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Long-Term Inpatient Evolution During HIV-2 Infection

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Poster presentation

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Long-term inpatient evolution during HIV-2 infection

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HIV-2 disease progression and transmission is attenuated compared to HIV-1, yet prospective studies examining HIV-2 inpatient evolution have been limited. We examined viral sequence evolution in the C2V3C3 region of the viral env gene in 8 HIV-2 infected individuals from Dakar, Senegal, over the course of approximately 10 years. To compare results to HIV-1 infection, we reanalyzed data from our previous study that examined inpatient evolution in HIV-1 infected individuals from the same population. HIV-2 sequences from early and late timepoints were phylogenetically intermixed for all subjects, and no distinct trends were observed in terms of increases or decreases in fragment size or number of N-linked glycosylation sites. In homologous env C2V3 sequence, rates of viral divergence and diversification were slower in individuals infected with HIV-2 than individuals with HIV-1. This data indicates that viral evolution occurs slowly in HIV-2 infection, which is consistent with the slow disease progression observed in HIV-2 infection, and supports the notion that viral evolution may be a relevant correlate for disease progression.