THE HUMAN T LYMPHOTROPIC VIRUS TYPE 1 SUBTYPE C: A MAJOR CAUSE OF MORBIDITY AND MORTALITY FOR INDIGENOUS AUSTRALIANS

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The human T lymphotropic virus type 1c is highly endemic to central Australia where more than half of all Indigenous adults residing in some remote communities are infected. Infection is associated with a rapidly progressive haematological malignancy (Adult T-cell leukemia, ATL), inflammatory diseases involving various organ systems and an increased likelihood and severity of other infections, notably with *Strongyloides stercoralis*. In central Australia, each of the major HTLV-1 associated diseases have been described, however, in this setting HTLV-1 infection is most often associated with chronic respiratory disease, including life-threatening, severe bronchiectasis, and with invasive bacterial infections. The region has the highest reported prevalence of adult bronchiectasis, and among the highest blood stream infection incidence rates, worldwide. The risk of bronchiectasis and the extent of pulmonary injury are strongly associated with the HTLV-1 proviral load (pVL), which also predicts risk of invasive bacterial infection. The association between HTLV-1 pVL and these life-threatening conditions is consistent with recent findings that higher HTLV-1 pVL are associated with an increased risk of death in a large prospective cohort of Indigenous adults. High rates of HTLV-1 infection and HTLV-1 associated diseases contribute substantially to the burden of ill-health and early mortality among Indigenous Australians living in central Australia.