

Pediatric Pathology & Laboratory Medicine

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Background: Human epidermal growth factor receptor 2 (HER-2/neu) has a prognostic implication in certain cancers like breast and gastric cancer. Ligation of the receptor in colorectal cancer is rare. In this study, we have investigated the frequency of HER-2/neu expression in colorectal adenocarcinoma and its association with a clinicopathological variable.

Methods: A total of 95 patients with colorectal carcinoma were studied after immunohistochemical analysis. Hematoxylin and eosin (H&E) staining was performed on all the sections. Expression of HER-2/neu was investigated by immunohistochemistry using anti-HER-2 antibody. In addition, if HER-2/neu expression is 'high', we evaluated the association of staining intensity and percentage of tumor cells stained with the clinicopathological variable including age, gender, histological grade and stage of the tumor. Data were analyzed using SPSS version 21. A p-value < 0.05 was considered a significant.

Results: From the total of 95 cases, 75 (78.9%) cases showed HER-2/neu expression. Percentage of HER-2/neu staining was significantly associated with the grade (p-value=0.030) and the colorectal cancer (p-value=0.024). We also observed a significant association between percentage of tumor cells stained and tumor stage (p-value=0.006).

Conclusion: HER2/neu is not ideal biomarker used in colorectal adenocarcinoma in Pakistani population. Our finding indicates a significant association of low/mid HER-2/neu expression with high grade and membranous HER-2/neu expression with high grade colorectal cancer.

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