## **13<sup>th</sup> EUROPEAN PATHOLOGY CONGRESS** August 02-03, 2017 Milan, Italy

## Frequency of Her2/*neu* expression in colorectal adenocarcinoma: a study from developing South Asian country

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**Background:** Human epidermal growth factor (Her-2/*neu*) has strong therapeutic implications in certain cancers like breast and gastric cancer. Literature on its frequency in colorectal cancer is scarce. In this study, we have investigated the frequency of Her-2/*neu* expression in colorectal adenocarcinomas and its association with various clinicopathological variables.

**Methods:** A total of 95 patients who underwent colonoscopic biopsy or colectomy were studied after institutional ethical approval. Hematoxylin & eosin (H&E) staining was performed on all the tissue sections. Expression of Her-2/*neu* was investigated by immunohistochemistry using  $\alpha$ -Her-2 antibody. In order to quantify Her-2/*neu* expression, three criteria were applied that includes the pattern of staining, intensity of staining and percentage of tumor cells stained. Furthermore, its association was seen with various clinicopathological variables including age, gender, histopathological type, grade and stage of the tumor. Data was entered and analyzed using SPSS version 21. A p-value of <0.05 was considered as significant.

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

**Conclusion:** Her2/*neu* is considerably expressed in colorectal adenocarcinoma in Pakistani population. Our findings indicate a significant strong association of cytoplasmic Her-2/*neu* expression with low grades and membranous Her-2/*neu* expression with high grades of colorectal cancer.

## Biography

Asma Shabbir has expertise in Diagnostic Pathology and also adores teaching the medical students. Her dissertation work involved evaluation of Her-2/neu in gastric and colorectal adenocarcinomas. The basis of which arose from the use of targeted therapy ( $\alpha$ -Her-2) in breast cancer patients. Similarly,  $\alpha$ -Her-2 therapy in gastric & colorectal cancer might give another treatment option for better prognosis to these patients in this new era of personalized medicine.

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