

Berry's work made a meta-analysis of eight clinical trials regarding the benefits and risks of mammograms for women in their forties. Bayesian analysis was conducted and a reduction in 15-year mortality was observed, though there would be a greater uncertainty without the assumption of homogeneity in the eight studies. Kopans and Halpern criticized Berry's article based on a few concerns, including the ignorance of a certain data set, the misuse of the poor quality Canadian trial, and the inappropriate conclusion from his statistical analysis. Berry argued that the inclusion of the Canadian trial is fine due to its large sample size, his Bayesian approach addressed heterogeneity, and some criticism from Kopans and Halpern is just due to their misunderstanding of the article.

I have two questions regarding Berry's article and the mammogram trials. First, I don't feel really comfortable that mortality is the only outcome that is considered throughout the article. Even if the use of mammograms is proven to extend life significantly, it may be necessary to conduct statistical analysis on other outcomes such as side effects and quality of life. Second, I wonder if it makes better sense to conduct a 3-arm trial: mammogram, no screening, and another screening option other than mammogram (maybe ultrasound?). If I were to suggest my wife or my mother about breast cancer screening, I may not only ask if we need a screening but also what technology we are going to use for the screening.