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## **Detection of Human Herpesvirus 8 Subtype A in a HIV-negative Queensland Patient**

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**Introduction** HHV-8 is regarded as the aetiological agent of Kaposi's sarcoma (KS), multicentric Castleman's disease (MCD) and primary effusion lymphoma (PEL). Our overall objective is to characterize HHV-8 subtypes and prevalence in Australia, as part of a multinational study which includes high-prevalence parts of the world in order to design better detection methods and increase the early detection of HIV and KS. This pilot study describes HHV-8 detected in KS and MCD biopsies from both HIV-positive and -negative patients in Queensland.

**Approach and Findings** In 16 patients (14 HIV-positive, 2 HIV-negative) HHV-8 presence was assessed by immunohistochemistry (IHC) and real-time polymerase chain reaction (rtPCR). The two HIV-negative elderly patients had classic KS nodules. In the 14 HIV-positive patients, biopsies of AIDS-KS lesions positive for HHV-8, taken from various epidermal sites, were visible at all KS stages (patch to nodule). HHV-8 was detected in a cervical lymph node from an HIV-positive male with MCD. Sequence analysis of ORFK1 revealed HHV-8 subtype A in a KS nodule of an HIV-negative Italian elderly male.

**Conclusion** HHV-8 was detected in KS and MCD biopsies in Australia. The presence of HHV-8 subtype A from an HIV-negative elderly Italian male from QLD. This is the second reported HHV-8 subtype from Australia, the first being subtype D (isolate Au1; Victoria). HHV-8 subtype A may be present due to the patient's ethnicity or whether subtype A is common in Australia.

**Future Direction** Further studies are underway to characterize the Australian HHV-8 subtype(s) and determine if HHV-8 subtypes correlate with the patients' ethnicity or to the geographical location in this multicultural nation. We are also determining HHV-8 subtypes, seroprevalence, and transmission in Kenya, India, and PNG as part of a multinational study.

**Opportunities for Collaboration in Health** Work related to epidemiology, molecular basis of viral associated HIV diseases, clinical studies of antivirals, and virus transmission.