Oncolytic Virotherapy to Treat Cancer and the Effects from the Delayed Immune System

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Oncolytic viruses are a form of cancer treatment used to target tumor cells without harming healthy cells. These viruses have been engineered to specifically infect and kill cancer cells. Maximizing oncolytic potential of replicating viruses, however, has not been found to be an optimal strategy, as opposed to maximizing viral spread through the tumor. The delay differential equation model in this work includes interactions of uninfected tumor cells, tumor cells infected by the virus, and virus specific antigens, representing an immune response. Here , the thresholds between replicating viruses parameters are explored to find the most optimal outcome towards the minimization of tumor cells.

References

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