Advanced colorectal cancer and risk factors for survival

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Introduction: Colorectal cancer (CRC) is one of the most common localizations of malignant tumors. Given the characteristics of the course of this disease and its diagnosis lead to a large prevalence of advanced form. In the Republic of Kazakhstan CRC takes a leading position in the structure of cancer incidence. In 2015 in Kazakhstan...
registered 3686 CRC patients and 1840 CRC patients died. Despite the fact that significant progress has been made in the treatment of CRC in recent years, this disease is still one of the leading causes of mortality from cancer pathology.

Methods: Retrospective study of 287 patients with advance colorectal cancer who tested the mutational status of the KRAS gene. 60.2% of patients have negative and 39.8% of patients have positive mutational status of the KRAS gene. The most common forms of mutation are G12D (12.5%), G13D (10.1%) G12V (8.4%). Right side of intestinum lesion was in 42 (14.6%) patients, left side intestinum in 128 (44.6%) patients, rectum in 117 (40.8%) patients. Median of follow-up was 25.1 month. Overall survival (OS) was calculated from the start of treatment to death from any cause or until the date of the last appearance of the patient. Survival was estimated by Kaplan- Meier survival curves, comparison of curves by log rank test.

Results: OS 24%, median was 24 months, SE 0.9, CI 95% (22.3 – 25.7). Risk factor differences not significant for: gender (χ² = 0.01 p = 0.9), ethnic group (χ² = 0.19 p = 0.7), age < 50 survival median was 27 months, age > 50 survival median was 24 months (χ² = 2.46 p = 0.12). Standard chemotherapy survival median was 24-months, target chemotherapy survival median was 26 months (χ² = 0.25 p = 0.621). Adenocarcinoma histology type survival median was 25 months, for mucosa histology type survival median was 17 months (χ² = 1.1 p = 0.29). Positive mutational status of the KRAS gene survival median was 24 months. Positive mutational status of the KRAS gene survival median was 24 months. For T3 category survival median was 26 months for T4 spread was 24 months (χ² = 2.1 p = 0.15). For new metastasis during treatment survival median was 24 months, for no metastases during treatment survival median was 27 months (χ² = 1.03 p = 0.31). Differences in OS was significant for: metastasis in regional lymph nodes, survival median was 23 months, N0 survival median was 27.4 months (χ² = 12.1 p = 0.01). G3 tumor differentiation survival median was 20 months, for G2 survival median was 26 months, G1 survival median was 28 months (χ² = 7.78 p = 0.002). Intestinum right side OS was 26.2%, survival median 24 months, left side OS was 27.3% survival median 26 months, rectum OS was 19.7% survival median 21 months (χ² = 4.8 p = 0.04).

Conclusion: Metastasis in regional lymph nodes and G3 tumor differentiation are significant risk factors for advance colorectal cancer.