

Global Oncolytic Virus Therapy Market & Pipeline Outlook 2022

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Abstracts

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“Global Oncolytic Virus Therapy Market & Pipeline Outlook 2022” report analyzes ongoing clinical and non-clinical trends in the oncolytic virus therapy market. Currently there are 2 oncolytic virus therapies commercially available in the market. This report analyzes the ongoing clinical trial of 48 oncolytic virus therapies in clinical pipeline and gives comprehensive clinical insight on various parameters associated with the development of the oncolytic virus therapies. Most of the oncolytic virus therapy in clinical trials are in preclinical phase followed by Phase-I trials.

The preceding decades have shown the higher incidence and prevalence trends for the cancer. Globally, the scenario is worsening with the mounting number of cancer patients every year. Thousands of regimens have been employed for the eradication of this deadly disease and yet the new interventions are anticipated. Undeniably, several modalities have resulted in some form of relief so far, but the triumph towards cancer abolition is long way road.

The conventional chemotherapy and radiotherapy have limited therapeutic index and a plethora of treatment associated negative effects. The current scenario of the oncological treatment represents the impetus search for the novel therapeutic modalities that can selectively disrupt the tumor cells and block the cancer growth along with the safety, that the treatment will be harmless towards the normal cells.

The major role of developing the new therapy for the treatment of cancer is to have broader therapeutic index which represents the high potency towards the malignant cells with low or no toxicities towards healthy cells. One such approach is the use of the

viruses for the treatment of cancer turning into term known as viral oncotherapy. With the advances in oncology and the virology, the routes towards the engineering of viruses with increased tumor selectivity and enhanced oncolytic activity is conceivable.

Therefore the oncolytic virus is a virus that preferentially infects and kills cancer cells, as the infected cancer cells are destroyed by oncolysis, they release new infectious viral particles to help destroy the remaining tumor. Oncolytic viruses perform the dual functions they not only cause the destruction of cancerous cell but also stimulate the host anti-tumor immune responses and don't allow the growth of tumor cells. Certainly, targeted therapy of cancer using viruses has generated interest in the light of limited efficacy of the standard cancer therapeutics.

The next few years will see progress in terms of viral delivery, in particular the use of immune cell carriers that have yet to enter clinical trials. The promising strategy of combining existing antitumor adoptive cellular therapy with oncolytic viral delivery is likely to be explored. Combinations of viral therapy with chemotherapy, radiotherapy, transient immunosuppression and other immunotherapy strategies will probably be tested in early phase clinical trials.

For the broader future of oncolytic immunotherapy, it is expected that a rapid expansion of the number of clinical trials already being conducted combining this with immune co-inhibitory pathway blockade, improved oncolytic agents being developed (i.e. with greater direct antitumor effects and with an improved ability to spread through tumors), and in particular the ability of viruses to deliver proteins directly to the tumor microenvironment to help further induce, enhance, and shape the anti-tumor immune response being exploited to a greater extent.

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