

Neuroblastoma is estimated to be responsible for 7-10% tumor cases of childhood, and it is the most common extracranial solid tumor of the group. Neuroblastoma affects approximately 70 children a year in Poland (more than 600 in the USA, and more than 100 in Italy). Because the number of neuroblastoma cases in Poland is significant, and the disease is being diagnosed in its late stages, it is essential to carry out experiments leading to establishment of novel strategies of treatment of neuroblastoma. Over the past years, several new agents and their combinations have been developed for use in the high-risk patients and numerous attempts have been made to improve the outcome of advanced neuroblastoma patients.

The purpose of this study is to investigate the mechanism of the inhibitory effect of a therapeutic antibody recognizing a molecule highly expressed on the surface of the tumor cells, binding it and next causing tumor cell death. Possible roles of one of the selected genes identified as the most induced with the therapeutic antibody in regulation of cancer cells fate, will be evaluated using modern methods of studies of gene expression. Innovative treatment approaches based on a better understanding of the crucial biological pathways responsible for neuroblastoma tumor initiation and progression should result in improvement of treatment strategies and thus survival of neuroblastoma patients in future.