

Cancer Genomics: A New Perception in Cancer Prevention

Maheswari J*

Department of Pharmacy, Vignan Institute of Pharmaceutical Technology, Visakhapatnam, Andhra Pradesh, India

ABSTRACT

Cancer is a deadly disease affecting a huge number of individuals throughout the world wide. In case of cancer treatment the research and clinical trials are still on-going in several research countries. Several new mechanisms and methods are suggested and some are supported in this path. Recently the 2 methods i.e., cancer genomics and immuno oncology are providing an effective and efficient treatment for the various types of cancers.

Keywords: Cancer genomics; Tumor; Metastasis; Mutations

DESCRIPTION

This article explains about the cancer genomics and its mode of action in treating a tumor cell. In cancer condition, cell proliferation is the major step in which number of cells will increase drastically within a less time and these changes can alter the cells to produce the particular proteins which complete their role in the body system. These cell proliferation steps majorly occur due to mutations. These alterations caused by genetic inheritance, during cell division, environmental factors.

This cancer genomics is a new research area, will helpful for identifying the growth of specific tumor which was driven by DNA alteration and these genomic mutations are differing from individuals. Gene transfer is one of the method, inserting a foreign gene directly into tumor cell or into surrounding tissue so that the newly inserted gene will effect the cancer cells to die or prevent the spread of cancer growth.

In this cancer genomics treatment, genome sequencing is the first step that is determining the complete DNA sequencing of an individual genome at a once. Mutated/tumor cell from the sequencing will be examined. This sequencing will be helpful to know the genetic information which is carried in a particular DNA segment. But this process is costlier and it takes time for the results to be obtained. After a several research projects, It was clear that cancer is also a genetic disease and it is inherited from previous generations and their ancestors also.

Off course there are slight disadvantages in this method that is this testing may increase anxiety and stress. Sometime the results may uncertain or inconclusive. Genetic mutation is not only the center cause for all types of cancers, there are some other reasons for causing a cancer. Based on the type of mutation i.e., point mutation, deletion, base substitution etc. the treatment will be vary.

Certain genetic mutations can alter the choice of treatment for example in the case of chronic myeloid leukemia won't give response for chemoimmuno therapy. Cancer treatment possibility is based on individual genetic profile of tumor. However cancer genomics is not only the method to challenge the cancer. This method also contributes personalized medicine by explaining types of cancers and its subtypes based on their genetics.

DISCUSSION AND CONCLUSION

The role of ESD in the treatment of superficial PSCC is expanding in Japan; indeed, its use is gradually becoming more widespread not only in Asia, but also in the West, thanks to its safety and utility. Provided appropriate training in the use of this technique is given, ESD can become a mainstay in the treatment of superficial PSCC.

Correspondence to: Maheswari J, Department of Pharmacy, Vignan Institute of Pharmaceutical Technology, Visakhapatnam, Andhra Pradesh, India, E-mail: rameshjellapalli@gmail.com

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