



Online Advanced Healthcare Modeling

- Build Patient Simulation, Discrete Event Simulation and Partitioned Survival models.
- Validate your models with patient-level reporting and model calculation tracking.
- Export your models to Excel for review by colleagues.

Course Agenda

1. Patient Simulation

- Run simulated patients to model complex disease processes.
- Add patient characteristics and patient history to drive disease progression.
- Incorporate complex probability calculations and hazard ratios.
- Examine patient-level and cohort-level reporting.

2. Bootstrapping & Subgroup Analysis

- Apply real patient characteristics to your simulated patients.
- Examine results isolated by subgroup to see if treatment should vary by patient.

3. Model Debugging

- Debug your models by examining internal calculation details.

4. Model Calibration

- Refine model inputs to match observed target survival.

5. Discrete Event Simulation (DES)

- Build a model based on sampled event times by patient.
- Examine patient-level and cohort-level reporting.

6. Partitioned Survival Analysis (PartSA)

- Build a model where disease progression is driven by survival curves for progression-free survival (PFS) and overall survival (OS).

7. Exporting Models and Results to Excel

- Export a Markov models to an independent model in Excel.
- Export results from any model to Excel, so colleagues to change inputs and see the corresponding changes to results.

8. Budget Impact Analysis

- Expand your patient-level model to a population-level model to assess budget impact.
- Export annual costs by strategy to incorporate population counts in Excel.