Name _____

Student Number _____

STA 312 f2023 Quiz 10

1. (6 points) Prove $S(t) = e^{-\int_0^t h(y)\,dy}$. This is a fact from the formula sheet. You may use anything on the formula sheet *except* what you are proving.

2. In your analysis of the `veteran` data, you fit a model with just experimental treatment, cell type (type of cancer) and Karnofsky score. You found that controlling for experimental treatment and Karnofsky score, the risk of death did depend on cell type. Following that finding up with pairwise comparisons, you tested for a difference between adenocarcinoma and large cell cancer.

   (a) (1 point) Fill in the table below.

Z or Chi-squared Statistic (a number)	p-value (a number)	Reject H_0? (Yes or No)	Statistically Significant? (Yes or No)

   On your printout, circle the test statistic value and write "Question 2" beside it.

   (b) (2 points) State the conclusion in plain, non-statistical language. Use the word "adjusting."

   (c) (1 point) Allowing for Karnofsky score and treatment, the risk of death for a patient with adenocarcinoma is estimated to be _____ times as great as the risk for a patient with large cell cancer.

Please attach your printout for the `veteran` data. Make sure your name is on it.