

# KerusCloud

## A virtual environment for optimising clinical study design and analysis strategies

KerusCloud is an innovative clinical trial simulation software platform that is the future of study planning and data analytics.

Leveraging the combined power of artificial intelligence and cloud computing, KerusCloud generates realistic virtual studies simplifying planning and decision-making to deliver advanced analytics for smarter studies.

KerusCloud is a versatile platform that can handle the diverse and complex data collected routinely in clinical research.



### With KerusCloud you can

Transform **study planning** with rapid optimisation of study parameters to support the design of complex research studies and clinical trials.

Increase **successful outcomes** in real studies by selecting the best design and analysis strategy.

Deliver **smarter studies** and better decision-making with advanced analytics for complex data.

Create **simulations** that mimic more closely the complex multi-factor biological and clinical interactions observed in real studies.

Leverage the instant **scalability and power of Cloud computing** to move beyond the limitation of internal IT infrastructure with an on-demand computing capability to run complex simulations.

### KerusCloud has been shown to

Increase real study success rates by up to **40% at no extra cost** through optimisation of study design and analysis options.

**Generate more clinical evidence** for the same costs.

Rigorously **evaluate new analytical approaches** against traditional methods.

Support the implementation of **Precision Medicine**.

Accelerate access to novel treatments through **better targeting of patient population** and selection of outcome measures.

## Benefits and Features

KerusCloud allows rapid evaluation of hundreds of design and analysis options to reveal the key information needed for optimising real studies.

KerusCloud is a comprehensive clinical trials simulation platform that uses the power of Artificial Intelligence and Cloud Computing to:

- **Determine the probability of success** for study design and analysis options to avoid costly failures
- **Identify the best study endpoints, patient number and target populations** to increase success, saving time and costs
- **Develop robust evidence packages** to support investment or regulatory engagement, increasing the value of development pipelines

## Key Features

### Realistic Data Simulations

#### Baseline

- Subgroups
- Covariates

#### Outcome

- Continuous
- Discrete
- Survival

#### Enhancements

- Correlation between variables
- Derived variables
- Missing data
- Truncation
- Censoring

### Relevant Decision Rules

#### Single objectives

- Hypothesis test
- Summary statistic

#### Combined objectives

- Co-primary endpoints
- Efficacy-safety trade-offs
- Multiple comparison adjustments

### Study Designs

- Parallel group
- Cross-over

### Comprehensive Analysis Options

#### Continuous

- One sample t-test
- Two sample t-test
- Signed rank test
- Mann-Whitney test
- ANOVA
- Kruskal-Wallis test
- Linear regression

#### Discrete

- One sample proportion
- McNemar's test
- Fisher's exact test
- Chi-square test

#### Survival

- Log-rank test
- Cox proportional hazards

### Export Functionality

- Audit report
- Simulated data
- Probability of Success results

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## Optimise for Success

Identify the right development path, optimising the number of patients required to generate evidence and reducing the risk of failure, costs and time.

## De-Risk Investment

Rapidly evaluate and test the impact of key assumptions to de-risk investment.

## Accelerate Development

Accelerate access to novel treatments through better targeting of patient population and selection of outcome measures.

## Kerus Functionality

KerusCloud transforms the study planning process with quick and convenient optimisation of study parameters to support the design of complex clinical research trials so you can:

- Simulate data with correlations and missing values reflecting real-world patients and studies
- Assess the probability of success for real-world objectives involving trade-offs between several factors
- Identify the critical study aspects impacting on the probability of success
- Compare analysis plans with selections from the comprehensive analysis suite

## On Demand

KerusCloud offers instant access to the power and scalability of the cloud. No matter how complex or demanding the study, KerusCloud can handle it delivering results rapidly.

## User Experience

- User Friendly Web interface
- Online user guide
- Online Tutorials



Exploristics Ltd. 24 Linenhall Street  
Belfast, Northern Ireland BT2 8BG

find out more T +44 (0)28 9600 1996  
exploristics.com/kerus | info@exploristics.com

