OBJECTIVE: In colorectal carcinomas, tumor budding has been defined as the presence of isolated single tumor cells or small cell clusters in the stroma at the invasive tumor margin. In this study, the relationship between tumor budding density at the invasive tumor margin and pathological parameters is investigated.

MATERIAL AND METHOD: Haematoxylin and eosin stained slides of 73 cases with colorectal carcinoma were retrospectively evaluated for the presence and intensity of tumor budding by 2 observers. After the specimens were assessed, the highest density of tumor budding area was counted in a microscopic field of x200. Cases were separated into 2 groups according to tumor budding density as low grade (<10) and high grade (≥10). The relationship of these groups with depth of tumor invasion, histological grade, vascular invasion and lymph node involvement was investigated.

RESULTS: Of the 73 colorectal carcinoma cases, 33 (45.2%) had low and 40 (54.8%) had high grade tumor budding density, respectively. There was a statistically significant relationship between high grade tumor budding density and histological grade (p=0.042), lymph node involvement (p=0.0001) and vascular invasion (p=0.0034).

CONCLUSION: High grade tumor budding density is associated with aggressive phenotypical features in colorectal carcinoma.

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