

## Gene therapy is the next big step in cancer: report

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**Singapore:** The fight against cancer is leading a new movement in gene therapy, as the failure of conventional cancer therapies is fueling demand for new treatments, according to a new report by healthcare experts GBI Research.

The new report states that gene therapy technology is still in its nascent stage, and high levels of regulatory surveillance in clinical development is affecting progress. However, the increasing potential of upcoming treatments and shortcomings in traditional therapies is gradually leading to broader acceptance of gene therapy in medicine.

Therapies, such as chemotherapy and hormone therapy, control the progression of diseases, but are often associated with severe side effects, such as nausea, hair loss and abnormal blood cell counts. Once administered, the drugs induce systemic action throughout the body, and patients often die due to the side effects of treatment rather than the cancer itself. The inability of these conventional therapies to cure diseases has created a significant unmet need in the treatment of cancer, as well as Human Immunodeficiency Virus (HIV), autoimmune diseases, and viral infections.

Targeted therapies such as monoclonal antibodies, stem cell therapies, Ribonucleic Acid (RNA) therapies and gene therapies have initially shown better efficacy and safety profiles compared to chemotherapies.

Gene therapy has several promising drug candidates, which are likely to drive the growth of the gene therapy market if clinical trials are successful.

Collatogene by AnGes MG, Cardium Therapeutics' Generx, and Vical Incorporation's Allovectin-7 are in development for a wide range of cancer indications, and are expected to compete in the oncology therapeutics market as the market acceptance of gene therapy improves over time.

Gene therapy holds the potential to deliver tumor suppressor genes to an individual, preventing the growth of malignant tumors and reducing metastatic disease. The prevalence of cancer means that 38 percent of all ongoing gene therapy

pipeline projects are for cancer, with particular focus given to rare tumor types such as pancreatic cancer, and highly prevalent tumor types such as breast cancer and prostate cancer, in which case advanced forms of the disease are likely to be the primary targets.

However, patients may have a while to wait. Although the gene therapy pipeline portfolio has 145 pipeline projects under research and development, only 10 projects are in Phase III clinical studies, and only three gene therapy products have reached the market so far.

A market authorization application (MAA) was filed for Glybera and Cerepro, but the Medicines and Healthcare products Regulatory Agency (MHRA) denied their marketing authorization due to a lack of reliable evidence to support the drugs clinical benefit.