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IGG EXPRESSION AMONG SUDANESE PATIENTS WITH COLORECTAL CANCER USING IMMUNOHISTOCHEMISTRY

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ABSTRACT
This is a retrospective study aimed to detect the expression of IgG in formalin fixed paraffin embedded sections using immunohistochemistry technique. 45 cases previously diagnosed with colorectal cancer were recruited and investigated for the IgG expression. No significant correlation was found between neither patients' age nor patients' gender and histological type of the tumor. In addition, no significant correlation was found between histological types or tumor grade and IgG expression.

INTRODUCTION
The relationship between IgG expression and clinicopathological features and biological markers associated with prognosis and response to therapy in colorectal cancer was previously suggested[1]-[3] (Niu et al, 2014). In Sudan Colorectal cancer is the fifth cancer (Saeed et al, 2014). In this study the expression of IgG in colorectal cancer among Sudanese patients was assessed by using monoclonal antibody for IgG.

MATERIALS AND METHODS
45 formalin fixed paraffin embedded tissues were used in this study. From each block 4 um section was cut and subjected to immunostain as described by manufacturer (Dako). Polyclonal rabbit antihuman antibody (Dako, IS512) for IgG detection was used. Appropriate positive and negative controls were used. The demographic data of the patients were obtained from lab records. Histopathology results were also obtained from lab records.

RESULTS
The male: female ratio of the patients included in this study was found to be 1:1.8.

The most common type of cancer in this study was adenocarcinoma while the main tumor grade was well differentiated type followed by moderately differentiated and finally the poorly differentiated type.

In this study no significant correlation was found between neither patients' age nor patients' gender and histological type of the tumor (P value= 0.589 and 0.329 respectively).

Also, no significant correlation was found between histological types or tumor grade and IgG expression (p.v= 0.511 and 0.651 respectively).

DISCUSSION
Immunoglobulin expression in different types of cancer cells was previously studied and proved. Increased serum levels of IgG often detected in patients with epithelial cancers[4]-[5] including those with colorectal cancer[6]-[7]. In the current study attention has been made to detect the expression of IgG in Sudanese patients with colorectal cancer. No significant relation was found between the IgG expression and the clinicopathological features and biological behaviors of carcinomas. Chen et al. have recentlyreported that the expression of IgG in soft tissue sarcomas was associated with tumor grade and expression of PCNA, Ki-67 and Cyclin D1[8]. No such relation was found in our work concerning the association between the IgG expression and the tumor grade. This may be explained by the fact that the detection of the expression of the immunoglobulin in the tissue samples is more precise than in the blood samples. In contrast to what we found in this study, Niu et al (2012) found a positive correlation between IgG expression and tumor differentiation gradewith strongerIgG expression in CRC tissues withpoor differentiation than in thosewith better differentiation. In contrast, in this study we found that the stronger expression of IgG is associated with well differentiated tumertypes, although no significant relation was found statistically. This may be attributed mainly to the small size of samples in our study compared with other studies.

In conclusion, no significant relation was found between IgG expression and tumor type, histological grade and tumor differentiation. As with the small sample size of

samples used in this study, larger sample size is needed to confirm/rule out the role of IgG in colorectal cancer behavior. In addition, other detection methods may help in better recognition of the role if IgG in colorectal cancer.

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