

Statistics 1211 Spring 2008 HW2

Due in class or in my mailbox before class on Feb. 11

Section 1 (crdi/no credit) On page 3 of the linked document from the course homepage, a graph plots survival times of guinea pigs after the animals treated with a potentially prophylactic TB treatment and then exposed to TB. Three such trials were performed. In the first (marked with a circle), the treatment was saline, essentially placebo. In the second, marked by triangles, the BCG vaccine was administered. In the third, BCG was combined with a so-called DNA boost.

The curves are called survival curves. To understand them, the curve for the combined vaccine means that all of the animals survived until 50 weeks; slightly after 50 weeks, one died. Slightly after 75 weeks, a second died, and 60 remainder of the experiment.

- a) Explain why from seeing the curves alone, you can conclude that there are 5 test animals in each trial.
- b) For each of the trials, estimate the times at which the deaths of the animals occurred.

Section 2 (graded) from Devore, 7th edition: Exercises

2.4.47, 2.4.50, 2.4.61, 2.4.66, 2.5.76, 2.5.82

Section 3 (credit/no credit, due with HW2): Try to do any calculations to solve other exercises of the homework in R. Print out one page of the calculations and include it in what you turn in.