CPH 931 — Fall 2009 — Dr. Charnigo

Written Assignment 5

Written Assignment 5 is due on Friday 04 December at the end of class.

Refer to "Clinical impact of thrombectomy in acute ST elevation myocardial infarction: an individual patient-data pooled analysis of 11 trials" by Burzotta et al (2009).

[10] 1. Criticize the following summary of results regarding the relationship between randomized therapy and the primary endpoint of mortality: "OR = 0.71, 95% CI 0.49-1.00, P = 0.05".

[15] 2. Why did the authors call attention to the fact that their subgroup analyses were "pre-defined"?

[15] 3. For the primary endpoint of mortality, did the authors test the null hypothesis of no interaction between randomized therapy and the type of thrombectomy device available? If yes, what is the result of the hypothesis test? If no, what are the null hypotheses for which results are presented in the paragraph about the type of thrombectomy device?

[15] 4. The authors report an estimated odds ratio of 0.72 and a 95% confidence interval of 0.47 to 1.10 for the secondary endpoint of myocardial infarction. In assessing this result, to what conceptual error might an unsophisticated reader be vulnerable?

[15] 5. The authors state that there is no survival benefit of thrombectomy to patients not receiving IIb/IIIa inhibitors, noting an estimated hazard ratio of 0.93 and a 95% confidence interval of 0.48 to 1.80. Assuming that a 7% reduction in the hazard is not clinically important, do you feel that the authors' statement is appropriate? Explain why or why not.

[15] 6. Are the results reported in Figure 2 based on a meta-analysis as described in Section 13.8 of Rosner? If yes, did the model have fixed effects or random effects? If no, what are the results reported in Figure 2 based on?

[15] 7. What did the authors hope to accomplish by including Figure 3?