
Detailed Programme

Sunday, 23 August 2020

Course: **SC1: Regression Modelling Strategies**

Instructor: **Frank Harrell Jr.**, *Vanderbilt University School of Medicine, United States*

Course: **SC2: Absolute Risk Methods and Applications in Clinical management and Public Health**

Instructors: **Ruth Pfeiffer**, *Division of Cancer Epidemiology and Genetics, National Cancer Institute, NIH, HHS, United States*
Mitchell H. Gail, *Division of Cancer Epidemiology and Genetics, National Cancer Institute, NIH, HHS, United States*

13.00 - 19.00

13.00 - 13.45	Introduction
13.45 - 14.30	Survival analysis and competing risks without covariate
14.30 - 15.00	Estimating absolute risk from cohorts 20 slides
15.00 - 15.30	Estimation by combining cohort or case-control data with registry data
15.30 - 16.00	Software for model building
16.15 - 17.15	Criteria for evaluation
17.15 - 18.00	Comparing two models
18.00 - 18.45	Applications
18.45 - 19.00	Questions/review or special topics

Course: **SC3: Understanding and Tackling Measurement Error a Review of Modern Practical Methods**

Instructors: **Pamela Shaw**, *University of Pennsylvania Perelman School of Medicine, United States*
Ruth Keogh, *London School of Hygiene and Tropical Medicine, United Kingdom*

13.00 - 19.00

13.00 - 13.05	Preliminaries
13.05 - 13.30	Introduction to measurement error and its effects
13.30 - 14.00	Regression Calibration
14.00 - 14.30	Simulation Extrapolation (SIMEX)
14.30 - 15.15	Practical worked examples + R practicum: Session 1
15.45 - 16.15	Special considerations for categorical exposures
16.15 - 16.45	Bayesian Methods for measurement error correction
16.45 - 17.30	Practical worked examples + R practicum: Session 2
18.00 - 18.25	Outcome and other types of measurement error
18.25 - 18.50	Considerations for study design
18.50 - 19.00	Closing remarks
19.00	Class End

Course: **SC4: Analysis of High-Dimensional Data**

Instructors: **Jörg Rahnenführer**, *TU Dortmund, Germany*
Michel Lang, *TU Dortmund, Germany*
Lara Lusa, *University of Ljubljana, Slovenia*

Course:

SC5: Early Phase Clinical Trials

Instructors: **Alexia Iasonos**, *Memorial Sloan Kettering Cancer Center, New York, NY, United States*

John O'Quigley, *Department of Statistical Science, University College London, United Kingdom*

13.00 - 18.45

13.00 - 13.15	Welcome and Introduction
13.165- 14.00	Introduction to general Phase I designs
14.00 - 15.00	General background to dose finding approaches. Model based, interval and semi-parametric methods
15.15-15.45	Statistical theory (convergence, coherence principles, model parameterization): Application to design
16.15 - 17.00	Dose expansion cohorts: theory and practice
17.00 - 17.45	More complex designs (patient heterogeneity and bridging, toxicity and efficacy, Phase I/II, combination therapies)
18.00 - 18.30	Protocol development, practical and logistical concerns such as accrual rates and endpoint observation, review of case studies, software
18.30 - 18.45	

19.30 - 20.30 Students' Get Together

14.00 Conference Opening:
 Welcome by: Krystyna Szafraniec & Maciej Polak (LOC Chairs)
 Michał Abrahamowicz, SPC Chair
 Vana Sypsa, President ISCB

14.30 - 15.30 President's Invited Speaker:
Miguel Hernán Learning what works: Causal inference from observational data
Harvard University, USA
 Organiser: **Vana Sypsa**, *Medical School, National and Kapodistrian University of Athens, Greece*

Session: **IS01: Bayesian modelling of chronic & infectious diseases: Reverend Bayes going anti-viral**
 Organisers / Chairs: **Dani Gamerman**, *UFMG, Brazil*
Maia Lesosky, *University of Cape Town, South Africa*

15.50 - 17.20

IS01.1	15.50 - 16.20	Paula Moraga	Bayesian Geospatial Models for Tropical Disease Mapping
IS01.2	16.20 - 16.50	Jony Arrais Pinto Jr.	Point pattern analysis of cerebrovascular deaths in Rio de Janeiro with spatially varying covariate effects
IS01.3	16.50 - 17.20	Alexandra Schmidt	A Poisson-multinomial spatial model for the number of cases of vector-borne diseases in Rio de Janeiro, Brazil

Session: **IS02: Tackling the challenges of imperfections in longitudinal and survival data: missingness, measurement error and irregular**
 Organisers / Chairs: **Laurence S. Freedman**, *Gertner Institute for Epidemiology, Israel*
Ruth Keogh, *LSHTM, United Kingdom*

15.50 - 17.20

IS02.1	15.50 - 16.20	Eleni-Rosalina Andrinopoulou	Challenges and opportunities of combined analysis of multiple outcomes in longitudinal studies
IS02.2	16.20 - 16.50	Havi Murad	Missing time-dependent covariate values for the Cox model - multiple imputation versus joint models approach
IS02.3	16.50 - 17.20	Shaun Seaman	Structural nested cumulative survival time models to adjust for time-dependent confounding

Session: **OC01: Clinical Trials Methodology 1**
 Chair: **Colin Begg**, *Memorial Sloan Kettering Cancer Center, United States*

15.50 - 17.20

OC01.1	15.50 - 16.08	Heinz Schmidli	Use of external control information in clinical trials
OC01.2	16.08 - 16.26	Babak Choodari-Oskooei	Treatment selection in multi-arm multi-stage (MAMS) designs: an application to primary postpartum haemorrhage
OC01.3	16.26 - 16.44	David Robertson	Controlling type I error rates in multi-arm clinical trials: a case for the false discovery rate
OC01.4	16.44 - 17.02	Alexandra Graf	Optimized multiple testing procedures for nested sub-populations based on a continuous biomarker
OC01.5	17.02 - 17.20	Szymon Urbas StCA Winner	Inhomogeneous Poisson-gamma recruitment model for multi-centre clinical trials with model-averaged predictions

Session: **OC02: Causal Inference 1**
Chair: **Robert Platt**, *McGill University, Canada*

15.50 - 17.20

OC02.1	15.50 - 16.08	Sander Roberti	Bias correction for estimates from linear excess relative risk models in small studies
OC02.2	16.08 - 16.26	Hege Michiels	Estimation of the treatment effect in case of switching to rescue medication in a randomised clinical trial
OC02.3	16.26 - 16.44	Sharon Lutz	Caution Against Examining the Role of Reverse Causality in Mendelian
OC02.4	16.44 - 17.02	Daniela Schlueter	Understanding pathways to health inequalities in cystic fibrosis using UK registry data
OC02.5	17.02 - 17.20	Johan Steen	Using health records to estimate mortality attributed to acute kidney injury: challenges and reflections

Session: **OC03: Multi-State models**
Chair: **Jeremy Taylor**, *University of Michigan, United States*

15.50 - 17.20

OC03.1	15.50 - 16.08	Charlotte Castel	Multi-state Markov model for estimating HIV incidence from HIV surveillance data in France, 2008-2018
OC03.2	16.08 - 16.26	Jan Feifel	Assessing the effect of time-dependent exposures on time-to-event endpoints with economical sampling designs
OC03.3	16.26 - 16.44	Jonathan Broomfield	Assessing and Relaxing the Markov Assumption in the Illness-Death Model
OC03.4	16.44 - 17.02	Pierre Joly	Regression model for epidemiological indicators: an alternative to the pseudo-values
OC03.5	17.02 - 17.20	Jerome Lambert	Analysis of recurrent hospital acquired infections and hospital discharge using marginal regression modelling

Session: **OC04: Individualised Risk Prediction 1**
Chair: **Torben Martinussen**, *University of Copenhagen, Denmark*

15.50 - 17.20

OC04.1	15.50 - 16.08	Laure Wynants	Developing risk models for multicenter data: a simulation study comparing regression techniques
OC04.2	16.08 - 16.26	Menelaos Pavlou	Sample size calculation for external validation of risk models
OC04.3	16.26 - 16.44	Wenyue Zhu StCA Winner	Spatial predictive statistical model: detecting the need for treatment from retinal imaging data
OC04.4	16.44 - 17.02	Solon Karapanagiotis	Tailored Bayesian risk prediction modelling
OC04.5	17.02 - 17.20	Francesca Gasperoni	Personalised screening schedules for optimal prevention of cardiovascular disease

Session: **OC05: Omics & Survival Analysis**
Chair: **Jaroslav Harezlak**, *Indiana University, United States*

15.50 - 17.20

OC05.1	15.50 - 16.08	Mirko Signorelli	How to predict a survival outcome using longitudinal and high-dimensional omic data
OC05.2	16.08 - 16.26	Agnieszka Król	Improving the evaluation of COPD exacerbation treatment effects by accounting for treatment discontinuations
OC05.3	16.26 - 16.44	Laura Villain	Generalized Berk Jones test for Gene Set Analysis of time to event transcriptomics applied to recurrence risk
OC05.4	16.44 - 17.02	Krista Fischer	The controversial concept of biological age
OC05.5	17.02 - 17.20	Lars LJ Van Der Burg	Impact of genetic markers on time-to-event outcomes taking into account ambiguous measurements

Session: **OC06: Novel Applications of Survival Analysis**

Chair: **Georg Heinze**, *Medical University of Vienna, Austria*

15.50 - 17.20

OC06.1	15.50 - 16.08	Ping Liu	Estimating conditional cumulative incidence in the presence of an internal time-varying exposure
OC06.2	16.08 - 16.26	Nina Ruzic Gorenjec	Random Cancers as Supported by Registry Data
OC06.3	16.26 - 16.44	Michelle Samuel	Comparison of methods to prevent immortal time bias for frequently recurring outcomes
OC06.4	16.44 - 17.02	Siyana Kurteva	Flexible modelling of recency-weighted cumulative opioid exposure provides new insights on the opioid safety
OC06.5	17.02 - 17.20	Sofia Kanavou	Defining impaired olfaction in Parkinson's disease: assessing agreement between four published methods

Session: **IS03: Can Ying dance with Yang?: Combining evidence from RCT's and Pharmaco-epidemiology population-based studies of drug effects**

Organiser / Chair: **Jessica Franklin**, *Brigham and Women's Hospital / Harvard Medical School, United States*

17.40 - 19.10

IS03.1	17.40 - 18.10	Sara Lodi	A three-step approach to compare randomized trials and observational studies
IS03.2	18.10 - 18.40	Jonathan Sterne	How risk of bias assessments can inform comparisons between RCTs and observational studies
IS03.3	18.40 - 19.10	Shirley Wang	Unambiguously reported and replicable real-world evidence to support decision-making

Session: **IS04: New Frontiers: Big Data & Functional Data Analysis**

Organiser / Chair: **Yingying Fan**, *USC, United States*

Chair: **Michal Abrahamowicz**, *McGill, Montreal, Canada*

17.40 - 19.10

IS04.1	17.40 - 18.10	James Ramsay	More Accurate Self-report Scale Scores
IS04.2	18.10 - 18.40	Timothy Cannings	Classification with imperfect training labels
IS04.3	18.40 - 19.10	Yingying Fan	An empirical Bayes shrinkage method for functional data

Session: **OC07: Clinical Trials Methodology 2**

Chair: **Mimi Kim**, *Albert Einstein College of Medicine, United States*

17.40 - 19.10

OC07.1	17.40 - 17.58	Ruitao Lin	Time-to-event model-assisted designs to accelerate and optimize early-phase immunotherapy trials
OC07.2	17.58 - 18.16	Megan Othus	Dynamic balancing in platform trials
OC07.3	18.16 - 18.34	Maximilian Pilz	Optimal unplanned recalculation in adaptive two-stage designs
OC07.4	18.34 - 18.52	Caroline Kristunas	An evaluation of the use of covariate constrained randomisation for stepped-wedge cluster randomised trial
OC07.5	18.52 - 19.10	Alessandra Serra	Multi-Arm Multi-Stage Design for Ordered Treatments

Session: **OC08: Causal Inference 2**
 Chair: **Saskia Le Cessie**, *Leiden University, the Netherlands*

17.40 - 19.10

OC08.1	17.40 - 17.58	Lucy Teece	Comparing and expanding potential-outcome models for average treatment effect estimation in cardio-oncology
OC08.2	17.58 - 18.16	Paul Meyvisch	On the relationship between association and surrogacy when both the surrogate and true endpoint are binary.
OC08.3	18.16 - 18.34	Wenxi Yu	Effect Estimation By A Boosted Doubly Robust Method
OC08.4	18.34 - 18.52	Jonas Béal	Causal inference with multiple versions of treatment and application to personalized medicine
OC08.5	18.52 - 19.10	Christiana Drake	Propensity Weighting in the Estimation of Direct Effects

Session: **OC09: Survival Analysis 1**
 Chair: **Richard. J. Cook**, *University of Waterloo, Canada*

17.40 - 19.10

OC09.1	17.40 - 17.58	Georgios Kantidakis	Prediction models in bone sarcoma - a simulation study to compare Cox models with Survival Neural Networks
OC09.2	17.58 - 18.16	Aurelien Belot	An excess hazard regression model based on a general structure and with individual frailty
OC09.3	18.16 - 18.34	Jennifer Hellier	Estimating survival functions using growth curve modelling with thresholds
OC09.4	18.34 - 18.52	Camille Maringe	Prediction of cancer survival for cohorts of patients most recently diagnosed using multi-model inference
OC09.5	18.52 - 19.10	Aimilia Exarchakou	Use of pseudo-observations to quantify the impact of cancer due to socioeconomic inequalities

Session: **OC10: Personalised Medicine 1**
 Chair: **Helene Jacqmin-Gadda**, *Inserm, France*

17.40 - 19.10

OC10.1	17.40 - 17.58	Holly Jackson	Rare Disease Trials: Using a continuous biomarker to allocate patients in a response-adaptive clinical trial
OC10.2	17.58 - 18.16	Paweł Morzywołek	Assessing the optimal time to start renal replacement therapy using Causal Machine Learning
OC10.3	18.16 - 18.34	Janie Coulombe	Simple optimal adaptive treatment strategies in studies subject to informative monitoring times
OC10.4	18.34 - 18.52	Maren Hackenberg	Learning individual trajectories from biomedical time-series data with deep generative models
OC10.5	18.52 - 19.10	Michail Belias	Spline-based modelling to investigate treatment effect differences in IPD-MA: a gentle introduction

Session: **OC11: Methods Validation and Comparisons**

Chair: **Aris Perperoglou**, AstraZeneca, United Kingdom

17.40 - 19.10

OC11.1	17.40 - 17.58	Stephanie Wied	Evaluation of the Fill-it-up design to use historical controls in randomized controlled clinical trials
OC11.2	17.58 - 18.16	Matthieu Faron	Indirect treatment effect estimation in presence of modifier in Network Meta Analyses of time-to-event data
OC11.3	18.16 - 18.34	Katy Morgan	What happens to sample size predictions for series of N-of-1 trials when outcomes aren't normally distributed?
OC11.4	18.34 - 18.52	Md Ariful Islam Sanim	On estimating average treatment effect of rare exposure: sample size consideration and bias correction
OC11.5	18.52 - 19.10	Małgorzata Ćwiklińska-Jurkowska	Modeling improvement of performance for combined procedures in classification of microarray data sets

Session: **OC12: Meta-analysis 1**

Chair: **Marianne Huebner**, Michigan State University, United States

17.40 - 19.10

OC12.1	17.40 - 17.58	Ralf Bender	Exploring the empirical distribution of tau from IQWiG reports to inform Bayesian meta-analyses
OC12.2	17.58 - 18.16	Loic Darchy	Multi-Arm Multi-Stage (MAMS) Designs in Clinical Development: A comparative review
OC12.3	18.16 - 18.34	Theodoros Evrenoglou	Network meta-analysis of rare events using penalized likelihood regression
OC12.4	18.34 - 18.52	Silvia Metelli	Detecting outlying studies in Network Meta-analysis using Bayes factors
OC12.5	18.52 - 19.10	Konstantina Chalkou	A Prediction Model of Heterogeneous Treatment Effects Using Randomized and Observational Data

19.30 - 20.30 **Welcome Get Together & Kraków virtual tour**

Session: **IS05: Causal Inference vs. Unmeasured Confounding**
 Organiser: **Eric Tchetgen Tchetgen**, *University of Pennsylvania, United States*
 Chair: **John Carlin**, *Murdoch Children's Research Institute & University of Melbourne, Australia*

12.10 - 13.40

IS05.1	12.10 - 12.40	Vanessa Didelez	On the (In)Validity of Multiple Instruments for Mendelian Randomisation Studies
IS05.2	12.40 - 13.10	Torben Martinussen	Competing risk data and unmeasured confounding
IS05.3	13.10 - 13.40	Qingyuan Zhao	Using sparsity to overcome unmeasured confounding: two examples

Session: **IS13: Statistical challenges in Covid-19 research**
 Organiser: **Krista Fisher**, *University of Tartu, Estonia*

12.10 - 13.40

IS13.1	12.10 - 12.40	Els Goetghebeur	Emulating trials with observational data and effect of hydroxychloroquine in hospitalized COVID-19 patients
IS13.2	12.40 - 13.10	Christopher Jackson	COVID-19: Estimating the severity of the epidemic from hospitalised cohorts in the UK
IS13.3	13.10 - 13.40	Tom Britton	Basic reproduction numbers, effective reproduction numbers and herd immunity

Session: **OC13: Clinical Trials Methodology 3**
 Chair: **Stephen Senn**, *Statistical Consultant, United Kingdom*

12.10 - 13.40

OC13.1	12.10 - 12.28	Shinjo Yada	An adaptive design of phase I/II clinical trials for precision medicine using oncogene information
OC13.2	12.28 - 12.46	Jessica Kasza	Information content of cluster-period cells in stepped wedge designs with unequal cell sizes
OC13.3	12.46 - 13.04	Anneke Grobler	How to handle drop-out in palliative care trials
OC13.4	13.04 - 13.22	Julia Niewczas	GO/NO-GO interim decision making incorporating short- and long-term endpoints
OC13.5	13.22 - 13.40	Andrew Vincent	Empirically derived prior using ClinicalTrials.gov for a Bayesian RCT.

Session: **OC14: Survival Analysis 2**
 Chair: **Zdenek Valenta**, *Institute of Computer Science, Czech Academy of Sciences, Czech Republic*

12.10 - 13.40

OC14.1	12.10 - 12.28	Regina Stegherr	Survival analysis for AdVerse events with Varying follow-up times - The empirical study of the SAVVY project
OC14.2	12.28 - 12.46	Audinga-Dea Hazewinkel	Prediction models with survival data: comparing machine learning to the Cox proportional hazards model
OC14.3	12.46 - 13.04	Il Do Ha	Semi-parametric Copula Modelling Approaches for Clustered Survival Data
OC14.4	13.04 - 13.22	Tasneem Fatima Alam CASC Winner	Bias reduction and solution to separation in the AFT models for small or rare event survival data
OC14.5	13.22 - 13.40	Martin Posch	Testing procedures for the comparison of multiple characteristics of different survival functions

Session: **OC15: Individualised Risk Prediction 2**
Chair: **Mark van de Wiel**, *Free University, Amsterdam, the Netherlands*

12.10 - 13.40

OC15.1	12.10 - 12.28	Ben Van Calster	Risk prediction for ordinal outcomes: calibration and the proportional odds assumption
OC15.2	12.28 - 12.46	J. Hoogland	Flexible parametric survival modeling by means of penalized maximum likelihood
OC15.3	12.46 - 13.04	Rumana Omar	Evaluation of sample size requirements for the development of risk prediction models
OC15.4	13.04 - 13.22	Isao Yokota	Regression model for personalized chance of longer survival using pseudo-observations
OC15.5	13.22 - 13.40	Pablo Gonzalez Ginestet	Stacked Inverse Probability of Censoring Weighted Bagging: A Case Study in The InfCare HIV Register

Session: **OC16: Functional Data Analysis**
Chair: **Timothy Cannings**, *University of Edinburgh, United Kingdom*

12.10 - 13.40

OC16.1	12.10 - 12.28	Francesca Ieva	Modeling the effect of dynamic covariates on time-to-event processes via Functional Data Analysis
OC16.2	12.28 - 12.46	Marta Spreafico	Including dynamic covariates in survival models via Functional Data Analysis: an application to osteosarcoma
OC16.3	12.46 - 13.04	Mohammad Fayaz	Functional Random Forest for Mixed Data
OC16.4	13.04 - 13.22	Stanislav Katina	Comparism of different statistical models used in shape index calculation on human face
OC16.5	13.22 - 13.40	Nicolo Margaritella	Parameter clustering in Bayesian functional data models of neuroscientific recordings

Session: **OC17: Omics & Genetics**
Chair: **Zoltán Kutalik**, *University of Lausanne, Switzerland*

12.10 - 13.40

OC17.1	12.10 - 12.28	Munshi Imran Hossain	Identification of Genetic Biomarkers using Models of Network Interactions
OC17.2	12.28 - 12.46	Pedro Afonso	Efficiently analyzing big data with Bayesian joint models for longitudinal and time-to-event data
OC17.3	12.46 - 13.04	Rodolphe Thiebaut	Generalized random forests for high-dimensional longitudinal data
OC17.4	13.04 - 13.22	Agus Salim	RUV-NB: Removing Unwanted Variation from Single-Cell RNA-seq Data
OC17.5	13.22 - 13.40	Marine Gauthier	Conditional cumulative distribution function estimation for differential expression analysis in scRNA-seq data

Session: **OC18: Longitudinal Data**
Chair: **Tomasz Burzykowski**, *Hasselt University, Belgium*

12.10 - 13.40

OC18.1	12.10 - 12.28	Abigail Burdon	Joint Modelling of Longitudinal and Survival Data Applied to Group Sequential Trials
OC18.2	12.28 - 12.46	Nicole Erler	Dealing with missing values in multivariate joint models for longitudinal and survival data
OC18.3	12.46 - 13.04	Zsolt Lang	A new type of generalized linear mixed models with linear predictor linked to marginal mean
OC18.4	13.04 - 13.22	Denis Rustand	Joint modelling of a semicontinuous longitudinal biomarker and a terminal event
OC18.5	13.22 - 13.40	Roger Marshall	Prognostic stratification: using Boolean classification to identify ordinal levels of risk

Session: **IS06: When non-inferiority trials are superior?**
 Organiser: **Toshiro Tango**, *Center for Medical Statistics, Tokyo, Japan*
 Organiser / Chair: **Lisa Hampson**, *Novartis Pharma AG, Switzerland*

14.00 - 15.30

IS06.1	14.00 - 14.30	Eisuke Hida	Can we evaluate assay sensitivity in a non-inferiority trial ?
IS06.2	14.30 - 15.00	Mimi Kim & <u>Melissa Fazzari</u>	Subgroup analyses in non-inferiority trials
IS06.3	15.00 - 15.30	Andrew Copas	Non-inferiority trials to directly inform treatment recommendations

Session: **IS07: Can Cox model survive in the 21st century survival analysis?**
 Organiser: **Maja Pohar Perme**, *Universtiy of Ljubljana, Slovenia*

14.00 - 15.30

IS07.1	14.00 - 14.30	Per Kragh Andersen	50 years with the Cox model - 80 more to come?
IS07.2	14.30 - 15.00	Richard J. Cook	Challenges in causal inference with survival and life history processes
IS07.3	15.00 - 15.30	Bianca de Stavola	The Cox model in the era of target trials emulations

Session: **OC19: Epidemiology: Methods & Applications**
 Chair: **Andrzej Pająk**, *Jagiellonian University Medical College, Poland*

14.00 - 15.30

OC19.1	14.00 - 14.18	Qi Ge	A Robust discriminant framework based on qEEG on the diagnosis of Alzheimer's disease
OC19.2	14.18 - 14.36	Jeremie Lespinasse	Modeling of multivariate longitudinal markers in a latent disease timescale: application in Alzheimer's disease
OC19.3	14.36 - 14.54	Dominik Grathwohl	Optimal pooling of blood samples
OC19.4	14.54 - 15.12	Matthew Smith	Survival inequalities in non-Hodgkin lymphoma: excess hazard models with joint modelling multiple imputation
OC19.5	15.12 - 15.30	Frederique Chammartin	Risk of non-AIDS defining and AIDS defining malignancies of early versus delayed initiation of antiretroviral

Session: **OC20: Multivariable Model Building**
 Chair: **Anne-Laure Boulesteix**, *LMU Munich, Germany*

14.00 - 15.30

OC20.1	14.00 - 14.18	Ihor Malyk	Optimal separation of normal distributed samples. Application for anxiety and alexithymia scales in cardiology
OC20.2	14.18 - 14.36	Lucinda Archer	Dichotomisation of continuous outcomes in prediction model research: (not such) a bad idea?
OC20.3	14.36 - 14.54	Sergio Sabroso-Lasa	Evaluating the role of correlations among markers in prediction models
OC20.4	14.54 - 15.12	Andreas Bender	Piece-wise exponential (additive mixed) modelling tools for survival analysis
OC20.5	15.12 - 15.30	Aris Perperoglou	Common spline bases for regression models in practice: a comparative simulation study

Session: **OC21: Bayesian Methods & Omics**
Chair: **Rodolphe Thiebaut**, *Bordeaux University / Inserm, France*

14.00 - 15.30

OC21.1	14.00 - 14.18	Sarah-Laure Rincourt	Nonparametric bayesian sparse factor analysis to model individual heterogeneity in gene-expression data
OC21.2	14.18 - 14.36	Sonja Zehetmayer	Adaptive filtering increases the power but not the False Discovery Rate in RNA-seq experiments
OC21.3	14.36 - 14.54	Alma Revers	A Bayesian approach for identifying gut-microbiome - diet associations
OC21.4	14.54 - 15.12	Miguel Rodo	Identifying rare cell types using an outlier-detection approach

Session: **OC22: Missing Data 1**
Chair: **Sven Ove Samuelsen**, *University of Oslo, Norway*

14.00 - 15.30

OC22.1	14.00 - 14.18	Shahab Jolani	Hierarchical imputation of categorical variables with both systematically and sporadically missing values
OC22.2	14.18 - 14.36	Orlagh Carroll StCA Winner	Combining bootstrap with multiple imputation to assess prognostic models with missing covariate data
OC22.3	14.36 - 14.54	Grigorios Papageorgiou	An alternative characterization of Missing at Random in Shared Parameter Models
OC22.4	14.54 - 15.12	Halehsadat Nekoe Zahraei	Cluster Analysis in Incomplete Data
OC22.5	15.12 - 15.30	Jonathan Bartlett	Bootstrap Inference for Multiple Imputation under Uncongeniality and Misspecification

Session: **OC23: Bayesian Methods**
Chair: **Alexandra Schmidt**, *McGill University, Canada*

14.00 - 15.30

OC23.1	14.00 - 14.18	Jonathan Roux	Bayesian reconstruction of inter-hospital propagation chains of antimicrobial resistant bacteria
OC23.2	14.18 - 14.36	Md Mynul Islam CASC Winner	A spatial multilevel model using conditional autoregressive processes
OC23.3	14.36 - 14.54	Steffen Ballerstedt	A Probability of Success Approach in Late Stage Drug Development
OC23.4	14.54 - 15.12	Paweł Wiczling	The Bayesian population pharmacokinetic analysis of dexmedetomidine and clonidine in Stan and Torsten
OC23.5	15.12 - 15.30	Erik van Zwet	Corpus based priors for calibrated Bayesian inference

Session: **OC24: Meta-analysis 2**
Chair: **Laure Wynants**, *Maastricht University, Netherlands*

14.00 - 15.30

OC24.1	14.00 - 14.18	Gerta Rücker	Model selection for component network meta-analysis in disconnected networks
OC24.2	14.18 - 14.36	Virginia Chiochia	Framework for evaluating reporting bias in network meta-analysis
OC24.3	14.36 - 14.54	Tasnim Hamza	Bayesian dose-response network meta-analysis
OC24.4	14.54 - 15.12	Hugo Pedder	Connecting the dots: Linking disconnected networks using dose-response Model-Based Network Meta-Analysis

Session: **IS08: New developments in Longitudinal data analysis**

Organiser: **Andrzej Galecki**, *University of Michigan, United States*

15.50 - 17.20

IS08.1	15.50 - 16.20	Helene Jacqmin-Gadda	Challenges in longitudinal analysis of pre-dementia cognitive decline
IS08.2	16.20 - 16.50	Tomasz Burzykowski	Design of longitudinal trials
IS08.3	16.50 - 17.20	Jeremy Taylor	Evaluation of predictive model performance of an existing model in the presence of missing data

Session: **IS09: Progress in providing analytic guidance for observational studies: the STRATOS initiative**

Organisers / Chairs: **Laurence Freedman**, *Gertner Institute for Epidemiology, Israel*

Willi Sauerbrei, *Institute of Medical Biometry and Statistics, Medical Center - University of Freiburg, Germany*

15.50 - 17.20

IS09.1	15.50 - 16.20	Saskia Le Cessie	Bridging the gap between causal inference and survival analysis: a censored edition
IS09.2	16.20 - 16.50	Jörg Rahnenführer	Statistical and machine learning techniques: Which help in patient care and medical research?
IS09.3	16.50 - 17.20	Georg Heinze & Marianne Huebner	Regression without regrets: data screening is needed before modeling

Session: **OC25: Clinical Trials Methodology 4**

Chair: **Sara Lodi**, *Boston University School of Public Health, United States*

15.50 - 17.20

OC25.1	15.50 - 16.08	Jian-Lun Xu	A new method to estimate the predictive value in a repeated screening program
OC25.2	16.08 - 16.26	Tra My Pham	Analysis of binary composite outcomes with partially observed components: a comparison of strategies
OC25.3	16.26 - 16.44	Leonhard Held	The harmonic mean chi-squared test to substantiate scientific findings
OC25.4	16.44 - 17.02	Juan Guillermo Gonzalez Maffe	An Application of Bayesian Hierarchical Model in Platform Phase I Oncology Dose Escalation studies
OC25.5	17.02 - 17.20	Damjan Manevski	Confidence intervals for the Mann-Whitney test

Session: **OC26: Causal Inference for Survival Analysis**

Chair: **Els Goetghebeur**, *Ghent University, Belgium*

15.50 - 17.20

OC26.1	15.50 - 16.08	Arthur Chatton	G-computation and Inverse Probability Weighting for time-to-event analyses
OC26.2	16.08 - 16.26	Suzy Van Sanden	Adjusting the estimate of overall survival benefit for treatment switching in a randomized clinical trial
OC26.3	16.26 - 16.44	Ruth Keogh	Emulation of target trials to investigate causal effects of lung transplant on survival in cystic fibrosis
OC26.4	16.44 - 17.02	Ellie John	Comparing instrumental variables approaches for time to event data
OC26.5	17.02 - 17.20	Mark Clements	„Plug-In“ Estimation for Parametric and Penalised Multi-State Markov Models

Session: **OC27: Survival Analysis 3**
Chair: **Terry Therneau**, *Mayo Clinic, United States*

15.50 - 17.20

OC27.1	15.50 - 16.08	Reuben Adatorwovor	Relaxing the Independence Assumption in Relative Survival Analysis: A Parametric Approach
OC27.2	16.08 - 16.26	Bernard Rchet	Building robust specific life tables using multidimensional penalized splines
OC27.3	16.26 - 16.44	Helmut Küchenhoff	Flexible estimation of complex, lagged, cumulative effects in the context of competing risks
OC27.4	16.44 - 17.02	Manuela Quaresma	Flexible Bayesian hierarchical excess hazard models using low-rank thin plate splines
OC27.5	17.02 - 17.20	Michal Abrahamowicz	Adapting SIMEX to correct for bias due to interval-censored data in survival analysis

Session: **OC28: Personalised Medicine 2**
Chair: **Ruth Pfeiffer**, *National Cancer Institute, Bethesda United States*

15.50 - 17.20

OC28.1	15.50 - 16.08	Svetlana Cherlin	Developing and testing high-efficacy patient subgroups within a clinical trial using risk scores
OC28.2	16.08 - 16.26	Shaima Belhechmi	Favoring the hierarchy constraint of interactions in penalized survival models of randomized trials
OC28.3	16.26 - 16.44	Sarah Booth	Accounting for calibration drift due to improvements in baseline survival during prognostic model development
OC28.4	16.44 - 17.02	Bernard Francq	I'm not an average but a patient! A significant Holy Grail
OC28.5	17.02 - 17.20	Gabriela Czanner	Statistical and machine learning methods for uncertainty-informed decision referral

Session: **OC29: Measurement Errors**
Chair: **Pamela Shaw**, *University of Pennsylvania, United States*

15.50 - 17.20

OC29.1	15.50 - 16.08	Valentijn M. T. De Jong	Adjusting for misclassification of a predictor in an individual participant data meta-analysis
OC29.2	16.08 - 16.26	Tanja Buelow	Various distributed data affected by lower limits of quantification: Point estimates vs. confidence intervals
OC29.3	16.26 - 16.44	Steve Ferreira Guerra	On Improved SIMEX for Covariate-Dependent Measurement Error with Continuous Covariates
OC29.4	16.44 - 17.02	Hana Sinkovec	Optimizing the use of dynamic quality indicators as covariates in regression models

Session: **OC30: Bayesian Methods for Clinical Trials**
Chair: **Paula Moraga**, *King Abdullah University of Science and Technology (KAUST), Saudi Arabia*

15.50 - 17.20

OC30.1	15.50 - 16.08	Samer Kharroubi	Modeling a preference-based index for EQ-5D and EQ-5D+Sleep using a Bayesian framework
OC30.2	16.08 - 16.26	Emma Gerard	Dose-finding Bayesian design for toxicity-schedule assessment using pharmacokinetics and pharmacodynamics
OC30.3	16.26 - 16.44	Hongchao Qi	Incorporating historical controls in clinical trials with longitudinal outcomes using the modified power prior
OC30.4	16.44 - 17.02	Haiyan Zheng	Bayesian sample size estimation for exploratory basket trials that enable borrowing of information
OC30.5	17.02 - 17.20	Yasin Desai	Prior elicitation of the efficacy of Methotrexate and Mycophenolate Mofetil in Juvenile Localised Scleroderma

17.40 - 19.10

Session **PO1: Clinical Trials: Methods & Applications**

Session **PO2: Longitudinal Data / Biomarkers**

Session **PO3: Survival analysis / Machine Learning**

Wednesday, 26 August 2020

10.20 - 11.50

Session	PO4: Big Data /Machine Learning
Session	PO5: Causal Inference
Session	PO6: Epidemiology: Methods and Applications / Electronic Health Records

Session: **IS10: Individualised Risk Prediction & Omics**

Organize/Chair: **Krista Fischer**, *University of Tartu, Estonia*

12.10 - 13.40

IS10.1	12.10 - 12.40	Kristel Van Steen	Precision Medicine at the Interface of translational Science & Systems
IS10.2	12.40 - 13.10	Zoltán Kutalik	Causes and health consequences of altered transcriptome profiles
IS10.3	13.10 - 13.40	Mark van de Wiel	Learning from a lot: Empirical Bayes for high-dimensional model-based prediction

Session: **OC31: Clinical Trials**

Chair: **David W. Warne**, *Switzerland*

12.10 - 13.40

OC31.1	12.10 - 12.28	Lizzi Pitt	Using dynamic programming to find an optimal dose escalation scheme for a phase I trial
OC31.2	12.28 - 12.46	Kathrin Moellenhoff	Equivalence tests for binary efficacy-toxicity responses
OC31.3	12.46 - 13.04	Andrew Copas	Designing cluster randomised trials with unequal allocation of clusters or measurements
OC31.4	13.04 - 13.22	Anais Andrillon	Dose-finding designs with right censored endpoints. Evaluation through benchmark
OC31.5	13.22 - 13.40	Antonios Daletzakis	Estimation of the response rate in Simon's two stage design with early termination

Session: **OC32: Causal Inference 3**

Chair: **Vanessa Didelez**, *Leibniz Institute for Prevention Research and Epidemiology - BIPS, Germany*

12.10 - 13.40

OC32.1	12.10 - 12.28	Zhiyue Huang	Inference on Time-to-Event Data after Propensity Score Matching
OC32.2	12.28 - 12.46	Margarita Moreno-Betancur	Data-adaptive methods for high-dimensional mediation analysis: Application to a tuberculosis vaccine trial
OC32.3	12.46 - 13.04	Camille Nevoret	Estimating causal effects from the large observational, with an application to multiple sclerosis
OC32.4	13.04 - 13.22	Mathilde Lefort	Long-term effect of first-line multiple sclerosis treatments using time-dependent propensity score matching
OC32.5	13.22 - 13.40	Emily Granger	Propensity score diagnostics: assessing the accuracy of a propensity-adjusted effect estimate

Session: **OC33: Survival Analysis 4**
 Chair: **Per Kragh Andersen**, *Biostatistics, University of Copenhagen, Denmark*

12.10 - 13.40

OC33.1	12.10 - 12.28	Ali Shariati	Statistical Intervals for the MRL Function via Empirical Likelihood Using Right Censored Length-biased Data
OC33.2	12.28 - 12.46	Lars Bugiera	An Analytic Approach on the Cumulative Mean Function for Recurrent and Terminal Events
OC33.3	12.46 - 13.04	Reinhard Meister	Stratifying event-history data by a binary time-dependent covariate without conditioning on the future
OC33.4	13.04 - 13.22	Francesca Graziano	Discordant sampling designs from a longitudinal cohort: efficiency comparison
OC33.5	13.22 - 13.40	Lubomir Stepanek	A robust alternative for comparing time-event survival curves: initial simulations and cancer data analysis

Session: **OC34: Personalised Medicine 3**
 Chair: **Shaun Seaman**, *University of Cambridge, United Kingdom*

12.10 - 13.40

OC34.1	12.10 - 12.28	Michael Seo	Predicting real world effectiveness of interventions using randomized and non-randomized data
OC34.2	12.28 - 12.46	Orestis Efthimiou	An evaluation of the c-statistic for benefit
OC34.3	12.46 - 13.04	Michael Lauseker	Estimating the common distribution of two right-censored potential treatment responses given a biomarker
OC34.4	13.04 - 13.22	Bernhard Haller	Confidence interval estimation for the changepoint of treatment stratification
OC34.5	13.22 - 13.40	Myra McGuinness	Statistical methods to assess dynamic treatment regimens in observational settings: a scoping review

Session: **OC35: Missing Data 2**
 Chair: **Havi Murad**, *Gertner Institute for Epidemiology and Health Research Policy, Israel*

12.10 - 13.40

OC35.1	12.10 - 12.28	Marie-Cecile Fournier	Methods to deal with values under limit of detection or quantification
OC35.2	12.28 - 12.46	Sabbir Ahmed Hemo StCA Winner	Performance of Inverse Probability Weighting Compared to Multiple Imputation for Missing Binary Outcome in CRT
OC35.3	12.46 - 13.04	Edouard Bonneville	Missing covariates for competing risks models: an evaluation of available imputation methods
OC35.4	13.04 - 13.22	Vincent Audigier	Clustering with missing values: what about congeniality?
OC35.5	13.22 - 13.40	Liesbeth C De Wreede	Construction and assessment of prognostic rules with missing predictor data using multiple imputation

Session: **OC36: Dynamic Prediction**
 Chair: **Eleni-Rosalina Andrinopoulou**, *Erasmus MC, Netherlands*

12.10 - 13.40

OC36.1	12.10 - 12.28	Dimitris Rizopoulos	Minimizing the Burden of Invasive Procedures via Personalized Scheduling
OC36.2	12.28 - 12.46	Zijing Yang	Analysis of dynamic restricted mean survival time for right-censored data
OC36.3	12.46 - 13.04	Harry Parr	Proposal of Clinical Dynamic Prediction Models to Predict Prognosis of Post-Treatment Prostate Cancer Patients
OC36.4	13.04 - 13.22	Rana Dandis	Joint modeling vs discriminant analysis for dynamic prediction based on longitudinal data: A simulation study
OC36.5	13.22 - 13.40	Itai Dattner	A statistical methodology for data-driven partitioning of infectious disease incidence into age-groups

Session: **IS11: Biostatistical inference in practice: moving beyond false dichotomies**
 Organisers / Chairs: **John Carlin**, *Murdoch Children's Research Institute & University of Melbourne, Australia*
Jonathan Sterne, *University of Bristol, UK*

14.00 - 15.30

IS11.1	14.00 - 14.25	Laure Wynants	Dichotomania and other challenges: a perspective on principles and responsibilities
IS11.2	14.25 - 14.50	Colin Begg	Reflections on the strengths and weaknesses of significance testing
IS11.3	14.50 - 15.15	John Carlin	Beyond dichotomous thinking in the analysis and reporting of clinical trials: why, how and who's responsible?
IS11.4	15.15 - 15.30		Discussion, lead by J. Sterne

Session: **IS12: Efficient Designs & cutting-edge analyses**
 Organisers / Chairs: **Mitchell H. Gail**, *National Cancer Institute, United States*
Sven Ove Samuelsen, *Department of Mathematics, University of Oslo, Norway*

14.00 - 15.30

IS12.1	14.00 - 14.30	Sven Ove Samuelsen	Use of auxiliary data for efficient analysis of two-phase survival studies
IS12.2	14.30 - 15.00	Pamela Shaw	Methods to address correlated covariate and time-to-event error in electronic health records
IS12.3	15.00 - 15.30	Ruth Keogh	Using negative controls to estimate causal effects of treatment in an entirely treated cohort

Session: **OC37: Clinical Trials Methodology 6**
 Chair: **Andrew Copas**, *MRC Clinical Trials Unit at University College London, United Kingdom*

14.00 - 15.30

OC37.1	14.00 - 14.18	Isabelle Smith	The impact of misclassification in a clinical trial with discrete longitudinal outcomes
OC37.2	14.18 - 14.36	Heiko Goette	Adaptive design with interim decision for single arm trial with external controls or randomized trial
OC37.3	14.36 - 14.54	Cornelia Ursula Kunz	Extending the updating algorithm for the Graphical Approach
OC37.4	14.54 - 15.12	Philip Hougaard	EPAD: The European prevention of Alzheimer's dementia platform trial
OC37.5	15.12 - 15.30	Guillaume Mulier	Phase II trial with a trinomial efficacy-toxicity endpoint

Session: **OC38: Causal Inference 4**
 Chair: **Bianca De Stavola**, *University College London, United Kingdom*

14.00 - 15.30

OC38.1	14.00 - 14.18	Maxime Léger	G-computation: a robust alternative for drawing causal inference when the positivity assumption does not hold
OC38.2	14.18 - 14.36	Rik van Eekelen	Correcting for selection bias when comparing separate treated and untreated cohorts
OC38.3	14.36 - 14.54	Linda Nab	Quantitative bias analysis for a misclassified confounder: marginal structural models vs conditional models
OC38.4	14.54 - 15.12	Klaus Groes Larsen	Treatment effects in the principal stratum of patients who would comply, if treated with a specific treatment
OC38.5	15.12 - 15.30	Stefanie Von Felten	Outcomes truncated by death in RCTs: a simulation study on the survivor average causal effect

Session: **OC39: AFT Modelling & Survival**
 Chair: **Roch Giorgi**, *Aix-Marseille Univ. Inserm IRD / SESSTIM, France*

14.00 - 15.30

OC39.1	14.00 - 14.18	Moumita Chatterjee	Effects of covariates on alternately occurring recurrent events in Accelerated Failure Time models
OC39.2	14.18 - 14.36	Dip Das	Embedded Likelihood based Estimation under Accelerated Failure Time Models for Clustered Censored Data
OC39.3	14.36 - 14.54	Thomas Klausch	Bayesian estimation of three-state accelerated failure time models for interval censored surveillance outcomes
OC39.4	14.54 - 15.12	Menglan Pang	Flexible Modeling of Time-dependent and Non-linear covariate effects in Accelerated Failure Time model

Session: **OC40: Big Data**
 Chair: **Jörg Rahnenführer**, *Technische Universität Dortmund, Germany*

14.00 - 15.30

OC40.1	14.00 - 14.18	Hugo Terrisse	Comparing predictive models for continuous outcomes with proper scoring rules : a simulation study
OC40.2	14.18 - 14.36	Veronica Sciannameo	Deep Learning for predicting hospitalizations in elderly population using Electronic Health Records
OC40.3	14.36 - 14.54	Stephen Senn	Forward to the Past: The analysis of designed experiments and lessons for big data
OC40.4	14.54 - 15.12	Nicolas Ngo	Construction and comparison of feature selection methods using a new measure of separability: the gamma-metric
OC40.5	15.12 - 15.30	Jixian Wang	Propensity score matching and stratification using multiple sources without pooling individual level data

Session: **OC41: Machine Learning**
 Chair: **Stanislav Katina**, *Masaryk University, Czech Republic*

14.00 - 15.30

OC41.1	14.00 - 14.18	Lilith Fauchoux	Multi Objective Semi-Supervised Clustering with a right censored end point and in presence of missing data
OC41.2	14.18 - 14.36	Ido Azuri	Discriminating between healthy and malaria-diseased cytoskeleton red blood cells by fast-AFM and deep learning
OC41.3	14.36 - 14.54	Ilaria Gandin	Making time-series deep learning models more interpretable: a study in patients with cardiovascular disease
OC41.4	14.54 - 15.12	Nayma Hossain CASC Winner	Iterative Least-squares Regression with Censored Data: A Survival Ensemble of Learning Machine
OC41.5	15.12 - 15.30	Clemence Leyrat	Covariate adjustment in randomised trials: when and how?

Session: **OC42: Meta-analysis 3**
 Chair: **Gerta Rücker**, *University of Freiburg, Germany*

14.00 - 15.30

OC42.1	14.00 - 14.18	Daniela Zöller	Federated regression modeling for selecting biomarkers under data protection constraints
OC42.2	14.18 - 14.36	Alessandra Meddis	Test of informative cluster size with survival data
OC42.3	14.36 - 14.54	Sylwia Bujkiewicz	Use of real world data in bridging disconnected networks of first and second lines of therapies
OC42.4	14.54 - 15.12	Pablo Verde	jarbes: An R Package for Combining Randomized and Observational Studies in Meta-Analysis
OC42.5	15.12 - 15.30	Iman Jaljuli	Quantifying replicability and consistency in systematic reviews

17.40 - 19.10

Keynote Session: **Machine Learning vs. Statistical Modeling**

Organiser / Chair: **Michal Abrahamowicz**, SPC Chair, ISCB 2020
McGill, Montreal, Canada

17.46 - 18.22 **Trevor Hastie** **Predictive Models in Health Research**
Stanford University, USA

18.22 - 18.58 **Frank Harrell Jr.** **Musing on Statistical Models vs. Machine Learning in Health Research**
Vanderbilt University School of Medicine, Vanderbilt, USA

18.58 - 19.10 Discussion

Thursday, 27 August 2020

Session: **MS3: Advanced statistical methods for the analysis of high-dimensional medical data**

Organisers / Chairs: **Malgorzata Bogdan**, *University of Wroclaw, Poland*
Jaroslav Hazerlak, *Indiana University, United States*

11.30 - 17.20

MS3.1	11.30 - 11.40	Malgorzata Bogdan	Advanced technologies, large data and modern statistics in medicine
MS3.2	11.40 - 12.10	Armando Teixeira-Pinto	Recycling genome-wide association studies with Mendelian Randomisation
MS3.3	12.10 - 12.40	Florian Frommlet	Selecting predictive biomarkers from genomic data
MS3.4	12.40 - 13.10	Hernando Ombao	Modeling Dependence in Multivariate Time Series
MS3.5	13.10 - 13.40	Anna Dudek	(Dual-Frequency)-dependent dynamic functional connectivity analysis of visual working memory capacity
MS3.6	14.00 - 14.30	Julie Josse	Treatment effect estimation with missing attributes
MS3.7	14.30 - 15.00	Jaroslav Hazerlak	Regularization methods for multimodal brain imaging
MS3.8	15.00 - 15.30	Damian Brzyski	Revealing the common structure of brain networks by combining the nuclear and L1 norms
MS3.9	15.50 - 16.20	Marta Karas	Novel approach for precise walking cadence estimation from high - density tri - axial accelerometry data
MS3.10	16.20 - 16.50	John Kornak	Bayesian image analysis in transformed spaces (BITS) and the BIFS/BIWS Python packages
MS3.11	16.50 - 17.20	Grzegorz Rempala	Dynamical Survival Analysis for COVID-19 Predictions in Ohio

Session: **MS1: Statistical methods in pharmacoepidemiology and pharmacoeconomics**

Organiser / Chair: **Robert Platt**, *McGill University, Canada*

14.00 - 17.00

MS1.1	14.00 - 14.20	Robert Platt	Overview lecture – state of the art and current problems
MS1.2	14.20 - 15.00	Jason Roy	Machine learning in pharmacoepidemiology
MS1.3	15.20 - 16.00	Thomas Debray	The importance of informative visit patterns
MS1.4	16.00 - 16.40	Menglan Pang	Targeted learning in pharmacoepidemiology
	16.40 - 17.00		Question period

Session: **MS2: STRATOS initiative - more on guidance for analysis of observational studies**

Organisers / Chairs: **Georg Heinze**, *Medical University of Vienna, Austria*
Willi Sauerbrei, *University of Freiburg, Germany*

14.00 - 17.15

	14.00 - 14.10	Georg Heinze	Introduction
MS2.1	14.10 - 14.35	Willi Sauerbrei	Outstanding issues in selection of variables and functional forms in multivariable analysis
MS2.2	14.35 - 15.00	Ben van Calster	Calibration of risk prediction models: making decisions with the lights on or off?
MS2.3	15.00 - 15.25	Helmut Kuechenhoff and Veronika Deffner	Measurement error and misclassification of variables in observational epidemiology - an overview
MS2.4	15.45 - 16.10	Maja Pohar Perme	Analysis of time-to-event for observational studies: Guidance to the use of intensity models
MS2.5	16.10 - 16.35	James Carpenter and Katherine Lee	Framework for the Treatment And Reporting of Missing data in Observational Studies: The TARMOS framework
MS2.6	16.35 - 17.00	Anne-Laure Boulesteix	A replication crisis in methodological research? On the design of comparison studies
	17.00 - 17.15		General discussion

Early Career Biostatisticians' Day

12.00 - 17.15

	12.00 - 12.15	Myra McGuinness	Welcome address
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Session: 1

Chair: **Michael Grayling**, *Newcastle University, United Kingdom*

	12.15 - 13.00	Emily Karahalios	Working as a biostatistician – effectively planning, organizing and monitoring the progress of a project
	13.00 - 13.15	Rushani Wijesuriya	Bachelors to PhD: taking the leap
	13.15 - 13.30	Monsurul Hoq	A biostatistician's journey from aid work to academia
	13.30 - 13.40		Discussion

Session: 2

Chair: **Camila Olarte Parra**, *Ghent University, Belgium*

	14.00 - 14.45	Havi Murad	Working in public health versus academia or pharmaceutical industry
	14.45 - 15.00	Mohammad Fayaz	From wrong analysis to the wrong decisions; the lift chart and the others
	15.00 - 15.15	Anna Schritz	Possible pitfalls when performing sample size calculation with online tools
	15.15 - 15.30		Discussion

Session: 3

Chair: **Laure Wynants**, *Maastricht University, Belgium*

	16.00 - 16.15	Phillip Awodutire	Survival analyst in Nigeria: my experience
	16.15 - 17.00	Stephen Senn	The seven habits of highly effective statisticians
	17.00 - 17.15		Discussion

17.20 Closing ISCB41 & Invitation ISCB42

Poster Overview Sessions

Tuesday, 25 August 2020

Session: **PO1: Clinical Trials: Methods & Applications**

Chairs: **Kinga Salapa**, Astra Zeneca Pharma, Poland

Alexia Iasonos, Memorial Sloan Kettering Cancer Center, New York, United States

17.40 - 19.10

PO1.01	17.40 - 17.46	Maria Elisabeth Frey	Nonparametric Limits of Agreement for small to moderate sample sizes - a simulation study
PO1.02	17.46 - 17.52	Milan Geybels	Association rule mining to find correlations between adverse events and drugs in clinical trials
PO1.03	14.52 - 17.58	Monica Sofia Maria Persson	Using electronic health records to inform the development of clinical trials in an uncommon skin disease
PO1.04	17.58 - 18.04	Jacek Kopec	Development and preliminary validation of a novel risk and life expectancy calculator
PO1.05	18.04 - 18.10	Markus Pfirrmann	A practical approach to blinded sample size re-estimation in a randomized trial with a survival endpoint
PO1.06	18.10 - 18.16	Lamis Alamoudi	Testing treatment effects for Split-plot design for Clinical trials
PO1.07	18.16 - 18.22	Martin Reugels	Allocation bias in randomized clinical trials with binary response
PO1.08	18.22 - 18.28	Nan van Geloven	What happens when you switch the analysis scale in a non-inferiority trial?
PO1.09	18.28 - 18.34	Linda Sharples	Design and analysis of trials including subgroups defined by a biomarker
PO1.10	18.34 - 18.40	Jake Emmerson	Recommendations for analysing multi-arm non-inferiority trials and controlling family-wise error rate
PO1.11	18.40 - 18.46	Florian Halbeisen	Using routine data to conduct a pragmatic RCT to reduce antibiotic prescriptions in Swiss primary care
PO1.12	18.46 - 18.52	Julien St-Pierre	Comparison of penalized linear mixed models for high-dimensional data.
PO1.13	18.52 - 18.58	Elias Laurin Meyer	The evolution of Master Protocol Clinical Trial Designs - A Systematic Review
PO1.14	18.58 - 19.04	Derek Dinart	Sample size estimation for cancer randomized trials in the presence of heterogeneous data
PO1.15	19.04 - 19.10	Dawn Teare	The impact of primary outcomes measures with ceiling effects on non-inferiority designs

Session: **P02: Longitudinal Data / Biomarkers**

Chairs: **Aleksander Owczarek**, *Medical University of Silesia, Sosnowiec, Poland*
Orlagh Carroll, *LSHTM, London, United Kingdom*

17.40 - 19.10

P02.01	17.40 - 17.46	Celline Almeida-Brasil	Personalized Comparisons of Flare Rates after Hydroxychloroquine Tapering or Discontinuation in Systemic Lupus
P02.02	17.46 - 17.52	Adam Korczyński	Imputation techniques for longitudinal data - applications in clinical trials
P02.03	14.52 - 17.58	Brian Mosier	Estimation and Construction of CIs for the Cutoffs of Continuous Biomarkers in Trichotomous Settings
P02.04	17.58 - 18.04	Natasa Kejzar	Three zone diagnostic decisions for numerical data
P02.05	18.04 - 18.10	Wencan Zhu	A variable selection approach for highly correlated predictors in high-dimensional settings
P02.06	18.10 - 18.16	Felix J. Clouth	Prediction of recovery in trauma patients using latent Markov models
P02.07	18.16 - 18.22	Tore Wentzel-Larsen	Transition between living arrangements among elderly Norwegians 2011-2016. Use of the IPLOS register
P02.08	18.22 - 18.28	Alice Bonomi	Coronary Heart Disease Risk Map according to Mediterranean Diet Score and Dietary variety
P02.09	18.28 - 18.34	Lisanne Gitsels	Does having amblyopia affect school readiness and cognitive performance?
P02.10	18.34 - 18.40	Rocio Aznar	Using multilevel models to estimate weight percentiles in twin pregnancies
P02.11	18.40 - 18.46	Becki Green	Investigating the use of blood metabolites as biomarkers of early cognitive changes relevant to dementia
P02.12	18.46 - 18.52	Zeynep Yavuz	Assessing the correlation and agreement of repeated measures: application to BIS data
P02.13	18.52 - 18.58	Lamprini Syrogiannouli	Incorporating baseline outcome data in individual participant data meta-analysis of non-randomized studies
P02.14	18.58 - 19.04	Willi Sauerbrei	Structured reporting to improve transparency of analyses in prognostic biomarker studies
P02.15	19.04 - 19.10	Jeppe Christensen	Perturbation of proteomic biomarker data for sharing: gaining privacy while preserving utility?

Session: **PO3: Survival analysis / Machine Learning**

Chairs: **Janie Coulombe**, McGill University, Montreal, Canada

Steve Ferreira Guerra, McGill University, Montreal, Canada

17.40 - 19.10

PO3.01	17.40 - 17.46	Marina Machado	Pre-existing autoimmune disease and immune-related adverse events with checkpoint inhibitors in melanoma
PO3.02	17.46 - 17.52	Phillip Awodutire	Mixture and Non-Mixture Cure Rate Models Using the Beta Type I Generalized Half Logistic Distribution
PO3.03	14.52 - 17.58	Liping Tong	A New Method to Evaluate Post-Discharge Intervention on Risk of Adverse Events with Observational Data
PO3.04	17.58 - 18.04	Gustavo Soutinho	Estimation of the transition probabilities conditional on repeated measures in Multi-state models
PO3.05	18.04 - 18.10	Marion Procter	Summarising a Global Interaction Test, Quantitative Interaction Terms and Qualitative Interaction Tests Summar
PO3.06	18.10 - 18.16	Anna Giczewska	Application of machine learning algorithms for recurrent musculoskeletal pain prediction
PO3.07	18.16 - 18.22	Anna Lecka	Missing Data: Imputation methods for survival analysis
PO3.08	18.22 - 18.28	Elvire Roblin	On the use of neural networks for survival models with censored data
PO3.09	18.28 - 18.34	Paola M.V. Rancoita	Enhancing the optimal cut-point identification of continuous covariates for predicting survival outcomes
PO3.10	18.34 - 18.40	Catherine Welch	Using multiple imputation to impute missing cancer stage in the estimation of relative survival
PO3.11	18.40 - 18.46	Marion Kerioui	Multilevel nonlinear joint model to characterize the tumor response variability under immunotherapy
PO3.12	18.46 - 18.52	Sonia Grandi	The Influence of Repeat Pregnancies on the Generalizability and Accuracy of Risk Prediction Models for Time-to
PO3.13	18.52 - 18.58	Nele Taba	Dietary patterns as markers for lifestyle - prediction of long-term mortality
PO3.14	18.58 - 19.04	Jadwiga Borucka	Comparison of Semiparametric and Parametric Survival Models with the Use of Time-Dependent ROC Curve
PO3.15	19.04 - 19.10	Mohammad Kaviul Anam Khan	Variable importance metric using modern machine learning techniques for clustered data

Wednesday, 26 August 2020

Session: **PO4: Big Data / Machine Learning**

Chairs: **Małgorzata Ćwiklińska-Jurkowska**, *Nicolaus Copernicus University, Torun, Poland*
Lara Lusa, *University of Primorska, Koper/Capodistria, Slovenia*

10.20 - 11.50

PO4.01	10.20 - 10.26	Jinheum Kim	Comparing survival functions with interval-censored data in the presence of an intermediate clinical event
PO4.02	10.26 - 10.32	Antoniya Georgieva	Fetal health risk assessment around the onset of labour: the role of an hour of cardiotocography monitoring
PO4.03	10.32 - 10.38	Adnan Karaibrahimoglu	An Innovative Study to evaluate the treatment efficiency of Percutaneous Nephrolithotomy by DEA
PO4.04	10.38 - 10.44	Francesco Innocenti	Sample size planning and optimal design for estimating regression-based reference values
PO4.05	10.44 - 10.50	Enzo Cerullo	Estimating Diagnostic Test Accuracy Whilst Adjusting for Imperfect Interrater Agreement in the Reference Stand
PO4.06	10.50 - 10.56	Alice Davis	Predicting patient engagement in IAPT services: A statistical analysis of electronic patient records
PO4.07	10.56 - 11.02	Emeline Courtois	Adaptive lasso approaches for pharmacovigilance signal detection: new penalty weights for variable selection
PO4.08	11.02 - 11.08	Balazs Dobi	Markov chart: an R package for cost-optimal patient monitoring and treatment
PO4.09	11.08 - 11.14	Rubaiya Rubaiya	Modeling and Mapping Low Birth-Weights: Role of Interactions among Determinants and Spatial Adjustment
PO4.10	11.14 - 11.20	Tomomi Takeshima	A dynamic treatment regime model to enhance adherence of patients with type 2 diabetes with Q-learning
PO4.11	11.20 - 11.26	Thomas Cowling	Selecting small sets of diagnosis codes with high prediction performance in large electronic medical datasets
PO4.12	11.26 - 11.32	Matteo Di Maso	A posteriori maternal dietary patterns and human milk: an application of the principal component analysis
PO4.13	11.32 - 11.38	Parinaz Mehdipour	Bayesian within-host modelling of red blood cell dynamics and primaquine induced haemolysis in G6PD deficiency
PO4.14	11.38 - 11.44	Maria Petropoulou	Shift the mean or the study variance to detect outliers in network meta-analysis

Session: **P05: Causal Inference**

Chairs: **Agnieszka Pac**, Jagiellonian University Medical College, Chair of Epidemiology and Preventive Medicine, Krakow, Poland
Myra McGuinness, University of Melbourne, Australia

10.20 - 11.50

P05.01	10.20 - 10.26	Nadia Dardenne	How to deal with multidimensional mediators? Overview and application with health literacy
P05.02	10.26 - 10.32	Emilia Gvozdenovic	Causal inference concepts applied to three observational studies in the context of vaccine development
P05.03	10.32 - 10.38	Maria Alvarez Hernandez	Agreement among raters: revisiting Hubert's kappa.
P05.04	10.38 - 10.44	L. Naga Rajeev	Comparison of weight-for-height and BMI-for-age for estimating under-five thinness burden: Policy implications
P05.05	10.44 - 10.50	David Phillippo	Assessing the performance of population adjustment methods for indirect comparisons: a simulation study
P05.06	10.50 - 10.56	Sebastian Nielsen	Non-Specific Effects of Oral Polio Vaccine Campaigns on Child Mortality? Triangulation of Epidemiological Data
P05.07	10.56 - 11.02	Rushani Wijesuriya	Evaluation of substantive-model-compatible multiple imputation approaches for incomplete three-level data
P05.08	11.02 - 11.08	Monsurul Hoq	Comparison of statistical methods for estimating age-specific paediatric reference intervals
P05.09	11.08 - 11.14	Anastassia Kolde	Martingale residual based approach for Cox modeling from high-dimensional data
P05.10	11.14 - 11.20	Katri Parna	Prediction versus transferability of betas: a PCA informed strategy
P05.11	11.20 - 11.26	Nicola Fitz-Simon	Multiple mediation modalities for social class disparities in cardiovascular patients
P05.12	11.26 - 11.32	Stella Preussler	Using independent cross-sectional survey data to approximate post-migration health trajectories among refugees
P05.13	11.32 - 11.38	Mariella Gregorich	A comparison of methods for causal inference with a rare binary outcome

Session: **PO6: Epidemiology: Methods and Applications / Electronic Health Records**

Chairs: **Agnieszka Doryńska**, *Institute of Public Health, Jagiellonian University Medical College, Krakow, Poland*
Kristel Van Steen

10.20 - 11.50

PO6.01	10.20 - 10.26	Aleksandra Turkiewicz	Probabilistic quantification of bias - combine strengths of population-based register data and clinical cohort
PO6.02	10.26 - 10.32	Gareth McCray	Creation of WHO indicators of Infant and Young Child Development (IYCD): metadata synthesis and item mapping
PO6.03	10.32 - 10.38	Patricia Soares	Time until the diagnosis of pulmonary tuberculosis in Portugal: spatiotemporal clustering
PO6.04	10.38 - 10.44	Kai Zhao	Risk of severe infections and mortality in patients with newly diagnosis of systemic lupus erythematosus
PO6.05	10.44 - 10.50	Simon Grřntved	Classification trees applied to identify predictors of autism spectrum disorder diagnosed in early childhood
PO6.06	10.50 - 10.56	Jerissa Samuel	A Review on the Application of Adaptive Designs in Oncology Clinical Trials
PO6.07	10.56 - 11.02	Borja Manuel Fernandez-Felix	Internal bootstrap validation of logistic predictive models: Stata command bsvvalidation
PO6.08	11.02 - 11.08	Doris Tove Kristoffersen	Hospital readmissions and death within 30 days and 1 year for patients with hip fracture – a multi-state model
PO6.09	11.08 - 11.14	Frissiano Honwana	Predictive discrimination models to diagnose malabsorption from routine clinical diagnostics tests in Africa
PO6.10	11.14 - 11.20	Isobel Ridler	Applications of Regularised Structural Equation Modelling to Psychometrics
PO6.11	11.20 - 11.26	Rafał Pawłowski	Heart Rate Asymmetry assessment during head up tilt table test for healthy women
PO6.12	11.26 - 11.32	Susanne Schmitz	Efficacy of treatments for patients with recurrent glioblastoma: A systematic review and network meta-analysis
PO6.13	11.32 - 11.38	Sho Komukai	Doubly robust inference procedure for relative survival ratio in population-based cancer registry data
PO6.14	11.38 - 11.44	Michail Katsoulis	Weight change and the incidence of cardiovascular diseases in healthy adults; emulating trials using EHR
PO6.15	11.44 - 11.50	Malgorzata Hirsz	Age-period-cohort analysis of colorectal cancer incidence in New Zealand 1994-2018