

Advances in Clinical Trial Methodology, Statistics, and Epidemiology



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Submissions:

Manuscripts should be
submitted to the journal via the
online submission system:

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Dear Colleagues,

We are pleased to announce the Special Issue entitled "Advances in Clinical Trial Methodology, Statistics, and Epidemiology". The field of clinical trials is rapidly evolving in line with adaptive trials, artificial intelligence, digital health tools, and pragmatic designs utilizing electronic health records and real world data (e.g., causal inference and targeted trial emulation). Innovative and adaptive trials ultimately lead to efficient development timelines, cost reductions, and increased success rates.

In particular, advanced methods for conducting and analyzing clinical trials includes Bayesian methods, machine learning-based approaches, response-adaptive randomization, and multi-arm bandit designs, within the context of master protocols, platform studies with shared referent-control arms, basket/umbrella trials, and targeted emulation studies employing causal inference methods. As well, improvements in digital platforms facilitate interchange and dialog among patients, researchers, clinicians, and key decision-makers, culminating in improved adherence to trial protocols and better patient retention.

Artificial intelligence and machine learning tools also aid in the analysis of large databases, prediction of patient outcomes, and identification of patterns leading to improved treatment strategies and personalized approaches. This includes the automation of patient recruitment, enhanced adverse event reporting, and better data quality control.



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Targeted therapies evolving from advances in genomics and biomarker research enable the tailoring of clinical trial therapies to individual patient characteristics.

We hope this special issue will be of interest to you. Collaboration with students and research fellows in your group also is encouraged. Following submission, manuscripts will receive prompt attention and undergo fair but thorough review by experts in the field.

Keywords

- Clinical trial statistical and epidemiologic methods
- Targeted trial emulation
- Pragmatic trials
- Master protocols
- Basket/umbrella trials
- Platform studies
- Ethical and patient-centered clinical trials
- Data bias
- Algorithm transparency
- Causal inference
- Mendelian randomization
- Imputation techniques
- Genetic biomarker analysis
- Statistical genetics modeling
- Bayesian methods
- Pharmacoepidemiological analytics
- Machine learning/Artificial intelligence
- Adaptive models
- Digital health tools
- Shared referent-control arms

**Please note that
there are no
APC charges for
paper published
in this special
issue.**