Genomics CURE Weekly Progress Report Format

Progress report format

A. Accomplishments (target 250 words)
B. Challenges and how you addressed them (target 250 words)
C. Scientific Writing Prompt (target 100 words)

Progress report rubric (100 points)

- Accomplishments (40 points)
    - Lists concepts/coding learned (30 points) For example:
        - List novel findings
        - Concepts learned
        - Coding solutions
    - List successful communication with instructors and classmates (10)
- Challenges and how you addressed them (40 points)
    - List specific challenges for the week (10)
        - If you did not have challenges, describe your strategies/background used to make this a challenge-free week
    - List your approaches for addressing this challenge (and if it is still outstanding) (30)
        - If you did not have challenges, describe how you helped others address a challenge (via Slack, meetings, group discussion)
- Scientific Writing Prompt (20 points)
    - Submit requested scientific writing/figures

Example One Scientific Writing Prompt

Scientific Writing Prompt
Example prompt: In your own words, state the aims and significance of the research project

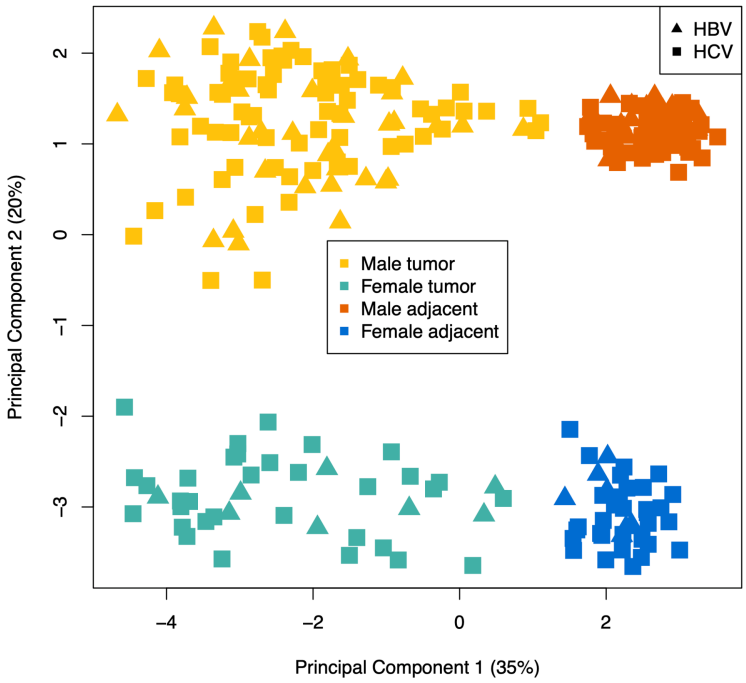
The aims of this project are understanding what genes and pathways differ between lesion type, sex, and viral etiology. We want to know what genes and pathways are differentially expressed between all tumor and tumor-adjacent tissue. We also will investigate what genes and pathways ,associated with the formation of the viral-mediate tumor, differ across males and females and which remain the same. We all want to specify by viral etiology and understand what genes and pathways are specific to them. Hepatocellular Carcinoma (HCC) has known sex differences in genetic expression. However, current research has not accounted for viral etiology or looked into viral-mediated HCC. Understanding differential expression in both viral etiology and sex can help create individualized cancer therapeutics and diagnostics for patients.

Example Two Scientific Writing Prompt

Scientific Writing Prompt

Prompt: ***For one of the figures you generated this week write a descriptive figure legend***
The legend should include:

- *a short descriptive title indicating the main conclusion of the figure*
- *short text description that accompanies a figure: briefly what data/information is being plotted*
- *type of plot (such as violin plot, scatter plot, upset plot, etc)*
- *what is on the X axis*
- *what is on the Y axis*
- *the meaning of any colors, symbols, or other important visual aspects of the figure*
- *explain the meaning of the figure (or parts of the figure) clearly without the help of any other text in the report*



The MDS plot shows the results of a multidimensional scaling (MDS) analysis of the top 25 differentially expressed genes selected for all pairwise comparisons. The MDS plot is colored by sex and tissue type where yellow is male tumor samples, green is female tumor samples, orange is male tumor-adjacent samples, and blue is female tumor-adjacent samples. The triangle shapes represent liver tissue samples infected with Hepatitis B and the square shapes represent liver tissues infected with Hepatitis C. Principal component 1 accounts for 35% of the difference in data and is attributable to tumor vs tumor-adjacent tissue and principal component 2 accounts for 20% of the data and is attributable to male vs female sex.