Patent Search

Invention Title	A ROBUST AND DEEP CONVOLUTIONAL NEURAL NETWORK APPROACH TO DETECT EARLY STAGES OF LUNGS CANCER
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Abstract:

a robust and deep convolutional neural network approach to detect early stages of lungs cancer is the proposed invention. The invention focuses on designing a framewo is reliable and robust for detecting the exact stage of lung cancer. Deep CNN algorithms are run on the data that is captured through imaging techniques and blood tests. proposed invention will pave way for therapeutic treatment.

Complete Specification

Description: [0001] Background description includes information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.
[0002] Lung cancer which is known as lung carcinoma is a malignant kung tumor. characterized by uncontrolled cell growth in tissues of the lung. The vast majority of l cancer is caused by smoking. The projected incidence of patients with cancer in India among malls was 679,421 and among females 712,758 for the year 2020.
[0003] A number of different types of lung cancer detection systems that are known in the prior art. For example, the following patents are provided for their supporti teachings and are all incorporated by reference.
[0004] Early lung cancer diagnostic biomarker discovery by machine learning methods Early diagnosis has been proved to improve survival rate of lung cancer patients The availability of blood-based screening could increase early lung cancer patient uptake. Our present study attempted to discover Chinese patients' plasma metabolites diagnostic biomarkers for lung cancer. In this work, we use a pioneering interdisciplinary mechanism, which is firstly applied to lung cancer, to detect early lung cancer diagnostic biomarkers by combining metabolomics and machine learning methods. We collected total 110 lung cancer patients and 43 healthy individuals in our study. Levels of 61 plasma metabolites were from targeted metabolomic study using LC-MS/MS. A specific combination of six metabolic biomarkers note-worthily enabling the discrimination between stage I lung cancer patients and healthy individuals (AUC = 0.989, Sensitivity = 98.1%, Specificity = 100.0%). And the top 5 relative importance metabolic biomarkers developed by FCBF algorithm also could be potential screening biomarkers for early detection of lung cancer. Naïve Bayes is recommended as an exploitable tool for early lung tumor prediction. This research will provide strong support for the feasibility of blood-based screening, and bring a more accurate, quick ar integrated application tool for early lung cancer diagnostic. The proposed interdisciplinary method could be adapted to other cancer beyond lung cancer.

View Application Status