

**Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz**

<http://www.meduniwien.ac.at/wbs/>

Einladung zum

Biometrischen Kolloquium

am Donnerstag, den 31. März 2011 um 15:00 Uhr (s.t.)

in der Informatikbibliothek (Ebene 3, Raum 88.03.806) der
Besonderen Einrichtung für Medizinische Statistik und Informatik
(MSI) der Medizinischen Universität Wien
Spitalgasse 23, 1090 Wien

Vortragender:

Prof. Patrick Royston (MRC Clinical Trials Unit, London):

**A new strategy for meta-analysis of continuous covariates
in observational studies**

Wir freuen uns auf zahlreichen Besuch.

Georg Heinze
Präsident

A new strategy for meta-analysis of continuous covariates in observational studies

Patrick Royston and Willi Sauerbrei

Vienna, 31 March 2011.

While meta-analyses of data from randomized controlled trials is well-established and familiar to statisticians and many health professionals, meta-analysis of dose-response relationships in observational studies is much less developed. I shall present a suggestion for how to meta-analyse the influence of a continuous covariate in an epidemiological or prognostic setting. The effect of the covariate is modelled using fractional polynomial functions in each study, and estimated functions are combined using pointwise weighted averaging. Confounders, which may differ across studies, are modelled per study and their linear predictors are used to adjust for confounding in each study. Fixed or random-effects models can be used. I shall apply the methods, as a motivating example, to registry data from the US SEER database for breast cancer patients, and show how the prognostic influence of number of positive lymph nodes and of age can be usefully summarised across registries.

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