

## Biostatistics II

### Regression Models in Clinical Epidemiology

#### Facilitators

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#### Description

In Biostatistics II you will learn to apply the acquired knowledge that was introduced in the module basic biostatistics in more advanced settings. Instead of simple calculations using a pocket calculator, you now will use the statistical software package R (<https://www.r-project.org/>) in order to perform analysis on your own.

#### Objectives

To extend your toolbox for statistical analysis to settings in which regressions are used. You will become familiar with one now commonly used free statistical software that helps you to perform more refined statistical analyses.

- Participants are able to provide descriptive statistics graphical summaries of concrete data sets
- They can use the software R to provide summary estimates and 95% CIs, and to conduct hypothesis testing in certain situations
- Participants are able to perform logistic and linear regression analyses
- Participants are able to perform basic survival and time-to-event analyses (analysis of incident rates, obtaining Kaplan-Meier survival estimates, Cox proportional hazards regression)

In addition to the techniques of statistical analyses, the participants will have to be able to state specific facts about epidemiologic terms, and to comment findings of epidemiological studies.

#### Dates

**2024, Jan 24-26/ April 15-17/ April 19 (optional test exam)/ April 26 (exam)**

#### Equipment

Participants must bring their own laptops on which R (<https://www.r-project.org/>) and RStudio (<https://www.rstudio.com/>) are installed.

#### Contact:

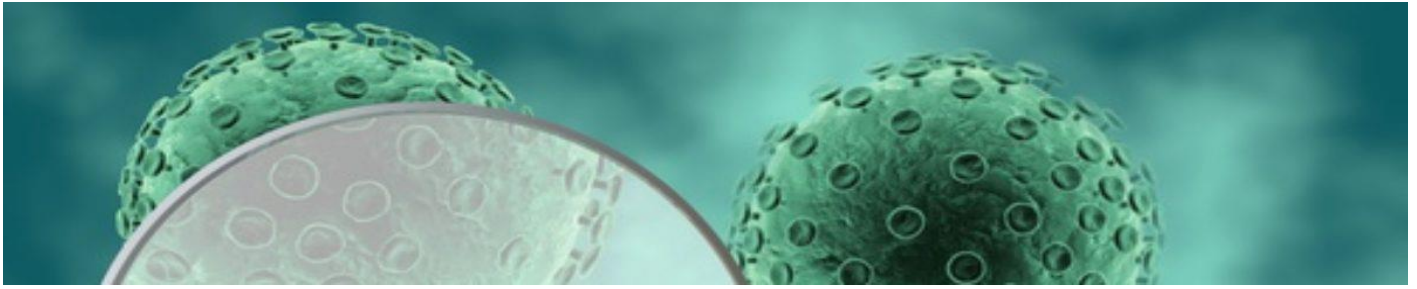
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# CAS in Clinical Research



## Course Structure

The programme of the module contains a mix of traditional lectures as well as group work and concrete practicals in which the participants apply the theoretical concepts provided in the lectures using the statistical software R.

## Assessment

Exam

## Credits

**3 ECTS**

Contact: 56 h, Homework: 4h

## Location

(1 ECTS corresponds to appr. 25-30 hours workload)

ISPM Bern, Mittelstrasse 43, 3012 Bern, Room tbd

## Contact:

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