Abstract

Biomedical imaging is a series of procedures which create images of the human body, or parts of the body, to help screen for possible illness or injury, diagnose the likely cause of symptoms and monitor health conditions or the effects of treatment. The objective of the paper is to provide an overview about various biomedical imaging techniques used in detection and diagnosis of Cancer. Each of these imaging techniques provides information about the anatomy, chemical or physiologic phenomena of the human body which are studied independently by doctors to identify Cancer. The biomedical imaging systems, applications, benefits, drawbacks and research challenges are discussed. Image Fusion and its role in biomedical imaging is also discussed. Image Fusion is the process of fusing two or more biomedical images which contain complementary information into a single composite image. These enrich image quality and avoid redundancy thereby increase the clinical applicability of medical images for cancer detection, prognosis and treatment planning of Cancer.

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Index Terms

Computer Science  
Image Processing

Keywords

CT, MRI, PET, SPECT, Ultrasound imaging, Biomedical Image Fusion