

# Analysis of Heart Attack Data

Due: Friday, April 5, 2002

A study was conducted to examine what happened to the blood cholesterol level in patients after a heart attack. The data<sup>1</sup> was collected on 28 patients 2, 4, and 14 days post heart attack and on 30 control patients. The researchers are interested in addressing two questions:

- A. Is the cholesterol levels the same in the two groups of patients?
  - B. How does the blood cholesterol level change after a patient has a heart attack.
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1. Describe two model that can be used to address the researchers questions.
  - (a) One model should be set up for a split plot in time analysis.
  - (b) The other model should be set up for a repeated measures analysis.
2. Analyze the data as a split plot in time.
3. Analyze the data using a repeated measures analysis with a covariance structure equivalent to a split plot in time.
4. Determine an appropriate covariance structure for the repeated measures analysis. You may wish to use the group option to allow for heterogeneous variances in the two groups.
5. Complete the repeated measures analysis using the covariance matrix you selected.
6. Summarize the results from the two analyses. How would the researcher's conclusions differ between the two approaches. Which approach would you recommend to the researcher.

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<sup>1</sup>Electronic version: OzDASL - Australasian Data and Story Library  
<http://www.statsci.org/data/general/cholest.html>