

Core Facility Computational Bioanalytics

Statistical data analysis with SPSS for Life Science Researchers

Survival analysis and Analysing Categorical data

The aim of the **first day** course is to describe the various methods used for modeling and evaluating survival data, also called time-to-event data. General statistical concepts and methods discussed in this course include survival and hazard functions, Kaplan-Meier graphs, log-rank and related tests, Cox proportional hazards model, and the extended Cox model for time-varying covariates.

The **second day** course will focus on logistic regression models for the analysis of contingency table data, where the cell entries represent counts that are cross-tabulated using categorical variables. Tests for (conditional) independence are discussed in the context of odds-ratios, relative risks and simple Chi²-tests.

Upon successful completion of this courses, participants will be able to check test specific assumptions and will be familiar with common statistical methods in survival and categorical data analysis. The participants will have the ability to choose the suitable statistical analysis method for different data sets and will have insight how to interpret statistical results.

Survival analysis (Day 1): Overview of different Survival models, focussed on Kaplan Meier and Log Rank test, Cox Regression (time-dependent/independent), scientific presentation of results

Analyzing categorical data (Day 2): Odds Ratio, Relative-Risk, Chi², McNemar, Logistic Regression, estimation of cut-offs, ROC/AUC analysis, sensitivity and specificity, scientific presentation of results;

Teaching and learning method: 20% lecture and 80% interactive

Languages of instruction: English or German

Target audience: PhD students, technicians and researchers

Entrance qualifications: SPSS basics course

Costs: 150 Euro (University)/ 300 Euro (Company) per day Each day can be booked separately.

Registration: zmf-sekretariat@medunigraz.at (deadline: June 1st 2018)

As the number of participants is limited (min. 3 and max. 8), please register early to confirm your seat!

Day 1: June 11th 2018 (9 am - 4 pm)

Day 2: June 12th 2018 (9 am - 4 pm)

ZMF seminar room ground floor EG-086

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DFP: 7-Points per day
Total: 14-Points