

# Contents

## Part I Risk Assessment in Lifetime Data Analysis

<b>Non-proportionality of Hazards in the Competing Risks Framework .....</b>	<b>3</b>
Alvaro Muñoz, Alison G. Abraham, Matthew Matheson, and Nikolas Wada	
<b>Semiparametric Inference on the Absolute Risk Reduction and the Restricted Mean Survival Difference .....</b>	<b>23</b>
Song Yang	
<b>Connecting Threshold Regression and Accelerated Failure Time Models .....</b>	<b>47</b>
Xin He and G.A. Whitmore	
<b>Residuals and Functional Form in Accelerated Life Regression Models .....</b>	<b>61</b>
Stein Aaserud, Jan Terje Kvaløy, and Bo Henry Lindqvist	
<b>Neyman, Markov Processes and Survival Analysis .....</b>	<b>67</b>
Grace Yang	
<b>Quantiles of Residual Survival .....</b>	<b>87</b>
Christopher Cox, Michael F. Schneider, and Alvaro Muñoz	

## Part II Evaluation of Predictions

<b>Methods for Evaluating Prediction Performance of Biomarkers and Tests .....</b>	<b>107</b>
Margaret Pepe and Holly Janes	
<b>Estimating Improvement in Prediction with Matched Case-Control Designs .....</b>	<b>143</b>
Aasthaa Bansal and Margaret Sullivan Pepe	

<b>ROC Analysis for Multiple Markers with Tree-Based Classification</b> .....	179
Mei-Cheng Wang and Shanshan Li	
<b>Assessing Discrimination of Risk Prediction Rules in a Clustered Data Setting</b> .....	199
Bernard Rosner, Weiliang Qiu, and Mei-Ling Ting Lee	
<b>Time-Dependent AUC with Right-Censored Data: A Survey</b> .....	239
Paul Blanche, Aurélien Latouche, and Vivian Viallon	
<b>Subgroup Specific Incremental Value of New Markers for Risk Prediction</b> .....	253
Q. Zhou, Y. Zheng, and T. Cai	
 <b>Part III Applications</b>	
<b>Assessing the Effects of Imprinting and Maternal Genotypes on Complex Genetic Traits</b> .....	285
Shili Lin	
<b>Competing Risks Models and Breast Cancer: A Brief Review</b> .....	301
Sharareh Taghipour, Dragan Banjevic, Anthony Miller, and Bart Harvey	
<b>Quantifying Relative Potency in Dose-Response Studies</b> .....	315
Gregg E. Dinse and David M. Umbach	
<b>Development and Validation of Exposure Biomarkers to Dietary Contaminants Mycotoxins: A Case for Aflatoxin and Impaired Child Growth</b> .....	333
Paul Craig Turner and Barbara Zappe Pasturel	
<b>Pharmaceutical Risk Assessment and Predictive Enrichment to Maximize Benefit and Minimize Risk: Issues in Product Life Cycle Evaluation</b> .....	349
Robert T. O'Neill	
<b>A Multiple Imputation Approach for the Evaluation of Surrogate Markers in the Principal Stratification Causal Inference Framework</b> .....	361
Xiaopeng Miao, Xiaoming Li, Peter B. Gilbert, and Ivan S.F. Chan	
<b>Mapping Return Values of Extreme Wind Speeds</b> .....	383
Adam L. Pintar and Franklin T. Lombardo	

**Decision Analysis Methods for Selecting Consumer Services  
with Attribute Value Uncertainty** ..... 405  
Dennis D. Leber and Jeffrey W. Herrmann

**Evaluating Incremental Values from New Predictors  
with Net Reclassification Improvement in Survival Analysis** ..... 425  
Yingye Zheng, Layla Parast, Tianxi Cai, and Marshall Brown

Risk Assessment and Evaluation of Predictions

Lee, M.-L.T.; Gail, M.; Pfeiffer, R.; Satten, G.; Cai, T.;  
Gandy, A. (Eds.)

2013, XI, 445 p., Softcover

ISBN: 978-1-4614-8980-1