Writing the Results & Figure Captions (HW)

Results:

1. Choose which sentence is better for a results section, explain your answer:
2. The results of the interaction analysis showed no significant interaction between laterality and age, grade stage, receptor status, or number of positive nodes (Fig. 1).

* The second option listed every single p-value, and while it is important to stress p-values in your results, this option felt a bit clunky and excessive (maybe split up each p-value into its own sub-paragraph and discussion why that’s significant for each variable
* The third option was not descriptive enough, as the other two options both mentioned the types of variables/factors that were being studied in the interaction analysis.

1. Although the length of the TCGA and other institutional cohorts is not the same, when we ran a normalized survival analysis, we found no significant difference in length of survival with a mean of 6.3 years and a 10-year survival rate of 38% (Table 1).

* The first and second options both don’t mention the fact that the cohort lengths were not the same. It is good practice to mention these types of details when discussing the results and acknowledge potential shortcomings of your analysis.

1. Does every figure need to be explicitly mentioned somewhere in the results section? If no, why not? If yes, where would you put figures not mentioned?

Though every figure included in the paper needs to contribute to the overall findings or ideas of the article/study, not every figure must be explicitly discussed in the results section. Having a concise, clear figure caption and title will allow the figure to still contribute to the reader’s understanding of the study without needing an explicit discussion in the results section – and it is the job of figures to convey information in a easy way to readers.

1. How do you decide between referencing figures as “Figs. 1, 2, 3…” or as “Fig 1. a) b) c)…”?

If figures are very closely related in terms of the point they try to make, then the a) b) c) approach will be more effective than separating them into figures 1, 2, 3. If they aren’t extremely connected in any way, the numbered method is better here.

Figure Captions:

Chart, line chart

Description automatically generated

Figure 1. Kaplan-Meier plot demonstrates that the survival of younger cohorts (age < 50 years old) is more probable in early stages of a breast cancer diagnosis, but eventually reaches the survival of older patients (age > 50 years old) . Data was retrieved from TCGA-BRCA and plot was generated via R-packages survival, survminer, and ggplot2. Note that the p-value is abnormally high in this situation, which may indicate that the trends in this plot are not statistically significant.

1. Write a caption for the figure below.

Figure 3. Oncoplots comparing stomach adenocarcinoma in men and women groups demonstrate that the top 6 genes with the highest rate of somatic mutations were shared between these groups. Mutation and clinical data were retrieved from TCGA-STAD and analyzed via R-package maftools. Oncoplots were generated using R-package maftools and show total gene mutation and gene characterization by type of mutation.

1. What are the differences between how you write figure captions and how you write table captions?

Table captions go above a table and figure captions go below their respective figures. Figure captions tend to carry more detail with them (e.g. figure captions should include a takeaway, data analysis techniques used to generate the figure, etc. while table captions should only include a descriptive title).