Abstract

This paper deals with the detection of tumor stage in brain MR images with efficient algorithm and 3D assessment of brain for tumor detection providing better result. Tumor is an abnormal growth of tissues reproducing themselves in any part of the body. There are different types of tumor having different Characteristics and treatment. A large number of people having brain tumors die due to inaccurate detection. Magnetic resonance imaging (MRI) is a diagnostic procedure that uses a combination of radio frequencies, large magnet, and a computer to generate detailed images of organs and structures within the body. MR image is examined visually by the physician for detection & diagnosis of brain tumor. However this method of detection consists of less accuracy while detecting the stage & size of tumor. This project uses a computer aided method for segmentation (detection) of brain tumor based on the combination of algorithms. In this method segmentation of tumor tissue is done with accuracy and reproducibility than manual segmentation with less analysis time. then the tumor is extracted from the MR image and its exact position, shape and stage is determined. Then 3D analysis of brain MRI with the help of 3D analyzer tool and graph generation for tumor growth rate of particular patients and tumor types will be done.
References


Index Terms

Computer Science
Image Processing

Keywords
Brain Tumor Segmentation and Stage Detection in Brain MR Images with 3D Assessment

3D Assessment  Brain tumor  Fuzzy C-means (FCM)  K-means  Magnetic Resonance Imaging (MRI)

Pre-processing