Homework 3

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Problem 1

(i)

Figure 1 shows the two curves for two groups. It appears that the two curves are somewhat different, but there is a lot of overlap in the confidence bands for two groups.
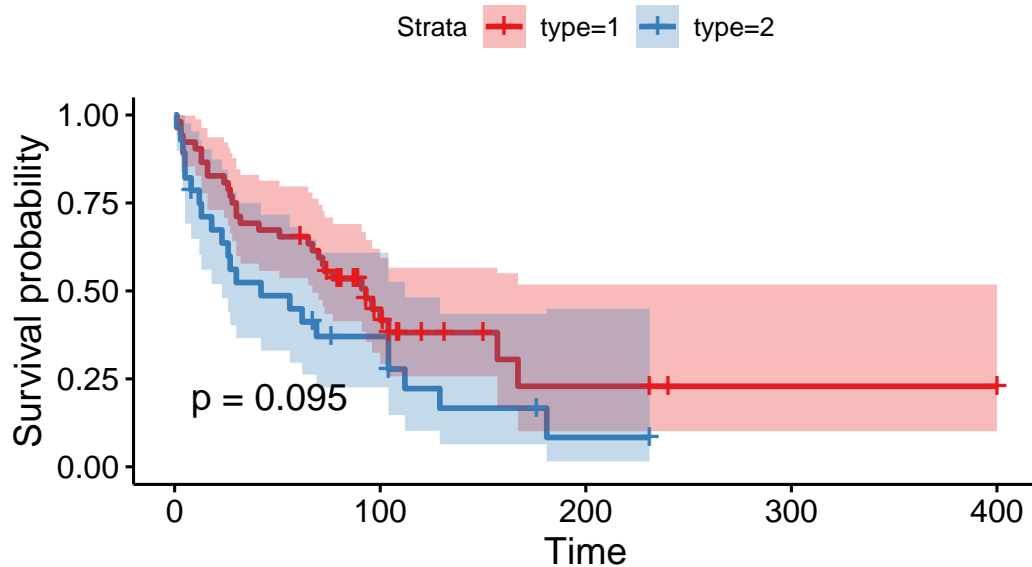
Survival Estimates by Group

Figure 1: Time to tongue cancer between two types of tumor groups

- Null hypothesis: There is no difference in survival between the two groups being compared.

- Alternative hypothesis: There is a difference in survival between the two groups being compared.

- Test statistic: 2.8

- Use χ^2_1 random variable and its 95th percentile to find critical value. Critical value: 3.841

- Conclusion:

(ii)

(iii)

Problem 2

(i)

Problem 3

(i)

(ii)

Problem 4

(i)

(ii)

(iii)

Problem 5

(i)

(ii)

(iii)