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Abstract:

Histopathological images are used to automatically identify various types of lung cancer using a lightweight, end-to-end CNN approach ABSTRACT: The most prevalent form of cancer is lung cancer. As a consequence, it is a leading cause of cancer-related mortality. Lung and colon malignancies cause more deaths and illnesses than they can cause damage and manifest themselves in multiple organs. If the malignancy is not detected early, it will have spread to both organs by the time treatment. Histological analysis is essential for detecting and treating these malignant growths. Even though the process is protracted and intricate, deep learning (DL) strategies make it possible to complete it more quickly and accurately. This has allowed professionals to evaluate a significantly larger number of patients in significantly less time and at a significantly lower cost. In the past, researchers employed DL models, which required a substantial quantity of computing power and other resources. The majority rely on standalone DL models to capture high-dimensional data or identify issues. Nonetheless, based on numerous lightweight DL models, this study provides a method for the detection of lung and colon cancer.

Complete Specification

Description:DESCRIPTIONS

Cancer can occur when cells in organs or other parts of the body divide and grow uncontrollably. In a multitude of physiological systems and tissues, cancer-causing cells can be detected. Cancer will be the leading or second-leading cause of death for persons under the age of 70 in 112 countries in 2019, according to the World Health Organization (WHO). The International Agency for Research on Cancer found in a 2020 analysis that cancer is the primary or second leading cause of death in 134 countries. More than 200 distinct types of cancer have been identified. According to a statistical study conducted in the United States, lung cancer and colon cancer are two of the three most prevalent forms of cancer in 2020. Lung and colon cancer patients in the United States will have the highest mortality rates of all cancer patients in 2020, according to the report. According to data compiled by GLOBOCAN 2020, 11.4% of individuals develop lung cancer, while 18.0% develop colon cancer. In addition, WHO estimates that four million people will have been diagnosed with lung or gastric cancer by the year 2020. Approximately 2.7 million individuals have perished from these malignancies. These findings demonstrate that lung and stomach cancer harm a significant number of individuals worldwide. It is possible to develop both lung and colon cancer during one's lifetime, as approximately 17% of individuals with one form of cancer also develop the other. In addition, if the disease is not detected early, there is a high likelihood that malignant cells will migrate from one organ to another. Many people believe that poor dietary habits may contribute to colon cancer, which is caused by smoking. When lung cancer spreads to the intestines, it can cause injury and heighten the risk of developing colon cancer. People who have had colon cancer often perceive lung cancer to be their "second cancer" as a result. A person can be diagnosed with both gastric and lung cancer in this circumstance. This demonstrates the significance of testing individuals for both forms of cancer simultaneously and obtaining a diagnosis as quickly as possible. Cancer's more obvious symptoms are different from those that aid in early detection. Common symptoms of many diseases include fatigue, wheezing, and muscle discomfort, but there are many more. The most

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