CLASSIFICATION OF CLINICAL STAGE LIVER CANCER

DONE BY COMBINING BOTH MACHINE LEARNING AND BIOMARKER DESIGN

TEAM MEMBERS

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BACKGROUND INFORMATION

- According to the American cancer society (ACS) liver cancer has 4 stages and they are determined by Tumor size, spread to lymph nodes, and metastasis.
- But, not many studies have tried and classify these stages according to gene expressions and methylation values.
- In our project we will incorporate both machine learning and biomarker hunting techniques to try and make the classification process as accurate and as thorough as possible.

We will start by reading all the research papers in this topic in the last 5 years

After reading all the papers we will have accumulated enough data to start and find data for liver cancer patients from TCGA

After doing all the preprocessing to the data and cleaning it

Biomarker hunters will proceed with finding pathways for the significant genes

Machine learning scientists will try and find new stages or classes for liver cancer by clustering the different samples by many different ML algorithms that we will find along the way.

Finally, we will incorporate both methods together to achieve the best clinical stages classification possible

EXPECTED RESULTS

- Identifying new liver cancer biomarkers.
- Developing fast and efficient ML systems that are able to classify the different stages.
- Incorporating the two fields together in a way that increases accuracy.

THANK YOU FOR LISTENING ☺

Any questions?