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Oral presentation

O324 HIV, immune deficiency and malignancy

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Until recently, it was accepted that only a few specific types of cancer were associated with the immune deficiency associated with HIV infection. Although it is known that a number of other cancers occur at increased rates, most studies have concluded that these cancers occur at increased rates because of lifestyle risk factors for cancer in people with HIV, rather than a direct effect of immune deficiency. In the past year, this paradigm has been challenged by the finding that solid organ transplant recipients have a profile of increased cancer incidence that is strikingly similar to people with HIV. As these two populations share little in terms of lifestyle risks for cancer, it appears that immune deficiency must underlie these increased risks. Most of cancers occurring at increased incidence are those known or suspected to be related to oncogenic infective agents including Epstein-Barr virus (non-Hodgkin lymphoma (NHL), Hodgkin lymphoma), human herpesvirus 8 (Kaposi's sarcoma, KS), human papillomavirus (anogenital and head and neck cancers), hepatitis B and C virus (liver cancer), and *Helicobacter pylori* (stomach cancer). Most epithelial cancers common in the general population (e.g. breast, prostate and ovarian) do not occur at increased risk. Although it is now clear that immune deficiency causes increased incidence of many cancers, there remains uncertainty about the level of immune function required to prevent increased rates of cancer. In transplant recipients, rates of many cancers rapidly return towards normal on cessation of iatrogenic immune suppression. In people with HIV, rates of NHL and KS have declined markedly since the widespread use of combination antiretroviral therapy, but rates remain raised above population levels. For Hodgkin lymphoma, its incidence is highest when immune deficiency is moderate rather than profound. For other cancers, there are few data on rates by level of immune deficiency. Describing cancer rates by level of immune function is an important research priority among people with HIV. If cancer incidence is raised even in the modestly immune deficient, cancer risk may become an important consideration in deciding when to start HIV therapy, and in the setting of goals for optimal immune recovery.