

Division of Biostatistics, IHE
Medical College of Wisconsin presents

By: Jianwen Cai, PhD

In many biomedical studies, interest often involves estimation of the relationship between exposures and disease endpoints. In some studies, due to the rarity of the disease and the cost in collecting the exposure information for the entire cohort, a case-cohort or a generalized case-cohort study design is often used. Case-cohort study designs consist of a small (stratified) random sample of the whole cohort and all or a fraction of the diseased subjects. In this talk, I will discuss the design aspects for case-cohort studies. I will introduce the test statistics for the case-cohort study design, present the associated sample size/power calculation formulae, and provide examples on how to use the formulae. I will also discuss potential extensions of this work.



Biography: Jianwen Cai is Boshamer Distinguished Professor in the Department of Biostatistics at the University of North Carolina. She received her PhD in Biostatistics from University of Washington. She is an elected fellow of ASA and IMS. Dr. Cai's research interests lie in the development and application of statistical methods for analysis of multivariate survival data and correlated responses from epidemiological and medical studies. She is also interested in the design issues in clinical trials and cost-effective designs for cohort studies. She has had multiple statistical methods grants to develop innovative statistical methods for multivariate survival analysis, correlated responses, and case-cohort study design. Dr. Cai has also been extensively involved in subject matter research collaboration in many areas such as cardiovascular disease research, obesity research, Hispanic/Latino health research, dental research, geriatric research, and disease prevention research among others. She is currently the Principal Investigator for the Coordinate Center for the Hispanic Community Health Study/Study of Latinos (HCHS/SOL), which is a multi-center study of over 16,000 Hispanics/Latinos, who have been followed since 2008. The study has resulted in many high impact publications.