

ABSTRACT

Although subclinical persistent infections with the human polyomaviruses BKV and JCV are ubiquitous worldwide, these are known to vary in relation to diseases present and geographical location. DNAs from 220 cervical smears and 109 invasive cervical carcinomas obtained from HIV positive and HIV negative Kenyan women of known HPV status were analyzed by nested endpoint PCR for BKV and JCV. BKV–JCV DNA was detected in 5/105 (4.7%) of cervical smears and in 6/37 (16%) of cervical carcinomas from women infected with HIV whereas 9/115 (7.8%) of the cervical smears and 4/72 (5.5%) of the carcinomas were positive in HIV negative women. Nested PCR showed that all 24 samples were positive for JCV and not BKV. JCV was not more prevalent in either HPV positive ($P = 0.438$) or HPV negative women ($P = 0.392$). However, 37% of carcinomas and smears which were positive for JCV were also positive for a “high-risk” oncogenic HPV. Comparison of the incidence of JCV in cervical smears and cervical carcinomas showed a ~3-fold increase in samples from HIV positive women with cervical carcinoma ($P = 0.025$) whereas no significant difference was found between cervical smears and cervical carcinomas from HIV negative women ($P = 0.553$). These results suggest that JCV may combine with high-risk HPV infection in women infected with HIV to influence the rate of progression to invasive cervical carcinoma. *J. Med. Virol.* **86:672–677, 2014.** © 2013 Wiley Periodicals, Inc.