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Abstract

Generally, the grade of a breast cancer is considered as an ”aggressive potential” in the growth of a tumor. Breast cancer grading is characterized by three important factors, gland formation, nuclear pleomorphism, and mitosis count. In this research, an automated detection of mitosis from histopathological images is presented. From initial experiments, it has been observed that detection of mitosis becomes challenging, due to the similarity in size and shape compared to nonmitosis nuclei. Towards this end, several contributions have been made to automatically detect mitosis nuclei. From an Exhaustive experimentation, it is clear that mitotic texture shows discriminative features when compared to nonmitotic nuclei. To validate the performance of mitosis detection, two datasets from the MITOSIS-ATYPIA-14 challenge is considered. The proposed method is able to achieve 97% overall accuracy after feature reduction

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Index Terms

Computer Science Image Processing

Keywords

Histopathological Images, Mitosis, Texture features, Patch extraction, Digital Pathology