HIV-Associated Cancers

Presented by

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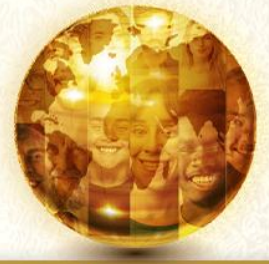

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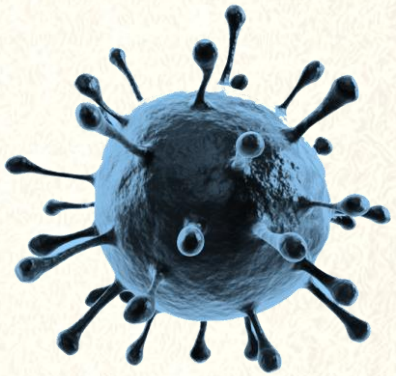

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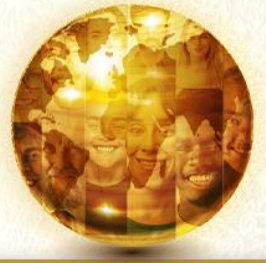
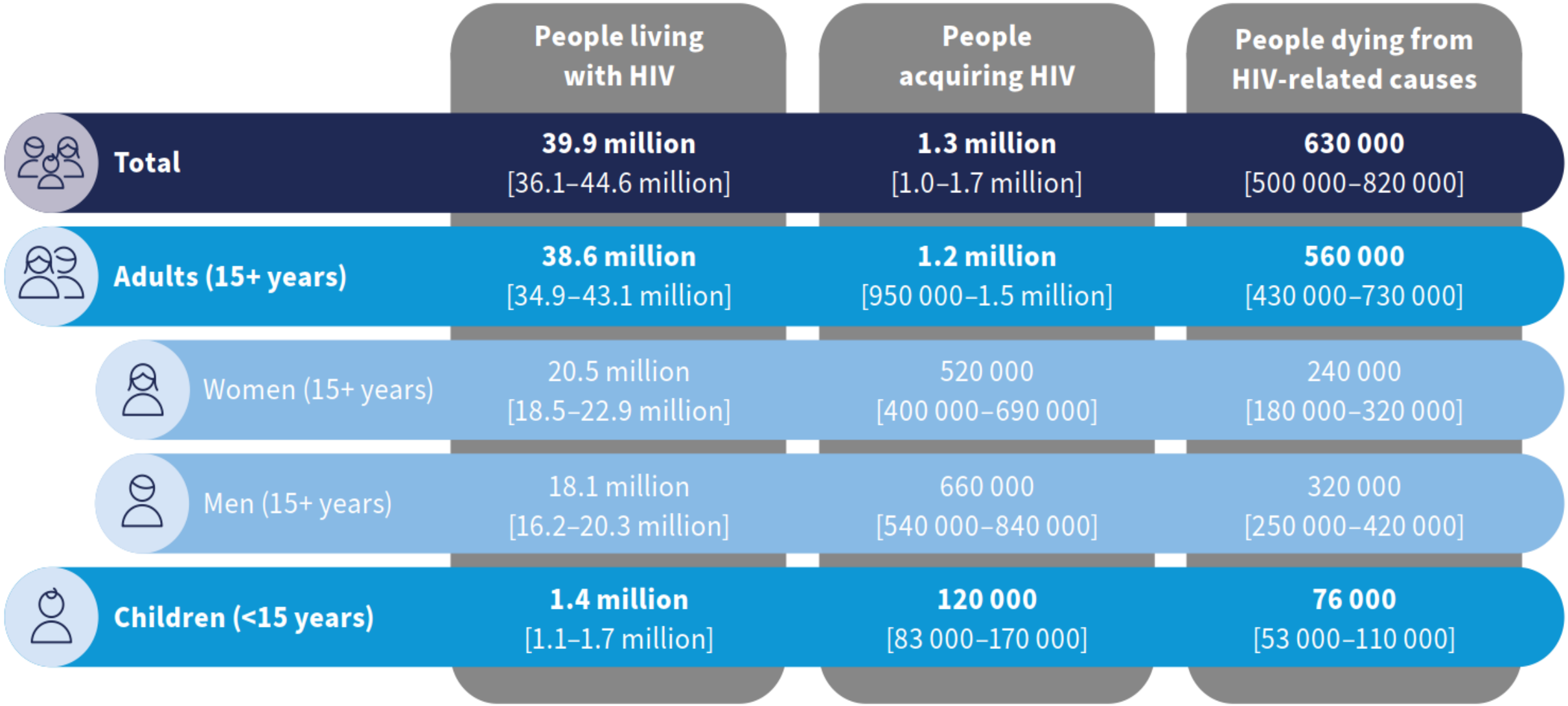
Key facts

- HIV remains a major global public health issue, having claimed an estimated 42.3 million lives to date.
- Transmission is ongoing in all countries globally.
- There were an estimated 39.9 million people living with HIV at the end of 2023, 65% of whom are in the WHO African Region.
- In 2023, an estimated 630 000 people died from HIV-related causes and an estimated 1.3 million people acquired HIV.

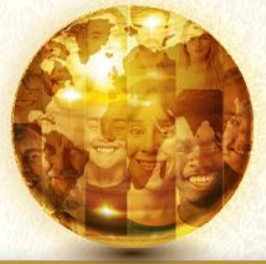


Summary of the global HIV epidemic, 2023

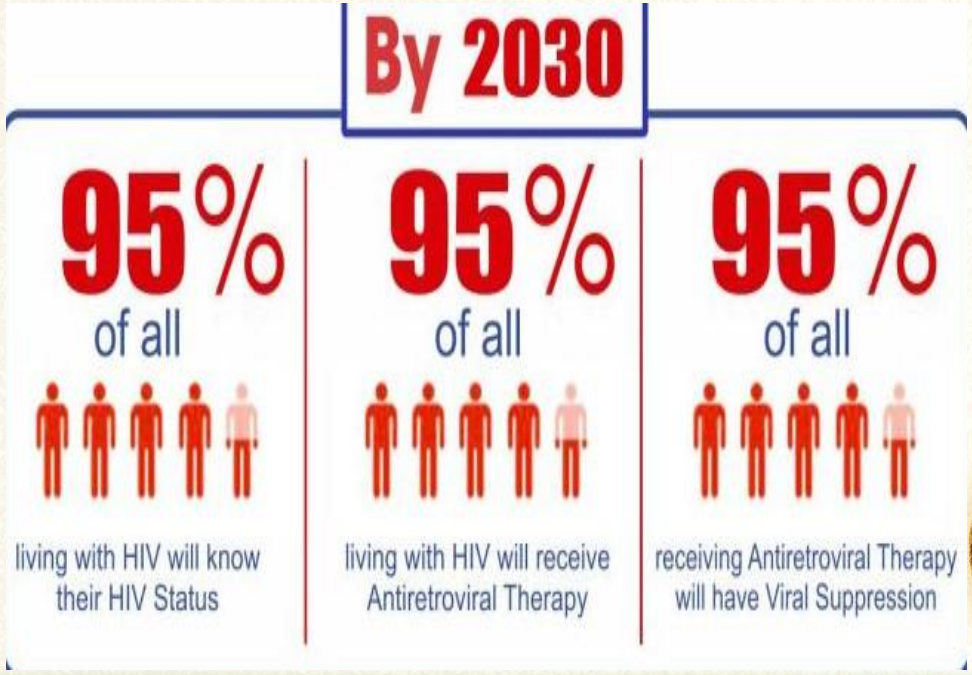


Source: UNAIDS/WHO estimates, 2024.

- There is no cure for HIV infection. However, with access to effective HIV prevention, diagnosis, treatment and care, including for opportunistic infections, HIV infection has become a manageable chronic health condition, enabling people living with HIV to lead long and healthy lives.

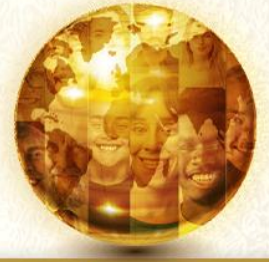


- **By 2030, 95% of all people living with HIV should have a diagnosis, 95% of whom should be taking lifesaving antiretroviral treatment, and 95% of people living with HIV on treatment should achieve a suppressed viral load for the benefit of the person's health and for reducing onward HIV transmission.**

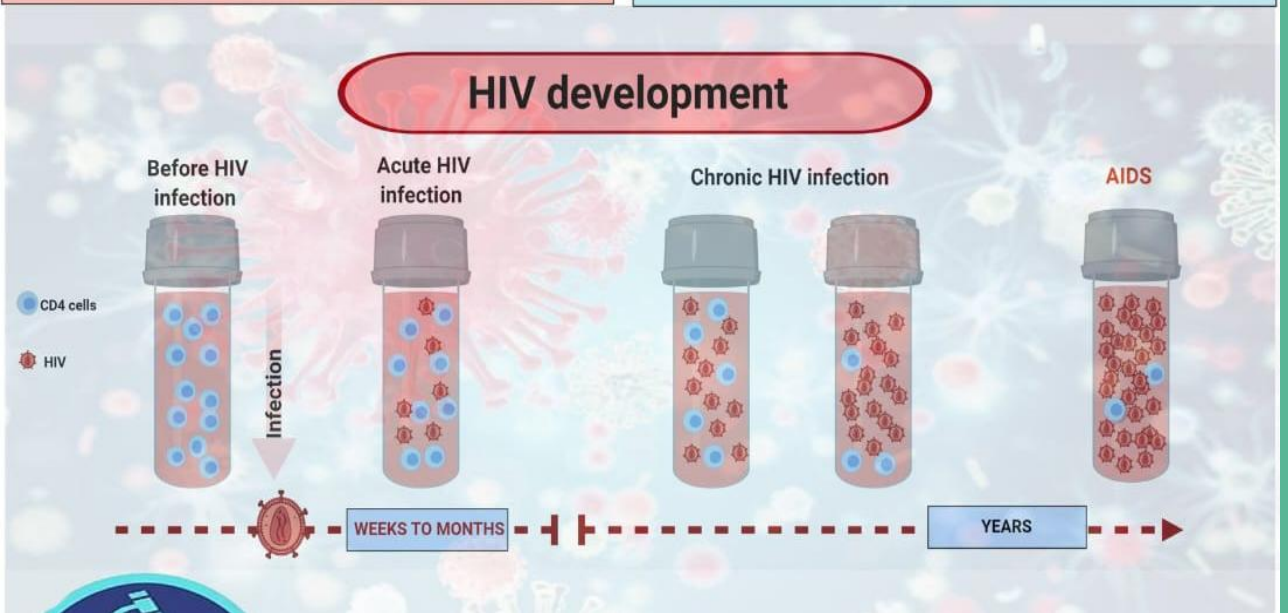


Overview

- Human immunodeficiency virus (HIV) is a virus that attacks the body's immune system.
- Acquired immunodeficiency syndrome (AIDS) occurs at the most advanced stage of infection.
- HIV targets the body's white blood cells, weakening the immune system. This makes it easier to get sick with diseases like tuberculosis, infections and some cancers.
- HIV is spread from the body fluids of an infected person, including blood, breast milk, semen and vaginal fluids.
- It is not spread by kisses, hugs or sharing food. It can also spread from a mother to her baby.



HIV	VS	AIDS
- HIV is the acronym for Human immunodeficiency virus. - HIV finds and destroys a type of white blood cell (T cells or CD4 cells) that the immune system must have to fight disease. - The CD4 cell count in healthy individuals ranges from 500 to 1,600 cells per cubic millimeter of blood (cells/mm3). - Patients will suffer minor difficulties ; symptoms will be similar to flu.		- AIDS is the acronym for Acquired immunodeficiency syndrome. - Final stage of HIV infection. - HIV are considered to have developed AIDS when their CD4 cell count drops to under 200 cells/mm3. - Patients will experience severe signs and symptoms, disrupting the quality of life.



HIV/AIDS

HIV is transmitted

use of non-sterile syringes and tools

pregnancy breastfeeding

blood transfusion

organ transplant

unprotected sex

HIV is not transmitted

food, drink, utensils

insect bites

kiss, touch

clothes, towels

toilet, shower

- HIV can be prevented and treated with antiretroviral therapy (ART).
- Untreated HIV can progress to AIDS, often after many years.
- WHO now defines Advanced HIV Disease (AHD) as CD4 cell count less than 200 cells/mm3 or WHO stage 3 or 4 in adults and adolescents. All children younger than 5 years of age living with HIV are considered to have advanced HIV disease.

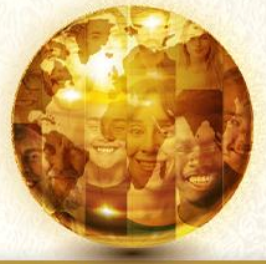
TABLE 122.5 World Health Organization Immunologic Classification for Established HIV Infection

	AGE-RELATED CD4 VALUES			
HIV-ASSOCIATED IMMUNODEFICIENCY	**<11 Months (% $CD4^+$)**	**12–35 Months (% $CD4^+$)**	**36–59 Months (% $CD4^+$)**	**>5 Years (Absolute No./mm^3 or % $CD4^+$)**
None or not significant	>35	>30	>25	>500
Mild	30–35	25–30	20–25	350–500
Advanced	25–29	20–24	15–19	200–349
Severe	<25	<20	<15	<200 or <15%

Signs and symptoms

- The symptoms of HIV vary depending on the stage of infection.
- HIV spreads more easily in the first few months after a person is infected, but many are unaware of their status until the later stages.
- In the first few weeks after being infected people may not experience symptoms. Others may have an influenza-like illness including:
  - fever
  - headache
  - rash
  - sore throat.

- The infection progressively weakens the immune system. This can cause other signs and symptoms:
  - swollen lymph nodes
  - weight loss
  - fever
  - diarrhoea
  - cough.



- **Without treatment, people living with HIV infection can also develop severe illnesses:**
  - **tuberculosis (TB)**
  - **cryptococcal meningitis**
  - **severe bacterial infections**
  - **cancers such as lymphomas and Kaposi's sarcoma.**

Different types of AIDS-related cancers cause different symptoms.

These may include:

❖ **Kaposi sarcoma.** A visible symptom of this cancer is purple or brown spots on the skin or inside the mouth. The disease can affect internal organs.

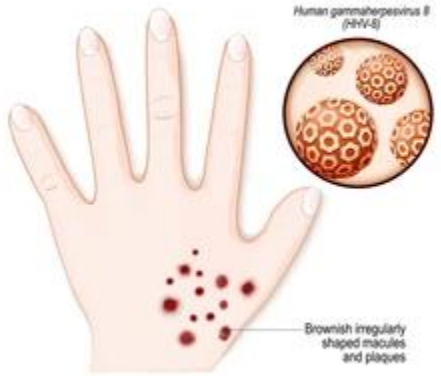
❖ **Non-Hodgkin lymphoma.** Symptoms are unexplained weight loss; swollen lymph nodes in the underarms, and neck;

. Other symptoms can include memory loss

, seizures, and fatigue.

Kaposi's sarcoma on the skin of an AIDS patient

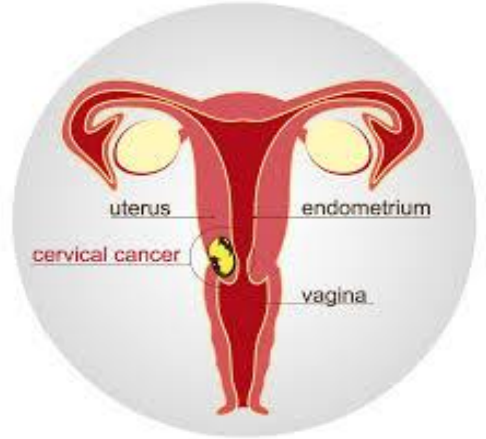
Kaposi's sarcoma-associated herpesvirus

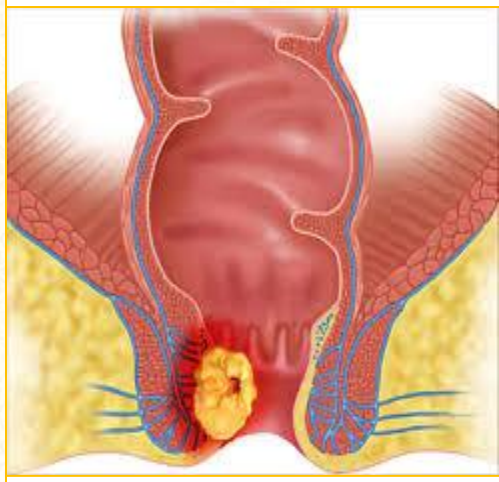


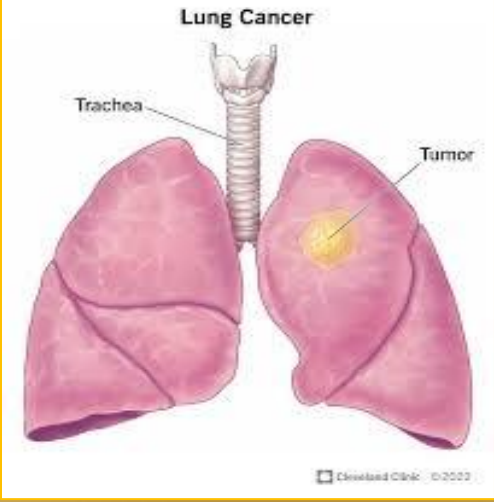
❖ **Cervical cancer.** This may not cause symptoms, especially early in its growth. Eventually, however, cervical cancer may cause abnormal vaginal bleeding, discomfort during sex, and an unusual vaginal discharge.

❖ **Anal cancer.** Symptoms may include pain in the anal area, bleeding, itching, a change in bowel habits.

❖ **Lung cancer.** Symptoms can include severe coughing, which may bring up blood; chest pain; trouble breathing; fatigue; and weight loss.



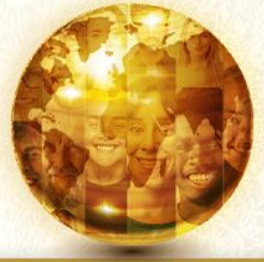




Why might people infected with HIV have a higher risk of some types of cancer?

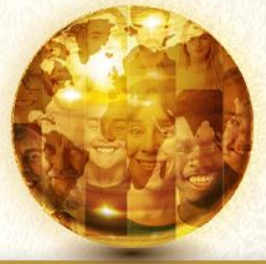
❖ Infection with HIV weakens the immune system and reduces the body's ability to fight viral infections that may lead to cancer. The viruses that are most likely to cause cancer in people with HIV are:

- Kaposi sarcoma-associated herpesvirus (KSHV), also known as human herpesvirus 8 (HHV-8), which causes Kaposi sarcoma and some subtypes of lymphoma.
- Epstein-Barr virus (EBV), which causes some subtypes of non-Hodgkin and Hodgkin lymphoma.
- Human papillomaviruses (HPV), high-risk types of which cause cervical cancer, most anal cancers, and vaginal cancer.
- Hepatitis B virus (HBV) and hepatitis C virus (HCV), which both cause liver cancer.

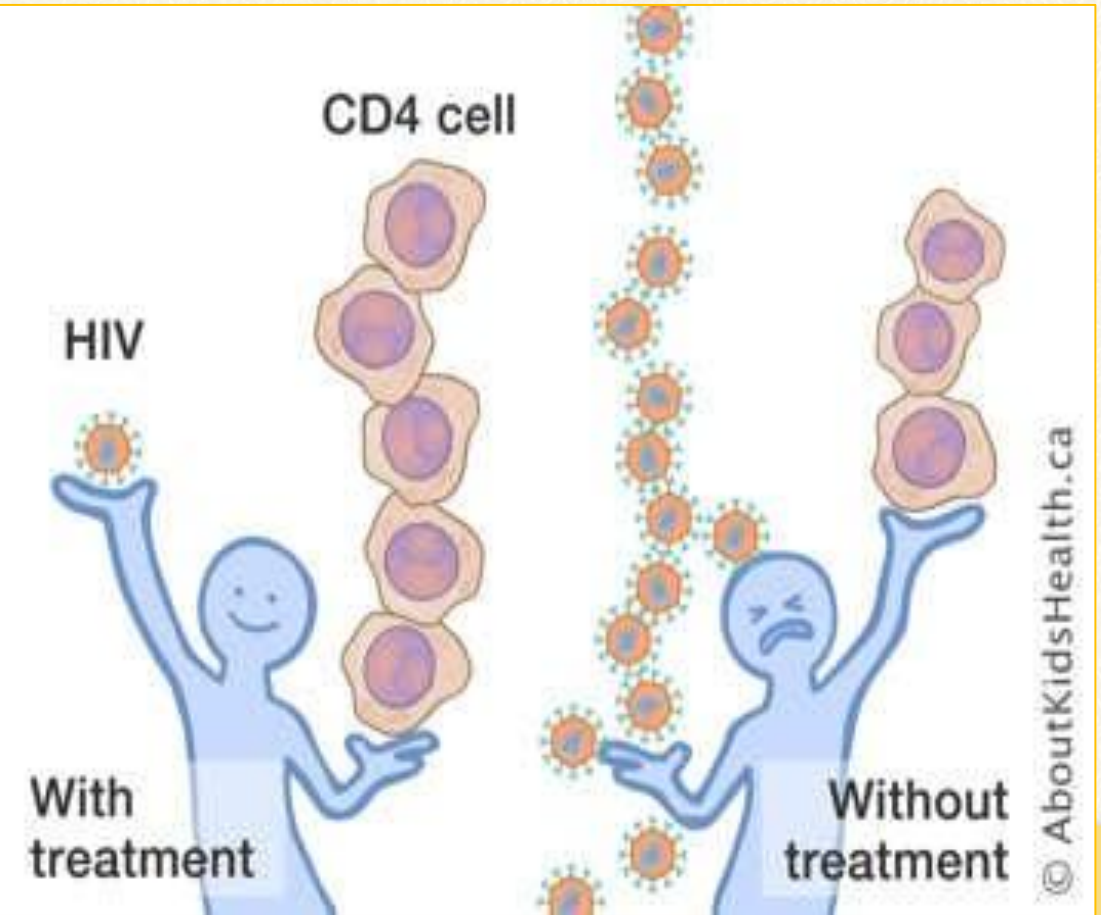


Has the introduction of antiretroviral therapy changed the cancer risk of people infected with HIV?

- The introduction of highly active antiretroviral therapy (HAART), also called combination antiretroviral therapy (cART), starting in the mid-1990s greatly reduced the incidence of certain cancers in HIV-infected patients, especially Kaposi sarcoma and non-Hodgkin lymphoma.
- The likely explanation for this reduced incidence is that cART lowers the amount of HIV circulating in the blood, thereby allowing partial restoration of immune system function to fight the viruses that cause many of these cancers.

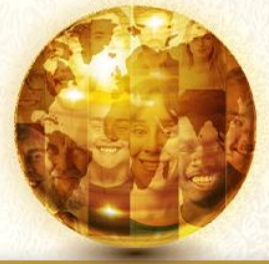


❖ **This persistently high risk may reflect the fact that cART does not completely restore immune system functioning.**

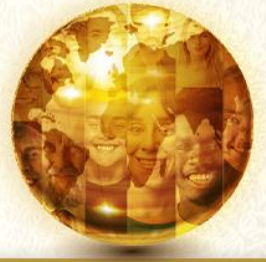


What can people infected with HIV do to reduce their risk of cancer or to find cancer early?

- Taking cART as indicated based on current HIV treatment guidelines lowers the risk of Kaposi sarcoma and non-Hodgkin lymphoma and increases overall survival.
- The higher incidence of liver cancer among HIV-infected people appears to be related to more frequent infection with hepatitis virus than among HIV-uninfected people.
- In addition, if HIV-infected people currently have viral hepatitis, they should discuss with their health care provider whether antiviral treatment is an option for them. Some drugs may be used for both HBV-suppressing therapy and cART.

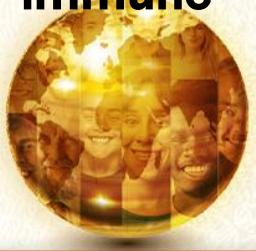


- Because HIV-infected women have a higher risk of cervical cancer, it is important that they be screened regularly for this disease. In addition, the Centers for Disease Control and Prevention (CDC) recommends vaccination against human papillomavirus (HPV) for women and men with HIV infection up to age 26 years.
- Cervical cancer screening guidelines that incorporate results of a Pap test and an HPV DNA test are evolving, and women should discuss screening options with their healthcare provider.
- Some researchers recommend anal Pap test screening to detect and treat early lesions before they progress to anal cancer.

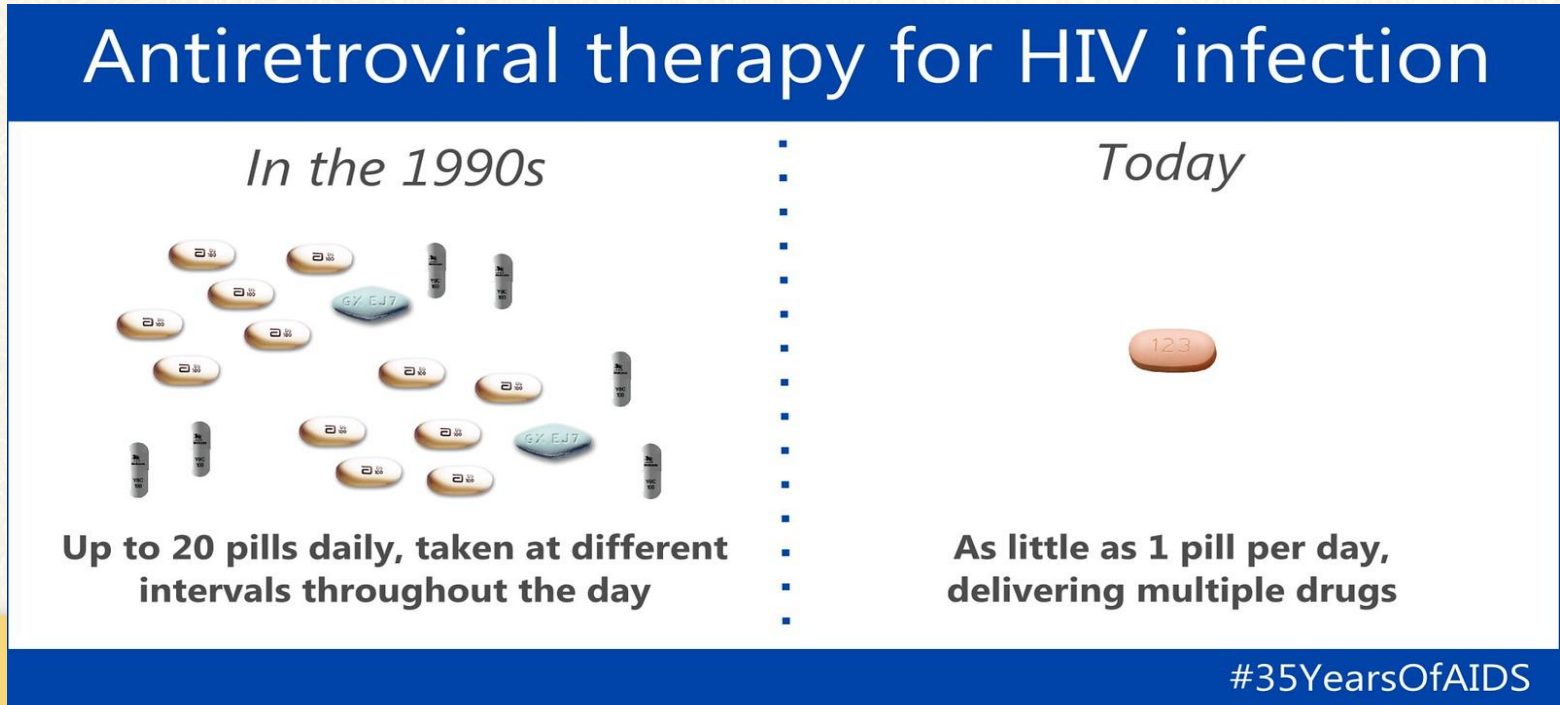


Cancer treatment in people with HIV or AIDS

- Treatment of both HIV and cancer can be complex, so it is very important that cancer doctors (oncologists) and HIV specialists work closely together. There may be a need to make changes to Antiretroviral therapy (ART) to decrease interactions between the cancer treatment and the HIV treatment.
- There is no cure for HIV infection. It is treated with antiretroviral drugs, which stop the virus from replicating in the body.
- Current antiretroviral therapy (ART) does not cure HIV infection but allows a person's immune system to get stronger. This helps them to fight other infections.

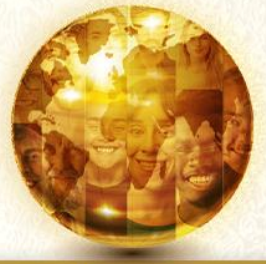


- Currently, ART must be taken every day for the rest of a person's life.
- ART lowers the amount of the virus in a person's body. This stops symptoms and allows people to live full and healthy lives. People living with HIV who are taking ART and who have no evidence of virus in the blood will not spread the virus to their sexual partners.



- Pregnant women with HIV should have access to, and take, ART as soon as possible. This protects the health of the mother and will help prevent HIV transmission to the fetus before birth, or through breast milk.
- Treating cancer alongside HIV depends on:

  - the type of cancer
  - stage of cancer
  - a person's overall health
  - immune system function, such as CD4 count and viral load
  - reaction to treatment or medication



HIV Prevention
What you need to know

2,561
newly diagnosed cases of HIV in Canada in 2018

Early diagnosis and treatment lead to better health outcomes

The only way to **know** if you have **HIV** is to **get tested!**

It's Unforgettable! Undetectable= Untransmittable

People living with HIV, who take HIV medication as prescribed, and maintain an undetectable viral load, have effectively no risk of passing HIV to their sexual partner(s).

What does an undetectable viral load mean?
Viral load is the amount of HIV in a person's blood. Treatment can lower the amount of virus in the blood, to a level that is too low to be measured on a test. This means undetectable.

Having an **undetectable viral load** does not mean a person is cured of HIV. It is important to **take HIV medication daily and visit a healthcare provider regularly.**

People who are on treatment, are engaged in care, and maintain an undetectable viral load, do not transmit HIV to their baby during pregnancy and delivery.

Pre-Exposure Prophylaxis (PrEP)

A daily medicine that prevents people, especially those at risk, from acquiring HIV. If taken correctly and consistently, PrEP can provide up to 99% protection.

WAYS YOU CAN HELP PREVENT HIV/AIDS

KNOW
get the facts about HIV/AIDS

TALK
start the conversation

PROTECT
for you and those you love

TEST
know your status

TREAT
stay healthy, protect others

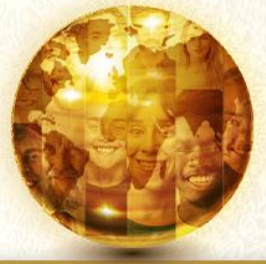
AIDS Helpline 1097

Download NACO AIDS App

@goasacs

REFRANCE

- https://www.who.int/news-room/fact-sheets/detail/hiv-aids?gad_source=1&gclid=Cj0KCQjwi5q3BhCiARIsAJCfuZkmubvXTga8mHF4fgcuWZuLJe1f6B7Z-YGpl5Y0aMpNko6eHDVuesYaAmjiEALw_wcB
- https://www.managedhealthcareexecutive.com/view/cancer-is-the-leading-cause-of-death-in-hiv-positive-individuals
- https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hiv-fact-sheet
- https://www.mskcc.org/cancer-care/types/aids-associated
- https://www.cancer.org/cancer/risk-prevention/infections/hiv-infection-aids/hiv-aids-and-cancer.html
- https://www.cancer.gov/about-cancer/causes-prevention/risk/infectious-agents/hiv-fact-sheet
- https://www.hopkinsmedicine.org/health/conditions-and-diseases/hiv-and-aids/aidsrelated-malignancies#:~:text=These%20types%20of%20cancer%20include,well%20as%20develop%20Hodgkin%20lymphoma.
- https://www.canada.ca/en/public-health/services/publications/diseases-conditions/hiv-prevention-infographic.html




Thank You