Patent Search

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Abstract:

ABSTRACT The present invention oral cancer detection model using deep learning improves early detection and diagnosis of oral cancer with its ability to accurately i malignant lesions from a diverse dataset of oral cancer images. This system has the potential to reduce morbidity and mortality rates associated with late-stage dete employing convolutional neural networks (CNNs) for image analysis, oral cancer detection system captures subtle variations indicative of cancerous tissue, surpassin limitations of traditional screening methods with exceptional sensitivity and specificity. The present invention also offers opportunities for remote monitoring and co assessment of lesions over time. Its user-friendly interface seamlessly integrates into existing dental practices, allowing for rapid and non-invasive examinations. Wit human error and reliable results, the present invention has the potential to revolutionize oral cancer detection, significantly improving oral healthcare outcomes. The invention is highly accurate in detection of various types and stages of oral cancer and further enhancing the system's capabilities.

Complete Specification

Description:Field of the Invention

The present invention relates to cancer detection. More particularly, the present invention relates to oral cancer detection model using deep learning to enhance ea diagnosis.

Background of the Invention

This section is intended to provide information relating to the field and background of the invention and thus any approach/functionality described below should n assumed to be qualified as prior art merely by its inclusion in this section.

Oral cancer, also known as mouth cancer, is a cancer of the lining of the lips, mouth, or upper throat. In the mouth, it most commonly starts as a painless white pat thickens, develops red patches, an ulcer, and continues to grow. When on the lips, it commonly looks like a persistent crusting ulcer that does not heal, and slowly g Other symptoms may include difficult or painful swallowing, new lumps or bumps in the neck, a swelling in the mouth, or a feeling of numbness in the mouth or lip Risk factors include tobacco and alcohol use. Those who use both alcohol and tobacco have a 15 times greater risk of oral cancer than those who use neither. Othe factors include HPV infection, chewing paan, and sun exposure on the lower lip. Oral cancer is a subgroup of head and neck cancers. Diagnosis is made by biopsy o concerning area, followed by investigation with CT scan, MRI, PET scan, and examination to determine if it has spread to distant parts of the body.

Oral cancer can be prevented by avoiding tobacco products, limiting alcohol use, sun protection on the lower lip, HPV vaccination, and avoidance of paan. Treatmen for oral cancer can include a combination of surgery (to remove the tumor and regional lymph nodes), radiation therapy, chemotherapy, or targeted therapy. The ty treatments will depend on the size, locations, and spread of the cancer taken into consideration with the general health of the person

View Application Status