Special Issue

The Impact of Artificial Intelligence in the New Trends of Non-invasive Biomarkers

Message from the Guest Editors

A new era for noninvasive biomarkers has begun due to an unprecedented acceleration in recent advances in high performance computing, the availability of large annotated data sets required for training, and new frameworks for implementing deep learning (DL) networks. It has become apparent that medical images can serve as mineable data that contain large amounts of quantitative features with potential clinical significance. Extraction and analysis of these quantitative features is commonly referred to as the texture of radiomic analysis. DL and radiomics-based techniques have enabled non-invasive characterization of tumor extent and functional metabolic activity and play a central role in screening, diagnostic work-up and surveillance of oncology patients. In this Special Issue, the current use and future potential of noninvasive biomarkers based on DL- or radiomics-based approaches from medical imaging analysis will be discussed in different clinical diagnostic areas.

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