

## **Virological perspective of cancer: a global health concern**

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### **Introduction:**

In most affluent countries, poorest countries, developing countries and developed countries cancer is playing a leading role in mortality. Globally, rapid increase of cases and its prevalence is severely affecting all human societies. Unfortunately, the natural and anthropogenic cause of cancer is multidirectional and most vital for its early diagnosis followed by treatment and prevention. As per the data provided by the American Cancer Society (ACS), more than 17 lakhs new cases and approximately 6 lakhs cancer deaths were reported in the United States (Siegel et al., 2020) in the year 2019. In comparison to the most developed country, in developing countries like India, the mortality rate is also spectacular, dramatic and noticeable. Ahead of World Cancer Day, 2018 World Health Organization (WHO) official reported that, the ratio of cancer case and cancer death are one in ten Indians and one in fifteen Indians respectively (WHO 2018). Among different types of cancer, in male oral cancer, lung cancer, stomach cancer, colorectal cancer and oesophageal cancer are more prevalent and similarly breast cancer, cervical cancer, ovarian cancer and oral cancer are more common in female. Genetic and epigenetic changes, familial history, obesity, smoking, chewing of tobacco, consumption of alcohol, exposure to UV radiation, mutation and red meat are the principal causative factors for cancer development. Many number of malignancies and tumorigenic are virus originated. Nearly 20% of cancers are caused by various infectious agents including virus (Zhang et al., 2013). Most predominant viral strain linked to human cancer includes Epstein Barr virus (EBV) and Kaposi sarcoma associated herpesvirus or human herpesvirus type 8 (KSHV/ HHV8), Human papilloma viruses (HPVs) . Oncovirus related cancers are now becoming a global concern. Broad understanding and deep knowledge about the host virus interaction, receptor responsible for the adherence of virus, factors promoting the survival of virus can be used as a strategy for prevention, control and treatment of oncoviral infection in human. The convoluted mechanism of