

Bayesian Therapeutic Drug Monitoring and Dosing — Hands-on

Understand how Bayesian therapeutic drug monitoring (TDM) supports precision dosing. This module focuses on the conceptual workflow: starting from prior knowledge and patient data, updating a PK model in a Bayesian way, reading posterior exposure, and drafting dose recommendations and follow up plans for clinicians.

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Session 1

Fee: Rs 8800 [Apply Now](#)

TDM & Bayesian Thinking Foundations

Role of therapeutic drug monitoring in clinical practice

[narrow therapeutic index drugs](#) [toxicity and failure prevention](#) [integration with clinical judgement](#)

Classical vs Bayesian TDM thinking

[fixed trough ranges idea](#) [patient specific PK model concept](#) [prior, data and posterior view](#)

High level TDM–Bayesian workflow overview

collect context and sample timing **update model with levels** **translate to dosing advice**

Session 2

Fee: Rs 11800 Apply Now

Data, Priors & Posterior Exposure

Concentration–time data and sampling concepts

peak, trough and random levels **steady state assumptions** **recording dose and sampling history**

Priors and PK models at a conceptual level

population parameter expectations **between subject variability idea** **using prior information responsibly**

Posterior exposure and prediction thinking

updated individual PK profile concept **visualizing predicted concentration curves** **credible intervals and uncertainty**

Session 3

Fee: Rs 14800 Apply Now

Bayesian Dosing Decisions & Follow Up

From posterior exposure to dose adjustment ideas

target concentration windows concept **changing dose or interval themes** **balancing efficacy and safety signals**

Special situations in Bayesian TDM (high level)

renal and hepatic impairment ideas **obesity and critical illness themes** **drug interactions and changing clearance**

Sequential TDM and communication with the team

planning next sample timing **documenting rationale and caveats** **integrating feedback from outcomes**

Session 4

Fee: Rs 18800 Apply Now

Mini Capstone: TDM–Bayesian Dose Consult

Assemble a TDM case with context and level data

summarize indication and comorbidities **list dose history and samples** **note interacting medicines and organ function**

Draft a Bayesian TDM dosing recommendation

describe inferred exposure pattern conceptually **propose new dose or interval** **outline monitoring and re sampling plan**

Deliverables: TDM–Bayesian consult note and slide

clinic note as PDF or DOCX **one slide summary for boards** **template for future TDM cases**