

PROACTIVE COHORT MANAGEMENT for Mastering Dose Escalation in Early-Phase Oncology Development

Goals in Dose Escalation Studies



Escalate dose safely and efficiently to identify the optimal dose range



Determine the Recommended Phase 2 Dose (RP2D)

Early Phase Oncology Trials & Proactive Cohort Management



Early phase oncology trials are complex and fast-moving



Delays between dose levels result in longer timelines and increased cost



Proactive cohort management can keep studies on track and improve efficiency

Traditional Challenges

- ✗ Reactive decision-making
- ✗ Delayed data availability
- ✗ Safety reviews scheduling
- ✗ Patient readiness lag

Proactive Cohort Management

- ✓ Planning ahead
- ✓ Parallel workflows
- ✓ Proactive Project Management leadership
- ✓ Cross-functional team alignment

Success depends on early cross-functional alignment between Project Management, Medical and Clinical Pharmacology teams

Benefits of Proactive Cohort Management



Keeps timelines on track and improves study efficiency



Coordinates stakeholders: investigators, CRAs and sponsors



Ensures real-time data capture, including dose-limiting toxicities and protocol deviations



Anticipates risks and builds in contingencies before delays occur

Safety Review Committees (SRCs)

Their Role



- Dose escalation decisions
- RP2D or biologically effective dose (BED) determination
- Adjudication of unclear DLTs

Best Practices



- Give SRCs flexibility to adjust dose or schedule without protocol amendments
- Allow for ad hoc SRC meetings if safety issues arise mid-cohort

Committee Structures & Hybrid Models



Internal Committees

- PI, sponsor/CRO medical monitor, biostatistician
- Fast decision-making, familiar team
- May lack independence or external expertise

Hybrid Model

- Combines internal team with independent experts (open/closed sessions)
- Balanced expertise and flexibility
- Requires more planning and charter definition



External Committees

- Independent, non-PI medical experts
- Offers objectivity and fresh perspectives
- More complex to coordinate

Clinical Pharmacology's Expanding Role

With the new dosing paradigm, Clinical Pharmacology is more involved:



PK/PD analysis and interpretation

NCA (Non-Compartmental Analysis): C_{max}/AUC

Exposure-Response to support dose selection



Present Clinical Pharmacology Insights to Safety Review Committee

Share PK/PD insights to inform SRC dose decisions

Enabling Smarter Decisions with Real-Time Data

Electronic Data Capture (EDC) alerts provide instant notification of triggers of real-time data



AE/AESI/SAE



DLT/lab values

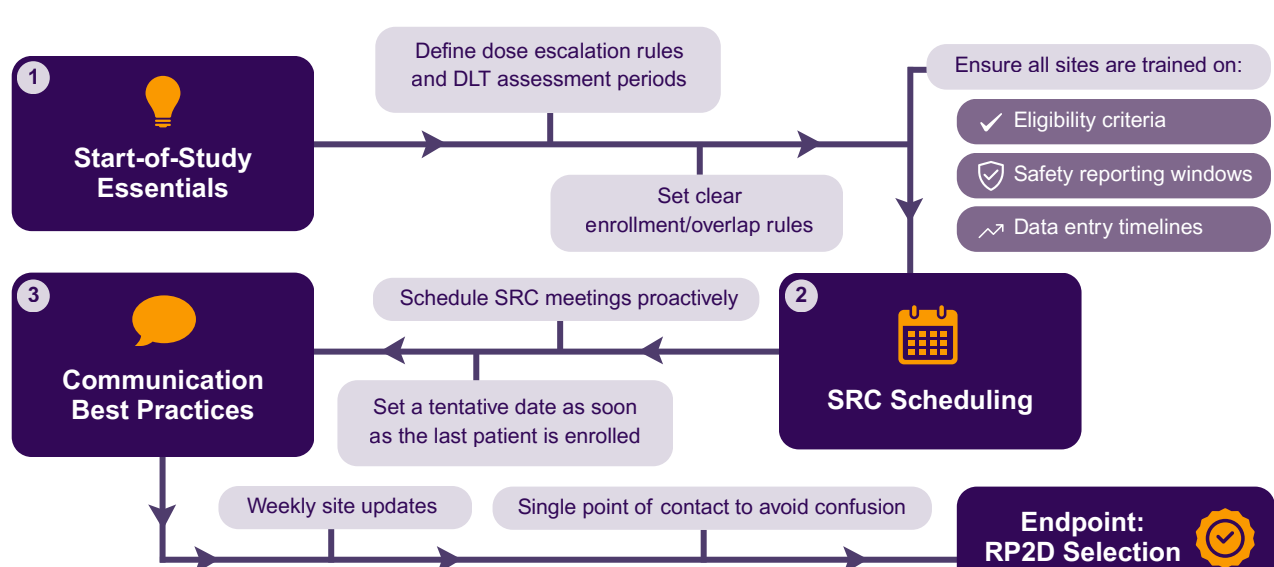


Disease progression

EDC alerts are underutilized yet powerful

- ✓ Ensure relevant real-time safety data are transmitted promptly to the SRC
- ✓ Avoid having to wait for a scheduled committee meeting

Operational Tactics and Path for Success



➔ Many of these processes run in parallel to expedite decisions

🎯 Successful dose escalation is about orchestration to reach RP2D efficiently and safely

Proactive cohort management can reduce delays and costs, and success comes from scenario planning and parallel workflows