



Prognostic Research: From Basics to Modelling

January 18th – 20st, 2018

Course description

Faculty	Prof. Margaret May University of Bristol, United Kingdom Prof. Matthias Egger Institute of Social and Preventive Medicine (ISPM), University of Bern, Switzerland
Place	CH – 3823 Wengen SWITZERLAND Room Bühlstube (see map at http://www.epi-winterschool.org/hotels)
Introduction	Prognosis is the probability that a specific event will occur in the future. Prognostic research is fundamental to clinical decision making, healthcare policy, and discovering new approaches to patient management. It is part of evidence-based medicine and as such needs to adhere to the highest standards. In this course we describe different aspects of prognostic research including the course of disease as it is currently diagnosed and treated (fundamental research), specific factors (such as biomarkers) that are associated with outcomes, the development, validation and impact of prognostic models, and using prognostic information to help tailor treatment decisions to an individual (stratified medicine). Unfortunately there is often a gap in translating prognostic information into clinically useful decision tools. Many prognostic models are proposed, but relatively few have clinical impact. This might improve with better prognostic research, but also crucially by evaluating models in clinical practice – healthcare technology assessment.
Course objectives	By the end of the course participants will have <ul style="list-style-type: none">• An understanding of the 4 types of prognostic research<ul style="list-style-type: none">○ Fundamental prognosis research○ Prognostic factors○ Prognostic models○ Stratified medicine

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- An understanding of how prognosis is used in clinical decision making and in discovering new approaches to managing patients.
- Practical experience of analysing and assessing potential prognostic factors.
- Practical experience of developing and validating a prognostic model.
- An understanding of the quality of prognostic research and how it can be improved.

What you have to bring

Students should bring their own portable computers.

Outline of course

The course will run over three days and consists of a mixture of lectures and computer practicals. During the extended break in the afternoon, participants review course materials, catch up on emails or go skiing.

Thursday, January 18th

Welcome and introduction to the course. What is (and is not) prognostic research? Introducing the 4 themes framework:

- fundamental prognosis research
- prognostic factors
- prognostic models
- stratified medicine

Fundamental prognosis research

Prognostic factor research

Stata practical

Strength and form of predictors

Effect of influential observations and what to do with outliers

Review of Day 1

Friday, January 19th

Developing prognostic models

Validation of prognostic models

Evaluating the impact of a prognostic model

Stata practical

Developing a prognostic model

Validating a prognostic model

Review of Day 2

Saturday, January 20st

Stratified medicine research – optimising treatment for the individual

The challenge: how to improve prognosis research

Stata practical

Stratified medicine

Review of Day 3 and course evaluation

Swiss Epidemiology Winter School 2018

Credit	1.5 ECTS
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Course fee	SSPH+:	CHF	0
	Academic:	CHF	900
	Industry:	CHF	2000

Registration	You can register on the Winter School website www.epi-winterschool.org .
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Course hotels	Participants must book their accommodations themselves (see map and recommendations on www.epi-winterschool.org/hotels).
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