

TEXTURE ANALYSIS IN SKULL MAGNETIC RESONANCE IMAGING

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Abstract

traumatic brain injury (TBI) represents a serious public health problem worldwide. It is the most common cause of death and disability in the young population (aged 15–45 years), with major family, social and economic implications [1]. In medical terms, the human body can be studied as an object. The reconstruction of bone structures after physical damage generated by such an unfortunate event as disease or trauma can range from the implementation of prostheses to the engineering of artificial bone implants [2]. To make a virtual or physical model of any human anatomy, it must first be captured in three dimensions in a way that can be used by computational processes. Most hospital scanners capture data from the entire body both internally and externally. These machines are typically medical imaging devices capable of scanning the entire human body, among which, the most common is the magnetic resonance imaging (MRI) equipment [3]. The goal of the research is to analyze the texture in magnetic resonance imaging and its relationship to bone mineral content (BMC) using simple linear regression.

Keywords

Genetic algorithm, Skull magnetic resonance imaging, Texture analysis