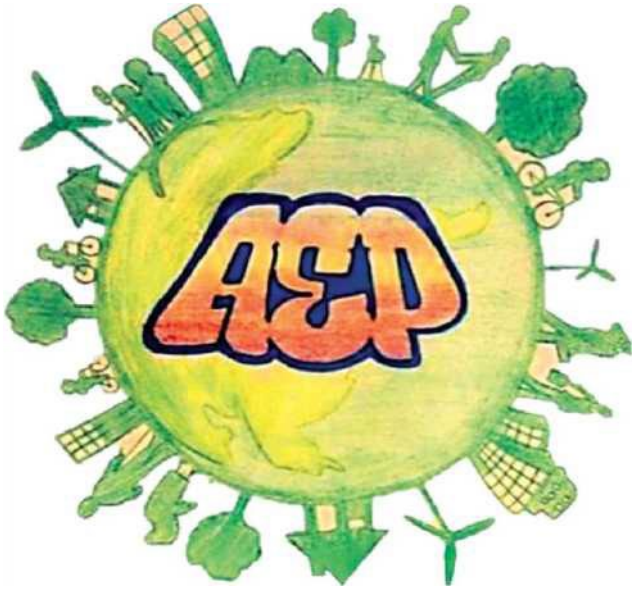
BELARUSIAN STATE UNIVERSITY

Establishment of Education

«International Sakharov Environmental Institute»



ACTUAL ENVIRONMENTAL PROBLEMS

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INFLUENCE OF INTERRUPTIONS IN THE COURSE OF EXTERNAL BEAM THERAPY FOR PROSTATE CANCER ON THE SURVIVAL OF PATIENTS IN GROUPS OF HIGH AND EXTREMELY HIGH RISKS OF DISEASE RECURRENCE

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The aim of the study was to analyze the cancer-specific survival of patients who completed a course of radiation therapy for prostate adenocarcinoma according to a radical program, depending on the duration of the interruptions in the split course of radiation therapy.

Keywords: prostate cancer, adenocarcinoma, radiation therapy, interruption in the course of RT.

The effect of the duration of interruptions on survival was assessed by analyzing the treatment regimens of patients, who completed radiotherapy course from 2007 to 2016 at the Republican Scientific and Practical Center named after N.I. Alexandrov and at the Brest Regional Oncology Center. Statistical processing of the obtained data included analysis by the Cox regression and Kaplan-Meier methods [1].

A total of 360 patients met the selection conditions: they underwent only RT with standard fractionation (2 Gy per tumor lesion per fraction, 5 radiation fractions per week).

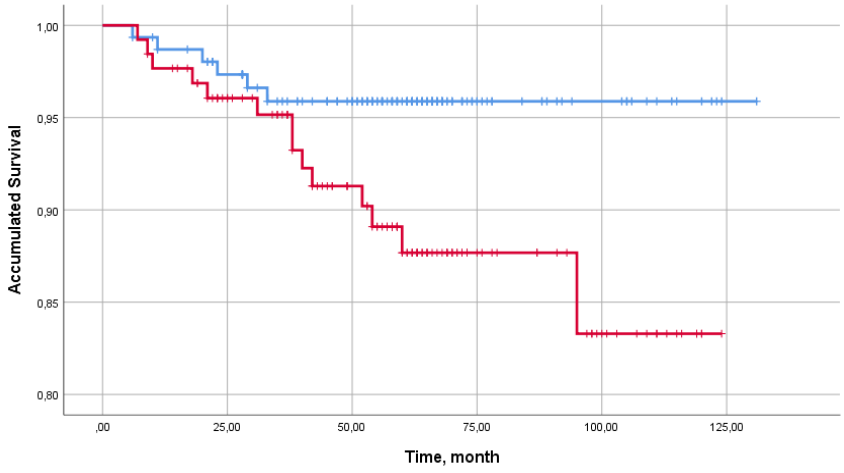

Fig.1. – Cancer-specific survival for the group of patients at high and extremely high risk of disease recurrence depending on interruptions in radiation treatment, $p_{logrank} = 0{,}026$. The up line corresponds to interruptions of less than 3 weeks, the down line to more.

We found that the accumulated cancer-specific survival in the group of patients at high and extremely high risk of disease recurrence with a duration of interruption in radiation treatment <3 weeks, compared with the group of patients

who completed treatment with an interval of ≥3 weeks, show a statistically significant result (96,1% vs. 89,1%, $p_{log\ rank}$ =0,026).

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