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Testing protocol: Figures

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Definitions

Purpose

To validate Figures requirement of the Pharmacometrics TFL Generator app.

Figures

The application includes numerous figures for exploratory analysis and model evaluation, including:

- Serum concentration vs time plots (for and individual)
- Serum concentration vs time plots (for groups of individuals)
- Observed vs predicted concentration plots
- Parameter distribution plots
- Categorical covariance plots (i.e., continuous vs categorical box and whisker plot)
- Continuous covariance plots (i.e., continuous vs continuous scatter plot)
- Pairwise correlation plots
- Quantile-Quantile (QQ) plots
- Goodness of fit plots for models
- Bar Charts
- VPC (Visual Predictive Checks)

For all of these plots, all inputs are checked to ensure that the the output is reactive to the input. Screenshots are used to document evidence of this.

Testing procedures

Testing procedures are outlined in the attached testing document.

References and supporting documents

- Requirements document and overview: `tflgenerator_Requirements_R2.pdf`

Testing log

RID	Topic	Test ID	Step Description	Expected Result	Qualification Note(s)	Pass/Fail
1	Serum Concentration Versus Time-Individual	1	Create plot panel: Analysis Selection -> PKInputFigures -> SErum Concentration Versus Time-Individual to 1	ConcvTime panel created in Figures		
		2	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure specific limits work: Enter the following into "Limit": EVID != 1&DV>100	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects changes in Theme Size Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
		6	Figure renders and respects changes in Theme Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
2	Serum Concentration Versus Time-Groups	1	Create plot panel: Analysis Selection -> PKInputFigures -> Serum Concentration Versus Time-Groups to 1	ConcvTimeGroup panel created in Figures		
		2	Figure renders and respects inputs for "Group Plots" Marky by discrete	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for "Group Plots" Marky by continuous	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure renders and respects inputs for "Group Plots" Add text inputs	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects inputs for "Group Plots" Facet by inputs	Plot is updated, respecting inputs. Screencap as evidence		
		6	Figure renders and respects inputs for "Group Plots" Scales Free inputs	Plot is updated, respecting inputs. Screencap as evidence		
		7	Figure renders and respects inputs for "Group Plots" Scales Free_x inputs	Plot is updated, respecting inputs. Screencap as evidence		
		8	Figure renders and respects inputs for "Group Plots" Scales Free_y inputs	Plot is updated, respecting inputs. Screencap as evidence		
		9	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		10	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		11	Figure renders and respects inputs for all "Summarize Data?" boxes (Mean Standard Deviation)	Plot is updated, respecting inputs. Screencap as evidence		
		12	Figure renders and respects inputs for all "Summarize Data?" boxes (Median 95% confidence interval)	Plot is updated, respecting inputs. Screencap as evidence		
		13	Figure renders and respects inputs for all "Limits and Transformations" Inputs: DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		14	Figure renders and respects changes in Theme Size Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
		15	Figure renders and respects changes in Theme Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
3	Observed Versus Predicted	1	Create plot panel: Analysis Selection -> Model figures -> Observed vs Predicted to 1	OBSvPRED panel created in Figures		
		2	Figure renders and respects inputs for all "Group Plots" inputs: Marky by Discrete	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Group Plots" inputs: Marky by Continuous	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure renders and respects inputs for "Group Plots" Facet by and add text inputs	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects inputs for "Group Plots" Facet ncol and nrov inputs	Plot is updated, respecting inputs. Screencap as evidence		
		6	Figure renders and respects inputs for "Group Plots" Scales Free_y inputs	Plot is updated, respecting inputs. Screencap as evidence		
		7	Figure renders and respects inputs for all "Plots Details" and "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		

RID	Topic	Test ID	Step Description	Expected Result	Qualification Note(s)	Pass/Fail
		8	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		9	Figure renders and respects changes in Theme Size Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
		10	Figure renders and respects changes in Theme Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
4	Parameter Distribution	1	Create plot panel: Analysis Selection -> Model figures ->Parameter Distribution to 1	paramDist panel created in Figures		
		2	Figure renders and respects inputs for all "Group Plots" inputs	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		6	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
5	Categorical Covariance	1	Create plot panel: Analysis Selection -> Model figures -> Categorical covariance to 1	covCat panel created in Figures		
		2	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
6	Continuous Covariance	1	Create plot panel: Analysis Selection -> Model figures -> Continuous covariance to 1	covCon panel created in Figures		
		2	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
7	Correlation Pairs	1	Create plot panel: Analysis Selection -> Model figures -> Correlation Pairs to 1	corPairs panel created in Figures		
		2	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
8	Quantile Plot	1	Create plot panel: Analysis Selection -> Model figures -> QQ Plot to 1	QQplot panel created in Figures		
		2	Figure renders and respects "Group Plots" facet by input	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for "Group Plots" Facet ncol and nrow inputs	Plot is updated, respecting inputs. Screencap as evidence		

RID	Topic	Test ID	Step Description	Expected Result	Qualification Note(s)	Pass/Fail
		4	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		6	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		7	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
9	Goodness of Fit	1	Create plot panel: Analysis Selection -> Model figures -> GOF to 1	GOF panel created in Figures		
		2	Figure renders and respects inputs for "Group Plots" Marky by discrete	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for "Group Plots" Marky by continuous	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure renders and respects inputs for "Group Plots" plot loess	Plot is updated, respecting inputs. Screencap as evidence		
		5	Figure renders and respects inputs for all "Plot Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		6	Figure renders and respects inputs for all "IPRED Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		7	Figure renders and respects inputs for all "PRED Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		8	Figure renders and respects inputs for all "DV Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		9	Figure renders and respects inputs for all "RESID Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		10	Figure renders and respects inputs for all "NPDE Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		11	Figure specific limits work: Enter the following into "Limit": DOSE<=7	Plot is updated, respecting inputs. Screencap as evidence		
		12	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
10	Variable Distribution	1	Create plot panel: Analysis Selection -> Model figures -> distMult to 1	distMult panel created in Figures		
		2	Figure renders and respects inputs for all "Plot Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Manipulate Data" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
11	Bar Charts	1	Create plot panel: Analysis Selection -> Model figures -> barchartMult to 1	barchartMult panel created in Figures		
		2	Figure renders and respects inputs for all "Plot Details" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		3	Figure renders and respects inputs for all "Manipulate Data" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		4	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		
12	VPC	1	Simulation data can be loaded, merged with source data, and displayed on screen. The mi210 510 and 511 runs will be used for this RID. Verify that the data parser runs on the VPC data.	screencap as evidence		
		2	Additional csv dataset can be loaded and displayed. Use the parser to demonstrate that it runs on the additional data.	screencap as evidence		
		3	Figure renders and respects inputs for all figures of the shading type "simulated percentile/Each Percentile"	Plot is updated, respecting inputs. Screencaps 12-03-01:12-03-6 as evidence		
		4	Figure renders and respects inputs for all figures of the shading type "predicted median"	Plot is updated, respecting inputs. Screencaps 12-04-01:12-04-6 as evidence		
		5	Figure renders and respects inputs for all figures of the shading type "none"	Plot is updated, respecting inputs. Screencaps 12-05-01:12-05-6 as evidence		
		6	Figure renders and respects inputs for all figures of the shading type "simulated percentile/Overall Percentile"	Plot is updated, respecting inputs. Screencaps 12-06-01:12-06-5 as evidence		

RID	Topic	Test ID	Step Description	Expected Result	Qualification Note(s)	Pass/Fail
		7	Figure renders and respects inputs for all "Manipulate Data" boxes	Plot is updated, respecting inputs. Screencap as evidence		
		8	Figure renders and respects changes in Theme Size and Colour Manipulation	Plot is updated, respecting inputs. Screencap as evidence		