Kaposi’s sarcoma associated herpesvirus (KSHV) is a gammaherpesvirus with polymorphic variation within the K1 region of the genome. DNA sequencing of the viral genome has been previously used to identify strain variation. Studies from our laboratory have determined that KSHV is present in oral secretions of healthy and immunosuppressed persons. Objective: To distinguish KSHV subtypes within our population of oral samples from healthy and immunosuppressed subjects by polymerase chain reaction (PCR), sequence analysis, and heteroduplex tracking assay (HTA). KSHV strain C contains a characteristic 15bp in frame deletion of amino acids. Based on the principles that the size of fragments will determine their patterns of migration on a gel, it was hypothesized that KSHV strains A and C would migrate differently on agarose and polyacrylamide gels based on size and strain differences. Methods: nested PCR was used to amplify K1 from our population. Amplified fragments were annealed to strain A and strain C probes, then run on 1.5-2.0% agarose gels or on 10% polyacrylamide gels with positive (strain A and C probe alone) and negative (a no DNA sample) controls. Results: PCR amplified topo-cloned K1 fragments of healthy and immunosuppressed subjects migrated similar to strain A and strain C probes. Strain A topo-cloned K1 fragments migrated as homoduplexes using HTA when annealed to strain A probe and as heteroduplexes when annealed to strain C probe; the reverse occurred with strain C fragments. Strain C probes migrated lower on agarose gels due to the 15bp in frame deletion. Most persons with oral KSHV were strain A based on the assay. Results were corroborated by sequence analysis. Conclusion: Results support the use of PCR based assays as a means of KSHV strain identity in oral Kaposi’s sarcoma and in oral secretions from healthy and immunosuppressed persons. Studies were supported by K23DE. cncooper@email.unc.edu

Seq #388 - Microbial Pathogenesis and Inhibition
10:15 AM-11:30 AM, Saturday, 13 March 2004 Hawaii Convention Center Exhibit Hall 1-2

Back to the Oral Medicine & Pathology Program
Back to the IADR/AADR/CADR 82nd General Session (March 10-13, 2004)