

HIV CD4+ 500

When HIV patients have CD4+ counts that drop below 500 cells/microL, they are at increased risk of developing opportunistic pathogenic infections. More specifically, these patients have an increased incidence of oral thrush related to candidiasis overgrowth as well as the characteristic Kaposi's sarcoma. Additionally, HPV may reactivate and can lead to warts and squamous cell carcinoma while EBV infection can cause oral hairy leukoplakia in patients at this stage of immunodeficiency.



PLAY PICMONIC

Signs and Symptoms

Candida albicans (Oral Thrush)

[Canada Owl-can](#)

When CD4+ levels drop below 500 cells/microL, patients are at risk for Candida albicans overgrowth. This fungal infection leads to oral thrush, forming white plaques on the mouth and tongue, which can be scraped off, leaving erythematous and bloody lesions.

Kaposi's Sarcoma (HHV-8)

[Cape Shark-comb](#)

Kaposi's sarcoma develops secondary to infection by human herpesvirus-8 or HHV-8. Patients develop papular nodules and blotches that are purple, blue, black, and red. These are typically seen on the skin but can also affect the GI and respiratory systems.

Human Papillomavirus (HPV)

[Human Puppet-virus](#)

Patients with this level of immunodeficiency are also at increased risk of expressing more manifestations of human papillomavirus infection, or HPV. These include the presence of warts and, more severely, squamous cell carcinoma. In males who have sex with other males, this can be carcinoma of the anus, though it can also occur in the cervix in women.

Epstein-Barr Virus (Oral Hairy Leukoplakia)

[Einstein Bar Virus](#)

Epstein-Barr Virus, or EBV, can manifest as oral hairy leukoplakia in HIV-infected patients who have a CD4+ count below 500 cells/microL. This manifestation is different from oral thrush associated with candida albicans because, with oral hairy leukoplakia, the white plaques are unscrapable. These are typically present on the lateral tongue with a hairy, corrugated appearance.