Miscellaneous

Cancer Vaccines

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Traditionally, the vaccine is a type of medication prescribed for preventing the development or treating, primarily, infectious diseases. Currently, there are vaccine related inventions that can be employed for tackling other conditions, i.e. allergy and malignancies.

Now, the roles of cancer vaccine are used as a prevention for the genesis or therapy. For instances, HPV vaccine, which is used to protect against human papillomavirus, has been shown to prevent cervical, vaginal, vulvar, and anal cancers; and hepatitis B vaccine is used to prevent liver cancer. In the future with further advancement of molecular medicine, individuals who are at risk to develop certain cancers, such as breast, lung and colorectal cancers, could be candidate for a preventive intervention. For instances, persons who show BRCA genes at birth, on delivery, or at the time of disease presentation, on whom with familial history of such cancers, the application of molecular scissors (CRISPR/Cas9) would correct the abnormalities to achieve satisfactory therapy. Further, in the case of certain tumors, a cancer vaccine would be an additional tool for successful therapy by means of the immune system's ability to recognize and destroy cancer cells (chimeric antigen receptors; CARs), the so-called antibody drug conjugates (ADCs) or immunoreceptor therapy.

Documents for further reading

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