

SGPANEL and SGRENDER

Producing Panel by Dose plots using SGPANEL
and SGRENDER

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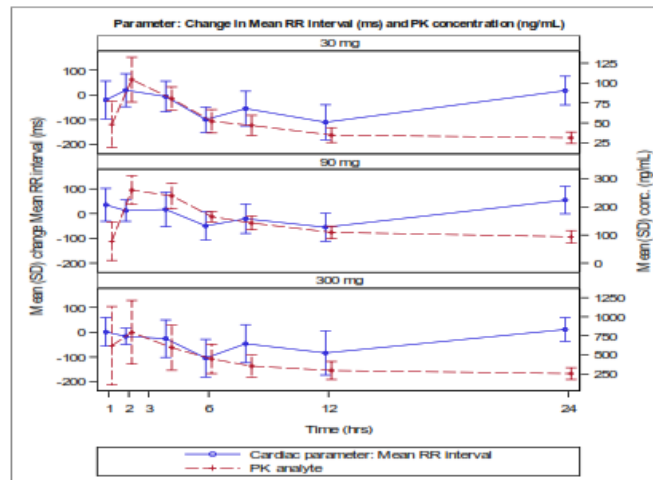




Figure 1 is a dual-axis line graph titled "Parameter Change in Mean RT interval (ms) and PK concentration (μg/L)". The X-axis represents "Time (h)" from 0 to 24. The left Y-axis represents "Mean RT change (ms)" from -200 to 300. The right Y-axis represents "PK concentration (μg/L)" from 400 to 800. The RT interval is shown as a blue line with diamond markers and error bars, and the PK concentration is shown as a red line with triangle markers and error bars. The RT interval starts at approximately 100 ms at 0h, peaks at 200 ms at 1h, and then fluctuates between 100 and 200 ms. The PK concentration starts at approximately 450 μg/L at 0h, peaks at 750 μg/L at 1h, and then fluctuates between 400 and 500 μg/L.

Figure 1 consists of three vertically stacked line graphs, each representing a different noise level: 50 ms, 100 ms, and 200 ms. The Y-axis for all graphs is 'Percent correct' ranging from -200 to 100. The X-axis is 'Time (sec)' with values 1, 3, 4, 6, 8, and 13. Two conditions are plotted: 'no' (solid line with open circles) and 'with' (dashed line with open squares). Error bars represent standard error. In all three noise conditions, the 'with' condition consistently shows higher accuracy than the 'no' condition. Accuracy generally decreases as time increases, with a notable dip at 6 seconds for both conditions in each graph.

Noise Level	Time (sec)	no (Percent correct)	with (Percent correct)
50 ms	1	~10	~10
	3	~10	~10
	4	~10	~10
	6	~-100	~-100
	8	~-10	~-10
	13	~10	~10
100 ms	1	~-10	~-10
	3	~-10	~-10
	4	~-10	~-10
	6	~-100	~-100
	8	~-10	~-10
	13	~10	~10
200 ms	1	~-10	~-10
	3	~-10	~-10
	4	~-10	~-10
	6	~-100	~-100
	8	~-10	~-10
	13	~10	~10

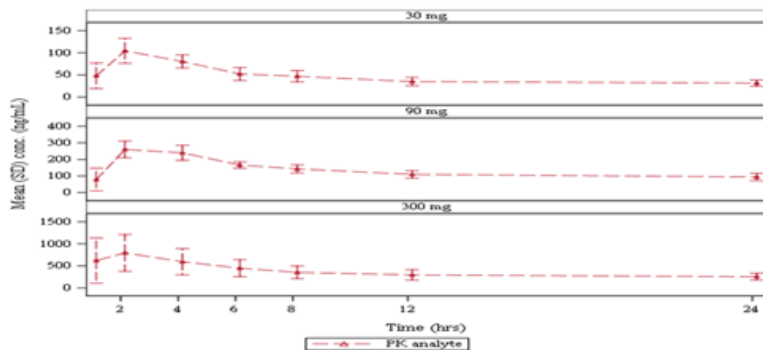
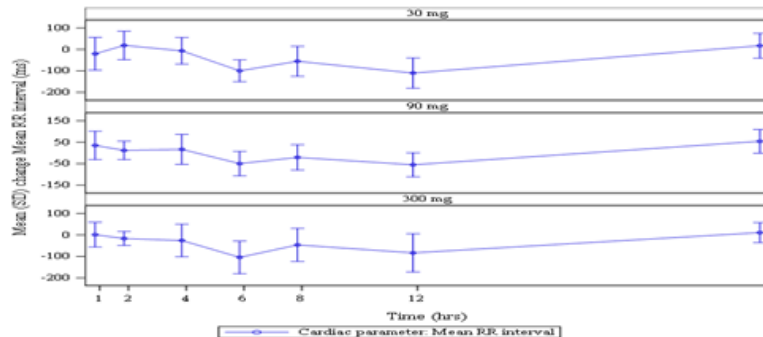
[illegible]

WHY is there a need for these plots

- In most PK studies the statistician wants to look at the by Treatment group splits to compare the effects of each dose
- At times (not all the time), the statistician requests to plot both the clinical data and the PK/PD data on the same graph to spot the existing relationships between the 2 parameters
- This can be achieved easily by using the PROC SGPLOT procedure which gives us the flexibility to plot both the clinical data and the PK/PD data on each y-axis as per the request
- It gets a bit tricky when the statistician requests to plot the same graph by doses

SGPANEL procedure

The SGPANEL procedure creates a panel of graph cells for the values of one or more classification variables defined in the PANELBY statement.

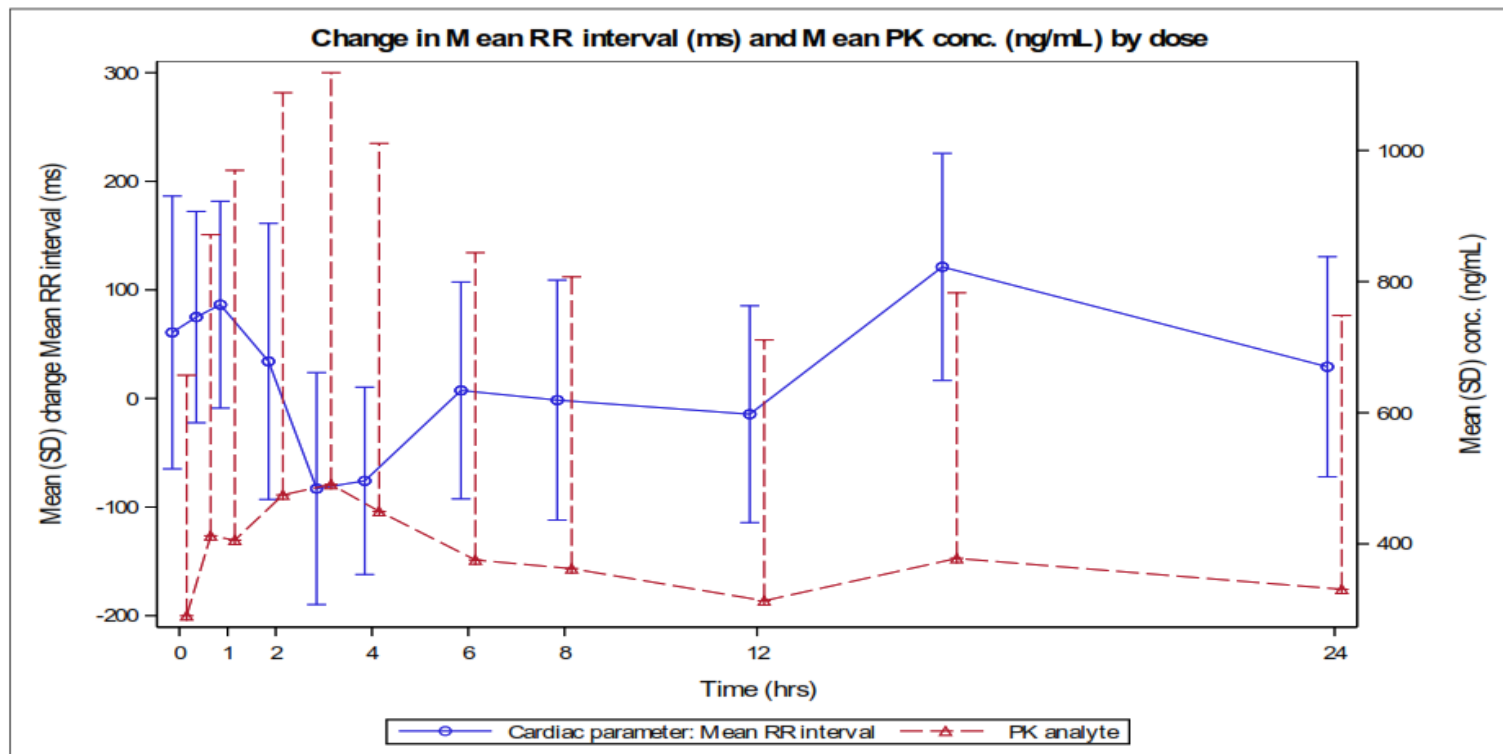


Y2AXIS option on the plot statement is not supported in SGPANEL. So, it gets difficult to plot both the clinical data and PK data on the same graph using SGPANEL procedure.

- The SGPANEL procedure is used to create a panel of graph cells for the values of one or more classification variables defined in the PANELBY statement
- This procedure is similar to the SGPLOT procedure except that a PANELBY statement is required in addition.
- SGPANEL is quite a comprehensive and powerful procedure in the Statistical Graphics family to create paneled plots with various layouts

SGRENDER procedure

- SGRENDER procedure creates customized plots by rendering the user-defined templates written in the Graph Template Language. In simple words, you create your own template and render that template using the SGRENDER procedure.



Conclusion

Obviously, each approach has its own advantages and disadvantages, and which one to use depends on the situation and the kind of plot. Both these procedures can be used to produce very sophisticated graphs. For a large amount of the graphs such as single-cell basic plots and fit and confidence plots, the learning curve from SGPLOT to GTL is quite minimal. For multi-cell categorization plots and distribution plots, the learning curve is slightly steeper but something that is worth doing because some graphs can only be produced with GTL, and also with GTL you can produce almost any graph that you would like.

Questions

