R as a tool for graphical diagnostics in population pharmacokinetic modeling

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Keywords: graphical model diagnostics, population pharmacokinetics

R packages: ggplot2; lattice

Population pharmacokinetic (PopPK) modeling aims at finding typical pharmacokinetic parameters and their variability within a target population of patients treated with a drug of interest. Population approach to pharmacokinetic modeling is gaining popularity as it can handle sparse data and estimate pharmacokinetic parameters of each individual. Large datasets and complexity of the models hinder assessing the quality of a model fit with a single numerical value. Graphical analysis plays a unique role in PopPK since it enables a better insight into the model structure. R is a powerful and versatile tool for graphical model diagnostics. It offers variety of visualizations, allows creating flexible scripts for quick model assessment and saving the results as a formal report. The produced graphics are publication-ready and meet the requirements for most nonstandard and customized plots.

References

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