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## **CORRELATION OF EXPRESSION ERK-2 IN HIGH-GRADE COLON CANCER WITH ADJUSTED DISEASE-FREE SURVIVAL**

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**Introduction.** Colon cancer is not monogenic disease, because each patient's own set of mutations in different genes [1]. The best-studied signaling cascade involving ERK1 / 2 is RAS - RAF - MEK -Erk signaling pathway from the cell surface of many receptors. Representatives of the Erk family also play a role in the transendothelial migration of certain cells and can stimulate angiogenesis and invasion [2].

**Purpose.** To determine the connection Erk2 expression level in high-grade colon cancer with an adjusted disease-free survival (ADFS) of patients.

**Materials and methods.** The study was performed on the operating material of 17 patients (10 men and 7 women) aged 54.7 to 80.7 years (74.45 (67,14-76,61)) with histologically verified high-grade colon cancer (G3-4 ). The immunohistochemical study was performed using mouse monoclonal antibodies to Erk2 (ab72096) by standard methods. Quantitation of the level of expression was performed using the program Aperio Image Scope [3]. Statistical analysis was performed using STATISTICA 10.0 (SNAXAR207F394425FA-Q).

**Results.** Tumors appeared with equal frequency in both the localization: proximal (8 cases (47%)) and distal (9 cases (53%)). pT3 detected in 9 cases (53%), pT2 - 3 (17.6%), pT4 - to 5. At the time of diagnosis N1-2 was 12 (70.6%) patients. Hematogenous metastases were diagnosed in 6 patients (35.3%). In 5 patients (29.4%) over time have any relapses, all of which occurred during the first two years after surgery. On average, the tumor recurred after 1.15 years (1,0-1,68). Overall survival (January 2016) was 2.3 years (1,3-4,48). The most accurate indicator reflecting essentially a cure for cancer is adjusted disease-free survival. In its calculation of the patients who died of the underlying disease, as well as those patients who during his lifetime was diagnosed locoregional recurrence or distant metastases are counted as dead - on relapse diagnosis time and / or metastasis, or death [4]. ADFS was 1.5 years (1,0-2,3). The Spearman rank correlation test showed a trend: with increasing Erk2 expression in tumor cells adjusted progression-free survival increased ( $p = 0.08$ ). Expressionless Erk2 in cells of colon tumors in patients with relapse-free survival of less than one year (0.0007 (0,00058-0,0008)), compared to over 1 year survival (0.009 (0,004-0,029)) ( $p = 0.02$ ). Statistically significant differences depending on the three- and five-year survival rate is not revealed. Statistically significant differences in the level of Erk2 positivity in the tumor stroma and the edges of the incision, depending on the ADFS were found ( $p > 0.05$ ).

**Conclusions.** Determination Erk2 expression in tumor cells can be used for prediction annual adjusted disease-free survival of patients with high-grade adenocarcinoma of the colon.

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## THE RISING TREND OF NON-COMMUNICABLE DISEASES IN NIGERIA

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**Abstract.** Emerging evidence has indicated that developing countries are experiencing an epidemiological transition consisting of communicable and non-communicable diseases, driven by the spread of Globalization [1]. The Risk Factors implicated in the etiology of this rising trend are unhealthy nutrition, low hygiene, smoking e.tc. [1,2]. This paper discusses the relationship between the risk factors of NCDs and the growth spurt of globalization in Nigeria; as it drives the increasing incidence of NCDs nationwide.

**Objective:** To assess the Nigerian dimension of the relationship between the risk factors of NCDs and globalization.

**Methods:** 1.) Analysis of the data of published papers by capable Nigerian scientists regarding NCDs in Nigeria, 2.) analysis of reports and surveys in the World Health Organisation (WHO) database.

**Results:** a.) The major NCDs identified from the analysis of materials from both methods used indicate the following as the most common NCDs in Nigeria in descending order: Cardiovascular diseases, diabetes mellitus, chronic respiratory distress and cancer

b.) The results of the analysis of the data published in Nigeria revealed: increase in obesity by 19% post globalization, smoking by 1.1% post globalization, alcohol consumption by 8% post globalization etc. In general there was a rise in the risk factors post-globalization (1998-2002) as compared with the pre-globalization period (1975-1979)

c.) The results of the analysis of the reports provided by WHO revealed significant rise in the mean systolic blood pressure and the mean fasting blood sugar level of the Nigerian populace from the year 2000 to 2008/2011 [3]. A time when the country witnessed increased access to information technology, global media, and increased ease of communication reflected in the high growth of internet users within the same period.

**Conclusion:** The burden of NCDs is on the rise in Nigeria, and it seems impossible to control the forces of globalization. Therefore, concerted efforts should be targeted at primary prevention, while also improving the Nigerian health systems (with emphasis of Primary Health Care).

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