

Homework # 2

Biostatistics 210

DUE October 15, 2013 to Barbara Grimes Box in Suite 5700, CBL

This assignment will give you practice in applying approaches to describing a continuous variable. You'll be contrasting the approaches we have discussed to address a specific question.

Perform a secondary analysis of UNOS data on pediatric kidney transplants. You have data on 1 year survival on all transplants carried out between 1990 and 2002. Suppose the network put in place for guidelines for post-transplant treatment in the year 1996 and would like to assess whether there is evidence that the implementation of the guidelines has improved care and steadily increased the likelihood of 1 year survival.

1. DOWNLOAD

Download the dataset hw2.dta from the course website. The variables are

- died (1=died in first year, 0 = survived first year)
- txdate (date of transplant)
- year_cts (calendar year with fractions 2001.5 -= June 1, 2001)
- year (calendar year)
- age (age of child at transplant)
- txtype (1=cadaveric donor, 0 = living donor)
- prior1996 (1=for years 1990-1995, 0=for years 1996-2002)

2. ANALYSIS

Your colleague performed a logistic regression model using prior1996 as a predictor. (1) Can you verify the association? (2) Given your colleague's hypothesis, how would you expect the risk of death to change over the years? (3) Explore this using some techniques which discussed. You might also want to make sure you have taken into account factors which have changed over the year (recipient age and living v. cadaveric tx). (4) Which analysis appears to be the most informative? (5) Do you conclude that guideline implementation has improved one year survival?