time and treatment.
5. Distribution of maximum LFT values by treatment.
6. Change of LFT with from baseline to maximum by treatment.
7. Mean change of maximum LFT values.
8. LFT Patient profiles.
9. Mean frequency on therapy adverse events sorted by relative risk.
10. Cumulative distribution (with 95% CI) of time to first AE of special interest.
11. Kaplan-Meier curves for AEs of special interest (with 95% CI).
12. Adverse event profiles.
13. Life Events Over Time.
14. Hematology Profile by Treatment.

Let us review each graph along with the code needed to create the graphs using the Statistical Graphics (SG) Procedures or the Graph Template Language (GTL).

Clinical Graphs Using Ods Graphics Analysis Of Safety

Christian G. Meyer



Clinical Graphs Using Ods Graphics Analysis Of Safety:

Clinical Graphs Using SAS Sanjay Matange,2016-03-21 SAS users in the Health and Life Sciences industry need to create complex graphs to analyze biostatistics data and clinical data and they need to submit drugs for approval to the FDA Graphs used in the HLS industry are complex in nature and require innovative usage of the graphics features Clinical Graphs Using SAS provides the knowledge the code and real world examples that enable you to create common clinical graphs using SAS graphics tools such as the Statistical Graphics procedures and the Graph Template Language This book describes detailed processes to create many commonly used graphs in the Health and Life Sciences industry For SAS 9 3 and SAS 9 4 it covers many improvements in the graphics features that are supported by the Statistical Graphics procedures and the Graph Template Language many of which are a direct result of the needs of the Health and Life Sciences community With the addition of new features in SAS 9 4 these graphs become positively easy to create Topics covered include the usage of SGPLOT procedure the SGPANEL procedure and the Graph Template Language for the creation of graphs like forest plots swimmer plots and survival plots Producing High-Quality Figures Using SAS/GRAPH and ODS Graphics Procedures

Charlie Chunhua Liu,2015-02-06 This book demonstrates how to create commonly used figures and plots with SAS GRAPH and ODS Graphics procedures It provides all the details on selecting the right figure formats options and fonts In depth instructions and SAS programs using procedures in both SAS GRAPH and ODS Graphics show how to generate sample figures in listing graphics formats and ODS document files Each chapter includes practical examples and SAS programs Readers can easily modify the SAS programs to develop high quality figures to meet their own needs **Tumescent**

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Artificial Intelligence Abstracts ,1991 **Journal of the American Optometric Association** American Optometric Association,1983 Business Periodicals Index ,2005

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Table of Contents Clinical Graphs Using Ods Graphics Analysis Of Safety

1. Understanding the eBook Clinical Graphs Using Ods Graphics Analysis Of Safety
 - The Rise of Digital Reading Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Advantages of eBooks Over Traditional Books
2. Identifying Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Clinical Graphs Using Ods Graphics Analysis Of Safety
 - User-Friendly Interface
4. Exploring eBook Recommendations from Clinical Graphs Using Ods Graphics Analysis Of Safety

- Personalized Recommendations
 - Clinical Graphs Using Ods Graphics Analysis Of Safety User Reviews and Ratings
 - Clinical Graphs Using Ods Graphics Analysis Of Safety and Bestseller Lists
5. Accessing Clinical Graphs Using Ods Graphics Analysis Of Safety Free and Paid eBooks
 - Clinical Graphs Using Ods Graphics Analysis Of Safety Public Domain eBooks
 - Clinical Graphs Using Ods Graphics Analysis Of Safety eBook Subscription Services
 - Clinical Graphs Using Ods Graphics Analysis Of Safety Budget-Friendly Options
 6. Navigating Clinical Graphs Using Ods Graphics Analysis Of Safety eBook Formats
 - ePub, PDF, MOBI, and More
 - Clinical Graphs Using Ods Graphics Analysis Of Safety Compatibility with Devices
 - Clinical Graphs Using Ods Graphics Analysis Of Safety Enhanced eBook Features
 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Highlighting and Note-Taking Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Interactive Elements Clinical Graphs Using Ods Graphics Analysis Of Safety
 8. Staying Engaged with Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Clinical Graphs Using Ods Graphics Analysis Of Safety
 9. Balancing eBooks and Physical Books Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Clinical Graphs Using Ods Graphics Analysis Of Safety
 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
 11. Cultivating a Reading Routine Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Setting Reading Goals Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Carving Out Dedicated Reading Time
 12. Sourcing Reliable Information of Clinical Graphs Using Ods Graphics Analysis Of Safety

- Fact-Checking eBook Content of Clinical Graphs Using Ods Graphics Analysis Of Safety
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
- Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
- Integration of Multimedia Elements
 - Interactive and Gamified eBooks

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