

## 2<sup>nd</sup> World Congress on **Breast Cancer**

September 19-21, 2016 Phoenix, USA



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#### **Valid statistical approaches for data driven analysis in breast cancer: Research avenues under Patient Protection and Affordable Care Act (PPACA)**

Secondary data analysis is becoming a popular method for analyzing population data related to cancer outcomes. Large data repositories like the National Cancer Database (NCDB) and the Surveillance, Epidemiology, and End Result (SEER) provide researchers with a vast wealth of pertinent clinical, prognostic, demographic, confounding, and outcome variables in real patient populations. Subgroup and sensitivity analyses are also easier to conduct with large datasets because they are more likely to represent underserved and at-risk populations. The Patient Protection and Affordable Care Act (PPACA) put forth a call to compare established treatments on their clinical efficacy using comparative effectiveness research (CER). CER was defined in the PPACA as “research evaluation and comparing health outcomes and clinical effectiveness, risks, and benefits of two or more medical treatments, services, and items.” With access to millions of breast cancer outcomes and a reinvigorated focus on comparing treatments, services, and items, researchers are uniquely positioned to produce extensive CER evidence related to the diagnosis and treatment of breast cancer. Going further, these large databases allow for CER evidence to be generated for many underserved and vulnerable populations that are not represented in the current literature. The objective of generating evidence for these types of subgroups is written right into the legislation (PPACA) itself. Another beneficial aspect of the CER and secondary data is that the PPACA defines retrospective cohort designs as perfectly acceptable when generating evidence. These types of observational studies are very easy to conduct and are an excellent fit for large secondary databases.

#### **Biography**

R Eric Heidel completed his PhD at the University of Tennessee in 2012 and was immediately hired as the first Assistant Professor of Biostatistics ever at University of Tennessee Graduate School of Medicine. He has published over 40 peer-reviewed papers in top-tier journals and has led workshops at numerous national and international conferences on research design, statistics, epidemiology and psychometrics. He started his own statistical consulting company in 2014, Scale, LLC and published the world's first online decision engine for applied research and statistics, Research Engineer. It has been accessed in 229 countries and territories around the world.

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