A survey on Machine learning based Medical Assistive systems in Current Oncological Sciences

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Abstract

Background: Cancer is one of the life threatening disease which is affecting a large number of population worldwide. The cancer cells multiply inside the body without showing much symptoms on the surface of the skin thereby making it difficult to predict and detect at the onset of disease. Many organizations are working towards automating the process of cancer detection with minimal false detection rates.

Introduction: The machine learning algorithms serve to be a promising alternative to support health care practitioners to rule out the disease and predict the growth with various imaging and statistical analysis tools. The medical practitioners are utilizing the output of these algorithms to diagnose and design the course of treatment. These algorithms are capable of finding out the risk level of the patient and can reduce the mortality rate concerning to cancer disease.

Method: This article presents the existing state of art techniques for identifying cancer affecting human organs based on machine learning models. The supported set of imaging operations are also elaborated for each type of Cancer.

Conclusion: The CAD tools are the aid for the diagnostic radiologists for preliminary investigations and detecting the nature of tumor cells.

Keywords: Brain Tumor; Breast Cancer; Classification; Lung Cancer; Machine intelligence; Medical Imaging.