

In this study we present the models of preventive and therapeutic vaccination of sarcoma-bearing rats with dendritic cells that present tumor antigens from killed tumor cells. We present the characteristics of DCs-based vaccine and its capacity to induce antitumor immune response both in v vitro and in vivo. We show that preventive vaccination efficiently prevents the growth of tumors. On the other hand vaccination of rats with established tumors did not led to the eradication of tumors. Despite the induction of a vigorous immune response after administration of DCs-based vaccine and transient decrease in tumor progression, tumors eventually resumed their growth and animals vaccinated with DCs succumbed to cancer. In both settings, preventive and therapeutic, DCs-based vaccination induced a vigorous tumor specific T cells response. These results argue for the timing of cancer immunotherapy to the stages of low tumor load. Immunotherapy initiated at the stage of minimal residual disease, after reduction of tumor load by other modalities, will have much better chance to offer a clinical benefit to cancer patients than the immunotherapy at the stage of metastatic disease.