

HISTOMORPHOLOGIC ASSESEMENT OF TUMOUR BUDDING AND POORLY DIRFFFERENTIATED CLUSTER IN COLORECTAL CANCER

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ABSTRACT

Introduction: Tumor budding (TB) and poorly differentiated cluster (PDC) are independent prognostic factors for colorectal cancer (CRC), which may allow for stratification of patients into more meaningful risk categories than TNM staging. However, these parameters are not routinely incorporated as part of the histopathological assessment. Therefore, we aimed to evaluate the TB and PDC in our CRC cases and assess their associations with the prognostic clinicopathological parameters.

Methodology: Haematoxylin and eosin-stained slides prepared from tissue blocks of 129 CRC cases diagnosed from 1st January 2017 to 31st December 2018, in Hospital Tengku Ampuan Afzan (HTAA) and Sultan Ahmad Shah Medical Centre @ IIUM, Kuantan Pahang were analysed. The PDC, and TB according to the International tumor budding consensus conference (ITBCC) criteria were scored.

Results: For TB, of the 129 cases studied, 93, 25, and 11 cases were classified as budding 1, budding 2, and budding 3, respectively. As for PDC, 93, 25, and 11 cases were classified as grade 1, grade 2, and grade 3, respectively. High TB and PDC grades were significantly associated with lympho-vascular invasion ($p < 0.05$), nodal metastasis ($p < 0.05$) and high pTNM stage ($p < 0.05$).

Conclusion: Based on the results of the study it is suggested that TB and PDC be included as histomorphologic parameters for assessment of CRC.

Keywords: Tumour budding, Poorly differentiated cluster, Colorectal cancer.

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