Review of: "Enhancing Cancer Treatment and Understanding Through Clustering of Gene Responses to Categorical Stressors"

Hany Akeel Al-Hussaniy

Potential competing interests: No potential competing interests to declare.

This study by El Hadi et al. investigates how cancer cells respond to stressful environments, specifically those induced by glycolysis inhibitory drugs. They use a consensus clustering approach to identify four distinct clusters of cancer cell responses. The first and third clusters are the most sensitive to glycolysis inhibitors, while the second and fourth clusters are relatively unaffected.

The authors suggest that this study can help to improve our understanding of cancer biology and lead to the development of more effective cancer treatments. For example, by understanding how different types of cancer cells respond to glycolysis inhibitors, we can develop personalized treatment plans that are more likely to be effective.

The study is well-designed and executed. The authors use a large dataset of gene expression data from cancer cells treated with glycolysis inhibitors. They also use a rigorous clustering approach to identify groups of cancer cells with similar responses.

The results of the study are interesting and potentially important. The authors identify four distinct clusters of cancer cell responses to glycolysis inhibitors. This suggests that there is a great deal of heterogeneity in how cancer cells respond to these drugs.

The authors' conclusions are well-supported by the data. They also discuss the limitations of their study and suggest directions for future research.

Overall, this is a well-written and informative study that makes a significant contribution to our understanding of cancer biology and the development of more effective cancer treatments.

Here are some specific comments on the study:

The authors use a consensus clustering approach, which is a robust way to identify clusters that are not sensitive to the choice of clustering algorithm.
The authors use a variety of evaluation indices to assess the quality of their clustering results.
The authors identify four distinct clusters of cancer cell responses to glycolysis inhibitors. This suggests that there is a great deal of heterogeneity in how cancer cells respond to these drugs.
The authors discuss the potential clinical implications of their findings. For example, they suggest that their findings could

be used to develop personalized treatment plans for patients with cancer.

Overall, this is a well-designed and executed study that makes a significant contribution to our understanding of cancer biology and the development of more effective cancer treatments.