



TreeAge Pro Training: Advanced Markov/Discrete Event Simulation

Agenda

1. Build/Analyze Markov Simulation Model
 - Add advanced techniques to a Markov model using patient data to drive model values
 - Add nested clones and complex variable definitions in the simulation model
 - Analyze the Markov simulation model and interpret results
2. Build/Analyze a Discrete Event Simulation Model
 - Compare a simple Markov model to a simple DES model
 - Build a Discrete Event Simulation (DES) model
 - Analyze DES model via Microsimulation
 - Add complexity for non-fixed probabilities and time horizon
 - Run sensitivity analysis on DES model
 - One-way sensitivity analysis
 - Probabilistic sensitivity analysis
3. Simulation Time Reporting
 - Track patients in model
 - Generate cohort-level details from patient simulation analysis
4. Debugging models
 - Output complex calculation trace data to the console
5. Dynamic Cohort
 - Discuss when Dynamic Cohort models are needed
 - Use non-coherent probabilities to set the cohort size
 - Add to the cohort by cycle using an Entry node
 - Analyze the model and examine results for the full cohort size
6. Parallel Trials
 - Discuss when Parallel Trials models are needed
 - Use Stop nodes and global trackers to handle resource constraints
 - Show Stop node and explain about key word which needs to be used.
 - Analyses the model and examine results
7. Subgroup Analysis
 - Heterogeneity via bootstrapping (we don't show the sampling approach here, just mention)
 - Report on subgroups via simulation result filtering