

## Neoplastic cells of Hodgkin's disease show differences in EBV expression between Kenya and Italy.

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### **Abstract:**

The Epstein-Barr Virus (EBV) has been implicated in the pathogenesis of Hodgkin's disease (HD). However, the association of EBV with this disease varies greatly from series to series and from country to country. Epidemiological studies have shown differences in HD occurring in different parts of the world. In particular, it has been reported that HD in developing countries differs from HD in Western countries in terms of epidemiological, pathological and clinical characteristics. These discrepancies among populations suggest an interaction with environmental factors and a direct role of different etiological agents. At present, there are no data on the frequency of association of EBV with HD in equatorial Africa. In this study, a large series of HD cases have been collected at the University of Nairobi, Kenya, and at the Universities of Bologna and Siena, Italy. The cases have been reviewed and classified according to the REAL Classification and the presence of EBV has been assessed by in situ hybridization (ISH). A statistical difference in EBV expression was found between HD from Kenya and HD from Italy. EBV-positive neoplastic cells were detected in 92% of Kenyan cases, whereas only 48% of Italian cases showed EBER1/2 positivity in the neoplastic cells. Our results suggest that, in Kenya, EBV plays a more direct role in the pathogenesis of HD, as it does for endemic Burkitt lymphoma.