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Gender specificity of colorectal cancer in the Republic of Tatarstan

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Abstract

The purpose of the study: to develop an expert system based on the construction of a «decision tree» for predicting the 5-year survival rate of patients with colorectal cancer. Material and Methods. T he study included 654 patients with colorectal cancer (CRC) who were treated from 2013 to 2015, including 434 men and 220 women. The average age of patients was 64,1 ± 10,2 years. All patients underwent genetic analysis for the presence of a mutation in the K-ras gene from the primary tumor. Results. For the Republic of Tatarstan, there are regional features of mutation of the K-ras gene: the frequency of mutations in tumors in men was less frequent (20.3 %) than in women (37.7 %), in patients of Slavic nationality, mutations were slightly more frequent - 39 % than in Tatars - 21 %. The gender approach to assessing long-term treatment results showed that in men with colorectal cancer, the most favorable treatment results were observed in patients with tumors in stage T1-2N0M0, regardless of the differentiation of the tumor and its mutational status. Low-grade tumors with any T should be considered prognostically unfavorable in men, with the presence of regional metastases and mutation of the K-ras gene, even in the absence of distant metastases: no patient lived 5 years. Based on the construction of a «decision tree», the most favorable treatment results were observed in female patients with tumors in stage T1-2-3N0M0 at the age of 70 years (5-year survival rate of 90 %), with tumors T1-2N0M0 at the age of 70 years (5-year survival rate of 81.8 %), regardless of the tumor differentiation and its mutational status. Tumors of any differentiation are prognostically unfavorable for women of the T3-4N0 stage with the presence of distant metastases (6 % of patients lived 5 years) and lowdifferentiated stage T4N0M0 tumors (5-year survival rate of 8 %). Conclusion. G ender- and age-associated features of the development and course of CRC are relevant for oncologists to choose effective diagnostic and therapeutic measures.

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Keywords

Colorectal cancer, Gender, K-ras gene mutation, Long-term results, Regional features

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