Anti-viral treatment and cancer control.

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Source

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Abstract

Hepatitis B virus (HBV), hepatitis C virus (HCV), human papillomavirus (HPV), and Epstein-Barr virus (EBV) contribute to about 10-15% global burden of human cancers. Conventional chemotherapy or molecular target therapies have been used to treat virus-associated cancers. However, a more proactive approach would be the use of antiviral treatment to suppress or eliminate viral infections to prevent the occurrence of cancer in the first place. Antiviral treatments against chronic HBV and HCV infections have achieved this goal, with significant reduction in the incidence of hepatocellular carcinoma in treated patients. Antiviral treatments for EBV, Kaposi's sarcoma-associated herpesvirus (KSHV), and human T-cell lymphotropic virus type 1 (HTLV-1) had limited success in treating refractory EBV-associated lymphoma and post-transplant lymphoproliferative disorder, KSHV-associated Kaposi's sarcoma in AIDS patients, and HTLV-1-associated acute, chronic, and smoldering subtypes of adult T-cell lymphoma, respectively. Therapeutic HPV vaccine and RNA-interference-based therapies for treating HPV-associated cervical cancers also showed some encouraging results. Taken together, antiviral therapies have yielded promising results in cancer prevention and treatment. More large-scale studies are necessary to confirm the efficacy of antiviral therapy. Further investigation for more effective and convenient antiviral regimens warrants more attention.

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