1. For problem 1, Tutorial 3, do the following:

(a) Derive and plot the equal probability 95% log-log transformed confidence bands of the survival function from $t = 0$ to the estimated median life.

(b) Obtain the estimates of the 0.6th and 0.75th quantiles of the lifetime distribution and their 95% confidence intervals.

2. For the bone marrow transplantation for leukemia data presented in Section 1.3 of Klein and Moeschberger (2003), let the survival time be the time to either relapse or death. Do the following:

(a) Plot of survival curves for three disease groups.

(b) Estimate the median survival time for each of the three groups.

(c) Derive and plot the pointwise 95% log-log transformed confidence intervals of the survival function for each of the groups.

(d) Derive and plot the 95% Hall-Wellner log-log transformed confidence bands of the survival function for each of the groups.

(e) Compute the estimates of the incidence function for the risks relapse and death and their standard errors.