

CONFIDENTIAL

## 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

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.

### Figure from disk

The user may alternatively point to a file on disk to be included in the output RTF file. In this step, a PNG figure is read from disk and it is verified that a preview is displayed to the user. Evidence is again documented via screenshot.

### Figures can be quickly create from previously created figures

After configuring the parameters for a figure, the user can then use that as a template for an ensuing figure. This functionality is tested by tester by increasing the integer value of the desired plot in "Analysis specification". Screenshots of the original and duplicate are used as evidence of success.

## 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
13	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. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure specific limits work: Enter the following into "Limit": EVID != 1	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
14	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 all "Group Plots" inputs	Plot is updated, respecting inputs. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": EVID != 1	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Select "Preserve all Levels", subset to STUDY == 183, and ensure that the color is the same as with the full data	Preserve all levels button retains same association between colors and variables before and after subsetting		
		7	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
15	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	Plot is updated, respecting inputs. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": STUDY==183	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
16	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. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": STUDY == 183	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
17	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 "Group Plots" inputs	Plot is updated, respecting inputs. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		

RID	Topic	Test ID	Step Description	Expected Result	Qualification Note(s)	Pass/Fail
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": STUDY == 183	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
18	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 "Group Plots" inputs	Plot is updated, respecting inputs. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": STUDY == 183	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
19	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. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure specific limits work: Enter the following into "Limit": STUDY == 183	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
20	Quantile Plot	1	Create plot panel: Analysis Selection -> Model figures -> QQ Plot to 1	QQplot panel created in Figures		
		2	Figure renders and respects inputs for all "Group Plots" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": STUDY == 183	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
21	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 all "Group Plots" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		3	Figure renders and respects inputs for all "Plots Details" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		4	Figure renders and respects inputs for all "Change Defaults" boxes	Plot is updated, respecting inputs. Screenshot as evidence		
		5	Figure specific limits work: Enter the following into "Limit": STUDY == 183	Plot is updated, respecting inputs. Screenshot as evidence		
		6	Reset button clears selections	Plot is updated, respecting inputs. Screenshot as evidence		
22	Figure from disk	1	Create plot panel: Analysis Selection -> Model figures -> Figure from disk	inputFigure panel is created		

RID	Topic	Test ID	Step Description	Expected Result	Qualification Note(s)	Pass/Fail
		2	Figure renders from disk: Upload figure to /data, point to figure, and generate plot	Figure preview is shown		
23	Figures can quickly be created from previously created figures	1	Increase the value for a plot in Analysis Selection	Verify that the settings are duplicated to a new panel		