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Evgenii Khailov. *Program- positional strategies for a Lotka -Volterra type cancer control model.*

In this work, we use the Lotka – Volterra competition model to describe the interaction of cancer and healthy cells. For the controllable system under consideration, the goal is to minimize the terminal functional, which is a weighted difference in the concentrations of cancer and healthy cells at the final time point of the treatment period. Three types of cancer treatment are considered. Using the Pontryagin maximum principle for each type of treatment, the properties of optimal controls are analytically established and confirmed by the corresponding numerical calculations. Also, this research presents the results of analytical and numerical studies of the terminal control problem for the model with two variants of control restrictions (Received September 14, 2019)