Student Supervision & Teaching

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Biostatistician
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THESIS AND INTERN SUPERVISION:

Löwe, H. (2023). *Implementation of correlation between PFS and OS into the **simIDM** package.* Three month full-time internship with Roche Statistical engineering, Basel. Co-supervised with Daniel Sabanés Bové and Matthias Meller.

Vazquez Rabunal, M. (2023). *Improved treatment effect estimation in subgroups displayed in forest plots based on Bayesian shrinkage priors.* Four month full-time internship with Roche Biostatistics, Basel. Co-supervised with Marcel Wolbers and Daniel Sabanés Bové.

Sawant, A. (2022). *Truncation by death for longitudinal continuous data: estimands and estimation methods.* Four month full-time internship with Roche Biostatistics, Basel.

Chen, X. (2019). *Sample size for prediction models.* Three month full-time internship with Roche Biostatistics, Basel. Co-supervised with Markus Elze and Gian Thanei.

Li, K. (2018). *Optimism-corrected treatment effect estimates in subgroups displayed in forest plots for time-to-event outcomes.* Master thesis to obtain Master in Biostatistics, University of Zurich. Initiated within three month full-time internship with Roche Biostatistics, Basel. Co-supervised with Marcel Wolbers. Academic supervisor: Prof. Torsten Hothorn, University of Zurich.

Meller, M. (2016). *Joint Modelling of Overall Survival and Progression Free Survival.* Master thesis to obtain Master in Biostatistics, University of Ulm. Initiated within four month full-time internship with Roche Biostatistics, Basel. Academic supervisor: Prof. Jan Beyersmann, University of Ulm. Winner of the Bernd Streitberg Award 2018 of the German Region of the International Biometric Society.

Hebeisen, M. (2014). *Estimation from Interval-censored Time-to-event Data: Method Comparison by Simulation based on GALLIUM Study for Follicular Lymphoma.* Master thesis to obtain Master in Biostatistics, University of Zurich. Prepared within seven month full-time internship with Roche Biostatistics, Basel. Academic supervisor: Prof. Torsten Hothorn, University of Zurich. download thesis

Hubeaux, S. (2013). *Analysis of time-to-event data with interval- or left-censored covariates.* Six month full-time internship with Roche Biostatistics, Basel.

Boutellier, P. (2013). *What does a PSA bounce look like? A numerical and graphical description of the prostate-specific antigen (PSA) bounce phenomenon in patients treated for prostate cancer with brachytherapy only.* Master thesis to obtain Master in Medicine, University of Zurich.

Loiero, D. (2012). *Inter- and Intrareader variability of Ratingen score in the Swiss Clinical Quality Management database.* Master thesis to obtain Master in Medicine, University of Zurich.

Scherer, A. (2011). *Determinants of TNFa inhibitor prescription in the Swiss Clinical Quality Management cohort of axial Spondylarthropathy patients.* Semester thesis in Master of Biostatistics program, University of Zurich.

Achermann, R. (2008). *Netrin-1 und DCC Expression bei Hirntumoren.* Semester thesis in Master of Biostatistics program, University of Zurich.

Lanz, K., Weber M. (2005). *Sehleistung unter körperlicher Anstrengung.* Swiss Technical School for Optometrics, Olten, Switzerland.

TEACHING LEADERSHIP

- At Roche, I led the official roll-out of the ICH E9 addendum within Roche, for statisticians and partner functions (such as clinical science, regulatory, biometrics, early research).

- A full-day introductory biostatistics course that I gave at Roche together with Marcel Wolbers has been selected as part of the official training program for all Roche affiliates globally.

SHORT COURSES FOR STATISTICALLY TRAINED AUDIENCES

06/2024	*Introduction to and applications of survival analysis.* (IBS German and Austrian-Swiss Region Summer school, with Paul Blanche [U Copenhagen], Sarah Friedrich [U Augsburg], Helga Wagner [U Linz].)
05/2024	*Courses on basics of clinical trials, group-sequential designs, estimands, subgroup analysis.* (Within MSc program "Master of Pharmaceutical Sciences in Drug Development and Regulatory Affairs", University of Innsbruck, Austria.)
09/2023	*Advanced group-sequential and adaptive confirmatory clinical trial designs, with R practicals using **rpact**.* (Pre-conference course at 5th Conference of the Central European Network, Basel, Switzerland, with Gernot Wassmer [rpact], Marc Vandemeulebroecke [Novartis], Marcel Wolbers [Roche].)
08/2023	*Causal Inference in Randomized Controlled Trials.* (Pre-conference course at Joint Statistical Meetings in Toronto, with Mouna Akacha, Robin Dunn, Tianmeng Lyu [all Novartis], Shanti Gomatam [FDA].)
08/2023	*Basic methods for group-sequential trials.* (Roche internal course for biostatisticians, Mississauga, Canada.)
03/2023	*Courses on basics of clinical trials, group-sequential designs, estimands, subgroup analysis.* (Within MSc program "Master of Pharmaceutical Sciences in Drug Development and Regulatory Affairs", University of Innsbruck, Austria.)
02/2023	*Some challenges with implementing estimands in real life.* (Recording for online training for *The Effective Statistician Academy*, Butzbach, Germany.)
02/2023	*Basic and advanced methods for group-sequential trials.* (Roche internal course for biostatisticians. With Marcel Wolbers.)
09/2022	*Advanced group-sequential and adaptive confirmatory clinical trial designs, with R practicals using rpact.* (Organized by the Basel Biometrics Section, Basel. With Gernot Wassmer [rpact], Marc Vandemeulebroecke [Novartis], Marcel Wolbers [Roche], full-day course)
02/2022	*"Confirmatory adaptive designs" for drug developers.* (Two half-days course for drug development functions at Roche, run 3 times with in total >650 participants)
12/2021	*Adaptive Design in Clinical Trials.* (Two half-days course in collaboration with DIA)
05/2021	*successR: comprehensive resource for training, methodology, and computational tools around success probabilities.* (Five 2.5-hour shortcourses for all Roche biostatisticians)

05/2021	*Stop the abuse: A plea for a more principled approach to the analysis of time-to-event endpoints with competing risks, with a focus on analysis of AEs.* (Two 2.5-hour shortcourses for all Roche biostatisticians, with Marcel Wolbers)
01/2021	*Answering Old Questions with New Tools: Application of the ICH E9 Addendum in Oncology.* (Two 2.5-hour shortcourses for all Roche biostatisticians, with Godwin Yung)
12/2020	*Answering Old Questions with New Tools: Application of the ICH E9 Addendum in Oncology.* (Half-day shortcourse at 76th Annual Deming Conference on Applied Statistics, with Evgeny Degtyarev)
06/2020 – 12/2020	*A Toolbox for Innovative Confirmatory Trial Designs. Four 2h modules on group-sequential, adaptive, and multiarm multistage designs.* (Virtual course for all Roche biostatisticians, with Marcel Wolbers)
10/2019	*Advanced methods for group-sequential and adaptive trials.* (Summer school organized on behalf of the German Region of the IBS, Lambrecht, Germany. With Marc Vandemeulebroecke, Gernot Wassmer, and Marcel Wolbers, 3-day course)
07/2019	*Advanced methods for group-sequential trials.* (ISCB40, Leuven, Belgium. With Marcel Wolbers. Half-day pre-conference course)
03/2019	*Group-sequential clinical trial designs, advanced topics.* (Roche, Basel. With Marcel Wolbers. Half-day course)
03/2018	*Group-sequential and adaptive clinical trial designs, with R practicals.* (Organized by the Basel Biometrics Section, Basel. With Daniel Sabanés Bové, Marc Vandemeulebroecke, Marcel Wolbers, full-day course)
06/2013	*Analysis of Longitudinal data.* (Roche, Basel. 8-hour course)
01/2011	*Analysis of Longitudinal data.* (Institue for Medical Biometry, Epidemiology, and Informatics, University of Mainz. 3-day course, with Leo Held)
06/2010	*Analysis of Longitudinal data, as part of Master in Medical Biometry.* (Department of Medical Biometry, University of Heidelberg, Heidelberg. 3-day course, with Leo Held)

GRADUATE LEVEL TEACHING FOR STATISTICIANS

Preparing and teaching lecture to Master students, preparing and discussing exercises (blackboard and with R), preparing and grading exams.

12/2019	*Introduction to Applied Mathematics and Informatics in Drug Discovery (AMIDD), one session: Interim look into pivotal clinical trials - why it matters and how to do it* (Graduate level, University of Basel)
11/2013	*Statistical Methods for Clinical Research, one session on group-sequential designs in clinical research* (Graduate level, University of Zurich)
11/2012 – 12/2012	*Statistical Methods for Clinical Research, two sessions: group-sequential designs in clinical research and measures of agreement* (Graduate level, University of Zurich)
09/2011 – 12/2011	*Statistical Methods for Clinical Research* (Graduate level, University of Zurich)
02/2010 – 06/2010	*Longitudinal data analysis* (joint with Prof. L. Held, graduate level, University of Zurich)
09/2009 – 12/2009	*Biostatistical methods, Part II: Statistical methods for clinical trials* (graduate level, University of Zurich)

02/2009 – 05/2009	*Likelihood inference* (joint with Prof. L. Held, graduate level, University of Zurich)
10/2005 – 02/2006	*Introduction to Statistics* (undergraduate level, University of Bern)

SHORT COURSES FOR NON-STATISTICAL AUDIENCES

09/2024	*Survival analysis, group-sequential trial designs* (European Center of Pharmaceutical Medicine Course, Basel)
06/2024	*Basics of clinical trial designs* (European Center of Pharmaceutical Medicine Course, Basel)
10/2023	*Futility analyses - they are not futile!* (90min session for medical affairs, Roche, Basel)
10/2023	*Introduction to survival analysis* (30min session for medical affairs, Roche, Basel)
05/2023	*Multiplicity* (2h course for Pharmacometrics department, Roche, Basel)
09/2022 – 10/2022	*Introduction to statistics, survival analysis, interpretation of subgroups in clinical trials, interim analyses* (2 days for swiss health quality association, Zug)
09/2022	*The Concept of Estimands / Group-Sequential Designs and Interim Analyses in Drug Development / Survival Analysis* (European Center of Pharmaceutical Medicine Course, Basel)
06/2022	*Basic Statistical Concepts* (European Center of Pharmaceutical Medicine Course, Basel)
06/2022	*Estimands in Multiple Sclerosis* (1-hour course for Roche's MS clinical science community, virtual event)
04/2022	*Platform trials in drug development* (1-hour course for Roche's Nordic commercial organization, virtual event)
11/2021	*The final word on interim analyses* (2-hour courses for all product development colleagues, Roche, Basel, virtual event)
10/2021	*How to survive survival analysis?* (2-hour courses for all product development colleagues, Roche, Basel, virtual event)
05/2021	*Introduction to statistics.* (2-hour courses for all product development colleagues, Roche, Basel, virtual event)
05/2021	*2-hour training for clinical reviewers: Implications of the ICH E9 estimand addendum on how we develop, run, and analyse clinical trials* (Agância Nacional de Vigilância Sanitária (ANVISA, virtual event))
05/2021	*Introduction to statistics.* (2-hour courses for all product development colleagues, Roche, Basel, virtual event)
01/2021	*Introduction to statistics.* (Two 2-hour courses for all Medical Science Liaison colleagues within Roche Medical Affairs, Roche, Basel, virtual event)
12/2020	*Survival analysis in rheumatology.* (1-hour course for medical doctors, organized by Roche Switzerland at St. Gallen Hospital, virtual event)
11/2020	*Introduction to statistics.* (Two 2-hour courses for all product development colleagues, Roche, Basel, virtual event)
09/2020	*Introduction to survival and interim analyses.* (Half-day course for Regulatory Documentation Department, Roche, Basel & Welwyn, virtual event)
08/2020	*Introduction to statistics.* (Half-day course for Regulatory Documentation Department, Roche, Basel & Welwyn, virtual event)

01/2020	*Introduction to survival and interim analyses.* (Half-day course for Regulatory Documentation Department, Roche, Basel)
01/2020	*How to interpret subgroup analyses in clinical trials?* (2-hour course for medical doctors, organized by Roche Switzerland at University Hospital Zurich.)
11/2019 – 01/2020	*Design of Experiments & Effective Statistical Practices.* (Three two-hour courses for early development organization, Roche, Basel)
10/2019	*Introduction to statistics.* (Half-day course for Regulatory Documentation Department, Roche, Basel)
01/2019	*Introduction to statistics in clinical trials.* (2-hour course for Medical Science Liaison group, Roche Swiss Affiliate, Reinach)
01/2019	*Introduction to survival analysis and clinical trial designs, Part II.* (2-hour course for medical doctors, organized by Roche Switzerland at Baden Hospital.)
01/2019	*Estimands and real-world data in drug development.* (Half-day course for early development Neuroscience, Ophthalmology and Rare Disease scientists, Roche, Basel)
11/2018	*Introduction to survival analysis and clinical trial designs.* (Half-day course for early development Neuroscience, Ophthalmology and Rare Disease scientists, Roche, Basel)
03/2018	*Introduction to survival analysis and clinical trial designs.* (3-hour course for medical doctors, organized by Roche Switzerland at Baden Hospital.)
02/2018	*Introduction to survival analysis and clinical trial designs.* (Half-day course for Regulatory Documentation Department and Global Project Managers, Roche, Basel)
11/2017	*Introduction to statistics.* (Half-day course for Regulatory Documentation Department and Global Project Managers, Roche, Basel)
07/2017	*Sample size planning and survival analysis in clinical trials.* (Full-day course for Medical Affairs and Clinical Science Departments, Roche, Basel, jointly with Marcel Wolbers)
04/2017	*Introduction to statistics.* (Half-day course for Competitive Intelligence Group, Roche, Basel)
03/2017	*Introduction to statistics.* (2-hour course for Finance Department, Roche, Basel)
11/2016	*Introduction to statistics.* (Half-day course for Regulatory Documentation Department, Roche, Mississauga)
10/2016	*Introduction to statistics.* (Half-day course for Regulatory Documentation Department, Roche, Basel)
08/2016	*Introduction to statistics.* (3-hour course for Media Group Roche, Basel)
03/2016 – 11/2016	*Five workshops on specific biostatistical topics in clinical trials.* (3-hour courses for medical doctors, organized by Roche Switzerland at hospitals in Sion, St. Gallen, Frauenfeld, Aarau, Zürich.)
05/2016	*Introduction to statistics.* (Half-day course for Regulatory Documentation Department, Genentech, South San Francisco and Roche, Basel)
02/2016	*Introduction to statistics in clinical trials.* (Half-day course for Medical Science Liaison group, Roche Swiss Affiliate, Reinach)
01/2016 – 02/2016	*Introduction to statistics. Certificate of Advanced Studies (CAS) course, as part of the Master of Advanced Studies in Managed Health Care.* (2-day course, ZHAW Zurich University of Applied Sciences, School of Management and Law, Winterthur Institute for Health Economics, Winterthur)

11/2015	*Introduction to statistics.* (1-day course for Statistical Programming and Analysis Department, Roche Basel)
10/2015	*Introduction to statistics.* (Two 1-day courses for Regulatory Documentation Department, Roche Basel & Welwyn)
05/2015	*Introduction to statistics.* (1-day course for Product Development Department, Roche Basel)
02/2015	*Introduction to statistics. Certificate of Advanced Studies (CAS) course, as part of the Master of Advanced Studies in Managed Health Care.* (2-day course, ZHAW Zurich University of Applied Sciences, School of Management and Law, Winterthur Institute for Health Economics, Winterthur)
06/2014 – 11/2014	*Four workshops on specific biostatistical topics in clinical trials.* (3-hour courses for medical doctors, organized by Roche Switzerland at hospitals in Zürich, Lausanne, Basel, Baden.)
01/2014 – 03/2014	*Introduction to statistics. Certificate of Advanced Studies (CAS) course, as part of the Master of Advanced Studies in Managed Health Care.* (3-day course, ZHAW Zurich University of Applied Sciences, School of Management and Law, Winterthur Institute for Health Economics, Winterthur)
11/2013	*Workshop on survival analysis in oncology.* (3-hour course for Roche Oncology sales force, Reinach)
06/2013 – 04/2014	*Seven workshops on survival analysis in oncology.* (3-hour courses for medical doctors organized jointly by Roche Switzerland and Novartis Switzerland at hospitals in Basel, Zürich, Bern, Luzern, Lausanne, Lugano, Olten.)
01/2012 – 03/2012	*Introduction to statistics. Certificate of Advanced Studies (CAS) course, as part of the Master of Advanced Studies in Managed Health Care.* (3-day course, ZHAW Zurich University of Applied Sciences, School of Management and Law, Winterthur Institute for Health Economics, Winterthur)
09/2011	*Statistics in oncology.* (1-day course, cancer biology PhD program, University of Zurich)
04/2011	*How to write a scientific paper – statistical aspects.* (4-hour course as part of medical curriculum, University Hospital, Zurich)
02/2011	*Introduction to biostatistics.* (3-hour course, continuing education for radiologists, University Hospital, Bern)
03/2010	*Samples, confidence intervals, statistical tests, and p-values.* (1-hour talk, Medical radiology department, University Hospital Zurich, Zurich)
01/2010 – 05/2010	*Introduction to statistics. Certificate of Advanced Studies (CAS) course, as part of the Master of Advanced Studies in Managed Health Care.* (3-day course, ZHAW Zurich University of Applied Sciences, School of Management and Law, Winterthur Institute for Health Economics, Winterthur)
09/2010	*Statistics in oncology.* (1-day course, cancer biology PhD program, University of Zurich)
09/2009	*Statistics in oncology.* (1-day course, cancer biology PhD program, University of Zurich)
09/2009	*Assessment of agreement between continuous variables.* (1-hour talk, Waid Hospital, Zurich)
02/2009	*Introduction to biostatistics.* (1-hour talk, Triemli Hospital, Zurich)
01/2009	*Introduction to biostatistics.* (1-day course, continuing studies for researchers, University of Zurich)

09/2008	*Statistics in oncology.*
	(1-day course, cancer biology PhD program, University of Zurich)
02/2008	*Linear models.*
	(1-day course, continuing studies for researchers, University of Zurich)
04/2005 – 05/2005	*Introduction to R.* (2-day course, continuing studies, University of Bern)

FURTHER SHORT COURSES

| 09/2011 | *Optimization.* |
| | (2-hour course, Energy trading academy, BKW FMB Energie AG) |