Pirana is a flexible and extendible modeling workbench that provides a graphical user interface (GUI) for NONMEM, PsN, Xpose/R, and more, facilitating the management of pharmacometric workflows. Population PK/PD (Pop PK/PD), a powerful tool used by modelers in the pharmaceutical industry and regulatory agencies to analyze drug safety and efficacy, has become the norm for regulatory submissions. Organizing and managing pharmacometric models can be an inefficient and time-consuming process. Pirana’s research tools provide modelers with structure to facilitate the iterative processes used to create Pop PK/PD models and perform simulations resulting in better organization and more efficient analysis of Pop PK/PD results.

Optimize Pharmacometric Workflows with Pirana

Pirana delivers faster, more efficient modeling and simulation by connecting multiple tools for optimizing a pharmacometrics workflow. A graphical user interface provides an automated folder structure for the storage of analytical results, adding order and traceability to complex analyses.

Organize and manage models

Analogous to a lab notebook, Pirana creates the necessary infrastructure to manage, create, track, and perform simulations.

Pirana provides modelers a wide range of critical structure, tools and graphics pivotal to validating modeling results for traceability and reproducibility:

- Model templates and wizards
- Library of goodness-of-fit plots (R)
- Model translation tools
- Built-in support for version control and audit trails
- Seamless access to open source tools in order to interface with Pop PK/PD modeling tools for visual predictive check, covariate modeling, and bootstraps
- Runs on all major operating systems including Windows®, macOS®, and Linux®
Pirana Graphical User Interface

The Pirana modeling workbench provides a flexible and intuitive graphical user interface for the management of pharmacometric workflows using NONMEM and other analysis software.

Pirana provides functionality for model management, model execution, output generation, and interpretation of results:

- Models can be read from a folder or created in Pirana
- Analyses are automatically managed using a basic command line tool
- Post-processing work can be performed on models executed in Pirana

- The Estimates tab contains model results displaying summaries of estimated model parameters
- A library of scripts provides options to run, generate plots and analyses, create, review or modify R code and run additional scripts by other integrated software, e.g., PsN or Xpose
- Basic summaries of results and reports and generated plots of the scripts in PDF format can be easily accessed from the Results tab
Data Visualization

Pirana provides a quick and easy graphical interface to R plotting tools and supports the generation of plots in R using PSN and Xpose or custom user scripts.

Compare model diagnostics

Pirana provides faster, easier model evaluation and side-by-side model diagnostics to aid in the model development process.

Report and summarize model results

Pirana’s powerful reporting tools provide options to run reports in various formats, including Word, html, plain text, LaTeX, and Excel.

Visualize the model decision tree

The Visual Run Record in Pirana documents the model development process through a unique interactive visualization. A summary of the model selection thought process displays how models were evaluated, and how/why the final model was chosen.


Interface with most pharmacometric software

Pirana provides interfaces to a range of software tools used in pharmacometric modeling including NONMEM®, PsN, Xpose, R Software (including R Studio), and Monolix unleashing a concert of functionality for efficient and organized pharmacometric analyses.

Start using Pirana today to optimize your pharmacometrics workflow!

Contact us at sales@certara.com to discover how Pirana provides a unique and powerful workbench that delivers faster, more efficient modeling and simulation results.

About Certara

Certara is a leading provider of decision support technology and consulting services for optimizing drug development and improving health outcomes. Certara’s solutions, which span the drug development and patient care lifecycle, help increase the probability of regulatory and commercial success by using the most scientifically advanced modeling and simulation technologies and regulatory strategies. Its clients include hundreds of global biopharmaceutical companies, leading academic institutions and key regulatory agencies.

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