Exposure–Response Modeling and Dose Optimization — Hands-on

Develop a conceptual but practical understanding of exposure–response modeling and dose optimization. This module connects PK/PD thinking with efficacy and safety outcomes, helping you frame exposure–response questions, summarize model results and translate them into dose and schedule recommendations for development and clinical use.

Exposure–Response Modeling and Dose Optimization

Help Desk · WhatsApp

Session Index

Session 1

Fee: Rs 8800 Apply Now

Exposure–Response & PK/PD Foundations

What is exposure–response modeling and why it is used

linking PK, PD and outcomes | **dose selection and refinement** | **benefit–risk and labeling themes**

Exposure metrics and response endpoints (conceptual)

Cmax, AUC, Ctrough ideas | **continuous, binary and ordinal responses** | **time to event and safety endpoints**

Data sources for exposure–response analysis

early phase trials | late phase and real world data | linking PopPK with ER modeling

Session 2

Fee: Rs 11800 Apply Now

Exposure–Response Models & Curves

Concepts of common exposure–response model shapes

linear and log linear patterns | Emax and sigmoidal Emax ideas | plateau and threshold concepts

Efficacy vs safety exposure–response thinking

separate curves for benefit and risk | therapeutic window themes | probability of target attainment ideas

Preparing data and stratifying by key factors (conceptual)

summarizing exposure by patient | strata by dose and covariates | visual overlays and trends

Session 3

Fee: Rs 14800 Apply Now

Dose Optimization & Scenario Analysis

Using exposure–response curves to explore doses

identifying target exposure ranges | dose and schedule comparisons | margins between efficacy and safety

Subgroup and covariate based scenario thinking

high risk vs typical patients | special populations conceptually | simulation based what if questions

Balancing benefit–risk in dose optimization narratives

visual summaries for teams | argumentation for dose choice | uncertainty and sensitivity themes

Session 4

Fee: Rs 18800 Apply Now

Mini Capstone: ER Case & Dose Proposal

Select an exposure–response example and summarize insights

state objective and endpoints | describe exposure metrics used | outline curve shape and key findings

Draft a dose and schedule proposal based on ER thinking

suggested dose levels and intervals | rationale linking exposure and response | monitoring and next data steps

Deliverables: ER case slide deck and one page dosing note

PDF or PPTX | ready for MIDD or PMx review | template for future ER analyses