

## Prospective therapeutic strategies for cervical cancer

### ABSTRACT

Cervical cancer is one of the leading causal cancer-related fatalities in the world. Cervical cancer patients can be treated by conventional treatment such as surgery, radiotherapy, chemotherapy, medications and combination treatments. Currently, more targeted treatments are being developed to cure cervical cancer. The treatments include immunotherapy, virotherapy and gene therapy which will be discussed in this paper. In immunotherapy, the synergy of CTLA-4 suppression and PD-1/PDL-1 immune checkpoint inhibition targeting their corresponding pathways enhanced the human immune system resulting a promising treatment effects. Oncolytic viruses such as Newcastle disease virus selectively infect and kill cancerous cells/tissues without harming normal cells/tissues. This character has made them a potential modality in combating cancer which popularly known as oncolytic virotherapy. Gene therapy delivers modified genetic materials to the target cancer cells via viral and non-viral vectors. It is used to target the abnormal gene, to increase cells susceptibility towards drugs or conventional therapy, to induce tumour cells apoptosis, to enhance tumour cell immunogenicity recognition and to inhibit the oncogene expression. The objective of this minireview is to add to the general knowledge on aforementioned therapeutic strategies against cervical cancer.

**Keyword:** Cancer; Cervical; Immunotherapy; Oncolytic; Gene therapy