

**The DIVISION OF BIOSTATISTICS  
of the  
MEDICAL COLLEGE OF WISCONSIN**

Proudly Presents  
A Special Talk

By:



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**An Improved Survival Estimator for Censored Medical Costs Using Kernel Methods**

Costs assessment and cost-effectiveness analysis serve as an essential part in economic evaluation of medical interventions. In clinical trials and many observational studies, costs as well as survival data are frequently censored. Standard techniques for survival-type data are often invalid in analyzing censored cost data, due to the induced dependent censoring problem. In this talk, we will first examine the equivalency between a redistribute-to-the-right (RR) algorithm and the popular Kaplan-Meier method for estimating the survival function of time. Next, we will extend the RR algorithm to the problem of estimating the survival function of medical costs, and discuss RR-based estimators. Finally, we will propose a kernel-based estimator for the survival function of costs, which is shown to be monotone, consistent, and more efficient than some existing survival estimators. We conduct simulation experiments to compare these survival estimators for costs and apply them to a data example from a randomized cardiovascular clinical trial.

**Tuesday, September 6, 2016**

**3:30 – 4:30 PM**

**Medical College of Wisconsin**

**Room M2050 – 2<sup>nd</sup> floor of the MEB**

*Refreshments 3:00 – 3:30 PM in H2030*