## البحث الخامس

**Expression of Septin 2 and Her2/neu in Colorectal Cancer**

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Journal of Microscopy and Ultrastructure. Online/June 2021

# Abstract

**Background**: Colorectal cancer (CRC) is a common and lethal disease. Septin 2 belongs to the same class of GTPases as the *RAS* oncogenes influences the invasion and metastasis of many types of tumor cells. Also, HER2/neu is involved in the tumor genesis and progression of various types of tumors. The role of both molecules is still questionable in CRC.
**Aim**: Examine the expression of Septin 2 and Her2/neu in patients with CRC.
**Methods**: The study was conducted on 2 groups; The first group consisted of 70 paraffin blocks for CRC patients and the second group was formed of 24 blocks from patients diagnosed as colorectal adenoma. For each adenoma and carcinoma case a section was immunohistochemically stained using anti-human SEPT2 polyclonal antibody. For each carcinoma case another section was immunostained using monoclonal anti-HER2/neu. The results were statistically analyzed and compared with the collected clinicopathologic data of the cases.
**Results**: For the carcinoma patients there was a significant association between SEPT2 staining intensity and histologic type ($P=0.001$) and grade ($P<0.001$), tumor T ($P=0.001$) and N ($P=0.011$) stages and the presence of lymphovascular invasion ($P<0.001$) and a significant association between Her2/neu immunoreactivity scores and histologic grade ($P=0.048$), tumor T ($P<0.001$) and N ($P=0.019$) stages and the presence of perineural ($P=0.004$) and lymphovascular ($P=0.003$) invasion. In colonic adenoma patients; there was a significant relation between Septin 2 immunoreactivity scores and the grade of dysplasia in the adenoma ($P<0.001$) and significant relation with its expression in carcinoma group ($P<0.001$).
**Conclusion**: A potential prognostic role of Septin 2 and Her2/neu for patients with CRC is suggested as expression of both markers was associated with many important prognostic clinicopathologic variables in patients of CRC.
of this neoplasm.