

Keywords and Phrases for Concept Map on the Role of Viruses in Tumor Production

Approximately 90% of infected infants, 30% of infected children less than 5 years of age, and 2-6% of infected adults become chronically infected.

Around 15% of the world's cancers are associated with 5 viruses.

Between 70% and 85% of individuals infected with HCV become chronic carriers.

Epstein-Barr virus (EBV)

Hepatitis B virus (HBV)

Hepatitis C virus (HCV)

HPV-16 and HPV-18 are responsible for approximately 70% of cervical cancer in the US.

Human papilloma viruses (HPV)

Human T-lymphotropic virus type I (HTLV-I)

Growth-promoting proto-oncogenes

Growth-restricting tumor suppressor genes

Lymphomas in immunosuppressed individuals

Mutations that increase the activities of proto-oncogenes and/or decrease the activities of tumor suppressor genes can lead to growth of tumors.

Other factors promoting changes in cellular genes are also involved.

Rare adult T-lymphocyte leukemia-lymphoma

Responsible for 60% of all liver cancer cases worldwide

Some sexually-transmitted strains of HPV are associated with cervical, vulvar, vaginal, penile, and anal cancers