

# Comparison of Clinical Treatment used for HIV Positive and HIV-Negative Bladder Cancer Patients

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## DESCRIPTION

The immune system of the human body, specifically CD4+T lymphocytes, mononuclear macrophages, and dendritic cells, are the primary targets of the Human Immunodeficiency Virus (HIV). Currently, there are around 38 million HIV-positive individuals worldwide, and 1.7 million new cases occur yearly. As High-Efficiency Combined Anti-Retroviral Therapy (HAART) becomes more prevalent and helps people with HIV live longer, the incidence of HIV-related diseases rises because immune function in human cells is reduced due to HIV infection, which can lead to a variety of tumours and opportunistic infections. Kaposi's sarcoma and non-Hodgkin's lymphoma have also been linked to HIV infection. Experts in urology have also been interested in HIV-associated urological tumours. The most prevalent urological malignancy and the tenth most prevalent cancer overall is bladder cancer. The relationship between bladder cancer and HIV infection is still unknown according to recent domestic and international investigations.

Globally, HIV has been extensively studied. HIV not only raises the incidence of kaposi's sarcoma, a known HIV-associated tumor, but also of other malignancies such cutaneous squamous cell carcinoma and anal carcinoma. However, bladder cancer patients who also have HIV are rather uncommon worldwide. Only a few case reports or serial case descriptions exist as of yet, and no study has contrasted bladder cancer in people with HIV and those without the virus. This is the first study to examine the baseline characteristics, laboratory tests, pathological kinds, treatments, and follow-up of bladder cancer in HIV positive and non-HIV patients. In comparison to the HIV group, the age of onset was noticeably older in the non-HIV group. The age of HIV patients in this study is much younger than that of non-HIV patients, which may be associated to HIV infection. Previous studies

have revealed that the median age of HIV/AIDS beginning is 40 years old. The human immune system is attacked by the virus known as HIV. It primarily kills CD4+T cells, causing immunological deficiencies in humans that raise the risk of tumour development. According to studies, people with HIV have a 1.6-1.7 times higher chance of developing cancer than the general population. Additionally, those who have HIV are more likely to often contract additional cancer-causing agents such as the EB virus, Human Herpes Virus 8 (HHV-8), Human Papilloma Virus (HPV), Hepatitis b and c Virus (HBV, HCV), etc. further raise the possibility of tumour development.

Fortunately, only two incidences of syphilis infection and no other tumour-related virus infections were found in the HIV group of this investigation. Since the discovery of HIV, the majority of HIV-infected individuals have also been routinely referred for antiretroviral therapy, allowing them to identify other illnesses, such as bladder cancer, earlier in the examination process. The most common pathological kind of bladder cancer is urinary tract carcinoma. Due to the small sample size in this study, both groups' pathologies were same in that they both had urinary tract carcinoma. The prevalence of Non-Muscle Invasive Bladder Cancer (NMIBC), which accounts for more than 70% of bladder cancer, is 78.57% in the HIV group and 74.42% in the non-HIV group. According to studies, antiretroviral medication has dramatically reduced the death rate of HIV-infected people as well as the mortality rate of HIV-related cancers. At the very least, no increased risk of morbidity and mortality has been seen for any cancer since the introduction and advancement of antiretroviral therapy. The patient outcome indicators also show that under the condition of good HIV control, surgery for HIV-positive bladder cancer patients is safe and successful, and the survival rate will be significantly increased, despite the short follow-up period and small number of patients.

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