

Kolloquium „Statistische Methoden in der empirischen Forschung“

Wann: 30. Januar 2018, 17:00 – 18:30 Uhr

Wo: Robert Koch-Institut | Nordufer 20 | 13353 Berlin (Wedding),
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Why we are overestimating the scope for personalised medicine

For at least twenty years now, we have been promised that a personalised medicine revolution is just around the corner. Despite some notable successes, such progress as there has been is far from constituting a revolution. I present some reasons for thinking that naive approaches to analysing clinical trials may have led to the scope for personalised medicine being vastly overrated. In the first part of this lecture I shall try explain, from the statistical point of view, what has gone wrong, with extravagant causal interpretations of arbitrary responder dichotomies being a major culprit.

The fact, however, that progress has been slow does not mean the goal is not worth pursuing where the opportunity presents itself. Identifying that opportunity, however, is not easy. For chronic diseases, n-of-1 trials seem particularly suitable although, given suitable models and plausible assumptions, repeated measures designs may offer an alternative. There may also be further opportunities in translating general clinical findings into personal medical decisions.

I conclude that the most important task for drug development remains finding drugs that work well on average but that on occasion the goal of personalising will be worthwhile. However, to help realise this, statisticians need to pay attention to the statistical challenges.