

Module title		Abbreviation
Prognostic and Diagnostic Studies		o3-TM-PROGDIAG-181-mo1
Module coordinator		Module offered by
Comprehensive Heart Failure Center (DZHI)		Faculty of Medicine
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
<p>Prognostic studies: Prognosis is a key concept in patient care, but the methodology behind it is relatively under-developed. The course discusses the principles and methods of non-experimental prognostic research, together with the practice of prognostic research in a clinical setting. Emphasis is on learning and applying design and statistical analysis of prognostic studies, construction and estimation of prediction rules, approaches to validation, and generalization of research results. Further, the challenges of dealing with small data sets will be discussed. Diagnostic studies: Diagnostic processes as diagnostic studies play an increasingly important role. However, awareness of the most appropriate methodology is often poorly developed at the mind of the clinical researcher leading to suboptimal study design and analysis. The course will explain established principles and new challenges arising for example from high dimensional data. Focus will be on implementation of strategies supporting a joint evaluation of sensitivity and specificity in diagnostic studies, the adoption of guidelines for non-standard diagnostic studies (e.g. multiple raters, multiple decisions), the development of approaches to demonstrate the long term clinical benefit of new diagnostic modalities.</p>		
Intended learning outcomes		
<p>Prognostic studies: Student are able to: apply design and statistical analysis of prognostic studies to selected clinical research questions; construct and estimate prediction rules; have insight into approaches to validation; gain judgement on reliable generalization of research results; can deal with the challenges of prognostic modelling in small data sets. Diagnostic studies: Student will have knowledge on: main elements of diagnostic studies; main elements of test accuracy; main elements of test utility; how to integrate diagnostic research questions into study design & study planning; main elements of statistical analysis in diagnostic studies; study design options in diagnostic research; main elements how to summarize evidence from several diagnostic studies; main elements on good practice of publication of diagnostic studies.</p>		
Courses (type, number of weekly contact hours, language — if other than German)		
V (1.5) + S (1.5) Module taught in: German or English		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
written examination (30 to 60 minutes) Language of assessment: German or English		
Allocation of places		
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Additional information		
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Workload		
150 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in

Supplementary course Translational Medicine (2018)

Master's degree (1 major) Translational Medicine (2018)