

**Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz**
<http://www.meduniwien.ac.at/wbs/>

Einladung zum

Biometrischen Kolloquium

am Donnerstag, 10. Mai 2012 um 13:30 Uhr (s.t.)

in der Informatik-Bibliothek (Ebene 3, Raum 88.03.806) des
Zentrums für Medizinische Statistik, Informatik und Intelligente
Systeme (CeMSIIS) der Medizinischen Universität Wien
Spitalgasse 23, 1090 Wien
(Plan siehe <http://www.muw.ac.at/cemsiis/allgemeines/anschrift/>)

Vortragende:

Karen Leffondré

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**Comparison of the illness-death model and
standard survival models for interval-censored
data: a simulation study and an application to
dementia**

Wir freuen uns auf zahlreichen Besuch.

Georg Heinze
Präsident

Gerhard Svolba
Sekretär

Comparison of the illness-death model and standard survival models for interval-censored data: a simulation study and an application to dementia.

Karen Leffondré, PhD

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In survival analyses of longitudinal studies, death is often a competing event for the event of interest, and the time-to-event of interest is often interval-censored. For example, in the French elderly PAQUID cohort study, the time-to-dementia onset is interval-censored between the visit of diagnosis and the previous visit. In addition, subjects may die before developing dementia, which makes death a competing event for dementia. Standard cause-specific models can be used but, because of interval-censoring, dementia status at death may be unknown for a large part of subjects (2298 over 3675 subjects in PAQUID). For these dead subjects with unknown dementia status at death, standard cause-specific models consist in right-censoring the time-to-dementia onset at the last visit when the subject was still non demented. By contrast, using an illness-death model for interval-censored data, these subjects remain at risk of disease between the last visit and death. The illness-death model for interval-censored data has been shown to better estimate disease-incidence than standard cause-specific models, but the two approaches have never been compared to estimate the effects of risk factors on the risk of disease. The objective of this talk is to present some simulation results comparing the accuracy of the estimates from these two approaches, for estimating the effect of a binary risk factor on the risk of disease. Different effects of the risk factor on both disease and death will be considered. I will also present the results obtained from these different approaches to estimate the effects of selected risk factors on dementia using the PAQUID cohort data.