

Biostat 578A: Evaluating Vaccine Efficacy

Questions for Readings 2

Due Thursday January 19

Assignment: Answer one of the following questions.

1. Halloran, Struchiner, and Longini (1997): In the parlance of this paper, what are the main differences between “direct” vaccine effects, “indirect” vaccine effects, and “total” vaccine effects? What kind of study design is needed to measure total vaccine effects?
2. Gilbert et al. (2005): How (in summary) did the tested vaccine impact the progression of HIV infection over 1-2 years following diagnosis of HIV infection? For the presented analyses of the vaccine effect on the pre-antiretroviral therapy viral loads, do you think the inferences are biased? Are there additional analyses of the dataset that you would like to see to shed further light on the vaccine effect on HIV progression?
3. Gilbert et al. (2003): Why is it important to follow HIV infected trial participants fairly long-term (say at least 18 months after infection diagnosis)? How does the degree of adherence to standardized treatment initiation guidelines used within a trial influence the interpretation of the analysis of the composite endpoint (first event of viral failure or treatment initiation)?