

HOMEWORK #1

(Written Portion Due Thursday, January 17 in class)

Reading:

H&L: Ch. 1 and Sections 2.1, 2.2 & 2.3
B&D pp. 48-61 and 192-195

1. Read the article [Benedetti J, Corey L, Ashley R. Recurrence rates in genital herpes after symptomatic first-episode infection. *Annals Internal Medicine* 121\(11\):847-854, 1994](#) available electronically through the UW Libraries.
Be prepared to discuss in class by Tuesday, Jan 15:
 - a. Who is in the cohort under investigation?
 - b. What is “time” for the analyses of time to first recurrence in Fig. 3 and Table 3? In particular, what is “time zero” and is this clearly specified? Does it make a difference whether time zero is at the beginning or the end of the first clinical episode? Explain.
 - c. What is the definition of a failure (Fig. 3 and Table 3)?
 - d. What are the censoring mechanisms?
 - e. Is it reasonable to assume that the censoring was not related to a particular person’s chance of failure?
 - f. Are the curves of time to first recurrence compared statistically (e.g. p-values) and by what test? What was the result?
 - g. Why was only time to first recurrence used in the Cox regression analysis?
 - h. What do you think of the analysis that was performed?

2. Find an article of interest to you that has a Kaplan-Meier plot with at least two curves on it that are being compared (Medline search on Kaplan-Meier and your topic?) Do not intentionally choose the same article as someone else in the class. Turn in a copy of the article with your assignment (you will get it back).
Answer the following questions in writing and be prepared to discuss:
 - a. What is the time axis in the plot?
 - b. Who is a member of the cohort under observation?
 - c. What is the definition of a failure?
 - d. What is the censoring mechanism (or mechanisms)?
 - e. Is it reasonable to assume that censoring was not related to subsequent chances of failure? Why or why not?
 - f. Are the curves compared statistically (e.g. p-values) and by what test? What was the result?
 - g. Are any statistical models provided? (E.g. Cox regression, Weibull, etc.)
 - h. Describe what you see in the K-M plots.
 - i. What do you think of the analysis that was performed?