PREDICTION ANALYSIS REPORT

The Cancer Dataset describes the performance status or the ability of a lung cancer patient to perform usual daily activities without any restrictions. By passing a patient's age, sex and Karnofsky Performance Scale Index (ranging from 0-100) to the Prediction model, we can predict their ECOG performance score, which gives us an estimate whether such an individual will be able to perform their regular day-to-day activities or not.

The ECOG performance score has levels from 0 to 5, where 0 means a patient is "Fully Active" and 5 would mean the patient is "Dead". In this training dataset, I have only considered the first 4 levels or grades of the ECOG, that is, Grade 0: Fully Active, Grade 1: Restricted but ambulatory, Grade 2: Ambulatory but cannot do any work activities and Grade 3: Limited Selfcare. The ECOG performance status is a scale used to assess how a patient's disease is progressing, assess how the disease affects the daily living abilities of the patient, and determine appropriate treatment and prognosis.

These predictions help the Physician assess the current condition of the patient, just by passing the above mentioned 3 variables. This prediction is good since it gets a fairly accurate prediction about the survival rate of the patient based on his condition. It can give a further insight into the stage of cancer the patient might be currently in. This can aid physicians to decrease or increase a dosage of a particular medicine. The ECOG Performance Status can be used to determine a patient's prognosis and to measure changes in a patient's ability to function or to determine if a patient could be included in a clinical trial. As per the Karnofsky score, the lower it is, the worse the survival is against cancer.

How can these predictions help in the future? These predictions can aid Physicians and Researchers who are working on lung cancer medication to better study the data observations and to learn the trend of cancer contraction and detection. A Lung Cancer Patient can help make informed decisions on further procedures observing the past data and observation of other patients. We can analyse further on the probability of a lung cancer patient's survival rate based on his ECOG performance score. We can compare the various age groups and analyse the reason why a particular age group has a higher percentage of lung cancer occurrences as compared to the other age groups. We can also find out how different age groups respond to the medicines and treatment provided to them and thus will help in further treatment. It can also help the researchers and the patients to learn more about how lung cancer affects a particular gender more. We can also find out the probability of a lung cancer patient's survival rate based on his age and Karnofsky Performance Scale Index as rated by physician.

To conclude, these predictions and data analysis will greatly benefit lung cancer patients and also, help greatly in various research areas. They can also help immensely for the ultimate cure of Lung Cancer.

REFERENCES

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